In This Issue...

Artistic Titling Tips

January 1945
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CONTENTS

Aces of the Camera (Jack Greenhalgh, A.S.C.) By W. G. C. Bosco 7
Bringing the Bible to the Screen...By ALVIN WYCKOFF, D.Sc., A.S.C. 8
Eugene Augustin Lauste, Inventor—Sound Movies By IRVING BROWNING 10
Tailor Made Fades and Laps With a Cine Special

By PHILIP A. JACOBSEN 12
Mili Introduces New Technique...By EZRA GOODMAN 14
The Camera Versus the Microphone in Training Film Production By LT. HERBERT R. JENSEN, U.S.N.R. 16
Through the Editor’s Finder...By IRVING BROWNING 20
Among the Movie Clubs...By IRVING BROWNING 22
Artistic Titling Tips...By GLENN R. KERSHNER, A.S.C. 24
What A.S.C. Members Are Now Filming...30

ON THE FRONT COVER we have what might be termed the soap suds detail, with three “prop” men whipping up the suds for the tub in which pretty Barbara Slater is sitting for a musical number in “Bring on the Girls”, a Paramount picture starring Veronica Lake, Sonny Tufts, Eddie Bracken and Marjorie Reynolds. Meanwhile Director of Photography Karl Struss, A.S.C., waits for the suds to get high before starting to photograph this bit of glamour.

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The postwar market — a market of new materials, new products, and new customers. Those who adjust their manufacturing, training and marketing methods to the faster, more efficient tempo made possible by Victor 16mm Magic will be the leaders. Quick reconversion to peacetime production methods through the intelligent use of training films; training of sales and service personnel rapidly and thoroughly; demonstrating and selling to a million customers at a time — scattered all over the world, speaking a score of languages, will be essential for postwar industry and business.

Victor 16mm sound motion picture equipment offers the medium, Victor's world-wide sales and service organization offers the cooperation you may need. Let your nearby Victor distributor help plan and set up a training program to suit your specific requirements; advise and guide you in the preparation of sound film sales aids to vitalize your postwar marketing.

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For Victory In 1945 — Buy War Bonds!
GLORY BE TO GOOD RELATIONS—This is Adele Mara, 21, blonde and, as anyone can see, shapely as all get-out. What's more, she's a talented actress—talented enough to be playing the feminine lead in Republic Studio's "Song of Mexico", the first bi-lingual film in Hollywood history. Adele is of Spanish-Irish ancestry. She speaks English and Spanish equally well. Latin-American relations, already good, can't help but be better from where we're sitting . . . Photograph by Roman Freulich.
ACES of the CAMERA

Jack Greenhalgh, A.S.C.

By W. G. C. BOSCO

ONE of the first of Hollywood's contingent of ace cameramen to return to civilian life after a term of duty with the armed forces, Jack Greenhalgh, A.S.C., brings back from the South Pacific a thrilling, first-hand account of the many ways in which the cameramen and the crews they trained contributed to the war effort in that area.

The story, concerning as it does the early phases of the war in that theatre, when our forces were chiefly engaged in trying to stem the surging tide of Japanese aggression, or, with feeble thrusts that only hinted at the strength of the sledge-hammer blows that were to follow, attacked the perimeter of the enemy's defenses, is one of resolute courage in the face of most distressing physical and mental obstacles, and the circumvention of supply and mechanical difficulties by ingenious improvisation. And among the photographs assembled in an oversized album as a pictorial record of his period of service are too many grim reminders of the toll of war — the photographs of those members of the gallant company who will never return.

It was December the 11th, 1942, when Jack received word that the commission for which he had applied had come through. To be precise it was exactly noon, and when he received the news over the phone he expressed his satisfaction and naively told the military personage on the other end of the wire that he would be around as soon as he had finished the picture on which he was then working. But that was an arrangement completely unsatisfactory to the military personage, who told him that he was expected to report immediately.

"But I'm in the middle of a picture," expostulated Jack, who believed fervently in the tradition of show-business.

"And we're in the middle of a war," boomed the man on the other end of the wire who had probably never heard that the show must go on.

"At least let me remain until they find someone else to take my place," countered Jack, while he did mental arithmetic trying to estimate what a delay in shooting "My Son, The Hero" would cost his friend Sig Neufeld, the producer.

"All right," said the military personage in a burst of magnanimity and understanding, "report at 9 o'clock tomorrow morning."

That was just a sample of the speed with which events were to move in the military career of Jack Greenhalgh. At nine the next morning he was sworn in and told to report back, with a complete set of uniforms and other military impediments necessary in the life of a 1st lieutenant, by 2 p.m. the same day.

For two months he was attached to the First Motion Picture Unit at the Hal Roach Studios in Culver City, and spent the time getting basic military training, becoming indoctrinated in army regulations and the responsibilities and requirements of his new calling, instructing in aerial photography and combat camera work, and found time to make a training film in San Antonio, Texas, before being shipped.

He went overseas with the Combat Camera Unit of the famous 5th A.A.F., and after a brief stopover in Brisbane, Australia, landed at Port Moresby in New Guinea.

He was initiated into the perils and thrills of warfare soon after leaving the friendly coast of California behind. On two different occasions Jap subs launched torpedoes at the ship on which he was traveling, a ship they had already sunk, according to their optimistic broadcasts, but skillful maneuvering avoided the lethal load.

[Continued on Page 18]
Bringing The Bible To The Screen

By ALVIN WYCKOFF, D.Sc., A.S.C.

A n old adage tells us that "there is nothing new under the sun." That phrase was coined before there was a place called Hollywood. Something new under the Hollywood sun (or arc lights) has happened! An idea, new in motion pictures, has sprouted and grown into a healthy business of entertainment, almost without notice.

That idea is the making of sound motion pictures for church, school and home from Bible stories. Making these pictures both educational and entertaining. The company making these unusual motion pictures, all released on 16mm. film, is known as Cathedral Films, and is located at 6404 Sunset Boulevard, Hollywood, California. It is a non-profit picture company, organized solely for the interest of the church, and was conceived by two brilliant men, the Rev. James K. Friedrich and John T. Coyle.

The Rev. Mr. Friedrich, in addition to his film production work, is assistant rector of St. Marks in Van Nuys, California, and also is conducting experimentally, a Visual Aid Sunday School in Sherman Oaks, where the children are gathering enthusiastically each Sunday to see the Bible stories on the screen. These children do not have to be urged to go to Sunday School. They can't wait for Sunday to roll around. And they are learning rapidly and effectively the teachings of the Bible while being entertained.

Several years ago Coyle, a motion picture director and producer, as well as an inventor of many new innovations in making the effect sequences, met the Rev. Mr. Friedrich. He had faith in his idea that motion pictures depicting Biblical episodes would be accepted if the Biblical characters walked and talked like human beings we know as our neighbors; if the characters were shown as men and women of feeling, passion and intrigue. Above all, they must be entertaining. He believes that one GOOD motion picture can deliver a more eloquent sermon to more listeners than the most eloquent sermon delivered from a pulpit. The results seem to prove that he is right.

The religious films made by Cathedral Films have a national release. Distributing organizations which are supplying the nation with these unusual films are located in twenty-eight states, Canada and Hawaii. There are a total of 61 of these distributing organizations at this writing, and the number is rapidly increasing. Throughout the nation these films are being shown in homes, churches, clubs and schools in ever-increasing numbers.

In Sunday School work they have been rapidly gaining ground. The following excerpt from Very Rev. Hugh Lavery, M.M., Director Maryknoll, Los Angeles, Calif., gives some idea of what the churchmen think of the religious films: "I have twice seen your film, "A Certain Nobleman," and was delighted and much impressed by it. It conveys a great les-
Above, the rescue of an American airman in "We, Too, Receive".

The two wise producers of these pictures are wide awake to the fact that the success of the films depends upon GOOD ENTERTAINMENT, consequently each film tells a story of romance and humor that blends perfectly with the spiritual theme, enhanced by clever sound effects and excellent dialogue.

One of the company's most successful films is a recent production that tells the story of a young American airman, shot down by Jap planes over enemy territory. Successfully, the flyer who was badly wounded parachutes to a safe landing in a dense mountain jungle, close to a swift flowing stream. He crawls to the stream to bathe his wounds, and a letter falls from his pocket into the stream. The letter is carried downstream where a native finds it and carries it to his Chief. The Chief, having been educated by an American missionary, reads the letter, and surmises what has happened. Calling some of his men, they work their way up the stream and find the wounded airman. They carry him to their village and nurse him back to health. Then help him find his way back to his base.

The story is well constructed, and makes good, wholesome, thrilling entertainment. It must be a hit with the public...

(Continued on Page 26)
EUGENE AUGUSTIN LAUSTE
Inventor — Sound Movies

By IRVING BROWNING

EUGENE Augustin Lauste, remember that name, for it was he who gave the world the voice from the screen, and there are patents in almost every country to prove it. Patents issued on the combination of picture and sound recorded photographically on the same film were granted to Eugene Augustin Lauste as far back as 1906 and became a reality twenty years later. Warner Brothers so honored Eugene Lauste in a recent one reel film commemorating the 50th anniversary of the Motion Picture, the title of which is "The Voice that Thrilled the World."

Lauste was born in the Montmartre district of Paris, France, on January 17th, 1857. It is said that he early displayed inventive and mechanical talents of a high order, and it is certain that before he was twenty-three years old he had filed with the French patent office no less than fifty-three models and designs on a variety of devices. Eugene Lauste, proud of his achievements, hopeful for the day when he would see his invention in use, often said to his loving wife that it would not be long before they both would receive their share from the success of his inventions; and today, we hear the voice, coming directly from the screen, just as Eugene Lauste said it would.

I am telling this story, for I have known the man; he was my friend for nearly twenty years. He was much older than I, and I had great respect and reverence for him. He was the essence of goodness and kindness. He believed in everyone, a trustworthy soul, for to him, there was no wrong in the world, yet how the world wronged him!

My first meeting with Lauste, in 1919, was a most interesting incident. I was producing the Eastern portion of Screen Snapshots for CBC Film Sales Corporation, now Columbia Pictures. Some one I met told me about an elderly gentleman who had an invention that would some day make the movies talk, and that intrigued me. I asked a lot of questions about the man and his inventions, for I had to report every story that I wanted to do in film for Snapshots to Jack Cohn, now vice president of Columbia Pictures. I discussed prospective production ideas with Jack Cohn, for he has a great genius in selecting screen material. We talked about my findings and I was insistent on doing the Lauste story, for I believed that this story should be seen, yet Jack Cohn said to me, "What good is it, you can't hear it."

He was right, we couldn't reproduce the sound in our film at that time. We could show the apparatus and tell about it in the titles. What was wrong in telling about it? We were telling about the movie stars and what they were doing at home, on the side lines when they were at work and also when they were at play. So why not show the invention of Eugene Lauste? His material was part and parcel of the motion picture. So we talked about it and Jack told me to go ahead and make the subject. This I did, and I never enjoyed working with anyone more than I did working with Lauste. He cooperated wholeheartedly, for to him this was recognition of his work and the coming of sound. Yes, we told about it to the world via Screen Snapshots, yet the screen was silent for many years after.
The following year, I left Screen Snapshots and went to Universal Pictures to produce the Universal New Screen Magazine, a magazine reel with stories about people and unusual things they do. I made many subjects for that reel of varied types, and in no time at all Eugene Lauste came to my mind again, and I decided that his story could be told again in the Universal New Screen Magazine. I arranged with Lauste once more and made the story. This time, I gave him a copy of the 35mm. film, fully edited and titled, about two hundred feet in length. I do not believe that either Screen Snapshots or Universal New Screen Magazine are in any way responsible for the advent of sound, but at that time, it was a preview of its machinations, but no one came to the door of Eugene Lauste, begging him to sell a share of his great invention, though some people, out of sheer curiosity, came and asked him to demonstrate his talking motion pictures.

Here is a resumé of the inventions and patents of Eugene Lauste for he had been awarded many of them. His first application for recording sound waves photographically was made in England, where he was working. The date of application was August 11th, 1906, and was accepted August 10th, 1907; “The Invention relates to a new or improved cinematographic and phonographic method or process and the means for recording and reproducing simultaneously the

(Continued on Page 18)
Tailor Made Fades and Laps
With a Cine Special

By PHILIP A. JACOBSEN
Technical and Research Director
Campus Studios, University of Washington

THE Motor Driven Cinematographer's Thumb, shown attached to the Cine Special shutter lever in Figure 1, is a mongrel reincarnation of a speedometer cable, an egg beater and a Yankee screwdriver, and was designed to eliminate those "lovable little imperfections" which distinguish the truly "hand made" from the less individualistic but more usable "tailor made" fades and laps.

The artificial limb pictured in the illustration is Model III. Model I (extinct) was a Rube Goldberg robot as big as the camera. Its completely housed gears, cams, springs and levers practically surrounded the "Special", covering up all the aids to navigation on the starboard side and making the changing of a magazine a "Karloff" for even an "A.S.C. Houdini." Model II, which was rushed to completion before the essential essence of Yankee screwdriver blew into the studio shop, was not even distantly related to Model I. It was a marvel of simplicity, it was very small, it was very commercial looking and it was

N.G. Its failure was followed by the violent removal from the studios of a crystal ball, a rabbit's foot paper weight and our Encyclopedia of Easy Motion Picture Magic. Construction on Model III was delayed until a junta of sufferers passed the following ordinances:

1. No Motor Driven Cinematographer's Thumb (MDCT) shall be manufactured which cannot be stowed in the two-inch lens compartment of the "Special" carrying case.

2. No MDCT shall be allowed to interfere with the normal use of the "Special's" cranks, film meters, magazine changing or shutter lever hand operation.

3. No MDCT shall require an abdominal operation on the "Special" to install.

4. All MDCTs shall have at least one speed; three speeds if possible.

5. No MDCT will be licensed which cannot dish up successive fades and laps; which is "Tech-Language" for saying that the Thumb Emancipator must be able to do every thing a live first digit can muster, except a fumble.

6. No MDCTs will be permitted at large unless they can start and stop without the screen effect of a blockbuster exploding in the alley behind the studio.

7. Labor and materials shall not cost more than $31.69 per unit unless someone else pays the bill.

8. Materials which cannot be found in the average junk box shall not require the usual AAA-1, WPB 1319 and Washington Directive to get the usual first class 180 day "Delivery Maybe Promise."

9. All MDCTs must function, without service, for the life of a couple of Cine...
The egg beater gears above are early Bronze Age and were practically made with a jack knife. The knob atop the pinion shaft bearing housing is used to lock the pinion and shaft in each of three positions.

Specials under varying conditions of temperature, humidity, cigar smoke and blasphemy.

10. All “difficult to handle” MDCTs will be consigned to the Cinema Works of the Hot Place as soon as possible after the designer has been committed to a well guarded “Home.”

When Mr. Henkler, our studio mechanic, read these good intentions he went into his usual depressive “can’t be done” routine but we were more than ready for the cunning hypochondriac with the following reviving word plasma:

“Mr. Henkler, we are surprised at your lack of spirit and understanding. This is no ordinary job, nor is it just another 16mm. brain storm. This great development involves humanity itself... Mr. Henkler, our position as oracle is most unbecoming in the presence of a

(Continued on Page 30)

Below is an intimate character study of the shift lever. Reversing is accomplished by pulling straight out on the shift handle, rotating the handle about ten degrees and releasing. A small pin, spring and hole arrangement locks the lever in each of two positions. The upward travel of the carriage is stopped when the shutter lever stops the camera motor. The downward travel ends where the worm ends.

Top right photo shows the racial similarity between the MDCT and the Yankee Screwdriver. It also shows how crude the gear teeth can be and still work. The double worm is mild steel, the gears are brass, the carriage is brass, the guides are drill rod and the shift lever is heat treated soft iron. The frame is aluminum. A “mass production”, dime store model could probably be made entirely from pot metal and sold for $1.37.

Bottom right shows how the carriage imparts motion to the shutter lever. The extension arm on the shutter lever is made fast by a single screw and a drop of solder. The outboard end of the arm engages a slot in the carriage. It can not be pinned because the end of the arm describes an arc. The thing is rustic but it works.
Mili Introduces New Technique

By Ezra Goodman

Motion picture short subjects do not always receive as much attention as they deserve amid the welter of feature-length epics starring Ann Sheridan or Humphrey Bogart. But on this particular day, sound stage 2 at Warner Brothers was a focal point of attraction for visitors and for studio workers. On hand were Jack Warner, short-subject producer Gordon Hollingshead and directors like Jean Negulesco and Vincent Sherman, as well as many technical craftsmen. All of them were watching Gjon Mili, former photographer on Life Magazine, direct a short subject entitled "Jammin' the Blues."

Stage 2 was a jumble of sets and props. At one end of the stage a camera boom faced a raised, black platform set against a gigantic black drape that stretched from the roof to the floor. On the platform sat a group of swing musicians, wearing dark suits. Harry Edison, trumpet; Lester Young, sax; and Joe Jones, drums, were all from Count Basie's band; Sidney Satlett, Marlo Morris and John Simmons were a trio from the Street of Paris night club.
on Hollywood boulevard, Morris at the piano. Red Callender was playing bass viol, Illinois Jacquette was on sax, and Barney Kessel, guitar. On the sidelines sat Marie Bryant, a colored songstress, and Archie Savage, who used to dance with Katherine Dunham.

"Jammin' the Blues" is the first serious film to come out of a Hollywood studio on the subject of modern swing. The nearest a picture had come to it previously was the jam session that figured in the film "Phantom Lady." That sequence, however, was not sufficiently documented. "Jammin' the Blues" was conceived as a result of photographer Mili's layout on a jam session that appeared in Life magazine. Mili, who hails from Albania and wears corduroy pork pie hats from Macy's Junior Department which he orders by the half dozen, is an M.I.T. graduate, an expert in lighting research, in stroboscopic photography, and also an authority on folk dancing and swing music. At the moment he was indulging his passion for both swing and lenswork. He was sitting on the edge of the raised camera boom and explaining to cinematographer Bob Burks just how he wanted the scene photographed.

Mili was attempting some unusual photographic and directional devices in this film. He is a student and admirer of the great Russian silents and of such directors as Einstein and Pudovkin. He believes that Hollywood camera lighting usually lights a face for its best appeal at all times. Mili wanted cameraman Burks to light the faces in his film for mood and visual effect. Few arc lights shone down on the set from the overhead catwalks and only two spotlights crisscrossed from lower angles upon the musicians. Burks was using only a percentage of the light that is used for the average motion picture. Mili was also trying some exceptional camera angles. There are many close-

(Continued on Page 26)
The Camera vs. The Microphone
In Training Film Production
By Lt. Herbert R. Jensen, U.S.N.

The state of the art of producing training films, despite the volume achieved, still leaves much to be desired. This paper will point out a principal shortcoming of the art as it is presently practiced, from the point of view that the primary power of the screen (in instruction or entertainment) lies in its ability to maintain attention and interest through the eye rather than the ear.

The function of the training film is to present its subject primarily to the visual and not the auditory sense. The film's instructive power comes through seeing, not hearing, as is so admirably stated in the Chinese phrase, "one hundred hearing not so good one seeing."

The fact that the motion picture was originally designed for the sense of sight is too often forgotten in writing and producing a training film. The word "writing" is stressed, for that is where the fault too often lies; scripts are written rather than pictured. This is understandable for we have been able to use and manipulate words for hundreds of years while we have had less than 50 years of practice in using and manipulating pictures. The adoption of the policy of using the spoken word instead of the picture is not from lack of knowledge. The experience gained from the days when films were silent taught us of the faults too often lies; scripts are written rather than pictured.

The extent to which the word has been used instead of the picture is indicated by the results of an analysis of a few typical scripts. The script for another picture that had "sleepy" tendencies had 38 words per scene. It is admitted that this method of judging the effectiveness of a film is a crude one, but it does give some indication of the extent to which words have been substituted for pictures. The quality and effectiveness of a training film are undoubtedly related to the words-scene ratio, and the lower the ratio the better the film.

A further indication that the camera has not been used efficiently is the oft-heard remark that training films put men to sleep. The auditory sense, as may be proved by this discussion is a powerful sedative, and even its use here may put you to sleep. The same thing happens in the training film, or more accurately stated, the film lecture in which the words have been substituted for pictures and the film thereby fails to maintain the attention of the learner. To avoid this the eye must receive the major impact and not the ear.

The problem of maintaining attention is also related to film length. Many training films are longer than they need be because of the inadequate handling of the screen image. Not enough of the right pictures are used in the right way, with the result that the track has to say the things the screen does not say. Word explanation is less efficient than picture explanation, and the greater the number of words needed to explain the item under instruction the more feet of film needed to carry them. This overdependence on narrative explanation results in a sound track packed with voice modulations from beginning to end with nary a pause in between. The constant bombardment of words on the auditory nerves dulls them and the learner is lulled to insensibility. Adroitly used, the narrated track must allow pauses between sentences and paragraphs. Phrasing sound and silence is necessary if the mind is to absorb and retain what is said. This is even more true in the sound track. And so the microphone takes over the camera's work, the audience goes to sleep and the information fails to become part of the learner's experience.

What should happen instead of this is that the camera should be used to isolate, describe, and explain the item, relegating the narrated track to the background in a merely supporting role. The camera should be used as a pointer, moving in, out, and across the scene as dynamically as the galvanometer on a recorder. Attention should be aroused and maintained by the camera's ability to interest and excite the eye.

The type of camera handling desired is one that will deliver to the screen an effect similar to that which the human mind gets with his own eye. The effect to be achieved is the appearance of the same fluid mobility that the human eye enjoys in examining an object. This would result in more effective training films because of the subsequent increased eye attention to the screen. In this regard we should err on the side of using too many pictures rather than too few. The one act of going all-out for pictures and using words only when practically forced to, will put the camera back in its rightful role.

Now in all this what part of it relates to the work of the motion picture engineer? Some subversive activity on his part directed at the microphone, or the amplifiers, or the recorders? Not that, but rather constructive work on the camera's home front.

Mobility and ease of manipulation of the camera have been problems receiving subsequent delivery of a sentence to a microphone in a modern comfortable recording studio is nothing compared to the difficult manipulation of a camera on location. Contrast these working conditions with those confronting the camera.

Cameramen doing Navy location shooting are required to work under handicaps that seldom exist in the studio. Much of the Navy's camera work could be classed as "tripibian," involving as it does photography on land, at sea, and in the air with attendant problems almost too formidable for those involved in this type of warfare. The cramped quarters of a bridge or an engine room, the unstable platform of a landing boat or an airplane make camera handling hard work. The narrow passageway and the vertical or near-vertical ladders that must be traversed with heavy equipment to gain access to the various parts of a ship involve almost as much sweat, if not blood, as is involved in following a trail in New Guinea. It is not without cause that once a camera position is achieved it seems that it is seldom abandoned until every usable foot that can be extracted from the scene has been shot. Why move in to get a close-up or another angle when the item can be described so much more easily in the sound track? And so the microphone takes over the camera's work, the audience goes to sleep and the information fails to become part of the learner's experience.

NOTE: The above article by Lieut. Jensen of the Training Film Branch, Bureau of Aeronautics, U.S.N., was selected from the November, 1944, Journal of the Society of Motion Picture Engineers. The Editor.
To our friends at home —
and to the many friends
now serving in the Foreign
Theatres of War —

Greetings and best wishes
for the New Year

J. E. BRULATOUR, Inc.
FORT LEE — HOLLYWOOD — CHICAGO

Distributor
EASTMAN FILMS
Aces of the Camera

(Continued from Page 7)

When the ship that carried the unit from Brisbane to Moreabry arrived at its destination he was left on board, with two enlisted men, to look after the equipment. He turned out to be a brilliant tropic night, complete with full moon. Jack thought it was wonderful.

And then he heard some of the Australian stevedores saying what a wonderful night it was for the Tojo Limited. The Tojo Limited, which previously had only artistic and romantic appeal, now seemed to be an excellent target that ship would be under a diabolical searchlight training its brilliant light on ship for the nefarious purpose of Tojo's bombers. What an excellent target that ship would be under such a moon, stuck out in the middle of the placid waters of Moreaby Harbor. Jack could feel his stomach contracting as he weighed the possibilities open to him in case of attack. To stay on the deck. And the Aussies were sure would not be neglected.

What had seemed like such an ideal night to Jack a few minutes previously, now had all the earmarks of being one of the worst possible nights. The moon, which previously had only artistic and romantic appeal, now seemed to be a diabolical searchlight training its brilliant light on ship for the nefarious purpose of Tojo's bombers. What an excellent target that ship would be under such a moon, stuck out in the middle of the placid waters of Moreaby Harbor. Jack could feel his stomach contracting as he weighed the possibilities open to him in case of attack. To stay on the ship, which was loaded with ammunition and high-octane gas, or to take to the water which was full of man-eating sharks? Suddenly his stomach relaxed as he weighed the possibilities open to him in case of attack.

The Tojo Limited failed to come over that night. The Aussies were sure would not neglect the ship. And the Aussies were sure would not neglect the ship. And the Aussies were sure would not neglect the ship. And the Aussies were sure would not neglect the ship.

The magnificent work of the combat camera units throughout the various war theatres is too well known to need repeating here, and the story of Jack Greenhalgh's unit with the 5th A.A. Command cannot be told. But besides their ground and aerial combat duties it can be revealed that they covered their area for general news events that concerned the Allied armed forces, much as a newswoman covers her beat at home, made films on ordnance tests, and on-the-spot movies of improvements or new developments in battle or battlefield technique.

By way of illustration, two films that Jack made while he was in New Guinea: one was on the right as well as the wrong way to drop supplies to isolated groups of men in the jungle. Made right in the fighting area, under actual, not simulated, conditions, it was sent to Washington where it was studied, and the lessons it taught passed on to those who needed the information. Another was on how to convert a jeep into an ambulance—quickly, under field conditions. It had been something the brasshats had been wanting to know for a long time, and then one day, under the stern pressuring of necessity, a G.I. in New Guinea discovered how to do it. So, Jack and his boys made a film showing just how it was done, and sent the film to Washington. And that information was also passed on.

Jack says the army was a great experience. And although there were many incidents that he wouldn't care to live over he wouldn't have passed it up for the world. One he's only sorry his career didn't stand up better under the rigors of the life out there.

Jack came to Hollywood from San Antonio, Texas, in 1923 and got his start in pictures as Ross Fisher's assistant. He had gone with his father to visit the company on location at Lake Sherwood, then called Las Turas Lake, and fell heir to the job when the regular assistant failed to show up. It was a fill-in job that turned into a fulltime position on the series which Harry Joe Brown was producing, and Al Rogell directing. And while Jack was the regular assistant now he was still expected to fill in for the stunt men when they failed to make the grade.

There was the time a spectacular shot had been planned from the top of the Flatiron Building, the tallest structure in Los Angeles at the time. It called for the stunt man to descend from the roof of a building, a rope throw to a girl from one of the windows on the way, and carry her down to the ground. Everything worked out splendidly until the stuntman got up on the roof and looked down the ten stories to the sidewalk below. Something had benched to his insides and he refused to do the stunt. Al Rogell raised an eyebrow and looked meaningly at Jack. So Jack carried the heroine down the rope.

Then there was the time that the script called for the hero to speed up to a moving train on a motorcycle and climb aboard. But the stuntman hired for that occasion, though he raced along by the side of the train, couldn't make up his mind to change vehicles. So once more the Rogell eyebrow was raised and the meaningful look was cast in the direction of the assistant cameraman. "But I've never even been on a motorcycle," Jack remarked, as casually as he could. "Well, don't worry," Rogell told him, "the second section of the train won't be long for five minutes and anyone can learn to ride one of the things in that time. The one who is twist this and shove in that . . . ."

He made it.

As second cameraman Jack went with the Fred Thompson Company. And when Fred Thompson died he went to Pathe for his first experience with sound; on a picture starring Constance Bennett and Regis Toomey which Norbert Broduine photographed. He was with First National in 1930, and with Fox in '32. In '35 he went to Panama as second man to Edgar Lyons to shoot "Go Get 'em Haynes," starring Bill Boyd. It was one of the pictures that put Republic in business.

When P.R.C. started, Sig Neufeld called Jack to shoot their first picture, "The Beast of Berlin"; and he was shooting on that lot until Uncle Sam called. And two days after his medical discharge Sig Neufeld called him back to work. He hopes all the other boys will receive such considerate treatment when they come home.

Eugene Lauste

(Continued from Page 11)

movements or motions of persons or objects and the sounds produced by them." Other excerpts from the patent papers, "It is obvious therefore that no true record or reproduction of the sound waves could be made by any mechanical process or means in which a hard substance, necessary to make the impression comes in contact with another hard substance, such for instance as the recording or reproducing pin of the phonograph or gramophone, because the friction caused between the two hard substances itself creates sound waves which accompany, vary or modify, the sound waves which it is desired to record and reproduce and are recorded and reproduced with the latter, producing dissatisfactory or unsound reproduction. The record therefore must be taken or produced without any contact between the medium caused to vibrate by the sound waves and the record or recording substance."

In 1908 a paper was drawn, accrediting Eugene Augustin Lauste with the Photocinematophone, A Revolution in Living Pictures, A Revolution in Talking Machines, A Cinematograph and Photophone combined. "The Most Marvelous and Interesting Scientific Invention of the Age," and inside the paper, the following was written: "Plays its own part, never fails to sustain it, and gives any one of the most important elements of the true reproduction. The record therefore must be taken or produced without any contact between the medium caused to vibrate by the sound waves and the record or recording substance."

In 1909 Eugene Lauste, his meager savings gone fast, and still working in London advertised for work, and here is one of the advertisements as it appeared, "Ten gentlemen, with 200 pounds each, REQUIRED to form syndicate, to demonstrate and license valuable patent for which there is world-wide interest."
The friction type "Professional Junior" removable tripod head is unconditionally guaranteed for 5 years. It gives super-smooth 360° pan and 80° tilt action. It fits all of the several tripod bases made by us. The large pin and trunnion assures long dependable service. A "T" level is attached. The top-plate can be set for EK Cine Special (with or without motor) 35mm DeVry and B&H Eyemo (with motor), and with or without alignment gauge.

The Standard size tripod base is sturdy, affords positive adjustments from normal low of 42" to extended high of 72" and weighs but 14 lbs. complete. The Baby size depresses to 16" extends to 21", weighs 5½ lbs. All tripods have fluted, positive adjustment knobs.

Illustrated below are: (1) The new Baby "Professional Junior" Tripod, all metal, for low shots; (2) The "Professional Junior" Tripod Head which fits all our tripods; (3) the top portion of the standard "Professional Junior" Tripod and (4) the "Hi-Hat" low-base adaptor, underneath which is shown the finger-grip head fastening nut that firmly holds the Tripod Head onto any style of tripod base in the "Professional Junior" line. To the right is shown the "Professional Junior" Tripod on which is mounted an Eyemo affixed to the Camera Equipment Co. Shiftover Alignment Gauge.

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading Newsreel companies and 16 mm. and 35mm. motion picture producers.

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading Newsreel companies and 16 mm. and 35mm. motion picture producers.

Tripod Head Unconditionally Guaranteed 5 Years. Write for Descriptive Literature.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY
THE first fifty years of motion pictures has now become history, and one of the most intelligent and interesting bits of writing concerning these fifty years of motion pictures is found in the 16th annual edition of Martin Quigley’s International Motion Picture Almanac. Editor Terry Ramsaye has written a brief outline of the history of motion pictures from which we quote the following:

“Within just five decades, or about the time of man’s arrival at maturity, the motion picture has arisen and developed into the dominant entertainment medium for the world. Its status among the arts of saying and telling is second only to the printed word and in an effective sense its audience is greater. No book ever published, save perhaps the Bible in its many versions, has ever reached so many persons as have seen ‘Gone With the Wind’ and many other notable pictures.

“The screen has achieved this, and in every land under the sun, by reason of the capacity to more fully recreate events, real or imagined, than any other form of expression. It can present and say all that the written and printed word can say. It can record, reproduce and state all manner of emotion, mood and gesture, with either more realism or more theatricalism, than the stage. It captures for itself the spell of music, the voice of the orator, the colors from maiden’s blush to rainbow. It takes over all of pagentry and the dance. Whatever man can do the screen can do. Beyond that with its capacities of accent by selection and close-up and its super-human seeing, near and far, independent of tense, free to mingle yesterday with today and the morrow in its telling, the motion picture has powers unapproached by the older arts.”
Complete facilities for three processing jobs—negative, positive and reversal film—are provided in one self-contained unit with the Model 3 Houston. In appearance, materials and fabrication, this versatile machine embodies the best of Houston's many years of specialized experience and engineering knowledge. Uniform processing results are pre-determined because this ingenious Houston handles every step with machine-controlled accuracy. Model 3 is compact and portable. Its ease of operation and speed assure profitable volume production.

Write for descriptive folder.

THE HOUSTON CORPORATION
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MEETS EVERY FILM FINISHING NEED... Requires no additional equipment ★ Operated in white light ★ Top drive type with floating bottom elevators ★ 90 in. long, 52 in. high, 30 in. wide ★ Precision-made throughout ★ Delivers 600-900 ft. negative film per hour; 1200-1800 ft. positive film; 600-900 ft. reversal ★ A.C. 220 volts; 12 K.V.A.
AMONG THE MOVIE CLUBS

L. A. 8mm Club

Approximately one hundred members and guests of the Los Angeles 8mm Club attended the annual banquet and installation of officers.

New officers installed were: President Erwin Dietz, Vice-President John Boaz, Secretary Bill Dorris and Treasurer Claude Cadarette.

As is the custom of the club, the prize winning pictures of the year were announced at the banquet, and the top winners were screened. Winning first prize and the Achievement Trophy was W. D. Garlock’s picture, “Pretties on Parade”. Second was Milton Armstrong’s “Tell Me a Story”. Third prize went to Fred Evan’s “Ice Follies”, and fourth prize was won by Gertrude Millar for her picture “Vacation with Wackie Will”. She also won the Vacation Trophy.

La Casa Movie Club

The La Casa Movie Club of Alhambra, California, continued its pace-setting attendance record at its December meeting with well over 200 present. The following program was presented:

A La Casa Movie Club demonstration film in 8mm.

A “Special” Christmas film in 8mm.

“Christmas Memories”, in 16mm., by Mrs. R. Gillman.

“High Sierras”, in 35mm., by C. L. Ritter.

“Ice Follies of 1944”, in 16mm. by P. L. Cowherd.

“Parrot Like Birds”, in 16mm., by Andrew Orear, President of the Aviculture Society.

Syracuse Movie Makers

The members of the Syracuse Movie Makers have hit upon an idea that is worthy of passing along for consideration by other clubs. Starting in December, they devoted one meeting to strictly business. Members figure that lengthy business meetings preceding the showing of films becomes boresome to guests—and to members who are anxious to see the show go on.

The December 19th meeting was devoted to discussion of the technique of making Christmas home movies. Archie Rodgers handled the meeting, and many Christmas movies of the past were screened and commented upon. Comment was cold-blooded and to the point, with bad features and good ones being pointed out.

Saint Louis Club

Most outstanding feature of the December meeting of the Amateur Motion Picture Club of Saint Louis was a talk by Vernon Rasmussen on “The Use of Light Meters”. Rasmussen is an expert on this subject, and gave members some valuable advice.

Dr. and Mrs. W. R. Jordan screened 200 feet of excellent Kodachrome showing the beauty spots of Palm Beach, Miami and Havana.

“Tiny Factories”, an interesting film about Bees, filmed by Walter Jennings of Kansas City, Mo., was particularly interesting.

Final subject screened was “Glacier National Park”, in Kodachrome, by Edward O. Miller.

L. A. Cinema Club

The Los Angeles Cinema Club combined its annual dinner and its election of officers on the evening of December 12.

Officers elected were: Harry E. Parker, President; Alice Claire Hoffman, Vice-President; Mrs. Mildred Zimmerman, Secretary-Treasurer.


M.M.P.C.

Four films highlighted the December meeting of the Metropolitan Motion Picture Club, held in the Walnut Room of the Hotel Capitol, New York City. Pictures screened were:

“Ice Follies of the Sirens”—an 8mm. production by the San Francisco Amateur Movie Producers of San Francisco, California.

“A Day at the Seashore”—Produced by Harry Groedel, and filmed during the summer of 1944.


“Sahuaroland”—Winner of the club’s Annual Contest in February, 1941, made by Frank E. Gunnell.

Philadelphia Club

The Philadelphia Cinema Club held its December meeting on December 12 at Westminster Hall.

Among the features of the program was “A Trip to Bermuda”, filmed by Dr. L. H. Hergesheimer. Another outstanding film screened was “Merry Christmas”, a very entertaining Castle film.

Five of the club members also exhibited unusual examples of 35mm. slides.

Tri-City Club

The annual dinner of the Tri-City Cinema Club was held in Davenport, Iowa, the evening of December 14. Motion pictures were taken of all members and guests.

Consider These Facts:

There are few greater thrills than viewing 8 mm. motion pictures you have made yourself—of re-living in motion and color the precious highlights of family life, friendship, sport and travel—or of seeing in your own home your choice of the rapidly expanding libraries of 8 mm. films.

But to enjoy 8 mm. films to the utmost—they should be shown with a precision projector that embodies all the features and conveniences of a professional type machine.

Thousands of Ampro 8 mm. projectors, produced before the war, delighted users all over the world. They offered new standards of brilliance of illumination and ease of operation plus:

... still pictures for detailed study...
400 foot capacity if desired...
reverse picture operation for humorous effects...
one hand precision tilting control...
fast automatic rewinding...
automatic pilot light for threading...
removable optics for quick cleaning...
easy threading over large sprockets...
and many other features.

Although Ampro 8 mm. projectors will not be available until after the war—keep in touch with newest developments in motion picture projection by writing today for latest information on Ampro projectors.
Artistic Titling Tips

By GLENN R. KERSHNER, A.S.C.

DURING 1944, in many issues of the Cinematographer, we dwelled on various subjects helpful to the photographer, particularly to the 16mm non-professional who has never been fortunate enough to be in Hollywood to observe how the professional cameraman works to accomplish his fine results.

"Proper Placing of Reflector," in the March Issue, was devoted to the comparison between the 35 and 16mm films as well as how to place the reflectors when the sun gave a front, three-quarter light. In the April issue "More About Reflectors," the sun was furnishing a direct sidelight. "Lighting Sunday Movies," in the May issue, described how to use reflectors when the sun was a back-light.

On page 267 of the August number we dwelt on "Improving Vacation Movies" by describing continuity in travel films. "Composition for the Amateur," in September, brought many requests for more of such articles. While "Movie Tricks for Amateurs" in the October Cinematographer brought letters from interested readers in some twenty foreign countries where the magazine is delivered. In that article we discussed miniatures with charts on the hyperfocal distances of lenses at various stops, and picture areas of different lenses at various distances of focus.

December being the holiday number, the article "Plan Your Christmas Movies" was devoted to the building of miniature trees, landscapes and buildings around the base of the Christmas tree, as well as how to light and photograph these miniatures; also ideas about how to cut from the miniature shots to the actual scenes of the family and holiday events.

Presuming your Christmas pictures are now made, you will want to title them artistically. Something different than the usual white letters on a black background are not good salesmanship for the scenes that follow. Titles with backgrounds similar to the scene give the best results so it is of these titles we will talk.

We may spend weeks and months and, at times, a considerable sum of money in filming a subject or a travelogue. Therefore we should at least spend a considerable time in preparation and filming the titles. There should be no repeating of words and never use a word more than once in the beginning of your titles.

Once your titles are all finished, lay them out and number them as they are to be cut into the film. By counting the words, you will know how much film will be required. In 16mm there are 40 frames to the foot. As a rule we use 8 frames per word making five to the foot then add an additional foot for each title for safety sake. Should you have a camera that can be wound backwards then part of this extra foot can be used in the dissolves or fades. It is well at the time you count the words of each title to write the number of feet required in the upper right hand corner beside the card number, so that you will make no mistake while photographing.

This system, which I have used for many years, you can use whether you have a camera that fades in and out or not. After carefully reading and studying the accompanying diagram, and with a little patience, you too, will be making all your titles with backgrounds in them. If you can not make lap-dissolves you can fade in your titles by the use of a dimmer on lights. It takes 21/2 seconds normal to run one foot. If you start your camera and bring up your lights from darkness to full light on the title in 11/2 seconds, and at the end of the title fade it out the same, you will have a perfect fade-in and fade-out. Or, if you would rather have a full foot fade, use the 21/2 seconds. Now if you can wind your camera backwards that foot, you can fade in on the next title, called, a lap-dissolve. Very nice if you can do it, for it saves the sudden jump and shows that you have become quite a master of the technique.

Since we are talking of lap-dissolves, fade-ins and fade-outs, I will give you symbols that will be very helpful to you. Symbols that you can mark on your title as you plan them. For example the title is marked Number 1. It requires three feet, I write 3 ft. up in the corner. Now, if I wish to fade in, I make this character before it <. That means from nothing to full light. Should I wish to fade out at the end, I place the opposite symbol > after the 3 ft. This means from full light to nothing. If I wish to make a lap-dissolve to the next title, I use a combination of the two which is

and in the diagram on this page you will see how these can be used.

To prevent becoming confused at any time, you lay out your titles as numbered and make a diagram as illustrated. As

(Continued on Page 29)
Caught flat-footed by our gunners and a combat cameraman

THE combat photographer is two men—he’s a trained and toughened fighting man. He’s an expert cameraman. He has to have the strength and skill of a fighting man to get his pictures when the fighting is at its thickest. As a cameraman, he has to be so expert that he is virtually a picture-taking machine, functioning at high efficiency under incredibly difficult conditions.

Everyone sees his pictures; but few outside the motion picture industry realize how many combat cameramen are former movie cameramen, how many have been trained by veteran movie photographers.

And, of course, processing, editing, cutting, adding supplementary sound—weaving separate shots into finished productions—are largely in the hands of movie-trained people. The archives of this war will be illustrated by the most magnificent war pictures ever made, and much of their excellence will be due to the co-operation of the motion picture industry.

Eastman Kodak Company, Rochester, N. Y.

J. E. BRULATOUR, INC., Distributors

FORT LEE CHICAGO HOLLYWOOD

One of a series of advertisements by KODAK testifying to the achievements of the movies at war

AMERICAN CINEMATOGRAPHER • January, 1945 25
DEVELOPING MACHINES
With a Patented Controlled Drive
For
MOTION PICTURE FILM

A simple, positive method of
Driving both 16mm. & 35mm.
Motion Picture Film
Through a Developing Machine.
It gives a
Soft—even—controlled—
Flowing Action to the Film
That insures your
PRICELESS, IRREPLACEABLE NEGATIVE
Against breakage or
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WE BUILD LARGE UNITS FOR PRODUCTION LABORATORIES

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Cable Address “Fonda”

“’The Machine That Cannot Break Your Film’”

Bringing the Bible to the Screen
(Continued from Page 9)

users of these films, for the demand for release prints has been tripled.

In Cathedral Films the gospel lives on the screen. The Christ speaks out as though he is advising us of today, and Biblical characters become human instead of mythical creatures of legend. The fact that this type of film is catching on as it is indicates that the motion picture of the future will play a great part in teaching man that love is better than hatred; that peace is preferable to war.

Mili’s script called for one shot to be followed by a cut to another shot for bars 6 to 9. Mili is a great believer in the psychological inferences that can be developed by connecting different strips of films. This, again, he derived mostly from the Russian school of moviemaking. “Jammin’ the Blues” is like a silent film in many ways. No one talks in it, except for the music and singing. The picture also has an abstract quality. There are no sets in it, and the musicians seem to be photographed in space without a floor or ceiling or walls. As a result, the photography has an almost three-dimensional effect combined with the quality of an etching.

The musicians for “Jammin’ the Blues,” all of them among the most eminent in their field, were selected by technical director Norman Granz and Mili. They play three numbers, a slow blues to start off with; then “On the Sunny Side of the Street,” to step up the tempo; and finally a fast swing number which actually jams the session. The numbers were recorded in true jam session style from midnight to 6 a.m. one night on sound stage 9, the music recording stage at Warners. The music was then amplified on playback machines and coordinated with the photographic image on the set. Marie Bryant sings the “Sunny Side” number, and Archie Savage is cut in for an abstract dance in the course of the music.

Mili points out that none of the popular standbys of swing music are in evidence in the film. None of the musicians are drinking, and only one of them is smoking. None of them are tense, for the essence of a real jam session is complete relaxation. Lester Young, the saxophonist who is one of the stars of “Jammin’ the Blues,” is one of the most highly regarded musicians in the trade. He has a soft, poetic face, and Mili is capitalizing on it in his photography. The picture opens with a shot on Young’s pork pie hat on which the credit titles are superimposed. Then, as the music fades in, Young lifts his face to the camera as he is shown doing a sax solo.

Mili had been placed under long-term contract by Warners, and the production office as well as the craftsmen at the studio watched the making of his first film with interest. He was given complete freedom to do what he liked and to experiment with the camera, film and settings as he saw fit.

Result: “Jammin’ the Blues” is so good it is being boomed for an Academy Award.

Don’t forget to visit your nearest Blood Bank. A pint of YOUR blood may save a Life—GIVE.
New Filmosound Library Releases Announced by B.&H.

COURAGEOUS MR. PENN, No. 5826, 9 reels. Stirring historical drama showing the struggle for religious and civil liberty in England under Charles II, and the founding of a free, peaceful commonwealth in Pennsylvania. William Penn is shown as a fearless Quaker, doffing his broad-brimmed hat to none but God, though it incur the wrath of king or judge. He defends himself magnificently before arrogant, corrupt judges by winning the jury to his side. The influence of his loyal, nobly-born wife plays a vital role, and his part in founding his colony, and its peaceful relations with the Indians is excellently brought out. One of the best films ever made for schools, churches, and other social groups. Study guide. (Clifford Evans, Deborah Kerr.)

FIRED WIFE (Universal), No. 2579, 7 reels. High tempo comedy mixup of business and romance. Career girl called back from a secret honeymoon, winds up in Reno, but is saved for a new career. (Robert Paige, Louis Albritton, Diana Barrymore.) Available from March 6, 1945 for approved non-theatrical audiences.

MASTERS OF SACRED MUSIC, No. 928, 10 min. Purchase $28. Rental $1.50. Beethoven and Bruckner, some of their major contributions to sacred music, and the scenes enriched by their lives. (Music only, and titles.) Selections include: Beethoven's Fifth Symphony, Symphony Pastorale, Missa Solennis, Symphony Eroica and Bruckner's Fourth Symphony. Purchase $28.

P.F.C. Releases New Film Catalog

The Princeton Film Center, motion picture producers and distributors, has just released its 1945 Film catalog, listing a wide variety of educational and special-purpose films. Attractively bound and carefully arranged to permit quick, easy selection of titles, the films listed in the catalog cover virtually every type of subject, including teaching aids, cultural and technical releases and entertainment films.

In the comprehensive Educational section, films designed especially for classroom use are available for teaching aids in history, geography, chemistry, physics and social studies, as well as health, safety and other general topics.

Supplementing a well rounded list of cultural films in the Center's own library, a large number of special releases have been deposited with Princeton by the Office of War Information and the Coordinator of Inter-American Affairs. World wide in scope, these releases include war subjects, many of which were filmed in actual combat, as well as valuable post-war informational and documentary subjects.

Specally chosen sponsored subjects, selected for their educational value, are included in the catalog. Each subject is fully described on a separate, colored, illustrated page, and arranged so these descriptive pages can be used for classroom discussion of the subject.

B & H Announces New 16mm. Sound Projector

Designed especially for 25-cycle operation, the Filmosound Model 156-VB is identical in other respects with the Model 156-V, and is listed at $453.67, according to word from the Bell & Howell Co., 7100 McCormick Rd., Chicago. While as yet the entire output of this model is allocated to military and high-priority civilian use, the 25-cycle feature is expected to fill a real demand in rural localities after the war.
Eugene Lauste
(Continued from Page 18)

wide demand. Inventor wants third share. No cash.—Address L., Box 1,624, Postal Department, Daily Telegraph, Fleet-Street, E. C. 1," and another appeared later reading as follows, "Vast fortune awaits financier who will assist inventor for completing most marvelous and startling cinematograph, embracing natural sounds. Working capital about 2000 pounds. Syndicate entertained,—Write Enterprise 12a, Melbourne-sq., Brixton, S. W."

In this manner, he could accumulate a little capital now and then and carry on, but the time was not just ripe and those seeking fortune would gradually drop out, but Eugene Lauste believed in the future. On May 3rd, 1912, November 3rd, 1913, and November 4th, 1913, he received other patents in Great Britain. On May 3rd, 1913, he was awarded a patent in France, Belgium, and Italy; later he received his patents from Australia, Switzerland and Sweden, and in the months to follow he received his papers from the Patent Office from Spain, Portugal, Hungary, Norway, Denmark, Holland, New Zealand, Mexico, India, Brazil, Japan, United States and Germany. All sealed and delivered in the year 1913. Mr. Lauste was fortunate to have the help of his oldest son Henry Georges in all of his experimenting. Though Georges finally accepted a post as a representative of the Eastman Kodak Company, Ltd., Lauste kept the scientific laboratory in Brixton, as busy as a bee hive.

In 1910 to 1912 Lauste very successfully recorded the music of a fifteen piece band and an eighteen piece orchestra, which was demonstrated again for the reproduction of both the picture and sound simultaneously. Eugene Lauste came into his own, for he had proven definitely in 1909 that he could both photograph the picture and sound on the same film.

Lauste came to this country in the year 1887 where he joined the technical and research staff of Thomas A. Edison at Orange, New Jersey, and there with Edison, he worked and helped perfect the famous Kinetoscope projector. Lauste left Edison in 1902 to develop a gasoline engine which he designed in association with another French engineer. He was assured by experts that an engine of this type with its noise and inflammable potentialities, could never be commercial because it would not be allowed on the streets. He dropped it, yet, he might have been accredited as the inventor of the automobile as well as the inventor of sound in motion pictures.

More than his being credited with the invention of the photographing and recording of sound and picture simultaneously, he had a wide list of achievements in motion pictures, one as great as the other, for he pioneered and is responsible for the following: He was the inventor and designer of the Eidoloscope camera and projector and the inventor of the so-called "Latham Loop" while working with Latham and the indispensable second sprocket, still an essential element in the modern projector, which for years was a patent litigation that marked the early history of the film industry.

Following his invention of the Eidoloscope camera, he was associated with the American Biograph and Mutoscope Company for several years, and while there and about the year 1900, he made his first great light valve and also made experimental drawings and designs, which have for the most part been lost. I have no intention of making this a technical treatise of the work of Eugene Lauste, for I am only interested in the man and his achievements.

I knew him in his late years and he was a very tired and weary man, having faced many hardships. He was many times close to poverty, yet he held on to hope. Few could see the future as he did, for had others gone along with him then, the sound motion picture would have been yours to enjoy, many years earlier. Lauste had faith and the patience of a saint. He went back to England to continue and while there, his work was interrupted because of England's entry into the first World War. He came back to the United States in 1916, hoping to find new capital here for the commercialization of his invention, but here he met with a similar situation, for it was not much later that we entered the war.

I prided myself for having been one of the early cameramen in the commercialization of prize fight films, but now I am taken back, for in my research into Eugene Augustin Lauste's life, I have found that he photographed the Griffio-Barnet prize fight on the roof of the Old Madison Square Garden which was shown in a tent on Surf Avenue, in Coney Island about the time the stork was looking for an address and a chimney in which to drop me.

In the year 1926 the sound motion pictures was introduced by Warner Brothers via the phonograph disc and it was not until two years later that the sound motion picture came into its own via the combined picture and sound track, on the same film strip.

The entry of sound brought many new people into the field; sound technicians, engineers, editors, dialogue directors, stage directors, a new crop of actors and actresses, new apparatus, new manufacturing plants all turning out the machinery needed for the production and reproduction of sound. Then came the 16mm. sound, which brought new manufacturing, new ideas, now playing a great part in this war for the education of our Army, Navy and Air Forces and for the education of our children. It brought new languages into our homes. It makes possible the study of sound to scientists, physicians, psychologists and psychiatrists; it has become a world teacher and it is yet young and the depths of its scientific achievements has a long way to go. Yes, much has been gained since the introduction of sound on film.

Eugene Augustin Lauste has been honored in documents in the Society of Motion Picture Engineers. His apparatus in the museums of the Bell Telephone Laboratories, the Smithsonian Institute in Washington are conclusive evidence of his work. There is no doubt that many have and will benefit by its processes, but Eugene Augustin Lauste and his immediate family, received only a
meager remuneration for his inventions in spite of his patents, in spite of his hope that he would some day receive his part for his efforts, he died leaving his widow who still lives in the little house at 12 Howard Street, in Bloomfield, New Jersey.

Today her dearest one's invention of the sound motion picture can be heard on any screen. She, the hopeful one, sits beside a window, looking out toward the little shack where her Eugene labored in his laboratory always working to keep his invention up to date with the changing of the years, for she remembers his promise that success would be theirs when sound on film will be given a hearing.

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Government Accepts Optical Training Films

Over a year in the making, a series of six visual aid units on optical craftsmanship, produced for the United States Office of Education by the Bell & Howell Company, has just been formally accepted in Washington. Each unit comprises a sound film (running time of from 20 to 30 minutes), a silent filmstrip (40 to 70 frames in length), and a 16-page illustrated instruction manual.

The series was produced in collaboration with the U. S. Navy, which has under way a similar group of eight films dealing with the grinding and polishing of flat surfaces. The Bell & Howell series is confined to spherical surfaces, and was produced at the company's new Lincolnwood optical plant. Professional production values prevail throughout, Terrytoon and Knowledge Builders studios did the animation; Action Films, the photography; Reeves, the recording. Wm. F. Kruse, head of the Bell & Howell Films Division wrote and directed the entire series.

The formal preview was held in the screening room of the Office of War Information, with Navy, State, Agriculture and other government departments represented. British, Russian and Chinese government representatives have expressed interest in getting prints for their own optical industries.

These films form part of the nearly 500 war training films produced by the USOE under the direction of Floyde Brooker. They are used daily in a large scale craftsmanship training program at the Bell & Howell plant, not only for the instruction of job specialists, their primary purpose, but also to give a broad grasp of the entire lens production process to craftsmen and executives alike. Other USOE films also find a place in this training program, which is expected to be applied also in many other plants. This series, like all the USOE and Army-Navy pre-induction films, can be rented and purchased through the Bell & Howell Filmosound Library, with rental charges credited against purchase price of films bought within 30 days of original rental.
LENSES for Today and the Future

B&H-THC Cine Lenses are not merely ideally corrected for today’s monochrome and color work; their design anticipates the possibility of future improvements in film emulsions. Thus they are long-time investments. Write for details.

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What A.S.C. Members Are Now Filming

As this issue goes to press the following pictures were in production in Hollywood. They are listed by studios, with the name of the Director of Photography for each picture:

COLUMBIA STUDIOS

“A Thousand and One Nights”, Ray Rennahan, A.S.C.

INTERNATIONAL PICTURES

“Along Came Jones”, Milton Krasner, A.S.C.

METRO-GOLDWYN-MAYER STUDIOS

“Hold High the Torch”, Len Smith, A.S.C.
“Our Vines Have Tender Grapes”, Robert Surtees, A.S.C.
“Weekend at the Waldorf”, Robert Planck, A.S.C.
“Twice Blessed”, Ray June A.S.C.
“The Hidden Eye”, Lester White, A.S.C.
“Her Highness and the Bellboy”, Harry Stradling, A.S.C.

PARADISE STUDIOS

“The Lost Weekend”, John Seitz, A.S.C.
“The Affairs of Susan”, David Abel, A.S.C.
“The Virginian”, Harry Hallenberger, A.S.C.
“Good Intentions”, Daniel Fapp, A.S.C.
“Too Good to Be True”, Charles Lang, A.S.C.
“Masquerade in Mexico”, Lionel Lindon, A.S.C.

RKO STUDIOS

“The Invisible Army”, Nick Muscarela, A.S.C.
“The Spanish Main”, George Barnes, A.S.C.
“Johnny Angel”, Harry Wild, A.S.C.
“Follow Your Heart”, Frank Redman, A.S.C.

20TH CENTURY-FOX

“A Bell for Adano”, Joseph La Shelle, A.S.C.
“Captain Eddie”, Joe MacDonald, A.S.C.

UNIVERSAL STUDIOS

“A Night in Paradise”, Hal Mohr, A.S.C.

WARNER BROS. STUDIOS

“The Big Sleep”, Sid Hickox, A.S.C.
“Hotel Berlin”, Carl Guthrie, A.S.C.
“Mildred Pierce”, Ernest Haller, A.S.C.
Japs Copy American Aircraft Camera

The Japs have copied an American-made aircraft camera, even to the model number and the U. S. Navy's inspection insignia, an anchor, according to Fairchild Camera and Instrument Corporation, New York, manufacturer of the original.

The camera copied is the small, hand-held, manually-operated Fairchild F-8, used for many years in both Naval planes and by private aerial and news photographers throughout the world.

But the Japanese were not content with copying the main features of the F-8s, plus its model number and the anchor insignia. They went further and stole camera features from the French and Germans, incorporating them to produce an instrument which, Fairchild candidly admits, has some superior points, although definite weaknesses.

The American original is a 15-pound camera designed to meet military, naval and commercial demands for a light, low-priced aerial camera with a wide range of versatility. It is particularly well suited for training and miscellaneous assignments which do not require use of a large, precision camera. It has a 15-inch telephoto f/5.6 lens, a focal plane shutter, and a negative size of 5" x 7". and it can use either roll or cut film. In the earlier models the Fairchild F-8 had a speed range from 1/35th to 1/200th second, and in the latest model 1/125th to 1/400th. There is a single slot curtain.

The Japs have made these changes:

They have borrowed the multi-slot focal plane shutter curtain from the French Gaumont camera, giving their camera a speed range from 1/35th to 1/400th second, which is a definite improvement.

A German cut film magazine has been installed. It is superior to American magazines available for this camera, experts say.

Adjustable leather hand and shoulder straps, undoubtedly necessary for the fly-weight Jap photographers to hold the camera steady in the slip stream, were copied from a German design. The straps are advantageous.

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Heavier castings are used in the camera, increasing its weight to about 24 pounds. This is not good.

Fairchild's camera has one level bubble, for vertical pictures. The Japs have two bubbles, one on the cover and the other at the base of the magazine. Fairchild engineers can't figure the purpose of the extra bubble, view it as superfluous.

Tokyo has put a most elaborate viewfinder on the camera. Instead of a glass lens it consists of an open wire frame with three upright guide sights. Its large size makes it seem possible that it would get lost in action when shooting from close quarters. It also hides a considerable portion of the center of the target, and appears generally inferior to photographers who have tried it out.

W. E. Will Produce Television Equipment

Western Electric Company plans to manufacture television transmitting equipment in the postwar period, according to an announcement by F. R. Lack, vice president in charge of the Company's radio division.

Mr. Lack pointed out that during peacetime Western Electric is the manufacturing and supply unit of the Bell System and a leading manufacturer of radio broadcasting equipment. Since Pearl Harbor, he said, the Company has become the Nation's largest producer of communications and electronic devices for the Armed Forces, including amplitude modulated and frequency modulated radio transmitting equipment.

Claridge Honored

Master Sergeant William W. Claridge, above, laboratory supervisor of the 4th Signal Photographic Laboratory Unit, now stationed on New Caledonia in the South Pacific, was recently awarded a special commendation by Major General Frederick Gilbreath, Commanding General of the South Pacific Command. He was given the citation for "outstanding professional ability and superior devotion to duty in setting up and operating a motion picture laboratory at New Caledonia. Although faced with seeming insurmountable obstacles such as lack of highly technical equipment, inadequate temperature control devices and unsuitable buildings, you nevertheless by an excellent display of initiative and resourcefulness succeeded in establishing a processing station capable of developing a considerable amount of combat negative when these pictures were vital to the war effort."

Before going into the service M/Sgt. Claridge was laboratory supervisor at the Technicolor Laboratories, Hollywood.

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MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931
Nation's Children Still Get School Movie Equipment

School children in Spokane, Wash., will continue to enjoy a high standard of education even though there's a war on. By virtue of a government priority allotment, J. M. Tewinkel, assistant superintendent of schools in Spokane, Wash., recently accepted delivery on eight brand new Filmsound motion picture units recently allotted the Spokane public school system by government priority.

Through the combined foresight of the equipment manufacturers—most of whose efforts currently are devoted to vital war work—and the W.P.B.—whose officials realize keenly the necessity of allotting equipment to educational activities—American youth today is enjoying the most well-rounded learning facilities in the nation's history.

Nelsen Appointed Ampro Educational Sales Director

Ampro Corporation announces the appointment of Ervin N. Nelsen, for five years supervisor of Visual Education in the St. Louis Park Schools, Minneapolis, Minnesota, as Educational Sales Director of the company.

This is in line with Ampro's policy of offering constant assistance and service to the various educational dealers throughout the country and its plan to set up the best possible educational sales organization for the distribution of its products.

Mr. Nelsen comes to Ampro with a vast knowledge and understanding of the field of visual education in the elementary and secondary schools of the country and a keen appreciation of the future possibilities of visual education and the vital part it does and will play in both the industrial and educational fields.

His background suits him well for the position which he fills. As principal, teacher and supervisor of visual instruction in various schools for the past ten years he comes to Ampro with the viewpoint of the educator, yet his work in this special field has not been confined alone to formal education, having also spent considerable time in industry, where he has supervised the production and national distribution of various visual aids materials.
Camera vs the Microphone

(Continued from Page 15)

ing attention for some time, but mostly in relation to studio use. If all training films could be produced under controlled studio conditions, the present equipment would be adequate. This is seldom the situation confronting, however. What studio could arrange space and accommodations to handle a battleship or a battle in relation to studio use. If all training attention for some time, but mostly in relation to studio use. If all training attention for some time, but mostly in relation to studio use. If all training attention for some time, but mostly in relation to studio use. If all training attention for some time, but mostly in relation to studio use.

Lighter, versatile equipment of military alloys in camera and accessory equipment will take some of the curse off the handling of equipment. Lighter cameras, tripod heads, tripods, battery cases, and so on, would free cameramen and their crews of the sometimes killing weight of equipment that has to be moved. Collapsible, lightweight magnesium dollies and tracks would aid in making it possible to move the camera in and out, to permit it to be used as a pointer. Perhaps a spring-suspended gyrostabilized camera head can be designed which would permit moving the camera on locations where track cannot be laid. Lightweight collapsible camera platforms would be of considerable use. If these were fitted with detachable pneumatic tires they could be used to move the object into and away from the camera in situations where it would be difficult to move the camera smoothly.

Because the photography involved in making training films must be done under handicaps not found in studio work, attention should be directed at making the camera as mobile as possible. The pen is mightier than the sword. Freeing the camera would make it mightier than the pen and subsequently the microphone. Paraphrasing an old saying, it is “every camera to itself and may the microphone take the hindmost.”

Women Producers On the Increase

The list of women entering the production field is taking on sizeable proportions, with Constance Bennett the latest to join the group. She will launch “Paris Underground,” her first for United Artists, this month.

Mary Pickford has announced “One Touch of Venus,” from the Broadway musical, to be done in Technicolor. Virginia Van Upp has just been handed the biggest job ever held by a woman in the industry, with her appointment as executive producer at Columbia. This reward came after producing pictures for the company less than a year. She has recently completed “Together Again” and now is preparing the Rosalind Russell starrer, “Some Call It Love.”

Harriet Parsons might be termed the dean of the women producers, having started her production career making shorts for Columbia, and graduating to features with the making of two Judy Canova pictures at Republic. She recently completed “Enchanted Cottage” for RKO, and is now preparing “Prodigal Women,” with “Who Can Ask for Anything More?” to follow.

Joan Harrison produced “Phantom Lady” last year for Universal and is back to produce “Uncle Harry,” from the Broadway stage play, which will be one of the big shows on the company’s current program. She holds a writer-producer contract.

France and Belgium Get 16mm. Shows

A striking development of the Nazi occupation of France and Belgium is the widespread use of 16mm. projectors by commercial exhibitors in both countries, according to the latest OWI film survey. In France, the October estimate of commercial exhibitors equipped to show 16mm. sound films was 4500. More than 90 Belgian movie houses were found to be using 16mm. equipment in September.

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Transition Opportunities

To help American industry bridge immediate dislocations after V-E Day, nearly 200 of the outstanding postwar trade potentialities, new products and services have just been summarized in "Transition Opportunities," the latest postwar study published by the N. Y. Journal of Commerce.

The new publication calls attention to long pent-up sales opportunities and supply problems in foreign and domestic markets, with particular emphasis on the H-B businessman by country and product by product.

peacetime products now in the demonstration stages—from synthetic raw materials to the latest manufacturing innovations—are outlined in descriptive detail. Warborn operating economies which industry will pass on to the consumer in the initial transition period are likewise spotlighted in this new study.

"Transition Opportunities" was prepared from data secured through key industrialists, government and trade association officials. Copies may be had at 25 cents each from the N. Y. Journal of Commerce, 63 Park Row, New York 15, N. Y.

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AMERICAN Cinematographer
THE MOTION PICTURE CAMERA MAGAZINE

In This Issue...
Fact Films to the Front

February 1945
Where the “dope” gets squeezed . . .

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Landing on Leyte

For Americans breathlessly awaiting news of the Leyte campaign, Eyemo recorded General MacArthur’s landing and much of the fighting that followed.

This same Bell & Howell Eyemo was with Don Senick at the bloody Tarawa landing, the second assault at Saipan, the retaking of Guam.

Previously the same camera was used at Pearl Harbor and had followed the Fleet for 22 months in the South Pacific. It has been doused in sea water twice.

Ample evidence this, that Eyemo Cameras have what it takes to do the tough jobs; and it’s the explanation of why most newreels are Eyemo-filmed. Yes, Eyemo Cameras are favorites with Don Senick and many other ace cameramen who learned the hard way that Eyemos always get their shots accurately, clearly, and quickly. Seven Eyemo models with a wide range of accessories mean that Eyemo is best fitted to do your job, too.


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Don Senick, Movietone News representative in the Pacific War Theater Newsreel Pool, rests with his veteran Bell & Howell Eyemo beside a shot-up Jap Zero.

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American Cinematographer • February, 1945 39
CONTENTS


The Documentary Film..............By Irving Browning 44

Fact Films to the Front..............By Ezra Goodman 46

The War of Russian Films.............By Robert Joseph 48

Commercial Processing of 16mm. Variable Area...By Robert V. McKie 50

Requirements of Educational Film Presentation...By Oliver Bell, M.A. 52

Through the Editor's Finder...........56

Among the Movie Clubs................58

Artistic Titling Tips (Part 2).........By Glenn R. Kershner, A.S.C. 60

THE FRONT COVER: Director of Photography Milton Krasner, A.S.C., is filming a scene for "Along Came Jones," starring Gary Cooper, who is also producing the picture for International Pictures.

Stuart Heisler is the director.
The character of the film is important, too.

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MAJOR ELMER DYER, A.S.C.

I
F the famous Luther Burbank had not decided to develop a spineless cactus it is entirely probable that the motion picture industry might never have heard about Elmer Dyer, A.S.C., who since 1927 has been one of Hollywood's outstanding aerial cinematographers. As a matter of fact, Elmer says he tips his hat to a cactus whenever he sees one, for he thinks he owes his photographic career to a cactus—and Luther Burbank.

Here's how it happened. Elmer had loaned a man some money to equip a motion picture camera. The man couldn't pay it back, so gave the camera to Elmer. He also told Elmer the names of certain people to write to in order to make money with said camera. It turned out that Elmer, whose photographic experience was confined to a box Brownie camera, was to go out and make newsreel shots and then try and sell them to newsreel companies.

Elmer had heard that Luther Burbank was developing a spineless cactus to feed cows. So he went over to see him and arranged to make movies of the work. The result was "Harvest in the Desert," the story of Burbank's triumph, and Elmer's first film. He sold it to J. R. Bray, and was on the road to a cinematographic career. "You see," says Elmer, "you never know what's going to happen next in this life, so you better keep your eyes open and read the newspapers to see what's going on.

That cactus picture set Elmer up proper. He became the western representative of Paramount Pictographs and soon had made 40 subjects. He was doing that when the first World War broke out. He tried to join, but the army turned him down because he was married. All of which goes to show you never can tell what will happen during a war. For 25 years after the army refused to take him because he was married, it did accept him for the present World War—and he still was married.

But by now he had become a famous aerial cameraman, and his service and experience was needed. So he was commissioned a Major in the Air Forces. He was sent overseas where he directed the photography of "Target for Today," and made an enviable record for himself. He was retired from active service several months ago, and now is back in Hollywood again. As soon as he returned he went to work on "Captain Eddie," flying an old pusher type plane.

Still a bit groggy from so much aerial work in Europe, he decided he would rest up a bit from the flying work after finishing "Captain Eddie," so he mounted his camera on a tank and did special work on Lester Cowan's "G. I. Joe." He directed the photography on the second unit of the picture which made battle scenes. Elmer says he would like a few more ground jobs, but we bet he will be back in the air the first time he is called. He's like that.

Getting back to a few historical facts about Elmer, we inform you he was born in Amarillo, Texas, on August 24, 1892. He moved around a bit, and attended public schools in Oklahoma City, San Antonio, Texas, and Los Angeles. It was when he was just 21 years old that he acquired the motion picture camera we mentioned at the start.

When he was turned down by the Signal Corps in 1917, he took a job with Nat Spitzer and photographed Texas Guinan in "Two Gun Woman." For three years he photographed a series for Spitzer. Then the Whitman Bennett Studio sent him to Alaska on "The Iron Trail." He was there for seven months. When he returned he went with the Fox Studios where he photographed the Van Bibber pictures. He did "Last Man on Earth," and then went to Universal Studios where he photographed films starring Arthur Lake and Slim Summerville. While at Universal, in 1927, they wanted a special scene made from the air. The cameraman became sick. So Elmer told them he could do it. He had flown down through the Grand Canyon of the Colorado making a newsreel picture before the first World War. (Incidentally, he is probably the (Continued on Page 68)
Camera

By HAL HALL

I
F any man ever seemed to lead a charmed life it is Charles Alfred Marshall, A.S.C., who for the last nineteen years has been engaged in aerial cinematography, and has nothing but an occasional stiff neck in the way of injuries.

BUT—Marshall has led a charmed life, otherwise he would not still be an aerial photographer. In fact, he figures he really shouldn’t be alive to tell his story. Three times he has faced death while making motion pictures, and he escaped even slight injury in two of them. In the other a leather cushion which he held in front of his head probably saved his life.

He was flying at Randolph Field during the filming of “West Point of the Air.” His plane was at a great height when his pilot turned its nose down and went into a terrific dive. “Suddenly planes appeared all around us,” explained Marshall. “It was all over in a matter of seconds. Then I learned that we had dived right through a formation of 48 planes. How we missed them is a mystery to me.”

Another time Marshall was at March Field making tests at dusk. Flares consisting of 65 pounds of magnesium were carried up in the camera plane and dropped in an effort to get certain effects. As the camera ship was taxiing down the field on the takeoff one of the big flares exploded in the plane. Marshall jumped out, along with the pilot, while the ship was going fifty miles an hour. Both saved their lives and escaped with only scratches. The plane was burned to a crisp. So was the camera.

The third narrow escape for Marshall was in 1937 when he flew to Alaska to photograph the expected rescue of the Russian fliers who went down over the North Pole. Fifteen miles out of Fairbanks, Alaska, the camera plane crashed and landed upside-down in a swamp four feet deep. When the crash seemed certain Marshall grabbed a leather cushion and held it in front of his face. The cushion was cut in two pieces by the impact, but all Marshall received was an injured neck. He is still bothered with that neck from time to time.

Marshall was born in Los Angeles on July 21, 1898, and graduated from Hollywood High School. He had attended Junior College a year and a half when the first World War broke out. He immediately joined the Air Service and was sent to the School of Military Aeronautics at the University of California. At March Field he received his flying training. He was commissioned a Second Lieutenant, but before he could get overseas the war ended.

Charley got a job in the old Lasky Laboratory in the printing room. He worked there ten hours a day for two years before being transferred to the drying room. For this he received $45.00 per week. He left there and went to work in the laboratory at the Goldwyn Studio where he eventually got a chance as an assistant cameraman under Andre Barlatier, at $25.00 a week. That was his start.

He went as assistant to John Mescall after the merger which resulted in the forming of Metro-Goldwyn-Mayer Studios. He became a second cameraman there and remained at MGM for eight years. Then he got into doing Akeley work, and soon became an Akeley specialist.

In 1926 he started doing aerial photography, and in 1928 made the first big air picture “Flying Fleet” at Metro-Goldwyn-Mayer Studios. He left Metro-Goldwyn-Mayer in 1929 and did free lance Akeley and Aerial work. But he was back at MGM again in 1931 doing aerial photography on “Hell Divers.” In 1932 he was on “Sky Bride” at Paramount. In 1933 he was one of the aerial cinematographers on “Night Flight” at MGM. His experience in flying over the Rockies at 14,000 feet with no oxygen he says was one he’ll not forget.

In 1934 Marshall was on “West Point of the Air”—that was when his ship dived through the formation of 48 planes by accident. “13 Hours by Air” was Charley’s next in 1934. That was for Paramount. He got a slight scare on that

(Charles Marshall, A.S.C.)

(Continued on Page 68)
THE DOCUMENTARY FILM

By IRVING BROWNING

FOR some time now, I have had my opinion regarding an old trend of film production. The past fifteen years have brought to the fore a new classification for them, the "Documentary." The question whether the recording of an incident on the spot is documentary or whether it can be re-enacted by actors or non-actors, directed, capably edited, with special musical score is also "Documentary."

Many fine and some poor films have been cloaked behind the word "Documentary." Low production cost is one of its attributes but not one of its assets. I have made films which were documentary, therefore in preparation of this article, I did some research, discussed and even argued with writers, producers and editors, regarding the documentary film, so here I present proof with my viewpoint. Is it a new trend or is it just a silent film like those of the silent era?

I have found that some of the "Documentary" producers have had little experience in film production, journalism, or creative arts, but they do have an abundance of intestinal fortitude and ambition. The paint, pomp, oversized sets, glamorous stars and polished dialogue is not the fare of the documentary producer; he uses the background of our common folk, the most natural material for dramatic filming. A classic example of such material, as Hollywood would make it, is Erskine Caldwell's "Tobacco Road."

I can cite an incident in a film of mine, entitled, "City of Contrasts," which I made in 1930 and was presented by Sol Lesser. I made several scenes on Riverside Drive in New York City. This street facing the Hudson River is well known as one of wealth. At that time, along the waterfront, on Riverside Drive, a group of men, because of the depression, colonized there, setting up a squatters' camp, governed by their own Mayor and his Committee. This was a sorrowful scene, yet it was on Riverside Drive. If I were to tell a one-sided story of New York, I would make a close-up of the lamp post showing "Riverside Drive" and then make some shots of the "colony" with its squalor but that would not be the truth, neither would it be the truth if I had shown the side of wealth alone. Here I could have easily created a distortion of incident.

To me, the documentary film must tell the unadulterated truth, made on the spot. Having characters re-enact the incident which happened some time earlier, could create color, as by the editor's hand, flavored by special music, tainted by the dramatic tongue of the narrator, for when all are combined, make for the same effect that Hollywood obtains in the drama.

Now, I bet I am in a hell of a jam with ye producer, ye writer, ye editor, ye musical director and ye cameraman who make the documentary film, but I am going to stick to my opinion and get going further into my story. First, I shall open Webster's dictionary and take from it, the definition of the word "Documentary." As Webster defines "Documentary"—"pertaining to written evidence; consisting in documents, as documentary evidence." If a film of such classification were brought into a court of law, it would have to be a true, unadulterated fact or it would never stand up as "Documentary" evidence.

The power of the film as a political force is far reaching, greater than the newspaper, yes, even greater than the spoken word. That entertainment is a morale builder, has been clearly defined centuries ago; it provides that which every human seeks, reality or escape. It puts into instant action our stagnant senses. In most instances, it is accepted without condition. Before the film, we found our escape in books, lectures and the theatre; the film came forward with a greater force because it could recreate that which we are able to en-
vision from books and newspapers. Radio too, excites our imagination as will television when we can see as well as hear.

When the film was first put in motion, the true documentary material was its first source. This eventually led to the newscast, the travelogue and the exploration film. The necessity for making a paying venture of the film, brought on the melodrama, comedies, historical films, and so forth. To me, this film fits into three categories, FACT, FICTION and FANTASY. The FACT film would, of necessity be the “Documentary;” the FICTION film is a creation by an author; the FANTASY film, such as Shakespeare’s “Midsummer’s Night Dream,” the cartoon and others of that class. The newscast, the very oldest of our documentary films, still is a very important parcel of every motion picture program; it is proof of the necessity of presenting the facts, at least in even proportion to fiction and fantasy. It is important for us to come out of our world of fantasy and view the real world we live in.

Whether or not we agree with the use of Webster’s definition of the word “Documentary” and whether or not a documentary film should be re-enacted by actors or non-actors from a story written for special emphasis, with music composed or selected to create a dramatic effect and with dialogue created specially for the drama, if this be called “Documentary” film, then I do not agree, for to me it compares to the early silent film, put to music, but a silent film it is and in that class, it should compete.

I should like to cite another instance of a simple distortion of incident. Julien Bryan, a foremost documentary film producer, and a very close friend of mine, told me that while he was in Poland covering the German invasion, the Germans seized his films and still pictures, to view for censorship. They finally returned the films and pictures, especially complimented some shots of the German soldiers smilingly looking at the camera. “When you show these fine films,” they told Bryan, “do not fail to mention what strong, healthy, smiling men the German soldiers are.” This he agreed to do, but by the time he prepared his films for his lecture tour, the Germans had already laid waste of Poland, Czechoslovakia, France, Belgium. Bryan in his lectures then referred to these particular sequences as “The German barbarians, laughing at the atrocities they committed to life, home and liberty.” What a different face the same pictures presented with just a slight change in dialogue. If ten writers were to caption a single photograph, there probably would be ten different expressions of enthusiastic comment, with ten different meanings.

A re-enactment alone can alter a story favoring a particular slant, then add to it music and the editor’s creative effect and you have a distortion. Preparation for the production of a documentary film compared to the Hollywood film, makes very little difference except for the cost, the cast, and the artisans who produce them.

Let us take for example the case of two films such as “The March of Time” and “This Is America.” These two series should, under the present circumstances be called “Documentary.” Are they Documentary? Both films are re-enacted sometimes by actors, sometimes by non-actors; both are highly seasoned by the director, cameraman and editors’ distinctive imprint and both use, to a great extent flash-backs, of “real” documentary scenes from newsreel libraries. Both re-create important news and political viewpoints, yet, if we dig deep down to the core, they could never be termed true “Documentaries.”

(Continued on Page 64)
FACT FILMS TO THE FRONT

By EZRA GOODMAN

Much has been written and reasoned about the documentary film. In England, men like John Grierson and Paul Rotha have theorized about fact films and also produced some superlative examples of them. In this country, moviemakers like Robert Flaherty and Pare Lorentz have been pioneers in this realm. Recently, emphasis upon the documentary film has been brought about by the war. The stress of current events has accentuated the documentary, and pictures like "Desert Victory," "Memphis Belle" and "The Fighting Lady" have met with popular and critical acclaim.

The last named of these pictures is noteworthy in more ways than one. Not only is it one of the finest examples of the documentary technique, but it marks the first time that a major American studio has entered into documentary production and distribution on a full-fledged scale. The producer of "The Fighting Lady" is Louis de Rochemont, founder and for nine years head of the March of Time. The studio is Twentieth Century-Fox, which is producing a series of non-fiction films, of which "The Fighting Lady" is the first.

De Rochemont himself prefers not to designate his picture with the word "documentary." He likes phrases like "screen journalism" and "fact films" better. It is his contention that the word "documentary" has a forbidding sound about it, with overtones of the precious and aesthetic. He believes that a disservice has been done to the non-fiction film by some of its past practitioners, who have been interested more in theory and technique than in subject matter. Some of these documentary makers have gone overboard on "arty" camera angles, in the bad sense of that word, and have stressed style to the disadvantage of communication. De Rochemont argues that a good many of these documentary producers have not made the necessary contact with the broad base of their audiences by failing to speak out more directly and by neglecting to insure the widest possible distribution for their productions.

De Rochemont is confident that he will not fall into either of these two pitfalls. His theory of moviemaking is that the screen can be the counterpart of a newspaper reporter or of the non-fiction branch of a publishing house, as well as purveying regular fiction films. And Twentieth Century-Fox is providing the complete facilities of its distribution set-up for these non-fictional releases.


The picture is unique in that it blends the documentary technique with the best Hollywood methods of moviemaking. The spectacular combat footage in the film is combined with the human element of characterization of the carrier's crew.
The Navy cameramen worked from a preconceived scenario and took all of these shots as planned. "The Fighting Lady" leads up to its battle scenes in methodical fashion. There are close-ups of the men on the ship and of life aboard the carrier. By the time the action scenes are reached, the audience has a total sense of participation in the event. "The Fighting Lady" is being distributed in theatres throughout the country on the same bill with "Sunday Dinner for a Soldier." Reports received from exhibitors thus far indicate that audiences are as partial to the non-fiction film as to the fiction film. Prior to "The Fighting Lady" the top gross for a documentary film that was sold to theatres was "The Ramparts We Watch," produced by de Rochemont for the March of Time in 1939. The picture, augmented by a heavy advertising and publicity campaign, grossed $700,000. "Desert Victory," the British documentary, was distributed by Twentieth Century-Fox in the United States on a regular commercial basis, and grossed $500,000. Pictures like "Tarawa" and "Memphis Belle" were given gratis to exhibitors. They played widely and helped condition audiences for other documentaries.

(Continued on Page 66)
The War of Russian Films

By ROBERT JOSEPH

I
N TWENTY-SEVEN years of Russian Soviet Union history, motion picture films have been one of the most powerful of all propaganda and educational weapons. Beginning with first Soviet films like "Potemkin" and "Ten Days That Shook the World" the Soviet Republic has used the screen as a medium for educating its citizens into what the Russian revolution stood for, what it was trying to accomplish, and what it meant in the everyday life of Soviet citizens. By 1939 the Russian motion picture industry had reached a high level of screen excellence, and many of the films which were shown to audiences in this country were found enjoyable and on a par with some of the best which we had to offer. Films like "Serge Nevsky" and "Peter the First," based on the stories of Russian national heroes of antiquity are considered by critics the world over as among the finest examples of motion picture entertainment.

When Germany attacked Russia on June 22, 1941, Russia continued its program of moving its important industries east across the Urals to Central Asia and Siberia on a stepped up plan. Entire industries, factories, complements of workers had been moved during the middle and late thirties from the western-most portions of the Soviet Union to far-off places like Uzbekistan and Kazakhstan, thousands of miles to the East. Among the industries which began moving out of Moscow and Leningrad on June 22, 1941, was Russia's all-important motion picture industry.

The site selected for the continuance of Russia's gigantic motion picture producing program—the Soviet Union has thousands of stationary and mobile theatres—was Alma-Ata, capital of the Kazakh Soviet Socialist Republic. Other minor studios were also located in Transcaucasia, Tashkent, Ashkhabad and Stalinabad. The problem of transportation in those dark days of the summer of 1941 were almost insurmountable. Yet Soviet leaders realized the importance of preserving as much of the vitality of the Russian film industry as possible. There were training films to be made, films for civilian morale, and the necessity to preserve a record of the progress of the war against the Germans.

Yet the move was made, and Russian film companies continued to turn out pictures on the same important scale as before. The spirit of heroism which was so evident in spectacles made before 1941 was as strong as ever, and films like "General Suvorov" and "War of 1812" and "Ivan the Terrible," as three examples of Soviet spectacles made after the Nazi invasion, were produced on the same gigantic scale. Russia's greatest contribution in the field of war-time films was its realistic program of front-line documentaries, American audiences have seen some of these films—"One Day of War," "The Russian Front," "The Battle of Moscow," and other pictures which have been shown in American theatres during the last several seasons. Among some of these tremendous documentaries "Sevastopol" must stand alone. "Sevastopol" has been considered one of the finest of all war films, a milestone in recording breath-taking front-line war.

The day following invasion in June of 1941 Russian cameramen and technicians were in uniform, assigned to specific front-line jobs. Within a matter of days they were hardened masters in the art of recording the war. "Sevastopol," according to their own account, is the culmination of the best experience in shooting war-front battle scenes. The following by Roman Karmen, Russia's ace cameraman, is a front line account of shooting this most interesting of all Soviet documentary films:

"Sevastopol. Years will pass, but Sevastopol's glory will remain undimmed. At the Black Sea Naval Base Soviet cameramen worked under the bombing of thousands of planes, under hurricane shelling. Vladimir Mikosha, Dimitri Rymaryov and others kept the camera going without a stop, recording the defence of Sevastopol. Our descendants will see the blood-smeared, noble faces of machine gunners in the trenches at Sevastopol's approaches, which all express the one thought: 'Only over my dead body can the Hitlerite scum enter Sevastopol.'

"The months of war rolled on; the cameraman turned into a soldier. There was no sector on the Sevastopol front without the man with a camera. New forces kept coming to this 'Kinokronika' (Soviet newsreel): young students from the State Institute of Cinematography.
Assistant operators became full-fledged operators. There were not enough cameras; sometimes film was lacking; but there was never a shortage of men. Hundreds of applications to the Sevastopol front were filed by the Cinematography Committee.

“We lost many comrades. They died a soldier’s death on the battlefront. Many a time in action the cameraman had to put aside his apparatus and take to a rifle or machinegun. Each of us now has three and a half years war experience behind him. The cameraman is thrilled beyond words when he shoots victorious battles at a place where three years ago he was recording the bitter episodes of retreat. In those bitter days we knew our work would not be in vain. We knew that the shots of the first days of the war would someday go into the film of victory. We didn’t lose heart; we worked with dour perseverance and without rest. And only death in action stopped us. I saw Cameraman Lozovsky shoot a tank attack. He went in with the leading Soviet tank, and he kept his camera working until three shells had hit his tank. The third set it ablaze. With blood streaming down his face he jumped from the burning tank hugging the film to his breast. That eagerness to shoot the film, come what might, epitomizes the Soviet cameraman.”

Shooting the siege of Sevastopol had something of a national crusading spirit to it. Cameramen in all parts of the Soviet Union vied with each other for this assignment.

With the Russian victory at Stalingrad and the resurgence of Soviet Armies westward toward Germany, Soviet film industries have been moving back to their former studios in Moscow and Leningrad. But studios in Transcaucasia, Alma-Ata and other Central Asian cities are still in operation. There has been time and opportunity during the past several months for a somewhat more leisurely pursuit of film production, and

**Top left, a scene from “Bogdan Kmelinskiy-Ukraine Hero”, one of Russia’s great wartime films.**

Although in the midst of war, Russia’s film industry made the historical film, “Russia’s First Printer”, a scene of which is shown at top right.

**Right center is a scene from “Sukha Bator—Warrior of Asia”, a great spectacle film made during the war.**

**Below, a scene from “Tankmen”, one of Russia’s realistic films of the war.**

(Continued on Page 69)
Commercial Processing of 16mm Variable Area

By ROBERT V. MCKIE
RCA Victor Division of Radio Corporation of America

These pictures are distributed to the Army and Navy for projection at various camps overseas. From 65 to 75 composite prints are made on each picture and, including the many training films being produced at this time, the total 16mm. film being processed will average millions of feet per month.

Two types of measurements were desired. First, measurements to determine processing controls and, second, measurements of distortion on 16mm. soundtrack properly processed.

A “family” of 16mm. negatives was recorded at 60 per cent amplitude, each negative consisting of (1) 400 cycles for reference level, (2) 4000 cycles for measuring high-frequency loss, and (3) 4000 cycles modulated in amplitude at a 400-cycle rate for cross-modulation measurements.

The 400-cycle section of the test was used to obtain the data for the distortion measurements.

Using a Corning 384 filter, EK5372 fine-grain recording stock was exposed as a negative material over a density range from 1.00 to 1.49 using EK5302 as a positive material.

A review of the quality of recording equipment showed that even a better than average commercial 16mm. reproducer would be unsatisfactory for measuring these tests. Accordingly, a special 16mm. reproducer of the “grindstone” type was set up and used for the measurements subsequently discussed. The tests were measured through the special film measuring channel by running the film in the form of a loop.

Fig. 1 shows the cross-modulation curves plotted against print density. It has been established by numerous frequency tests and by practical experience with music and dialogue recordings that 30-db cancellation of the 400-cycle component in the cross-modulation test is satisfactory for all types of material, and density tolerances have been established at this value. From Fig. 1 the print density tolerance for a negative density of 2.15 is 0.92 to 1.42.

However, experience has proved that owing to variations in exposures and emulsions it is more practical to maintain the print density within the smallest possible tolerance, and to allow the maximum variations in negative density. All laboratories now have a well-established control department, and tests covering the entire process are made at definite intervals so that the variations which do occur can be controlled easier in the laboratory than during actual production, where the sound tracks are recorded under varying conditions of temperature that may effect the emulsion and cause changes in the density of the sound track negative.

This method of maintaining the print density within the smallest possible tolerance and allowing the maximum variations in negative density, requires the least number of timing corrections. Negative densities can easily be maintained within the wide tolerance permissible for a given optimum print density under reasonable processing conditions. This method eliminates unnecessary handling and timing of each scene of the negative when sent to the laboratory, or the necessity of keeping elaborate records on the density of each scene. Only negative variations, which do not fall within the wide negative tolerance as indicated by the cross-modulation test, need be noted.

Fig. 2 shows density tolerances for a combination of negatives and prints having 30-db cancellation and indicates a negative ‘density range of 1.92 to 2.45 for an optimum print density of 1.20 to 0.10.

The 400-cycle section of the test recording was used for distortion measurements. The grindstone was used as a means of running this film. For any given negative or print density covered by the density range, as indicated above, the distortion measured from 2.5 per cent to 3.5 per cent using a General Radio distortion factor meter.

[Continued on Page 70]
Requirements of Educational Film Presentation

By OLIVER BELL, M.A.
Director, British Film Institute.

MOST people will pay lip service to the idea of the using of films for educational purposes. But having agreed the principle, the matter only too frequently ends. On the one hand, the educational world asks why it should buy this relatively expensive apparatus when there is nothing very much to show on it. On the other, the commercial film maker asks what is the use of making films which are rarely shown and on which he will never get any return for his money. That is a deadlock which has been one of the principal objects of the British Film Institute to solve.

Our efforts have mainly been directed at the educational people. We have used every means in our power to persuade them that apparatus for the projection of visual material ought to be as much a normal piece of school and classroom equipment as a wireless set or a blackboard.

It has not been an easy task, yet progress has been made. Roughly ten per cent of the schools in England now have projection apparatus. Had it not been for the war, it is my personal belief that the mere re-stocking of the schools would have been doubled. As soon as supplies of projectors again become available there is, I am certain, an immediate demand for 5,000 to be filled. Within a period of ten years there should be a total of at least 20,000 installed. As electricity becomes available and bad premises are rebuilt, there should be between 30,000 and 40,000. It would seem, therefore, that the mere re-stocking of the schools would have been doubled.

The sub-standard film has come to stay. I can see it being used by Government Departments for making known their policy. I am sure it will again be used (and perhaps more intelligently used than before the war) by the big commercial interests either for direct advertisement, in the case of branded products, or for general public relations work in the case of trade associations. Voluntary societies and political organizations will use films in connection with their ordinary propaganda work. In the world of direct instruction films will naturally be used in adult education, in the Universities, in the Technical Colleges, in the Youth Organizations, in the Young People's Colleges, in the Junior Technical Schools, in Secondary education, and in Primary education. In short, just as the effect of the last war was to bring radio into the normal life of the world, I think it is not too much to say that one outcome of the present conflict will be to put Film into its rightful place.

The manufacturers of sub-standard apparatus on both sides of the Atlantic are well advanced in their plans. Prototype types are coming off the test benches; sales campaigns are under consideration. But what of the supplies of films that are to be shown on these machines? Seeking a possible, nay probable, market, the rent-ers, I am led to believe, are more ready than they were in the past to reduce to 16mm. the money-spinning features of yester-year. But what of the world of education? Can anything be done to provide material for that? Will the audience of 7½ million school children ever be great enough to pay for normal commercial production as in the case of the publishers of educational text-books? Or shall we always have to look forward to a hand-to-mouth philanthropic existence?

I admit that the onus of equitable payment is on the educational world. Nevertheless, the ultimate cost of using films in education must bear some relation to the other costs of educational material. It is, indeed, only the most enlightened authorities that make adequate allowances for the hire of films to schools owning projectors. The result is that the unhappy possessor is forced to use the free sources of films. Advertising or publicity films do not make the best classroom teaching films—or even the best general educational films.

Types of Film

As a result of painful experience, the British Film Institute Committees can now say with a certain assurance the qualities which are wanted for an educational film. But before we go into that, let us consider one or two other factors, such as the types of film, which the schoolsman wants.

First of all, there is the very short length which is almost a moving lantern slide. He wants it to illustrate just one point of what he is saying. It may be a thing like a street scene in a foreign country which he wants in connection with a geography lesson. If it had natural sound it would be so much better, though it can be used silent; but it should never have a commentary. It may be a slow moving picture of how a sheep, cow or horse feeds. It may be a rhythmic action, such as different forms of electrical circuit, or the passage of light through a prism. In existing films there are large numbers of short sequences which, if taken out of a film and catalogued as "illustrational films," would be very valuable to all types of schools. These short lengths of film, depending on the subject, might run for anything between one and five minutes.

The second type of film which teachers want is the Lesson film. This film, which can be up to 15 minutes' running time, forms the kernel of a lesson to be given by the teacher. The number of such films is legion, but the number which have any merit is small in the extreme. The technique of using such a film is simple. The teacher consciously moulds his scheme of teaching to allow it to fall naturally into place in one of his periods. The class is, therefore, prepared for what it is going to see. After the film has been shown the teacher, by questioning them, discovers if the pupils have seen what they were intended to observe. Some teachers point the moral by stopping the film as it is running through the machine and holding a still on the screen so that the exact details may be memorized by the class. Others run the film through a second time to make quite certain that it is impressed on the children's minds.

The third type of film which the schools want is the Background film. This is a film which may be used for giving an introduction to a subject, for revision purposes, or for giving students general information about the world in which he lives. The child is not expected to remember every detail of the film. It should interest him and stimulate his imagination. It should be an interesting incident about it and by

(Continued on Page 54)
To approach perfection, they magnify errors...with the "Comparator" they magnify a tiny camera part 100 times, projecting its image against a master chart. Any variation from the model means rejection of the part.

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To remember Clark Field—the first Philippine fighting?—How three years ago our boys went out time after time—5 to 10 bombers against the whole Jap fleet—18 hours at a stretch in the air—no fighter protection! A stern example to us—buy and hold—more war bonds.

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Technicians at Kodak deal with "invisible elements"—splitting light waves instead of hairs...or accurately splitting a second into 1000 equal fractions...

Gages they use every day, in checking the precise shape and size of camera parts, are accurate to hundred-thousandths of an inch. Some of the camera parts themselves are so tiny that they must be handled under optical magnification in inspection and assembly.

"Quality control," as it is called at the Kodak Camera Works, has become the most exacting of sciences—yet over the years has been systematized to the point where it represents only a small fraction of the cost of your camera.

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It means the difference between a camera that performs and keeps on performing, getting great pictures year after year—and one that "looks swell" on the counter, but shows its lack of precision where it hurts...on your photographic film.

Kodak precision has been a long time growing. Thousands of Kodaks and Brownies, "as good as new" in performance after 10 or 20 years of use, demonstrate its historic importance to photography.

"Postwar" Kodaks, now with the Army and Navy, are the precision tools of Military Photography. Other postwar Kodaks are on the designing boards or in test operation. You'll have precision to higher standards than ever before, in a wide choice of models and prices...cameras that make your dreams come true!

EASTMAN KODAK COMPANY
ROCHESTER, N.Y.
Requirements of Educational Film Presentation

(Continued from Page 52)

other means, such as the school or public library, to learn more about the subject.

There is almost an adequate supply of this material, and especially of the general information type. Most of the output of these enterprises, such as the Ministry of Information, the British Council, the Gas and Oil interests, and quite a number of the more serious feature films, conforms to this pattern. Much of it is admirable.

Sound or Silent?

The lesson film raises the question of sound or silent. I think that the answer is that two versions of each film are needed. And when I say versions, I mean versions. A muted sound film is not a silent film. I think the silent projectors will continue to be used in schools for quite a while to come. From the Education Authority’s or purchaser’s point of view, it is considerably cheaper than the sound machine. From the teacher’s point of view, it is light and easily moved about. The threading is so simple that even the unmechanically minded are not afraid of it.

From the point of view of method, many teachers claim that the silent film is much more flexible. Every class differs and no two classes need exactly the same points underlined. This means, say they, that with a silent machine they are able to teach better than with a sound film, when a strange personality comes into the classroom, and that personality in substance and diction may not necessarily fit the class. This is very true with younger children. They are not as clear-cut as their older cousins. Because of this, teachers are reduced to endless shifts of putting paper-clips in the sections of film they want to show and then running the projector with their hand over the lens, talking the while until they reach the section they would say then: Don’t be afraid of simplicity.

This cramping of material leads to the tempo of the film being far too fast. Film editors should assume nothing when dealing with younger children. They all would do well to have a look at the products of the Colonial Film Unit if they want to see how slow a tempo can be used and be appreciated by an audience. Our own children, having been to the pictures on a Saturday ever since they were old enough, are quicker in the uptake and more responsive to screen conventions and screen idiom than the Africans as yet. But if they are to learn from the film, it must move more slowly than the average theatrical Western.

The educational film is all unfamiliar country. Probably the child has seen nothing like it before. What is worse, from his point of view, is the fact that the teacher expects him to look at it with concentrated attention—in itself a difficult task needing a supreme effort of will—and to remember what he has seen and what it all means.

The child’s mind is simple and direct and the films he wants are simple and direct. Avoid photogenic frills like the plague. The Teaching Notes, which ought automatically to accompany every film and for which there is a ready market, can suggest to the teacher the trimmings which might be put in. Furthermore, any teacher who is worth his salt will be able to amplify the film, verbally adjusting his comments to the mental capacity of his class.

Use of Stills

I would also commend to film makers the need for taking out a still camera when they are out on location or whenever they are shooting. It is my opinion that still pictures will play a larger role than heretofore in the classroom. The efficient diapace and the efficient filmstrip or film projector has only recently been perfected. Before the war this was considerably reduced, but after the war I think it will be one of the commonest instruments in schools. It has the advantage, I understand, of being easily susceptible to mass production. There is, indeed, talk of being able to sell such a machine with plastic lenses and a high light-output for between £5 and £6. In addition, it is easy for an amateur photographer to make his own slides, and the teacher who, as you know, prides himself on his sturdy independence, delights in making his own material. Even he should come up to professional standards, that doesn’t matter. As Touchstone said of Audrey: “A poor thing but mine own!”

There is much to be said for making a film strip of each film put out. Instead, as at present, of the teacher stopping the film as it is going—often harming that section of the film as well as getting only an indifferent image on the screen—he will run the film straight through and emphasize the points he wants to make by reference to the stills in the film strip.

One day, too, I hope that an enterprising educational publisher will cooperate with a film company, and the text book with its accompanying films and film strips will be published simultaneously.

And that brings me to another point. One isolated film on a particular subject is of little value. The teacher has, so to speak, to make a detour in his ordinary scheme of work in order to include it.

It is far, far better to make a series, so that the teacher can plan his course to take in films at regular intervals.

Requirements of Higher Age-Groups

So far we have been considering the film from the point of view of the younger age ranges of children. The same principles still apply as the children get older. More and more, however, they can be addressed in adult language as their knowledge of the world and their mental stature increases. This, in turn, means that the tempo of the film can be speeded up and the factual content increased and the length can also be greater as the ability of the student to concentrate increases.

I do not think the educational film should ever reach the quick cutting of the ordinary entertainment film, for these educational films have still ultimately to be remembered in detail. I would maintain this even in the case of the “introductory” or the “revision” film. In this type of film a rapid survey of the subject is made. In the first place, the film can serve to give the student a general grasp of the subject into which he can fit detailed knowledge as he acquires it through reading or other means. In the second, the course

(Continued on Page 62)
Illustrated below are: (1) The new Baby "Professional Junior" Tripod, all metal, for low shots; (2) The "Professional Junior" Tripod Head which fits all our tripods; (3) the top portion of the standard "Professional Junior" Tripod and (4) the "Hi-Hat" low-base adaptor, underneath which is shown the finger-grip head fastening nut that firmly holds the Tripod Head onto any style of tripod base in the "Professional Junior" line. To the right is shown the "Professional Junior" Tripod on which is mounted a Cineflex 35mm camera with 200 ft. magazine and 12 volt motor.

"PROFESSIONAL JUNIOR"* TRIPOD with Removable Head

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U.S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading Newsreel companies and 16 mm. and 35mm. motion picture producers.

Write for Literature.

The friction type "Professional Junior" removable tripod head is unconditionally guaranteed for 5 years. It gives super-smooth 360° pan and 80° tilt action. It fits all of the several tripod bases made by us. The large pin and trunnion assures long dependable service. A "T" level is attached. The top-plate can be set for EK Cine Special (with or without motor) 35mm DeVry and B&H Eyemo (with motor) and with or without alignment gauge.

The Standard size tripod base is sturdy affords positive adjustments from normal low of 42" to extended high of 72" and weighs but 14 lbs. complete. The Baby size depresses to 16" extends to 21", weighs 5½ lbs. All tripods have fluted, positive adjustment knobs.
THROUGH the EDITOR’S FINDER

THE many friends of Al Gilks, one of the best liked members of the American Society of Cinematographers, will be happy to know that he has been promoted to the rank of a Commander in the Navy.

Commander Gilks, USNR, was called to active duty in September, 1941, with the rank of Senior Lieutenant. In 1943 he was promoted to Lieut-Commander. In January, 1945, he was made a full Commander. Congratulations, Commander Gilks, from Ye Editor, who knows you deserve the promotion!

AGAIN we bring up the subject of more recognition for the Cinematographers of the American motion picture industry.

From where we sit, it would seem that the Cinematographers work is becoming more and more important, and the Cinematographers are playing a big part in the turning out of successful motion pictures.

Yesterday, for example, in the Hollywood Reporter there appeared a review of Universal’s “Her Lucky Night,” which must have cast a pall of gloom over the屏幕上的advertisements and individual credit titles on the screen. In part the Review says: “To break it as gently as possible, this is a pretty sorry affair... the story is stupid and impossible and the script was worse... The direction is no help either... The cast struggled as best it could with the feeble material at its disposal, but it was pretty much of a hopeless task from the start... The best thing about it is the photography of Hal Mohr, which is excellent.”

You see, the Cinematographer didn’t fall down on his job.

In the same issue appeared another review of “A Tree Grows in Brooklyn,” which was made by 20th-Century-Fox. It was a glowing review of an excellent picture, which read in part: “’A Tree Grows in Brooklyn’ is one of the truly fine pictures of this or any year. In many respects it possesses the qualities of greatness... As a directorial effort, this is a triumph for Elia Kazan... Leon Shamroy’s photography is of the finest.”

A few days ago, also in the Hollywood Reporter, was a review of Columbia’s “A Song to Remember,” photographed in Technicolor by Tony Gaudio, A.S.C., and Allen M. Davy, A.S.C. That review read in part: “This glorious picture is a major event in film history. It is one of the finest and most beautiful screen productions yet given to the world... It took the vision, understanding and great writing of Sidney Buchman who wrote the screenplay and followed through on the production, and the vision, understanding and great directorial ability of Charles Vidor, who interpreted it, aided by the finest of technical talent in every department, to bring about this superb result... Tony Gaudio and Allen M. Davy achieved a masterpiece of Technicolor photography, perfectly keyed to every mood of the film, always vivid, warm and rich in beauty.”

The fact stands out that whether the story, acting and direction is good or bad the work of the Cinematographer stands out because of its excellence.

This writer hopes the day will come when the Cinematographer is given the same recognition as the writer and the director.

OUT of the midst of the war in Europe came a delightful letter the other day from one of the oldest members of the American Society of Cinematographers. When we say “oldest” we mean in point of years of membership. It was from John Dorel, who for many years was with Paramount News in Rio de Janeiro.

“I have been covering the war in Europe from the past year,” he wrote. “It is a great life, and I enjoy it. Chances are you might have seen a number of stories in the News Reels covered by me.”

That is typical of John. He is enjoying being in the middle of the war!

He wrote his letter on December 19, and in it wished all of his friends in America “a very happy and prosperous New Year.”

That is typical, too, of John. Right in the midst of the fighting he thinks about sending greetings to his friends. Thanks, John, and good photographing.

AS this issue goes to press it is interesting to note that members of the American Society of Cinematographers are photographing 33 feature pictures in the Hollywood studios.

At Columbia Rudy Mate is filming “Over 21,” Charles Lawton, Jr., is shooting “Kiss and Tell,” and George Meehan is filming “Boston Blackie Booked on Suspicion.”

At Samuel Goldwyn-Studios Lucien Andriot is shooting “Ten Little Indians.”

At Metro-Goldwyn-Mayer Studios Robert Planeck is shooting “Weekend at the Waldorf,” Harry Stradling is filming “Her Highness and the Bellboy,” Charles Rosher is on “Yolanda and the Thief,” and George Folsey is shooting “The Harvey Girls.”

At Paramount Studios Charles Lang is shooting “Too Good to Be True,” and Lionel Lindon is filming “Masquerade in Mexico.”

At PRC Studios Marcel LePicard is shooting “Enchanted Forest,” Jack Greenhalgh is shooting “Undercover Girl,” and James Brown is filming “Stranger in the Family.”

At RKO Studios Nick Musuraca is handling cinematography on “The Invisible Army,” George Barnes on “The Spanish Main,” Ted Tetzlaff on “Those Endearing Young Charms.”


At United Artists Joseph Valentine is photographing “Guest Wife,” Lee Garmes is shooting “Paris-Underground,” and Archie Stout is filming “Captain Kidd.”

At Universal Studios Charles Van Enger is shooting “That’s the Spirit,” Hal Mohr and W. Howard Greene are filming “A Night in Paradise,” Virgil Miller is shooting “Invitation to Death,” George Robinson is filming “The Naughty Nineties,” and Elwood Bredell is shooting “Lady on a Train.”

At Warner Bros. Studios Ernest Haller is filming “Mildred Pierce,” Arthur Edson “Three Strangers,” and Carl Guthrie is shooting “Too Young to Know.”

TREES

56 February, 1945 • American Cinematographer
Model 8 embodies the best of Houston’s broad experience in designing, engineering and building precision processing equipment. With this ingenious machine, the complete processing of 16 mm. positive or negative film is an easy, quick, profitable job. After developing, fixing and final washing have been done in one side of the machine, film is automatically crossed over to other side for drying and delivery. Every step is machine-controlled, assuring uniform results.

Compact and available with or without casters, Model 8 saves space and provides convenient mobility. It is the modern complement to present types of microfilm recorders and conventional cameras. No additional equipment is required.

All controls conveniently grouped at one end. Solution tanks, connections, shafts, pipes, fittings, brackets, bearings, turbulation rods and nozzles made of stainless steel. Easy to operate. Precision-built to usual Houston standards. Write for descriptive literature.

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11801 W. Olympic Blvd., Los Angeles 25, Calif.

INSTRUMENT PANEL easily accessible.
AMONG THE MOVIE CLUBS

L A Cinema Club

Following are the prize winners in the Los Angeles Cinema Club’s Annual Contest for 1944:

First Prize, “Vancouver Island,” by Carl Thomsen.


Third Prize, “Pink Elephants,” by Edwin E. Olsen.


Fifth Prize, “Elizabeth Park,” by Paul Zerrahn.

Sixth Prize, “Guatemala,” by Harry E. Parker.

Seventh Prize, “Autumn in Utah,” by W. L. Easley.


All the films are in color, and percentage ratings were made according to merit of subject, composition, interest, titles, panning, clarity, etc.

San Francisco Club

Three reels of unusually beautiful Kodachrome pictures highlighted the January meeting of the Cinema Club of San Francisco. The films were made by Walter C. Johnson of the Westwood Movie Club. They were:

“Land of Scenic Surprises.”

“Yosemite in Spring.”

“Rambling in Yosemite,” filmed in the Autumn.

Also on the program was a 400-foot Kodachrome film, “The Pageant,” which was photographed by John Smurr, Russ Hanlan and C. D. Hudson at the Shrine football game in San Francisco on January 1, 1944.

M.M.P.C.

The January meeting of the Metropolitan Motion Picture Club was devoted to the screening of films submitted for the club’s Novice Contest. We would have liked to have printed the names of the winners, but the club’s publicity department apparently failed to function.

Philadelphia Cinema Club

“Angels Are Made of Wood” and “Ten Pretty Girls,” both on 8mm., highlighted the January meeting of the Philadelphia Cinema Club. This club celebrates its tenth anniversary in April. Plans are now under way for an anniversary program that will top all programs of the club’s ten years of activity.

La Casa Movie Club

The La Casa Movie Club of Alhambra, California, started the new year with two 35mm. and two 16mm. films featuring the January meeting. And, as usual, the place was packed with movie enthusiasts. The La Casa Club will have to hire a theatre soon, if attendance continues to increase as it did during 1944.

Films shown at the meeting were:

“Native Life in Tibet,” photographed by Dr. David Tennant, who is now serving as a British Army Doctor. Not long before the start of the war Dr. Tennant made a trip through Tibet. Under very trying conditions he made his film.

“Southern California Views,” by member Earl Martin.


“Hawaiian Islands,” by member Dr. Almon Balkins.

Saint Louis Club

The Amateur Motion Picture Club of Saint Louis held two meetings during January. At the January 9th meeting Jim Blaison gave an interesting talk on editing, titling and splicing.

January 23rd was the night of the club’s big party and fun show, which is reported to have been quite a success.

New York Eight

The January meeting of the New York Eight was held at the Hotel Pennsylvania. Three films featured the program. They were:

“Home from the Aleutians,” by Maurice Krakower.

“Le Petit Cinema” and “Random Recollections,” by George Valentine.

8-16 Movie Club

The Board of Directors of the 8-16 Movie Club of Philadelphia are planning an interesting meeting for February. One of the features will be the reshowing of the winning pictures in the Gold Cup Contest, at which the producers of the films will explain the problems they faced in filming them. They will also answer questions relating to them.

Arrangements are also being made to have a speaker from the Armed Forces who has actually made pictures during combat. Should be an interesting meeting.
When peace returns we, the living, must take renewed inspiration from him who wanted the nation and the world to be free; who saw that only through education and training could government of the people, by the people and for the people survive on earth... Lincoln, who learned by firelight with a board for a slate, a coal for a pencil, had the vision... Will we, with the great tools of education and training now at hand, fail to use them?

In rebuilding a new world 16mm films and Victor Sound Motion Picture Equipment can and will take a great part — speeding and advancing training and teaching, presenting to a receptive world the methods, achievements and meaning of Democracy.
Artistic Titling Tips

By GLENN R. KERSHNER, A. S. C.

(Part Two)

SOME time ago an enthusiastic 16mm friend invited me over to see a picture he had filmed around Thanksgiving Day. It was entertaining and well photographed. I was happy to note that his exposure for color was perfect. BUT—the titles were terrible! Some were crooked. Some glistened because the lights had not been placed far enough back to eliminate reflection. A few were out of balance. The thing that bothered me most, however, was the fact that every title was made with the same small white letters on a perpetual black background.

As I sat there watching the picture, feasting my eyes on beautiful scenes... flower-covered deserts that swept to snowcapped mountains—blue skies... tumbling clouds... then— I suddenly found myself staring at those pesky little white letters on the title card. The next and the next and the next were the same. It was awful on the nerves.

When the lights were switched on at the finish we discussed the picture and I mentioned the titles. My friend admitted that he had made them in a hurry for a showing at his club. Just temporary titles. However, he had wasted time in order to be foolish enough to show his picture in that condition to picture-wise folk.

Knowing how much good titles mean to the success of a picture, I worked with him for the next three evenings making new ones in time for his club exhibition. When the picture was shown my friend received many compliments. This is the way we made those new titles:

First we projected the picture again. Then we wound it by hand several times, making notes as to the titles, their length, nature of the scene, fade-ins and outs, etc. We gave each title and scene a number and scratched it onto the first frame of each scene to assist in cutting the titles in later. Then we carefully rechecked for errors.

Fortunately, my friend had made many Leica shots of all these scenes and we had no trouble in picking suitable ones for each scene to enlarge for the background of the title.

It might be well to digress for a moment to explain how to pick photographs for a background. First—when you are making the photographs you should avoid too much detail such as windows, white tree branches, reflections and contrasty objects where the titles will be. It is very confusing when black letters or shadings are lost in the shadows or white letters blend into the high lights. But should you have too many high lights you can diffuse the light with small sticks or little branches.

We made the enlargements on matte paper and colored them (not too vivid). We found many suitable pictures in magazines, travel folders, etc., etc. For some we even selected pieces of artistic colored silks. We also mixed plaster of paris, made designs with our hands and painted them in colors. For a couple of titles we made little miniatures and painted them in color.

In the mean time we had a regular title man set up the titles with selected types with the first letter of each title painted in color, large and quite fancy.

(Continued on Page 67)
Look At Me, Daddy!

RE-LIVE your youngsters’ fleeting childhood days through all the years to come. Capture their amusing, endearing traits in motion pictures. It’s surprisingly easy to do—even with the simplest equipment—if your camera is loaded with Triple S Pan Reversible Film.

Ansco Triple S Pan is a remarkably fast film, ideal for making movies indoors with photoflood lamps, or outdoors when the light is poor.

Not only that—but its fine grain, full panchromatic color sensitivity, and well-balanced contrast insure sparkling, life-like results.

Triple S Pan Film has wide latitude, too! A quality which helps you get good pictures even when your exposures are something more or less than perfect.

Make sure you ask for Ansco Triple S Pan Reversible Film. Available for both 8 and 16mm cameras—in 100- and 50-foot rolls for 16mm and in 25-foot (double-width) rolls for 8mm. Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation.

Ansco
8 and 16mm
TRIPLE S PAN FILM

KEEP YOUR EYE ON ANSCO—FIRST WITH THE FINEST
Requirements of Educational Film Presentation

(Continued from Page 54)

having been taken, it is useful to see such a film again so that his store of knowledge can be re-adjusted by seeing the whole range of a subject again.

Introductory or revision films are on the borderline of the background film. I have already said that this is a very valuable type. The general method of approach has already been worked out successfully by the documentary group of film makers. To use the metaphor of the newspaper, it corresponds to the leading article. A certain number of facts are stated and from them certain conclusions are drawn.

Another type of background film is the travelogue, preferably without the musical accompaniment or the wisecracks. I have indeed seen many theatrical films which, had they not been marred by cheap witticisms, would have been admirable background and even classroom films.

Subjects of Films

And now let us leave the types of film and their different uses to what subjects films should be about. Really, there is scarcely one that is not susceptible to film treatment. As yet, however, many have only received scurvy treatment at the hands of those who put out films.

Of all the subjects that have been mishandled, I suppose Geography is the worst. Only too often, owing to the cost of having proper films made, firms have been too content to take the product of an amateur on holiday in some part of the world, give it a superficial dose of reediting and put it out as a teaching film. Another type of film which, because it is free, is often used for Geography teaching is the tourist film leading up to the excellence of an hotel or the comfort of a cruising liner or the railway facilities in a certain country.

Geography

It will probably be more expensive to make first-class Geography film than any other. A special unit has to be sent to distant parts. The unit must have considerable knowledge of what is really wanted. For no matter how carefully the script is worked out before, it will have to be adjusted on arrival. The cameraman must resist the temptation to take a shot just because it is a good shot. The Director must be like a good journalist and in a short time get beneath the surface to spot the really significant facts. The backers must be prepared for a high proportion of waste material, as overshooting is essential if the editor is to have enough material at his disposal to produce an effective result.

Probably the greatest mine of as yet unquarried material lies in the vaults of the feature makers. For many feature films, units have been sent overseas on location and brought back thousands of feet of material of which only a fraction was ever used. Often they took out a sound track also, and got the natural sounds. What a boon it would be if, despite the tiny profits, if any, that could be made, these companies as a philanthropic gesture paid a small fee to a good teacher to go through the material in their possession. Then if his advice was in the affirmative, they would get an editor on to the job in cooperation with the teacher.

Biology Subjects

The supplies of films on biological and zoological subjects all reach a high level of excellence. Even the amateur makes a reasonably good job of it, as his material is moving in itself. The professionals, especially when they are using slow or speeded-up photography, or when they use micro-photography, almost always turn out magnificent material. My only comment is that much of it is still a little too far advanced for the younger children for whose needs I am making a special plea tonight.

Oddly enough a closely related subject, Physical education, has been rather neglected. All children are far more interested in the workings of their own bodies than in that of a worm, an ant or a rabbit. Whether the matter is looked at from the point of view of good health or the use of education, there would seem to be a tremendous field here awaiting exploitation. Much of the stuff would obviously have to be diagrammatic, but skilful use of the X-ray could blend diagram into actuality, as was done in a German film on Breathing which I saw before the war.

(To Be continued in the March Issue)

Doubtful Dollars

TWO new motion pictures have been produced by the safety education department of the Aetna Life and Accident Companies in cooperation with the United States Secret Service, Treasury Department, and will form vital parts of a nationwide crime prevention campaign being conducted by that agency.

The films are: "Doubtful Dollars," which can be utilized to explain the specific faults which usually distinguish counterfeit from real money; and "Check and Double-check," which is aimed at curtailing the forgery of government checks, millions of which are now being sent to dependents of men and women in the armed forces. This latter film was produced in cooperation with the American Bankers Association, as well as the Secret Service.

In making these films, Aetna Life technicians chalked up a number of "firsts." Special permission had to be obtained from Treasury Secretary Morgenthau to photograph, for the first time, both good and counterfeit money in full color for a motion picture. This was important

New S.V.E. Picturrol Catalog

A new Picturrol Catalog, which lists many new slidefilms, has been announced by the Society for Visual Education. The catalog includes, among other slidefilms, an entirely new series of Picturrols on the National Parks of the United States.

Another new slidefilm of timely interest is "Romance of the Alaska Highway," a picture story of the building of the Alcan Highway to supply the troops in Alaska and the Aleutians. In contrast are two new slidefilms on the life and scenic attractions in the Virgin Islands.

Other educational slidefilm additions include "Elementary Meteorology" (three slidefilms); "Origin and Basic Definitions of Algebra" (two slidefilms); "Mathematical Instruments" (4 slidefilms presenting different types of instruments and their use); "Theory of Flight" (4 slidefilms).

Many other interesting and instructive slidefilms have been added to the extensive S.V.E. Picturrol library. Some are accompanied by teacher's manuals, and others include full information in the titles and subtitles of the slidefilm.

Copies of the new S.V.E. Picturrol Catalog are furnished free upon request to the Society for Visual Education, Inc., 100 East Ohio Street, Chicago 11, Illinois.

New Slidefilm on Air Transportation

"Air Transportation . . . Jobs and You," second in a series of slidefilms presented by United Air Lines, is designed primarily to explain the various jobs in the field of air transportation. This slidefilm was prepared by the Department of School and College Service of United Air Lines and is distributed by the Society for Visual Education.

This fifty-six frame slidefilm is designed for use in junior and senior high schools and junior colleges. It will answer any of the questions asked today concerning the employment possibilities in the new and rapidly developing field of air transportation. The slidefilm and its new type of fully illustrated teacher's manual present an accurate picture of the wide diversification of jobs in commercial aviation, and indicate clearly the requirements for employment and the numerous advantages to those who have qualified as employees. The film and manual provide excellent assistance to those who are confronted with the problem of presenting the complete story of aviation as an industry.

The manual which accompanies the slidefilm is unique in presenting frame by frame exactly the illustrations used in the slidefilm. This enables the instructor to prepare for presentation without actually projecting the various pictures in the slidefilm. The manual is also used extensively for further study by students, and in some instances where projection equipment is not available.
"Arcs and film go hand in hand for fine photography"
—James Wong Howe, A.S.C.
The Documentary Film

(Continued from Page 45)

Here again is a simple example of the preparation of a documentary film. Like myself, most producers, have a great desire to create an outstanding photographic film. An exterior would never be done without the sunlight at a particular angle. An addition of reflectors to help lighten a darkened area. Even a scene in its natural surroundings is spiced with lights for that photographic effect. This creation of eye appeal draws audience reaction to its artistic value and in most instances weakens its intended purpose. So often, there is an anxiety to favor a cultural audience with this fare, that the facts become terrifically distorted by the time all hands have made their contributions.

I was cameraman on a film titled, "Growing Americans" directed by Gene Martel, director of talent and screen tests for Paramount Pictures in New York, who has been connected with the production of documentary films for many years. This film was made for the Coordinator of Inter-American Affairs, to be used for the betterment of our relations with the South American countries. This story, a re-enactment by two boys, is a true story of their occupation in their spare time. No make-up was used, and the film was produced on their own chicken farm, on their home grounds, with their neighbors acting in the picture with them. As authentic as it possibly could be, it is a story re-told and re-enacted and it can easily be made to favor a particular point; with a wee bit of good editing and music to glide over the silent and unspoken portions; but, IS THIS A DOCUMENTARY FILM?

I am not against films of this type, rather I am for them, but if I were put on a jury and cross examined, I would demand facts. I would not accept a re-enactment as a document. A newspaper editor or a judge would ask for facts, are re-enacted films facts?


I have worked side by side with many of these men and I know that they have covered the globe and have photographed documentary evidence of news events of important historical significance, of places and people. Many of them are now covering special assignments as war correspondents; some have been wounded, some have given their lives in bringing you "real" documentary films. Little publicity is given these men, they do not seek it. They are the unheralded "Documentary Film" producers who have been making these films for from twenty to thirty-five years. I have the ambition, if I had the time, I could write a book about these
men and their tales that would excite your every fibre.

I would like to especially make a point of the film, “The Forgotten Village,” produced by Herb Kline, from the script by John Steinbeck. I particularly mention this film, for, when the expedition was in preparation, I was instrumental in supplying some of the photographic equipment which was used on this film. I saw the film about a year or so later and may I say from the standpoint of production, photography, dramatic content, music and narration, it was excellent, but, IS THIS A TRUE DOCUMENTARY FILM?

I quote this from an item by a London correspondent, in the New York Times of June 28, 1944, “When the film opened in London at the Academy Cinema, after having had a stormy passage with the censors,” the reporter says, “The intelligentsia are descending like a storm of bees on ‘The Forgotten Village.’” Box office receipts have been solid at a moment when most West End show business in slumping. ‘The Forgotten Village’ may be, as a representative of the Mexican government confided to us after the premiere, ‘A Hollywood Dream,’ but Steinbeck, who knows intelligentsia almost as well as he knows his peons, certainly seems to have been dreaming with his eyes open.

Then too, I want to particularly commend the wonderful documentary films being made in recording the war by our Army, Navy, Signal Corps, Maritime Service, Air Forces and Marines and the work of our Allies.

I take exception to a letter written by a civilian to the editor of the New York Times, some time ago, in which he criticized a film he saw on the “Invasion of Sicily,” in his local theater. This film made by men, some of whom probably have given their lives was criticized for its lack of artistic photography (he compared it to Hollywood made productions) he further criticized the poor quality of color, (it was photographed on 16mm. Kodachrome and enlarged to 35mm. by Technicolor for theatrical release) and that little attempt had been made in artistic editing. Here, we have critical of a “real” documentary film, made by men who do their fighting with a camera, in face of danger to life; many of whom have made the extreme sacrifice in recording these facts of the war for us. Why anyone should expect entertainment from a source such as this, is more than I can understand.

I put the facts before you, is a film a “Documentary” because it tells a story about real people in original locations regardless of the addition of actors, music, narration and dramatic editing, as long as it satisfyes and entertains us, or, is it a “Documentary” when it presents original facts. What do you think?

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DeVRY Equipment Gets Around

From Noumea, New Caledonia, comes another page for the long record of DeVRY motion picture cameras used to film events where the first shooting is the only shooting—where there are no rehearsals and no retakes. At Noumea, Cameraman Fred Dunn used a DeVRY to film ceremonies commemorating the centenary of the landing of Roman Catholic Missionaries—an event of considerable historic significance—a record of which was desired for the continent. In Peace as in War, DeVRY 35mm. and 16mm. motion picture cameras are relied upon by newsreel men, by professional cinematographers, to come through the toughest of conditions with the best possible of filmed records of the event to be filmed: witness—“DESSERT VICTORY,” “TUNISIAN VICTORY” and other film epics were filmed with DeVRYs. With war’s end, you too can become a proud owner of one of these fine precision DeVRY cameras. Plan on it NOW!

DeVRY CORPORATION, 1111 Armitage Avenue, Chicago 14, Illinois

DeVRY-ALONE has Earned FOUR Consecutive Army-Navy “E” for Excellence in the Production of Motion Picture Sound Equipment.

Film of Leyte Invasion

The historic American invasion of Leyte island in the Philippines has been recorded in an action-packed documentary film called “Going North,” made by a Netherlands East Indies film unit, according to Aneta, Netherlands News Agency. The Australia press hailed it as one of the best authoritative Pacific war pictures yet made.

The picture portrays the American soldiers leaving their invasion barges and going ashore under the terrific barrage of the warships. The bombardment and its results are also photographed.

Lytle Heads Bureau

Alfred Y. Lytle, a member of the motion picture bureau of the Aetna Life Affiliated Companies since 1940, has been named supervisor of this bureau according to an announcement by Stanley F. Withe, manager of the advertising and publicity department. Mr. Lytle succeeds Frederick W. Bright, who has resigned.

Experienced in both the technical and dramatic phases of motion picture production, Mr. Lytle takes over the supervision of the motion picture bureau at a time when expansion of its facilities is in prospect in the fields of educational and sales promotional films.
New Filmosound Library

Releases Announced by B&H

CORVETTE K-225 (Universal)
No. 2551
10 reels

Crew of corvette sunk in enemy action gets new ship, the K-225, another “bucking broncho of the sea.” On its maiden convoy it accounts for two subs and two Nazi planes. It is badly mauled, but most of its convoy gets through. (Randolph Scott, James Brown, Ella Raines, Andy Devine) Available from April 1, 1945 for approved non-theatrical audiences.

Fact Films to the Front

(Continued from Page 47)

De Rochemont points out that the documentary technique is no screen novelty. The first pictures ever made, in the screen’s infancy, were fact films, recording scenes of actuality. In recent years, pictures like “The Grapes of Wrath,” “How Green Was My Valley,” and “Wilson” have utilized documentary elements. The tremendous circulation given newsreels and government films during the war has furthered this trend. Today there is less of a gap between the fact and fiction film than before. Short subjects like the March of Time, This Is America and The World in Action series have had widespread circulation. The latter series stems from Canada where John Grierson, who founded the British documentary movement, is now building up a powerful documentary school.

De Rochemont’s next production will be “Now It Can Be Told,” based on the activities of the F.B.I. J. Edgar Hoover has thrown open all of his facilities to the producer. Part of the picture will be re-enacted by little-known actors, but all of it will be solidly based on fact, and will utilize real settings wherever possible. There will be a regular story line concerning the war against enemy espionage. As his third production, de Rochemont plans to make “Boomerang,” and afterwards a feature-length film dealing with the newsreel business, its history, highlights and methods.

De Rochemont himself is a veteran newsreel cameraman. He has been engaged in making movies since he was 15 years old, when he sold free-lance film to the newsreel companies. In 1923 he joined the Fox newsreel where he obtained valuable experience in the business of transferring the raw stuff of reality to film.

The famous Indian race riot films, taken by Fox Movietone in 1930-31 in Bombay—footage which is still used today in most screen depictions of India—was smuggled out of that country by de Rochemont. He put the exposed film into empty cans, and put the unexposed film into the riot film cans. The police confiscated the latter and de Rochemont put on a good show of protesting. Meanwhile, he gave the exposed film to a British nurse who was sailing for Marseilles. He labelled the film as a travelogue, “Poona Festival,” and ultimately the entire 2000 feet of riot film reached New York. There it was placed in a vault, under the impression that it was simply a travelogue film. It was finally retrieved from the vaults and hit the nation’s screens like a bombshell.

On another occasion, a screen showman purchased the exclusive newsreel rights to the Zev-Pappys race in 1925. All other cameramen were barred from the track. Fox Movietone decided to scoop this producer. There was a soft-drink truck at the track with a big mug on it. De Rochemont constructed a platform inside the mug and placed his cameramen there. He also made a deal with the U. S. Navy to teach a number of gobs how to operate the Senecana camera, which was a novelty then, and which ran only 30-40 feet of film. The sailors were placed at strategic places around the track and all of them got shots of the race, which de Rochemont subsequently used. This producer was instrumental in putting an end to the business of selling exclusive newsreel rights to any one company.

When de Rochemont was head of the March of Time he had occasional scraps with the Axis governments. He once wanted to obtain a full, unexpurgated copy of “Blitzkrieg in Polen,” the German propaganda film of the invasion of the Low Countries. The German Embassy would only give de Rochemont its edited, propaganda version. De Rochemont had a copy of the film secretly made. This was smuggled to Canada and then smuggled across the border to New York. But first the Canadian Mounted Police were tipped off by de Rochemont and they confiscated the film at the border as alien property. Afterward, de Rochemont was able to purchase the film from them for $31,000. The police were powerless to interfere. De Rochemont later showed the film to Ulrich von Gienanth, the first Secretary of the German Embassy in New York. He rigged up a microphone secretly in the projection room and recorded von Gienanth’s muttered comments: “Germany is no longer a small nation and does not have to put up with such things.” Fritz Kuhn, leader of the Bund, also saw the film and exclaimed: “If Hitler sees this I’m ruined!”

De Rochemont, it is apparent, is no executive who operates from behind a big desk. He is typical of the newsreel cameraman in that he is ingenious, has a nose for news and the ability to get it. His experience is now proving useful in his new position as producer of non-fiction films for Twentieth Century-Fox. All of de Rochemont’s pictures will tell a story and attempt to be entertaining, but in terms of reality and not of fiction. His films will not grind any propa-
Artistic Titling Tips

(Continued from Page 60)

We then marked the title number, symbols and footage required in the upper right hand corner and they were ready for shooting.

A long table top furnished the work bench. Down the center we drew a line and six inches each side of it we fastened a piece of one by two board forming guides for two pieces of board, one foot wide and two feet long. On one we built the title frame. On the other a table to hold miniatures, larger pictures, etc. By this method we could slide them back and forth, knowing at all times they would be square with the camera, and the cross lines on the frames would be exact with the center of the lens.

We had the titles made to cover an area of 7 x 10 inches on a board 12 x 14 inches. This gave us a two foot focus with the one inch lens. The miniatures were made for a 16 x 22 area with a focus of five feet, so that we could make them easier as well as having the depth of focus and room for lighting.

With everything ready, the camera loaded and in it's place, and fastened down solid to the table, we took up a foot of negative for safety sake and set the counter at zero. We now took out the lens and through the aperture we made and X with pen and India ink on the film. We then replaced the lens, turned on the lights, consulted our diagram and by following it perfectly, checking off each operation as made, we made the backgrounds. After the last background was made we ran an extra foot and made another X on the film through the aperture, rewound to the beginning and checked to see if the little cross mark was in the aperture at zero.

It is well to remember when making backgrounds to keep them soft. Do not light too heavily, and do not stop your lens down very far; only enough to carry depth of focus. This you can check on chart "A." But when you make the titles, give them plenty of light and stop down so as to make them more contrasty.

The titles were now dropped one at a time in the title holder, the title set at two feet. We took our meter readings as before and checked continuously with the footage meter on the camera to see that we were correct. At the finish, we were happily surprised when we checked with the aperture to find the X at the end within three frames, which was very satisfactory.

On the backgrounds we had used 75 watt special coil filament projection lamps, and 100 watt on the titles. On the miniatures we used a number of them to give us the desired effects, being careful at all times to keep the light well shaded from the lens.

In closing, here is a table that will help you in making backgrounds and titles. A one inch lens will cover 3½ x 5 inches at one foot; 7 x 10 inches at 2 feet; 10½ x 15 inches at 3 feet; 14 x 20 inches at 4 feet, and 17½ x 25 inches at 5 feet.
Aerial Aces of the Camera
Elmer Dyer, A.S.C.

(Continued from Page 42)

First cameraman who photographed the Grand Canyon from the air. So Universal executives sent him up. He made the scenes successfully, and was launched on a new photographic career.


In 1943, he spent practically the entire year with the Navy in Florida and Norfolk, Virginia, where he made "We've Never Been Licked." In 1944 he did more confidential work for the Navy and did the aerial photography on "God Is My Co-Pilot."

Aerial Aces of the Camera
Charles Marshall, A.S.C.

(Continued from Page 43)

one, for while he was flying over Salt Lake City in a transport plane a short circuit filled the plane with smoke. He says he was a bit worried until he knew everything was all right. In 1936 he did "20,000 Men a Year" for Fox. He had to fly down through Zion Canyon to shoot some of that. Then he did "Men With Wings," first big Technicolor air picture.

His next air assignment was "Test Pilot" for MGM, starring Clark Gable and Myrna Loy. This was followed by "Too Hot to Handle." Charley says he guesses it was to hot to handle, for his camera plane cracked up in a ditch at Long Beach. Two Bell & Howell Cameras flew by him and grazed his head. When he crawled out of the plane he had several broken ribs and a slight back injury. But the Marshall pack held, and he soon was as good as new.

In 1939, he did "Eternally Yours" for Walter Wanger. In 1941 he went on contract with Warner Brothers Studios and worked on "Dive Bomber" and "Captains of the Clouds" along with Elmer Dyer, A.S.C. This was followed in 1942 with aerial work on Warner's "Air Force," also with Dyer.

Charley has been married since 1928. He's a quiet, likeable chap, and one who has been forced to talk about himself. We like men of his type.

Navy Commendation Given to Visual Training Corp.

A special commendation for good work has just been extended to Visual Training Corporation, Detroit training and promotion service specialists, by the Navy Department through Rear Admiral D. C. Ramsey of the Bureau of Aeronautics.

This commendation was based in particular, said Genaro A. Florez, head of Visual Training, on the company's work in connection with the Packard Marine Engine training program for the operation and maintenance of the 4M-2500 Navy marine engine, used in motor torpedo boats.

(Continued from Page 43)
New Ampro Booklet

Republication in booklet form of Stanley Young's noteworthy article, "What will happen in the movies the day War is over . . ." is announced by the Ampro Corporation of Chicago. This stimulating survey of the postwar possibilities of 16mm. sound motion picture first appeared in a recent issue of Cosmopolitan Magazine. It revealed many new facts about the increasingly important role of 16mm. films in a war-time America and aroused widespread interest. Free copies of this booklet are available on request from Ampro Corporation, Chicago 18, Illinois.

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The War of Russian Films

(Continued from Page 49)

this new freedom, possible because of the distance of front-line fighting, has turned Soviet attention again toward experimentation in motion picture production.

In this connection the Soviet Union has announced two important advances in "three-dimensional cinematography," the result of the work of Russian scientist Semyon Ivanov, 35-year-old inventor.

Within a few months Moscow audiences will, it is claimed, see their first three-dimensional motion picture film. The first showing of this system was held in Moscow in February, 1941. Until recently the exigencies of the war curtailed experimentation and invention. Essentially Ivanov's method consists of shooting films from two different angles, and subsequently projecting them simultaneously on a special screen. This system does away with the need of the twocolored spectacles which formerly gave depth to vision on the screen.

Ivanov is also experimenting with what he calls the "integral screen." For three years Ivanov has been working on experimental screens as a solution to the three-dimensional problem. The first screen Ivanov designed consisted of 30,000 strands of fine wire. His latest has 6,000 additional strands and is backed up by a reflecting surface. These changes minimize the number of dark lines that previously obscured parts of the screen, and also serve to increase luminosity one and a half times. At the same time the inventor has worked on the problem of increasing the luminosity from a new angle. The design is a light-power screen consisting of a mirror glass with several thousand tiny lenses glued to it. And as distinct from the usual spherical or cylindrical lenses, those on Ivanov's screen are conical.

There are 20 such screens on order to be used in leading houses in the Soviet Union.

At present the Russian motion picture industry is back to what one might call a normal footing. Because of its importance to national life the Soviet film industry has a top priority on both supplies and man-power. An interesting feature of the current production program is the inclusion of a number of pure entertainment films. We have seen one of them in this country: "Leningrad Music Hall," a variety show of some of the Union's finest dancing and singing artists. Television is the subject of intensive research at present in Russia indeed as it is here in the United States.

But first and foremost, Russia's films, as the films of this country, have as their first duty—the winning of this war.

BUY MORE WAR BONDS

American Cinematographer • February, 1945
Fact Films to the Front
(Continued from Page 66)
ganda axes. They will be equivalent to full-length news reports by a competent journalist. Darryl Zanuck and his associates will continue to turn out regular fiction films for the studio, while the de Rochemont unit will devote itself to non-fiction films under the Zanuck aegis. The success of "Wilson," with its documentary ingredients, served to confirm Zanuck's theories which hark back to such semi-documentary endeavors as "Public Enemy," "I Am a Fugitive from a Chain Gang," "Wild Boys of the Roof," and "They Won't Forget."

It is de Rochemont's belief that the documentary film has not received a fair chance to prove itself in this country. By combining the qualities of reality with the advanced technique of Hollywood production, the documentary film, in his estimation, can be a dynamic force in American moviemaking. The time is now ripe for the reporting to moviegoers about the epic events of our time. The de Rochemont unit hopes to make a beginning in that direction.

Commercial Processing
(Continued from Page 50)

Under adequate control the sound quality depends largely upon the mechanical performance of the printer and, to some extent, upon the type of developer used by the laboratory.

The processing conditions under which these tests were made represent commercial practice and may not represent the optimum conditions for processing 16mm. film. They do, however, represent the average and the distortion figures as indicated in this paper, even though they do not represent the absolute minimum, appear to be about the right order of magnitude for the average commercial recording.

It should be remembered that the distortion figures include the distortion of the recording and reproducing systems, as well as the distortion of the film itself. We do not know of any satisfactory method for separating these distortions. Under existing circumstances, we do not consider this magnitude presents a serious problem.

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74 March, 1945 • American Cinematographer
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CONTENTS

Aces of the Camera (James J. Seeley, A.S.C.) .........By HAL HALL 79
Where Will You Fit in Television? .........By IRVING BROWNING 80
Production Designing ...........................................By EZRA GOODMAN 82
Congo Goes to War ..............................................By ROBERT JOSEPH 84
Photographing Tokyo from the Air ...................... 86
Requirements of Educational Film Presentation. By OLIVER BELL, M.A. 87
Through the Editor's Finder ................................... 88
Among the Movie Clubs ........................................ 92
Transitions ..................................................By LORUS J. MILNE 94

THE FRONT COVER: Director of Photography Arthur Miller, A.S.C. films a scene on one of the streets of Pai Tan in the 20th Century-Fox production, "The Keys of the Kingdom." Central figure in clerical garb is Gregory Peck, who plays Francis Chisholm. John M. Stahl was the director.
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MEET CLEO MOORE who has been christened the blonde bombshell from Louisiana. After she had studied photography in New Orleans she decided she would head for Hollywood. Now she has laid photography aside and seems destined for a career as an actress. She says she figures she ought to make the grade. Well, she seems to have the figure. (A Hollywood Press Syndicate Photo)
NOT so long ago a subscriber to this magazine wrote me asking if an Ace of the Camera could be found only in a Hollywood studio. He said he had noticed that all of the Aces written about were in Hollywood, and he was just curious—wanted to know if we in Hollywood have a corner on these gentlemen.

Due to the fact that most of America's motion picture making is done in Hollywood, here is where most of the Camera Aces are located, but there are others in various sections of the world. Take for example, James J. Seeley, A.S.C., who works for that famous news-reel organization, News of the Day. James has his headquarters in New York City, but you might find him and his cameras almost anywhere—depending upon what news is breaking.

Seeley, although he devotes his time to photographing news, can well be called one of our best Aces of the Camera. In his field, he is tops, and has a record that is absolutely spectacular and enviable. Seeley has the knack of being on the job when the most unexpected and spectacular news events occur.

Take for example, the horrible explosion and burning of the German Zeppelin, the Hindenburg, at Lakehurst, New Jersey, in May, 1937. Jim filmed that awful event from the moment of the first flash of flame until the huge airship had been consumed by flames.

"As the Hindenburg arrived at Lakehurst," says Seeley, "I was set up on the ground for what I anticipated would be a routine assignment similar to others I had covered from time to time. No one ever had any idea the Hindenburg would explode.

"I was panning my camera across the body of the ship when the terrific explosion took place near the stern. Suddenly flames leaped hundreds of feet into the air. I was stunned by what I was witnessing, but the training of every news-reel man gets to hold his ground. By pure reflex action I kept grinding, even while passengers and crew were spewed out of the cabin windows of the monster and scrambled from beneath the mass of flaming fabric, their figures silhouetted against the background of seething fire. Not until my film ran out did I cease grinding. Then I knew I had the picture of the Century. I ran to a telephone booth and notified my office that I had 'got it,' and then rushed to New York by automobile. One hour later I was looking at it on the screen. It really was a horrible experience."

Seeley made newsreel history when he secured a newsreel scoop of the tragic Akron disaster in 1933. No matter how difficult the situation, when Seeley is there he always gets his pictures—that is, unless he is knocked unconscious as he was on Labor Day, 1939.

On Labor Day, 1939, Seeley went along with Federal agents to take pictures of them destroying a gigantic bootleg distilling plant they had discovered in a pine forest near Malaga, New Jersey. But let him tell it.

"The first blast was Okay; just an explosion such as I had photographed many times before," says Seeley. "The second blast was on the big vats that held the mash. When that went off a couple of pieces of flying debris hit me on the head and right hand. The concussion threw me through the air about twenty feet. The legs of the tripod were sheared off. I was hauled away unconscious to a hospital. Three days later I woke up and saw a beautiful blonde nurse bending over me. I didn't know whether I had died or not, so said: 'Hello, Angel.' When she smiled and answered I knew I was still alive.

"Well, I have always been glad I was injured and taken to that hospital, for I married that beautiful blonde nurse."

Seeley calls Atlantic City his home town, and it was there he got his start as a cameraman. In fact, in the early twenties he used to get in the hair, and in the way, of policemen and firemen in Atlantic City every time there was any kind of excitement. He had a camera of his own, and was busy at all times trying to find subjects to film which he could sell to the newsreel companies. That early training, when he only got paid when he got a subject the newsreels wanted, taught him a lot of things that have stood him in good stead ever since.

(Continued on Page 104)
Where Will You Fit In Television?

By IRVING BROWNING

For a long time, many eyes have been cast in the direction of an industry where promised employment runs into six figures, Television. For a long time, the newspapers have carried items about television, such as: "Television pictures held to be near," "Live talent versus films in television," "Theatre television to be a reality," "600,000 to be employed in television."

In New York City, we are so near to television and radio that we hear a lot of tall and short talk regarding who will "take over" when television gets the signal to go ahead. Will it be Video (live shows) or will it be film, or a combination of both? That question is most annoying to those presently employed in television; while film people just keep mum and look on. With that question unanswered, I got the idea to look into the matter for the purpose of doing an article on the subject for those of you who are looking to the television scanner with the hope of working in this field I thought it would be interesting to see and hear what was going on, and so here, I present my findings.

Radio, the theatre, and motion picture techniques have come up from the bottom. WILL TELEVISION DO THE SAME? I hope not, for television must pass up much experimentation and pick from the best of the other fields of entertainment if it is to survive its beginning. At present, television is presented to a minority audience at great expense to its sponsors who are working on a non-profit basis. Until it gets the OK from the Federal Communications Commission, television cannot charge for the entertainment programs they are presenting. I spoke to an executive of a television station some years ago and he told me that up to that time, it had cost television some $15,000 per television set, receiving unsponsored entertainment. While it experiments with advertising media, it receives no compensation whatsoever and television is now a costly experiment until it really gets going.

To get this story, I decided to talk to radio writers, directors, producers, technicians and executives of television, radio, motion pictures and the theatre, and I have found that opinions vary. Some talk with assuredness; some with reservations, but they all want to talk about television.

On December 14th, 1944, I attended a meeting of the American Television Society and became a member before their January meeting because I felt that here would be a good place to listen and talk to men and women in the allied arts, for this organization functions as a laboratory where new ideas, methods, inventions, technical and educational practices are threshed out. Here is a program of a season's activities:

October 12, 1944—Television and Government.
November 16, 1944—30 Million Television sets—when and where.
December 14, 1944—Television and sports.
January 11, 1945—Seeing is believing—Television in advertising.
February 15, 1945—Scenic design—Stage—Screen—Television.
March 15, 1945—Television at home or at the theatre.
April 12, 1945—Camera technique—Screen and Television.
May 12, 1945—Television and the visual arts.

These meetings, conducted as forums, have exhibits of everything from radio, motion pictures and television, highlighted by speakers from all branches of the entertainment field. It was particu-
larly interesting to me to listen to Bill Slater, at the meeting of December 14th, tell of his problem in radio and the problem which he knows he will encounter when he goes on the air in television. Slater now has four assistants working with him because it is impossible for him to note all details which are necessary for him to tell his audience in any game of sport. In football when a man makes a "run," what distance was that "run," who stopped who, who fumbled and who picked up? He sits atop the grandstand and when a play is made, all he can see is the number on the back of the player but one of his assistants, whose job it is to check numbers with players names, prepares to hold up a chart with the player's name and number and pointing to it, while Slater takes up the cue and passes it on to the listening audience and is ready to watch the game again. When a particular gain is made, it is the job of one of his assistants to hold up his chart while pointing to the distance lost or gained so that when Slater gets to tell of that detail, all he does is look over his shoulder, see the chart and call out the distance. The other two assistants serve in similar capacities and, as a crew, they all work at feverish speed the whole time they are on the air.

Now, says Slater, comes the rub. Coordinating the work of the cameraman who is to get the visual while he supplies the mental. That is going to be something. Any newsreel cameraman will agree that it is some job to follow action of a football game to perfection. There's only one chance to get it, it cannot be done over again as in production, so the cameraman must be good. Imagine a fine descriptive patter coming over the air, but the eye misses the play. Here, you will get an unfavorable combination of reactions.

Slater favors film in television, he says that it will play an important part in sports especially. Take for instance a horse race. Radio can put an announcer with a microphone in many places and fill in the allotted time before and after the race. Television cannot have many cameras in many places to cover a race in the same manner. He says that the newsreel library will be a busy place, for television will depend on the motion picture film library for the preparation of material, as in the case where a horse is the favorite and a former winner. The film library can prepare a film made up from those former races which will be shown before the start of the race. This film gives such a sports event human interest and the television camera and announcer give it the thrill of the race to follow. This point of enlightenment, which Bill Slater has cleared for us on the use of film, will give you some idea on other uses of films in connection with political, industrial, advertising and travel programs.

I heard a speaker on fashions complain that she hoped that television would not make the demands on the fashion experts that the motion picture does. She made reference to colors, claiming that she would never be interested in designing for motion pictures because such demands. But what I have seen of television makes me feel that she will have her wish. If television will have better lighting systems, then it will be entirely up to the director of photography to get the best results, for the only demands on color separation in black and white photography are the separation of certain colors that photograph the same. We know that blue will photograph dark on panoramic film, while red will photograph light and we get the reverse tones when using ortho films.

My admiration for the wise words of Paul Raibourn. Mr. Raibourn is an economist for Paramount Pictures, who is heading their television interests and he says, "These definitions should make it clear that we are not necessarily talking about antipathetic elements. Sound motion pictures is a term which could be used to describe the valuable program content in both television and motion picture film. It is a term which can also include a large number of elements which are not covered in the definitions (Continued from Page 90)
The name of William Cameron Menzies listed as production designer on a motion picture is just another unknown quantity as far as the average cash customer is concerned. The moviegoer usually goes to a picture to see a certain story or his favorite stars, and his or her interest usually stops at that point. In the trade, however, Menzies is a name with which to conjure. He has been a motion picture designer for more than a quarter of a century and he has contributed much to such superior productions as “Gone With the Wind,” “Our Town,” “The Devil and Miss Jones,” “Kings’ Row,” “Pride of the Yankees” and “For Whom the Bell Tolls.”

As production designer, Menzies is concerned with the visual over-all appearance of a picture, a function which puts him in particularly close touch with the cameraman. Menzies has worked with some of the best lensmen in the business, like George Barnes, Gregg Toland, Rudolph Maté, Ernest Heller, and James Wong Howe. Long before a picture goes into production Menzies is at work “pre-staging” it in terms of sketches that encompass mood, character, background and camera setup. He may work from an unfinished script, or sometimes from a book, like “Gone With the Wind” and “For Whom the Bell Tolls,” that has not yet been broken down into scenario form. He keeps in touch with the producer, director, art director, scenarist and cameraman, and is on hand when actual production gets underway. Menzies defines his own job as a kind of “pre-staging.” He says that there is a spot between the scenario and the direction that an artist, trained in film fundamentals, can usefully fill. His production designs are, in that sense, an intermediate process between the printed word and its visualization on celluloid.

Today there are other men who are known as production designers, but Menzies was the first and is still the foremost of them. Born in New Haven, Conn., 49 years ago, of parents who came from Scotland, he returned to Scotland with his mother when he was six years old and received his early schooling abroad. He was illustrating children’s books when George Fitzmaurice, the pioneer Pathé producer and director, became interested in his work. Fitzmaurice wanted an artist to create the illusion of a palm grove on a tropic isle for a picture. Menzies solved it simply, by taking two big palm-leaf fans, carving them into a semblance of nature, and projecting their shadows on a background. As a result, he got a job with Fitzmaurice, and that was the origin of the unique Menzies method of set designing.

Menzies was art director for many pictures, including Lubitsch’s first American production, “Rosita,” and Fairbanks’ “The Thief of Bagdad,” as well as “Dark Angel,” “Coquette,” “Taming of the Shrew” and “The Tempest.” The latter won him his first Academy Award for art direction. All the while he was putting his own ideas about movie-making into effect in his drawings. His first opportunity to really demonstrate his developed technique came with Goldwyn’s “Bulldog Drummond” in 1929. For this picture he established the technique of doing a complete layout of every camera setup, which he has been doing ever since.

He was art director with United Artists for twelve years and then directed several pictures for Fox, always doing production-design continuity. For Paramount he directed “Alice in Wonderland,” and then went to England for...
Alexander Korda where he directed “The Shape of Things to Come.” He came back to Hollywood for David Selznick and was production designer on “Nothing Sacred,” “The Adventures of Tom Sawyer,” “Made for Each Other,” “Intermezzo” and “Gone With the Wind.” In recent years he was associated fairly consistently with Director Sam Wood on some of his best pictures. After producing and directing “Address Unknown,” he has now signed a long-term contract at RKO whereby he will produce and direct pictures for that studio.

For the average picture, Menzies makes from 1200 to 1400 different sketches. “Gone With the Wind” ran to 2500 drawings. There is a sketch for every individual camera setup that will be seen in the finished film. Working from the script, he first draws numerous thumbnail sketches that indicate the lighting and pattern of a scene broken down into its component elements. For key scenes he will do a big sketch in detail. If these could be skimmed rapidly before the eye they would add up to a sort of preview of the motion picture in question.

Take as an example Menzies’ current stint at RKO. This will be his last straight job as a production designer, for he will next direct and design a picture on his own. His present assignment is a forthcoming Cary Grant picture, “The Greatest Gift,” which Clifford Odets is writing and directing. Menzies took on the assignment because the picture provided him with broad scope for his talents. The film will be a dramatic fantasy, with heavenly sequences. Odets’ conception of heaven, however, is not one of clouds and choirs. The opening shot calls for “a pleasant, neat street, lined with old fashioned trees and several comfortable residence houses about.” A four-year old girl is shown walking towards the camera. By subtly delineating everything out of proportion, Menzies has instilled an eerie quality into the sequence. The girl is shown as too small, and the trees a little too big. The scene is overstaged. In later, realistic sequences, Menzies is able to capitalize on the contrast between the two types of scenes in the picture.

Menzies has definite ideas about the visual side of a motion picture. He likes to compose with the camera frame, instead of inside it. In other words, Menzies’ sketches reach to the borders of the frame instead of falling within the frame. Menzies does not believe in composition for its own sake. There has to be a reason for every shot and every shot has to contribute to the story that is being told. He particularly dislikes to waste space and he likes to keep his people and backgrounds clarified. Normally he keeps his action close to the camera. He uses long shots for mood or violent action. Closeups are for the punctuation of a face or character. He believes in cutting and not in the moving camera, for he holds that the latter wastes footage, that the cameraman has less control of composi-

(Continued on Page 100)
A FRICA is one of the proving grounds of this war, for it is on the "Dark Continent" that we can best judge to a limited degree what kind of program the victorious nations have planned for the world after the war.

Africa's history, as any school boy can tell you, has been one of plunder and neglect; a race for markets and raw materials; a continent that has been the pawn for empire and conquest for many centuries; a continent that in the Algeciras Crisis of 1912 almost precipitated a world war that was to come two years later; a continent that in the Ethiopian conquest by Italy proved to be the prelude to World War II.

Today Africa's importance, both as a background for battle and as one of the stakes in the conflict, has been even greater. The Nazis and Italian fascists were thrown out of Africa after many dark and perilous months. The shame of Ethiopia has been eradicated. Liberia and Haille Sellasie's Empire have taken their rightful places in the council of nations. And the citizens of that vast continent are beginning to awake from the restrictions and injustices of centuries.

The might and potentialities of Africa come to light in the Belgian Government's official documentary, "Congo," produced and directed by the talented young film craftsman, Andre Cauvin, an official of the Belgian Government Information Center Film Mission. Cauvin, a recent visitor to these shores, spent over a year traveling more than twenty thousand miles in the interior of the Belgian Congo to record the daily lives and habits of the native Congolese; to photograph a dramatic four reel subject of what the heart of Africa is doing for the war effort.

The problems confronted and the physical hardships for this motion picture assignment were many. Cauvin and his troupe reached parts of the Congo where few white men had ever been before. Problems of provisioning the outfit were almost insurmountable. This was no easy safari for big game hunting. Problems of actual shooting were many and required the most careful study months in advance.

But Cauvin had behind him an outstanding record as a film producer for both 16 and 35mm. subjects. His documentary films on subjects, as varied as "World Art Pieces—The Works of Van Eyck" and "Belgian Housing Projects," are indicative of Cauvin's wide interests and talents as a documentarian. He also worked with several world-renowned physicists and chemists in their work, and was named as the outstanding documentary film producer on the continent. His pictures were shown and won awards at film exhibitions in Barcelona, Brussels and Venice, where he won first prize for one of his motion picture subjects. In 1940 he was appointed Film Counselor to the Belgian Government and joined the Belgian Army during the 1940 Spring campaign in the lowlands. After the Belgian capitulation Cauvin joined the underground and worked with anti-Nazi forces until his escape to London. On numerous later occasions he parachuted back to Belgium to show the underground and resistance forces British and American war films and documentaries, one of the important factors in keeping alive the resistance movement. He made his way back to London after each of these assignments.

In London in 1942 he was appointed head of the Belgian Film Mission by the Government-in-Exile, and was assigned to make a documentary about the Congo. He spent a year in Africa, returning only when his mission was completed. At

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present he is writing an official account of the Belgian resistance movement, a story which he plans to photograph in documentary fashion after the war is over. As an eye witness to many of the Nazi's crimes, and a participant in the underground struggle, Cauvin is admirably suited for this special task. Another project he has in mind is a full-length eight or ten reel feature documentary, "Children of Europe," a film which Cauvin will photograph with the official cooperation in all of the lands liberated from the German yoke. The assignment should take him from the Baltics to the Balkans, and from North Africa to Scotland in his project to show what years of war have done to the world's youngest generation.

Belgian Congo, Cauvin states, is the Ruhr Valley of Africa. This rich colony abounds in tin and copper, to mention two of the Congo's more important products. Cauvin found a great number of historical contradictions. Housing projects, hospitals and planned farming were in the heart of the Bantu district, a tribe of fantastically tattooed, thoroughly primitive peoples. The most modern equipped hospitals were organized for natives who but a generation before had been head-hunters and cannibals. Factories, hotels, radio stations rise over the memory of mud huts. In Leopoldville, formerly the native village of Kincassia, one finds a modern metropolis, the site of the powerful radio station, Radio-Leo, transmission point for programs between England and America. Cauvin recorded an Africa at work. White men and black are cooperating to make the sinews of war. Wherever the Belgian producer traveled, whether by plane, boat, auto caravan or pirogue men were working and talking about "apres la guerre..." for there, too, he found hope and aspirations. The natives are training for war at Watsa with the latest mechanized equipment, combining native jungle stealth with a knowledge of armored equipment to make fighting men who have already received the highest commendations from Continental-trained officers and commanders.

Africans who have as much at stake in this war, in terms of freedom and the right to a dignified way of life, are shown to be considering their future, a bright change from portraits of the past which shows them as a benighted, almost unworthy people. Cauvin's "Congo" is as much a public service for them as it is for the Europeans and Americans who have controlled their destinies in the past.

"Shooting 'Congo,'" Andre Cauvin says, "was not an easy job. We started to have trouble even before we left Upper left, old women of Ubangui tribe. Such lip stretching no longer is done. Above, native being taught how to fight sleeping sickness. Bottom, three shots from "Congo."

Europe, for our cameraman took ill just as we were ready to leave. And when we arrived in the Congo we had to send him back and go on without him." Cauvin, originally a still photographer, handled the camera himself from that point on. In addition to shooting the picture he shot some two thousand stills in both color and black and white. He worked with three cameras: Vinton (the British equivalent of a Mitchell,) a Newman Sinclair, and a Bell & Howell. The outfit also had its own generator which was used throughout the jungle journey. "The sun," Cauvin reports, "in the tropics is very deceiving, and at Stanleyville, Congo, right on the equator itself, the sun rises quickly and after a few hours of sunlight shadows are destroyed. As a result, a permanent use of reflectors was necessary, and most of the closeups were shot that way. Chauffeurs and pack carriers were trained to handle the converters until they were adept enough to work in studios."

The company also built a "dolly," the only dolly, Cauvin states, ever built in the African jungle. The equivalent was... (Continued on Page 101)
Photographing Tokyo From The Air

By R. H. BAILEY

ONE of the outstanding photographic jobs of World War II, a job that brought decorations for the 11-man crew of a Super-Fortress, was done this winter in three flights over Tokyo that paved the way for U.S. Army Air Forces' ensuing bombings of the Jap capital.

At the time of the photo missions, the Army announced nothing about the cameras that took the pictures which provided the intelligence necessary to plan the bombings, but it has now been revealed that the plane carried the largest of all aerial cameras, the Fairchild K-18, which takes photos 9" x 18". Bigger cameras have been custom-built, cameras with multiple lenses, but no other takes such big pictures as the K-18, a 70-pound instrument with a 24" telephoto lens.

Developed specifically as a military camera for obtaining large-scale photographs from extremely high altitudes, the K-18 has a magazine which accommodates a 150-foot roll of 94½" film to give 95 9" x 18" exposures. Operating automatically from remote controls, these cameras click off their giant negatives at intervals ranging from 1 to 120 seconds, according to the wishes of the crew, and as needed to give proper coverage according to altitude.

For the thorough serial mapping needed for concentrated bombing of a populous, strategic area such as Tokyo, a plane flies its camera back and forth over the territory, with one photo overlapping the next, so that mosaics that result when the photos are laid together show the sharpest detail, and when two overlapping photos are put side by side under a magnifying stereoscope third-dimensional details are shown.

The value of the K-18 is that far less pictures need be taken at a given altitude because of the larger area coverage, and thus precious minutes of flying time when the enemy is sending up a barrage of flak, are saved.

As an example, the Fairchild Camera & Instrument Corporation, which has designed and built most of the aircraft cameras for the Army and Navy, has prepared this comparative data on the use of a K-18 and a standard aircraft camera with a 7" x 9" negative:

- Focal length, both 24 inches; altitude, 25,000 feet; scale, 1/12,500; coverage, length, 7" x 9" 7,201 feet, and 9" x 18" 9,375 feet; coverage, width, 7" x 5" 9,375 feet, and 9" x 18" 18,750 feet; coverage, area, 7" x 9" 2.0 square miles, and 9" x 18" 3.3 square miles; minimum

(Continued on Page 103)
Requirements of Educational Film Presentation

By OLIVER BELL, M.A.
Director British Film Institute.

(Continued from February Issue)

Science and Mathematics

So far as the Natural Sciences are concerned, there is a good deal of scope for new material. Practical work is the essence of chemical and physical teaching. It is no use, therefore, making films of what students can do themselves, nor is it worth while making a film of an experiment which any demonstrator can perform for him. What does seem to be suitable for new films is, firstly, the Theory of Matter. I would like to see, for example, films on Intra-Molecular Physics or Electric Conduction. These are concepts which are hard for the child to grasp through verbal description, and ordinary wall or blackboard diagrams are unsatisfactory as they are static, whereas the phenomenon is dynamic.

Another group of Science films which I should like to see, and which should be easy to get made, is one which shows the relation between the small scale and the large scale, between laboratory and factory experience. It is one thing to make, shall we say, Prussian blue or a naphthalene dye in quantities of a few grams, but it is a completely different kettle of fish to make them by the ton. The same principles are involved but other factors, including those of engineering, unnoticed in the test tube, make their appearance in the factory.

Certain aspects of Mathematics are, to my mind, filmic material. At one time, I thought that films would be valuable right up to the limit of mathematical teaching. I have now revised my opinion. In this, as in any other abstract subject, there comes a time when the concrete medium of the film, even when using involved symbolic presentation, is unable further to keep in touch with the subject. In the earlier stages, however, it is both practicable and desirable. I was once told that an amateur film dealing with the Differential Calculus was able to introduce that subject to boys at 15 instead of the normal age of 16. Such films would be for Post-Primary pupils, but there is room for them.

Economic and Industrial Subjects

Economics is one of the most neglected, and at the same time one of the most important subjects. I know that about economists as about historians, the Latin tag: quot homines, quot sententia, is true. In this respect, film provides a certain common denominator of agreement. Even though money, so different from the days of Mr. Micawber, has temporarily lost its value, there are certain principles based on the law of supply and demand which could be simply stated by film.

One last class of films may I mention? Technical training has lately received a fillip. Instructional films on how to do things and how to use tools are urgently needed. Their value has already been proved in the Services. There is also needed a series of background films showing the relation of the part to the whole. A bricklayer's mate, a plumber's boy, going to a Junior Technical College would be a better workman if he saw his own job in relation to the whole factory. I should like to see, for example, a film showing the building of a house and the part the different trades have to play and the point at which their different skills are brought in. In the same way, I should like to see a series of films on factory operations showing where and why different groups of people work.

Color and Emotion

Natural Color, like natural sound, holds the mirror more closely up to reality. Apart from the ease with which a visual impression is retained in everybody's mind as opposed to the mental translation of the written word into visual terms based on one's own sometimes limited experiences, the second value of the use of the film in education is that verbal description becomes unnecessary. Ideas can, therefore, be presented to children who by reason of age or slight mental deficiency cannot grasp them if presented by word of mouth.

Finally the film, as witness its effect in the ordinary theatre, is an emotional instrument. In my view teaching should be emotional too. History can be as dry as the dust of ages; but again it can be made exciting and emotional. That is why I have introduced this thought at this point. Let our History teaching films have emotion in them provided it is not induced by written methods. Let them not be the old catalogue of facts.

Planning for Film Education

Let me conclude by outlining shortly what I consider to be the ideal scheme. On the apparatus side, I see every classroom equipped with a film strip projector. Between every three classrooms there will be a silent film projector. In every school there will be a sound projector. In schools catering for older students the proportion of sound and, if needs be, of moving pictures will be much lighter. Local Authorities will probably hold a number

The above article is the second installment of a paper read to the British Kinematograph Society last April, it is reprinted here from the Journal of the British Kinematograph Society because it presents a wealth of information that should be of benefit to our makers of educational films, and gives a brilliant picture of the state of art of sub-standard films in the post-war era.—The Editor.
THROUGH the EDITOR'S FINDER

THE 17th Annual Awards of Merit of the Academy of Motion Picture Arts and Sciences are just around the corner. The awards will be presented at Grauman's Chinese Theatre in Hollywood on the night of March 15th.

To camera enthusiasts, the most important awards of the night will be those given for cinematography in both black-and-white and color. This year, ten black-and-white pictures have been nominated for the black-and-white cinematography award, and six have been nominated for honors in the field of color. As usual, all the cinematographers whose work has been nominated are members of the American Society of Cinematographers. George Folsey has the unusual distinction of being nominated, for a black-and-white and a color picture. Following are the picture nominated and the cinematographers who photographed them:

Black-and-White Cinematography

"Double Indemnity," John F. Seitz.
"Dragon Seed," Sidney Wagner.
"Gaslight," Joseph Ruttenberg.
"Going My Way," Lionel Lindon.
"Laura," Joseph LaShelle.
"Lifeboat," Glen MacWilliams.
"The Uninvited," Charles B. Lang, Jr.

Color Cinematography

"Cover Girl," Rudy Maté and Allen M. Davye.
"Kismet," Charles Rosher.
"Lady in the Dark," Ray Rennahan.
"Meet Me in St. Louis," George Folsey.

EACH year more and more publications try to ape the Academy of Motion Picture Arts and Sciences by presenting awards for best acting, directing, etc.

To date only in addition to the Academy, one has seen fit to pay honor to the technical experts of the film industry who play such an important part in the making of American motion pictures. That was Look Magazine which this year gave its award for Cinematography to Leon Shamroy. A.S.C., for his work on "Wilson."

Why these various agencies, with the exception of the Academy, fail to recognize the value of the technical geniuses is something this writer cannot understand, and leads us to believe that these organizations which ape the magnificent Academy of Motion Picture Arts and Sciences are doing it only to grab off a lot of publicity for themselves. Their awards are not based on achievement, but rather upon purely popularity polls or box office returns, which, to our way of thinking, is not the way to select the best in artistic and technical achievement.

The Academy has the right idea, in that the Academy Awards are given solely on the basis of artistic achievement and creative effort on the part of actors, directors, cameramen, writers, producers, film editors, special effects experts, sound recording, art direction, short subjects, and music. The only people who can authentically judge the merits of the artists and technicians are the other creative artists and technicians. Who is better equipped than an actor to say which acting performance is the best? Who can judge the best cinematography better than a cameraman? Can the general public recognize the best film editing better than a film editor? Those who guide the Academy wisely make their selections the tops of the world by having Hollywood's own workers select the winners.

S O you may know what your favorite Cinematographer is doing, here is the Hollywood schedule of films in production as we go to press, together with the names of the Cinematographers who are filming them.

At Columbia Studios Rudy Mate is doing "Over 21." Charles Lawton, Jr., is on "Kiss and Tell," George Meehan is filming "Surprise in the Night," and Burnett Guffey is shooting "Blonde from Brooklyn."

At Metro-Goldwyn-Mayer Studios Charles Rosher is shooting "Yolanda and the Thief," George Folsey is filming "The Harvey Girls," Harry Stradling is doing "Early to Wed," and Karl Freund is photographing "Dangerous Partners."

At Paramount Studios Charles Lang is on "Cross My Heart," Lionel Lindon is doing "Masquerade in Mexico," John F. Seitz is filming "The Well Groomed Bride," Daniel Fapp is shooting "You Came Along," and Fred Jackman, Jr., is filming "Follow That Woman."

At Samuel Goldwyn Studios Lucien Andriot is shooting "Ten Little Indians," and Lee Garmes and Edward Cronjager are filming "Paris-Underground."

At RKO Studios Nick Musuraca is filming "The Invisible Army," George Barnes is doing "Those Endearing Young Charms," Harry Redman is shooting "Man Alive," Jack MacKenzie is on "Mamma Loves Papa," and Harry Wild is doing "First Man Into Tokyo."

At 20th Century-Fox Studios Joe MacDonald is filming "Captive Eddie," Leon Shamroy is doing "State Fair," Norbert Brodine is filming "Two-Faced Quillan," Ernest Palmer is doing "The Dolly Sisters," Charles Clarke is filming "Junior Miss," Arthur Miller is shooting "Dragonwyck," and Glen MacWilliams is doing "Within These Walls."

For United Artists release, Archie Stout is filming "Captain Kidd."

At Universal Studios Hal Mohr and W. Howard Greene are filming "Night in Paradise." George Robinson is doing "The Naughty Nineties," Elwood Bredell is shooting "Lady on a Train," and Paul Ivan is doing "Men in Her Diary."

At Warners Studios Ernest Haller is filming "Mildred Pierce," Arthur Edeson is shooting "Three Strangers," Carl Guthrie is doing "Too Young To Know," Sol Polito is shooting "Stolen Life," and Wesley Anderson is shooting "Danger Signal."

It is interesting to note that all the big pictures are filmed by A.S.C. members.
BRULATOUR SERVICE

EASTMAN FILMS
Where Do You Fit In Television...

(Continued from Page 81)

above. Motion picture film, as can television, can be used for advertising, for direct selling, for propaganda, for education and for any form of transfer of intellectual or information from one person to another. We thus arrive at the conclusion that basically, it is motion picture film versus electrical television which represent intrinsically different media and that if there is any real question of impinging at all, it is a problem of Eastman Kodak, Dupont and Ansco as against the Telephone Company, Radio Corporation, General Electric, Philco and DuMont rather than broadcasting companies as against so-called motion picture companies. These two latter groups are probably more likely to help each other than to hurt each other as they build talent for each other and make it popular. Motion picture companies may make films for television and television may supplement feature film fare in theatre programs. On the other hand, television might displace 16mm. movies in the home or schools in a reasonable period of time and thereby destroy the dream of the film manufacturing companies of an ever-expanding market. It permits simultaneous viewing and hearing in many places of a single event, at the time that event is taking place. While importance of this effect is important because of its emotional impact depends on rivalry or personality, everyone would like to view and hear it as it happens. Television alone, can allow them to do that. It cannot allow them to see it later. Film can record it and allow it to be seen later. Time of viewing can be selected; as examples, there are two groups of events which have had very definite influence on theatre attendance. The first of these is world championship boxing; that reaction will, I believe, be quite understandable to you all. The other is more esoteric. When President Roosevelt made his original fireside talks, the drop-off in theatre attendance on the nights of the talks was extraordinary. It is possible as has already been announced by one company, that the motion picture studio turning out this type of film will make them for television or even that television may, to some extent, take the place of them in the theatre. The best hours for showing can be chosen with ease, either on the East Coast or West Coast, or even for repetition if it is found advantageous.

I agree with many of the statements made by Paul Raiburn, but the statement I will disagree with is his 16mm. motion picture, I cannot agree with. Not as long as a daddy can pick up his camera and make some film of his little ones and his family and photograph places of interest to him, will 16mm. movies be displaced by any other process; no, not even in the school, for television could not bring into the classroom the lesson of the day. Since 16mm. sound has gained such popularity, I predict that it will forge ahead faster after the war.

Here, I want to quote a paragraph from the text of an article by a television director with whom I thoroughly disagree, for he says, “We are beginning to discover that television is neither radio nor motion pictures, nor a combination of both; it is a separate art, but contains some elements of both the camera and microphone and countless additional problems not common to either. Being a new art, it will take time to develop. We are the film people, but television will have much time for the production of films and, when television gets started, many will enter the field of production. As small film companies must have a background in motion picture production to compete. I am certain that every bit of information which I have learned from this project which I developed from motion pictures lies in the expertise of the film editor. Television like motion pictures lies in the expertise of the film editor.

I do not believe that Hollywood will have much time for the production of films for television, but there will be a lot of room for films and, when television gets started, many will enter the field of production. As small film companies must have a background in motion picture production to compete. I am certain that every bit of information which I have learned from this project which I developed from motion pictures lies in the expertise of the film editor. Television like motion pictures lies in the expertise of the film editor.

I have heard many arguments against the high cost of Hollywood production, and here television cannot compete because it has no money to spend on production. But I do not believe that television will try to produce the same fare which Hollywood produces for the motion picture theatre, for Hollywood has a definite income from the motion picture picture theatre and it will never be possible for television to profit from such expensive film production.

I recently attended the presentation of a half hour play in television. This took place in a station in New York City. Everything done for this production was taken from the motion picture, starting with the introductory titles and introduction of the characters with a musical

(Continued on Page 102)
The Removable Head

"PROFESSIONAL JUNIOR"* TRIPOD

Handles ALL Cameras

The "Professional Junior"* Tripod with removable head is a most versatile unit. The friction type head gives super-smooth pan and tilt action,—360° pan and 80° tilt. A generous sized pin and trunnion assures long, dependable service. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. A "T" level is built in. The top plate can be set for 16mm E. K. Cine Special, with or without motor; 35mm Devry, B & H Eyemo with or without motor, with or without alignment gauge—and the Filmo.

Tripod Head Unconditionally Guaranteed 5 Years. Literature on Request.
AMONG THE MOVIE CLUBS

St. Louis Club Solves Its Financial Problems

The Amateur Motion Picture Club of Saint Louis was faced with a situation which possibly exists in other clubs. The club worked out the problem happily, and Lon Waxman, the club’s secretary, suggests that their solution to the difficulty might be of value to other clubs, so here it is in Len’s own words:

The problem confronting the Board of Directors of the club was one of a financial nature. Years ago when the club was organized the dues were set so low that it was almost impossible to meet expenses on the amount received. We therefore decided last year to give a show charging admission. This year our second annual show. Our president, James Bialson, Cup winner of Amateur Motion Picture Club of St. Louis for 1944.

The profits realized from this project were sufficient to augment our treasury and to buy equipment for the club to use.

Both February meetings of the Syracuse Club were devoted to technical talks and discussions. One took up the subject of various types of films, and the exposures necessary for each. Nedford Olney gave an interesting and instructive talk on this subject. The other meeting was given over to a talk on continuity and composition by Archie Rodgers, followed by a round table discussion.

(Continued on Page 98)
IN FACTORIES and war plants of America — in military training camps all over the world, Victor 16mm Sound Motion Picture Equipment is being used to train and teach faster and better the multitude of tasks that go into fighting a war, and producing for war. All Victor equipment has been recruited for war today; but tomorrow you and your family and friends in your own home, your children in school, and your organizations in their meeting places, will be able to enjoy to the fullest, the advantages of new worlds — through Victor 16mm Magic. Victor 16mm sound projectors — the first yesterday, foremost today and the leader tomorrow — will be your choice, because of their clearer reproduction of sound and pictures; their sturdy construction and their most simple, trouble-free operation.

VICTOR ANIMATOGRAPH CORPORATION
Home Office and Factory: Davenport, Iowa
Chicago (1), 188 W. Randolph

TODAY Theirs
TOMORROW Yours

Insure your future
BUY BONDS

AMERICAN CINEMATOGRAPHER • March, 1945 93
In these days when the supply of film is small, many home movie makers are getting around to re-editing and titling their old films and finding that with very little footage (but a large amount of time and patience), highly satisfactory results can be obtained. Fancy introductory titles, animations, maps and running gags can be inserted to improve the audience-rating of films on hand. Perhaps the most appreciated feature which can be added is a series of interesting transitions. These may be between titles, between scenes, between title and scene, etc., but the more elaborate ones are properly reserved for introductory titles.

When one considers the many fancy lap dissolves, trick wipes and other complicated transitions used by the professional movie makers in previews of films, it becomes very obvious that these products of the optical printer have a known commercial value in attracting theatergoers to the box office on subsequent nights. The attraction of such preview films is usually in their novelty and unpredictability, and fancy transitions are used to enhance these changes to another. In a complete feature picture, special effects one after the other are usually confined to the introductory titles, where they greatly increase the percentage in the audience who give heed to the credit lines and similar text in the titles. Many amateurs wish they could duplicate to even a small extent such attractive, interesting transitions for home made introductory titles. Most of them do not realize how much can be done with a little planning and patient shooting.

Where the 16mm. camera is provided with a single frame release, backwind and perhaps a frame counter, very attractive titles can be filmed without more equipment than a title board, the printed or hand lettered title cards, and a supply of flat (matte) black showcard board which can be cut into wipe forms and animated frame by frame. As an example, let us consider one of the simplest wipe forms, in which a straight vertical line crosses the screen from left to right, erasing one title and uncovering the next as it goes. Suppose we plan this transition to occupy ten frames (about 3/4 second). We must prepare a series of black cardboard cutouts which can be held in some definite position on our title board, covering the title. The first of the series must have a rectangular hole, exposing all of the title except the left hand 1/10th; call this D1. The second must have a rectangular hole which leaves visible all but the left hand 1/5th of the title; call it D2. The third must conceal all but the left hand 3/10ths; call it D3; etc., etc., to D9 which will hide all but the right hand 1/10th of the title. D10 would be an all black card and is not needed; just leave the frame unexposed. If we are clever, these nine cards will be of such a shape that we can turn them around, and with D9 cover all but the left hand 1/10th of the title, with D8 the left hand 1/5th, etc. Now we can proceed. After sufficient footage has been shot for one title, we stop the camera, place D1 over the title, expose a frame, replace D1 with D2, expose a frame, replace D2 with D3, expose a frame, etc., etc., replace D8 with D9, expose a frame, then cover the lens and rewind the film eight frames. Uncover the lens, put the second title in the title board, turn the transition cardboards so that they are ready for the second run, place D9 in position to hide all but the left hand 1/10th of the new title, expose a frame, replace D9 with D8, etc., etc., finally shooting the proper amount of film to enable the audience to read the second title.

If care is used, transitions need not start at the edge and progress across or around, but can have beginnings anywhere in the field. Thus the E series may have a diamond-shaped hole at the center of the field, which becomes progressively large until the whole title is uncovered, while the corresponding D series was simply a number of diamond-shaped cards matching the E series holes, and placed carefully over the first title, starting at the center and ending by concealing it altogether. Instead of a diamond, the hole may have an irregular "shell burst" form, and the increase or decrease in size need not be regular in any one direction. The only requirement is that the D series correspond perfectly, i.e., for every D there is an identical shaped and sized E.

Left, six consecutive frame enlargements by the author.

(Continued on Page 96)
When You Consider Your Post-War Projector for 16 mm. Silent Films

After the war—the vast libraries of 16 mm. silent film will continue to be important to home motion picture fans. These silent motion pictures, plus those you make yourself, still possess unique advantages that assure their continued use. That means new 16 mm. silent projectors will be needed when peace-time production is resumed.

In selecting your post-war 16 mm. silent projectors, you should bear these important facts in mind:

Prior to the war, Ampro 16 mm. projectors were recognized as approved equipment in thousands of school systems, universities and government agencies all over the world. They offered new standards of dependability, brilliancy of illumination and ease of operation plus—portability . . . simplified easy threading . . . triple claw movement that protects film . . . automatic safety shutter . . . still picture button . . . fast and direct threading rewind . . . centralized controls . . . pilot light . . . standard lamps obtainable everywhere . . . framer . . . centralized lubrication . . . and many other features.

The rugged dependability and other important features that have made Ampro so popular with home users, schools and industry have also been recognized by all branches of the U. S. Army and Navy. As a result, practically 100% of Ampro output now goes to our armed forces. Therefore, Ampro 16 mm. silent projectors will not be available until after the war.

An unusually interesting and informative story entitled "What Will Happen in the Movies the Day War is Over . . ." is being distributed in attractive booklet form by the Ampro Corporation. Write today for your FREE copy.

Bay War Bonds

AMPRO CORPORATION, Chicago 18, Ill.

Precision Ciné Equipment Ampro 16 mm. Silent Projector
Transitions . . .

(Continued from Page 94)

So much for transitions between titles. They are easy, fun to make, gratifying in audience response, and the sky is the limit with respect to length. But let us consider the general needs for printing in the camera, and then introduce our transition problems.

In the darkroom, a camera spool of 100 feet capacity is loaded with up to 50 feet of unexposed film and a corresponding length of movie negative of which a print is to be made. The two film lengths are wound on the spool together, emulsion to emulsion, the back of the unexposed film out, the back of the negative film toward the spool. They are threaded together over the sprockets, through the camera gate and then wound tightly (without cinching!) in the camera. A large wooden box can be constructed—through which the titleing board can escape from the box into the darkroom, yet the camera lens is focused on the box and the camera lens should be closed carefully with black cloth so that when the title board lights are on, no light can escape from the camera. If wound tightly in the darkroom, yet the camera lens is focused on a white card on the title stand. If the photographer has no title board, a corresponding device can be constructed—the only essentials are the white, evenly illuminated card and the camera lens, inside a light tight box into which the camera lens fits while its film chamber is open (or can be removed) for manipulation.

Suppose a transition is wanted between two scenes which the movie maker has in negative. It makes no difference whether the scenes are on the same length of film or on two. If on one, they should be cut apart. The length of the two scenes must be known accurately in frames, not feet, from the beginning of the first scene to the end of the transition planned, and from the beginning of the second scene exactly at the beginning of the transition (a known number of frames from the paper clip). This frame is inserted in the gate, the negative and raw stock fed through the sprockets and loops. The take up spool may be unrolled to free the negative of the first scene, and the raw stock rewound and the spool turned snug. The feed spool should be unrolled to a point corresponding with the end of the second scene and the second scene negative and raw film wound on, the filled spool placed in the camera. We are ready to shoot the second half of our transition and print the second scene. It takes longer to describe the movements than it does to make them. If the raw stock is a slow film such as the negative, considerable safelight illumination can be used so that eyes can direct fingers in handling the films.

To make a successful lap dissolve one must know the latitude of the raw film emulsion. Specifically, we must know how much we have to close the diaphragm before the film registers "no light." Trial is the only sure way to obtain this information. Actually the range of iris openings between normal exposure and that at which the film receives too little light to cause a reaction, is only half the latitude of the film; the other half is between normal exposure and the iris opening which causes the film to be completely fogged, with no visible detail.

Suppose our trial exposures for determining the film latitude show that the normal exposure (best print from an average negative) requires a lens stop of f:2.8, while there is no recognizable print on frames exposed a f:11. We refer to our table of lens stops:

<table>
<thead>
<tr>
<th>f:1.4</th>
<th>2.0</th>
<th>2.8</th>
<th>4</th>
<th>5.6</th>
<th>8</th>
<th>11</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8</td>
<td>2.3</td>
<td>3.5</td>
<td>4.5</td>
<td>6.3</td>
<td>9.1</td>
<td>12.5</td>
<td>18</td>
</tr>
</tbody>
</table>

F:2.8 and f:11 are four full stops apart, and we refer to our table of relative exposure:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>32</th>
<th>64</th>
<th>128</th>
<th>256</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>3</td>
<td>5.6</td>
<td>11</td>
<td>22</td>
<td>45</td>
<td>90</td>
<td>180</td>
<td>360</td>
</tr>
</tbody>
</table>

A difference of four full stops is a difference of 1:16 in exposure, i.e., the normal exposure is sixteen times that which gives no reaction on the film.

Suppose that we wish to make our lap dissolve in nine frames. The first frame will be exposed at f:2.8, the ninth at f:11 (or unexposed since it makes no difference), the fifth (midway in the series) at f:8 (since f:8 is one-eighth the normal exposure), and the one sixteenth of the exposure of f:2.8, namely f:11. The third frame will be exposed at f:5.6 (since f:5.6 is one-fourth the exposure of f:2.8, i.e., halfway to

(Continued on Page 104)
Your Kodak Film in the making is "coddled beyond belief"

"What a wonderful day!"...that’s true any day in the year, if you work in the big buildings where the famous Verichrome and other Kodak Films are made.

The temperature is 70°, the humidity 50%, the air washed clean...

If you work in one of the film "coating rooms," the facilities of a fine club are at your disposal. After your shower, you are provided fresh clothing "from the skin out"—laundered free of charge. Your outer garments, from head to foot, are snow-white lintless fabric...

For these garments must not shed lint—not even a "microscopic" speck of lint or dust can be permitted to touch the film coating.

These are only obvious safeguards. Kodak has compiled—from experience over the years—a "million dollar book of film allergies"... page after page of weird, "unreal" influences which can affect film in the process of manufacture.

For instance, the treatment of a worker’s scratched finger—the medicine applied—can be "poison" to film in the making.

This is an example of the many strange "allergies" which, during the manufacture of film, might affect its photographic qualities.

Knowing these influences, and guarding against them, have contributed much to Kodak Film’s outstanding performance as an important military tool.

EASTMAN KODAK COMPANY ROCHESTER, N. Y.

REMEMBER THE FOXHOLES ON BATAAN?—How, three years ago, against staggering odds... fighting knee-deep in filth... under a blistering sun... with little food, water, drugs... and under incessant bombings, our boys and the Filipinos fought off the Japs those tragic weeks? A stern example for us at home. BUY—HOLD—MORE WAR BONDS.

"INCUBATOR BABY"... This is the critical moment when a Master Roll of film base stock, produced and cured under glass, is first exposed to the outer air. The giant roll, 2000 feet long and 50 inches wide, is severed by the attendant from the endless ribbon in production, and enclosed in a "cradle" in which it rides to the coating rooms. There, in darkness, the light-sensitive emulsions are applied.
Among the Movie Clubs

(Continued from Page 92)

St. Louis Club

Six films were on the program at the February meeting of the Amateur Motion Picture Club of Saint Louis. Films shown were, "Vacation Days," by Frances Ulrich; "The Boss Comes to Dinner," by Mr. and Mrs. Ryne Zimmerman of Milwaukee, Wisconsin; "Heckled Holidays," by Mr. and Mrs. Lon Wadman; "How to Make Good Movies"; "Happy Landings," by Mildred Calder of Long Beach, California; and "Home Sweet Home," by Forest Kellogg of Long Beach, California.

San Francisco Club

Chief feature of the February meeting of the San Francisco Cinema Club was a 1,000-foot 16mm. film called, "Bottoms Up." It was in Kodachrome and was a magnificent picture of a trip down the Colorado River, featuring some exciting and dangerous trips shooting the rapids.

New York Eight

"The Silent Alarm," by Ernie Kremer, and "Ice Follies Revue," by Fred Evans, featured the February meeting of the New York City 8mm. Motion Picture Club.

L. A. 8MM Club

"San Diego Zoo," by Robert Hadley, and "Ceramics," by Lorin Smith of the Long Beach Cinema Club, highlighted the February meeting of the Los Angeles 8mm. Club. Also on the program were films made by club members Herbert Abel, Herman Hack and Dr. Reginald Petter.

Southern Cinema Club

The annual banquet of the Southern Cinema Club of South Gate, California, proved to be a gala affair. After the banquet the new club officers were installed and the winning pictures in the club's annual contest were announced. New officers are:

Ben Gale, re-elected president; R. L. Paige, vice-president; Walter F. Jarvis, secretary; Arnold Hellbusch, re-elected treasurer.

Prize winning pictures announced were:

Third Prize, "Vacation at Arrowhead," by Vernon Larson.

La Casa Club

Capacity attendance has become the rule at the meetings of the La Casa Movie Club of Alhambra, California. February meeting was jammed to the roof, figuratively speaking.

The movie fare served consisted of the following:

"Just the Desert," by Guy Nelli.
"Progress of Animation in Color, Sound and Music," a film shown through the courtesy of Walt Disney Studios.
"Canada's Radiant Rockies," by Ralph Taylor.
"Travel Scenes," by Dr. L. D. Whiting.
"California Scenes," by Dr. Harold R. Lutes.

Los Angeles Club

The Los Angeles Cinema Club is conducting a drive for new members, and hopes to make the club one of the largest in the United States, according to President Harry E. Parker.

The club's February meeting scored a ten-strike by the presentation of "Combat America," the picture that Major Clark Cable supervised in the European theatre of war.

J. D. Mohler, head of the Photolamp field service for the General Electric Company, gave an interesting talk on lighting home movies, and the meeting concluded with the showing of "Elizabeth Park," one of the recent winners in the club's annual contest.
RED CROSS WAR FUND

Keep your Red Cross at his side. Never was this more important than today. Long after swords have been beaten into plowshares the Red Cross will have much to do.

Even after the last gun has been fired many a month will pass before all our fighting men are home. Some will be confined in hospitals for long periods of recovery. Traditional Red Cross service for these men who have sacrificed so much must continue unabated. It is a sacred obligation delegated to your Red Cross.

No less sacred is the obligation to stand by with all necessary aid while veterans of this war, now being returned to civil life, adjust themselves to new conditions, prepare to take their rightful place in field and factory.

The welfare of the families of our men in uniform, their wives and children, their aged parents, must be guarded to see they do not suffer want in these trying times.

The refugees and waifs of war need help—help such as only the Red Cross is prepared to give in a war-scarred world.

Those essential and humanitarian services which at home have characterized the Red Cross through the years must be continued: disaster relief, home nursing instruction, nurse’s aide training, the many volunteer services, and other activities.

Though the roar of guns may cease, human needs remain. The Red Cross can meet these only with your continued generous support. The President has designated March as Red Cross Month, the period in which the 1945 Red Cross War Fun will be raised. Red Cross activities are financed solely from voluntary contributions and gifts. We all must do our part.

New Filmosound Releases Announced by B. & H.

CRAZY HOUSE (Universal)
No. 2555 8 reels Rental $17.50
A mad, merry tale of how not to make a motion picture, and whom to exclude if you do. Top executives and staff of Universal Studios fail to prevent production! (Olsen and Johnson, Martha O’Driscoll, Patric Knowles, Leo Carrillo, Grace McDonald, Andy Devine) Available from April 8, 1945 for approved non-theatrical audiences.

OPTICAL CRAFTSMANSHIP (Navy Group)
An additional series of eight sound films, made for the purpose of training optical craftsmen to meet vastly expanded war and postwar needs, is being offered for rental and sale by the Film...
and a closeup at the same time. In "Our Town," for instance, one of the memorable moments was the shot in the graveyard with the mother's head in the immediate foreground, and the daughter's full figure in a white dress in the background. As a matter of fact this shot had to be accomplished with a split screen by cameraman Bert Glennon because no lens could carry so deep a focus. When he worked with Rudolph Maté on "Address Unknown," Menzies vowed that he would not indulge in the obvious, overdone device of showing accentuated swastika armbands on his Nazis. In order to do this and appear natural at the same time, he used a simple trick. The storm troopers were handed electric lanterns which they used in their search for the quarry. Whenever they came close enough to the camera so that their swastikas might be seen, the glare of the lanterns into the lens blotted out the Nazi insignia on their arms.

In "Kings Row," working with Jimmy Howe, Menzies played a whole scene in lightning, going from intense blackness to flashes of light. After each lightning flash, the characters moved closer together. In this case, the lightning amounted to cuts. In "North Star," again with Howe, the low horizons emphasized the flatness of the Russian plains. In "The Adventures of Tom Sawyer," in the body-snatching scene, the main character stood dynamically through the dead center of the screen with the two men on either side of him digging in the graveyard. This was the strongest and strictest visual combination that Menzies could evolve. "The Adventures of Tom Sawyer" was in color, as were "Gone With the Wind" and "For Whom the Bell Tolls." Menzies prefers to work in color, since it offers more problems and greater possibilities. His use of color for dramatic effect in "Gone with the Wind"—the childbirth scene with the woman's black silhouette against the torrid orange background is an outstanding instance—won him a second Academy Award.

Menzies' ambition was once to become a theatrical kind of painter—a muralist. Today he strives for the utmost fluidity in designing a motion picture. He emphasizes the fact that his drawings are only short-hand sketches for entrances, first groupings and effective finishes for a scene. It is impossible to plan everything on paper. To avoid woodenness and a static quality, particularly in longer scenes, much must be done in the actual photography on the set, and that is where the cameraman, whom Menzies holds in such high esteem, comes in. Frequently, alternate sketches will be prepared to cope with conditions during shooting, and the final result will be a compilation of a number of ideas that are cemented on the set. Menzies prefers to collaborate with the cameraman during the production designing stages, and he has made a point of doing so on all of his own productions. He says that he became a producer and director chiefly to protect his interests as a production designer.

To achieve fluidity, Menzies resorts to all kinds of devices. He may fade out on a big closeup of a head and fade in on a tiny head in the same position. If the preceding composition dovetails into the following shot there will be an imperceptible blending that is easy on the eye.

But, for a man who is interested in theory and technique, Menzies is wise enough to realize the pitfalls into which they may lead. He expouses the cause of movie mechanics, but only insofar as it makes for a more effective depiction of the human element on the screen. He believes that his contribution to a picture is good if it helps the story, acting and direction. Today he is a producer and director himself, but he will always adhere to the principles of production design. "The whole secret of motion picture making is in preparation," he says. "What comes after that is hard work."

Sinclair Oil Presents
"Planning For Tomorrow"

"Planning for Tomorrow," presented by the Sinclair Refining Company, is a 25-minute dramatic motion picture visualization of the advantages of Sinclair's "TBA" program (tires, batteries, accessories) for filling station operators, particularly in "planning for tomorrow."

The picture tells the story of how two gas station partners who have more or less let things slip during the war, due to the shortage of help and supplies, get onto themselves through the progressive leadership of a Sinclair agent, spruce up the station, put in a new system, take on a line of Goodyear tires, batteries and accessories, and as a result, win back buyers. The picture is played by a New York cast and has been produced in black-and-white with direct sound recording by Visual Training Corp., Detroit training and promotion specialists. Address requests to Publicity Dept., Visual Training Corp., 815 Bates St., Detroit 26, Mich.
Congo Goes to War
(Continued from Page 85)

built by Cauvin and his assistants, headed by Mrs. Hevery-Meurisse, in Leopoldville, capital of the colony. The dolly was a platform some ten yards long on which rested a truck with four large, oversize rubber wheels. Natives who accompanied the mission were trained as grips and soon learned how to roll the dolly without losing momentum or smoothness of operation. At first the natives considered dollying a sort of game, but after a while they caught on to the urgencies of the work and really made for what Cauvin describes as a great camera crew. The platform and dolly which followed the group during its thousands of miles of travel weighed over half a ton and used the facilities of one small truck by itself.

The caravan consisted of two five ton trucks, and one small ton and a half truck, as well as a car for the personnel of the expedition. Natives used were, with the exception of a houseboy, all Congolese soldiers and were trained in advance to take over all the technical duties of a motion picture troupe. The itinerary inside Belgian Congo started out by boat from Leopoldville, center of operations, to Stanleyville, a thousand miles distant. From Stanleyville the expedition traveled by plane for the most part. Stopovers in any one native village were never for less than a day and often lasted a week to ten days.

There were a fortunate minimum of mishaps. Losing the chief cameraman at the very beginning of the expedition created a hardship. On another occasion while driving across the sun-hardened terrain of Northern Congo, a front axle of the lead car cracked and sent the auto careening end over end toward a deep ravine. The car perched over the edge perilously with all its occupants until they were rescued. On another occasion the lead car got lost in the thickest part of the African jungle veldt, and the troupe was finally located and rescued by the Congolese soldiers, trained to jungle life. Until they were rescued the motion picture troupe, under the expert guidance of the native houseboy, fed on jungle bark and flora and fauna.

Cauvin has nothing but the highest praise for the natives who demonstrated an extraordinary skill in learning the film-makers' techniques in shooting pictures. They became expert car mechanics, grips, electricians and even camera maintenance men when the occasion called for it, and showed an unusually high level of intelligence. There are quite a few motion picture houses in the Congo—in Leopoldville, Stanleyville, Watsa and Matadi among other settlements. As far as the Congo is concerned, Andre Cauvin's "Congo" will be the "Gone With the Wind" and "Going My Way" of Africa at the box office for years and probably generations to come.

The Red Cross Needs Your Blood... GIVE

Flight Kits For Wounded

Red Cross flight kits are provided wounded men evacuated from the Middle East to hospitals back home. Kits contain games, magazines, candy, and other items.

FOR LIGHT ON EASTERN PRODUCTION--

C. ROSS
For Lighting Equipment

As sole distributors East of the Mississippi we carry the full and complete line of latest-type Inkie and H.I.-Arc equipment manufactured by

MOLE-RICHARDSON, Inc.
Hollywood - California

Your requirements for interior or exterior locations taken care of to the last minute detail anywhere

MOTOR GENERATOR TRUCKS

RENTALS SALES SERVICE

CHARLES ROSS, Inc.
333 West 52nd St., New York, N.Y. Phones: Circle 6-5470-1
Requirements of Educational Film Presentation

(Continued from Page 87)

of spare pieces of apparatus which will be available to meet any sudden demand. The rural authorities will also probably, for a period at least, have one or more mobile vans able to take films to isolated communities and schools who, for one reason or another, have no projection apparatus of their own. Each Authority will have its own maintenance service. I expect that it will, however, continue for purely political reasons to buy through the local dealer rather than through a more economical central organization.

On the side of supply, I fancy that the Local and Regional Library system will develop, supplementing a Central Library in London. In essence it should be as easy for a school to get a film on demand as it is to get more dusters for the blackboard or a new electric light bulb. One solid virtue of the decentralization of supply is that the manufacturer can sell copies of films outright and in that way get back his capital outlay quicker than through the expensive method of individualhirings. More copies sold, the quicker the turnover, and the easier to keep up a steady output of new films. If between 20,000 and 30,000 schools were equipped with projection apparatus and able to borrow films without direct cost to themselves (though in order to reduce film damage, school funds should be made to bear the cost of repairs or replacement), I see no reason to doubt that 500,000 school periods each week and over 40 millions a year will provide such an annual replacement figure as to render it possible to see one's money back within three years on a popular film.

As to choice of new subjects for films, I think that the great teaching organizations could play a large part. It is also from their ranks that the film makers would recruit their advisers without whom and without attention to whose advice, most films would continue to be foredoomed to failure.

I would even go so far, in the initial stages at least, to ask that companies making educational films whose ideas on fresh subjects and their treatments had been approved by the Board of Education or its advisers, should be indemnified against loss. I think this is the only way to encourage speculative as opposed to sponsored production.

In this connection, may I say that I am more than a little nervous of the effects of high-class sponsored films of an educational nature. It is not the fact that they are sponsored that fills me with qualms, but the fact that if the education or its advisers, should be indemnified against to lost. I think this is the only way to encourage speculative as opposed to sponsored production.

In this connection, may I say that I am more than a little nervous of the effects of high-class sponsored films of an educational nature. It is not the fact that they are sponsored that fills me with qualms, but the fact that if the sponsors put high-class films—educational or semi-educational—on to the market free to all users, it may be fatal to the prospects of successful commercial production.

To sum up my sentiments, therefore, in the smallest possible compass, I would say: Films and other visual aids, especially film slides and film strips, will be increasingly used in the schools of this country. If they are to be effectively used, on the one hand teachers must adjust their methods to suit these new instruments. On the other, in making films there should be far closer co-operation between teacher and film-maker than in the past, and the teacher's voice and opinion receive more prominence than it has in the past. Given true cooperation, I see no reason why the international reputation of British educational and instructional films should not be maintained and even advanced.

My Bell's paper was illustrated by the following films, shown by courtesy of the respective companies: "Marine Models" (British Instructional Films), "Hammers, Pincers and Drills" (B&H Taylor-Hobson-Cooke), "Pacific" (made by G.B. Instructional for the British Council), and "A Ride with Uncle Joe" (made by Verity Films for the Royal Society for the Prevention of Accidents).

Where Do You Fit In Television...

(Continued from Page 90)
Photographing Tokio

Continued from Page 86

number of photographs to cover area 20 miles by 20 miles in size allowing 60% forward overlap and 40% side overlap, 7” x 9” 703, and 9” x 18” 290; minimum number of flight strips to cover area 20 miles wide, allowing 40% overlap, 7” x 9” 19, and 9” x 18” 10; minimum number of photographic miles to cover area, 7” x 9” 380, and 9” x 18” 200; minimum flying time at 120 miles per hour, 7” x 9” 3.16 hours, and 9” x 18” 1.66 hours.

How many thousand photographs of Tokyo were taken, the altitudes flown, flight speeds, and the area covered on the three trips are censor-shrouded statistics, but it was announced that on the third trip the cameras clicked steadily for two hours and 40 minutes.

From a photographic standpoint, the K-18 not only takes bigger pictures than other cameras, but it has an excellent lens, perfected by a U.S. optical works, which provides extremely sharp pictures. The camera also has the Fairchild between-the-lens aerial shutter, designed especially to eliminate distortion and sharpness. Because of the clarity, negatives can be enlarged to three or four diameters and the pictures are still without the faintest blur and loss of detail.

The plane that carried the cameras over Tokyo was sarcastically named the “Tokyo Rose” for the notorious woman announcer of the Japanese radio who had boasted so long that the reconnaissance photos we needed of Tokyo would never be taken.

B. & H. Offers Employees Course in Optical Technique

Unusual interest marked the recent opening of Bell & Howell’s School of Optical Manufacturing, which is meeting in the company’s modern optical shop at Lincolnwood, Illinois. Offered only to 25 employees at a time so as to insure thorough understanding between students and instructors, the course is based on an effective program of actual shop periods and seminars. Already more than 100 applications are on file from foremen, bench and machine operators, process and methods experts, and top supervisory personnel in many of the company’s divisions and departments.

One of the more appealing features of the course is that upon completion of it each pupil will have made his own Galilean telescope from beginning to end, working to the close tolerances characteristic of high-grade optical manufacture. Thus Bell & Howell employees who may necessarily have had to confine their previous shop activity to the operations or processes for which they were best qualified now are obtaining a sound working knowledge of every step in lens-making. Already the better understanding between departments which has resulted from the school is making itself felt along the production line, according to company officials.

We design and manufacture motion picture equipment to special order, for essential purposes. Your inquiries are invited.

Fly Light Bulbs To Italy

To beat the black market in Italy the Red Cross recently shipped 2,500 light bulbs by air and 7,500 by boat for use in its servicemen’s clubs. Shipments of 100 small pianos for Red Cross hospital recreation rooms have also been made to Italy.
Transitions ...

(Continued from Page 76)

one-eighth), the second frame at f:4, etc. The complete series of nine frames will then be:

\[ \frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{5}{8}, \frac{7}{8}, \frac{9}{8}, \frac{9}{7}, \frac{7}{6}, \frac{5}{6}, \frac{3}{4}, \frac{1}{2}, 1 \]

\[ f:2.8, f:5.6, f:6.3, f:8.5, f:9.1, f:10.0, f:11.0, f:12.0, f:12.0 \]

This will be the D series of our lap dissolve. The lens will be covered (at f:11 according to our calculations it makes no difference whether the lens is capped or not, but it is a lot safer to cover it!), and the film readjusted for the E series in the lap dissolve. The E series will run in the reverse order, f:10.0 on frame 2, f:9.1 on frame 3, etc., f:2.8 on frame 9 and for the succeeding title or scene.

Another use of the camera as a printer for the production of special effects, employs a negative of a title or an animation (black letters or lines on a clear field) through which is photographed a scene taken with the camera lens. Since the negative holds the raw stock away from its usual position in the gate by the thickness of the negative, compensation must be made in the focusing of the lens so that the image will be sharply delineated in the plane of the raw stock emulsion. Again a little experimental work is called for. With the camera so prepared, the film sandwich containing a title negative, the lens focused on a scene, the subject is shot. If developed in the ordinary way, the print will be a negative with white lettering, or if reversed in processing, the scene will provide a moving background for black lettering or animation.

Once a few of these interesting transitions have been attempted, the home movie maker is likely to become an addict, and will dream up more and more complicated special effects to try out. He will probably experiment with negatives of particularly complicated wipes, photographing scenes through such negatives, hurriedly to the darkroom or changing bag to adjust the film before taking the next scene. The ingenuity of the photographer is the principal limitation on tricks which can be performed in transitions. Good luck!

1944 Visual Review Is Announced

Featuring the story of the development of visual education over a period of twenty-five years, the Silver Anniversary edition of the Visual Review is announced by the Society for Visual Education.

Included in the new issue is the interesting history of S.V.E., which was founded by a group of forward-looking educators twenty-five years ago. The problems and methods used to lift visual education from the “realm of fad to the realm of faith” together with the story of the subsequent development of the Society for Visual Education, Inc., is told by Nelson L. Greene, editor of the Educational Screen magazine.

In “Twenty-five Years of Progress,” Ellsworth C. Dent, nationally known authority on audio-visual education, traces certain advances in audio-visual education during the past quarter century, particularly stressing the development in the production and distribution of slides and related training aids.

Other feature stories of the important part played by visual education in aviation education, training in the Armed Forces, and in various educational and religious fields, are authoritatively presented.
DeVry Gets New Government Contract

DeVry Corporation, Chicago, already a 4-time Army-Navy “E” award winner, has received further official endorsement of its craftsmanship in the form of a new government contract for motion picture sound equipment for the U.S. Navy and Marine Corps.

The equipment specified in the latest DeVry contract is to be used for combined training and entertainment purposes and is additional to the specialized “hush-hush” training equipment DeVry has been building for the synthetic training program of the Bureau of Aeronautics, U.S.N.

C. O. Kleinsmith has been elected a vice president of National Carbon Company, Inc., Chicago, and president of Union Carbide & Carbon Corporation. Mr. Kleinsmith was formerly general sales manager for the company’s “Eveready” Products. Prior to his appointment to that position, two years ago, he was sales manager for Eastern United States. He joined the company in 1919.

Mr. Kleinsmith announced the appointment of D. B. Joy as general sales manager for Carbon Products. Mr. Joy joined National Carbon Company in 1923 after graduating from Massachusetts Institute of Technology. He was made director of the company’s Process Engineering Laboratory at Fostoria, Ohio, ten years ago, and in 1941 became assistant superintendent of the Fostoria factory. He was made product manager last year.

Mr. Kleinsmith also announced the appointment of R. F. Bergan as general sales manager for the company’s consumer and related products.

Photographers Put Good Neighbor Policy On Job

Aided by the Photographic Society of America, amateur photographers of the United States, Canada, and Mexico are entering prints in 1945 South American salons. Three PSA representatives are receiving the prints at New York, Montreal, and Taxco, and will ship them to South American contacts who will enter them in the International Salon of the Sixth Photo Club Concordia, Argentina, Sept., 1945; Second Photo Club Bandeirante Sao Paulo, Brazil, Nov., 1945; Second Sociiedad Fluminense de Fotografia de Rio de Janeiro, Jan., 1946; Second Photo Club Rosario, Argentina, March, 1946; and Second Photo Club de Chile, Santiago, Chile, date unannounced.
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The Author of "BROWN BARRIERS" spent many years in the South Seas; long enough to know the natives and the islands intimately. He selected the inspiring island of Bora Bora, one of the Society Group, for the background of this intensely interesting and authentic travel novel.

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WHEN the town meets at the movies, War Bonds sell faster, blood donors hurry to the Red Cross, WAC and WAVE recruiting steps up the pace, the town blossoms out in new Victory Gardens, housewives and merchants band together to fight inflation . . .

Since the beginning of the war, thousands of exhibitors have contributed hundreds of hours of showing time. They and their staffs have worked day and night to make neighborhood and community movie audiences a vital factor in winning the war.

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Register your wants with your Bell & Howell dealer now, to be high on his preference list when Filmos become available. Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London. Established 1907.

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CONTENTS

Joseph LaShelle, Leon Shamroy
1944 Academy Award Winners..................By Hal Hall 114
Filming "Western Approaches"..................By Jack Cardiff 116
Julien Bryan, Film Reporter...................By Irving Browning 118
A Cinematographer Speaks....................By Ezra Goodman 120
An All-Friction Drive for Developing Machines..By W. G. C. Bosco 122
Aces of the Camera (Henry Sharp, A.S.C)........By W. G. C. Bosco 124
New Film Script Technique for Amateurs.......By F. C. Moultrie 126
Among the Movie Clubs........................128
Close-Up King ................................By T/5 George Justin 130

THE FRONT COVER: This scene might be termed "18th Century Rug Cutters", for it is a scene showing the dancing of the lovely minuet in Paramount's new film, "Kitty", starring Paulette Goddard. Director of Photography, Daniel Fapp, A.S.C., is photographing the picture, which is directed by Mitchell Leisen.

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LEON SHAMROY, A.S.C., receiving an "Oscar" from Bob Hope for best color photography of 1944.

THE 17th Annual Awards of Merit of the Academy of Motion Picture Arts and Sciences is now a matter of history. The famous awards, highest honors that can be bestowed upon the artists and scientists of the motion picture industry, were presented the evening of March 15th, 1945, at Grauman's Chinese Theatre, Hollywood, before two thousand of the film industry's outstanding celebrities.

To those interested in motion picture photography the highlight of the evening was the announcement of the winners of top honors in black-and-white and color cinematography. These two awards went to two members of the American Society of Cinematographers—to Joseph LaShelle for the best achievement in black-and-white cinematography, and to Leon Shamroy for the best color cinematography. LaShelle's award came for his photography on "Laura," for 20th Century-Fox, and Shamroy's was for his Technicolor photography on "Wilson," also for 20th Century-Fox. Thus, these two artists were crowned kings of the cinematographic world for 1944.

While the presentation of the awards to these men was an outstanding event in their lives, this writer is of the opinion that another event, which took place on the night of March 26th, probably made an even deeper impression on them. That occasion was a dinner given in honor of the two winners by their fellow craftsmen and fellow members of the American Society of Cinematographers. At that dinner all the other top cinematographers of Hollywood gathered to pay honor to the two men who have topped their work during the past year. Among the cameramen attending the dinner were sixteen men who were among the nominees competing for the Academy Awards. And those sixteen losers were the loudest in their praise of the work of LaShelle and Shamroy—which shows the stuff of which our cinematographers are made.

Even though we did print the names of all the nominees for cinematographic honors in last month's issue, we will print them again, for being a nominee is a great honor. Here are the other nominees, and the pictures for which they were nominated: Black-and-white cinematography—John Seitz, "Double Indemnity"; Sidney Wagner, "Dragon Seed"; Joseph Ruttenberg, "Gaslight"; Lionel Lindon, "Going My Way"; Glen MacWilliams, "Lifeboat"; Stanley Cortez and Lee Garmes, "Since You Went Away"; Robert Surtees and Harold Rosson, "Thirty Seconds Over Tokyo"; Charles Lang, "The Uninvited"; George Folsey, "The White Cliffs of Dover.”


Other important awards in the scientific field included those for best achievement in Special Effects, and for best sound recording. The award for special effects went to "Thirty Seconds Over Tokyo." A. Arnold Gillespie, Donald Jahrous and Warren Newcombe did the photographic effects, Douglas Shearer the sound effects.

The best sound recording award went to E. H. Hansen of 20th Century-Fox for the recording on "Wilson.”

Special Scientific Awards were presented to the following: To Stephen Dunn and the RKO Sound Department for the design, and to Radio Corporation of America for additional development of the Electronic Compressor-Limiter. This is a unique variable-gain amplifier, the design of which is based on the logarithmic characteristics of hearing and their specific relation to the reproduction of sound at theatre levels. Use of the compressor-limiter in a recording system provides automatic control of intensity ratios whereby the amplification and reproduction of sound, particularly speech, is accomplished without the phenomenon of exaggerated and
Leon Shamroy
Award Winners

By HAL HALL

unnatural volume surges. This device achieves a volumetric smoothness and a general increase in intelligibility not previously obtainable and is considered indispensable by all users of variable area sound systems.

To: Linwood Dunn, Cecil Love, and the Acme Tool Manufacturing Company for the design and construction of the Acme-Dunn Optical Printer.

The Acme-Dunn Optical Printer is the first such semi-automatic, electrically controlled equipment designed and engineered for trick optical printing, incorporating features previously used with many simple and fast-operating devices of new radical design into a compact, streamlined unit. This machine exemplifies technical advancement necessary to keep pace with the ever increasing scope of the motion picture art.

To: Grover Laube and the 20th Century-Fox Camera Department for the development of the Continuous Loop Projection Device.

The Continuous Device is the result of several years of experimentation on this type of equipment and is the first such device that will handle loops of over 1000 feet over a long period of time without film mutilation or erratic operation. It is simple, inexpensive, and efficient and can be quickly installed on any standard projector. In operation the device meets all the requirements of the most exacting operator for continuous loop projection for re-recording purposes.

To: Western Electric Company for the design and construction of the 1126-A Limiting Amplifier for Variable Density Sound Recording.

The use of the Western Electric 1126-A Limiting Amplifier provides, without distortion, automatic and instantaneous limiting of the sound volume in variable density recording. Its use simplifies the recording operations, prevents overloading of the modulator and thus provides improved release prints.

To: Russell Brown, Ray Hinsdale, and Joseph Robbins for the development and production use of the Paramount Floating Hydraulic Boat Rocker.

The Paramount Floating Hydraulic Boat Rocker is a completely self-contained unit, without a rigid gimble or guy lines, permitting an unhampered and natural flow of buoyancy which contributes to an action comparable to a ship actually under way at sea. One of the most unique features of its design is its ability to pick up its own anchorage so that it may be floated to any desired position in the tank. The results are an increased realism on the screen with an ease and speed of operation which decreases costs by reducing production time.

To: Gordon Jennings for the design and construction of the Paramount Nodal Point Tripod.

This tripod is so arranged that the camera body swings horizontally and vertically for panning or tilting shots on a fixed pivot point directly at the photographic lens of the camera. This pivot coincides with the rear nodal point of the lens. When the camera swings on this point as a center, the entering and emerging field angles corresponding with the objects at different distances from the camera remain conjugate to one another and the accurate line-up of miniature and action or background objects is preserved.

To: The Radio Corporation of America and the RKO Radio Sound Department for the design and construction of the RKO Reverberation Chamber.

This is the first reverberation chamber specifically designed and constructed to provide the re-recording process with realistic and effective reverberation suitable for innumerable pictorial situations.

(Continued on Page 137)
Filming "Western Approaches"

By JACK CARDIFF

THE Crown Film Unit, as everybody knows, adheres staunchly to realism in its films. Such studio requisites as make-up, model shots, back projection, etc., are anathema to them; so I was not surprised to learn that on "Western Approaches" we had to shoot many lifeboat scenes in a real sea and not in a studio, but my stomach rumbled nervously, for I am probably the worst sailor in the world. When, however, I was told that these scenes were to be shot with sound, physical apprehension turned to dismayed incredulity, for this foretold many problems. The bare idea of using our Technicolor blimp in a lifeboat is uproariously funny to those who are acquainted with it; but to those who have not seen this Technicolor Titan I need only compare it in size and weight to a four-foot square steel safe, for them to see the joke. In its place we had to use an auxiliary lightweight blimp which is generally used for crane shots, or exterior scenes where the regular heavy but efficient studio blimp is impracticable. This emergency blimp is the bete noire of any cameraman who has ever used it, as, being light and abbreviated for soaring on a crane or being carried up rocky mountains, it is fitted in one piece, like a hat, over the camera, and laboriously strapped together. For the most trifling operation like changing a viewfinder matt, it all has to come off again. This is fidgety enough on land, but at sea in a rolling lifeboat...

Chuckling in retrospect, I suppose, my assistant, Eric Asbury, was, on the whole, lucky to fall in the Irish Channel only once!

This turned out to be only a minor headache on a film which was the most despairing struggle a film unit ever had. For the lifeboat scenes our headquarters was at Holyhead, Wales, which proved to be the mecca of film-struck gremlins. The plan was, to tow our lifeboat twenty miles or so out to sea by a drifter.

It took many days for us to overcome literally hundreds of minor problems, but at last we went out to work. In our lifeboat was crammed, every day for six months, the director, myself and assistant, sound man, continuity girl, Western Electric sound gear, Technicolor camera with its many boxes of equipment, reflectors, props for the boat, such as a portable wireless transmitter, water barrels, and boxes of sandwiches for the day, and a flapping sail which swung murderously around when one least expected it. Oh, I forgot one other small item: twenty-two merchant seamen! All this in a 28-foot lifeboat.

I am relieved that this article is confined to photographic problems only. Anyone recording the problems of all departments would rival Tolstoy!

My first major problem was one of skies and exposure. Winter had been rightly chosen to give the best dramatic environment typical of so many frozen merchant seamen in this war. Now a person seen up against a summer's blue sky, bathed in radiant sunlight, is, to use a technical term, a pushover; but take away the radiant sun and blue sky, and an unrecognizable silhouette is smudged against the grey horizon. On groups of seamen this was just right for atmosphere; but on a closeup I could not get enough exposure to see who it was, unless I shot with the lens wide open—but then that over-exposed the sky behind. For instance, the sky alone usually needed an exposure of five at boat is uproariously funny to those who are acquainted with it; but to those who have not seen this Technicolor Titan I need only compare it in size and weight to a four-foot square steel safe, for them to see the joke. In its place we had to use an auxiliary lightweight blimp which is generally used for crane shots, or exterior scenes where the regular heavy but efficient studio blimp is impracticable. This emergency blimp is the bete noire of any cameraman who has ever used it, as, being light and abbreviated for soaring on a crane or being carried up rocky mountains, it is fitted in one piece, like a hat, over the camera, and laboriously strapped together. For the most trifling operation like changing a viewfinder matt, it all has to come off again. This is fidgety enough on land, but at sea in a rolling lifeboat...

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I am relieved that this article is confined to photographic problems only. Anyone recording the problems of all departments would rival Tolstoy!

My first major problem was one of skies and exposure. Winter had been rightly chosen to give the best dramatic environment typical of so many frozen merchant seamen in this war. Now a person seen up against a summer's blue sky, bathed in radiant sunlight, is, to use a technical term, a pushover; but take away the radiant sun and blue sky, and an unrecognizable silhouette is smudged against the grey horizon. On groups of seamen this was just right for atmosphere; but on a closeup I could not get enough exposure to see who it was, unless I shot with the lens wide open—but then that over-exposed the sky behind. For instance, the sky alone usually needed an exposure of five at
least, but the face was usually underexposed even with the lens wide open. Consequently, the laboratory could have printed on printer-point 1 for the face, but that made the sky flare from overexposure, so the scene should be printed at printer-point 20. I could not use a sky filter, as in black and white, for obvious reasons, and for a few worrying days “Western Approaches” looked like being the mystery film of all time, until we managed, after many difficulties, to get a couple of lamps in our boat—yes, there was only just room!—which were run from a small generator on the drifter towing us. This enabled me to put enough light on the faces until I could give an exposure of 5, and we were able to carry on.

The next problem was continuity of weather. Having started to shoot the scenes of the seamen’s first day in the lifeboat—a matter of several days’ work—in dull, rainy weather, we had to continue that way. But the next day would be like blazing June, with blue skies and that radiant sun again, so we decided that the second sequence would be shot in fine weather. So, if dull, first sequence; if sunny, second sequence; but after the first few days we ran into a much bigger headache—the continuity of the seamen’s beards. After shooting in four days’ fine weather on the second sequence, the seamen would show four days’ growth of beard. Then rain and dull weather would come for a week, but in order to return to the first sequence the seamen should be cleanshaven!

I made an interesting experiment at this stage, which enabled us to shoot sunny scenes in dull weather. The lamps I used were incandescent, and for normal use had to have a blue filter to correct the yellow light to white. By taking the blue glass off, the face was much too yellow for ordinary purposes, but by over-exposing to clean the dirty grey sky to a white one, and allowing for the laboratory to print on the blue side to correct the complementary yellow, so making the white sky blue, I was able to save waiting so long for sunshine.

When a rare sunny day did arrive in the months of October onwards, the sun was wan and orange, and always at such a low arc that the usual ground reflection was practically nil—but there wasn’t any ground, only dark blue sea, which was in complimentary opposition and accentuated the jaundiced effect. Reflectors in the shadow side were impossible with the boat rocking so much that the angle of reflection swung off far too much for the most adroit counter manipulation, and the inky gloom on one side of the face would be intermittently flared like a morse signal!

Winter sunlight is very yellow, much more than is usually realized, and when yellow faces are corrected by yellow’s complementary, blue, the seas, which are already blue, look fantastically unreal.

At the start of the film I was dismayed to see many faces over-sunburnt, for a tomato face in Technicolor is not very charming; but by the time winter had been wearily passed there was very little tan to be seen, and the difference was another headache for the cutter as well as myself.

Although our camera equipment was covered with water-proof canvas, salt water and salt atmosphere permeated everywhere, corroding viciously. Nearly every day the pungent smell of our cables and plugs shorting, with smoke issuing from our electrical gear told us that our salt water gremlins were having fun again, and we must dry the connections either by heating them with matches or lighters, or clean them under a water-proof while spray splashed in derisively. The Technicolor camera is the swanky apotheosis of movie machines, bred in million dollar Hollywood, delicately colored, with superb high-precision machinery and a prism which is set to a fraction of an inch and diligently watched for the most microscopic speck of dust, which would show as a large colored blob on the screen. This prism is always placed, with tense caution and bated breath, into the camera, keeping a perfect balance while doing so. This meticulous operation was a sight to be remembered in a lifeboat on stormy seas. Reloading the camera with fresh film was always a nightmare, with the ubiquitous gremlins

(Continued on Page 140)
Julien Bryan, Film Reporter

By IRVING BROWNING

JULIEN BRYAN, explorer, photographer, lecturer and author, whose work can be classified as a Film Reporter, started his unusual career from a desire to travel to far off places, meet people and study their existence. One must accept the hardships of the elements and the ways of their life to collect the vast material which Bryan has had the good fortune to amass in the fifteen years he spent traveling, photographing and collecting for his lecture tours. His genial manner easily wins him friends everywhere.

Julien was born in Titusville, Pennsylvania, in 1899. Titusville was the first town in the United States where an oil well was drilled and was well known throughout the world for developing the best oil well drillers, for when a driller was sought, Titusville was the place to find him. Titusville is still an oil town and many of its inhabitants earn their livelihood from oil which comes up from their back yards, yet, for all this, Bryan became a film reporter and not a driller. The father of Eli Culbertson was an oil driller in Titusville and Titusville gave two famous daughters to the world, Ida Tarbell, a writer and Helen Jepson, the opera singer.

At the age of eight, together with his brother, Julien started the “Bryan Brothers Picture Puzzle Corporation,” selling puzzles to his friends and relatives, constantly expanding their business, until one day, they received an order for one hundred and fifty picture puzzles which they were not geared up to deliver, this large order stumped them completely and they quit. Had he been a mite older, we may yet have seen that name today on puzzle packages.

Many find success by unusual circumstances. Sometimes it is thrust upon one; sometimes it is sought through ambitious effort; sometimes it is found of necessity and sheer hardship, but it is never a matter of luck, for nothing comes to one who waits for lady luck. So, with Bryan, he worked hard and long for what he has attained.

Bryan’s father always wanted his boys to meet people, and when a missionary parish minister came to Titusville to preach at the Presbyterian church where the family attended, he stayed at the Bryan home because there was no hotel in town. It was under such circumstances that Julien first learned the ways of the old world.

In World War 1, Bryan as a youth joined the American Ambulance Field Service and spent six months driving an ambulance for the French troops on the Verdun and Argonne Forest fronts. After the war, Bryan’s name came to the fore in a book which he wrote from his memoirs of the war titled, “Ambulance 464,” which the MacMillan Company published. This book carried photographic illustrations by Bryan which were made under trying conditions, but they were good enough to find a place in the newspapers and magazines in this country.

With these experiences behind him, his adventurous leanings got the best of him, for now he was old enough to attend college and at Princeton, his studies of history, medieval and modern, gave him insight to recognize social injustices in the world. Family traditions, his early experience both at home and in the war and his education all combined to influence Bryan to enter the ministry. He entered the Union Theological Seminary, where he spent
three years and was graduated. Before he completed the course, he decided not to be ordained but rather to engage in social work and for many years, he served as a director of boys' work in a Brooklyn Y.M.C.A.

In 1930, Julien first toured Russia on a vacation, in a party led by Maurice Hindus. On this trip he took with him a 16mm. camera and twenty rolls of film. When he returned, he showed his films privately and during these showings, he lectured, for there were eager folk, who waited to know and see what was going on in Russia. They had heard about the Five Year Plan and how Russia was evolving to a great nation. Most of his showings were free, but there were requests for his lectures and films for which Bryan was paid. All this was the beginning of Julien Bryan starting on a career which was to bring him renown and was to take him to many countries; to meet people in all walks of life; to be feted by royalty and presidents; to be invited to lecture at exclusive clubs, where he had many engagements.

In 1932 Bryan again set out for Russia. This time with a 35mm. Eyemo camera, for had he had 35mm. film for his 1930 vacation trip, he would have traveled through the lecture halls of this country as a professional. I first met him when he returned from Russia in 1932. A newsreel cameraman, Joe Reid, with whom I had made some college football films in Connecticut, met Bryan in Russia. Reid was sent by Universal Pictures to record the findings of a group of university professors of the work going on in the Soviet Union. Reid was so thrilled and impressed by what he saw, that upon learning that Bryan had traveled farther into the interior of Russia, covering many more places of this vast, interesting, rapid-developing country, he told Bryan he would like to meet him in the United States and that he might be instrumental in helping Bryan place his film for theatrical release.

One day when Reid was in New York, he dropped in to see me to tell me that he had been to Russia, had made film and had met Julien Bryan. He told me about the wonderful films which Bryan had made in the Soviet Union. Reid so impressed me, that I went to Universal Pictures and told the story of the films of Julien Bryan, as Joe Reid had related them to me. Neither Joe nor I had seen Bryan's films, but I managed to arrange a showing. Here, I stepped into the role of an agent, and oh, brother, how I wish I hadn't!

The day of the appointment for the showing of the Bryan film arrived and I took five reels up to the projectionist and then seated myself in a nice, easy chair in the projection room and waited for the committee, which had the authority to purchase independent productions.

The room darkened and the five reels of over- and under-exposed film with continuous panning to left and right, up and down, throughout the entire film continued. When this showing was over I sank deep into the chair, hoping the committee wouldn't find me. When the lights went on, only the gentleman with whom I arranged the showing, who is a very good friend of mine, was in the projection room. He came to me laughingly and said: "The next time, you come around with a film like this, it might be the last time." Later, I returned these films to Joe Reid and gave him a good bawling out for not having arranged to see the film before he "sold" me that wonderful tale about them. When the film was returned to Bryan he was not too disappointed, for he knew his shortcomings. But he was an ambitious go-getter who wanted to see it through to success and from then on, Bryan was at my doorstep desirous of learning what he could to make better films. This was the beginning of a long association and I became his advisor on cinematic production and photographic problems. It was then that he started as a Film Reporter with camera and pad as a serious business.

(Continued on Page 136)
A Cinematographer Speaks...

By EZRA GOODMAN

MOTION Picture Cameramen are acknowledged to be the masters of their craft. The lenswork is usually the most predictable part of a picture—it remains at a high level of excellence no matter how much the other phases of the film fluctuate. This is probably so because of the inherent ability of the cameramen as well as the fact that there is less executive interference in that department than in others, for the simple reason that it takes quite a bit of technical knowledge to interfere in so specialized a craft.

Cameramen are generally granted to be superior technicians. But I would like to add, as a writer about motion pictures, that some of the finest theoreticians on the subject of moviemaking to whom I have spoken have been cameramen. In the course of writing a daily Hollywood column and doing a number of magazine articles, I probably speak to as many as 500 producers, directors, performers, writers and other studio people in the course of a year. Looking back over the past few years, I would say that among the most satisfactory interviews I have obtained have been with cameramen like Jimmy Howe and Rudy Maté. I call these interviews satisfactory because they were well-rounded both as to technique and theory. There are moviemakers who create superior pictures but who are unable to articulate their methods. There are others who are long on theory and short on accomplishment. With men like Howe and Maté the accomplishment is apparent, and they are furthermore possessed of a critical faculty and theoretical background that is all too rare in Hollywood.

This story started out as an interview with Maté on the technical problems of his current assignment, “Over 21,” which he is photographing for Columbia. Somewhere along the line the interview veered into less technical channels. Personally, I found Maté’s observations extremely enlightening, and I pass them along to you in the conviction that theory is the touchstone of technique, and that the comments Maté made have their ultimate relevance in terms of arclights, camera angles and lenses.

Maté’s work on “Over 21,” which is being adapted to the screen from Ruth Gordon’s Broadway success, has its share of photographic problems. Approximately 80% of the film’s footage, he is working in the most constricted space limitations with which a cameraman has probably ever been confronted. The setting for most of the action is an ordinary bungalow near a Florida training camp that is typical of housing accommodations during wartime. In a living room that measures exactly 12 by 15 feet and contains chiefly a small divan and table, Irene Dunne, Alexander Knox and Charles Coburn go through most of the comic incidents of the plot. In the background is a kitchenette that is 4 by 2 feet, and there is a small bedroom that is shown occasionally. The smallness and ordinariness of the bungalow is integral to the comic convolutions, and producer Sidney Buchman and director Charles Vidor have made no attempt to glamourize or alter the set in any way. The picture’s action is
supposed to cover a time period of 42 days, but Maté estimates that 60 days of shooting time were spent in the living room, and 15 days in the bedroom alone, aside from exterior shots.

The use of wild (or movable) walls helped facilitate camera setups. Lights were arranged in banked tiers above the set in order to make use of every available foot of space. Maté is using less than the average number of lights because of his space problems, 3 light units on the floor and 5 or 6 above. Most of the shots are of necessity close and from an eye-level height. As a result there are almost no full-figure shots, with the camera usually cutting off the actors at the waistline. Since “Over 21” is a comedy, the camerawork has to be clear and cleancut, and because of the close quarters, the set and the action have to be lit at the same time. In larger sets, the actors can be lit from one source and the background from another. This is impractical in the current case, thereby contributing to Maté’s problems.

But Maté dismisses all of these problems as incidental ones. He points out that “Over 21” is a well known stage play, and that in this case the story is the thing. The emphasis is on plot, dialogue and acting, and not on lenswork. “We would ruin the story with camera tricks and glamour,” he says. “The camerawork is a compromise between glamour and realism. Miss Dunne, of course, has to look good, but the set itself is simple and dull. From the standpoint of camera mechanics, this is the most difficult picture I have ever worked on, because there is no scope for the camera. If nobody speaks about the photography in a picture like this, I will have done a good job.”

Maté’s admission of the relative unimportance of camerawork on this type of picture is a tribute to his comprehension of moviemaking. For the man who guided the camera pyrotechnics of “The Passion of Joan of Arc” and “Vampire” in France and who, during his 11 years in Hollywood, has photographed such superior productions as “The Pride of the Yankees,” “Address Unknown,” “Saara,” “Cover Girl” and “Tonight and Every Night,” realizes that there is variety in picture production as well as in real life. Not every picture can be a “Joan of Arc,” offering the cameraman extraordinary opportunities for visual effects. Successful pictures of a more theatrical and literary character, like “Watch on the Rhine,” are also part of the screen scene. Maté’s predilection is, naturally, for the films that are founded on visual principles, both because of his practising craft as a cameraman, and because of his belief in the theory that movies should move.

“The silent pictures,” he says, “forced the director and cameraman to develop original and imaginative ideas. There was no speech then, and so the moviemakers had to devise visual methods of getting across their points. Now it is so much easier to talk about something than to show it. The screen has lost some of its individual qualities and taken over many of the aspects of the stage. We are not showing enough today and we are talking too much about things.”

Born in Poland and educated in Budapest, Maté got his screen start in Vienna. He did his major work abroad in France where he photographed more than 75 pictures. The two most noteworthy of these were done in collaboration with director Carl Dreyer, who is today living in retirement in Sweden—“The Passion of Joan of Arc,” made in 1928, one of the memorable movies of the silent screen, and “Vampire,” a talking picture made in 1929, that is regarded by many critics as one of the finest horror films ever produced. Both pictures were shot with a DeBrie camera and with primitive equipment. Dreyer and Maté worked (Continued on Page 132)
An All-Friction Drive For Developing Machines

By W. G. C. BOSCO

Motion picture developing machines designed on a friction drive principle that for all practical purposes eliminates film breakage and damage from mechanical causes, has brought an enviable reputation and world-wide business to the manufacturer, The Fonda Machinery Company of Hollywood.

This company, which has been in production for nine years, has perfected an entire drive on film-carrying rollers with the power applied directly to the outer and upper edges, but which only applies when there is normal tension on the film. This unique driving action is achieved by creating a light constant drag or tension on the film all through the machine, with the resultant tension being relieved in the following manner: the film-carrying rollers are mounted on a shafting which is mounted yieldably downward on saddles carried on springs, and when the film drag, or tension, exceeds the amount determined by the spring adjustment these upper film-carrying rollers are drawn downward and away from the driving rollers until sufficient slack is fed up to relieve the tension, which then permits the spring to draw the film-carrying rollers into contact again with the driving rollers. This drawing downward action takes place almost constantly throughout the machine, but is noticeable only in the dry box where film shrinkage is added to the drag set up in the machine. On the take-off end the friction roller keeps the tension constant to the rewind.

At the first entrance of the film into the machine a speed is established which remains constant throughout the developing and drying process unless changed by the operator.

The driving rollers are directly over the upper film-carrying rollers, and all driving mechanism is out of tanks and solutions. The upper film-carrying rollers are mounted so that they may engage or disengage the driving rollers automatically.

All film-carrying rollers in the wet end are mounted individually free, and in turn are all mounted on free-turning tubing or shafting. All film-carrying rollers in the drive-box, in addition to being individually free, are mounted on tubing which in turn is mounted with ball-bearings on shafting, the entire unit being free to rotate or to slide laterally on the shaft, thus becoming self-aligning. At no place does the film pass over a tight roller.

With the Fonda system there are no sprockets to pull or tear the film, and no elevators are necessary to regulate tension. Speed and safety cooperate instead of limit each other, and the tension of the film remains virtually constant throughout the machine.

Built to specifications for any film capacity, and with a wide range of speeds, Fonda developing machines are built to both 35mm or 16mm standards; or, equipped with rollers that handle both film sizes. The same machine will process one or the other without the necessity of making mechanical changes.

These machines are proving themselves not only in the major Hollywood labs of Consolidated and Technicolor, but also in places like India and the Egyptian Sudan where the most adverse conditions of water temperature and humidity exist—conditions specifically designed (Continued on Page 132)
Again and Again!

EASTMAN FILMS

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DIRECTOR OF PHOTOGRAPHY

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20th Century-Fox Production

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Assistant Cameraman

BUD MAUTINO
Operative Cameraman

FOR TECHNICOLOR—JOHN GREER and EDW. PLANTE
Technician
Assistant

IN BLACK AND WHITE

JOSEPH LaSHELLE, A.S.C.
Director of Photography

"LAURA"
20th Century-Fox Production

RAY MALA
Assistant Cameraman

LLOYD AHERNE
Operative Cameraman

FOR SOUND RECORDING
20th Century-Fox Sound Department

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"WILSON"

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EASTMAN FILMS

SEVENTEENTH ANNUAL AWARDS OF MERIT BY THE
ACADEMY OF MOTION PICTURE ARTS AND SCIENCES
ACES of the CAMERA

Henry Sharp, A.S.C.

By W. G. C. BOSCO

THE late Doug Fairbanks of happy memory was possessed of one of the most electric, most scintillating and most charming personalities ever to have brought credit to the screen. The joyous vitality by which he captured the imaginations of millions through the medium of the motion picture had its counterpart in his personal life in which he won for himself countless friends, especially among those with whom he worked. His energy and agility was prodigious, and the joie de vivre which lent so much color and verve to his screen portrayals was truly a reflection of his real character. “Life is always wonderful,” he once told Henry Sharp, A.S.C., “always exciting, if you see it as a great adventure.”

It’s easy to see that Henry isn’t kidding. With one of the longest careers as a top-ranking cameraman in Hollywood to his credit, he is still as interested in the possibilities latent in a new assignment, still as excited about the probabilities of hitting a photographic high-spot, as an ambitious newcomer. There’s a freshness about him and an eagerness of approach that belies the fact that he made his bow as a cameraman with the late Thomas Ince.

Becoming a first man for Ince in ’24, after having served the usual apprenticeship as an assistant, Henry soon had rolled up to his credit some of the most distinguished films of that era: the original “Anna Christie”, which starred Blanche Sweet and Bill Russell; “Lorna Doone”, with Madge Bellamy and John Bowers; a series with Fred Niblo; “Barbara Fritchie”, featuring Florence Vidor and Edmund Lowe; and with George Archainbaud as director, was in production on “Enticement”, which featured Mary Astor, when Thomas Ince met his untimely and tragic end.

Fairbanks had been Henry’s ideal from the beginning, and it had always been his ambition to photograph the man professionally. But always, he felt, it would remain an aspiration rather than a realization. Fate, however, works in devious ways, and Fairbanks’ interest in Mary Astor caused him to look at the “Enticement” footage shot by Henry Sharp. And so, as film history records, he not only took over Miss Astor’s contract from the Ince interests, but was so impressed by the deft camerawork, he took up Henry’s contract also.

Henry’s first picture with Fairbanks was “Don Q, Son of Zorro”, directed, and acted in, by Donald Crisp. That was the story in which Doug played a dual role; in which the script called for him to fight “himself”. And, with no trick department, the acrobatics of the volatile Doug made it necessary for the cameraman to really know his business. But Doug was always most considerate of the cameraman. Every scene that involved those violent exertions for which he was famous were always worked out by him with the cameraman, in detail, beforehand.

After “Don Q” he started work with Doug on “The Black Pirate”; the first major production in the then new Technicolor two color process. In association with George Cave, who was the Technicolor cameraman on the picture, he conducted tests for four months. With no light meter thousands and thousands of feet of film were shot to test, and retest, every costume, make-up, and color to be used on the sets.

Even today, after so much film has gone through the cameras, “The Black Pirate” is remembered as an outstanding picture. If everything else has been forgotten people still remember the famous scene in which Doug thrust a knife into the sail, and, in one of those spectacular jumps, leapt from the rigging to the deck, slitting the sail asunder.

Henry thinks that Fairbanks’ companies were as happy as any with whom he has worked. “There was always an air of expectancy,” he said. “Everyone was always bright and on their toes. People on the set were buoyed up with Doug’s infectious good humor. And no matter what little difficulties we ran into, no one ever lost his temper in meeting them.” He remembered an incident during the filming of “The Black Pirate”. An orchestra, as was the custom in the silent days, was playing appropriate music during one of the takes when suddenly there was a gasp, a grunt, and a great slithering followed by a resounding crash and the splintering of wood. During the deadly silence that followed, and while work was suspended, it was discovered that some nameless person had (Continued on Page 139)
The Houston Corporation proudly announces the new Model 10 Film Processor. Embodying time-tested principles of operation plus the latest advances of Houston engineering, this machine brings new speed, ease and simplicity to 35 mm. film processing.

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THERE is an outstanding problem ever confronting amateur film makers, particularly, although by no means exclusively, affecting those who like to engage in the making of amateur photoplays. It is the "sound vs. silent" problem. Although this writer believes that films made by the "silent" technique may actually be preferable for certain types of stories to a fully synchronized sound-film, this view is not commonly shared, and we have to face the fact that audiences have for the past fifteen years been sound-film trained, and make their judgments on the question of movie entertainment accordingly.

While there are ways of satisfactorily synchronizing sound on disc and even though sound-on-film recorders are, perhaps, not beyond the means of large schools and colleges or clubs, most amateurs will find such equipment beyond their abilities either to obtain or to handle, for a considerable time to come.

This suggestion is offered to those who may possess only a simple disc recorder, or perhaps nothing more than a record-player and amplifier, into which a microphone may be "plugged," the mutual volume ratio between voice and/or music and sound effects being suitably controlled by means of a "mixer." The proposal is one which, if properly carried out, would result in a film very closely approximating a regular "talkie," and it hinges upon the preparation and use of a special type of script.

While the nucleus of this script consists of the narration which will be used in final presentation of the film, it is prepared in such a manner as will fit it also for use as a shooting script, thus reversing the more common procedure of first producing the film and later attempting to provide a timed dissertation, and/or sound effects and music. One may reasonably ask, "What advantage is claimed for the suggested scheme?" The answer is that the advantages are manifold. At times it becomes very difficult to deliver an adequate or well rounded-out discourse as an accompaniment to a film that has been made by use of the regular "action" type of silent-film script. Scenes will often flash past before the words relating thereto can be spoken.

Thus, traps will occur, since the brevity of some scenes may be such as to make it impossible to render even the most stilted description. Where such is necessary, the insertion of a title would be the only way out. Conversely, other scenes may be of such length as to stretch beyond all reason any spoken account thereof. Cutting AFTERWARDS, to fit a post-made speech, may involve one in disproportionate tempo considerations.

The recommended system will predetermine the speech, music and sound effects, as well as the length of a scene. Thus the total running time of the film may be very closely ascertained ahead of it's production. It is advisable to plot each scene so that it's running time will extend several seconds beyond that of it's relevant accompaniment. This is to allow for slight discrepancies in projector speeds, sound and speech delivery, etc., and to permit limited latitude in editing, cutting, and so on. If you have no governor on your projector and such cannot be fitted, a small neon lamp and a stroboscopic disc should be used, to provide a means of checking speed frequently and maintaining it at sixteen frames per second. It is proposed presently to give detailed examples of the types of narration that would lend themselves for usage as indicated and deal with the manner in which they should be prepared.

While styles may vary quite widely, in accordance with the authors' tastes or natural gifts, it appears that they should be all alike in at least one respect, namely, they should be fully descriptive as to scene and action, in order to avoid extensive subsidiary script notes for camera and direction, and should be composed with full appreciation of the construction of a film in respect to frequent changes of scene, camera viewpoint, and so on. For this reason, it is unlikely that many "ready made" write-ups could be discovered which would be found suitable. Suppose, then, we prepare our story in a style such as the following:

"It was cold and intensely dark. The weird night sounds were all about me and I must confess that I felt a nauseating fear it was difficult to control, as I stealthily crept around the old house, seeking a means of entry. The shutters were all nailed fast, and I possessed no tools with which to pry them open. I realized that, even if I found one shutter that was comparatively loose, it would be utterly beyond the power of my numbed fingers to release it. I earnestly hoped to find an unlocked door."

As one examines the foregoing, it becomes apparent that it might easily be subdivided into sections which would clarify it for use as a "shooting script" while at the same time preserving it's continuity for later rendering as the film is projected. Having thus written our story, it is now necessary to handle it a second time and arrange it in a form similar to the following:

And now, for the sake of any who may wish to try out a "ready made" script of this type as a "test-piece," the writer has prepared a short comedy, given hereunder, and which should absorb an even 100-ft. of 16mm film (or 50 ft. 8mm). Fine details, as usual, are left to individual directing ability and facilities.

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**TITLE**

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<thead>
<tr>
<th>Camera Direction</th>
<th>Story Commentary</th>
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<tr>
<td>Cutter No. 16</td>
<td>Scene of action not fully described</td>
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<tr>
<td>Med. shot</td>
<td>MUSIC or sound effects</td>
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<tr>
<td>Cutter No. 17</td>
<td>&quot;Dance Macabre&quot;</td>
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<tr>
<td>Med. close up</td>
<td>soft during speech</td>
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<tr>
<td>Pan to close up</td>
<td>Man feels in pockets for MUSIC LOUDER</td>
</tr>
<tr>
<td>Cutter No. 18</td>
<td>knife or implement.</td>
</tr>
</tbody>
</table>
| Cutter No. 19    | Man's demeanor indicates frustration of attempts to *
| Cutter No. 20    | enter via windows, etc. |
| Cutter No. 21    | Man recedes from view around corner of house. |

(Continued on Page 134)
THE indispensable first step in getting along with a neighbor... across the fence or across an international boundary line... is to get to know each other better. The movies are doing a lot to help the Latin Americans to know us better, and more and more films from below the Rio Grande are coming this way to help us know them better. It works both ways. For our country's part, feature pictures, short subjects, newsreels, industrial films, agricultural films, health films... in English, Spanish, Portuguese... all are helping our neighbors to see us as we really are. At the movies, they are learning something of our culture, our history, our daily lives... And in wartime, growing good will among all the American peoples has taken on new importance.

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FORT LEE  CHICAGO  HOLLYWOOD
The Editor's Crabs

Elsewhere on this page we explain, at the expense of the Utah Cine Arts Club, the reason for the lack of news about that organization in this issue. We didn't like to do it, but maybe it will help solve a problem that faces this harassed editor... That is, getting in the club news when it is still news.

While we understand, some magazines are cutting down on the space devoted to club news, we are happy to expand it in the Cinematographer. But, unless the club secretaries and publicity representatives take the time and interest to get the news to us we can't print it. Take the case of the Amateur Motion Picture Club of Saint Louis, for example. Their February meeting was held on February 26th. On February 26, one of our friends told us the events on the program. That reached us a few days after the March issue was off the press. We can't very well use it now, but we have no news about the March meeting, either. Let's get some at us for writing this, for we gave his club a big spread in the March issue, which proves we are trying to serve every club in America that wants service.

If your meeting is scheduled for late in the month, just send us an advance notice so it will reach our office by the 15th of the month preceding publication date. Come on, now, you clubbers, send in the news and news photographers, too. We'll print both.—H.H.

Syracuse Club

Three meetings were on the schedule of the Syracuse Movie Makers during the month of March.

On March 6th Ned Olney gave an interesting talk on lenses and filters.

On March 13th the regular business meeting was held.

On March 20th Lyle Conway gave a valuable talk on editing.

Utah Cine Arts Club

This will probably upset our good friend Al Morton no end, but we can't report the March meeting because we have not yet received either an advance notice or a report on what took place. We did receive a program of the February meeting, but it didn't arrive until we were well into the preparation of the April issue of the magazine.

However, we do want to congratulate Club Secretary Bill Lovelace on the excellent job he is doing in preparing the club's monthly Cinemagazine. It's really good. Now, if we can only get it in our editorial office sooner, we'll be happy.—H.H.

San Francisco Club

Topping the March meeting of the Cinema Club of San Francisco was a showing of colored slides called "Rambling in California." They were made by Leon Gagne, who is really an expert.

Three interesting films were also on the program. They were:

"Grasshopper Vacation," filmed by Eric Unanue.

"Early One Morning," an extremely interesting 16mm. subject in black-and-white with sound. It was filmed in Sweden at an old Swedish church one Christmas morning, and was loaned the club through the courtesy of Mrs. A. O. Olson.

"Billy, Our Baby," in color and black-and-white. This was filmed by President and Mrs. Charles D. Hudson of the Cinema Club of San Francisco.

New York Eight

The March meeting of the New York City 8mm. Motion Picture Club featured a revival program, showing Joe Harley's "Auntie in Moccasins" and Brit Boice's "Bermuda."

In the monthly bulletin of the NY8 is an item that might well be read by all members of every amateur movie club in America. We take the liberty of reprinting it here:

"8mm. Artists, Attention! Mabel Scar- cheri in her 'Your Camera' column of the N. Y. World-Telegram makes this suggestion: Paste this definition of Art by Andre Oliveroff on your camera. Exactly this, to reveal poignantly and recognizably the meaning and beauty, the joy and tragedy of human life... has been the aim and the partial accomplishment of all great creative artists, in whatever field they may have worked."

Westwood Club

More than one hundred members and guests of the Westwood Movie Club, of San Francisco, attended the annual banquet and installation of officers for the coming year.

Officers installed were: George Loehrson, president; Fred Harvey, vice-president; Joseph Pissott, secretary; Dee Golar, treasurer.

Three medals and a trophy, awards for the 1944 content films, were presented to the following members: The trophy and first medal went to Edward Franke, winner of the 1943 and 1944 Westwood contest, for his production, "The Home Front," 8mm. in color. Second medal went to Walter Johnson for his short color film, "Yosemite in Spring." Third medal was presented to George Loehrson for his 8mm. color film, "Colorful San Francisco."

Philadelphia Cinema Club

Remarkably unusual was the March program of the Philadelphia Cinema Club. It featured the screening of three excellent films made by amateurs and three professional films of many years ago. The contrast was terrific. The amateur films shown were:

"To the Ships of Sydney," a Grand Prize winner loaned the club from the film library of the American Cinematographer.

"Night Life," a film packed with the very finest amateur trick photography.


The old time films shown were:

"Gay Nineties Live Again!"

"His Trysting Place."

"Cast Adrift and How."

There will probably be more such showings, judging from the reaction of those present at the showing.

L. A. 8mm. Club

If the members of the Los Angeles 8mm. Club didn't know a few things about titling at the conclusion of the March meeting of that group, it was not the fault of Fred Evans, who arranged and conducted the program. A total of seven talks and seven demonstrations on every phase of titling was given. Here's the program:

Tilting the Easy Way....... Bill Millar Hand-Lettered Titles....... W. D. Garlock Centering Your Titles....... Bill Wade Double-Exposed Titles....... John Walter Special Title Effects...... Fred Evans Available Titling Equipment........ Irwin Dietze Exposure and Question Forum....... George Cushman Topping all this was the screening of Midge Caldwell's film, "In Our Garden."

M.M.P.C.

Featuring the March 8th meeting of the Metropolitan Motion Picture Club, of New York City, was a 1400 ft. Kodachrome film called "Romance of the Hybrid Orchid." This unusual film was made by A. M. Zinner, and was among the "ten best" selections of the Amateur Cinema League for 1943. Mr. Zinner's film traces the life of hybrid orchids from seed to full flowering. It is an example of magnificent camera work, and is said to be not only a labor of love, but an important contribution to the available information about orchid growing.

On the program also were "The Little Soldier," an excellent one reel film by Mrs. Mary Jessop; and "Land of My Dreams," by Joseph J. Harley. This film was the winner of the 1942 MMPC Annual Contest.

Among the Movie Clubs
Today's Victor Animatophones and Cine Cameras are maintaining the Victor reputation for quality of performance, simplicity of operation and sturdy construction. Thousands are in War Service all over the world.

With Victor, servicing the thousands of pre-war Victor Animatophones now in operation is as important as planning your post-war projector of tomorrow. Schools, Institutions, Business and Industry depend on Victor to maintain their irreplaceable 16mm motion picture equipment. Victor and Victor distributors have not failed them. Even under present conditions, when the demand for Victor production for war is so great, Victor parts and Victor service are available wherever Victor equipment is used. The unexcelled performance of old and new Victor 16mm equipment is being maintained.

YOUR FUTURE DEPENDS ON WAR BONDS YOU BUY TODAY.

VICTOR ANIMATOGRAPH CORPORATION
Home Office and Factory: Davenport, Iowa
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Close-Up King

By T-5 GEORGE JUSTIN

We were grown men and yet we went to school together. Danny and I were classmates, or GI mates, or call it what you will, in the same Signal Corps motion picture camera class. He, Danny, was a tall, fairly good-looking guy with black, curly hair and a little black moustache. He also had a wonderful smile.

Danny could never understand why he had been assigned to become a cameraman. Time and again he would say to me: "I told that dumb kid who interviewed me that I like to paint pictures... But I'm an artist... not a photographer..."

He was a good artist too. After I got to know him, he took me out to his home in Rutherford and showed me a lot of his canvases. Perhaps that kid at the classification desk had not been so dumb after all. A guy who could paint as well as Danny did, would learn to paint pictures with the camera.

I was a long way from home and therefore spent several Sundays with Danny and Danny's family. From the first visit, it was evident that he was a kind of a God to them. In every corner, on every wall, of every room—the mother, or the father, the sister and the younger brother had proudly displayed, some one of Danny's paintings. To them this talent, this ability to create, to paint pictures, was the divine miracle; something to be cradled and fostered and worshipped. And they paid homage to it. He would rarely ever discuss his work with me. Sometime, however, after we had eaten a big spaghetti dinner and had sipped a lot of sherry wine and we were all seated around the family table and there was a little time left before catching the last train back to camp, his father might say: "Danny, can I buy you some more brushes...?" or the mother: "After the war, Danny will be a famous painter..."

Then, he might open some more brushes... or the father had proudly displayed, some one of Danny's paintings. They worshipped. And they paid homage to it. He would rarely ever discuss his work with me. Sometime, however, after we had eaten a big spaghetti dinner and had sipped a lot of sherry wine and we were all seated around the family table and there was a little time left before catching the last train back to camp, his father might say: "Danny, can I buy you some more brushes...?" or the mother: "After the war, Danny will be a famous painter..."

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He had enlisted in the army because he believed in the war and he wanted to be a good soldier and a good soldier does as he is told and Danny was told to become a cameraman.

Some of the GIs used to call him The Wop; but I didn't. He spoke with a very slight, clipped Italian accent and when he couldn't understand some mechanical device on the camera he would fling out something that sounded like "mama mia" or "sapristi." I called him Danny; but later I referred to him as the Close-Up King.

For a guy who had never handled any kind of camera before, Danny got along amazingly well. After a while, he could load and unload film as fast as any of us: his hands flew around in the changing bag and his face would light up and he would smile and we knew that the job was done. So it was with everything: lenses, filters, exposure, caring for the camera. He listened, he asked questions, he tried, he made mistakes, he yelled mama mia, and he learned. Danny was a good soldier and he learned everything he was taught about this small thirty-five millimeter camera which the army has found most practical for frontline combat photography.

At school, the officers used to pound words into us at our desks: "Long shot, Medium-shot, Close-Up! It will be dangerous when you go over, but remember, you haven't got a story without a close-up..." The words became sacred to Danny: "Close-up... Close-Up... Close-Up..."

In the seventeen weeks I knew and went to school with him, we were assigned to cover many stories together: parades, ball-games, morning calisthenics, the rifle range, infiltration course, and even visiting generals. And always he would say to me: "You get the long and medium shots; I'll get the close-ups. I'm fast... I'll get the close-ups."

"You've got to be fast. You have no control over the subject. This is strictly off the cuff photography. The picture is here now, gone a minute from now. You'll never get the Nitzia or the Nazis away from a general's face or the muzzle of a gun."

At the end of each day, just before chow time, the class would be taken into the projection room and we'd be shown all the previous day's shooting. The officers would comment and criticize. Their voices in the projection room would say: "Privates Davis and Piller, you haven't got a story; just a lot of shots. Get in close..." or "Steiner, you're overexposing..." or "DeTita, your shots are too long; stop wasting film..." or "Manheim, you're not holding the camera steady enough; see the flicker..."

And then, sooner or later, "Look at that close-up. That's what we mean by a close-shot. Fine work..." Fine work, Danny.

He was very fast and he became very accurate and was soon the king of the close-up.

All of this was some time ago.

I'm still here, in the states, waiting to go over. There are a lot of us GIs running around here with cameras: on maneuvers and trial flights and photographing training films for other GIs and covering secret conferences.

Danny—I've had all kinds of V-mail from Danny since those school days: Casablanca, Tunisia, Cassino... Those horrible, wonderful close-shots you've seen in the theatres—so much of that was Danny's stuff.

He's done a lot of running around—painting pictures. Only the painting is done.

Danny was there when our side started to clean the Nazis out of Aachen. They say he never stopped moving in—closer and closer. Close-ups of hand to hand street fighting, close-ups of machine-gun nests being blown to nothingness, close-ups of all those buildings being smashed to the ground. Great, big close-ups; the kind they loved in the projection room. And then, when there were no more close-ups to be had, Danny dropped back, way back for one long shot of the whole works. He never got that long shot. Some sniper must have been watching for Danny. The curly-headed guy with the big smile will run no more. The king is dead.
a worthy co-star in any production!

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to thwart the best efforts of even the most conscientious lab man, particularly on 16mm stock—and yet, with their almost fool-proof operation are performing with astounding efficiency.

Because there are no precision parts, and the simplicity of the design calls for fewer parts in its manufacture, The Fonda Company claims for their machines a lower initial cost, and maintenance costs of one-tenth of that considered normal for other installations.

Under any circumstances these machines embody a principle that should provide the modern laboratory with better means for performing its important function.

**A Cinematographer Speaks**

(Continued from Page 121)

in close collaboration and, since these films were made as individual enterprises, were able to allow themselves lengthy shooting schedules. "The Passion of Joan of Arc" was noteworthy for its realism and its epic quality. Falconetti, a well known French actress, who played Joan, wore no makeup. The camera angles were mostly very low (the camera was dug into the ground most of the time) and as a result the figures loomed large on the screen against sky or masonry; or, conversely, many of the shots were made from high angles shooting down. Interiors were shot in a vacated garage near Paris. Maté used the deep-focus shot in that picture, a technique which was "re-discovered" by Gregg Toland notably in "Citizen Kane," and which is in wide use today. One shot in "The Passion of Joan of Arc," for instance, showed a pair of big feet in the foreground and, shooting between them, in the background were seen the crowds running during the execution scene.

"Vampire" was shot in and around a real, old castle. Maté rigged up all kinds of gadgets for the camera, including different kinds of heads for unusual pan and moving shots. The DeBrie was light enough to be lifted by hand if necessary. The weird, slow-motion shots from unusual angles around the cornices of the castle and through its dark corridors were extremely effective. The camera, at one point, was placed in the coffin, representing the body of the vampire, and the result was startling, to say the least. The horror film today is one of the last outposts of imaginative photography in Hollywood, but even horror photography, Maté argues, is becoming stereotyped in its adherence to fixed forms and techniques.

"Our camera equipment when we made 'The Passion of Joan of Arc' and 'Vampire' was deficient by Hollywood standards," he says. "But I have always maintained that the brain is more important than the camera. In Hollywood, we have the most perfect technique in the world. We have the finest cameras and equipment. But the story is lacking here, and technique is valueless without the proper story approach."

"When an art becomes big business, it is likely to suffer in its experimental, imaginative qualities. The fixed pattern is the great enemy of the screen. For example, our conception of feminine beauty is standardized. It is my job as a cameraman to study women. Every woman has her favorable and unfavorable points. We can accent the former with setups or lights. The result is that there is too much similarity between faces. I would like to see every face different. Today all faces have the same makeup, shading, color and shape of lips, hair tint and lighting."

"Too much emphasis is put upon production value and stars. Freedom in space does not necessarily mean a big set, but how you approach it. Some of the rooms in the castle in 'Vampire' were even smaller than in 'Over 21.' We had only 3 sets in 'The Passion of Joan of Arc'—the chapel, prison and torture chamber. Often the stars in our Hollywood pictures are as much of a liability as an asset. They are such a big investment that story and photographic values have to be sacrificed to them."

Maté's great interest now is color photography. His first color picture was "Cover Girl" in which he worked with the help of a Technicolor specialist. He was up for an Academy Award for his photography in that picture, particularly the double-exposure dance that Gene Kelly did with his after ego. "Tonight and Every Night" was his second color assignment, and he experimented with colored light and black-and-white photography methods in that film. He made closeups with incandescent light, normally used for black and white photography, in order to obtain muted and more realistic effects. In the outdoor blackout scenes, he used blue light, painting his set and cast with the light itself. He lit a bedroom with blue light and...
ACHIEVEMENT Through the Years

1917 "THE GULF BETWEEN" (first TECHNICOLOR feature)

1922 "THE TOLL OF THE SEA" (first production by two-component subtractive process)

1925 "THE BLACK PIRATE" (Douglas Fairbanks)

1929 "ON WITH THE SHOW" (first all-talking all TECHNICOLOR feature)

1935 "LA CUCARACHA" by TECHNICOLOR three-component process

1938 "SNOW WHITE AND THE SEVEN DWARFS" (first TECHNICOLOR animated feature)

1939 "GONE WITH THE WIND" (greatest grossing feature)

1940 Academy special award for TECHNICOLOR three-color process

1944 Record number of TECHNICOLOR feature productions

1945 First all MONOPACK TECHNICOLOR feature

TECHNICOLOR MOTION PICTURE CORPORATION
Herbert T. Kalmus, President and General Manager
New Film Script Technique for Amateurs

(Continued from Page 126)

TITLE: “Crescendo! Pianissimo! By F. C. Moultrie.

Camera Direction and Scene

MAIN TITLE AND CREDIT TITLES.

CUT TO No. 1

MED. SHOT No. 2
CLOSE UP

TRUCK BACK to Med. Shot No. 3
LAP DISSOLVE TO Long Shot No. 4

CUT TO Long Shot No. 5
LAP DISSOLVE TO Same as Shot 3 No. 6

CUT TO MONTAGE Shots No. 7

CUT TO Reversion to Shot No. 3 No. 8

CUT TO Med. Shot No. 9

Montages optional.

Otherwise retain shot of our hero appropriately demonstrating emotions.

TRUCK TO Medium Shot No. 10

Pan and truck to Med. Close No. 11

CUT TO Med. Shot No. 12
CUT TO Med. Shot No. 13
CUT TO Med. Shot No. 14

Slight panning of necessary, to take in movements.

CUT TO Med. Close Shot No. 15
(Note: Cigarette smoke puffed in slow wisps across camera lens will assist in this effect)
LAP DISSOLVE TO Med. close No. 16

CUT TO Medium Shot No. 17
CUT TO Close Up No. 18

Story Commentary

NO VOICE

It was night. The great Musician wearily sank into a chair.

He glanced at his hands.

It was hard to believe those slender, almost feminine fingers had held tens of thousands spellbound, tense, enchanted!

But now, with the plaudits of his last concert ringing in his ears they were to be stilled forever!

Bitterly he pondered the years of patient struggle which had secured him his present enviable reputation.

“THE GREAT MASTER”

“STRELLINI THE SUPREME,”

“Guest Artist, THE GREAT STRELLINI,” were examples of the news captions that greeted him everywhere.

Alas! He was unlike other men . . . free to move about his tasks quietly and unknown.

“There’s Strellini” had only begun as a whisper but soon broke into a roar and then would follow the usual round of INTERVIEWS! DINNERS! SPEECHES! and more headlines!

He was just a martyr—sacrificed to the ART of which he was the very living SOUL—the greatest living exponent!

But now he had decided to end it all.

Stoically he braced himself before the mirror.

One last gaze at that aesthetic countenance which would so soon be lost from among men!

He cast around to see that all his affairs were in order then groped dazedly, stumblingly on to the street. The hour was late. Only a dim streetlamp witnessed his departure.

Down among the dingy wharves, to the secret no prying eye would brand him a coward.

The eerie waterside mists swirled about him.

What an ignominous end!

Yet how peaceful!

For there was music, albeit of another kind—NATURE’S MUSIC! It actually seemed as though the sound of the lapping water vied with the reverberations of his beloved Steinway that he would touch no more.

Bravely he drew himself up, then, with but SIX PACES TO GO PLUNGED INTO Small Barber Shop entrance.

The little DOCKSIDE BARBER Shop!

THE END
“The modern arc, daylight when you want it and where you want it.”

John W. Boyle, A.S.C.
Before his 1933 jaunt he came to me and we discussed his trip. I advised what he should use to better his pictures, how to go about getting the best continuity and the importance of the use of a tripod. I especially cautioned him that if he panned his camera without reason, that I never wanted to see his films again. For many years after that Bryan continued to roam, especially to the USSR. Four times he went into almost inaccessible regions of the Caucuses, Siberia, Manchuria, Japan, Turkey, Poland, Finland and Nazi Germany.


By his audiences have taught him just what people want to learn and what they will and will not accept. For his own work, Bryan says, "I have learned one thing from my travels, whatever the dictators and militarists of the world may desire, the vast majority of all populations, the common people like ourselves, want peace and are bitterly opposed to war; so, I speak for them, the common people in foreign lands, in my lectures here in America. In my motion pictures, I show the peo-ple of all countries as human beings, not as political symbols. As I come back each year with new pictures to show with my lectures throughout America, it is my hope that I may be giving to my own people a truer understanding of how these other races live, work and play and thus perhaps in some small way to counteract those unjust prejudices which so many of us still harbor toward other lands.

Bryan's film material grew to such importance because he brought out of the countries the answer to the questions being asked by people everywhere, for Bryan had documentary proof as evidence of his statements. All of Bryan's cuts when they reached New York, were produced with no change for they were simply edited, of necessity to shorten them to time limit. There was no music added, only Bryan's voice coming from the stage. His lectures are prefaced with a ten or fifteen minute talk. Then the motion pictures are shown while he lectures in the form of a running commentary, and explanation, which is followed at the end, by a question and answer period in which he gives the public an opportunity to oppose Bryan or accept his views, for here you will find the critical, comparing his remarks with statements found in books, newspapers and those made by commentators on the radio. It is a period that gives the public an opportunity to oppose Bryan or accept his views, for here you will find the critical, comparing his remarks with statements found in books, newspapers and those made by commentators on the radio. It is a period that gives the public an opportunity to oppose Bryan or accept his views, for here you will find the critical, comparing his remarks with statements found in books, newspapers and those made by commentators on the radio. It is a period that gives the public an opportunity to oppose Bryan or accept his views, for here you will find the critical, comparing his remarks with statements found in books, newspapers and those made by commentators on the radio. It is a period that gives the public an opportunity to oppose Bryan or accept his views, for here you will find the critical, comparing his remarks with statements found in books, newspapers and those made by commentators on the radio.

Bryan's film "Siege," which reached the theatrical screens about 1940, is one of his best works in which he gives an account of his experience in Warsaw, Poland. He was the only photographer there throughout the Nazi bombardment of the Polish capital and anyone who has seen this film or read his book, published at the same time, will remember the terrific impression the beast called Nazi made on one.

"Siege" was distributed by RKO-Pathe, as were many of Bryan's films, some seem to be as "I Saw It in S. A." The March of Time also released much of Bryan's films in earlier years, using of his Russian material, Vol. 1, No. 4 and Vol. 2, No. 2, for which Bryan never received any screen credit. His material is interesting to audiences both theatrical and non-theatrical as it helps make for better relationships between our government and the governments of other countries.

When World War II, came along, our government found it necessary to create a film board for producing films for showings in South America and so came about the organization for the Coordinator of Inter-American Affairs for whom Julian Bryan became a contributor and producer. For this work, he had to enlarge his organization, for it was necessary for him to produce films in several South American countries and Mexico. Because of time limits he had to send other cameramen and writers to the South American countries because his programs called for completed films with date limits, and he therefore found it necessary to get to as many countries as time allowed him to send others to the places he could not go. The films he is produced for the Coordinator are as follows: "Americans All," "Good Neighbor Family," "Schools to the South," "Argentina Primer," "Colombia, Crossroads of the Americas," "Venezuela Moves Ahead," "Peru," "Lima," "Lima Family," "Housing in Chile," "Atacama Desert," "South Chile," "Found in Chile," "Bolivia," "La Paz," "High Plain," "Uruguay," "Montevideo Family," "Young Uruguay," "Roads of Peru," "South America," "Venezuela," "Ecuador," "Peru," "Lima" and "Lima Family." These were all produced from special scripts either written in this country before the crew ventured south of the border, or written on the spot of filming. Quoting from one of Bryan's books on the documentary films by him, he says, "The documentary film's only 'actors' are those actually living their parts, unaware that they are being photographed, perhaps indifferent and sometimes camera shy but never acting in the theatrical sense."

The list of lecture halls on whose shows the shoes of Julian Bryan have trod to tell the many thousands who have been able to listen to him, are long and varied and vast as any one man could possibly hope for. They include almost every large city in the United States.

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The moon, when full, gives off about nine times as much light as it does when at the quarter.
Academy Award Winners
(Continued from Page 115)

The chamber is constructed of concrete blocks and is divided into two rooms of different volumes. All interior surfaces are smoothly finished and non-parallel. Great flexibility is achieved by the use of double microphone and speaker circuits and by a remote-controlled sound-proofed door pivoted between the two rooms.

To: Daniel J. Bloomberg and the Republic Sound Department for the design and development of a Multi-Interlock Selector Switch.

This device consists of a six-pole six-position switch for use in Selsyn Interlock systems, which eliminates the usual cumbersome multiple patching plugs and cable connections which prevail throughout the industry. Economics in setup time and operation of Interlock systems are derived, resulting in an increased production efficiency.

To: Bernard B. Brown and John P. Livadary for the design and engineering of a Separate Soloist and Chorus Recording Room.

The design of a Separate Soloist and Chorus Room, and the engineering of associated equipment introduces a more flexible and economic method of scoring and permits greater realism in the screening of vocal numbers.

To: Paul Zeff, S. J. Twining, and George Seid of the Columbia Pictures Laboratory for the formula and for the application to production of a Simplified Variable Area Sound Negative Developer.

In the processing of variable density sound track negative, the need has been felt for a developing formula that would insure great stability of the solution and thereby create greater consistency in the process. This new formula, through the elimination of certain oxidizing agents, has accomplished the desired results.

To: Paul Lerpa for the design and construction of the Paramount Traveling Matte Projection and Photographing Device.

The Paramount Traveling Matte Projection and Photographing Device facilitates the making and accurately photographing of mattes, traveling mattes, and effects. The use of such a device makes it possible to photograph scenes which would otherwise be impossible. Used in conjunction with a split screen, this device makes it possible for a player, in a dual role, to cross screen, even in front of himself.

Armor Plate

Homogenous armor plate differs from face hardened plate in that it has uniform hardness throughout its thickness.

La Casa Movie Club

Four films made up the program of the La Casa Movie Club of Alhambra, California, at the March meeting. They were:

“Flowers and Animals,” 8mm., by C. K. Le Fiell.

“Mexico,” 8mm., by Dr. K. I. Lewis.

“India,” 8mm., by Miss Lillian Stevens.

“Our High Sierras,” 35mm., by Lloyd Austin.

Del C. Gardner Joins Staff

Del C. Gardner, who has been engaged in the field of industrial electronics for the past 18 years, formerly connected with U. S. Naval Ordnance and General Motors, has joined the staff of Visual Training Corporation, Detroit, as a technical writer. Mr. Gardner has specialized in developing logical reasoning processes for localizing electronic faults, and has also done extensive work in methods of preventative maintenance for electronic equipment.

EASY ON THE EYES

Brilliant, rock-steady, sharply defined pictures—that is what you get with DeVRY 16 mm. sound-on-film equipment. Photography that gives you the best in black and white or natural color. Projection that catches the infinite detail of the most difficult scene ... and sound that's always "Nature Real."

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CHAMPION CLOSE-UP—Hollywood’s all-time closest close-up is illustrated here. Subject of this remarkable camera feat is Ray Milland’s eye in Paramount’s “The Lost Weekend.” Above is the closeup as it appeared on the film. At upper right we see Camera-man John Seitz, A.S.C., making the shot. For the unique shot the lens was only six inches from the star’s eye. Note that the camera was so close that the edge of the finder rested on Milland’s forehead during the filming.

Wine Use Doubles

Consumption of California wines throughout the nation has doubled in the last 10 years and is expected to double again in the next decade, according to Horatio F. Stoll, of the California Wine Institute.

Dr. Cantril Retained for Audience Survey

Dr. Hadley Cantril, Director of Public Opinion Research for Princeton University, has just been retained as head of the Audience Survey Section of The Princeton Film Center, of Princeton, New Jersey.

In making announcement of the new affiliation, Gordon Knox, Executive Director of The Film Center, said, “The requisite to the successful use of motion pictures for special purposes is to determine in advance of production the interests, preferences, and tastes of the audience to be reached with a film.

New Filmosound Library Releases Announced by B&H

HIS BUTLER’S SISTER (Universal) No. 2556 9 reels

Young singer finds her brother a butler, instead of millionaire, as she had been led to believe. But he becomes unwilling stepping stone to audition with his boss, and the girl finds happiness at last—the annual “Butlers’ Ball.” (Deanna Durbin, Franchot Tone, Pat O’Brien). Available from May 26, 1945, for approved non-theatrical audiences.

YOU’RE A LUCKY FELLOW, MR. SMITH (Universal) No. 2595 6 reels

Marriage of convenience, between willful heiress and young soldier, proves highly inconvenient when hubby introduces some much-needed reforms. Very funny, much of action takes place in Pullman car, side-tracked because of a fictitious measles scare. (Allan Jones, Evelyn Ankers, Billie Burke, Patsy O’Connor—a real new juvenile star). Available from April 22, 1945, for approved non-theatrical audiences.

Fleming Promoted

Appointment of Ira L. Fleming to a newly created position as chief field engineer of DeVry Corporation, pioneer Chicago inventors and developers of motion sound equipment, is announced by William C. DeVry, president of the company.
Aces of the Camera

(Continued from Page 124)

fallen down a flight of stairs and, despite every effort to allay or divert his fall, had landed right on top of the bass fiddle.

When the big bass fiddle player looked, with homicidal intent, at the intruder sitting amidst the remains of the instrument, a hushed expectancy fell over the people on the set. Al Parker, the director of this picture, addressed a slow-footed electrician, the unwilling cause of all the disturbance, called out: “That’s all right, Joe, if that guy had had his fiddle up under his chin, where it belongs, this would never have happened.”

After “The Black Pirate”, Doug took one of his extended trips and Henry went to M.G.M. on a five year contract. For Leo he made a series starring Lon Chaney, and for King Vidor, that classic of its day, “The Crowd”, starring James Murray and Murray and their pedigrees.

Those with long memories will recall that “The Crowd”, made of course before the days of transparencies, was a notable photographic achievement in its realistic, almost “documentary” use of people. And these were the real thing. Photographed on location in such populous places as the front of the Equitable Life Insurance Bldg., the New York entrance to the Brooklyn Bridge, and achieved only after infinite patience, they prove that a simple magnificence seldom approached on the screen.

Before completing his term with M.G.M. Henry was loaned out to Fairbanks for the lensing job on “The Man in the Iron Mask”, and, upon completion of his contract, associated himself once more with Doug in the filming of that super travelogue, “Around the World in 80 Minutes”.

The assignment for the latter picture started with a phone call when Doug called him and asked him—as casually as if it were a call for a drink—if he could get away for a trip around the world. When Henry opined that perhaps he could, and asked when he would have to leave Doug told him “in four days”.

In four days Henry was ready. What a hectic four days! And what a trip! With Doug's tireless energy, and his ability to get into places, they saw everything worth seeing and were feted everywhere they went. In Siam, King Pradjadipok, who subsequently abdicated, entertained their party of four as his guests in one of his splendid palaces that might have come out of the Arabian Nights. In Kuch Behar, a little Indian Native State lying in the shadow of the Himalayas, they hunted tigers from the backs of elephants as the guests of a beautiful Maharani, ruler of a million people and owner of three palaces. By private train they toured the country and saw the incomparable wonders and mysteries of Heaven. Everywhere they went Henry had his camera out, grinding away at some of the most fascinating scenes it had fallen to the lot of any cameraman to shoot. Everywhere, that is, except in Japan. In Japan, even in 1931, the little Sons of Heaven must have had something up their kimono, because there were too many things taboo to the camera, especially around the waterfront.

Upon the return of the party Henry signed up with Paramount. Under that banner he directed the photography of such hits as “All the King’s Horses”, “The Glass Key”, “Alice in Wonderland”, “Geronimo”, “Dr. Cyclops”, notable for its technical achievement in color, the Charlie Ruggles and Mary Boland series, and had the satisfaction of working under the direction of Academy Award winner Leo McCarey.

In 1935, still under the Paramount banner, he boarded a plane with the production crew who headed east to Annapolis to make “Annapolis, Farewell”. In one of the worst tragedies in the history of Hollywood the plane crashed near the small town of Macon, Missouri. Five were killed, and everyone else on the plane was badly hurt including Capt. Paul Wing, who was recently released from a Jap prison in the Philippines, Dick Wallace, the director, Billy Caplan, and Pat Drew, an electrician. Henry, with a broken back, spent the next ten months in a hospital.

Henry's wealth of experience and his camera virtuosity is best expressed, perhaps, in a review of his current releases. In this list almost every type of picture is represented, and every budget. As a result all of them are better pictures for the considerate skill of an ace cameraman: “National Barndance”, based on the famous radio show; “The Man in Halfmoon Street”, featuring Helen Walker and Nils Asther, a story with the locale in London and the fog of the Thames; Fritz Lang's “Ministry of Fear”, with Roy Milland and Marjorie Reynolds. Incidentally, these last two are playing on the same bill. It isn’t often a cameraman gets a doubleheader.

“Tomorrow The World” is another current release based on the famous New York play and stars Frederick March; and, for Republic, “Jealousy”, with Karen Morley, Jane Randolph and John Loder, and directed by Gustav Machaty who made cinematic history when he directed Mrs. Loder in “Ecstasy”.

Perhaps the strain of responsibility shouldered year after year by directors of cinematography forces some of them to seek escape in music; in a detachment that nullifies the value of their accumulated experience. But there’s nothing jaded about Henry. He’s still the eager beaver, richly mollified by experience. Life is still a great adventure to him.

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American Cinematographer • April, 1945 139

AUTO-PARALLAX VIEW-RANGE
Camera FINDER
Filming Western Approaches

(Continued from Page 117)

having glorious fun, making the boat heave right over and throwing gallons of water over us as we staggered drunkenly about, lifting the blimp off and threading up the film somehow under a flapping tarpaulin.

Serious, of course, were never the same, either in character or color. On one day the waves would tower monstrously in the true Atlantic manner; then on the next day the sea would be as flat as the Serpentine, and the color changed every few hours, from deep blue to grey-green. One day fleecy, cumulous clouds; next day a completely cloudless sky. All these changes were typical of the ever-changing conditions at sea, but the difference can be glaringly seen when assembled together in the final cut film, with the whole sequence only supposed to be of five minutes duration.

The most deadly burden of all was seasickness. Even some of the veteran sea-men themselves were often horribly sick, so it was not surprising that most of the unit went through the ghastly misery of nausea nearly every day for many months. Sometimes our lifeboat looked as though a machine-gun had raked the whole crew down. Every wreched victim—except the few who were never sick—would lie inertly all over the boat or hang limply over the side heaving spasmodically like captured fish in a bucket. Our director was one of the heaven-blessed; he was not seasick once, but imagine how difficult it was for him to direct a scene when nearly all his crew were pathetically hors de combat.

With a sympathetic look around, he would say: "All right, let's try and get this scene before the sun goes in." Someone points feebly to Roland, the sound man, over the side, only his rear and twitching legs to be seen. "Well, I'll take the mike," says Pat. "Ready everybody?"

But my assistant hadn't taken the focus, only his tape measure is left swinging dramatically from the side, and a horrible choking vomit peculiar to Eric, explains his absence.

"All right, I'll take the tape out," says Pat desperately. "Five feet two inches, is that right, Jack?"

I have just returned from the side, and my head is sunk down on my chest like a dead man; my blurred vision tries to envisage Pat as I say something like, "Eggggmmph."

"Right," says Pat grimly, "turn 'em over."

But now the actor-seaman himself suddenly rises with a stifled gurgle and falls purposefully over the side. We wait listlessly. He comes back.

Eric returns, looking very white and battered. Roland, the sound man, crawls painfully back in position and buzzers are pressed weakly for the recordist on the drifter to set the machinery in motion; but after a dreary, burping delay, it is learned that Charlie, the American recordist, who works down an evil-smelling hold on the drifter, is busily vomiting into a bucket which he brings down with him every day.

In answer to feverish enquiries over the 'phone, Charlie pants indignantly, between heaving: "Can't a guy have time to puke once in a while?"

I also was a punctual sufferer, passing every day at sea with my soul in limbo and my stomach in the shades below, while looking through my camera to see that nothing except sea and sky were ever seen in the picture, for we were supposed to be on the Atlantic three thousand miles from anywhere. This was always difficult in the Irish Channel in wartime, with ceaseless convoys silhouetted against the horizon, and the Irish mail boat passing us four times daily heralded for miles with voluminous black smoke and thousands of sea gulls; also aeroplanes humming around all day machine-gunning flying targets or mock-battling. There were many buoys to watch out for, and lighthouses, wrecks, mine-sweepers, and, most ridiculous of all on one occasion, thousands of oranges floating by from a nearby wreck.

Apart from the thick rope used to tow us, there was also a heavy electric cable, and other cables for the microphone, etc., which, as they ploughed through the sea, gave us endless trouble. One of the million headaches that Kay Ash the chief sound man, had to deal with. The only way of getting the drifter out of the picture was to let the drifter steam ahead fast for a few minutes, then slow right down and, if the wind was strong enough, our lifeboat would sail up level with it, the cables stretched awkwardly at right angles and threatening to capsize our boat at any moment.

For six weary months we struggled through the lifeboat sequence, and when at last our location came to an end, we thought that the worst was over and the rest of the film would be easy; but I should have known better.

Our next location was the real Atlantic, this time on a cargo ship to New York. As there are only four Technicolor cameras in this country, I was not allowed to take my camera over 3,000 miles of sea with many U-boats lurking around, so Monopack was used on a black and white camera.

Although it was midsummer, bad luck still pursued us, for the weather was very bad going out and coming back from America, and fog nearly all the time made us scramble many weeks' work into a few days.

One evening, about 9:30, the ship in front of us was torpedoed. It was carrying high octane petrol and was soon a blazing hulk—a terrible sight which I shall never forget. Many men were killed that night, and I realized then, more than at any other time, why Pat Jackson was so sincere about making this film.

After the voyage to America we made several trips out to sea in destroyers, corvettes, and other escort vessels, getting authentic shots of convoy escort patrols.

By this time, having been over a year on the film, I had given up the idea of seas and skies matching, and fervently hoped that the laboratories would match the scenes up as near as possible.

One of the last remaining thrills was on a submarine which has to be sunk in

(Continued on Page 142)
A Cinematographer Speaks

(Continued from Page 132)

used yellow light on Rita Hayworth’s face. A room in the background was lit with white light. In one song number, when Janet Blair, wearing a green dress, sang in front of a white curtain, Maté colored the curtain with purple light.

“That way you have more freedom in getting effects,” he says. “You can take a normal set and paint it any color you like with light. The use of colored light is an unexplored field. I believe that color photography will be the big thing of the future.

“In real life we are subject psychologically to light and shadow even more than to color. And that is why I have tried to adapt the method of black-and-white photography to color shooting. There is little difference in real life between a beautiful day or a bad day. The color is about the same. It is the light and shadow that make for the effect on the onlooker. By emphasizing the light and shadow in color photography, I have tried to get the same sort of effect.”

But Maté reiterates that photography can be no better than the main body of the film, which is its dramatic structure. Asked as to what he thought the best shot in “Sahara” was, he replied: “The scene in which the Italian prisoner stumbles after the tracks of the tank in the desert.” That shot was a simple dolly shot, but Maté holds that since it was one of the most dramatic scenes in the picture it was also one of the most interesting photographically.

Pal Puppetoons Released
For Home Movie Fans

Release of three George Pal Puppetoons, for sale for the first time in the 16mm. home movie market, is announced by Milton J. Salzburg, President of Pictorial Films, Inc., RKO Building, New York 29, N. Y.

These Puppetoons are unique, in that they are animated puppets, perfectly coordinated in sound and action. The ancient legend of the Sleeping Beauty and her Gallant Prince is told with a modern swing twist in “SLEEPING BEAUTY.”

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“THE BIG BROADCAST,” is a professional variety show of song and dance from waltz to jive, including musical selections from some of the United Nations.

Double Duty

One newer church in London is used for religious services on Sundays and as a motion picture theater the rest of the week.
Filming Western Approaches
(Continued from Page 140)

the film. My camera was tied on the stern end, and the commander was asked, on a pre-arranged signal, to make a steep dive downwards, making sure that the end my camera was on was still above water. I started the camera on the signal, and the submarine accordingly dived so steeply that it disappeared rapidly, to my increasing concern, until just my camera and the top half of me were visible! Of course the submarine was under perfect control, but I needn’t have worried.

So ended a film which I regard as the most difficult film of my career so far.

Adhesives such as the kind that seal cigarettes or bind books, used over 150,000,000 pounds of corn starch and tri-lin in their composition during the last year.

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In this Issue...

Television and Motion Pictures

May 1945
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CONTENTS

Smith Heads A.S.C. for Third Year ......................... 150
The Adel Color Camera and Surgiscope ...............By W. G. Bosco 152
Junket to Albania ............................................ 154
Aces of the Camera (Joseph LaShelle, A.S.C.) ....By Hal Hall 155
University Film Courses ................................. By Irving Browning 156
Television and Motion Pictures ......................... By Richard Hubbell 158
Post-War Motion Pictures ..................By Ezra Goodman 160
Among the Movie Clubs .................................. 164
Modemizing Your Old Projector ...................... By Dr. F. D. Napolitani 166

THE FRONT COVER shows Director of Photography David Abel, A.S.C., preparing to shoot a scene for "The Affairs of Susan," which William Seiter is directing, with Joan Fontaine in the top feminine role. This film is a Hal Wallis production for Paramount release.

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**MAKERS OF 16MM EQUIPMENT SINCE 1923**
A.S.C. SMITH HEADS FOR THIRD YEAR

Leonard Smith, President of the American Society of Cinematographers for the past two years, was re-elected President for another year at the Society's annual election last month.

Fred W. Jackman, Executive Vice-President and Treasurer for the past year, and Executive Vice-President for the past two years, was also re-elected to the dual post for another year.

Other officers named at the election were: Charles G. Clarke, First Vice-President; Joseph Walker, Second Vice-President; Arthur Edeson, Third Vice-President; Ray Rennahan, Secretary; George Folsey, Sergeant-at-Arms.


The re-election of Smith and Jackman had long been anticipated, for under their enthusiastic leadership the ASC has become the most important organization in the American motion picture field. Both men are inspiring leaders and have the confidence and trust of not only every member of the society, but of the motion picture industry's key executives.

"It is difficult for me to put into words the deep feeling of gratitude I would like to express to my fellow members for this signal honor of being chosen as their president for the third year," says Smith. "If I have done a good job it is because I had the cooperation of all the officers, the members of the Board of Governors, and the members of the society themselves. Especially I want to express my appreciation for the great help that has been given me by Fred Jackman, Miss Marguerite Duerre and Hal Hall, the editor of our magazine. Without this trio of hard workers my job would have been a difficult one.

"Since the day I took office the first time I have attempted to keep the
President Smith is one of Hollywood's ablest cinematographers. For many years he has been one of the top cameramen at the Metro-Goldwyn-Mayer Studios. It was he who did that magnificent job of photographing "National Velvet." He is now photographing "The Yearling."

Fred Jackman for many years was one of the top trick cinematographers of Hollywood. For ten years he headed the process and special effects department at Warner Brothers Studios. He has been retired from active photographic work for several years, during which he has devoted most of his time to the handling of the problems of the ASC.

The Adel Color Camera and Surgiscope

By W. G. C. BOSCO

Indicative of the photographic magic that will be within the reach of everyone in the post-war world is the Adel Color Camera and Surgiscope, now in production by the Adel Precision Products Corp., Burbank, California, tested in many Army and Navy hospitals all over the country.

Designed to do a specific job in the field of surgical photography, the Adel Camera reflects this company's plans for a post-war camera for general use. The fundamental principles around which it has been designed and built, provide the basis for a camera which will permit even the most inexperienced to take color or black and white pictures of unusual quality.

To one, familiar with all the paraphernalia and involved problems generally regarded as prerequisite for a photographer, the foregoing statement might seem an exaggeration; but, when it is possible for the public to view, as this writer has done, the amazing results achieved by the rankest of photographic amateurs, and even by children, with this camera, it will be realized that exaggeration is difficult.

H. Ray Ellinwood, President of Adel, whom camera men will remember as designer of movements in several leading motion picture cameras, is a man whose industrial daring and mechanical virtuosity has already made him the subject of Saturday Evening Post, Life, and Time articles. This company set about the task of creating a camera to meet the unusual conditions present in clinical photography. Because of the limitations of clinical procedure imposed by standard methods, they discarded most of the well-known formulas and even went so far, in some instances, as to go completely opposite to the dictates of established photographic authority. They have succeeded brilliantly. And in so doing have opened up new possibilities for the post-war photographer.

The Adel Color Camera and Surgiscope has created a new photographic technique in the operating room and clinical laboratories and opened up exciting possibilities in the field of surgical and clinical photography previously limited by the requirements of asepsis in many departments of the modern hospital.

Prior to the development of the Surgiscope there were several published ways to procure actual photographs of operating procedure through an arrangement of suspended or correctly placed mirrors or reflectors over or near the operating table in conjunction with the camera, flash or photoflood equipment. But these arrangements require the use of a telephoto lens with the camera being located remotely from the immediate surgical area. While this method offers a means of permitting surgical photography, it can not be considered completely desirable because the photographic operator's ability to procure satisfactory photographs, particularly in color, depends on the movements of the surgeon and his assisting staff. Precious time is consumed in placing the equipment in a satisfactory position, the extra activity is not helpful to the patient, and no one but the operating surgeon knows when the precise moment
Right is a flash picture taken by the operator of his own eye, with the Adel Camera at a distance of 6 inches. Note the fine detail of the vein structure in the eye and the iris, also the skin texture.

is at hand to record photographically the operation procedure. And surgical photographs, to have any value at all; must be of excellent quality.

Extensive surveys were made by the Adel Precision Products Corp. under the direction of Gordon B. Pollock and Howard R. Trissel in cooperation with key surgeons in many of the large hospitals in the United States. Elements of timing, simplicity of camera manipulation and the necessity of maintaining an atmosphere of asepsis were considered, and formed the basis on which development of the Adel Color Camera and Surgiscope proceeded. From this original research it was determined that to be satisfactory for the taking of surgical and medical photographs the camera would have to be instantly available for quick action, since the life and safety of the patient could not be considered secondary to the need for obtaining medical photographs. To be completely satisfactory a surgical camera would have to produce reliable photographs with an absolute minimum of manipulation. It would have to approximate pointing the camera and pressing a button. To maintain the atmosphere of asepsis the camera would have to be actually a sterile instrument in the hands of the operating surgeon or his assistant, available for instant use when he saw the need for actual photographic record.

To the best of our knowledge, no camera equipment has been developed that can be subjected to the sterilization of the standard hospital autoclave. It is doubtful whether such a camera could ever be produced. Therefore, the only answer to the problem of producing a photographic mechanism that could be used as a surgically sterile instrument was the placement of a camera—precise in its functioning, simple in its operation, containing flash mechanism, and coordinating the use of color film—within a sterilizable housing. All these requirements have been met by the Adel Color Camera and Surgiscope.

While the Color Camera and its Surgiscope housing are two distinctly separate units, they are integrated into a functional unit that permits the taking of an unsterile camera into the operating room within its sterile housing. In order that the equipment may be readily handled, weight had to be considered; therefore, the Surgiscope was made of light weight aluminum alloy and stainless steel, machined with utter simplicity of lines, streamlined in fact, allowing no crevices, no hard-to-clean areas, no complicated construction. The unit has to be comparatively small to be placed in a standard hospital autoclave for complete sterilization. Inside the housing, shielding the camera and the flash bulbs, is a sealed partition of heat resistant glass. The viewing window is

(Continued on Page 168)
WHAT impresses you first about Tirana airport is how large it is for so small a country. The next thing is its international quality. In one of the hangars stand three small motorless Italian and German bi-planes, their wings ripped and their fuselages mere skeletons. Another hangar houses two Russian C-47s which are being repaired after cracking up on the field. A French advanced trainer has flown in by short hops all the way from Paris. British transports lumber in now and again with supplies and equipment for the British and American missions to the Partisan government.

Aside from that, it's not an impressive place. The buildings are in ruins, and only because the Partisans took the field before the Germans had a chance to begin proper demolitions was the concrete runway saved. So far, engineers have removed 1,200 mines, each consisting of five, 100-pound high explosive bombs.

From the airfield, you travel into town along a crowded dusty road, past vast Italian-constructed military barracks. Long lines of civilian men wait outside.

(Continued on Page 171)
ACES
of the
CAMERA

Joseph LaShelle
A. S. C.

By HAL HALL

WHEN Joseph LaShelle, A.S.C., won the Academy Award for best black-and-white cinematography for 1944 there were some in Hollywood who immediately declared that long years of experience are not necessary to make a man a top cameraman. They pointed out that LaShelle has been a Director of Cinematography for only two years—and has won top honors. So, they said why aren't other newcomers given a chance to be Directors of Cinematography.

What those people forget, or do not know, is the fact that it took Joe TWENTY YEARS to reach the point where he won that Academy Award... twenty years of hard work... twenty years of study and effort. Joe isn't a newcomer... he is a seasoned cameraman who spent twenty years of his life learning to be a top cinematographer. Then he proceeded to make good in a big way with his magnificent photography on "Laura" for 20th Century-Fox Studios.

"It was a long haul," said Joe to this writer. "I spent twenty years learning the business. The last fourteen years I worked with that really great cinematographer and truly great teacher, Arthur Miller. It is to Artie that I attribute whatever success I have had, for he taught me everything I know, and gave me the chance throughout the years to develop ideas of my own. You don't work FOR Artie Miller... you work WITH him. And I must say that if I couldn't learn a lot about cinematography working first as assistant and then operative cameraman with Miller for fourteen years I should have been dumped into the Pacific Ocean. I took the 'Oscar' at the Academy Awards, but Artie Miller deserves the credit for giving me fourteen years of wonderful experience."

There you have an indication of the sort of man Joe is. Quiet, unassuming, a bit bashful, and, above all, a deeply appreciative and grateful man. He is also a serious student of his art... always has been... always will be.

"I feel," explains Joe, "that when a cameraman reaches the point where he thinks he knows it all he is lost. If I am in the profession another twenty years I shall still be studying and searching for new ideas and methods to advance the quality of my work."

Born in Los Angeles, and educated in the Los Angeles public schools, LaShelle planned to become an Electrical Engineer. He finished his preparatory training at Polytechnic High School and was all set to go to Stanford University when he secured a summer job at the old Lasky Laboratory. That ended his Electrical Engineering desires.

It was in 1921 he secured that job in the printing room of the laboratory. He made rapid progress in the laboratory and eventually became superintendent of the printing room at the new Paramount Laboratory. It was in 1925 that Cameraman Charles K. Clarke, A.S.C., decided that LaShelle ought to become a cameraman. He sold Joe on the idea, so he quit his seventy-five-dollar-a-week laboratory job and became Clarke's assistant at a salary of twenty-five dollars a week. And that was his beginning of a twenty-year grind to reach the top.

After three months as an assistant cameraman, Joe was advanced to the position of a second cameraman and left Paramount for the Metropolitan Studio. It was then Joe became the proud owner of a Bell & Howell camera. It was his pride and joy—almost his sorrow, for he took it to Alaska to shoot a picture with George Melford and dropped it into the ocean off Sitka. It was a dark moment for Joe, but the camera was finally rescued and dried and was made as good as new.

"I was transferred from Metropolitan to Pathé shortly after that," says Joe, "and while at Pathé began my long and happy association with Arthur Miller—broken only by interludes when Arthur retired to the hospital for one of his frequent digressions from the artistic heights to the lowlands of surgical exploration. It was during one of these interludes that I went to the South Seas with Clyde DeVina on "The Pagan." On the way home the ship stopped a few times for mechanical difficulties, and after reaching San Francisco safely, proceeded to sink in mid-ocean on its next sistant at a salary of twenty-five dollars trip out. I figured we were lucky."

The next exciting episode in LaShelle's career happened right after he had pur (Continued on Page 170)
I have often thought of the youngsters who live in the cities and small towns all over the country, who desire to enter the motion picture industry with a view of making it their career. I have thought, too, of the many questions they would ask on how to go about getting into this work and so I made this the basis of my article.

Too often, youngsters leave home for the film colony, taking for granted that all they have to do is go up to the door, knock twice and enter "easy street," yet they would never think of applying the same method in any other industry. The glamour and life of luxury which continually appears in the movie magazines and, incidentally, on the screen, captures their imagination and they're off for Hollywood.

I remember vividly my youthful days in motion pictures. The going was hard and rough and I did not find it too friendly. I made up my mind to "stick it out" and I have found that more important than what you get out of a line of endeavor, is what you contribute to it; this being the difference between success and failure. Too many have rushed in and sadly walked out. Many get in, stay a long time, make no progress because they do not have "what it takes"; while some get in through influential relatives or friends.

I have keenly observed the upward climb of many, and I have met ambitious youngsters and grownups who wanted to be cameramen, directors, writers, editors, actors, and actresses. To get into the movie industry today, one cannot just start at the bottom and work up. One can start as an editor or writer, but how does one become an editor or writer? As for the technical work on film, one stepping stone is getting into the guilds and the unions. To become a member of these organizations, it is necessary to have many years experience and recognition in the industry and that in itself is something to acquire. But don't let that deter you. If you have that "something it takes" and the willingness to work, you can make the grade.

In New York City, our three universities have presented film courses for many years and I have had the good fortune to be acquainted with the curriculum. I hope that this article will not encourage those who want only to earn a lot of money, for this is not the key to any pot of gold. This article is sincerely written to encourage those who have talent and ambition and want to make motion pictures their life work.

I knew that I could get all the information necessary from the three universities in New York, but to those far from New York City, who cannot come here to study film production, I took it upon myself to write to several universities in different parts of the country, including New York, and get detailed data, so that everyone who wanted further information could write to the university nearest them and ask for a brochure with specifications for qualifications and admission to any or all of the courses they present.

The universities I wrote to are as follows:

1. City College of New York; New York University, New York; New York University, New York; University of Colorado; Northwestern University, Evanston, Ill.; University of Chicago, Chicago, Ill.; Bucknell University, Lewisburg, Pa.; Duquesne University, Pittsburgh, Pa.; Indiana University, Bloomington, Indiana; Cornell University, Ithaca, New York; Boston University, Boston, Mass.; University of Arizona, Tucson, Arizona.

The questions I asked are as follows:

1. Type of film course available, costs, etc.?
2. Type of student in attendance?
3. Length of course?
4. Instructors, their experience and backgrounds?
5. Does the university follow through on application the student makes of their knowledge after completing the course?
6. What percentage of students taking these film courses get placements in the film industry?

Ten of the universities answered my letter and they had this to say:

Northwestern University . . . no film courses.
University of Arizona . . . no reply.
University of Chicago . . . no regular film course . . . have a motion picture course for teachers on problems of production and distribution of class room films. At present very little is done with production.
Bucknell University . . . no film courses.
Duquesne University . . . no regular film courses.
Indiana University . . . no film course at present, preparations are being made for the commencement of two or three courses on both the appreciation of motion pictures and the production of motion pictures with emphasis in the case of the production courses on educational films.
Cornell University . . . while Cornell has a fine course in drama and theatre, they have no regular film training course; they have a considerable program of film showings in connection with the theatre work. They have a special interest in establishing at some later date a course on motion picture appreciation and criticism along with some elementary understanding of technical processes.
Boston University . . . no reply.
University of Colorado . . . no regular film course, only teachers courses in visual aids.

It did not surprise me to learn that most of the universities do not offer a Bachelor of Arts degree in film study, because most of the cities represented by the universities are not film centers like Hollywood or New York, and they could hardly afford to draw a staff of instructors from the motion picture industry. In New York, we have close at hand much of the technical apparatus, film libraries, studios, and so forth which are

University Film Courses

By IRVING BROWNING

I have often thought of the young-
Right, Prof. Robert Gessner, of New York University, shows a film to a class taking a film course.

visited by the classes, therefore affording the best set-up, outside of Hollywood for motion picture instruction.

The following is a reply to my letter to Columbia University, New York, which is self explanatory; it is signed by Frances Taylor Patterson, Instructor in Charge, and is as follows:

Dear Mr. Browning:

Your inquiry concerning the course in Motion Pictures offered by the University has been referred to me. Our course, I believe is the pioneer course in the field. It has been offered since 1915. The approach is primarily from the point of view of writing and composition, continuity, dialogue, screen treatments, synopsis, comedy methods, character, delineation, pictorial composition, cinema journalism and reviewing, technical methods, as far as they effect story content, methods of directors in handling screen narrative, the history of the industry and psychology of audiences, are among topics treated.

The Course has always been carried on in close cooperation with the industry. Leading directors, producers, story editors, technicians, actors and critics have addressed the student group from time to time and have acted in an advisory capacity. Films are exhibited and analyzed and scripts are studied in connection with current films. We have an excellent collection of scripts and stills for student reference.

There is no particular type of student in attendance; there are many types, such as teachers interested in teaching films, people in the industry interested in bettering their positions, writers interested in selling their material for screen presentation, graduate students, business men, any number of people.

There are no statistics available on what the students do after leaving the University, but we do know that many former students hold important positions in all departments of the industry.

The course is given both in the Winter term and the Spring term, each of which is fifteen weeks long. The class meets weekly for an hour and forty minutes with other seminars and conferences arranged. The fee is $37.50 with the additional university fee of $5.00.

I trust these details will be helpful.

Very sincerely yours,

Frances Taylor Patterson
Instructor in Charge

The next on my list is City College of New York. I found that Irving Jacoby is Supervisor on leave, so I contacted Hans Richter, the Instructor in Charge at present, and he had this to say about the film courses at the University. They have six groups and have a workshop for the beginner and the advanced student which is as follows:

1. The Fundamental class. Two hours per week—fifteen weeks. Hans Richter, Acting Supervisor.
2. The Workshop. Four hours per week—fifteen weeks.
3. Advanced Workshop—Four hours per week—fifteen weeks.
4. Film Writing—Two hours per week—fifteen weeks.
5. Film Editing. Four hours per week—fifteen weeks.
6. Motion Picture Photography. Four hours per week—fifteen weeks.

The Fundamental class is where the student gets complete information on the production of films from script to recording.

In answer to my question regarding type of students who qualify, his reply was that “fifty percent are actually interested in taking the complete course with an aim at entering the profession. The other fifty percent take the course as a form of expression. At present there are one hundred and sixty-six students taking either complete courses or one or more of the group of subjects. At the beginning of the war, sixty percent of the students taking the course went into various branches of film work with the government.”

For the student who had no training in film, but wishes to make it his life’s work, the Fundamental course prepares the student for the advanced courses.

In the Advanced Workshop, the student enters the stages of sound cutting and editing, recording and writing narrations. The entire instruction is centered around the production of documentary films and all the actual production (Continued on Page 172)
Theatre people may think of television in terms of the theatre, and radio people in terms of old-fashioned, blind radio, but motion-picture people and the general public are likely to think of it in terms of motion pictures. It is a natural reaction. Both are "moving pictures"; both use cameras, microphones, lights, and studios which look superficially similar.

Motion pictures were made technically ready for commercial and artistic development nearly a half century ahead of television. Edison made his first "motion camera" in 1877, and twelve years later he shot a motion picture on his first strip of Eastman-Kodak film. This was a famous sneezing sequence acted by one of his assistants, Fred Ott. The commercial birth of the motion-picture industry is usually pegged around 1894, but pictures of that era remained pretty much on the primitive side. Technically and artistically, motion pictures did not reach maturity until the third decade of this century.

Television was under scientific development during most of these years, but it was not technically ready to make its debut until the last part of the 1920's. A few tentative bows were made at that time—notably by the British Broadcasting Corporation. The American excursions into television programming were for the most part on a limited, amateurish basis. There was little serious effort, particularly when viewed in terms of the accomplishments of BBC television from 1927 to 1935—a time when the American television companies were bickering as to whether or not television was ready.

Almost all experimental program development was ended by the war, so that for practical purposes the beginning of serious commercial development of the art of television programming may be pegged around the middle of the 1940's. This will be roughly three thousand years after the birth of the theatre, half a century after the commercial start of silent pictures and a quarter of a century after its artistic flowering, two decades after the commercial sprouting of radio, and fifteen or sixteen years after the commercial and artistic beginnings (on a large scale) of sound pictures. In terms of technical perfection, however, television will be roughly about as far along as talking pictures were in 1930.

Both television and motion pictures are based on science; without the accomplishments of science neither could exist. Both are industries as well as arts, with motion pictures one of the largest of American industries and television giving every indication that it will be even bigger within a decade. Like motion pictures, television depends for its success on the cooperation of many artists, technicians, and businessmen.

It is too vast in scope, too complex, for an individual artist to create and produce an entire program by himself—all of which leads inevitably to a high degree of specialization, such as we find in motion pictures and in radio.

The danger in this is obvious, and the radio and motion-picture industries are full of living, walking, breathing illustrations of the danger. People tend to specialize on one job and never learn about the rest of the business. This puts an artificial limit on the development of the technician or artist, as well as on the medium itself—tending to result in a mass-produced "art" product without individuality or distinction.

This danger is no more acute in motion pictures than in television. In the former there is a long period of time elapsing between the moment a film is shot and the time anyone sees it. A great many different people can do a great many things to the film after it has left the director's hands, and in many cases he has nothing to do with the editing of the film. In television the entire production is created and distributed at the same time. The director has a much greater opportunity to put his own stamp on the show, and after it leaves his hands no man alters it. By the same token every cameraman, soundman, and artist exercises a direct control on the program. If he is expert, a cameraman can put his own stamp of individual artistry on a production. Conversely, if he is inexperienced one man can destroy an entire production.

In the production of motion pictures, teamwork, cooperation, and efficiency are necessary in order to avoid excessive production costs. In television these qualities are necessary for the same reasons and are vital if the destruction of a program's effectiveness is to be avoided. Good television demands even more than teamwork, cooperation, and efficiency. It demands a perfect working harmony between all members of a production crew, in precisely the same way that this is demanded of a bomber crew—and for precisely the same reason: if one man slips, the venture is finished; there are no retakes.

On the other hand, the dangers of mass production on unimaginative formule are as real in television as they are in radio. Television, will use many more hours of entertainment than the motion-picture industry distributes, perhaps as much as standard radio, and a good many of these programs will undoubtedly slip into ruts just as radio has done. One of the surest ways for a techni-
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Television and Motion Pictures

(Continued from Page 158)

The shapes of the television pictures and the motion picture are the same. Each has an aspect ratio of 3 by 4, which is the same as high bird's-eye views, in which one is housed by four units wide: i.e., 3 feet high by 4 feet wide, or 18 inches high and 24 inches wide, or 15 by 20 feet.

The production methods of television and motion pictures look alike in still photos. Both have cameras, lights, microphones on booms, and both are housed (or should be) in large, flexible stages, the walls of which are covered with acoustically dead material to absorb sound reflections.

A motion-picture camera exposes rolls of celluloid film, which are later developed in laboratories. The television camera uses no film, except in specialized cases which we can disregard here. It is entirely electric, as is the human eye, and it is "seeing" all the time—no need to take time out to change a reel of film.

Since television is not a photographic process, it entails none of the bothersome details of handling film, chemical processing, fire precautions, storage conditions, distribution in cans.

For these reasons actual television cameras are, with respect, simpler than in motion pictures. All control of cameras and microphones is accomplished as in radio, by turning a few knobs or throwing a few switches. By merely pressing a button here and there one can get superimpositions (double exposures) and other visual effects which are difficult and costly in film work.

On the other hand, television equipment cannot yet do all visual tricks as perfectly as motion pictures can. For example, on early equipment when one made a video "board fade"—that is, faded out the picture by turning down the camera control, or video gain—the picture persisted. It then was seen five or six diagonal white lines across the front of the television screen. Undoubtedly this defect and many other minor ones will be eliminated as television broadcasting goes ahead.

From a practical point of view there are certain very strong points which favor the extensive use of film in the early years of television. Perhaps the strongest of these is the fact that it takes time to build extensive television network facilities so that one program can be broadcast in all parts of the country at one time. Until such facilities are ready in any given area, films offer the potential scope and flexibility that television cannot yet do all visual tricks as perfectly as motion pictures can. For example, on early equipment when one made a video "board fade"—that is, faded out the picture by turning down the camera control, or video gain—the picture persisted. It then was seen five or six diagonal white lines across the front of the television screen. Undoubtedly this defect and many other minor ones will be eliminated as television broadcasting goes ahead.

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"PROFESSIONAL JUNIOR" * TRIPOD

with Removable Head

The friction type head gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

The tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest. Also available are heavy fibre carrying cases.

Tripod Head Unconditionally Guaranteed 5 Years. Write for Descriptive Literature!

"Professional Junior"* Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and Other Government Agencies—also by many leading newsreel companies and 16mm and 35mm motion picture producers.

FRANK C. ZUCKER
CAMERA EQUIPMENT Co.
1600 BROADWAY NEW YORK CITY

*Patent No. 2318910

* We show above a closeup of the Shiftover Alignment Gauge and also a view of the B&H Eyemo camera mounted on the "Professional Junior" Tripod and Shiftover. These have been especially adapted for aerial use by the Office of Strategic Services, Field Photographic Branch, Wash., D. C.

* This Shiftover device is the finest, lightest and most efficient available for the Eyemo Spider Turret prismatic focusing type camera.

* The male of the Shiftover attaches to the camera base permanently and permits using the regular camera holding handle if desired. The male dovetail mates with the female dovetail base and permits the camera to slide from focusing to photographing positions for parallax adjustment. The camera can be locked in desired position by a positive locking-device.

* The Shiftover has a "stop-bracket" which prevents the camera from sliding off the dovetail base—and is provided with dowel pins which position it to top-plates of tripods having 3/8 or 1/4-20 camera fastening screw.
Among the Movie Clubs

Milwaukee Club

Second Annual Gala Show of the Amateur Movie Society of Milwaukee proved an eventful affair, with six outstanding films on the program. They were:

- “It Runs in the Family,” by Mrs. Erma Niedermeyer.
- “Wish You Were Here,” by Elmer Morgan.
- “The Boss Comes to Dinner,” by Ryne Zimmerman.
- “Honey Harvest,” by W. W. Vincent, Jr.

Los Angeles Club

The camera work of three Doctors featured the April meeting of the Los Angeles Cinema Club. They were Dr. E. Leslie Eames, Dr. Roy E. Gerstenkorn and Dr. Leslie E. Smart.

Dr. Leslie thrilled the members with a showing of beautiful Kodachrome transparencies made in the Navajo, Hopi, Old Laguna and Acoma districts.

Dr. Gerstenkorn presented an unusual film made on a trip up the Yangtze River which crosses China.

Dr. Smart took the members on a Kodachrome tour of South America.

L. A. 8 mm. Club

Two excellent amateur films and an educational technical discussion made up the program of the April meeting of the Los Angeles 8mm. Club.

First on the program was Midge Caldwell’s “In Our Garden.” This was followed by “A Glimpse of Yosemite National Park,” photographed by Mr. and Mrs. Cliff Youngquist. It proved to be an interesting travelog in color.

New York Eight

Annual Guest Show of the New York City 8mm. Motion Picture Club on April 27th featured an impressive list of pictures. Films were:

- “The Silent Alarm,” by Ernie Kremer, a story of First Aid.
- “Summer Rhapsody” by Leonard Bauer of the 8-16 Club of Philadelphia, a story of horse racing.
- “The Boss Comes to Dinner,” by Ryne Zimmerman of Milwaukee, Wis.
- “Alaska,” by Dr. Almon Balkins.

Five films were screened at the April meeting of the Metropolitan Motion Picture Club, held at the Hotel Capitol, New York City, on April 24.

- “Summer Rhapsody,” by Charles J. Benjamin, featured the 1944 gala show of the Brooklyn Amateur Cine Club.
- “Back to the Soil,” by George Mesaros, dealt with victory gardens in an interesting manner.
- “Hail, British Columbia,” by Leo J. Heffernan, delighted all. It won the Hiram Percy Maxim award in 1941.
- “In the World of Sports,” by Harry Groedel, was unique in that Mr. Groedel approached his sport’s subject in a manner quite different from the usual sport film.

The program concluded with “Weary Willie’s Waterloo,” by A. Sonneborn.

San Francisco Club

Highlighting the April meeting of the Cinema Club of San Francisco was a screening of slides of the disastrous San Francisco earthquake and fire. Other subjects screened were four hundred feet of 16mm. Kodachrome of Shanghai, by George McCarty, and four hundred feet of 8mm. Kodachrome of Yellowstone National Park, by Lloyd Littleton.

Westwood Club

Five pictures were featured on the April meeting program of the Westwood Movie Club of San Francisco. They were:

- “Jerry’s Taffy Pull,” 8mm. Kodachrome by Edna Allen.
- “Breakfast Is Ready,” 8mm. black-and-white by Harry Berman.
- “Aussie Oddities,” 16mm. sound, Australian animal picture.
- “Golden Gate Park,” 16mm. Kodachrome with music background by Karl Gitschel.
- “Westwood’s 1945 Dinner Picture,” 8mm. Kodachrome by Eric Unnack.

The entire May 26th program will be given over to the club’s Fifth Annual Title Night activities. In the past, this night has been a great success.

La Casa Movie Club

Attendance figures at the meetings of the La Casa Movie Club of Alhambra, Calif., are still going up. At the last meeting 234 persons attended, which is something for the club to be proud of.

Five films were shown at the April meeting. They were:

- “Southern California,” by R. Kielsman.
- “Industrial Design,” by Frank Knaus.
- “Alaska,” by Dr. Almon Balkins.
- “Yosemite,” by Florence Ritzman.

Brooklyn Club

April fourth meeting of the Brooklyn Amateur Cine Club featured three interesting films. They were:

- “Land of My Dreams,” by J. J. Harlley, who won the 1944 Hiram Maxim award for his picture, “In His Judgment.”
- “The Steam Locomotive,” by Fred Beach.

The April 18th meeting was devoted to a talk on exposure meters by W. A. Weedy of the Weston Exposure Meter Company.

Thank You!

Sometimes it is necessary to remind folks of deadlines and such. Our little bit of cribbing in the April issue about lateness of receiving club news has resulted in a happy reaction on the part of the club secretaries. This month the news really came early, for which we are really grateful. And we received a perfectly priceless letter from Lon Wadman of the St. Louis Club in which he declared he had never hoped to be bawled out on a “national basis.” He should have said “international basis,” for this magazine has readers in more than twenty foreign countries.—H. H.
TRYING light conditions are no obstacle to sparkling shots, with Ansco Hypan Film in your camera!

In back-lighted scenes like the one above, Hypan's brilliant emulsion is extremely helpful to you in bringing out sparkling detail in the shadow areas. It preserves the clarity and snap so necessary to pleasing results.

Moreover, even bad lighting conditions can frequently be taken in their stride with Hypan. It's fast—very fast—with a reserve of speed that means good movies where a slower film might mean no movies at all! Hypan is fully pan-chromatic. It gives excellent color-value rendering with or without filters.

Its fine grain and high resolving power are especially valuable in the 8mm size, but they contribute to “professional” clarity in 16mm as well.

In fact, there's only one sour note connected with Hypan—it's scarce. But we know you understand that war requirements must come first. Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation.

Ansco
8mm and 16mm
HYPAN FILM

American Cinematographer • May, 1945 165
Modernizing Your Old Projector

By DR. F. D. NAPOLITANI
Hoff General Hospital, Santa Barbara, California

The projector depicted on these pages is about twenty-five years old, an old Kodascope C, and it is seeing action almost every day where silent films are being used as part of the treatment of returned nervous patients. The use of the sound projector was not felt adequate enough to achieve the purpose which this old timer is doing in helping to soothe “battle reactions” by the use of travel, comedies, and educational films. Also, since all mention of war is absent, the soothing effect is present.

When it was found that this type of film could be utilized, the only projector being on hand being the writer’s, it was studied from all angles to modernize it. 1. Cooling system was added, so that stronger bulbs could be used. 2. A rewind system which made it easy to rewind. 3. Rewiring and simplifying the switch system. 4. Attachment of a pilot light. 5. Accessory compartment, rewiring plug in cord, so that it was simple to push the pilot light and cord into accessory compartment and closed door.

Here’s how the modernizing was done:

1. Cooling system: An old hair dryer was obtained in town, and a three-inch hole, in diameter, was cut about the height where the bulb hits it’s brightest illumination. There are two screws which attach to the hair dryer at this point, and after the unattached grid or screening (of the hair dryer) was welded to the lamp container, the rest of the hair dryer was hooked on to it, and it was found to suspend itself without difficulty. One of the wires was cut into, and a second connection was made at two point switch in base (wooden compartment box) and switch marked cooler, so that it turned cooler on or off. This enabled us to use as high as 300 watt tubes instead of customary 100 watts (which are difficult to obtain).

2. Most projectors of pre-war type have system whereby the roll of film is removed from No. 1 (see photo) and placed at extention arm No. 3, then rewound. By cutting an extra arm, as marked rewind (in photo), and attaching a ball bearing type of gear, it was a simple matter to merely hook on the film back to the reel from whence it had just come, attach the lower spring to the pulley marked rewind, then turn motor on, cut off light, and rewind.

3. Rewiring—this was done after the accessory compartment was built, and switches placed from inside, so that all loose wiring was placed inside. Amateur gadgeteers are generally adept and skilful at many things, so that a little rewiring will not be so difficult. However, this may help. A push button switch was connected to the motor, and placed on top of the motor (see photo). This merely cut into the wire which came from the motor to light the bulb. By pressing the switch on or off the light could be saved when motor was used for rewinding. A rheostat was connected directly to the motor, which made it easy to determine correct speed.

4. The pilot light. We can add that it is a great help in turning it on when there is some difficulty present, and will make it easier to run the machine, and makes it easier on your guests. An extra socket can be re-inserted here so that a lamp connected at this point can be managed to light up the room when the picture is over, thereby placing responsibility of operating lights upon projectionist, and making your guests enjoy the program better.

5. Accessory compartment—this was made the same size as the metal base of the projector, and extended about six inches in depth. In the rear a door was made with two nails being utilized above and below to enable the door to swing in and close. A screw was used as a door knob, and a small piece of wood inside prevented the door from swinging inside completely. On operator’s right side the pilot light, motor switch and cooling switch were placed, making it easy to...
Buy More War Bonds!

Through the miracle of
16 mm. Talking Pictures

The day of 16 mm. sound films for the home has fully arrived! Strange worlds—far away worlds—are brought realistically into your home in motion, sound and color. History in the making, great dramas of past and present, the miracles of modern science—all are brilliantly, clearly recreated for you and your family in the comfort and privacy of your living room. This is not a dream—not a promise! It is something that is here now! Vast libraries of 16 mm. sound films augmented by unprecedented war-time production—are awaiting release. Efficient, easy-to-operate sound projectors—which were perfected before the war, refined and proved during the war, will be available when the demands of the war program are filled.

* * * *

To keep in touch with 16 mm. motion pictures—keep in touch with Ampro. In this connection, an unusually interesting and informative story entitled “What Will Happen in the Movies the Day War is Over...” is being distributed in attractive booklet form by the Ampro Corporation. Write today for your FREE Copy.
of the same material, and the entire housing so constructed that it will withstand the sterilization process along with all other instruments.

When removed from the autoclave and ready for the operating room, a sterile attendant handles the Surgiscope housing, permitting the unsterile attendant to place the properly set and pre-focused camera into the top section. The camera and Surgiscope together weigh little more than the average flash gun equipped camera.

The Surgiscope now being within easy reach of the operating surgeon or his assistant is then unnecessary to obtain perfect color reproduction of the operating field, or any unusual condition that might present itself during the surgical procedure, is to pick up the Surgiscope by its two handles, place the balancing plate against the forehead, which permits a three-point suspension, view the field through the large glass window and place the bottom of the Surgiscope within approximately three inches of the operating field. When the picture area is selected a mere pressure on the release button located near the bottom of the left handle completes the operation. In this manner, a foolproof, flash bulb picture, with a pre-selection of either color or black and white film, can be taken within a few seconds. There is no dangerous time lag.

Eight consecutive flash bulb pictures may be taken without reloading. The dial control on the side of the housing automatically indicates the picture and the flash bulb sequence. An ingenious device locks the shutter after each take, thus eliminating the risk of double exposure, and the mechanism that moves each new frame into place locks automatically when the film is in position.

The Adel Color Camera and Surgiscope provide a combination instrument which may be used inside and outside the operating room for the production of color records under controlled conditions. The camera may be used without the Surgiscope in general photography, with or without photoflash, where sterile conditions need not be maintained. When the camera is used in conjunction with the Surgiscope it provides medical sterility with a simplified photographic technique that is necessary to color reproductions easily of the surgical field to be made by the surgeon or his assistant with a minimum of time, and without the requirement of photographic knowledge on the part of the surgeon.

When the camera is separated from its surgical housing, it becomes a general purpose camera, so simple in its operation that it permits the operator to concentrate his attention on his subject without need for auxiliary equipment, except for filters adapted to certain atmospheric conditions and various inexpensive dioptric lenses for extreme close photography, as applied to eye, ear, nose and throat records. It is small and compact, and can be held in the palm of the hand. Built of light weight aluminum alloy with a flash bulb mechanism that is an integral part of the camera and mechanically timed within the camera itself. Only two simple dial settings are required before exposure of the picture is made. In addition to lens focus and f stops, it also is calibrated in exposure feet. The variable of the human factor has been reduced to a minimum.

The camera is a marvel of ingenuity and simplicity in design. It is a true reflex camera which permits viewing an image through the photographic lens with no parallax error. The unique construction of the optical system permits the viewed image to be of constant brilliance through the entire f. value range, regardless of the lens aperture. The image viewed compares most favorably with the vision of the unaided eye.

Designed primarily as a photoflash camera, it carries its own batteries with-in the camera case. Quick detachable reflectors are provided for the camera which enables the operator to take color flash pictures with the miniature reflector up to a distance of eight feet, which is normally sufficient for clinical use. A larger reflector, operates efficiently with Kodalchrome and flash in the 4 to 20 foot range. Black and white flash pictures can be taken at increased distance with either of the reflectors, depending upon the speed of film employed.

The camera is designed to use either the No. 5 or SM type of photoflash lamp. When the flash bulb has been used, the burned out bulb is ejected by pressing a small button at the top, right side of the camera.

The camera is also designed for two sizes of film—Kodachrome or black and white in the No. 828 Bomanix size or No. 127 in black and white. The picture field matte covering the two sizes of film aperture are shown in the viewer.

This camera offers wide application as an aid to visual education. It is obvious that educators in the medical field have felt the need for visual slides as an adjunct to text and charts, and to note it is conceded that color slides of actual operating techniques, shown in conjunction with classroom lectures, provide vivid impressions and memories of the subject concerned. The use of color films in recognizing tissue changes, areas of discoloration, inflammation, abnormal growths and all other pathological conditions is a tremendous field in visual education. Dermatology is another important field where color studies of various skin diseases will be a vital asset to the instructor. This is particularly interesting possibility now that global war has made direct information of tropical and geographical diseases imperative in both private practice and education as these diseases fall into the dermatosis field. Complete techniques and various surgical procedure can now be photographically documented even in the delicate and difficult branches of oral surgery. It is realized that color film records of all major surgical procedures in our hospitals will be a part of the basis to form permanent records.

There have been many occasions when litigation has been avoided by possession of photographic records, key to case history. Therefore, because of its flexible use, the Adel Color Camera assumes value as a laboratory camera. Its simplicity provides rapid assistance for all types of photography and routine laboratory procedure and in research development.

Smith Heads A.S.C.

(Continued from Page 151)

Seitz, Leon Shamroy (Academy Award Winner for best color photography for 1944) and William Skall are all among the top cinematographers of the world. John Arnold is head of the camera department at Metro-Goldwyn-Mayer Studios, and Raymon Haskin, for years a top process expert, is now under contract to Hal Wallis as a production executive, director and supervisor of cinematography for his company releasing through Paramount Pictures.

Modernizing Your Old Projector

(Continued from Page 166)

operate. When not in use, the cord and pilot light were placed in the compartment. The box itself was attached to the projector permanently, holes being drilled into the metal base, and screws attaching the compartment solidly.

6. Use of experimental chipped lens increased the size of the picture upon the screen, but normal lens used can be kept, and latter is not necessary.

Careful perusal of the photographs will indicate how you can utilize the changes to your eight or sixteen. The pleasure in simplified operation makes it more enjoyable when you know that you made this possible. Try it. You'll get a kick out of it, same as we did.
As you may not know, a fine Kodak lens consists of a series of lens elements—sometimes as many as seven—all their surfaces ground and polished within \( \frac{1}{2} \) light wave—\( \frac{1}{100,000} \) of an inch—of perfection.

These elements are then assembled in a lens mount and inspected for "teamwork"—ability to perform together. In this inspection, "the stars come out"...

Rays from a pinpoint of light, about 200 feet away, pass through the lens on the inspection bench. Examined through a powerful microscope, they appear as a star.

The good star shown above was formed by a Kodak lens at 11° "off Axis." If a lens fails to bring the light rays into good focus at all points, the star lacks symmetry and definition—the faults seen in the "bad" star at the right.

When, and only when, the stars are "good" at every point, the lens moves on to its future in a Kodak Ektra, let us say, a Kodak Medalist—or a Ciné-Kodak to be used, these days, by an Army or Navy cameraman. But it must pass this exacting test first.

The good stars simply mean, in the end, that the camera equipped with such a lens from Kodak can be counted on for a superb photographic performance.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

REMEMBER BASTOGNE—"the hole in the doughnut"? How its heroic garrison—outnumbered 4 to 1—held this vital road center for 8 gruelling days against 8 German divisions? How the wounded—without medics, nurses, drugs—begged "Don't give up on account of us"?

And how, told to choose between surrender and "annihilation," our commander sent back his historic reply, "NUTS"? Such spirit is a stern example to us at home. BUY—AND HOLD—MORE WAR BONDS.

Serving human progress through photography
chased a brand new Mitchell camera—

Aces of the Camera

Number 230—which he took to Arizona
during the stampede and headed for La-

film a stampede of six hundred enraged

for the filming of a Bill Boyd film, "The

Painted Desert." He set up his camera to

nothing left of the camera but broken

get out of their way, but there was

Shelle and his camera. Joe managed to

Abel sent his brand new Mitchell, which

behind a perfectly safe barricade in front

had never been used. This was set up

studio for another camera, and David

for a scene in the picture. The moun¬
tain blew up all right, but with much

large number seriously injured and Abel's

new camera was completely demolished.

more vigor than was anticipated. The

result was that two men were killed, a

mountain that was to be blown up

had years of experience. Joe came up

to one lighting trick just because it was

effective in one film. Each picture has a

very definite mood to portray and calls

for an effort on the part of the photo¬
grapher to project a message photo¬

tion of New York City, merged with a

mystery motif, had to be photograph¬

tion of war and the native simplicity

was depicted. In that picture we did the

unusual by using no make-up at all on

anyone. This did not constitute a grave

problem because the male members of the

cast were supposed to be very definitely

the 'he-man' type. However, denying even elementary make-up to the beauti-

ful Gene Tierney called for a bit of dipl-

omacy and moral courage. But the re-

sults were most gratifying, and the time-
honored theory that photographing wo-

men without make-up was impossible was

proven false."

"I don't believe that a man can safely

attempt to photograph a motion picture

unless he has had many years of experi-

ence working with master craftsmen.

After all, when a studio is planning a

production that is to cost a million dol-

lars, there is a lot of responsibility

placed upon the shoulders and the ability

of the cameraman who is to place it on

the film. If I were a producer, I would

hesitate a long time before I would en-

trust a million dollar picture to an in-

experienced man, no matter how great

was his ambition. I know that I would

have been afraid to tackle a picture like

'Laura' or 'A Bell for Adano' unless I

had had the long years of schooling and

experience that I had working with a

man like Miller."

LaShele touched upon a very im-

portant point in that last statement. Photo-

graphing and lighting a motion picture

is not a job for an amateur. A fortune

fate of an actor or actress rests upon

the photographic skill of the Director of

Photography. That is why the cinemato-

graphers who have been "tops" for

many years still remain "tops," except

in cases of men like LaShele who have

had years of experience. Joe came up

the hard way, but the way that will now

keep him where he belongs—a real Ace

of the Camera.

Aces of the Camera

(Continued from Page 155)

chased a brand new Mitchell camera—
Number 230—which he took to Arizona
for the filming of a Bill Boyd film, "The
Painted Desert." He set up his camera to
film a stampede of six hundred enraged
steers. The steers altered their course
during the stampede and headed for La-
Shele and his camera. Joe managed to
get out of their way, but there was
nothing left of the camera but broken
pieces after the steers had passed over it.

An emergency call was flashed to the
studio for another camera, and David
Abel sent his brand new Mitchell, which
had never been used. This was set up
behind a perfectly safe barricade in front
of a mountain that was to be blown up
for a scene in the picture. The moun-
tain blew up all right, but with much
more vigor than was anticipated. The
result was that two men were killed, a
large number seriously injured and Abel's
new camera was completely demolished.

Shortly after that calamity Arthur
Miller and LaShele moved over to the
20th Century-Fox studios, There LaShele
was operative cameraman for Miller on a
long and noteworthy list of films. Among
these were "The Little Colonel," "The
White Parade," "Brigham Young," "To-
bacco Road," "The Rains Came," "How
Green Was My Valley" and lastly, "The
Song of Bernadette." It was while he
was working with Miller on "Bernadette"
that Joe was advanced to Director of
Photography on "Happy Land." He fol-
lowed this with "The Eve of St. Mark,"
directed by John Stahl; "Laura," his
Academy Award winning picture; "Hangover Square," and just completed
is "A Bell for Adano."

"In my work," explained LaShele, "I
feel that a different technique is neces-
sary for every picture. You don't stick
to one lighting trick just because it was
effective in one film. Each picture has a
very definite mood to portray and calls
for an effort on the part of the photo-
grapher to project a message photo-
graphically. For instance, in 'Happy
Land' the feeling and friendliness of a
small town had to be shown, together
with the hopeless emptiness of a dear
one lost forever.

"In the case of 'The Eve of St. Mark,'
among other things, it was necessary to
portray the growing realization that
there would be no returning home—but
a determination to carry on to the end.
'Hangover Square' was a picture calling
for sheer terror with mental lapses into
the beauty and harmlessness of music.

In 'Laura' all the heat and sophisti-
cation of New York City, merged with a
mystery motif, had to be photograph-
ically interpreted.

"In 'A Bell for Adano' the extreme
contrast of Sicily, as well as the destruc-
tion of war and the native simplicity
was depicted. In that picture we did the
unusual by using no make-up at all on
anyone. This did not constitute a grave
problem because the male members of the
cast were supposed to be very definitely
the 'he-man' type. However, denying

Junket to Albania  
(Continued from Page 154)

the barracks, while others, assorted weapons slung over their shoulders, march up and down the road learning to keep in step. They will go into the Liberation Army as replacements for women, old men and men whose families need support. They have been recruited from the fields, the towns and the mountains. They sing as they march and they carry their weapons with assurance, if not finesse. A loaded Sten gun in the hands of a novice can be disconcerting.

Everywhere you look, soldiers are saluting. They salute everybody, officers or not. Guards, walking slowly in twos by the side of the road, greet you with eyes left or right. Those posted at buildings present arms. Some of the soldiers give a hand salute much like our own. No longer do you see the old Communist, clenched fist salute, which was abandoned when the National Liberation Front was expanded to include all political opinions and factions.

Tirana, Albania’s capital, is a battered city. During the three-week battle for its liberation many buildings were smashed or burned to the ground. Shell bursts have scarred Skenderbeg Square, named after Albania’s national hero who helped save Europe from the Turks in the 15th Century. Rruga Square’s 15th Century mosque bears the marks of 88 fire. Repairs are underway at King Zog’s ultra-modern, slightly damaged palace overlooking the town, but it isn’t likely to house a king again. It may be turned into a factory or tourist’s hotel.

To a visitor from Italy, the biggest surprise which Tirana offers is the fact that the overly-populated city of 100,000 is without a black market, without prostitution, without thievery and all the other sorry by-products of war-ravaged, liberated countries. There are good reasons.

Even before the war, which began for Albania on Good Friday, April 7, 1939, the country’s food supply was probably the lowest in Europe. One of the smallest, most primitive countries on the continent, Albania never has known a high standard of living. Thus, even though six years of foreign occupation and guerrilla warfare have damaged the nation’s economy still more, Albanians have not felt the pinch of poverty as much as they might. They are used to doing without. Such a condition is not encouraging to black marketers.

To an American educated the hard way to the use of locks and chains on jeeps, the honesty of Albanians is staggering. You can leave a jeep filled with rations, blankets and gasoline cans standing anywhere unattended. No one will touch it.

It well may be that the fear of Partisan bullets, rather than inherent honesty or wealth, are keeping Albanians on the straight and narrow, just as the Tirana jail appears to be by far the most effective preventative for prostitution. The fear of bullets for black market operators may not be founded on fact, but there appears to be no one daring enough to find it out for himself.

There is no apparent tobacco or cigarette shortage here. People will politely accept an American cigarette, but they will not go out of their way to get one. Smokers use either the popular brand, “Tirana,” or Bulgarian cigarettes of which there seems to be an abundance.

For a foreigner, the big difficulty is buying anything. In addition to the fact that the only authorized Allied currency for this part of the world is the British Military Authority pound, Albanians do not readily accept Allied cash. It isn’t so much that they don’t trust it but that they simply don’t know its value.

(Continued on Page 173)
University Film Courses  
(Continued from Page 157)

work is done with 35mm. film. As an example of the advanced work of the students, Hans Richter told me that the classes had written, produced, photographed and edited complete productions for the O.P.A. which are shown in non-theatrical institutions by the O.P.A. People come here from all walks of life, they are cooks, stock brokers, subway conductors, lawyers, students and housewives. Approximately twenty-five percent are working in some branch of the motion picture industry and take the course so that they can advance themselves into better positions.

The members of the Faculty of City College of New York, film courses are: 1. Fundamentals, Paul Faulkenberg. 2. Workshop, Hans Richter. 3. Advanced Workshop, Hans Richter. 4. Film Writing, L. Sidney Kaufman. 5. Film Editing, Paul Faulkenberg. 6. Motion Picture Photography, Jules Bucher, now with O.W.I. as director and photographer.

The present plans, as viewed for the post-war period I learned, is not to accept new students who have no knowledge or experience in any branch of the film industry. It is the purpose of the Supervisor to make these courses available to men and women who are at present employed in film work and to those in the Armed Forces, who are also engaged in film production. The Supervisor feels that to accept students who have no knowledge of film work is only to over crowd an industry and cause much unemployment.

New York University, the third on my list of film training in New York presents a four-year course on the art and science of motion pictures, and offers a Bachelor of Arts degree. It is a liberal arts course with specialization in motion picture writing and production.

I have attended several of the lecture sessions and I found them most enlightening. Heading the film course is Professor Robert Gessner who in 1935-1936 co-authored the screen play "Massacre" from his own novel by the same name, and who has collaborated with G. W. Pabst for Foxer Films.

In reply to my letter, Professor Gessner had this to say:

1. Our courses range from the study of the motion picture as an art form to the practical laboratory use of the motion picture as an industry.

2. Inasmuch as we are the only University offering a Bachelor of Arts degree in motion pictures, we have attracted students from the high schools who plan careers in motion pictures. We have had a fairly representative number of students transferred to us from other colleges. Also, during the war, approximately fifty percent of our students were non-metriculating, that is, interested only in one or two courses for their practical value and not interested in securing a degree.

3. A major in Motion Pictures takes the usual length of time, four years in college or a total of eight terms. Each course may run a full year or one term.

4. The Faculty consists of Professor Robert Gessner—script writing, and production; Mr. Irving Hartley who has his own recording studio; Mr. Lewis Morton, an assistant editor of the Story Department of Twentieth Century-Fox, is a member of the staff on leave. Mr. Morton received his B.A. at the University of Minnesota and his M.A. at the University of Iowa.

5. The University is not an employment agency and we do not guarantee jobs, nor do we follow through on our students. However, we have an incomplete record supplied us by the students themselves.

6. On the basis of the above statement I can only venture a guess. I think it is rather high, considering individual qualifications and individual talents. Somewhere around twenty to twenty-five percent.

After two years of instruction, many of the graduates now are in military and civilian motion picture work. The record of accomplishment, all the way from combat cameraman to Hollywood cutter, lists as follows: Some are in the photographic division of the Signal Corps in Long Island. Some are in the photographic division of the Air Corps. Others are employed in the Navy, the Marines and the United States Office of Strategic Services. For the United Nations, many have gone to work in the film departments for the Belgium government, and for the Russians, others. Some are working for producers and subcontractors on film for the Army, Navy, U. S. Office of Education and the Coordinator of Inter-American Affairs.

Irving Hartley, who runs his own producing company, has at various times employed the students. Some have gone to work for the major studios at Metro-Goldwyn-Mayer, in Culver City; for Metro in New York; at the Paramount Laboratory; at Universal Newsreel; at Twentieth Century-Fox in exploitation; at Columbia Pictures in exploitation and publicity.

In the brochure on the motion picture course, New York University emphatically explains: First, this program is not designed to prepare photographers, cameramen or other technicians for technicians; it trains actors. Problems of photography will be considered throughout the courses in production, with one senior elective course devoted to this topic, and students will act in the screen plays which they write and produce, but and production, and the treatment of photography will be incidental to the major interests in writing and production.

Second, in certain fields ambition, interest, and a capacity for hard work will go far to assure success. In the creative arts, including motion picture writing and production, these qualities are essential but in themselves insufficient. For success in these fields one must have also a certain talent or special flair, for the particular art. In this connection, admission to the third year and fourth year motion picture courses is made conditional on "the consent of the instructor". Such consent will be given only to students who, during the work of the first two years, have given evidence of some measure of this special talent. Students not admitted to the third year and fourth year motion picture courses may transfer to other programs offered by the college.

Thirdly, the competition of this program does not, of course assure placement in the motion picture field or the acceptance of any script. A number of established motion picture writers, script editors and executives in the industry have been consulted in the formulation of the program and have expressed interest in it and confidence in its value, and several script editors have indicated willingness to read recommended scripts produced in this program. An interview recommended graduates; but in general, graduates will have to make their way on their merits in competition with all comers, aided only by the knowledge they will have gained of motion picture techniques and the valuable experience in writing and production.

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Junket to Albania

(Continued from Page 171)

But any hasty impression that Albania is well-off because its capital has avoided the wartime pitfalls into which other European cities have fallen or because its people are loathe to accept American money is entirely false. Tirana is not Albania.

Albania never has boasted a well-developed highway system. The country's few dust-choked roads have been torn up by the treads of Nazi panzers. Mines still are exploding. The bridges, without which the towns and mountain communities are completely isolated, are for the most part destroyed. Thousands of civilians have been forced from their homes by the enemy. Albania's total population now is just about a million. But with 900,000 Albanians in Greece and Bulgaria alone, there actually are more Albanians living outside the country than within its borders.

In the snow-covered, giant mountains the people are freezing and starving. Typhus is rampant. Countless of Albania's citizens are waiting for the snow to melt, the roads to open, the bridges to be reconstructed. They are waiting to get back to what may be left of their homes. Thousands have been killed in air raids, in German reprisals. Not only Tirana but other towns stand partially ruined in the wake of heavy fighting. Albania, never strong, is weaker than ever now, and Albanians look to the Allies for economic aid.

The leaders of the liberation movement have set themselves an enormous task. First, they must rebuild what has been destroyed, and because of the deplorable state of the country's communications system, the bridge building program takes definite priority over any other part of the vast rehabilitation problem. The government has set a definite time limit for the bridge builders. By May, most of the important bridges must be completed.

But over and above the physical repairs, the government must create an entirely new nation out of a heritage of medieval customs, illiteracy, feudalism, corruption—and the intense sectionalism of the mountaineers. Even while rehabilitation goes on, some 20,000 Partisan soldiers—ill-clothed, ill-fed and ill-equipped—are fighting the Germans far to the north, near Sarajevo in Yugoslavia.

Albania is not a vital cog in the machinery of international politics, but it is a true part of the Balkans, with all the traditional Balkan problems. Unlike any other occupied nation, it has liberated itself completely from enemy occupation without the aid of invading Allied troops. Its new leaders, like Col. Gen. Enver Hoxha, are men who have directed its fortunes in battle; now they must carry over into peace that same enthusiasm, that same driving force. They are men who hail the new Yugoslavia no longer as Albania's most bitter and imperialistic foe but as another country striving for a federation of the Balkan nations.

These are the people who overcame a strongly armed Nazi garrison in Tirana in three weeks. These are the people who buried the dead Germans in mass graves around the city—after first removing their boots, which were turned over to Partisan soldiers who carried the fight against the occupants into Yugoslavia. They are like the chubby-faced, 15-year-old veteran, singing Partisan songs on a transport plane or the 18-year-old soldier-wife of a Partisan colonel, her hair cut short like a boy's to deceive the Germans if she were captured while fighting in the mountains.

The new government of Albania may not be "democracy," as we know it. But neither is it the despotic rule of former years, when Albania was merely a pawn in Balkan power politics, coveted by Belgrade, Athens and Rome. For a little country, Albania has taken some big steps.
Gerber Company Retains Visual Training Corp.

The Gerber Products Company of Fremont, Michigan, and Oakland, California, producers of Gerber's Baby Foods, has retained Visual Training Corporation of Detroit, as training and market development consultants.

Plans will be prepared for complete training of the Gerber marketing organization, the retail merchandising of baby foods, and consumer education.

Visual Training is currently responsible for the development of a number of Army and Navy training programs. Recently, special commendation was received from the Navy Department on one of these major training assignments.

Rapid reconnaissance photography has become an added task for U. S. Army Air Forces fighters in close air-ground coordination on fluid battle fronts. Previously the job fell to the tactical reconnaissance and photo reconnaissance planes, but orthodox procedures could not keep up with the constant scene shifting of ground warfare. Nor could the tiny Fairchild machine gun cameras (16mm. movies) with which all fighters are equipped be of much assistance, because the film is too small and the focal length of the lens is too short to permit good enlargements.

The only solution to the problem, therefore, was to install a standard small automatic aerial still-picture camera into the fighters and let them photograph their own strikes. The camera would have to be mounted so as not to interfere with the plane's flight behavior or its ability to bomb and strafe. It should not add any additional duties for the pilot, nor reveal to the enemy by special markings, windows and the like, that the fighter was so equipped.

After several experimental installations, photographic officers and technicians on the Italian front mounted a Fairchild K-25, 24-volt camera in a special bracket fixed to the jack pad and the bomb shackle swivel brace (as shown in USAF Photo). This bracket was shock-padded with sponge rubber and its top half had an arm extending forward to hold an adjustable clevis which enabled the camera to be raised or lowered for bore sighting. Every precaution was taken to hold the camera rigid and to eliminate all movement and vibration. A special faring was constructed, held to place by three fasteners, and here again the camera was mounted in sponge rubber.

The K-25 was developed and the initial delivery was made in a 30-day period by Fairchild Camera & Instrument Corporation for use on Jimmy Doolittle's "30-second" raid over Tokyo. The camera is an automatic version of the famed K-20 camera, smallest of aircraft still cameras, and Doolittle's men had the K-25 mounted in the tail of the planes to take record shots of bombing. The K-25, operated by a push-button control from the cockpit, clicks off 50 4" x 5" negatives in 20.8 seconds.
Television and Motion Pictures

(Continued from Page 162)

tory. Acustomed to working in a blind medium, he rattles on describing everything. Unfortunately the audience can see all this before the announcer can begin to talk about it—and the effect is confusion and irritation. The most successful sports announcers of television are those who know when to keep quiet; in most cases these more successful announcers have been able to watch both the television screen and the actual events as they talked.

In Chapter 4 it was pointed out that one of the basic differences between the stage and screen is the difference between "actions! and "reactions." In the theater the audience identifies itself with the actor, who builds up that indefinable "give-and-take" between the audience and himself by his direct actions and words. In motion pictures the "give-and-take! is built up when the audience identifies itself with "the person acted upon the screen, and not with the person acting." to quote motion-picture writer Dudley Nichols.

In discussing this point in his preface to "Twenty Best Film Plays," Mr. Nichols sagely points out:

At any emotional crisis of a film, when a character is saying something which profoundly affects another, it is to this second character that the camera instinctively roves, perhaps in close-up; and it is then that the hearts of the audience quiver and open in release, or rock with laughter or shrink with pain, leap to the screen and back again in swift growing vibrations. The great actors of the stage are actors; of the screen, re-actors.

If anyone doubts this, let him study his own emotions when viewing a good film. . . .

Mr. Nichols recalled that he had recently checked on this theory by experimenting with some friends after seeing Noel Coward's "In Which We Serve." All were most profoundly moved by re-actions rather than action. Particularly effective, he found, were such scenes as the shot of a woman as she receives a letter to her wife when the news is brought to him by the radio operator, and the reaction shot is continued beyond the usual facial expression, for he goes on deck, looks over the rail, and lets the unfinished letter flutter down into the water—extending reaction into action.

Another highly moving scene was the final one in which the captain says good-bye to what is left of his crew. We saw the faces of the men as they came forward to shake hands, and we heard their tired voices. This appeared to be straightforward action, whereas Mr. Coward actually staged it as a reaction shot. It showed the reaction of the men to their harrowing experience, all summed up in their weary faces and laconic speech.

Although Mr. Nichols did not note the fact, it is interesting to observe that

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(Continued on Page 178)
Television and Motion Pictures

(Continued from Page 177)

these most effective scenes were all close-ups or medium close-ups. Obviously, to show clearly the reaction of an actor to a given situation, the scene must be a close-up. Now the most effective shots of early television have all been close-ups. Undoubtedly this was due, in part, to the fact that early television receivers gave small-size, imperfect pictures in which small figures did not stand out clearly. However, this may also have been due to television's qualities of intimacy and effective transference of personality. Television directors should find it profitable to investigate thoroughly the possibilities of the television close-up. The close-up may continue to be our most effective shot, and perhaps we shall find ourselves learning a great deal more about its potentialities.

The fact that "live" television programs require a continuous and sustained performance, with no retakes and leisurely editing over a period of weeks, is not necessarily a handicap. On the contrary, it will undoubtedly prove to be a most important factor in making a new art form out of television. It is physically impossible to imitate motion-picture technique beyond a certain point. This will make us develop new techniques which suit the demands of television. Cameras, lights, microphones, and studios themselves leave much to be desired. New designs are needed to provide more flexible cameras, microphones, and lights. But beyond this we must look for new kinds of program material which television can do to perfection. We must look for more expert acting than is called for in either theatre or motion pictures. The actor must be able to sustain a performance from start to finish and at the same time adapt his technique for the moving camera, now in close-up, now in long shot. And most of all we must evolve a new technique for handling the video and the audio, a technique which will be built according to the essential nature of television.

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CONTENTS

Aces of the Camera (Harry Perry, A.S.C.) . . . . . . . . By Hal Hall 187
A Method of Film Conservation in Motion Picture Photography,
Processing and Reproduction .............. By S/Sgt. N. V. Mardovan 188
Harman Unveils New Animation Unit........ By W. G. C. Bosco 190
Kine-Micrography in Biological Research........ By R. McV. Weston 192
The Television Camera........................ By Richard Hubbell 193
Movement in Movies........................ By Ezra Goodman 194
Membership Roll of the American Society of Cinematographers .... 195
Industrial Film Review.................. By Ed Pyle 198
Among the Movie Clubs.......................... By James R. Oswald 200
Timely Tips for Wartime Vacations........ By James R. Oswald 202

THE FRONT COVER shows Director of Photography Arthur Miller, A.S.C., preparing to shoot a scene with Tallulah Bankhead and William Eythe in “A Royal Scandal” for 20th Century-Fox Studios. Miller is the man in a felt hat behind the camera.
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HOMeward BOUND
Photo by A. J. Patel, F.R.P.S., F.R.S.A.
Bombay, India
HARRY PERRY, A.S.C., is the only cameraman in Hollywood who can claim the unusual distinction of having slept in the swimming pool of an ocean liner. Not only did he sleep in the swimming pool, but he had as his sleeping neighbor no less a celebrity than Robert Montgomery.

No, it wasn't a lark, and neither of the above mentioned gentlemen had been gazing at the bottom of a cup that cheers. It was a situation brought about by the war. Harry was in Monte Carlo in 1939 making transparency background shots for David O. Selznick's "Rebecca." When the war broke out his French camera crew stopped work immediately and reported for military duty and he was forced to stop work and start for home as fast as possible. After many difficulties he found himself aboard the S. S. Washington where he was assigned a cot in the swimming pool. Montgomery was assigned the cot next to his. Every square inch of space on the ship was taken up with cots.

While Harry now goes quietly and efficiently about his photographic wizardry in the Transparency Department at Paramount Studios, he has in the past been one of the most globe-trotting globe-trotters in the ranks of Hollywood's ace cameramen. He says he hopes his travel days are over, and hopes to devote the remainder of his time to transparency work right in Hollywood.

Harry's cinematic history is interesting. It was in December, 1918, that he started on his first camera job. Alvin Wyckoff, A.S.C., was then head of the camera department at the old Lasky Studio on Vine Street, Hollywood. Alvin gave Harry a job as an assistant cameraman. For three years he was first an assistant and then a second cameraman, and shot stills along with his other work. Then Tom Forman was made a director and the first thing he did was to insist on my being made a first cameraman to shoot his first picture. Harry was a bit nervous about it, for Thomas Meighan was the star of the picture, and Harry felt that he might not be good enough to photograph so great a star. He did the picture to the great satisfaction of everybody concerned. In fact, he did it so well that he photographed seven pictures in a row starring Meighan, and directed by Forman.

It was while photographing these pictures that Harry started his travels. He went to Long Island to make "Cappy Ricks," to Ashville, N. C., to make "Conquest of Canaan," and to Sing Sing Prison to do "The City of Silent Men." Then he returned to California and left Lasky to go with B. P. Shulberg's producing company at the famous Selig Studio on North Broadway, Los Angeles, and at the old F.B.O. Studios which is now R.K.O. Studios. Harry photographed eleven feature pictures for Shulberg. Among them were "April Showers," with Colleen Moore; "Shadows," with Lon Chaney; "The Virginian," with Kenneth Harlan and Florence Vidor; and "The Broken Wing," with Harlan and Marion Cooper.

In 1925 Perry returned to the Lasky Studio where he spent six months making preparations and building camera mounts for airplanes. Then he was made head cameraman on Billy Wellman's great air pictures, "Wings." It took more than a year to photograph that picture, and Harry at one time had ten first cameramen working under him. Five months were spent in San Antonio, Texas, with the Air Forces. All the flying shots with the principals, Buddy Rogers and Dick Arlen, were actually made in the air, as process background technique had not then been perfected. Harry put in more than 300 hours in the air on that film alone.

Perry followed "Wings" with another air picture, "Now We're in the Air" (Continued on Page 204)
A Method of Film Conservation
In Motion Picture Photography, Processing and Reproduction

By S. SGT. NICHOLAS V. MARDOVAN
18TH A. A. F. BASE UNIT (Motion Picture Unit)

My invention relates to a method of photographing, printing and reproducing standard (conventional) 35 and/or 16 millimeter motion picture film using simple and inexpensive devices or attachments with existing 35 and/or 16 millimeter cameras, printers and motion picture or television projectors using either black and white or color film.

There have been several methods of attaining results similar to this invention, but none of these completely cover the entire art of producing motion picture effects without the use of either specially perforated film stock or specially built equipment as I intend to differentiate specifically herein.

The first object of my invention is to conserve film by utilizing only standard (conventional) 35 and/or 16 millimeter motion picture film stock and equipment. Thus, apart from the present chronic shortage of film stock which will continue for a considerable period even after cessation of hostilities in Europe and elsewhere, my process enables motion picture production, television and other users to cut their footage and resulting cost of film by practically fifty percent, particularly on color films. Hence, my invention is not just an idea evolved about some special film or special apparatus, but relates to the result of years of careful and definite planning, research and experimentation to incorporate the use of standard existing motion picture and television equipment.

A further object of this invention is to provide an improved method of producing motion pictures, in either black and white or in color, in which the images are photographed in such a manner that the film may run through a projector; thereby, rendering motion picture projection more expeditious.

The process photographs and/or prints two images into the space ordinarily occupied by one standard “Academy” 35 millimeter picture frame and portions of its borders, that is, since the height of one of these said reduced frames is approximately .365 of an inch, the sum of any two such picture frames would equal the total of four complete, standard, 35 millimeter sprocket holes in a standard 35 millimeter film; allowing about .009 of an inch for border spaces between said reduced picture frames. Ordinarily, the images are inverted to each other and their shorter dimensions are parallel to the film length. The images also appear in the precise center of the film width, or may appear in an off-center position for special effects. Therefore, the images appearing in the upper right position on the film represent, for example, reels numbers one, three, five, etc., while the inverted images represent wise, between and adjacent to each row of sprocket holes on opposite sides of the same strip of standard motion picture film, in either the same or in opposite directions to each other, without altering the width or length (speed) of a standard (conventional) 35 millimeter sound track for stereophonic effects.

Another object of this method and/or process is to provide a wider, lateral “scope” picture, if desired, for panoramic effects.

The method and/or process of my invention described herein, may be applied with equal success to any standard (conventional) 35 millimeter and/or 16 millimeter motion picture film or equipment.

The process photographs and/or prints two images into the space ordinarily occupied by one standard “Academy” 35 millimeter picture frame and portions of its borders, that is, since the height of one of these said reduced frames is approximately .365 of an inch, the sum of any two such picture frames would equal the total of four complete, standard, 35 millimeter sprocket holes in a standard 35 millimeter film; allowing about .009 of an inch for border spaces between said reduced picture frames.

Ordinarily, the images are inverted to each other and their shorter dimensions are parallel to the film length. The images also appear in the precise center of the film width, or may appear in an off-center position for special effects. Therefore, the images appearing in the upper right position on the film represent, for example, reels numbers one, three, five, etc., while the inverted images represent

Note: S/Sgt. Mardovan’s devices and attachments described in his paper are protected by Patent Application No. 559006. His explanation of this proposed method is presented here because the “American Cinematographer” constantly strives to be the first to print new ideas, methods and developments in motion picture production. Quite naturally, this magazine is not responsible for the statements or claims of authors, but gladly presents them for study and consideration by the readers.—The Editor.
feet of film; thus resulting in a saving of up to fifty percent of film stock.

A most important factor of my invention is that no mechanical changes are required in the standard equipment used either in photographing, printing or projecting. The only accessories required in photographing, printing and projecting, are masking devices or attachments with apertures approximately sixty percent that of standard 35 millimeter and one-half the size of 16 millimeter picture frames. These apertures are in direct proportion to the height and width (three to four ratio) to the standard 8, 16, 35 and 70 millimeter “Academy” sizes.

To photograph with a standard (conventional) camera, a mask is inserted into the camera aperture, which reduces the “frame” or picture to a substantially smaller size. Alternate picture frames are photographed, while the accompanying sound track (in a single system camera) is also photographed or recorded; being in proper alignment to the standard sound recording head, and remaining unchanged from standard size track. When a roll of film in the said camera reaches the last few feet, the camera is stopped and a “notch” or a similar indication is made on the film to show the position of the film in the camera aperture at that time. The exposed roll of film is then removed from the take-up magazine of the camera, and, using a dark-room or a loading-bag, is reversed (turned over with the sides of the spool in the roll of film facing in the opposite direction), re-loaded and re-threaded in the camera with the “notch” or mark moved one sprocket hole above or below its previous position. The film is then run through the camera a second time, during which the alternate picture frames, previously unexposed, will then be exposed, and the sound track will be impressed in proper alignment on the film edge opposite to that previously photographed or recorded.

With regard to laboratory procedure in printing and developing, no changes are necessary in the negative processing. For the printing operation, the printer should be of the continuous contact type, and should be provided with masks which will permit separate printing of each sound track and sequence of pictures. No other modifications are needed for this type printer.

An especially arranged printer may also be used in my method, comprising two optical printing heads in combination with magazines, so arranged as to print two or more sound tracks and/or picture sequences, simultaneously on the same strip of 35 millimeter and/or 16 millimeter film.

For editing purposes, in cutting negative film, it will be necessary to make duplicate picture negatives of each set of 35 millimeter and/or 16 millimeter pictures. If it is desired, the reduced picture sizes of this invention can be enlarged by optical printing to standard 35 millimeter or reduced to 16 millimeter sizes at the time duplicate picture negatives or “master” positives are made. Negative or positive duplicate prints may be made from standard sized 35 millimeter or 16 millimeter film by optical printing to conform to the size used in my process and/or method, either in black and white or in color processing.

Sound track editing can be done from separate 35 millimeter and/or 16 millimeter sound track prints, according to current standard practices.

To project, the only accessory needed is a simple masking plate which can be readily inserted into any projector aperture retainer, and, after the first series of pictures of my process is run through the projector, all a projectionist has to do is to remove the reel from the projector take-up magazine, replace it in the feeding magazine and re-thread in the usual manner. This places the proper sound track or tracks in the standard and/or auxiliary sound aperture and/or apertures, and the second set of pictures is ready for projection, thereby, eliminating rewinding of reels. This means much saving in labor and time to the projectionist, and the elimination of rewinding also tends to lessen scratching of the film and prolongs its life; for, instead of concentrating all the wear and tear onto one side of the sprocket holes, this wear and tear is reduced by balancing the wear equally onto both sides of the sprocket holes. This, in turn, retards slipping, warping and tearing of the film. I wish to point out here, that since, in my process, alternate frames are masked-off from the light in traversing through a projector, the film is not exposed twice to the projector light and heat as might erroneously be assumed.

Because of the fact that the picture and the projector apertures are reduced in size in my process, the projected picture sequences, simultaneously on the standard and/or auxiliary sound aperture or apertures, and the second set of pictures are ready for projection, thereby, eliminating rewinding of reels. This means much saving in labor and time to the projectionist, and the elimination of rewinding also tends to lessen scratching of the film and prolongs its life; for, instead of concentrating all the wear and tear onto one side of the sprocket holes, this wear and tear is reduced by balancing the wear equally onto both sides of the sprocket holes. This, in turn, retards slipping, warping and tearing of the film. I wish to point out here, that since, in my process, alternate frames are masked-off from the light in traversing through a projector, the film is not exposed twice to the projector light and heat as might erroneously be assumed. Because of the fact that the picture and the projector apertures are reduced in size in my process, the projected picture sequences, simultaneously
HARMAN UNVEILS NEW ANIMACTION UNIT

By W. G. C. Bosco

RINGING new latitude to the telling of screen stories, making it possible to combine the talents of live actors and animated characters in a single scene with startling realism, opening up brilliant new vistas in the realm of fantasy, and adding another milestone in the art and science of Motion Pictures, is the new Animaction unit recently revealed in the studios of Hugh Harman Productions, Inc.

Adaptable to either black-and-white or any color system now in use, the Animaction unit has proven after exhaustive tests to be so flexible in its use, so versatile in its application and to be capable of such high quality in all the uses for which it has been designed that it threatens to revolutionize the potentialities of motion picture production and make obsolete much that is today considered standard equipment.

Apart from the secret devices involved in a new process for making travelling mats—a process that seems to make all things possible—for which patent application has been made, it can be revealed that this Animaction unit combines live-action with live-action in an advanced form of split-screen, or the action of flesh-and-blood actors with that of animated characters, against either painted or fabricated sets. As an optical printer it is capable of a finer quality than that usually associated with the best optical printers; and in this respect produces amazing results in blowing up 16mm. to 35mm., or reducing 35mm. to 16mm. It can be truthfully said that the Harman Animaction unit is the most flexible and most technically advanced piece of equipment of its kind in practical use in the industry today. And while much that it accomplishes is possible through other means and methods, the Animaction unit, by providing an exact control of the multiple elements involved, and through the application of recent advances in optics, produces excellent results more simply.

Scenes combining live action and drawn action have a life-like realism, and appear to have the depth and focus of normal vision. This is due in part to the use of dual-plate projection which eliminates the problem of the over-head lights, needed to illuminate the animation cells on the platen, from interfering with the light from the translucent screen which carries the rear-projected picture.

In straight animation, and in animation which is combined with live-action, a whole new field, freed from mechanical restrictions, is opened up. Previously it was possible to have only a few foreground planes of sight, the rest was distorted or unreal. Now, with the Animaction unit, it is possible to combine live-action, animation, and miniature and achieve a realm more real than the actual; always supposing that it is possible to create the actual to be able to film it. The control, which is entirely automatic, is in the hands of the cameraman with more than a score of operations key to the console-like hand and foot switches at his direction.

The idea for such a unit originated, probably, as long ago as 1928 when Harman-Ising, the predecessor of Hugh Harman Productions, and one of the pioneers of animated pictures, produced the first subject in which live actors and animated characters acted and talked to one another; a production which, incidentally and for the record, constituted the first talking cartoon. The present unit, however, was born of the practical necessity for providing a means by which training films for the armed forces, dealing with complicated technical subjects, could be more graphically portrayed. In this important work the value of the Animaction unit has already been proven.

Credit for the design and development of the Animaction unit, and the engineering ability that reduced its many mechanical complexities and nuances to its present practical simplicity, belongs to Leonard Poole. Leonard entered the motion picture business as an assistant cameraman for Pathé News, in 1924, and is distinguished for having anticipated the coming of sound by building the first independent sound equipped commercial film laboratory, Associated 190 June, 1945 • American Cinematographer
Film Enterprises, Inc., and the first independently produced single-system sound equipment. His most notable achievement, however, prior to the Animation unit, was the designing and development, for the J. P. Seeburg Corp. of a coin-operated motion picture projector which was selective, and which synchronized the motion picture to a record by means of an inaudible signal. The commercial application of this device was interrupted by the War.

"Nothing is impossible, and no scene is too complicated for the Animaction unit," Hugh Harman pointed out. That this needs to be true can be realized from a reading of the scripts scheduled for production as Harman prepares to switch over from the Government films that have engaged his company’s entire attention for the last four years, to an entertainment program relying heavily on the Animaction technique. A brief resume of two of the stories will give some indication of the use to which the Animaction unit will be put.

"Hollywood Story" is a rollicking, romantic thing which will introduce a sophisticated cartoon cat who has quit starring in cartoons because he sees no future in the business, and becomes instead business partner to a real live plumber, and a talent agent on the side. In the complications that follow the audience will be treated to as weird and as zany an assortment of antics as ever appeared on the screen, as real, live people walk on ceilings, run around dressed in a bath-tub, and behave generally in a manner usually reserved for cartoon characters.

"King Arthur" is a totally different venture. Into this story is woven all the grandeur and charm inherent in these legends that have lived for a thousand years. Here is fantasy such as has never been seen on the screen; story-book castles, and fire breathing dragons; the magic of Merlin, and the evil sorceries of Morgana; the antics of knights, and harpies, and bewitched fawns against the tapestry of medieval England.
Kine-Micrography in Biological Research

By R. McV. Weston, M.A., F.R.M.S., F.R.P.S.

While ordinary kinematography is frequently used in biological research, the combination of the kine-microscope and visual observation, movement is more clearly seen under the microscope and visual observation reveals only slight differences in size or shape over, say, half an hour or an hour.

Another valuable feature is that two sequences, taken under the same conditions, may show differences in rate of change which are otherwise very difficult to detect.

A further important point is that any movement is more clearly seen under the high powers of the microscope. The movement is magnified as well as the object. If, in order to cover a wide field, a medium or low magnification has to be used for visual observation, movement may be quite impossible to detect. Using kine-micrography, however, it is just as easy to record movement under low powers as with high powers.

Time-Lapse Apparatus

The control over the time-factor has to be carefully considered in work of this nature, as different taking speeds have to be employed with different magnifications so that the movement, on projection, is neither too slow nor too fast.

One of the great advantages of time-lapse kine-micrography is that the apparatus can be made completely automatic in operation so that records can be obtained of changes occurring over periods of many hours, without any attention. One has to do some of this work to experience the great satisfaction of leaving the apparatus working all night and in the morning finding the film half made.

Since work of this nature is rather specialized, commercial equipment is not available, and the apparatus will have to be made up. This is by no means difficult, and perhaps some description of the author's equipment will be of interest.

The microscope is used in the vertical position as this is usually most convenient when living preparations are employed. The microscope is supported on an anti-vibration mounting consisting of a steel plate measuring 18 inches x 13 inches x 2 inches. This weighs about 100 pounds, and is supported on rubber at the four corners.

The camera is a 16mm. Cine-Kodak Special, but if expense is no consideration, a good 35mm. camera is to be preferred for optical reasons.

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The camera is a 16mm. Cine-Kodak Special, but if expense is no consideration, a good 35mm. camera is to be preferred for optical reasons.

The camera is supported above the microscope by means of a 4-inch Drummond lathe-bed, mounted vertically, and also standing on rubber. The handwheels of the lathe then control the position of the camera. The camera is in three dimensions, with great precision. No part of the microscope, or its mounting, must be allowed to touch the camera or its mounting.

Thermostatic and Optical Equipment

The microscope is housed in an incubator, to keep it, and the preparation, at the correct temperature. While a water-jacketed incubator is best, this is not essential. The author's incubator is made out of thick card lined with sheets of compressed cork. It has proved quite satisfactory in use. Constant temperature is maintained by means of carbon filament lamps with blackened bulbs, which are regulated by a thermostat and a vacuum switch.

It is essential to have a watching eye-piece between the microscope and the camera so that progress can be observed from time to time and correct focus maintained.

One of the most important points is accuracy of focus on the film, and it is the author's experience that any method of focusing depending on the use of ground glass is quite useless. The fine detail within the image will then be entirely lost. The only satisfactory method is to observe the aerial image projected by the microscope with a suitable magnifier.

The illuminating system is quite straightforward, but a timing mechanism and sector shutter are provided to make exposures at the appropriate intervals and to shield the preparation from light during the intervals between exposures. This unit was made with Mecano parts and is driven by a small synchronous clock motor. The timing mechanism actuates the camera by means of the standard electrical relay so that at the same time indicates the number of exposures made on an electric counter.

Need for Filters

Attention should be given to the provision of suitable filters, not to modify contrast as in ordinary photomicrography, but to protect the specimen from harmful radiations. Canti used a Pointolite as his illuminant, and took precautions to suppress all infra-red radiation. Since the Pointolite is, in effect, both an arc and an incandescent source, the presence of ultra-violet radiation has to be borne in mind. This is usually overlooked, but if a spectrogram is made, it will be found that the radiation emitted goes as far down as 3,150Å, and such rays are likely to be more harmful than the infra-red. Radiation of this wavelength will easily penetrate the glass components of the illuminating system and reach the preparation. To prevent this, a Wratten No. 2A or a Leitz U.V. filter should always be used. The intensity of the illumination is brought to the proper level for correct exposure by the use of neutral density filters.

Ten Top B.I.S. Films Announced

The British Information Services have found their ten most popular 16mm. films to be:

Desert Victory
Desert Victory

Target for Tonight
Target for Tonight

Psychiatry in Action
Psychiatry in Action

World of Plenty
World of Plenty

Pilot Is Safe
Pilot Is Safe

Before the Raid
Before the Raid

Britain's Paratroops
Britain's Paratroops

Two on this list of the first ten most popular films were made for and shown almost exclusively to specialized groups. Psychiatry in Action was booked over 2,000 times, largely by audiences interested in the rehabilitation of returned soldiers, while World of Plenty, dealing with post-war food problems, is of interest to agriculturists and nutrition experts. D-Day, Cherbourg and Road to Paris are three of a series called "Act and Fact" which uses combat footage to record the war on the Western Front.

NOTE: The above article by Mr. Weston is reprinted here through the courtesy of the Journal of the British Kinematograph Society.—The Editor.
THE TELEVISION CAMERA

By RICHARD HUBBELL

LIKE the human eye but unlike the motion-picture camera, the television eye is always "seeing" whenever any light reaches it. The motion-picture camera "sees" only when it has a strip of film in it, but the photosensitive plate in the television camera generates a signal constantly. (Whether or not that signal is "seen" depends on whether the camera is turned on, and whether the control apparatus is amplifying the signal and reproducing it on a screen.) The camera is so sensitive to light that, when it is not in use, a cap is placed over the lens to exclude all light and thus prolong its useful life. Excessive light can "burn" a spot on the mosaic of the tube, ruining it for broadcast usage.

Cameras in commercial use (1936-45) were manufactured under RCA or Farnsworth patents, with the RCA types more widely used for studio and outdoor pickups. Most cameras of prewar vintage were built around RCA Iconoscopes, and a few around Farnsworth, particularly called Orthicons. The Farnsworth type of camera tube is known as the Image Dissector and has been used largely for picking up motion-picture film telecasts.

Intense illumination is required to produce a good picture with prewar Iconoscopes and Image dissectors. In general a greater amount of light is needed with prewar models of these tubes than in black and white motion-picture production, a minimum over-all lighting level of 350 to 500 foot-candles being desirable on all parts of a given scene. High-lighting and modeling lights are added to this.

If sufficient light is not reflected from all parts of the scene viewed by the camera, the photosensitive mosaic is not sufficiently activated by the underlit portions. The result is an "undermodulated" picture which does not transmit well, or a picture in which the edges suffer from "edge flare."

In 1939, RCA began to introduce a few models of its improved type of camera, the Orthicon, which was four to five times more sensitive to light than the Iconoscope, although not capable of transmitting as sharp a picture as the Iconoscope because of lower powers of contrast and resolution. During the war, improvements in design made possible an Orthicon with higher resolution and a further increase of sensitivity, about another 400 to 500 per cent.

Both the Image Dissector and the Orthicon are free from a peculiarity of the Iconoscope: the need for "shading" of the picture by an extra engineer. In order to control a technical quirks of the Iconoscope, a special video engineer must constantly be fiddling with knobs and dials to keep the picture correctly shaded. The visible effect is the lighting of an overly dark portion of the screen.

The high level of illumination needed for prewar television cameras caused extreme discomfort for actors and studio personnel, particularly in small, ill-ventilated studios equipped entirely with hot, incandescent lights. Air conditioning helped considerably but did not solve the problem, which was to produce either more sensitive cameras or "cold light."

There are two types of "cold light"—mercury vapor, and fluorescent—both of which offer much promise for the future.

A camera takes pictures because light waves enter it and effect a photosensitive surface. The human eye works in the same way and so does the television camera. Since the photosensitive surface in any camera or eye has a fairly uniform and constant degree of sensitivity to light, and since most sources of light can vary considerably from bright to dark, some device is needed to regulate the amount of light entering the camera or eye.

In the human eye the device is automatic. Look closely in the mirror at your eyes, noting the size of the black spot in the center. Suddenly increase the amount of light shining on your eyes, and notice how the spot becomes smaller. Since the intensity of the light has increased, more light will enter your eye and "overload" it unless the flow of light is decreased. The black "spot" in your eye does just that. It is called the pupil and it is the opening through which the light waves enter. It is automatically closed down when the light increases. Turn off the light and it will again become bigger in order to admit more light so that you can see.

In a television camera, as in most photographic cameras, there is a similar device, usually called the diaphragm. Instead of being automatic it is adjusted by hand. If the lighting on a scene is weak, its stop-opening is opened wide. If the lighting is very strong the opening is decreased. The correct stop number (lens open¬ing) is generally used to identify them—just as the 3 sign is used to indicate dollars and the % sign is used to indicate per cent.

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SLAVKO VORKAPICH is a rather exotic name and the word "montage" seems to be on the esoteric side. But Vorkapich, the former Montage expert, who has recently been directing some of the best of the "This America" series for RKO, is an outspoken man who talks good common sense about motion pictures. He has now returned to Hollywood after a stint in the East, and it is likely that before long he will have a chance to put some of his theories into practice for a major studio.

Montage, in Hollywood, has a special meaning. When Vorkapich was working for M-G-M, he devised montages for number stories, and that motion pictures are a visual medium, and that the camera is the means with which the screen creator expresses himself. Although this theory has been set forth frequently, it has too rarely been put into effect. Most movies today, Vorkapich contends, are merely extensions of some sets. They knew just what effects they wanted to obtain and they were able to get those effects easily and inexpensively by using their ingenuity.

To continue with the montage from "Crime Without Passion"; the next shot was of Margo's eyes wincing in sudden pain. The next shot was an out-of-focus shot of smoke leaving the gun and the man behind the gun. Vorkapich explains that in an out-of-focus shot, the spectator's eye strains to bring the picture into focus and that this effort physically almost forces tears into the observer's eyes. Then there is a slow-motion shot of the woman falling to the ground in order to prolong the feeling of agony. One of the things the screen can do is to stretch time or compress it for dramatic purposes. The march of the police down the Odessa steps in the Russian film "Potemkin" required perhaps ten minutes to run on the screen. Actually, such a march would have taken only a few minutes in real life. Director Sergei Eisenstein prolonged the scene purposely in order to wring the last drop of suspense out of it.

Before Margo was shown hitting the ground in "Crime Without Passion," Vorkapich cut to a closeup of a drop of blood hitting the ground. Then out of the blood of the victim, the symbolic Furies were shown rising and flying over the city. Vorkapich shot this scene with the Furies stationary and the camera shooting from above and passing them as it headed down. Since all space is relative on the screen, the Furies seemed to be in motion. When I was at the Astoria studios where "Crime Without Passion" was shot, I remember looking for a moment at some of the sets stored away in one corner of the studio. The sets were flimsy and incomplete. Hecht and MacArthur, and Lee Garmes, the cameraman, had no use for expensive, cumbersome sets. They knew just what effects they wanted to obtain and they were able to get those effects easily and inexpensively by using their ingenuity.

I cite this montage from "Crime Without Passion" not because it is necessarily flawless, but because it represents an approach to movie-making that has been either forgotten or relegated to the background in recent years. Most of the shots I have quoted are quite obvious ones, and the point I am making is almost a truism. This point has been made many times before. I am making it once more because nobody seems to pay any attention to what appears to be the obvious thing. The screen, as an artistic medium, has certain inherent characteristics. It can do things that other artistic mediums cannot. But these advantages of the screen are rarely utilized today. It is

(Continued on Page 206)
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American Cinematographer • June, 1945 • 195
The Television Camera...

(Continued from Page 193)

era, television or photographic. The “normal” lens, the basic lens, is the one which gives the camera—and hence the viewer of the picture—the same perspective and view he would get with his own eyes.

Suppose you are watching a horse race, and you can see everything quite well with your own eyes—race track, crowds of people, sky and clouds, and the horses coming down the track. Now you want to get a much closer view of the same scene, ranging from infinitely long shots to extreme close-ups. The same variety can also be achieved by moving the camera back and forth, but sometimes this is not practical or convenient—as at a horse race. On many of the prewar programs it is desirable to get an extreme close-up without having to move your camera up to within a foot or so of the subject—thus distracting the actors, getting in the way of other cameras, and getting between the lights and the subject, thereby casting a shadow upon it.

The use of a close-up lens gives a form of distortion to the picture, since it shows the image with a spatial relationship different from that which the unaided eye would perceive. Distortion by close-up lenses, desirable because it can be accurately controlled, is not the only type of optical distortion available to the television producer. It can be carried in the other direction by using a lens which, instead of decreasing the sense of distance by magnifying the image, increases the sense of distance—the effect obtained when one looks through the wrong end of a pair of opera glasses.

This type of lens, known as a very short, wide-angle lens, exaggerates perspective. It can make an ordinary room seem like a long hall. If a person standing before the camera raises his hand toward the lens, it can be distorted into a huge fist, bigger than anything else in the picture. Some early television stations with very small studios have experimented with this type of lens—to make their tiny studios seem larger.

In general, the more a lens magnifies a scene, the greater it is in length. For this reason lenses are designated by their focal length—as well as by their speed. Thus we might describe a television lens as having a focal length of six inches and a speed of f/2.8. Immediately a cameraman will know what sort of view the lens will give and the minimum amount of light which can be used.

The normal lens—comparable to the human eye—varies with the size of the camera. An 8 mm. motion-picture camera has a normal lens of one-inch focal length; a 16 mm. camera uses a one-and-a-half-inch lens, and a 35 mm. takes a lens approximately a two-inch lens. Note that in each case the increase in the length of the lens is comparable to the increase of the area of photosensitive surface of the film; 16 mm. film is twice as wide as 8 mm., and therefore the area of each frame is four times larger. To focus the larger picture needed to cover this greater frame area a 50 per cent longer lens is required. The bigger the photosensitive surface upon which the image must be focused, the longer and bigger the lens must be. For example, in prewar Iconoscopes, the photosensitive mosaic is quite large, something like 3 by 4 inches. The normal lens used with this camera has a focal length of six or six and a half inches—which would be a powerful, telephoto lens on a small motion-picture camera.

If the basic, normal lens on this type of Iconoscope is six inches in focal length, then the magnifying close-up lenses were correspondingly larger—nine, twelve, and eighteen inches. Any lens less than six inches would exaggerate distance, by extra wide-angle. A twelve-inch lens would include a picture area half of that covered by the six-inch lens, but this area would fill the screen and thus be magnified two times. An eighteen-inch lens would include only one-third of the picture area of the six-inch lens, and would thus magnify the subject three times. A thirty-six inch telescope lens, which might be used at a football game, would magnify the subject six times.

Needless to say, lenses as big as this are clumsy to handle and very expensive—particularly if they are “fast,” and prewar television cameras had to have “fast” lenses. (Telephoto lenses are usually not as fast as those of shorter lengths, because it is difficult and costly to make a lens which has both high power of magnification and great speed.) The trend in postwar cameras is toward smaller size, photosensitive surfaces placed close to the lens, which will make the use of smaller lenses possible.

The importance of focus is so elemental that it needs little elaboration. If the television camera is not kept in focus, the scene is not clear—if it is seen at all. That much is simple, but how to keep the picture in sharp focus is another matter. You must be careful to adjust the focusing mechanism if the picture is to be sharp and clean, and for this reason his view finder—through which he sees what the camera is picking up—must be connected with the focusing device. If the camera is out of focus, so is the view finder, and he sees the error and corrects it immediately.

Fundamental to the problem of getting a good focusing view of the scene is the problem of depth of focus, a thorn in the side of prewar television directors, which went hand in hand with the low sensitivity of cameras. Depth of focus means simply that portion of the area in front of the camera in which objects will appear in sharp, clear focus, without adjustment of the camera. It extends from the closest point to the camera at which an object will be in focus to the farthest point. The distance between these two points is the focal depth of a scene. In most television studios it has been pitifully small.

Depth of focus is determined by three things in practical television production:

1. The size of the stop-opening of the diaphragm. The wider the opening, the shallower the focal depth. Prewar cameras, being very insensitive, needed plenty of light on the scene, but that illumination could be raised only to a given point—beyond which it became too hot to be endured by actors and studio crew. Therefore in many prewar cameras it was necessary to open the diaphragm to a low “f” number, such as f/2.8 or even lower. This resulted in such a shallow depth of focus that production of satisfactory programs was severely limited, as was the case at the Du Mont studio in New York. At the CBS studio, where most of the lighting was “cold”—mercury vapor and fluorescent—and it was possible to use more light on the set without discomfort to the actors, lenses could be stopped down to f/4.5 and sometimes to f/5.6, which helped considerably.

This problem will be eased by the introduction of more sensitive cameras which can operate at much smaller stop-openings and thus give a reasonable focal depth.

(Continued on Page 206)
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EASTMAN Motion Picture FILMS

J. E. BRULATOUR, Inc.
FORT LEE • CHICAGO • HOLLYWOOD
Title: "Industrial Design."

Producer: Frank Knaus, 2113 North Parkside, Los Angeles.

Type: Educational. (Designing a radio cabinet from first rough idea sketches to the finished air-brush drawing.)

Length: 400 feet (11 minutes) 16mm. silent Kodachrome, titled, with accompanying typed commentary suitable for preparation of sound track).

Availability: Address inquiry to producer.

This film is the first subject of a series of educational films on commercial and industrial arts, intended for distribution to high schools, colleges and vocational schools.

It gives the observer an over-all understanding of how a radio cabinet is designed, from the first rough pencil sketch to the finished air-brush drawing. The use of Kodachrome greatly supplements the presentation, as all the subtle shadings of skillful air-brushing in color would have been lost on black-and-white film.

Excellent hand-lettered introductory and end titles, with type set sub-titles help to tell the story, and the well written typed commentary accompanying the film could be recorded to convert this fine one-reel subject into sound.

The film consists almost entirely of close-ups showing only the hands of the designer manipulating his pencils, brushes and air-brush. Camera angles and framing are well handled, with most scenes photographed from over the designer's shoulder. A few scenes were filmed from the opposite side of the drawing board, resulting in the subject appearing upside down. This is somewhat of a distraction. To enable a change of angle occasionally to avoid monotonous scene sequence, left or right over the shoulder views would be preferable to the upside down effect. Also, a medium shot now and then, showing more of the designer would add a little interest to the continuity.

The producer, however, should be congratulated on this first reel of an interesting and useful series.

Note to Industrial and Educational film makers: Reviewing industrial and educational films is a service this magazine gladly offers free. We shall be glad to have Mr. Pyle review your films, if you send them in with all the necessary production data. If sufficiently interesting, photographs or blowups from the film are sent with your film, we shall be glad to use them in connection with the review.—The Editor.
The Removable Head

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AMONG THE MOVIE CLUBS

Westwood Club

Plans are already under way for the annual contest of the Westwood Movie Club of San Francisco, which will be held on November 30. The following members of the Picture Review and Contest Committee have been announced: Chairman Jesse W. Richardson, Henry Biggiro, I. C. Gobar and Ed Franke.

Rules governing the contest are:
1. Any subject photographed in black-and-white or color may be submitted.
2. No minimum or maximum requirements as to length of film.
3. Commercial titles will not be accepted.
4. All entries must be in the hands of the contest committee on or before November 15.
5. No entry will be accepted that has won any award in any previous Westwood Movie Club Contest.
6. Any leader or trailer indicating any commercial association with a movie studio, Movie Makers or any similar organization must be cut from entry before submission to the contest committee.

The contest will be judged by three judges who will not be contestants, and who will be appointed by the contest committee, with the approval of the club president.

L. A. 8mm. Club

Much technical discussion and very little film featured the May meeting of the Los Angeles 8mm. Club, held at the Bell & Howell Auditorium on May 8. Program consisted of:

"A Thumb-nail Sketch of Each Past President," by Larry Zeman.

"Composition," an interesting talk by Al Leitch.

"Continuity," also interesting talk, by Bill Wade.

"Use Filters," told by Claude Cadaretto.

"Sound on 8mm. Film," explained by Fred Evans.

"Transitions," how to make them, explained by Milt Armstrong.


"Red Cloud Lives Again," International first prize winner in competition with 8mm. and 16mm., screened by Dr. Bob Loscher.

Syracuse Club

The month of May was a busy one for the members of the Syracuse Movie Makers. The members devoted five nights to the work of shooting, processing and editing the new club film which is being made in an elaborate manner.

Utah Cine Arts Club

Technical highlight of the May meeting of the Utah Cine Arts Club was a demonstration by Al Londema of the use of positive film in making titles. He was assisted by Cloyd Herridge. They filmed titles and developed them right before the audience, and then hung them up to dry.

Next followed the screening of the very interesting film, "Highlights of 1944" by Al Londema, which was an excellent 8mm. record of Al and his family's activities.

Second film shown was "Shots of Yosemite and Carmel," by T. R. Pope. It was presented with complete recorded commentary, background music and sound effects, and was very professional in all respects.

Next was "Back to the Soil," a film that was among the "Ten Best" in 1942. It was photographed by George Mesaros. The "surprise" picture of the evening was a technical film from the Filmo-sound Library, "How Pictures Move and Talk."

At the conclusion of the screenings the title strips that had been photographed at the start of the meeting were projected.

San Francisco Club

Four films and a talk on "Exposure for Kodachrome" made up the program for the May meeting of the Cinema Club of San Francisco. The exposure talk was given by Dave Redfield. The films shown were:

"Vanities of 1945," by Adaline Meinert, a film of the roller skating Vanities.

"Dilly," a particularly interesting film made by Club President Charles D. Hudson of his young son.

"The Devil's Garden" and "Mission Gardens," both photographed by Leon Gagne.

Due to unusually wet conditions at the Stone Dam Picnic Grounds, the proposed field trip of the club has been postponed for a month or more.

Brooklyn Club

Three 8mm. films in Kodachrome featured the May 2 meeting of the Brooklyn Amateur Cine Club, with an unusual 16mm. slow motion film as the concluding number. Pictures shown were:


"The Boss Comes to Dinner," by Ryne Zimmerman.


"Slow Motion Studies," from the Bell Laboratory, by J. J. Harley. This picture was filmed at 4000 pictures per second.

"Hail British Columbia," by Leo Hefterman, was the feature of the May 16 meeting.

Saint Louis

Two unusual pictures featured the May meeting of the Amateur Motion Picture Club of Saint Louis.

First, "Yucutan," photographed by Dr. and Mrs. Walter Jordan. It was a beautiful picture in Kodachrome of the ancient ruins in the hidden cities of Chichen Itza, Uxmal, etc.

Next was a film also in Kodachrome, of St. Louis, by George Hysore. This film was shown for an admirable reason. It has recently been suggested that the club make a film of St. Louis, depicting its life in all its phases. In other words, make a film of St. Louis that would be a permanent record of how the people of the city live in 1945, a film that in years to come would have historical value. Mr. Hysore's film was screened to give the members an idea for the start of such a club film.

M.M.P.C.

Five distinguished films made up the program for the 12th Annual Gala Night of the Metropolitan Motion Picture Club, held at the Hunter Playhouse, New York City, the evening of May 11.

Topping the list was "In His Own Judgment," by Joseph J. Harley. This film won the Hiram Percy Maxim Award for 1944.

The other films were: "Snow on the Mountains," by Robert P. Kehoe. This film was named one of the Ten Best in Movie Makers Contest of 1944. "Sunstruck," by George A. Ward. It was given an Honorable Mention in the 1944 Movie Makers Contest. "Little Ones," by George A. Ward. "Windjammer," by Sidney Moritz.

La Casa Movie Club

Three 16mm. and two 35mm. films provided the film fare for the May meeting of the La Casa Movie Club of Alhambra, California, which will celebrate its eighth birthday this month. Films shown were:

"Gadget Night," by R. A. Battles, 16mm.

"Grand Canyon," 35mm., by C. H. Bodner.

"Vacation Days," 16mm., by Mrs. L. L. Conrad.

"Southern California Views," 35mm., by Mrs. Pearl Hall.

"Eastern Ramblings," 16mm., by Ralph Taylor.

Philadelphia Club

New officers elected by the Philadelphia Cinema Club are:

President, James R. Maucher.

Vice-President, William Brink.

Treasurer, G. C. Kugler.

Secretary, Adolph Pemsel.
Thanks to Victor’s World Wide Service, new chapters of “Maintenance” are being written . . . keeping pre-war and war time projectors at the gruelling, vital war job of training and entertaining on the Fighting Fronts. At home, too, Projectors must be kept running.

The various branches of the Service, Schools, Industry and Churches have learned the value and importance of this outstanding service . . . have learned that the word “Sold” does not carry a finality of interest in the dynamic job that Victor Projectors are doing throughout the world.

Yes, even 10-year-old Victors are still doing duty due to the unusual interest and quality of Victor’s interested and continuing service.

In post-war too, look to Victor for the most comprehensive understanding of the word, “Service.”

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**MAKERS OF 16MM EQUIPMENT SINCE 1923**
Timely Tips For Wartime Vacations

By JAMES R. OSWALD

With present travel conditions pretty much the same, if not slightly darker, than last year, it looks as though adventure seeking vacationists are again this summer going to have to forget about their long awaited cross-country jaunt, ocean cruise, or trip to that “cabin in the pines.” And when I mention wandering vacationists, I am speaking of movie makers, for more than a few of these lovers of the outdoors consider their cine equipment an essential part of every journey.

But of this group of traveling filmers, many can only be classed as “luke warm” camera enthusiasts, since their picture taking interest seems to end with the days en route. The remainder of the year the cine camera remains neatly tucked away in the corner of some bureau drawer, cupboard shelf, or other out-of-the-way place, forgotten.

Those who are of the opinion that “there’s nothing worth taking around home” are going to be sadly disappointed this summer, unless they awaken to the fact that movie making begins at home. These folks might well be compared to the person who “couldn’t find the woods because there were too many trees.” Now, if never before, they should acquaint themselves with the photographic opportunities of their immediate vicinity.

What is there worth taking around home? A look around your own community will best decide that, but the scenes accompanying this article are typical of the many possibilities within easy reach of the pursuer, and may offer a few suggestions.

Take for instance the local zoo. Animals are natural born actors and their amusing antics rate a high priority on your movie “shopping list.” The bears, especially, are always good for a laugh and are very “obliging.”

Then there are the neighborhood parks and playgrounds. Such shots need not be dull and lifeless, if photographed from the proper approach.

Picnic gatherings are always a source of merriment and movie making. One doesn’t have to travel great distances to join in the fun of this good old American custom!

Beach parties . . . and this doesn’t necessarily mean the usual “pin-up” and “glamour girl” studies. Search beyond the glimmer of glamour, and your efforts will be rewarded, for straying from the “beaten path.”

Sporting events and games of all sorts offer plenty of activity for the filmer who is “on his toes.” If cleverly handled, lots of enthusiasm and suspense can be whipped up in such scenes, even if those participating in the action are total strangers, and the wide-awake cameraman will want to capture every thrill-packed second.

And so it goes on down the line . . . familiar sights and common place happenings frequently overlooked in the

(Continued on Page 211)
FROM THE LOG OF THE GOOD SHIP "SIEVE"

WITH canny judgement, the Skiff Skippers will "log" this voyage on Ansco Hypan Reversible Film.

For no matter how simple your equipment is, Hypan is the ideal film for movie makers. It's fast enough for all but the very poorest light, and yet has the fine grain so desirable for home projection.

Not only that... its full panchromatic color sensitivity and balanced contrast virtually insure sparkling, lifelike results.

Hypan's latitude makes errors in exposure much less critical, too.

Ansco Hypan Reversible Film is made for both 8 and 16mm cameras—100- and 50-foot rolls for 16mm; 25-foot, double-width rolls for 8mm. If it's not available at your dealer's today, ask again tomorrow. Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation.

ASK FOR ANSCO 8 AND 16MM.

HYPAN FILM

KEEP YOUR EYE ON ANSCO—FIRST WITH THE FINEST
Activities of A. S. C. Members

As THIS issue of the CINEMATOGRAPHER goes to press members of the American Society of Cinematographers are photographing the following films:

Columbia Studios
Tony Gaudio is filming "The Bandit of Sherwood Forest," Russell Metty is shooting "Pardon My Past," Franz Planer is director of photography on "I Love a Band Leader," Joseph Walker is making "Some Call It Love."

Metro-Goldwyn-Mayer
Charles Rosher is photographing "You and the Thief," George Folsey is filming "The Harvey Girls," Edward Cronjager is filming "Kitten on the Keys," Joseph LaShelle is shooting "On Stage, Everybody," and Jack Greenhalgh is filming "Checkmate."

Paramount
Lionel Lindon is filming "Too Good to Be True," Charles Lang is shooting "The Stork Club."

P.R.C.
Ben Kline is shooting "Club Havana," and Jack Greenhalgh is filming "Checkmate."

R.K.O.
Joseph Valentine is filming "Tomorrow Is Forever."

20th Century-Fox
Edward Cronjager is filming "Kitten on the Keys," Joseph LaShelle is shooting "Fallen Angel," Leon Shamroy is photographing "Leave Her to Heaven," Harry Jackson and Joe MacDonald are filming "The Enchanted Voyage," and Norbert Brodine is shooting "Now It Can Be Told."

United Artists
Lee Garmes is director of photography and production assistant on "Young Widow," and Hal Rosson is photographing "Duel in the Sun."

Universal
Elwood Bredell is filming "Lady on a Train," Paul Ivano is shooting "Uncle Harry," Charles Van Enger is filming "On Stage, Everybody," and George Robinson is filming "Frontier Gal."

Warner Brothers

A. S. C. Men Record Great War Events
That members of the American Society of Cinematographers are playing a part in the really big events of the war is evidenced by the following letter just received from Captain Lloyd Knechtel of the Signal Corps, who is an ASC member. Knechtel writes:

To Fellow A.S.C. Members:
I thought you might be interested in knowing back in the "old country" that one of your absent members was entrusted with the motion picture coverage of the Nazi surrender in Italy. It was something that all of us over here were looking forward to, and it was really more dramatic than you might imagine. As you may read in the enclosed Stars and Stripes, the German officer didn't like us making movies of him, and he had just cause for being nervous about it. The proposed film was rushed by special plane to London where dupes were made for release in Great Britain. Then the original was flown to Washington for news releases in the States.

Others of the A.S.C. have also recorded historic events over here. Lt. Paul Vogel covered the conference pictures at Malta, and Stanley Cortez was in on the photography of the Crimea conference at Yalta, assisting Major Gaskill, an ex-newsreel man from Boston.

All best wishes to the A.S.C. Keep sending good movies to us overseas.

Lloyd Knechtel,
Captain, Signal Corps.

Greetings from Marine Capt. Henry Freulich
The following letter from Captain Henry Freulich, member of the American Society of Cinematographers, and now Division Photo Officer, 6th Marine Division, has just been received:

Dear fellows:
Just a line to say "hello." We are now permitted to tell our whereabouts. I have been on Okinawa Shima since April 1st. No doubt you all read about this important and successful operation. Have 38 photographers in our photographic section. A wonderful group of boys who have done a great job. Thank God, none of them has been killed—only one wounded in the leg, and now back with his regiment. I forgot to say that we are 635 miles from Tokyo.

Best wishes to all of you, and how's about hearing from some of you? Certainly would appreciate some news from home.

HENRY FREULICH.

Note: Henry's address is: Capt. Henry Freulich, Div. Photo Officer, 6th Marine Division, Fleet P.O., San Francisco, Calif.

Starring Wallace Beery and Raymond Hatton. Then Howard Hughes hired him and placed him in charge of all exterior and aerial photography on "Hell's Angels." He put in another 150 hours of flying on that picture.

Harry quit the air pictures then and went with Multicolor Films, making one- reel shorts for Educational Films. They were called "Romantic Journeys," and Harry was off again on his globetrotting. He shot Grand, Zion and Bryce Canyons. Then he went to Africa where he went from Casablanca to Tunis by auto. Then he went to advanced posts of the French Foreign Legion in the Atlas Mountains. Next he made a three weeks trip over the Sahara Desert. From there he journeyed to Paris, then on to Germany, making pictures in Bavaria, Munich and from airplanes over the Alps. He went on to London where he photographed that city from the air, and then returned home.

Soon after his return he started making backgrounds for transparentities, mostly exteriors. Shooting these background scenes took Perry to many places. In 1936 he went to England, France, Spain, Italy, Austria and Switzerland for Paramount. In 1938 he went to Europe again for Paramount, getting backgrounds for Samuel Goldwyn's "Dodsworth." On the same trip he shot scenes for Paramount and several other producers. On that trip he worked in Paris, Vienna, Venice, Naples, Capri, London and Ireland. He was gone five months.

In 1937 he went to Lake Placid for Paramount for scenes for "I Met Her in Paris." He shot scenes from a bob-sled while it was going sixty miles an hour 'down the slid run. In the same year he went to Europe again for Paramount, getting backgrounds for Paramount's "Honey in the Hive." Then he went to North Africa for Paramount's "Woman's Eight Wife" in Paris and on the Riviera. In 1938 he went to New York to shoot scenes for Paramount to be used in "Cafe Society" and "Invitation to Happiness."

The year 1939 found Harry first in the Bahamas and then he made a sporting trip, shooting back-grounds for Paramount's "Don't Steal My Honey in Bali," and then in August he arrived in Switzerland with a French camera crew to make scenes for "Rebecca." With the outbreak of the war he returned home, as we explained in the opening paragraphs of this article.

He couldn't seem to stay put in Hollywood, however, and in 1940 he went to New York to do scenes for Paramount's "New York Town," and to Florida, Haiti and Grand Turk Islands looking for locations for Paramount. Then he was off for Randolph Field, Texas, for Paramount's ["]."

In 1941 he went to Palm Beach for R.K.O.'s "My Life With Caroline," to New Orleans for "Sunny," to Grand (Continued on Page 214)
Preview of the new Kodascope Sixteen-20

In Limited Production!
KODASCOPE SIXTEEN-20 — brilliant, versatile, equally at home in living room, clubroom, church, classroom, or auditorium.

Drive Shafts Are Enclosed
Thread Light—When You Need It
Retractable Power Cord

“Stills”—Simplified Threading
Easy to “Look At”
“Tailor-Made” Projection

Your Ciné-Kodak dealer has the full story
KODAK is, of course, on war work almost exclusively; but the Government has recently approved the production of a limited number of the new Kodascope Sixteen-20’s, most of which are being supplied on priorities to schools and business organizations. Keep in touch with your Ciné-Kodak dealer—you may be getting your Sixteen-20 sooner than you think. Price—$174.50, with 50-mm. f/1.6 lens and 750-watt lamp. Five accessory lenses and 1000-watt lamp are available.

EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.
The Television Camera . . .
(Continued from Page 196)

(2) Focal depth is also determined by the distance of the camera from the subject. The greater the distance, the greater the focal depth. On close-ups the focal depth is very shallow. With a prewar type of Iconoscope camera, using a six inch lens set at f/2.8, the focal depth on an extreme close-up may run about two to three inches—not enough to keep both nose and ears in sharp focus. The camera is moved back ten feet from the subject, the resulting focal depth would be perhaps eighteen to twenty inches. When the camera is moved back to twenty feet, the focal depth in a long shot might be about three feet.

(3) Focal depth can also be changed without moving the camera by changing the lens. If a long lens is substituted for a short one, the focal depth of the picture is decreased but the picture is changed as well since the subject appears to be larger and closer to the camera. And if a short lens is substituted for a long one, the focal depth is increased but the subjects in the picture appear smaller.

Perhaps the importance of focal depth can be made clear by the following hypothetical situations in which an Iconoscope with a nine-inch lens set at f/4.5 is used:

Assume that you are directing a television show, and you wish to get a shot of two people seated at a table. You line up a picture which you think will be very nice, shooting at an angle which should make one person appear very large—because he is close to the camera—and the other person small and far away. This seems nice and dramatic in your mind’s eye, until you see the result on the screen. If you have one person in sharp focus, the other one is blurred and out of focus—and vice versa. The shot appears to be impossible, because your depth of focus is too shallow. One person is six feet from the camera, and the other one is nine feet—three feet farther away.

“And you see,” says your cameraman, “our depth of focus is only fourteen inches.”

Possibly the shot still can be used, but you will have to make one or more of the following adjustments:

(1) Use a smaller stop opening on your cameras. But to do this you will have to (a) greatly increase the amount of light on the set, or (b) get a more sensitive camera, or (c) try to compensate for the loss of light by having your control engineer raise the “gain,” increase the power of the circuits amplifying the picture. He will undoubtedly object, because the picture may be too weak and too washed out to transmit the way he wants it to be transmitted. Nevertheless, maybe he can squeeze just a little bit more out of the system.

(2) Move your camera farther away from the subjects, increasing your depth of focus but also bringing other objects into view—which may or may not upset the purpose of the shot.

(3) Change lenses, if you cannot move your camera back. Use a shorter, wider-angled lens, which will include a greater area in the picture, make the subjects seem further away and give you more depth of focus.

(4) “Split” the focus of your camera. Instead of trying to keep one person in perfect, sharp focus at the expense of losing the other, focus your camera for a point midway between the two, which may give you a reasonably acceptable focus on both subjects.

(5) Change the position of your camera in relation to the subjects, or change their positions with relation to the camera. In this way you can bring both of them closer together and within the focal depth of the camera—which, of course, may make the shot look awfully stiff.

Any summary of outstanding characteristics of early cameras should also include the fact that the Iconoscopes and Image Dissectors transmitted a reasonably high amount of definition. The Iconoscope, although more sensitive than the Image Dissector, needs extra amplifying tubes in the pickup head itself, which increases the size and weight of the camera. In general, cameras of the 1935-45 decade were clumsy, heavy, bulky, and awkward to handle because of the heavy coaxial cable which links the camera to the control room. They were not often designed from a practical cameraman’s point of view, focusing devices being awkward, view finders unreliable and lacking in certain desirable qualities, and seating arrangements for the cameraman uncomfortable or nonexistent. These characteristics introduced a problem of fatigue: if a cameraman kept his camera highly mobile, he soon became physically tired and had to be replaced.

These are the outstanding characteristics of the television camera, circa 1935-45. Now let us see how it can be improved. What are some of the characteristics of the ideal television camera?

Movement in Movies
(Continued from Page 194)

a wonderful, vast field that has barely been touched. As Vorkapich says, the world of color is the domain of painting, the world of tone is the province of music, and the world of movement is the characteristic of film. The full range of movie movement—by means of cutting, dissolving, moving shots, pan shots, slow motion, reverse action and the many other things the camera can do—can be used to probe the most complex and subtle moods and situations. Movement does not have to deal only with physical movement; it can deal also with action within people.

Vorkapich says that the trouble with motion picture scripts today is that they are written in terms of theatrical dialogue. He would like to see a scenario written in two sections. On one side of the page would be the dialogue, and on the other would be a detailed resume of the action and camera manipulation. He says that if the action does not speak for itself, then something is lacking in the script. Such a scenario technique would require that the writer be thoroughly trained in the A, B, C’s of motion picture production before he sits down at the typewriter. It would mean that the writer would think visually instead of from a literary standpoint, and would consult experienced cameramen, yes, would practically collaborate with cameramen in writing the action for his story.

Another requirement Vorkapich makes of a movie is rhythm. Not the kind of rhythm that is musical or even, but an over-all rhythm in a picture that arises out of the juxtaposition of the different shots. I will cite another instance, the current picture, "The Clocks". To my mind, the most moving scene in the picture is one that is told solely in terms of the camera and that could have been only briefly indicated by the writers. The boy and girl are in the park at night. Suddenly, looking at one another, they are drawn together. Two hands, at last, by some inner compulsion. The director and cameraman handled this scene almost as if it were a ballet. By some dexterous cutting and camera movement, and without a word being spoken, the couple move towards each other tremulously and gravely. The result is a favourite love scene that is seen on the screen. Handled with talent and imagination, it had overtones that words could not approximate. The result was the over-all combination of the different shots that made rhythm on the screen.

“Montage,” Vorkapich says, “is French for any kind of mounting, assembling, putting together. Like many other words it has a general and a special meaning. Thus, the making of a complete picture (assembling and putting together of individual strips of film) is Montage in its general meaning. So far as the possibilities of montage have been largely ignored upon. Practically, it has proved to be a valuable economical device in regular productions. Artistically it could become a true filmic form of expression. Montage is not just a jumble of camera tricks. They are tricks only when they are used for their own sake and not as a most graphic means of expressing something. Montage is in reality a film style of its own, and a very elastic one at that, which uses purely visual means, including all the possibilities of the camera, of movement, of rhythm, and of cutting to express feeling and thoughts to tell stories.”
"Arms Put Snap in Black-and-White Photography;
I wouldn't be without them." Joseph Ruttenberg, A. S. C.
New Repeating Flash Tube For Night Aerial Photography Announced

Details concerning the electric illumination of an astounding new photoflash camera, now in use by the armed forces, and designed to take clear bird's-eye pictures by night from reconnaissance planes has been revealed by Lamp Department of General Electric at Nela Park. The new and revolutionary light source has been designated as the G-E Mazda Flash Tube.

The night aerial photoflash camera, of which the repeating "flash tube" is a part, played a significant role in the success of the Normandy Invasion and in subsequent operations in the European theater. It is a complicated device which required several years of development on the part of Dr. Harold E. Edgerton, professor of electrical engineering at Massachusetts Institute of Technology, technicians of the Photographic Laboratory, Air Technical Service Command headquarters, Wright Field, Ohio; and engineers at the Nela Park laboratories.

Phenomenal feature of the "flying flash camera" is its ability to "shoot" earthward successive flashes, each as brilliant as a bolt of lightning—and all made possible at the touch of a button. For proper operation, the G-E Mazda Flash Tube is plugged into any one of three rather complex electronic devices designed for its use. Purpose of the auxiliary system is to pile up a tremendous amount of electrical energy which, when released suddenly into the flash tube, results in a blinding "explosion of light."

Although each flash of the new flash tube is many hundreds times as bright as that from flash bulbs used by news photographers, its duration is confined to a mere one thousandth of a second. So great, however, is the heat developed, that a steady blast of air must be forced through the jacket to cool the coil.

Accompanying each flash is a distinct and startling "pop!" caused by the sudden expansion (caused by heat) of surrounding air. Despite the forced cooling of the light source, heat from the flash is so intense that it chars wood at a distance of a foot or so from the tube.

Equipment of B-29 Photographic Reconnaissance Planes Revealed

Details of equipment of B-29 photographic reconnaissance planes now in action in the Pacific have been released by the Army Air Forces at Wright Field, Dayton, Ohio, as follows:

Designed by the Air Technical Service Command in conjunction with Fairchild Camera & Instrument Corp., New York, and Boeing Aircraft Company, Seattle, the superfortress photo plane, designated the F-13A, carries more cameras than any other reconnaissance aircraft, without sacrificing any of the B-29's deadly firepower.

It can deliver almost as much weight of bombs as the B-29, and matches its range and speed. It employs a complete combat crew of 11, plus camera technicians.

Its battery of six cameras makes the F-13A the most versatile of reconnaissance planes. For photo-mapping territory, the F-13A has a tri-metrogon installation of three Fairchild K-17 mapping cameras mounted side by side, one pointed down for vertical pictures and the others flanking it, pointed toward the horizon for obliques. The tri-metrogon set-up photographs a strip 20 to 30 miles wide, depending on the altitude at which the plane is flying.

For highly-detailed reconnaissance and photo interpretation work, the F-13A carries two Fairchild K-22 cameras in a split vertical mount. These cameras photograph particular targets, such as railroad yards, harbor facilities, gun installations or industrial plants. In contrast to the tri-metrogon, the area covered by split vertical cameras at 20,000 feet is only about two miles wide.

The sixth camera is a Fairchild K-18, with an assignment similar to that of the split vertical pair, but covering a wider range and taking a larger negative. It is used for close-ups of specific areas mapped by the tri-metrogon, and for photographing target areas which do not require the pin-point detail of the split vertical.

The F-13A can also be equipped—and is, in many cases—with a Fairchild K-19, designed for night photography with aerial flash bombs.

The K-17, K-19 and K-22 cameras make 9" x 9" negatives, and the K-18 has a 9" x 18" negative size. Film is fed from rolls up to 390 feet in length in special Fairchild magazines.

On routine missions, the F-13A's cameras can take more than 5,000 separate exposures, using enough film to make 7,500 rolls of film for ordinary box cameras.

Many Technical Papers Read at S.M.P.E. Meeting


Beach-Head Canteens

Three hours after the initial landing on Leyte, P. L., American Red Cross men had established beach-head canteens serving coffee and other refreshments.
Chicago Projectionists
Study Television

Definitely realizing the importance of the picturization of current events and incidents on the screen through television, moving picture operator locals in key cities throughout the country are expected to follow the lead of Chicago local, No. 110, Moving Picture Operators' Union, which has authorized an intensive study of radio-electronics and television for its members.

More than 100 members of the Chicago local are included in the first class now receiving instructions at DeForest's Training, Inc., Chicago, pioneer in the teaching of industrial subjects with the aid of motion pictures. One or more additional classes will soon be formed. Eventually all movie operators in the Chicago area, numbering more than 300, will take the course, according to Eugene J. Atkinson, business agent of the Chicago local. DeForest for years has included motion picture sound and television in its resident and home study courses. More than 4,000 DeForest trained technicians are operating motion picture equipment, doing advanced electronic work for the armed forces, and holding key jobs in the industries manufacturing critical radio, and electronic equipment.

Motion picture union officials for several months have been studying the possibility of television in metropolitan theaters and the effect its adoption would have on present-day operators. Finally it was decided to prepare for this eventuality by arranging for a course in television for every operator now employed in the Chicago area.

After examining several radio-electronic-television courses now available, it was decided to ask DeForest's Training to outline a course in radio-electronics in which the emphasis is to be put on television. As a result of conferences with William C. DeVry, president of DeVry Corporation, and T. J. LaFeber, general manager of DeForest's Training, Inc., union officials decided to adopt the course prepared by DeForest's Training as the official course for Chicago union members. This course is prepared under the direction of Dr. Lee DeForest, inventor of the Audion tube which made radio possible.

The DeForest course covers a period of 24 weeks. In addition to four hours a week at DeForest's Chicago laboratory, each member of the class completes a required amount of home work, which includes motion picture training films, in which method of industrial teaching DeForests is a pioneer.

Medical Kits For Prisoners

Red Cross medical kits for prisoners of war contain standard preparations in quantities sufficient for 100 men for one month.
A Method of Film Conservation  
(Continued from Page 189)

A Method of Film Conservation  
(Continued from Page 189)

ture will not appear as brilliant. This reduction in light is compensated by the use of a more efficient projector lamp and/or lens of about an f:2.0 rating in combination with a projector shutter of the conventional type comprising two adjustable shutter blades which reduce or increase the shutter blade areas from 0 to 5 degrees; thereby transmitting a greater amount of light onto the motion picture screen. These shutter blades may be adjusted and locked into proper position individually.

In order to project these "reduced" picture frames to standard, full screen sizes, a standard (conventional) type projector lens of a shorter focal length is used which "blows-up" or enlarges the reduced pictures approximately forty percent. It is assumed therefore, that the grain effect on the screen will also be increased which an expert technician might detect by comparison under ordinary conditions, since graininess (on the motion picture screen) appears in the form of tiny, scattered specks that dance about, giving a "boiling" effect; particularly noticeable in the lighter, middle-tone areas of uniform density.

The best solution to avoid graininess then, is to choose a standard film of slower emulsion speed and one with less grain. Recent advances in emulsion manufacture have made it possible to increase the speed of an emulsion without increasing its graininess. For example, when a slow-emulsion, fine-grain film with a resolving power of 110 or 150 lines per millimeter is used, graininess is then far less apparent; and, even less noticeable again, when an effective fine-grain developer is used in the processing. With respect to color film, there would be no grain problem involved.

It is generally accepted that Television will assume tremendous proportions in the post-war era, and since my invention is ideal in every respect for telecasting, because no enlargement is required in telecasting, it offers Television companies as manifold advantages as it does the motion picture industries.

Furthermore, it is my contention that color may ultimately replace black and white motion pictures as completely as "Talkies" did silent pictures. Since graininess is no problem with color film, the economy effected by my invention should open the door to a vast expansion in demand for color film by making color film available to innumerable users of 35 and 16 millimeter equipment, otherwise heretofore unable to afford it, particularly when several new and greatly simplified "mono-pack" color films will be available in the very near future. Therefore, in producing colored motion pictures with my method, standard "mono-pack" type color film is preferred in photographing, printing and projecting, utilizing the identical methods and procedures heretofore described.

An auxiliary, adjustable masking device comprising two pair of metal leaves arranged at right angles to each other, which functions as an iris and yet maintains a three to four ratio as to the height and width of an 8, 16, 35 or 70 millimeter "Academy" picture frame, and, which is mounted in or onto a projector lens, is to be used in cases where precision screen size "verniering" is required or in cases where a projector design will not permit a removable type aperture plate.

An ordinary type of splice may be used with any method and/or process, but in order to eliminate the destruction of any portions of the picture emulsions by scraping away portions when splicing in the customary manner, a special "butt-end" type splice is employed. The ends of the processed "reduced image" film are placed end to end against one another without any over-lap occurring; then, the two ends of the films are joined together by cementing a clear piece of film embodying at least two or more sprocket holes on either side of the piece of clear film, with the non-emulsion sides facing each other. A splice of this type is very serviceable and may be re-spliced without marring or destroying any portion of the picture or sound emulsion, and usually without any added loss of the film.

Should it be desired to keep the alternate picture frames of the two sequences in an upright rather than an inverted position in relation to each other, it will then be necessary to re-wind both the negative and positive films.

New Filmosound Library Releases Announced by B.&H

NEVER A DULL MOMENT (Universal) No. 2566 6 reels

A zany comedy with music—and very well named. The "Three Funny Bunnies" are supposed to double as jewel thieves but fail to learn the crooks' cues and routines. (Ritz Bros., Frances Langford) Available from May 19, 1945, for approved non-theatrical audiences.

PHANTOM LADY (Universal) No. 2560 9 reels

A casual, passing acquaintance has to be found in order that an innocent man be freed of a murder charge. (Ella Raines, Franchot Tone, Alan Curtis) Available from July 28, 1945, for approved non-theatrical audiences.

SING A JINGLE (Universal) No. 2559 6 reels

Ace radio crooner drops out of sight when army "physical" rejects him after big publicity build-up, and is re-discovered putting on morale show in war plant, where he is regular employee. (Allan Jones, June Vincent, Jerome Cowan) Available from July 7, 1945, for approved non-theatrical audiences.
Bell & Howell Service Craftsman Trailer Announced

First of a fleet of mechanically-equipped service trailers which will provide door-to-door service for users of Bell & Howell Co. equipment was exhibited to the public in Chicago last month.

The trailers are part of Bell & Howell's postwar program to provide skilled maintenance service to schools, churches, commercial firms, organizations, and other users of its 16mm. sound and silent movie projection equipment. The trailers, each to be in charge of a graduate of its training school, will operate on a regular schedule so that equipment can be serviced periodically.

The trailers also will be equipped with a good supply of 16mm. film from Bell & Howell's rental library, as well as equipment for film splicing and repairs.

Other trailer units will be added as rapidly as postwar conversion will permit, according to J. H. McNabb, president. The company plans eventually to have every section of the country under its traveling trailer program.

First of the units has gone into service for Pictosound Movie Service of St. Louis, and will be manned by a graduate electrical engineer who has also completed the service course at the Bell & Howell factory. The territory of Pictosound Movie Service includes Southern Illinois, Eastern Missouri, and metropolitan St. Louis. Its officials believe they will need from three to five additional trailers to properly service their territory when the program is in full stride.

Timely Tips for Wartime Vacations
(Continued from Page 202)

movie maker's quest for "adventure." Yet these scenes are the very ones that "make" a movie, and hold their entertainment value indefinitely, if photographed from a "human interest" standpoint.

Being able to judge worth while movie material when one sees it comes from a mixture of actual experience and good common sense. Still life subjects, landscapes, family groups, etc., belong in the "snapshot" category. Lacking action, an ordinary "still" camera will amply fill the bill for such scenes, although once in a while scenic views may be intermixed with action shots to good advantage, especially when filming in Kodachrome. So in spending your time lolling around home this summer, above all, don't let your interest in movie making be spoiled by a wartime vacation.

Johnson to Fairchild

Oliver F. Johnson, who has been with OPA as executive officer for field operations, has joined Fairchild Camera & Instrument Corp., New York, photographic equipment manufacturers. He will do market research and postwar sales and distribution planning.

A precision optical instrument, the Auricon ElI-20 Camera Finder combines range finder and view finder; shows a large upright picture, needle sharp and correct right to left. Parallax is automatically adjusted while focusing, at all distances from four feet to infinity. Adaptable to any 35mm or 16mm camera...uses inserted mattes to cover lens fields from wide angle to telephoto. Write today for full information.
Vanguard Sends Cameramen to South America

Greg Toland, A.S.C., and R. O. Binger, A.S.C., are in Rio de Janeiro photographing background and production scenes for Vanguard Films. They expect to be there for at least a month.

Professional Model Hollywood Viewer Is Announced

A high quality ground and polished lens, with extra large covering capacity and extraordinary magnification, is a feature of the new Professional Model Hollywood Viewer just announced by Craftsmen's Guild, 1608 N. Van Ness Ave., Hollywood 28, Calif. This lens is so large that the entire picture appears crystal clear, with no cutting of corners.

Another feature of this plastic viewer is the precision with which the lens can be focused by means of the spiral groove molded into the lens mount. The viewer will take any thickness of 2 x 2 inch slides, in cardboard, glass or metal mounts, and each viewer comes equipped with three film tracks, for 35mm., 16mm., and 8mm. film strips.

35mm. transparencies, viewed in the Professional Model Hollywood Viewer, appear as large as they could if projected to cover a screen eight feet wide at a distance of ten feet. These little viewers are extremely useful to color slide enthusiasts; they also are in demand for school and college students in visual education. Dentists use them for showing full color views of their products.

DeVry Postwar Selling to Be Mobile as Well as Audio-Visual

Immediate adoption by DeVry Corporation, pioneer Chicago manufacturers of motion picture sound equipment, of postwar sales plans built around the use of trailer-housed sales demonstrating units is announced by William C. DeVry. Thus, DeVry postwar selling will have the advantage of maximum mobility as well as that of sight and sound.

DeVry trailer units will be equipped to give on-the-ground demonstrations of all types of audio-visual teaching and training equipment in remote country schools, theatres, businesses, and other organizations as well as those in major cities. This equipment includes heavy duty professional theatre projectors, semi-portable and portable 35mm. theatre and auditorium sound-on-film projectors, 16mm. portable sound-on-film and silent projectors, stationary and portable sound systems, slide and film strip projectors, stereopticons, microphones, turntables, projection screens and related equipment and accessories. The equipment also includes 35mm. and 16mm. motion picture cameras, as well as a representative library of DeVry 16mm. educational and entertainment films and DeVry Filmsets.

Whitmore Promoted

Will Whitmore, advertising supervisor of the Western Electric Company, has been named advertising manager to succeed H. W. Forster, deceased, according to an announcement today (May 1) by F. B. Wright, the Company's director of public relations.
DeVry Gets Fifth Army-Navy "E" Award

DeVry Corporation, Chicago, has been awarded its fifth consecutive Army-Navy "E" for continued excellence in the production of motion picture sound equipment and secret electronic training devices for the armed forces.

Previously the only manufacturer of motion picture sound equipment to have been awarded four consecutive "E" citations, DeVry now joins the select few among the nation's producers of vital war goods privileged to fly the coveted 5-star banner.

Eastman Announces It Has No Television Program

Because of recent published reports concerning the Eastman Kodak Company and television activities, the Eastman Company has issued the following official statement clarifying its position:

“When Edison was working on a new idea—motion picture—he used Eastman film for the completion of his invention. Also, in building his motion-picture camera, Edison used parts of a No. 1 Kodak.

“When Roentgen discovered X-rays, Eastman plates were quickly put to use in recording the new shadow pictures.

“When other developments have occurred requiring photographic materials or equipment, Kodak has studied the needs and made supplies available.

“With television arousing new interest, it is appropriate to say that the Eastman Kodak Company hopes to be ready to provide whatever photographic and optical supplies the television industry may require. The present Kodak relationship to the television field is an exploratory one, with the company in the stage of learning what film, apparatus, and lenses may be required.

“Contrary to recent published speculations on the subject, Kodak is doing no development work on television equipment nor has it any 'program' along that line; ... but this company, as the largest photographic manufacturer, is keeping its eyes open to see how its products may fit into the needs of the new industry.”

“Flame Facts”

“Flame Facts,” a 16mm. sound motion picture, has just been made available to all types of non-theatrical film audiences by The Princeton Film Center, Princeton, New Jersey.

Designed to teach the correct use of fire extinguishers, in an emergency, this 20 minute film, in full color, explains how to determine the three main types of blazes, and how each can be extinguished most effectively.

“Flame Facts” is a valuable fire prevention aid for schools and colleges; hospitals, hotels and public building employees; fire departments, clubs, industrial plants and other adult groups.
Aces of the Camera...

(Continued from Page 204)

Turk Islands and Nassau for Paramount's "Bahamas Passage;" and he also worked on "Fly By Night."

In 1942 R.K.O. sent him to New York and Miami to make scenes and background shots for "Big Street." That finished they sent him on a similar stint to New York and Newport, R.I., in connection with the film, "The Navy Comes Through." As soon as he finished that he went to New Mexico and Texas for flying shots for R.K.O.'s "Bombardier." In the summer of 1942 he went to Halifax, Nova Scotia, Universal shooting on "Corvettes in Action." Incidentally, he saw some action while on that assignment, making six convoy trips on destroyers and corvettes in the Atlantic.

By that time two of Harry's sons had gone into the service, so he decided he wanted to stay at home with Mrs. Perry, so he turned down several location trips and accepted a steady position with Farciot Edouart at Paramount on interiors, doing background process work, at which he is an expert. Since starting the inside job he has worked on background process scenes on "China," "So Proudly We Hail," "The Uninvited," "Hour Before Dawn," "I Love a Soldier," "Practically Yours," "Till We Meet Again," "And Now Tomorrow," "Here Comes the Waves," "A Medal for Benny," "Sailors Three," "The Lost Weekend," and "Our Hearts Were Young and Gay."

Harry is proud of his boys in the service. Harry, Jr., is in the navy. He has been 28 months at sea in the Atlantic where he is a Radar operator on a carrier. Before entering the navy he was a student at the University of Southern California, where he was the Pacific Coast Collegiate Diving Champion. Tom was at Santa Barbara State College when he enlisted in the Army Air Forces. He had had more than 500 hours in the air as flight engineer on a flying fortress. He is now in the Marianas with a B-29 Bombardment Squadron, and has been in the service two years. Harry's third son, John, is only 15 years old, and is in high school at Beverly Hills.

Perry is a very quiet man whose words are built on modesty. Trying to get him to talk about himself is a real project. Maybe that's why he has been so successful in his work. Could be.

Helps Prisoners

The International Red Cross Committee watches over the welfare of war prisoners of all countries that have ratified the convention covering this phase of warfare. The Committee's delegates make periodic visits to prisoners of war camps, inspect housing and food, talk to the prisoners' chosen representatives in privacy, ascertain physical and spiritual needs, and see that they are properly cared for.
There's a "G.I." projectionist right behind them...

Behind the tanks and booming guns, the amph-tracks and the jeeps, you'll find G.I. movie-projection men... setting up shop to bring the boys a few bright hours on "Main Street"...

"Movies tonight!" Ask any morale officer or—more to the point—ask any Yank what that means. You'll learn how really important movies are when men are lonely and tired and a long way from home...

And it all adds up to this: The job being done by G.I. projectionists—movie-trained—is just about as big a contribution to military morale as can be imagined. The best evidence is written on the boys' faces... when they hear that call of "Movies tonight!"

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"Wipes"—How to Make Them
This is one of a battery of glass-lined “silver” kettles in the Du Pont film plant. Here, in subdued light, accurately determined quantities of silver nitrate crystals purer than “sterling” are made into a solution for the emulsion of Du Pont Motion Picture Film.

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CONTENTS

Review of the Film News............................................. 222
Aces of the Camera (Ira Morgan, A.S.C.) ..........By Hal Hall 223
A Director Who Recognizes the Importance of Cinematographers........By Ezra Goodman 224
A Device with Which to Film a Fly's Eye........By P. F. Ruckert 225
The Museum of Modern Art Film Library........By Irving Browning 226
“Wipes”—How to Make Them ................By Raymond Palmer 228
The War and the Training Film................By N. E. Meltzer 230
Rerecording 35mm Entertainment Films for 16mm Armed Forces Release........By P. E. Brigandi 232
Through the Editor’s Finder.................................. 234
Among the Movie Clubs...................................... 236
Shooting “Tulip Time in Holland”........By James R. Oswald 238
A Practical Cure for Convergent Verticals.................. 240
Weather, Biggest Problem of Aerial Photographers ........By J. W. Blank 248

THE FRONT COVER shows Director of Photography Harry Hallenberger, A.S.C., preparing to film a spectacular scene in Paramount's “The Virginian,” starring Joel McCrea, Sonny Tufts, Brian Donlevy and Barbara Britton.

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American Cinematographer
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"Our Victor was with us on the hot sands of Africa, through the hell of Syria, Egypt and on the beachhead at Anzio ... it hit the beaches on D-day" ... thus write the soldier-users of Victor equipment. And, as the makers, we're just a little proud of this record of service.

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MAKERS OF 16MM EQUIPMENT SINCE 1923

AMERICAN CINEMATOGRAPHER • July, 1945 221
FOREIGN FIELD

At the moment it looks as though American companies will make quite a number of films on foreign soil in the near future. 20th Century-Fox plans sending a company to Puerto Rico to film "An American Guerrilla in the Philippines." Sol Lesser is going to make "Paris Canteen" in Paris, Republic is contemplating making films in Mexico for Latin-American consumption, and several other companies have asked State Department for permission to make films in Germany. While a lot of the plans will probably end in just plans, it is quite evident that there will be considerable filming abroad.

FOREIGN RELEASING PROBLEMS

OWI Chief, Elmer Davis, has indicated that the American film industry is going to have plenty of headaches in reopening its foreign markets. He says troubles will come because of necessity of dealing with government picture monopolies. Particularly tough is the situation in France, where firms have to deal with FOUR government bureaus, all of which have to clear American films before they can get in. Davis also indicated that Russia is posing a problem by putting the pressure on countries adjoining her to use Russian films. Whole thing will probably straighten out in favor of United States companies in time, because sooner or later the theatre-going public in those countries will yell so loud for good American films that they will get them. Past history has proven that John Q. Public, no matter in what country, will patronize the good films and will stay away from the bad ones—even if they are a local product.

J. ARTHUR RANK

Big question mark in American film industry is J. Arthur Rank, the British producer. All kinds of reports have been published about what Rank plans to do in the world film trade. He has been reported as planning to produce in the United States, build theatres in the United States, block release of many American films in England, and so on. Latest statement, which seems most nearly accurate, is that he will produce in Canada. He has also refuted the report he will build theatres in America.

CHAFF

Studio "white collar" workers have been granted a 7 percent wage increase which is retroactive to January 1, 1944, in all but two studios. This gave them total back pay of approximately $860,000 . . . Sound Technicians also were given pay boosts averaging from 10 percent to 70 percent, retroactive to January 1, 1944. Back pay totalled approximately $7,000,000 . . . Film industry dividends this year are running behind those of last year. Figures from Department of Commerce show total dividends paid stockholders in first four months of 1945 totalled $5,000,000 as contrasted with figure of $7,000,000 for the same period last year. Increased production costs, due to war, is largely responsible.—H.H.
Aces of the Camera

IRA MORGAN
A.S.C.

By HAL HALL

To Ira Morgan, A.S.C., goes the distinction of being the first Cinematographer to use Panchromatic film in the photographing of a feature length motion picture. To Ira also goes the distinction of being one of the few cameramen of the industry who broke into the field as a cameraman by simply going out and buying a camera, and by some miracle just naturally knew how to use it. Actually, he never spent a day as an assistant.

But Ira is the sort of individual who is what you might call "different". For instance, he likes photographing low budgeted pictures with a top shooting schedule of ten days. In fact, he says he would rather shoot films for independents and smaller companies such as Monogram and P.R.C. than do films costing over a million dollars, with shooting schedules of three or four months.

"What I like about photographing a picture for Monogram producers such as Sam Katzman or the King Brothers, and for the P.R.C. company is the fact that every detail of production has been ironed out in advance. There is no rewriting of the script from day to day; no changing of the story when half way through the production. The script changes are all made before filming starts. The picture is practically cut before it is shot. Nothing is left to chance. AND, they hire a Director of Photography whom they have confidence in, and started shooting newsreels every day for Pathe and Gaumont. He started his career as a cable inspector for Western Electric. He next became a "trouble shooter" for the telephone company. From that he went to Chicago to take a job repairing projection machines for the Theatre Film Service. It was while working on the projection machines that he decided he would like to become a cameraman. Once he had made his decision he quit his job, bought a Gaumont camera, secured Oregon, Washington and Montana as his territory, and started shooting newsreels for Pathé and Gaumont.

"I guess I was lucky," explains Ira, "or maybe I was born to be a photographer, for my pictures were good enough to satisfy the newsreel companies. That was back in 1911."

One year later Ira quit the newsreels and joined Essanay at Niles, California. His first picture for them was a Bronco Billy Anderson film. In the next two years he photographed 250 Bronco Billy pictures, sometimes shooting six pictures in eight days.

In 1914 he joined the Pathé company in Hollywood, and from then until World War I broke out he was with Pathé and the American Film Company. He joined the Army as a Lieutenant in the Signal Corps, and spent a year overseas photographing the war.

In 1919 he joined King Vidor and photographed a series of pictures, including "Jack Knife Man". Then he went with Cosmopolitan Productions where he remained for six years, filming all of the biggest films starring Marion Davies; such films as "When Knighthood Was in Flower", "Little Old New York", "Janice Merideth", etc.

"It was while filming 'Janice Merideth' that we decided to try out the new Panchromatic film which Eastman Kodak Company had just brought out," said Ira. "Everybody was a bit nervous over trying something new, but we sent for 50,000 feet of it, and shot all our exteriors on the new film. That was the first time Panchromatic film was used in a feature film."

Leaving Cosmopolitan Productions, Ira spent the next five years at Metro-Goldwyn-Mayer Studios where he photographed mostly films directed by George Hill. He then decided to free-lance, and made several films for Warner Brothers. Then for Columbia he photographed "Washington Merry Go Round". For Tiffany he did "Hotel Continental". In 1933 for Phil Goldstone he did "Should a Woman Tell?", "Unwritten Law" and "Vampire Bat". He followed these the (Continued on Page 225)
A Director Who Recognizes Importance of Cinematographers

By EZRA GOODMAN

Herman Shumlin is an eminent stage director ("Grand Hotel," "The Little Foxes," "Watch on the Rhine") and his first motion picture, he is directing his second film, "Con-

By EZRA GOODMAN

Herman Shumlin is an eminent stage director ("Grand Hotel," "The Little Foxes," "Watch on the Rhine") and his first motion picture, "Watch on the Rhine," won New York Film Critics' Circle Award as best motion picture technique and he is doing his best to obtain the most expert advice on the subject, much of which, he says, comes from the cameramen who carry the initials A.S.C. after names.

"Watch on the Rhine," as Shumlin points out, "was not strictly speaking a motion picture story. The acting carried the greater part of the burden of the picture." With that film, Shumlin had the advantage of transferring to celluloid a play that he had originally produced in New York. He was familiar with every detail of the drama. Furthermore, several members of the Broadway cast, including Paul Lukas, participated in the picture. To assist him on technical details, Shumlin had as his director of cinematography Hal Mohr, A.S.C., who has on occasion directed pictures himself. He also had Warners' Academy Award-winning film editor, George Amy, standing by on the set daily to advise on film editing, and he accepted the advice of both men.

"Watch on the Rhine" turned out to be a great success. Now Shumlin is directing a picture that is quite different, "Confidential Agent," which many critics deem Graham Greene's finest thriller. It is the story of a concert pianist who becomes involved with a spy ring in his efforts to obtain coal for the Loyalists in Spain. Most of the action takes place in England, and the time is 1937. Shumlin, Howe and Amy worked together on the powerful "Ob-

Herman Shumlin.

Left, James Wong Howe, A.S.C., and Director Herman Shumlin.

Fascists, however, are named Fascists, which is a distinct improvement over the vapidness of "Blockade" and the vagueness of "For Whom the Bell Tolls." Now, almost a decade after one of the great tragedies of modern times, and after all the cards are on the table, Hollywood is beginning to lose some of its timidity about current events.

Shumlin, of course, is intensely interested in the political aspect of the story. But he is no less interested in its potentialities as a motion picture. "Confidential Agent" is a chase story, with Charles Boyer and Lauren Bacall as the leading characters. "I see this as a typical motion picture," Shumlin says. "The book is written in terms of progressive action." Accordingly, "Confidential Agent" presents much more of a technical problem than "Watch on the Rhine." The latter was a conversation piece played in a limited number of sets. "Confidential Agent" is melodrama conceived in terms of wide-scope action.

Warner Brothers has given Shumlin complete freedom in transferring the book to the screen, and he emphasizes the fact that if the picture falls down in any respect it is entirely his fault. His cameraman is James Wong Howe, and cutter George Amy is again standing by on the set daily. Howe and Amy worked together on the powerful "Ob-

jectave Burma," and Amy actually directed several weeks' shooting on that picture when director Raoul Walsh was ill. They work well together as a team. Shumlin, Howe and Amy are the triumvirate that are shouldering most of the responsibility for the shooting of "Confidential Agent."

Several weeks before production began, Howe and Amy broke down the regular shooting script into a tremen-

dously detailed shooting script, specifying angles, camera setups and camera movements. Thus a scene that might run for six lines in the regular script ran as much as ten to thirty pages in its final, detailed form. In this way, a specific blueprint was laid out for the shooting of the picture. This master-plan was not inflexible, however, and was altered whenever necessary during shooting. "Confidential Agent" is a note-

worthy for this detailed script breakdown and also for the fact that it is being shot in continuity. Shumlin believes that the result will justify the method. Shumlin is also a great believer in lengthy rehearsals. He likes to rehearse a motion picture cast for several weeks before shooting begins, and he likes to rehearse his players daily under actual production conditions and not just sitting on the sidelines or in a listening room.

"I don't find a very vast adjustment from the stage to the screen," says Shumlin. "I recognize certain differences, of course. Greater intimacy is possible. What appears in the eye and
A Device With Which To Film a Fly's Eye

By PAUL F. RUCKERT

THE two "gadgets" which I herewith describe may be of interest to some of the readers of the Cinematographer, so I pass them along.

The cost of these two gadgets is a matter of a few shillings only, if made in your own workshop. (You in America can figure out the cost in your own money). About two shillings for a few inches of brass tubing with thread cut, and one shilling for magnifying lens.

Although made for a Bolex camera with turret head, they can be made for any camera. The sketches are exact size as gadgets. Fig. 1 shows a device for photographing close-ups of such minute things as a fly's head, a small ant, etc. Although I have fitted prism on the gate of my Bolex I find it inadequate for micro-photography, as it is not possible to focus through Kodachrome owing to heavy backing. I therefore made a 3-inch extension tubing to take screw mount lens at A, and to screw into turret at B. C is an external handle connected to mirror D inside tubing (shown by dotted line). E is magnifying lens. F is eyeshade and viewing position when mirror is down. G is ground glass screen, set exactly to match camera aperture.

When subject is found and focused with mirror down it is just a matter of flicking mirror up and shooting the picture. The object is about 1/2 inch from lens and must be brightly lighted. Another 3-inch extension can be made to screw into A. At 1/8 inch from the lens a fly's eye can be photographed successfully with this extension.

Fig. 2 shows another device for not so close subjects and will cover a complete fly, bee or very small flowers, etc. A screws into turret of camera. The lens screws into B. A wire frame is extended to D, which is area lens covers at this extension. Wire frame is hinged at C to eliminate shadows when shooting. This allows frame to fold in and down out of camera field.

The success of these gadgets lies in the careful setting when making. It is imperative that the viewing field matches exactly with camera aperture.

NOTE: Mr. Ruckert, who devised the above described gadgets, is one of the many readers of the American Cinematographer in Australia. He lives in Brisbane. Mr. Ruckert doesn't know it yet, but he will soon receive a check for this interesting item. Other readers are requested to send in descriptions of gadgets they have created, along with drawings or pictures of the devices. They, too, will be paid for items accepted.—The Editor.
URING the past many months I have written for this magazine about motion pictures, motion picture people and motion picture history. In this article I am attempting to present a verbal picture of an institution which, perhaps more than any other, is preserving for the future those motion pictures which are a definite link in the thread of motion picture progress, technically, artistically, culturally and as a recorder of vital history. I write of the Museum of Modern Art Film Library, which is situated in New York City.

Undoubtedly motion pictures have helped develop a new design for living in many forms. Too few of us in the film industry have bothered to study our early efforts in picture making with the same seriousness with which an artist studies the Old Masters in the creation of new art forms.

The Museum of Modern Art Film Library has collected for posterity films by which to further the growth of the motion picture as an art. It is by this medium that future generations of film makers will benefit, and the world at large will be knit in a closer common understanding. I have attended screenings of several of the series of films presented in the Museum’s auditorium, and while there are many chuckles among those viewing the early films, one readily realizes these presentations have an important message. Since the foundation of the Film Library the Museum continues to further the film as an art with the same enthusiasm it extends to its collection of paintings, sculpture and still photography which are presented in its galleries.

The Curator of the Film Library of the Museum of Modern Art says that the Film Library owes its existence to the growing desire on the part of a few people to see again those motion pictures through which, step by step, the art of the films has developed. The Library has required to date some 17,798,848 feet of film which would take approximately 3,300 hours to run or 412½ eight-hour days of continuous projection. From these archives numerous programs have been made up in series or separately for showing at the Museum and for circulation to other non-commercial institutions throughout the country. In addition to the daily programs at the Museum, 819 other organizations or groups have shown its films. Of these, 451 have used the Museums’ programs regularly; the others intermittantly.

Users include 58 universities and 83 colleges, many Army camps, USO clubs, churches, libraries, hospitals and prisons, institutions as varied as the International Ladies Garment Workers Union, Yale University School of Fine Arts and Cornell University Theatre.

It is ten years since the Film Library came into existence. Some account of its origins and a critical glance at its activities seems appropriate. Has it done what it engaged to do? A substantial grant from the Rockefeller Foundation made its establishment possible. This was supplemented by other considerable gifts of money from private sources. In May, 1935, the Trustees, in announcing the creation of the Film Library, stated its purpose was “to trace, catalog, assemble, exhibit and circulate a library...”
of film programs so that the motion picture may be studied and enjoyed as any other one of the arts is studied and enjoyed."

We in the motion picture industry owe a debt of gratitude to the organizers of this Museum for the creation of the Film Library because the Film Industry itself has found little time for the preservation of these valuable treasures and time alone will increase the appreciation of our early efforts, as in any other art.

Miss Iris Barry is Curator of the Film Library. She was born and educated in England and on the Continent; is an American citizen, and has been Librarian of its art library and in 1935, when the Film Library was founded, became its Curator.

Miss Barry was a founder-member of the Film Society of London in 1925 and was motion picture editor of the Daily Mail, London, from 1925 to 1930, and in that capacity spent some time in Hollywood. She has written a number of books, particularly on motion pictures, and translated and edited A History of the Motion Picture by Bardeche and Brasillach in 1938.


Looking back fifty years of film, we can now realize that we were producing important records of a series of historical events and that everything that was recorded theatrical or non-theatrical was an expression of our existence. The advancement has created many changes, and only when we have an opportunity to view these changes from the Museum’s catalogued programs can we appreciate how much advancement has been made in such a relatively short time. It is important for the artisans in the film industry who are engaged in production to make every effort to see and study the old films the Museum has packaged, for while we create what we believe to be new methods and processes, we will find, somewhere in the past, the invention of the process and then we can see how proficient we have become in its adaptation. Like every other art form, the film is to be studied for comparison and past performance. Take for example a listing of “packaged programs” by the Museum.

SERIES 1.
Program 1. The Development of Narrative (75 min.)
1895—The Execution of Mary Queen of Scots.
1896—Wash Day Troubles.
1902—A Trip to the Moon by Georges Melies.
1903—The Great Train Robbery by Edwin S. Porter.
1910—Faust, a Pathé Film.
1912—Queen Elizabeth, with Sarah Bernhardt.
Program 2. The Rise of the American Film (110 min.)
1912—The New York Hat by D. W. Griffith with Mary Pickford and Lionel Barrymore.
1914—The Fugitive by Thomas H. Ince with Wm. S. Hart.
1917—The Clever Dummy, a Mack Sennett comedy.
1914—A Fool There Was, with Theda Bara.

Program 3. D. W. Griffith (130 min.)
Program 4. German Influence (111 min.)
1910—Faust, a Pathe Film.
1912—A Trip to the Moon by Georges Melies.
Program 5. The Advance Guard (85 min.)
1927—Sunrise by F. W. Murnau.
1928—Hands by Stella Simon.
1929—All Quiet on the Western Front.
1928—Steamboat Willie by Walt Disney.
Program 5a. The End of the Silent Era (95 min.)
1928—Plane Crazy, the first Mickey Mouse (Disney).
1928—The Last Command by Josef von Sternberg.
SERIES 2.—Some Memorable American Films.

The programs in this Series are planned as an extension to those in Series 1 and should, as a rule, not be shown unless the first Series has already been given.

Program 1. The “Western” Film, (110 min.)
Program 2. Comedies, (125 min.)
Program 3. The Film and Contemporary Life, (140 min.)
Program 4. Mystery and Violence, (90 min.)
Program 5. Screen Personalities, (120 min.)
SERIES 3.—The Film in Germany and the Film in France.
From 1895 to 1914 the development of the film was to considerable extent in French hands; important experiments were also carried on in France in the silent and early talkie days. The great German period which contributed so much to the body of the film technique and to the American studios in particular was from 1919 to 1928.

The Film in Germany
Program 1. Legend and Fantasy (85 min.)
Program 2. The Moving Camera (105 min.)
Program 3. Pabst and Realism (100 min.)
Program 3a. The Sound Film (90 min.)

The Film in France
Program 4. From Lumiere to Rene Clair (95 min.)
Program 5. The Advance Guard (85 min.)
Program 6. The Comedy Tradition (85 min.)
Program 7. Transition to sound (90 min.)
SERIES 4.

The Swedish Film and Postwar American Films
The Series opens with a program on the Swedish film which played an im-

(Continued on Page 244)
URING the past few months many requests have come in from amateur movie makers asking for information on how to make "wipes," "fades" and "dissolves." We hope the following explanation of "wipes" will be helpful to those amateurs who are trying to improve their home movies.

A very simple "wipe" is one in which a scene is wiped off the screen by an opaque, black area, which in turn is pushed off the screen by the following scene. You can make this type of "wipe" either directly in the camera, or on processed film by chemical means. The chemical "wipes" are made by splicing the desired scenes together, masking off the areas on each which are not to be exposed film by chemical means. The black edge shows the blades overlapped; the white edge indicates they were behind the correct synchronization.

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When a "wipe" is used, one scene apparently pushes another off the screen and is quite effective. To use "wipes" in 16mm. or 8mm. requires some special items that are quite inexpensive.

A very simple "wipe" is one in which a scene is wiped off the screen by an opaque, black area, which in turn is pushed off the screen by the following scene. You can make this type of "wipe" either directly in the camera, or on processed film by chemical means. The chemical "wipes" are made by splicing the desired scenes together, masking off the areas on each which are not to be exposed film by chemical means. The black edge shows the blades overlapped; the white edge indicates they were behind the correct synchronization.

To make the wipe-in, the blade is moved to the left-hand position, so it covers the lens, and when the gears are meshed it will move, left, but out of the picture, making a wipe-in. If the film is accurately rewound between these wipes, perfectly matched pushed-off wipes can be made always.

In the August issue we will take up the making of "fades" and "lap-dissolves." While it is difficult to send individual explanations of scores of problems to the many inquirers, we are always happy to try to solve amateur's problems through articles that deal with these matters. In this way many readers, who do not write for information can thus obtain it. So, please send your problems in, and we will try to take care of all of them in the course of time.

**Pasadena International Salon of Photography Scheduled for Sept. 15 Through Oct. 21**

The 1945 Pasadena International Salon of Photography, sponsored by the Foot hill Camera Club, will be held at the Pasadena Art Institute from September 15th through October 21st. Last day for receiving prints has been announced as Sept. 1, 1945.

Judges of the Salon are announced as Fred R. Archer, F.P.S.A., Harvey W. Brown, A.P.S.A., and Jack Wright, A.P.S.A. The following are the conditions of entry:

1. Four prints may be submitted by any contributor. Monochrome prints only are eligible, and except for mounting must be the sole work of the contributor.

2. The entry form with a fee of one dollar should be properly filled out and mailed separately from the prints to William Reynolds, exhibition treasurer, 315 S. Catalina Avenue, Pasadena 5, California, and must be received prior to September 1, 1945. Entries from outside the North American continent will be accepted without entry fee.

3. All prints should be mounted on white or light colored mounts of suitable size. Maximum print size is 16 by 20 inches. Each mount should bear on the back, plainly written, its number, title, process (toning, etc.), and the name and address of the artist to correspond with the entry form.

4. Prints may be forwarded either by parcel post or by express prepaid. All entries should be packed with sufficient protection for safe transportation both ways.

5. Prints will be carefully handled, but neither the camera club nor the Pasadena Art Institute assumes responsibility for loss or damage while prints are in transit or during exhibition.

6. Unless otherwise specified permission to reproduce for the publicity of the exhibition is assumed.
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The War and the Training Film

By NEWTON E. MELTZER
EDITOR, CANADIAN PARAMOUNT NEWS

T HE emergence and exhibition to the public within the last year of a group of so-called Army Indoc-

trination Films—notably, BATTLE OF RUSSIA, REPORT FROM THE ALEU-

TIANs and THE NEGRO SOLDIER—has brought into focus for many film-
gers and interested onlookers the exis-
tence of a vast, new field of cinematic endeavor. But the scope and dimensions of the Army, Navy, Coast Guard and Marine Corps training film program can be scarcely guessed at from a glance at the few titles which have reached civilian theatres.

There are, within the Army Air Forces alone, nearly seven hundred titles at present, dealing with such diverse subjects as celestial navigation, interrogation of enemy airmen, how to land a jet plane safely live in the Arctic, and venereal disease control (THREE CADETS, the most coldly unromantic love story ever brought to the screen).

In addition to these and other films made by branches of the armed services themselves, there have been farmed out to commercial producers (perhaps the best-known being Walt Disney Productions) several hundred related subjects which can be handled safely and satisfactorily by contractual arrangement.

Each subject is a one-, two-, or three-reel film, with music and dialogue or, most frequently, an “off-screen” commentary of some sort. They are released in the non-theatrical 16mm width, to fit the standard portable equipment available almost universally at Army and Navy bases and depots. The subjects are numbered, classified and catalogued according to the branch of the services they will benefit most, and are mounted in a standard container, which in turn is marked and titled exactly similar for hundreds of films.

But do not get the impression that this means a training film is necessarily a dull affair, welcomed by most G.I.’s as an after-dinner siesta. It is not. For example, one recent film produced by the Army Signal Corps and coldly numbered TF 10-105, is entitled HOW TO GET KILLED. It starts with an American infantryman creeping through a dense jungle on his belly, his M-1 rifle held out in front of him in one hand, a grenade clutched in the other. No word of narration explains where he is or why he is on his bayonet. And fifty yards away, a cleverly camouflaged Japanese sniper in a treetop takes careful aim and fires. The soldier jerks once and lies still.

The message is strikingly apparent: it is not his job to do his duty. He has to face up to what is staring him in the face such as a bayonet when stalking the enemy in close quarters. And the sequence, with all the others in this particular opus, is as realistic as any to come off the Hollywood lots. Today’s military training by motion picture has come a long way since MANUAL OF ARMS, a fumbling, poorly photographed effort from the first World War. The Army Signal Corps is a witness to it, when—commentary to crystallize the action on the screen, music and sound effects to point it up—has helped immeasurably. But the picture remains the thing—60% of the message, in fact, says one visual aids officer, with sound track the remaining 40%.

In such films as the Signal Corps’ SUCKER BAIT and BAPTISM OF FIRE, and the Air Forces’ HOW TO FLY THE P-39 (made commercially by the Bell Aircraft motion picture unit), live dialogue is used through much of the action (that is, lines actually spoken by the actors on screen, rather than an anonymous off-screen voice). More and more of late, the trend has been away from the impersonal commentary and toward live dialogue, particularly in the AAF subjects, produced in Culver City, Calif.

The majority of Army training films seen these days at training camps and overseas bases originate either in New York City, at the Army Signal Corps Photographic Center; in Culver City, Calif., at the 1st Army Air Forces Motion Picture Unit, or at Wright Field, O. The Signal Corps has taken over the archaic Eastern Service Studios, once the home of Paramount Pictures, and has completely refurnished it. It now teems with directors and cameramen in officers’ insignia, and actors, writers and film editors wearing the stripes of enlisted men. Live dialogue is used through much of the action (that is, lines actually spoken by the actors on screen, rather than an anonymous off-screen voice). More and more of late, the trend has been away from the impersonal commentary and toward live dialogue, particularly in the AAF subjects, produced in Culver City, Calif.

The former Hal Roach Studios in Culver City are now the stamping-ground for a variety of Air Forces film technicians in uniform—under the supervision of Lt. Col. Owen Crump, formerly of Hollywood. In New York City on the seventh floor of a lower Park Avenue building is the Combat Film Unit of the AAF, which edits, assembles and records all scenes of air combat action recorded by the various combat camera units (15 of them, in all sectors of the world). Undeniably, the war has been a factor in bringing about the training film’s new articulateness. The pattern has been set. Television stands ready to bring world enlightenment through the vehicle of the instructional film. Where we go from here is defined only by the outer limits of man’s adaptiveness and ingenuity.

As this issue of the Cinematographer goes to press members of the American Society of Cinematographers are filming pictures as follows:

**Columbia**


**M-G-M**


**Monogram**

Ira Morgan “Gregory;” Harry Neumann, “Allotment Women.”

**Paramount**

Lionel Lindon, “The Trouble With Women.”

**P.R.C.**

Ben Kline, “Detour.”

**ROK**

Frank Redman, “Dick Tracy;” Gregg Toland, “The Kid from Brooklyn” (Samuel Goldwyn Production).

**20th Century-Fox**


**United Artists**


**Universal**


**Warners**


Motion pictures, with their unique facility for transmitting abstract concepts and ideas without words, can be used successfully to teach foreign languages. They are an admirable means for the teaching of history, of geography, of geology, anthropology, biology, chemistry. Undeniably, the war has been a factor in bringing about the training film’s new articulateness. The pattern has been set. Television stands ready to bring world enlightenment through the vehicle of the instructional film. Where we go from here is defined only by the outer limits of man’s adaptiveness and ingenuity.
Covering the entire wide range from perfume “fixatives” to chemical weed killers, Kodak Research Laboratories provide more than 3000 organic chemicals essential to advancement of chemical knowledge. Illustrated is the formula of a “fixative”... used to make a perfume’s fragrance lasting.

Research scientists turn to Kodak for rare and costly organic chemicals

From our greatest research institutions to the lonely scientist in his cubby-hole laboratory, American research looks to Kodak for many of the rare organic chemicals that are essential to experimental work.

This is not a profit-making enterprise, in the usual sense. It simply makes available, in small packages at relatively small prices, the rare and costly “organics” without which original research can’t function.

EASTMAN KODAK CO., ROCHESTER 4, N. Y.

REMEMBER GUADALCANAL—our first offensive action in the Pacific, over three years ago? How, with the Japs threatening our life lines to Australia, and Australia itself, we attacked, despite greatly inferior naval and aviation forces? And how the Marines, fresh from training, made their first landing . . . fought battle after battle for 27 desperate weeks . . . wiped out the Japs . . . and turned the whole tide of the Pacific war? A stern example to us at home. BUY MORE WAR BONDS.

Growing from this “labor of love”... your future in color photography!

After Kodak Research undertook to supply other sciences with the chemical tools for research . . . came Kodak’s own pioneer development of processes for color photography. It was speedily apparent that the synthesis of organic chemicals, to create new dyes, was a critical factor . . .

And Kodak had the experience necessary to make them

This basic knowledge is reflected in the glowing beauty of your Kodachrome home movies and “stills,” your Minicolor and Kotavachrome prints . . . And now in the most far-reaching of all, your Kodacolor snapshots . . . full-color prints, on paper, from Kodacolor Film used in your present camera . . . limited now, but plentiful later!

Serving human progress through photography

AMERICAN CINEMATOGRAPHER    •    July, 1945    231
Rerecording 35-mm Entertainment Films for 16-mm Armed Forces Release

By P. E. Brigandi

Prior to the war, the few 16mm sound prints RKO needed were made by optical reduction from the original release negative. This provided a convenient and inexpensive way to make single prints, and the quality was considered adequate for projection to small groups. When RKO began releasing the majority of their 35mm entertainment films on 16mm to the Armed Forces, optical printing could not suffice as it was too slow to provide the large number of prints required. While 16mm contact printing was more rapid it necessitated making a 16mm negative, the first of which was optically reduced from a fine-grain 35mm print.

When prints of these negatives were projected on an average 16mm projector, the sound was not uniformly intelligible or pleasant to hear. The three main causes for this deficiency were (1) the overloading and resonant peaks of the projector speaker when reproducing the overloading and resonant peaks of the mid-range frequencies present on the track to intermodulate.

The only solution was to restrict the frequency and volume ranges by a rerecording. The simplest procedure was to rerecord from a 35mm release print directly to a 16mm negative. The alternative of rerecording a second time to 35mm and making a 16mm negative by optical reduction was discarded as it was wasteful of 35mm raw stock and involved the surface noise and the noise of the projector running in the room prevented the low passages of dialogue from being heard, and (3) the relative lack of resolution in the film and variations in printer contact were causing the extreme high frequencies present on the track to intermodulate.

The 16mm monitor decompensator is inserted before the regular 2-way monitor and the neon volume indicator. The purpose of this attenuation is to give the dialog to a higher level while maintaining protection against overload from the loud music level. The very low-level dialogue will then be kept to a level not lower than 5 db below the normal. It is necessary with this amount of compression to change the ceiling control on loud music and effects to prevent "squeezing".

The negative stock used has been EK 5575 exposed with ultraviolet light. Recently tests on the new EK 5572 exposed with incandescent light have shown excellent results. Either stock is developed to normal picture contrast with a track print density of about 1.50. Low negative and positive fog coupled with good printer contact and the elimination of extreme high frequencies during recording provide rather broad processing tolerances.

The method outlined in this paper must be considered a war emergency expedient, as it is realized that the dramatic values of certain pictures may suffer with this treatment and that the total distortion introduced is higher than desired. However, the main purpose is to provide our Armed Forces with 16mm releases, having high intelligibility under all conditions of projection.

Du Pont Acquires Defender

Transfer of the business and assets of the Defender Photo Supply Company, located in N. Y., to E. I. du Pont de Nemours & Company, Wilmington, Delaware, has been announced. L. Dudley Field, since 1923 president of the Rochester firm and George A. Seannan, general manager of the Du Pont Photo Products Department, made the announcement jointly, emphasizing that it comes about logically because Defender is chiefly a manufacturer of sensitized paper while Du Pont mainly produces film. Defender has distributed Du Pont sheet film since 1921.

Defender business will be continued as the Defender Division of the Photo Products Department, E. I. du Pont de Nemours & Company. No changes in personnel and policies are contemplated. Mr. Field and Karl T. Molin will continue as division manager and assistant division manager. Sales offices operated by the 50-year-old New York company will be maintained.

"The combined resources of the two organizations should mean that our dealers and their customers will gain considerably," Mr. Field pointed out. "New and better photographic materials can be expected in the future."
FINE GRAIN SIZE

AND

HIGH EMULSION SPEED

MAKE

ANSCO Supreme Negative Film

the ideal taking medium for crisp, well-defined negatives at practical levels of illumination

Keep Your Eye on ANSCO—First With the Finest
THROUGH the EDITOR'S FINDER

FROM a reader in Syracuse, N.Y., has come a letter that both pleases me and makes me mad. It pleases me because an individual not connected with Hollywood recognizes the worth of the Cinematographer in motion picture production. It angers me because, either critics nor production executives give credit to the cameramen in a manner such as is their due. The letter follows:

"The attached writeup from a local paper burns me up.

"Since when did 'directed by', 'produced by', and 'Original Screenplay by' ever make a gorgeous color picture? A rave notice on color photography and never a mention of the A.S.C. member to whom the credit should have been given.

"I recall all the work the A.S.C. has done to get recognition for their members, and I can't understand how various and sundry other studio workers get all the credit for the photography. Half of them couldn't make a good snapshot.

"I think it was a marvelous piece of color work by George Robinson.

"Sincerely,

(Signed) Rees Lumley."

Apparently, Mr. Lumley is really "burned up," and one can hardly blame him, for herewith is the review of "Sudan," from the Syracuse Herald-Journal of June 1, 1945:

SUDAN COLOR GORGEOUS

"SUDAN"


THE CAST

Naila .................................. Maria Montez
Merah .................................. Jon Hall
Herna .................................. Turhan Bey
Nekna .................................. Andy Devine
Heradef ................................ George Zucco
Maatet ................................ Robert Warwick

Color photography beyond the dreams of the most sanguine photographer of a decade ago is the high attraction of "Sudan," showing at Keith's this week.

The fanciful tale of the Oriental queen who is kidnapped, branded as a slave, and falls in love with a bandit who makes a business of freeing and protecting enslaved human beings, is something of a strain on the credulity of modern movie goers, but the producer and director deserves high credit for a gorgeous picture.

Filmed in the American desert, the picture has an air of scale, with great attention to detail. Desert and mountain, the palace of the legendary queen, the hideout of the slave band, sand dunes, and rocky cliffs deserve a more adequate vehicle of action.

Maria Montez is an attractive queen and demonstrates the ability to do some real riding, hampered as she is by a superabundance of drapery.

Turhan Bey as the bandit and Jon Hall as the vagabond thief and trickster contribute to the colorful warfare.

Best Shots—the landslide let loose when the bandits see the queen's henchmen approaching, and the free for all horse race won by Queen Naila.

It does seem rather amazing that such a review should not mention the name of the Cinematographer. Perhaps the reason "Sudan," from the Syracuse Herald-Journal of June 1, 1945:

"I recall all the work the A.S.C. has done to get recognition for their members, and I can't understand how various and sundry other studio workers get all the credit for the photography. Half of them couldn't make a good snapshot.

"I think it was a marvelous piece of color work by George Robinson.

"Sincerely,

(Signed) Rees Lumley."
with Removable Head

Acclaimed the finest for every picture taking use.

The friction type head which is unconditionally guaranteed for 5 years, gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor or Baby "Professional Junior" Tripod base. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

The standard size tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest.

ADAPTABILITY: below are illustrated (1) the "Hi-Hat" ready for the friction type "Professional Junior" tripod head (2) to be affixed. Under the "Hi-Hat" is the finger-grip head fastening nut that firmly holds the removable tripod head onto either the "Hi-Hat," standard tripod (3) or "Professional Junior" Baby Tripod (4). Note the positive-locking, fluted, height-adjustment knobs and tie-down rings on the standard (3) tripod base. The Baby Tripod has a "T" level, weighs 5½ lbs., is made of Aluminum, with Dural legs having spurs. Extended height—21 inches, depressed—16 inches. It's compact and sturdy. Quality throughout.

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading News-reel companies and 16mm. and 35mm. motion picture producers.

* Patent No. 2318910

The new "Professional Junior" Baby Tripod, shown ready for the Removable Head.
**Brooklyn Club**

The following officers have been elected for the coming year by the Brooklyn Amateur Cine Club:

President, Charles Ross.

Vice-President, Francis Sinclaire.

Treasurer, Herbert Erles.

Secretary, Martin Pollack.

Board of Directors, Sam Fass, Charles Benjamin, Irving Gittell.

Two meetings were held during June. The first was on June 6, with a talk on exposure meters by W. A. Reedy as the feature.

Nine films provided the screen fare for the meeting on June 20. Films shown were:

- "Northwoods", by Herbert Erles.
- "Fishing Blues", by Horace Guthman.
- "A Day in the Country", by Sam Fass.
- "Big Broadcast", by Francis Sinclaire.
- "H R H Marcia Lee", by Irving Gittell.
- "All in Fun", by Dr. A. Gortz.
- "Our Family", by B. C. Rackett.
- "David's First Birthday", by I. Flaumenaft.
- "Carol", by Mrs. M. Flaumenaft.

This was the last meeting until next Autumn.

**Philadelphia Club**

The June meeting of the Philadelphia Cinema Club was largely devoted to sound. John Campbell, professional sound man, spoke on "Sound on Film", and demonstrated various types of sound tracks and methods of recording. Carl Finger had disc recording equipment on hand and showed the various steps in making a record. Robert Henderson, with the assistance of James Maucher, demonstrated his new RCA sound camera and recording equipment.

Three films were also screened. They were:

- "Ace of Darts", by Dr. Robert E. Haentze.
- "Nantucket", by Russell T. Pansie.
- "Sahuaro Land", by Frank E. Gunnell.

**Saint Louis Club**

The Ninth Annual Banquet of the Amateur Motion Picture Club of St. Louis was held on Tuesday, June 12, 1945, on the Congress Hotel Roof. After a delicious Turkey dinner, President Ben Betts conducted a short business meeting and the Directors for the coming year were elected.

A five act floor show was presented with Mrs. Lon Wadman acting as mistress of ceremonies.

The climax of the evening was the judging of the films for the annual awards. Dr. Horst W. Janson, of Washington University; Mr. Charles Nagel, Jr., of the St. Louis Art Museum; and Mr. C. L. Harrod, of Laclede Power & Light Co., acted as judges who previous to the meeting picked the three top pictures in Class B and two top pictures in Class A. They were as follows:

**Class A**—"Closeups" by Werner Henze; "Trial and Error" by Lon Wadman.

**Class B**—"Lynn Carol's Fifth Birthday" by Leslie Easterday; "Yachting Season in Wisconsin" by Frank Sperka; "Behind the Eight Ball" by Jos. G. Epstein.

These pictures were shown at the banquet and a top winner in each class was picked by popular vote of the club's membership. "Trial and Error" was judged winner for the Class A award and "Behind the Eight Ball" was the winner for the Class B award. Appropriate trophies were presented to Mr. Wadman and Mr. Epstein.

Ninety-five members were present which is almost the entire membership of the club.

**M.M.P.C.**

Officers chosen for the coming year by the Metropolitan Motion Picture Club of New York City are:

President, Joseph J. Harley.

First Vice-President, Frank E. Gunnell.

Second Vice-President, John R. Hefele.

Treasurer, Sidney Moritz.

Secretary, Alice L. Burnett.

Three films that were honored in 1944 were on the program of the June meeting. They were "Follow the Girls", by Oscar Horovitz; "Glamor vs. Calories", by Charles Carbonaro, and "The Silent Alarm", by Ernest Kramer. First two were named among the "Ten Best of 1944", and the last one was given honorable mention.

**La Casa Club**

Members of the La Casa Movie Club of Alhambra, California, celebrated the organization's eighth anniversary on June 18 with a birthday cake and the screening of short films by 13 members of the club. Those showing selected short reels were: A. J. Zeman, L. W. Lantz, A. S. Litch, J. H. Clay, R. L. Johns, J. P. Glassner, Ralph Ingham, Mrs. L. S. Conrad, Miss Monda Taylor, H. A. McHenry, John Van Aalst, Dr. H. R. Lutz and Guy Nelli.

(Continued on Page 240)
Thrillingly Natural Sound for Home Movies

16mm. sound-on-film has effected a revolution in home motion pictures. To the sight and action of silent films it brings the rich beauty of music, the drama of the spoken word, the lifelike atmosphere of actual sound effects. Rapidly expanding libraries of 16mm. sound films open new and fascinating vistas of entertainment and education for the average home.

Fortunately, 16mm. sound projection equipment for home use has kept pace with this new development. Compact, easy-to-operate, moderate priced projectors such as Ampro can bring professional quality sound motion pictures right into your living room. Perfected before the war, tested and improved during the war, Ampro sound projectors will be available just as soon as the urgent war needs are filled. In the meantime, an interesting and informative story entitled "What Will Happen in the Movies the Day War is Over..." is being distributed in attractive booklet form by the Ampro Corporation. Write today for your FREE copy.
Shooting "Tulip Time in Holland"

By JAMES R. OSWALD

IT WAS a beautiful May morning when my chief assistant (my brother), and I set out on the 150 mile journey to cover in Kodachrome one of the country's most colorful spectacles...the celebrated "Tulip Time" festival at Holland, Michigan. Little did we realize then we were about to film what was to be acclaimed the greatest screen play ever to emanate from the studios of JRO Productions, Unincorporated. While the subject matter is somewhat exclusive, our experiences in filming this travelog closely parallel those encountered by the average amateur in similar circumstances, and therefore these experiences are set forth for what they may be worth.

With the usual enthusiasm of a news-reel cameraman about to tackle a new assignment, we made ready for the momentous occasion which was to be ours. After a careful check up of equipment, we packed our movie paraphernalia in the camera car, our trusty Ford, and were on our way. Not having witnessed the festival before, we were at a loss to have a planned scenario to shoot from, but in accordance with the policy of JRO Productions, one thing was quite certain: "To this we would hold fast...make this film surpass the last." And that is exactly what we did!

Holland is an enterprising little village, whose place on the map rises from oblivion to gain the spotlight of national recognition, during the festivities. Its inhabitants, as might be imagined, are predominantly of Dutch ancestry, and to them "Tulip Time" is definitely more than a "come on" slogan hashed up by an over active chamber of commerce. These folk like to set aside this time each year for one gala occasion in remembrance of their native land...to relive the strange traditions of days gone by...to don its quaint, gaily colored costumes, complete to the wooden shoes.

Holland takes great pride, and justly so, in its several tulip farms, which over skirt the town proper. Thereon are raised the greatest array of tulips I have ever laid eyes on...and with the typical Dutch windmill in the far corner...truly a magnificent spectacle...and one certainly not to be overlooked by an itchy "trigger" finger on the exposure button of a camera loaded with Kodachrome!

But this was to be just a sidelight of what was to come. The main, action packed events of the celebration hadn't even begun! A quick glance at an official "Tulip Time" program was well in order, for it informed us of major attractions upon which to focus our attention...and our cameras. Not the least of these, we learned, was the opening parade, which was destined to play a very prominent part in our finished production.

With the crowds swarming in droves to choice vantage points, we hastened to our own carefully selected spot, from which to film the parade sequences to best advantage. Mere words alone cannot adequately describe the quaintness of the occasion. Tiny tots in their colorful Dutch costumes...wooden shoe dancers going through their capers...drum majorettes in sparkling uniforms...all added up to give our film a required twist. Anxious days were ahead as we waited to view the rushes of this never-to-be-forgotten spectacle of spectacles!

But with the breaking up of the parade, our mission was far from completed. We realized a few interesting sidelights could make or break this film. And if you'll pardon my ego, they made it! The little Dutch children surrounded by a bed of tulips...the tiny youngster by the white picket fence, daring to pick one of the precious blooms...and other catch-as-catch can shots give the necessary uplift so essential to a well-rounded screen play.

As we gathered up our belongings in preparation for the trip home, we were reluctant to leave this land of three million tulips...this land that spells peace and contentment...this color fans' paradise. We were going to miss beautiful Centennial Park, where we had been whiling away the last remaining hours of our joyous holiday. But, "mission accomplished," we needed to be on our way, back to the grind of everyday life, away from this photographic dreamland. There was but one consolation...we had captured forever on film one of the most colorful pageants of our movie making career...to be relived at will in all the magnificent splendor of Kodachrome!

While there are, or have been, before the war, many captivating celebrations of one kind or another, scattered throughout the country, such as the Mardi Gras...Tournament of Roses...Cherry Blossom festival...etc., there is only one "Tulip Time in Holland." And if by chance you think I'm prejudiced, you may recall that even Hollywood, which is inclined to turn a deaf ear to mere trifles, recently filmed an entire feature...
SUMMER lighting ranges from deepest shade to brightest highlight, from the almost velvet blackness of shadows to the full glistening brilliance of sunlight on water and white sand!

That's reason enough to choose Ansco Hypan for your summer movies!

For this great film has the range to cover such extremes of lighting—to preserve the sparkling contrast and subtle gradation of your movie scenes.

And for indoor shots, and scenes on dull days and in deep shade, it has the speed you need for brilliant, well-exposed movies.

Plus, of course, the panchromatic color balance that gives pleasing rendering—and lends itself with unusual aptness to filter work of every type.

All this—and fine grain, too! Try Ansco Hypan soon—for better motion pictures. Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation.

KEEP YOUR EYE ON ANSCO — FIRST WITH THE FINEST
A Practical Cure For Convergent Verticals

In negatives taken with a camera which is pointed either upwards or downwards, vertical lines, such as the sides of a building, are not parallel, but converge to a greater or less degree depending on the angle of tilt. It is well known that parallelism can be obtained in enlarging by tilting the easel in the required direction, but this invariably results in an elongated picture. The elongation is somewhat reduced if the negative can be tilted in the opposite direction, an adjustment which also assists in obtaining sharp focus over the whole area of the picture. With these two adjustments only it is impossible to obtain full correction of the horizontal and vertical magnifications and maintain focus at the same time. If, however, the enlarger is also fitted with the means for trimming off the negative, the easel sideways, as shown in Fig. 1, complete correction can be attained.

The enlarger must be capable of taking larger negatives than the ones to be used in order to permit of the sideways movement. The negative carrier is illustrated in Fig. 2. It is only 3/16th inches thick, so that it slides easily through the slot in the enlarger and has an inner frame which lifts out for loading the negative. By means of pivots at one end and a thread which winds on the spindle shown, the inner frame can be made to tilt downwards when in position in the enlarger. The sideways movement is accomplished by simply sliding the whole carrier in the slot.

With the negative carrier flat, the easel is tilted until the verticals are parallel. The negative is then tilted until sharp focus is obtained and the easel is realigned to restore the parallelism lost in the process. When the negative and easel are tilted to position B (Fig. 1) the horizontal lines of the enlarger are in the true direction, but the relative horizontal and vertical dimensions will be correct. A pale enlargement of this, or even a pencil tracing of the projected image can then be used on the easel as a guide to the correct adjustment. Alternatively, it is sufficient to note the angle the top of the subject makes with the horizontal from the point at which the photograph is taken. This can be done with the aid of a simple protractor fitted with a pendulum pointer. The focal length of the camera lens multiplied by the tangent of this angle gives the distance between the top of the subject and the lens level line that should be recorded on a correct negative, and the ratio of this to the corresponding distance on the actual negative can be determined. If this distance is also measured on the projected image with the negative and easel flat and multiplied by the ratio found, the true distance to which the image should be adjusted is obtained. Care should be taken to place the lens level line across the axis screws of the tilting easel.

For architectural subjects, a duplicate negative can be made at the same time with the camera held level. Part of the subject may be missing, but the relative horizontal and vertical dimensions will be correct. A pale enlargement from this, or even a pencil tracing of the projected image can then be used on the easel as a guide to the correct adjustment. Alternatively, it is sufficient to note the angle the top of the subject makes with the horizontal from the point at which the photograph is taken. This can be done with the aid of a simple protractor fitted with a pendulum pointer. The focal length of the camera lens multiplied by the tangent of this angle gives the distance between the top of the subject and the lens level line that should be recorded on a correct negative, and the ratio of this to the corresponding distance on the actual negative can be determined. If this distance is also measured on the projected image with the negative and easel flat and multiplied by the ratio found, the true distance to which the image should be adjusted is obtained. Care should be taken to place the lens level line across the axis screws of the tilting easel.

NOTE: The above article is a synopsis of a paper by David Charles, F.R.P.S., delivered before the Royal Photographic Society, and is published through the courtesy of the Society's Photographic Journal, March-April issue, 1945.

The Editor.

Among the Movie Clubs

(Continued from Page 236)

L. A. Cinema Club

Twenty-four hundred feet of film was screened at the June meeting of the Los Angeles Cinema Club, and Dr. H. O. Barnes showed special Kodachrome slides pertaining to Plastic Surgery. Disappointment of the evening was inability of scheduled chief speaker Glenn R. Kerhner, A.S.C., to deliver his talk because of a program mixup.

Films shown were:

"Pre-war Germany", by Mrs. Mildred Zimmerman.

"Notables of the Past", by J. C. Mulligan.

"Wild Life in Yellowstone National Park", by Mel Lincoln.

L. A. 8mm Club

Unusual highlight of the June meeting of the Los Angeles 8mm Club was the personal appearance at the meeting of 33 gorgeous, glorious feminine models who were photographed by members of the club at the Ambassador Hotel last April. First, the movies of the girls were shown and then each model was introduced. It proved to be quite a novel event as each girl was a beauty.

From the Editor

We give Ernest Miller a pat on the back for the very attractive monthly bulletin he is editing for the Metropolitan Motion Picture Club. The bulletin reflects careful thought on the part of Miller in trying to present a piece of work that will please the eye as well as inform the mind.

While on the subject of Editor Miller we would like to suggest that every member of his club might do well to resolve to be as painstaking in his filming as Miller is in his editing. Judging from the way members of the MMPC land their pictures among the "Best Ten", it is quite possible that Miller might have taken a leaf out of the members' books.

Orthochromatic

Orthochromatic materials possess sensitivity to green, in addition to the ultraviolet and blue-violet.
Here's Why... Modern business has accepted the use of motion picture film in streamlining its business procedure. Financial institutions, mercantile establishments, schools and colleges, governmental agencies, commercial film studios and photographic supply houses are among the greatest users of 16 and 35 mm. film as a part of their daily business routine.

With Houston's new Models 10 and 11 Film Processing Machines, it becomes a simple matter for the community processor to acquire a large share of the lucrative and profitable processing business.

Houston's processing machines and methods make it possible and practical for film to be completely processed days and weeks ahead of present day "out of town" processing schedules.

Business establishments want processing done when and as they need it. With the Houston Models 10 and 11 Processors in action, it's done "Johnny on the spot" with a maximum of speed, accuracy and privacy and a minimum of delay. Houston's processing machines handle the entire job from camera to screen with each processing step under full automatic control.

You can be assured of a safe, sound, dependable future by becoming a community processor.

Write today for illustrated literature.

**HOUSTON MODEL 11**

Handles 16 mm. negative, positive and reversal film. A complete self-contained, portable unit requiring no extra equipment. Dimensions: 64" long, 54" high, 24" wide. Processing speeds: Reversal film 15 ft. per min., negative film 5 ft. per min. at 8 min. developing time, positive film 20 ft. per min. at 2 min. developing time.

**HOUSTON MODEL 10**

For 35 mm. negative and positive film. Dimensions: 168" long, 82" high, 34" wide. Capacity: 600-1200 ft. negative film per hour at developing time of 6-12 min., 1200-2400 ft. positive film per hour at developing time of 3-6 min. Streamlined, compact. Requires no extra equipment.

THE HOUSTON CORPORATION  
11801 W. OLYMPIC BLVD., LOS ANGELES 25, CALIFORNIA
"Target—TB", Important Health Film, Completed

Any step taken to help in the fight against Tuberculosis is an important one, and that is why "Target—TB," a ten-minute sound film, recently completed by Willard Pictures for the General Electric X-Ray Corporation, can be classed as important to millions of Americans.

This film has been endorsed by the National Tuberculosis Association and by the United States Public Health Service. It is to be used nationally to help fight tuberculosis, a dread disease which annually takes a terrific toll of lives. City, county and state health departments will present the pictures in schools, clubs and industrial plants in advance of the appearance of a chest X-Ray survey unit in the community.

The picture explains the importance of treating tuberculosis in its early stages, and shows how easy it is to have one's chest X-Rayed. It is also designed to allay fear that the X-Ray process might be painful or troublesome.

William Steiner, A.S.C., photographed the film, and did an excellent job from the point of view of composition and lighting. In fact, many makers of educational films would do well to see this film and observe how good photography makes a better educational picture. William M. Nelson directed with real intelligence. All in all, it is a film of which the producers may be proud, and one which should be of great help in the fight against Tuberculosis. Prints may be obtained from General Electric X-Ray Corporation, 2012 Jackson Boulevard, Chicago 12, Ill.—H. H.

A Director Who Recognizes Importance of Cinematographers

(Continued from Page 224)
to follow Bacall. Howe pointed out that this type of shot would not be as effective as a pan shot. Shumlin readily assented. According to Howe, “Shumlin is a very fine person. He knows his business about story and acting, but he is not entirely familiar with the camera. He is willing to listen and to understand and in that way to acquire a sense of movie mechanics. However, his lack of familiarity is helpful, too. We in the movie business have developed a number of formulas over the years and we stick to them in most every picture. Shumlin comes to his job with a fresh point of view. He is tops in his own line, and therefore we must be receptive to new ideas that he might have.

“Shumlin wanted to play his scenes continuously instead of breaking them up into dozens of different camera setups. That is why we are using the moving camera a good deal. But we are moving with the actors and so the audience will not be conscious of the camera. We are not going to have the usual over-the-shoulder shots and cliche closeups in ‘Confidential Agent.’ I agree with Shumlin that the average picture is cut up too much into separate scenes that have no particular point. We will try to tell our story by moving the camera unobtrusively and by cutting from one shot to the other on a movement so that the transitions will be fluid.

“The action dictates the camera movement. There was one scene we had at the beginning of the picture in which Boyer and Bacall walk along a foggy railroad station. We made no attempt to interrupt the continuous medium dolly shot that followed them. As they talked we did not cut to closeups or different angles, but maintained the same moving shot. I believe it worked out better this way, although most directors would have preferred to break up such a long moving shot. I think a close shot where a person is shown moving or walking distracts from the illusion of motion. In a closeup, most of the background disappears and the audience, therefore, has almost no sense of movement. This is only one example of what I mean by a fresh and dynamic approach to motion picture mechanics.”

To sum up, Shumlin is what might be called “a cameraman’s director,” for he recognizes the knowledge of the cinematographer and wisely uses it, and is not afraid to tell the world that his cameraman and his film editor and himself work together as a team.

Fog Density

Fog density is the density of the unexposed but developed and fixed-out negative material. Fog increases but slightly within the recommended development time. The density of the base should not be confused with fog, since base density is constant and does not affect contrast. Base plus fog is the minimum negative density or starting point of the characteristic curve for any material.

Shooting "Tulip Time" (Continued from Page 238)

with a "Tulip Time" locale. To brush up on your memory, this Metro-Goldwyn-Mayer hit was released under the title "Seven Sweethearts."

Although JRO Productions cannot hope to compete with MGM, at least our version is more authentic! And incidently, just in case you’ve been wondering, if you haven’t already guessed, the JRO part of JRO Productions is derived from the writer’s initials.

New Photoflash Lamps

G.E. Lamp Department announces that its Mazda Blue Photoflash lamps have been improved to give 40 percent more light output and to be 45 percent more effective photographically. Lamps affected are the No. 5B and No. 21B. Production on these superior lamps, it is expected, will be underway at an early date. To aid in the identification of packages containing the improved lamps, both lower corners of the contents label will be plainly clipped. Improvement in the blue flash lamps is attributed to marked improvement by Lamp Department laboratories in the lacquer for these photolamps.
Dual Purpose Strong Zipper Changeover

The Strong Zipper Changeover, adopted by the Government as standard equipment on all DeVry 35mm projectors supplied to the navy for the past three years, has now been selected as standard equipment on Brenkert projectors, it is announced by the Essannay Electric Manufacturing Co., Chicago.

Designed 25 years ago by L. D. Strong, a member of Local 110, IATSE, Chicago, and an active member of the Society of Motion Picture Engineers, the Strong Zipper Changeover is now in daily use on more than 20,000 projectors in the United States and foreign countries.

Dating back to the early wall models, Strong changeovers have continuously undergone important design changes to keep them in step with progressive projector practices, and are now available in three standard models. These are the "Special," the "Zipper" and the "Dual Zipper."

The "Special" is installed over the port hole of the projection room and can be used in conjunction with any projector.

The "Zipper" is mounted on the projector head at the aperture, and not only is a changeover but also provides additional fire prevention.

The "Dual Zipper" is a combination sound and vision changeover which not only changes the picture but the sound as well, acting as follows: The armature of the double solenoid coil actuates a built-in switch to close the sound circuit simultaneously with the closing of the picture shutter; and as both changes are simultaneously controlled by one operation of the treadle foot switch, perfect synchronization of the sound and picture changeover is accomplished. Built to withstand twice the power load required by government specification, it has already completed three years of service under battlefront conditions which surpass any laboratory tests that could be devised. The new model "Zipper" will be known as the "Dual Purpose Strong Zipper Changeover."

The Museum of Modern Art Film Library

(Continued from Page 227)

portant part in the development of the motion picture between 1917 and 1925; it shows work by the two great Swedish directors, Victor Seastrom and Mauritz Stiller, followed by two programs illustrating the later work of Seastrom and the actress Greta Garbo after they came to America. The remaining programs consist of additional outstanding examples of the growth of the American Film. SERIES 5.—The Work of D. W. Griffith.

Undisputed master of the motion picture, D. W. Griffith between 1909 and 1916 contributed to the medium much of its techniques and its expressiveness. His Birth of a Nation and Intolerance remain classic and their influence can be seen not only in subsequent American Film production but in the work of Gance in France and of Eisenstein in the USSR. These programs trace his career from the time he first entered a studio to the waning of his era of productivity some time before the rise of the talking film.

SERIES 6.—Non-Fiction Films.

It was as an instrument for imparting information and not as a dramatic or narrative vehicle that the motion picture was first admired; the subjects listed below illustrates some of the ways in which it has been so used.

1922—Nanook of the North, written, directed and photographed by Robert J. Flaherty.
1925—Grass, photographed and directed by Merian C. Cooper and Ernest B. Schoedsack.
1926—Rien que les Reures, directed by Alberto Cavalcanti, 4 reels.
1926—Berlin, the Symphony of a Great City, directed by Walter Ruttmann.
1926—Moana, photographed and directed by Robert J. Flaherty.
1927—Chang, photographed and directed by Merian C. Cooper and Ernest B. Schoedsack.
1928—Baboon, an aerial epic over Africa produced by Mr. and Mrs. Martin Johnson.
1935—Baboona, an aerial epic over Africa produced by Mr. and Mrs. Martin Johnson.
1935-1939—The March of Time.
1937—Tzar to Lenin, assembled and produced by Herman Alexbank and edited by Max Eastman.

Documentary and Instructional Films

These subjects, selected as good examples of their kind, represent various types of films made in Europe and America in recent years with the purpose of imparting information. They include instructional films, for classroom use or adult education, and documentary films made to publicize services (Continued on Page 249)

244 July, 1945 • AMERICAN CINEMATOGRAPHER
R. P. S. Honors John I. Crabtree

The Royal Photographic Society of Great Britain has approved the recommendation of the Scientific and Technical Group Committee to honor John I. Crabtree, assistant superintendent in the Kodak Park Research Lab, with the Henderson Award of 1944.

The award was established in 1907 and is presented annually for "the most useful discovery in, or essay on, photographic chemistry."

In his letter, the secretary of the Royal Photographic Society stated the award was based on Crabtree's recognition, appreciation and contributions to "photographic processing operations and especially recent papers (with George Eaton and Lowell Muehler, also of the Research Lab) on hypo elimination and the washing process."

Since joining the Company as a research chemist in 1913, Crabtree has been author and co-author of 75 or more papers. Muehler and Eaton collaborated with Crabtree in seven recent publications pertaining to the removal of hypo and silver salts from photographic material as affected by the composition of the processing solutions. Among the publications was one entitled "Washing Photographic Films and Prints in Sea Water," which the armed forces have received with interest.

Recently, two publications, "How to Fix and Wash for Permanence" and "Fixing and Washing for Permanence," were released by the trio. They are more popular versions of the booklet, "The Removal of Hypo and Silver Salts from Photographic Materials as Affected by the Composition of the Processing Solutions."

Because of wartime restrictions, the medal will not be awarded at this time, but official and public notification has been made.

Free Brochure of World War Two

Just off the press, and available free to all projector owners, is an interesting brochure covering the most important events of World War II— as presented in Official Films series of 8mm.-16mm. News Thrills. This leaflet describes and illustrates the struggles and sacrifices of nations at war—listing the highlight events from the dark days of '39 to V-E Day . . . all of which may be seen on your home movie screen! This listing covers a complete record of the war in Europe . . . as well as in the Pacific. Copies of the brochure may be obtained free by writing Official Films, Inc., 625 Madison Ave., New York 22, N. Y.

Searchlight-Steady!

Clear definition of image . . . uniformity of illumination over the screen's entire surface . . . soft, natural brilliance that assures viewing comfort— these are theater standards of performance you get in a NEW DeVry 16mm. sound-on-film projector. Shoot your moves with a DeVry camera. For 35mm. filming, use the DeVry that filmed Academy Award winning "Desert Victory." For 16mm. filming, use the DeVry that is preferred by professionals for their personal shooting, DeVry Corporation, 111 Amsteg Avenue, Chicago 14, Ill.

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Your requirements for interior or exterior locations taken care of to the last minute detail anywhere

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Geometry Film

Knowledge Builders Classroom Films, are releasing a series of Geometry teaching films in 16mm. sound, under the title of "Practical Geometry." As the company feels that the number of films needed to thoroughly cover the subject of geometry is practically unlimited, no set number of separate films to be included in the series has been decided upon. The first subject in the series, now available, is:

Lines and Angles—designed to aid the student in his understanding of the mathematical applications of basic geometry. Beginning with the erection of a perpendicular, the film illustrates the relationship of the perpendicular with the ordinary plumb-bob, level and square. Shows how angles are created by intersecting lines and how angles are measured in terms of degrees by means of a protractor.

Kodak Exposure Indexes for Use With Meters

One of the things in the past which has tended to confuse and complicate picture taking has been the multiplicity of speed systems, such as H and D, Din, European Scheiner, American Scheiner. Most of the speed systems in the past have not truly represented the actual camera performance of the film. It was obviously desirable that a single system be used, but important too that it be the right system.

The research Laboratories of Eastman Kodak Company in Rochester did extensive research experimental work which resulted in a new sensitometric system for measuring film speeds and which has been used for several years in connection with the quality control of its photographic materials. Coincidentally, the standard method which has been adopted by the American Standards Association for measuring the "speed" of amateur black-and-white negative materials very closely conforms to the method used in Kodak Laboratories. In this connection, the values now published by Kodak for use with exposure meters will be termed "exposure indexes" and determined according to the standard method adopted by the American Standards Association. These exposure indexes apply to the present day Weston and G. E. meters and others similarly calibrated and it is expected that the system will apply to most postwar meters.

In a recent communication sent to its representatives, Kodak said in part, "We are satisfied that this method gives the basic value which represents the minimum camera exposure which would yield an excellent picture as a final result. This basic value, the ASA "speed" does not apply to existing exposure meters, but serves as a starting point. For application to picture taking, this ASA "speed" is modified by a safety factor, to give more than the minimum exposure and to satisfy the requirements of exposure meters. The new Exposure Indexes will appear in the new edition of the Kodak Films Data Book. The Exposure Indexes will also appear on the instruction sheets packed with those sensitized products to which they apply.

"The new Kodak Exposure Indexes apply to black-and-white, continuous-tone negative materials, that is roll films, film packs, miniature camera films, sheet films, and plates not of the process type. Although the present American Standards Association does not cover sheet films and plates, Kodak, considering the convenience of the trade, will publish Exposure Indexes for these materials nevertheless.

"No American Standard exists as yet for reversal and color films," so continues Kodak's communication. "In view of the shorter latitude of these materials as compared with black-and-white negative materials, we do not see fit, at least as yet, to publish single values for such materials. It may be that further research may show that this is possible. Meanwhile, we shall continue to give separate meter settings for the Weston and G.E. exposure meters for Cinema Kodak black-and-white films, and Kodachrome Films."

Gamma

The slope of the straight-line portion of the characteristic curve, or tangent of the angle it forms with the horizontal, is shown as gamma. It is a measure of negative development contrast or degree of development.

New Filmosound Library Releases Announced by B. & H.

CHIP OFF THE OLD BLOCK
(Universal)
No. 2561—8 reels
Teen-age son of Navy family falls in love with youngest member of famed stage dynasty and eventually liberates her in fine style. Clean uproarious comedy with good music and dancing. (Donald O'Connor, Peggie Ryan, Ann Blyth, Helen Broderick, Arthur Tremble, Patric Knowles, Quiz Kid Joseph Kupperman). Available from August 15, 1945 for approved non-theatrical audiences.

WEEK-END PASS
(Universal)
No. 2563—6 reels
Champion shipyard worker wins bonus and week-end vacation. He yearns for peace and quiet and gets, instead, a mix-up with a girl uncertain of whether to join WACs or WAVES. (Noah Beery, Jr., Martha O'Driscoll). Available from August 15, 1945 for approved non-theatrical audiences.
$10,000 In Prizes For Best Amateur Films

Announcement has been made by International Theatrical and Television Corporation, through George A. Hirli- man, President, that IT&T this month will launch a national contest consisting of eleven prizes which will include a $10,000 award in cash to the best ama- teur film production submitted on any subject, and ten additional prizes, the awards for which will be commercial dis- tribution by IT&T of these subjects, with each of the ten winners receiving cash revenue through a percentage of their picture's earnings. Negotiations are now under way to choose a Board of ten judges, five of whom will be chosen from Hollywood's important personalities and the other five chosen from authorities in the substandard field.

In launching this contest, which has been the subject of long study and de- liberation on the part of IT&T execu- tives, Mr. Hirliman stated:

"In our research of the substandard field we have found that amateur pro- duction in a few cases compares favor- ably with the work done by professional people and organizations. The tremen- dous interest in production as a hobby by amateurs has resulted in many in- genious types of productions evidencing fresh and interesting approaches to pro- duction. In an effort to encourage fur- ther experimentation, it is IT&T's aim to give recognition in a substantial man- ner to those individuals or amateur or- ganizations aiming to develop higher standards in substandard production. In sponsoring this contest it is our belief that it will not only aid in developing higher standards for amateurs but will influence additionally, higher standards of professional substandard field.

The contest encompasses the entire field of substandard production including entertainment, vocational, educational and religious films, etc. As such it allows for inclusion of any type of film pro- duced by nonprofessionals.

The contest will be international in scope and will, we believe, not only help stimulate more ambitious production plans by amateurs, but will serve also as an important and objective goal for all those interested in substandard produc- tion."

According to the rules of the contest, and in consideration of its rules, IT&T will have all rights and title to the pro- duction awarded the $10,000 prize, while as stated above, the next ten best pro- ductions will be distributed nationally by IT&T with a percentage of the gross accorded to each of these next ten best winners on the receipts each individual picture receives. The contest will con- tinue for one year through June 30, 1946.

Resolving Power

Resolving power refers to the ability of an emulsion to record fine detail distinguishably.

Sharpness

Sharpness is a measure of the ability of a negative material to reproduce geometrically sharp edges.

Weather, Biggest Problem of Aerial Photographers

By JOHN W. BLANK

MARINE CORPS COMBAT CORRESPONDENT

SOMEWHERE IN THE PACIFIC—Chief problem of aerial photographic units covering widespread Marine and Navy combat action isn’t the enemy; it’s the weather.

“That’s the only thing that stumps them,” declared Harrison L. Currey of 42-65 77th Street, Elmhurst, N. Y., technical representative for the Fairchild Camera & Instrument Corp., Jamaica, N. Y., now on his second tour of overseas duty as a photographic equipment maintenance man. “And like people,” he added, “although they’re always talking about the weather, they don’t succeed in changing it any.”

Except that it’s still impossible for an aerial cameraman to get good pictures when there’s a layer of clouds between his plane and the earth, Currey believes the men of the photo squadrons and the “tech reps” have circumvented nearly every other problem which the muggy atmospheric conditions of the tropics have imposed.

“Photographers have learned to be as ingenious as other branches of the fighting forces,” he said. “If they don’t have what they need they improvise. As each new quirk develops they work on it until they have it licked. And taking a tip from the ground crews, they’ve become adept at ‘cannibalizing’ (i.e., stealing parts from someone else’s equipment) to keep their cameras in service.”

This inventiveness, he thinks, is one of the reasons why photo reconnaissance and photo-mapping are responsible for at least 90 percent of military intelligence in World War II. Also, new methods and equipment are continuously improving technique. Use of color films and night photography have been boons in the planning of ground campaigns and naval and aerial strikes.

After serving at nearly every base in the Pacific war theater, Currey is convinced there is no substitute for continuous inspection. Several “dope” preparations have been developed by Fairchild and government scientific researchers to combat jungle damp and fungus which attacks photographic gear as well as all optical and electronic equipment, but none seems to work under all conditions.

One protective method which Currey helped develop in the field is now widely used by photo units of all services. Hermetically-sealed chambers, heated with electric light bulbs to keep humidity at a minimum, were constructed for the storage of the aerial cameras, which weigh up to 100 pounds apiece and are up to four feet in length.

On the other hand, the only known method of keeping film from deteriorating in the tropics is refrigerated storage. A shortage of film dryers resulted in a very serviceable one being devised with a galley stove and a 50-gallon drum as the component parts. At another base, manpower was at a premium. Suggestions were pooled and a fully automatic contact printer to handle the long rolls of aerial camera film, which range up to 400 feet, came into being. It was built from a standard printer, bladder, oxygen bottle and electric motor rigged with micro switches to supply the automatic feature. One man could operate it, where two had been necessary before.

Russian Production Notes

According to special cabled news from the Press Service of the Soviet Information Bureau in Moscow, comedies will largely dominate the film productions in Russia for some months to come.

Grigory Alexandrov, producer of “Jolly Fellows,” “Circus” and “Volga, Volga,” is working on a new comedy entitled “Spring” with ballerina Paragulina Ulanova, singer Nadezhda Obukhova and Lyubov Orlova in the leading roles. Music for the film is being written by I. Dunayevsky, noted Soviet popular song writer. Writers A. Raskin and N. Slobodskoi are doing the script. It is planned to adapt the film scenario for a stage production at the Cinema Actors Theatre which will be opened in Moscow this coming Autumn.

Among the more serious pictures, Mikhail Room is at work on scenario of a new film based on post-war theme. He also intends making a picture based on Gogol’s “Inspector General,” and one on Dostoyevsky’s “Karamazov Brothers.”

Color Sensitivity

The color sensitivity of an emulsion defines the degree of its photographic response to light of various wave lengths or colors.
Museum of Modern Art Film Library

(Continued from Page 244)

performed by government and industry. All of them present not actors but ordinary citizens in their normal walks of life.

SERIES 7.—The Russian Film.
SERIES 8.—The Films of Douglas Fairbanks.
SERIES 9.—Forty Years of American Film Comedy.

This is but a part of the great program of films the Museum offers, for it has arranged a cycle of 300 films dating from 1895 to 1941. Iris Barry says, "Public education and guidance in film appreciation has been so slow to develop, however, that people sometimes complain they do not 'like' all the films shown, forgetting that these are not shown as diversion or entertainment, but for the pleasure of comparisons, analysis and study. A few make a small nuisance of themselves by rather ostentatiously flickering at the outmoded dresses, obsolete slang, old-fashioned moral values of films ten or twenty years old. This, it must be said, is habit fostered by certain sections of the film industry itself through the revamping of "Old" films to turn them to ridicule. But it is interesting to observe that films which are old enough do not provoke that reaction. It is very evident, too, that laughter at the death of Camille, played most expertly, though in an obsolete style, by Sarah Bernhardt, or at the dresses of Greta Garbo in Susan Lenox, is fraught with shock at the sudden disruption of the time sense rather than with merriment. As audiences gain the habit of looking at films as something more than a transient distraction, the tendency to ridicule diminishes noticeably, but its existence suggests some curious conclusions on the impermanence of standards of taste."

New films are fast becoming the Museum's valuable acquisitions. One can well visualize that some time in the future, it will be possible again to see and enjoy such films as The Lives of a Bengal Lancer and Mutiny on the Bounty, made in 1935; The Life of Emile Zola, Captains Courageous, The Good Earth, made in 1937; Love Finds Andy Hardy—1938; Destry Rides Again—1939; Sergeant York, How Green Was My Valley, The Maltese Falcon, made in 1941, or Going My Way, the 1944 Academy Award Winner.

Miss Barry further states, "but the first and most immediate task lay in the collection of the necessary films and here it was, of course, a case of first catch your hare. How were the necessary films to be obtained? It is not widely realized that a motion picture cannot usually be bought or otherwise procured as can a book or a painting
or that, even if a print of a film be so obtained, its physical possession does not necessarily entail the right to its use or showing.

"The situation proved quite other in regard to films of later date. Most of the motion pictures made since 1912-14 are the property of producer or producer-distributor firms who rent but do not sell prints for commercial exhibition through their own or other distribution companies. Used prints eventually revert to them and are destroyed. Ownership and consequently the right to exhibit such films remains firmly in these hands. Obviously then, in order to gain access to such material, it was immediately necessary to enlist the sympathetic support of the film industry as a whole. This the Film Library consequently attempted to do. Happily its creation, and the fact of its support by such an institution as the Rockefeller Foundation, had received a good press. People generally approved the idea. And, equally happily, among the Trustees and friends of the Museum were several who made immediate interests of one sort or another in the motion picture industry."

The Motion Picture is an art. Only when it is especially sought for preservation do we appreciate its value as such. For myself, I virtually live in Museums and whenever I travel, it is the Museums that attract me more than anything else a city has to offer.

The Museum of Modern Art has taken on a tremendous task and a worthy one, if they had not assumed the responsibility to start this Library, when they did, it might have been a lost cause, for the old films were slowly disappearing and the only survivors would have been those historic films which now and then appear on the screen to "ridicule" for commercial profit. The Museum's collection are prints from both original negatives and reproductions but they are left in their original state as intended by the producer.

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DeVry's First Portable Projector Is Honored

More than 30 years ago this spring, the late Dr. Herman A. DeVry emerged from the basement of his humble Chicago home with the world's first portable motion picture projector.

Today, this original "suitcase projector" as it was then called, is on its way to Washington to take its place in the Smithsonian Institute along with other outstanding mechanical contributions to the progress and profit of mankind.
Meet the Men and Women Who Turn Out Many of the Navy's Movies...

...THE TECHNICIANS AT ANACOSTIA

They were in the industry before the war...in the processing labs, or working with sound, animating, editing...in one way or another whipping exposed film into finished productions. That's what they're doing now in the Photo Science Laboratory at Anacostia, D. C. Their peacetime productions entertained or sold. Now, their Navy-made movies inform, inspire and instruct the officers and men of our fleets. Anacostia's technicians are an important part of the Navy's never-ending training program; their movies help make and keep our Navy great.

OFFICIAL U. S. NAVY PHOTOS

The Navy makes movies wherever it goes, and rushes them back home to the Photo Science Laboratory at Anacostia, D. C.

Here movie technicians whip this film footage into finished productions. They process...edit...title...dub in speech, music, sound effects...

...after a fault-finding preview, their latest productions are OK'd for release to our ships and stations, all over the world.

Eastman Kodak Company, Rochester 4, N. Y.

J. E. BRULATOUR, INC., Distributors, Fort Lee, Chicago, Hollywood

One of a series of advertisements by KODAK testifying to the achievements of the movies at war.
"Oooo, Mommy! Daddy's home"... a race to the gate, a little squeal of delight, and upsa-daisy into Daddy's ready arms.

Adorable family incidents like this can be vividly yours... forever... with home movies, a personal film library built around a Bell & Howell Filmosound.

Not only will a Filmosound show your personal movies to best advantage and let you relive your happiest memories... but professionally made sound films are also yours to screen at home, yours to rent or buy from the extensive B&H Filmosound Library.

In performance, dependability, ease of operation, Filmosounds excel! Typical is the new improved, cooler Filmosound 179...a 16mm. sound-on-film projector offering brilliant 750-watt illumination (1000-watt optional)...and built in the same tradition that has made Bell & Howell the preferred studio equipment of Hollywood and the world.

OPTI-ONICS—products combining the sciences of OPTics • electrONics • mechanICS
In This Issue...

Pictorial Cinematography
Ever see a sensitive "noodle"?

After light-sensitive, raw emulsion for DuPont Motion Picture Film has been chilled to a stiff gel, it is put through a "noodle" press. This converts the gelled cakes of emulsion into "noodles"... exposing increased surface area to facilitate washing.

"Noodling" and washing operations take place in rooms where safelights only are permitted for illumination. Almost total darkness prevails.

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CONTENTS

Review of the Film News .................................................. 258
Aces of the Camera (Archie Stout, A.S.C.) ....................By Hal Hall 259
Pictorial Cinematography .............................................By F. W. Pratt 260
The Academy War Film Library .........................By Ezra Goodman 261
A Crumbled Movie Empire ........................................By Irving Browning 262
Films in India ..........................................................By Capt. F. Berko 265
Fades, Lap-Dissolves and Other Tricks ....................By Ransom Palmer 266
Great Gold Elephant ..................................................By N. E. Meltzer 268
Through the Editor’s Finder .................................. 270
Among the Movie Clubs ........................................... 272
Take Your Cine Camera to the Beach ......................By J. R. Oswald 274

THE FRONT COVER: Director of Photography Lionel Linden, A.S.C., is shown filming a scene for “Masquerade in Mexico,” the Paramount picture starring Dorothy Lamour and Arturo de Cordova, who are shown making love in this scene.

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TOP news of the month involving motion pictures is also the dirtiest—Congressman John E. Rankin’s announcement that his committee on Un-American Activities is to investigate the Hollywood film industry, producers, writers, actors, etc., on the grounds that Hollywood’s film city is a hotbed of Communist folk who want to overthrow the United States government. Group of Rankin’s sleuths are now in Hollywood looking for evidence.

Hollywood is not worrying about Mr. Rankin and his charges. Just before Pearl Harbor another governmental committee tried to smear Hollywood with no success. And then, when the Japs hit us below the belt at Pearl Harbor, it was Hollywood that turned out the training films which helped to quickly train an army. Hollywood has been helping tremendously in the war effort ever since; sending hundreds of top entertainers right to the fronts to bolster the boys’ morale; sending the latest feature films by the hundreds to every fighting front. While Rankin’s investigators were digging for dirt, Rear Admiral Miller, chief of Navy public relations, made a public statement on July 18 declaring that the film industry’s contribution in originating and developing the Navy film program was “splendid and indispensible.”

**Illinois Libel Law**

Announcement that Governor Dwight Green of Illinois has signed the much-discussed Illinois radio libel bill, a measure providing penalties of up to a year in jail or a $500 fine for persons participating in defamation of character over the air, bears watching. It might be the start of a movement to take away freedom of speech, freedom of the press, freedom of the picture industry to make serious films dealing with vital topics. Peculiar part of the new law is that it exempts politicians during political campaigns. The candidates are allowed to call each other anything. That law should be watched carefully.

**Arthur Rank**

Arthur Rank, British film magnate, is still very much in the news. Preceded to America by countless rumors of what he plans, Rank still remained more or less a question mark after he had visited Hollywood. Day he left for England one definite announcement was made—he has closed a deal with RKO involving both production and releasing in England and America. While in Chicago, Rank is reported to have conferred with Bell & Howell executives, and is expected to acquire British rights for 16mm. projection and reproduction patents from the Bell & Howell Company. If he gets the patents he will be in manufacturing business as well as pictures.

**Raw Stock**

From Washington comes cheerful word, at last, that abandonment of film allocations for the fourth quarter of this year appears almost certain. Drop in military requirements is the reason. With normal raw stocks available, big jump in independent film production may be expected. More than a dozen independent producing companies with finances available are waiting for lifting of film restrictions. A terrific burst of independent production, giving great opportunity to the free-lance cameramen will break with the ending of restriction. Some of the companies are: Mervyn LeRoy’s Arrowhead Productions, Preston Sturgess Productions, William LeBaron Productions, Robert Golden’s Golden Pictures, Victor Saville Films, Liberty Films, Inc., headed by Frank Capra and Sam Sklaskin; Norman Z. McLeod Pictures, and Robert Riskin Productions.

**Bretton Woods**

Passage of the Bretton Woods international monetary pact by the Senate, should be a new event of interest to the picture industry, for when it is finally passed by both houses and signed by President Truman the foreign market for films will be much brighter. The International Bank and the International Stabilization Fund will aid in the rapid recovery of war-torn nations. The more rapid their recovery, the sooner will entertainment is being increased.

**Disney and Russia**

Walt Disney has been reported invited by Russian delegates to the San Francisco Conference to go to Russia and teach health and sanitation ideas through short film subjects similar to his “The Human Body.” Russians are also said to be interested in having Soviet-produced cartoons, carrying propaganda, made by Disney. Indications are that Russia, after the Japs are licked, may offer many opportunities to Americans with ideas.

**Hollywood Trouperers**

Report of the Hollywood Victory Committee reveals that Hollywood actors and actresses gave more than 5,000 performances for GI audiences on all the war fronts during the first half of 1945. Forty-nine stars went overseas, traveling a total of 100,000 miles to Europe, Alaska, Panama, China, the Philippines and other fighting zones. During that period the players participated in 1,134 entertainment events. Eighty other entertainers made 837 appearances in service hospitals throughout the United States, cheering the wounded. Entertainment is being increased.

**Eric Johnston**

News reports indicate that Eric Johnston, President of the United States Chamber of Commerce, will not take over the post of Will Hays as head of the Motion Picture Producers and Distributors of America, a post that has been rumored he would accept for the past few months. However, it wouldn’t be surprising to see Johnston become a big figure in the film industry in another post. He has indicated that he might be interested in a newly created job to unify the entire motion picture industry in achieving its goal. “I am not interested in a job,” he explained, “I am interested in being of service to the American people and in helping the motion picture industry to realize its vast power and influence in the world.” Don’t count him entirely out of the film picture.

**35mm. Booth Equipment**

News from Washington behooves studios and theatres to keep their present 35mm. projection equipment in running condition for an indefinite time. Hope that there would be an increase allowed in manufacture of such equipment has faded with the announcement that there will be no increase in projection equipment at least until fall. Only 165 35mm. projectors per quarter are being permitted manufactured for civilian use, so theatre operators needing new machines will just have to get along as best they can.

**Odds and Ends**

Samuel Goldwyn is going to make a film based on the life of General Eisenhower ... PRC has announced an ambitious production schedule calling for 84 feature pictures and 16 westerns during 1945-46 season ... Washington reports indicate that Italian market will be opened any day to American made films.

H. H.
Aces of the Camera

ARCHIE STOUT
A. S. C.

By HAL HALL

ONE day, away back in the “custard pie era” of motion pictures, Mack Sennett conceived the idea that he could have a very funny scene in one of his films if he could get a shot of a pelican nibbling at the posterior of Louise Fazenda. But getting a pelican to do this peculiar bit of business posed a question.

It seems that the California law stated that a pelican could be captured and used only after permission had been obtained from the fish and game commission, and then a representative of the commission had to be on hand to see that the Pelican was treated right. This permission was secured and a game warden named Archie Stout was assigned to look after the welfare of the pelican, and see that it was released at the place it was captured as soon as the photographic stint was over.

Stout enjoyed the whole thing immensely. In fact, he was so impressed with the business of picture making that he hung around the Mack Sennett studio for several days, principally in the company of Fred Jackman, then head of the Sennett camera department, and now Executive Vice-President of the American Society of Cinematographers. Jackman took a liking to Stout from the first, and told him about a problem he was facing. It seems that Jackman wanted some background shots of locations up in the High Sierras but couldn’t spare a cameraman to go and make them.

“Give me a camera. Show me how to use it, and I’ll get your stuff,” said Stout. “I’m going up there in a few days.”

So, Jackman gave him an old camera, showed him how to use it, and Stout departed. On his return several weeks later, he gave Jackman his exposed negative and camera. When it was developed a new cameraman came into existence, for Stout had made some beautiful scenes.

“I sure feel kindly toward all pelicans,” says Stout. “And I sort of wish I could locate that old pelican that helped get me into the photographic profession. I’d like to give him a nice mess of fish as a reward for what he did for me.”

It was just about 31 years ago that Archie started as a cameraman. At this writing he is filming his 500th picture—an almost unbelievable number. His present assignment is Jules Levey’s “Abilene.” When he casually remarked to Director Edwin L. Marin that he was starting his 500th picture Marin stopped all work and sent for coffee and cake.

Archie, long a member of the American Society of Cinematographers, doesn’t seem impressed with the amazing number of films he has shot. He explains that in the old days a one-reeler was shot in two or three days, and as soon as you finished one you started right in with another. He figures roughly that he made 300 pictures for Mack Sennett and the Christie boys during his first eight years in the business. The other 200 have been made during the last 23 years.

Archie is a veritable directory of the motion picture business. He knows everybody from office boys to producers, and they all know him. He is friendly and outspoken; quick to win the confidence and loyalty of those with whom he works, and down through the years he has acquired a technique for quieting ruffled temperaments that is unmatched in Hollywood. Incidentally, he says there was just as much temperament in the old days as there is now.

At one time or other he has photographed practically every star and featured player of the last 30 years, and he is a walking repository of anecdotes starting with the Keystone Kops down to date.

“Some of those fellows in the old days got to be so good at slinging pies,” says Archie, “that they could catch a man or a bathing beauty full in the face at a distance of forty feet. We kept one bakery going full blast just turning out pies for us to throw around at each other.”

Without effort Archie reels off the names of those old days that have found prominent niches in Hollywood’s Hall of Fame: Wallace Beery, Gloria Swanson, Charlie and Syd Chaplin, Alice Devilport, Mabel Normand, Alice Lake, Roscoe Arbuckle, Marie Prevost, Chester Conklin, etc., etc. All of them, at one time or another, were on the Mack Sennett payroll and came before Archie’s camera.

“We didn’t have a script most of the time in those old days,” says Archie. “We just shot off the cuff. Everybody

[Continued on Page 283]
Pictorial Cinematography

By F. W. Pratt

Vice-President, Australian Amateur Cine Society

It is an indisputable fact that composition is one of the most important factors in the making of a good picture—whether it be a still picture or a motion picture.

Restlessness of the human eye is one of the reasons why composition plays such an important part in photography. Have you ever noticed while sitting in a train how your eyes dart here, there and everywhere as the landscapes pass? You get a general impression of the passing show. Nothing to remember unless your eyes rest on some unusual scene. The eye pausing conveys the scene to the mind, and makes a lasting impression.

Although the eye is ever restless it is the instrument through which impressions are conveyed to the brain and the mind which grasps most readily only one thought or emotion at a given time. Since the mind comprehends most clearly one thought at a time, it follows logically that a photograph should express only one thought, one emotion, one idea. Thus we get unity in a photograph—the thing an artist refers to when he says a picture "hangs together."

And so the vital reason for arranging the details of a picture into some kind of a composition is to attract the eye, hold it, and have it lead in any easy way over the picture area. In other words, we control the eye by moving it regularly along a combination of lines, and the mind realizes the character and description of these lines and their relation to one another.

In a remarkable book, "The Elements of Drawing," John Ruskin puts the matter clearly by saying "Composition means literally and simply putting several things together so as to make one of them."

Summing up then, the first principle of Composition is Unity. Out of Unity comes Order. Then comes Balance. Balance places the various features in a photograph to give harmony to the whole setting.

How do we get Unity and Order? Any picture to be satisfying must have a principle object or idea to which all else is subordinated. A well known artist has said there is only one rule in Art—"Thou shall not paint two pictures on one canvas." Which is the same as saying there must be a main object and supporting objects.

And so, the easiest way to achieve a pleasing, orderly arrangement of details is to select a viewpoint that permits these details to fall into one of the simple and familiar geometrical patterns such as the circle, triangle, rectangular, vertical and horizontal lines and planes.

The direction and shape of the lines in a picture are important. Whatever form they take, they must carry the eye back to the center of interest. A predominance of straight vertical lines will create an imposing atmosphere, such as the vertical massive pillars of buildings. Horizontal lines tend to suggest quietness and repose—landscapes, for instance; while large curves (elliptical construction) convey an air of grace or beauty. Many of the world's greatest pictures are based on this construction. The formation is pleasing and easy to follow. Triangular construction suggests strength and stability, and the Diagonal motif can be made most effective in hilly landscapes and skiing pictures.

All pictures to be worthwhile must be built up on one of these foundations.

An entirely blank space has no power of attracting the eye. The eye wanders over it with no place to rest. But the moment a spot is added (say in the lower right hand corner) the eye rests on the spot and remains there.

Now, if another spot is added in the top left hand corner the eye travels back and forth from one spot to the other. Add a third spot in between these spots, so as to make a curve, and the eye travels over them impartially. Add further spots in the same curved line with the others there and the eye now gets the idea of a sequence or order of observation. Join them together. Now we have a Sequence—the eye travelling back and forward along the line. Now join the ends of the curve with a straight line and the eye travels over the entire enclosed figure, and the composition is complete.

These completed lines should have an easy, pleasurable motion. They must not be disconnected or broken. The eye should travel up one end and move easily down, without break or jerk. This means that if your eyes are drawn over a picture in a smooth, easy, pleasurable motion we then get the Law of Continuity, as Ruskin calls it.

After Continuity, a picture must have Balance. The question of Balance is of paramount importance. I have already told you a picture must have a main object and supporting objects. To get Balance do not place your main object in the center of the picture. This is a weak position.

(Continued on Page 276)
The Academy War Film Library

By EZRA GOODMAN

ALTHOUGH the average moviegoer might be inclined to believe that practically every picture about this war stars Sonny Tufts, John Garfield or Alan Ladd, most of the films about the war, much of it for the benefit of men in uniform, or for official archives, and most of it never exhibited publicly. Out of this vast aggregate of film, the Academy of Motion Picture Arts and Sciences has culled a representative collection which is the only one of its kind. It is housed in the Academy War Film Library in Hollywood and contains reels from the United States, Great Britain, Canada, Australia and Belgium. As such, it constitutes an invaluable record of the war.


Within the past year, more than 100 additions have been made to the collection. Studios borrow the films regularly to check backgrounds or action for their own war pictures. If a studio desires to use a portion of one of these reels as background material, it is required to obtain the footage from the unit that produced the film. Some of the many Army, Navy, Marine and Air Corps units occasionally borrow reels from the library in order to check on a film shot by another unit. The library has loaned films for showings at San Quentin prison in order to keep the inmates posted on the latest developments in the war. And non-commercial groups have borrowed them for showings.

Mrs. Gledhill describes the War Film Library as "an extension of Academy service to the Hollywood studios. It is made possible through the cooperation of the government units with the Academy and the motion picture industry. By agreement, use of prints in the collection is limited to studios, local photographic units of the Army, and a small number of non-theatrical showings. These films serve as a valuable source for increasing the authenticity of Hollywood production and offer material for background and insert footage.

"The Academy restricts its function to secure prints and loaning them on request. It has no commercial interest in the films and inquiries for purchase are referred directly to the proper representatives of the government units which produced them.

"Intended primarily as an aid to studio production, the collection has a unique value to Hollywood. It is a visual report of mobilization, civilian defense, training and armament industries of the Allies. It is a graphic account of manpower problems; the participation of women in industry and the armed services; the story of rationing and the progress of the various war bond campaigns. This is a cumulative record of modern mechanized warfare on land, sea and in the air from battle fronts all over the world.

"From a beginning of 25 war documentaries in the spring of 1942, the Film Library now has more than 500 subjects. It is the only collection of its kind anywhere, and is constantly being expanded."

Relatively few of these films, such as the Frank Capra "Why We Fight" series, have been shown publicly. Most of them were made for purposes of armament, and none of them are restricted films. To anyone who has surveyed even part of this collection, it is obvious that the documentary moviemakers have done a much better and truer job of recording this war than the commercial studios. Operating often under difficult battle conditions and having to keep war censorship in mind, they have nevertheless given a more accurate portrayal of the warfront and the homefront than the regular motion picture studios. It is too bad that a representative selection of these war documentaries cannot be shown to motion picture critics and to the public. Skimming through some of the credits on these documentaries, one runs across many familiar names: Produced and supervised by Colonel Frank Capra; Photographed by Pfc. Stanley Cortez; Narrated by Major Anthony Veiller. Or there are such familiar names in the regular documentary field as Willard Van Dyke, Irving Lerner, Alexander Hackenschmidt and many others. Most of these men were producers, directors, writers, photographers, cutters or actors in Hollywood before they donned uniforms. The fact that they have been able to view the war in adult fashion and in terms of cinematic vigor proves that the job can be done. If it can be done for men in uniform, it certainly can be done for civilians.

Whatever their faults, these war reels reflect a mature viewpoint. They speak out on such important subjects as minorities, the roots of fascism, the war's demands on the soldier and civilian. They do not gloss over their subject matter, nor do they talk down to their audiences. These documentaries have gone a long way towards educating the moviegoing public and Hollywood too. After sitting through "San Pietro" or "Attack! The Battle for New Britain," the cash customer is less likely to accept a pallid imitation. The world is constantly moving ahead, and the screen is doing likewise.

When the Hollywood moviemakers who have been covering the war with their cameras return to the cinema city, it is to be hoped that what they have seen and learned will not be forgotten, and that moviegoers audiences will not let the motion picture industry forget. The motion picture camera has discovered new and exciting perspectives in recent years. The vaults of the Academy War Film Library bear testimony to this and comprise a brilliant record.
A Crumbled Movie Empire

By IRVING BROWNING

From my memory picture book I sought to roam through its memorable pages, and before me stood Fort Lee. Here was born the Keystone comedy, Western film, Feature drama, Serial and Spectacle. Yet when financial help was needed, the bankers shied away. To them, this industry was a child with growing pains, but to me who worked in it, I found it serious business.

Here a Movie Empire stood where movie kings and queens reigned with directors, cameramen and other artists. Here, mighty studios stood high in glass and steel. Towns, villages and cities were built in the fields by Laemmle, Brady, Goldwyn, Selznick, Dittenfass, Steinert, Powers and Fox. In those days, we thrilled to watch events in motion and see the results as each day ended. A great industry was growing to greater heights.

Then the kings and queens and directors, too, moved away and left this place. To Hollywood they went, to start anew. The industry blossomed and grew, now ranking fifth in the world's great enterprises. But the once thriving studios of Fort Lee are now memories.

As I visualize Fort Lee, the picture became action as in a movie; across my imaginary screen moved incidents and people I had known. There were friends from the studios and the suburbs, Fort Lee as I remembered it from early 1910. I decided to make a pilgrimage to Fort Lee and travel to the old sites and see for myself, what was left of the once famous movie empire.

I remember that going there in the old days was a rough adventure. First, we would take a street car, the elevated or the Seventh Avenue subway, when that was newly built, and go to 125th Street and get as near to the Hudson River as was possible. From there, we boarded the Fort Lee ferry, went across the Hudson River to New Jersey. Again we took a street car which labored up a very steep hill, making the first stop in Grantwood. From there, we went on to Fort Lee. I remember getting off the car on the corner nearest the Willat Studios, which was then owned by Fox Films. Nearby were the Peerless, Solax, Eclair, Paragon, and Universal Studios. Going to Fort Lee in those days was a tiresome undertaking, but how different it is today! Now one can get on a bus, drive or even walk across the George Washington Bridge at 178th Street, in New York City, and at the other end of the bridge, step into the streets of Fort Lee, within walking distance of the Fort Lee Studios.

In the summer of 1944, my friend Palmer, of Bell & Howell's New York office, and I decided to visit Francis Doublier in Fort Lee. All three of us drove out to look over the remnants of that old movie empire. It was a bright sunny day as we stepped out of the car on the grounds of those mighty old timers. Now and then we talked to a neighbor whose curiosity was aroused, as to our purpose in this adventure and caused them to engage us in conversation and old reminiscences. Older folks knew of the work here, the youngsters just looked on and said nothing. For me, memory just raised them again, and I stood there and looked, as it seemed to come to life again. As we left an old site, I would say over and over again, "Gee, I'm sorry I didn't bring a camera with me. I would have liked to photograph these old sites and do an article about them". Before we went home that evening, I made another appointment with Doublier, to meet again on another bright sunny Sunday and this time, I would bring my camera and we could again venture to these old sites so I could make some pictures of them. A month later we made our second visit.

We went to the Peerless Studio, formerly operated by the World Film Corporation from about 1912 to 1921 by William A. Brady, and Lewis Selznick.
Above, site of the Evans laboratory next to Willat studio. Here the New York Motion Picture Company, Triangle Films, Keystone Comedies were started. Here the New York Motion Picture Company, Triangle Films, Keystone Comedies were started. Here such films as "Yankee Pluck", "Brand of Satan", "Divine Sacrifice", "Maid of Belgium", "Stolen Orders", "Swanee", "The Heart of a Girl", were produced. Here, too, Clara Kimball Young, Alice Brady, Vivian Martin, Charles Ray, Hope Hampton, Barbara Castleton, Arthur Houseman, Johnny Hines, Kitty Gordon, Madge Evans, Carlyle Blackwell, June Elvidge, Vera Gordon, Montague Love, George McQuarrie, reigned supreme.

Among the directors on that roster were James Young, Robert Thornby, Tom Terris, Harley Knowles, Travers Vale, Jack Adolphi, Del Henderson. Among the cameramen I remember are Phil Hatkin, Lester Lang, Lucien Andwit, Max Schneider and George Peters.

On the weeded lot outside, some fifty feet away, once stood the mighty Eclair Studio; this site brought back memories to Francis Doublier, of an incident which happened about the time he was in charge of the negatives and vaults for that company. It was in March, 1914, while production and laboratory were in full swing and while on a picture headed by Thomas Wise titled "The Gentleman from Mississippi", completed by the Arizona Company at a cost of $20,000; "Protea" made in the Paris Eclair Studio at a cost of $60,000 and several negatives made by the Fort Lee Eclair Company. The loss was estimated to be in excess of $750,000.

From here, just a few paces away, we went to the former site of a really mighty studio, known to us old timers as the Willat Studio, originally built by "Doc" Willat and later purchased and becoming the first large studio of the William Fox Film Company. Now, there is only a large, heavily weeded field. I can recall the days when there was much activity here, in about the year 1916. I believe the productions of "The Darling of Paris" was made here with Theda Bara featured, directed by J. Gordon Edwards, from Victor Hugo's "The Hunchback of Notre Dame". Out in the studio yard, a village of early France was built, for this production. Here was to be reenacted the scenes of the French Revolution with a mob of about one hundred and fifty extras to do the fighting. I being one of that mob. We were given pitch forks, imitation Pole arms, swords and clubs with which to do the fighting scene. I volunteered to instruct the extras who had been given swords, in the art of the defense of the blade. I knowing something about fencing, this privilege was extended to me, for gratis. The mob was eager to be taught, so, off to the side we went and I first cautioned them, emphasizing the importance of each one to strike the other man's sword, never, never to swing a sword in back of their heads for that would do fatal damage to a friend who would be unaware of that danger. After an hour of practice, I was satisfied, I watched them rehearsing and they were all serious about their fighting. Then came the call for everyone to get on the set, they were given instructions and were asked to make the battle scene as real as possible, while being careful not to hurt anyone. Then came the call for action, and I watched my pupils let me down. They swung high, wide and handsome. They made it real alright, for when the call to "cut" came, several of my pupils had to be taken or dragged to tents to be patched up for another take. There were no real fatalities on that take, but many were hurt.

Again I ventured to talk to my group and took them to task. I warned them again and told them I would be in the scene with them shouting instructions; another call for action and we were off. They fought like barbarians. They could have been dressed as American Indians and they would have fit the scene just as (Continued on Page 276)
A production still from "Vale of Kashmire", an ambitious Indian film. Indian film producers are now putting big production value in their films. This might well be a still from a big Hollywood production. It was made by A. J. Patel, F.R.P.S., of Bombay, India.
Films in India
By Capt. F. Berko

As far as mere physical factors, such as equipment, are concerned, a visit to any studio in India will convince one that substantially the present war. The studios still are not properly sound-proofed. They still need air conditioning. The corrugated iron and cement roofs, from which sacking is suspended to prevent echo, still remain. And pigeons have to be chased out before each "take." There are lots of doors and openings, and big fans blowing the hot air and dust out are not exactly ideal working constituents. The equipment, too, though in parts more modern, is still scanty, especially as far as lighting and camera are concerned—though this now may be due to the exigencies of war. The sets and properties will still have to be much improved to even approximate verisimilitude. But, in principle, there is everything modern studios have anywhere, and it seems only a matter of time until the differences are levelled out.

Financial Situation
There is plenty of capital in India to bring all these and plenty more studios up to date. In fact, there is more capital in India now than there was before the war. Even if people were willing to sink capital into such long-range investments it couldn't be done at the present, and secondly and more significant, it is very unlikely that they would be willing to so invest their money. Reason for the latter is because the people in the film industry want to make as much money as possible and as quickly as possible. That has always been the trouble with the film industry in India.
As a matter of fact, there never has been a time when so much money was being made so quickly and so easily in Indian films as there is now. The increase in the spending population has created an enormous demand for entertainment. Hence, in spite of the fact there is scarcity of materials of all kinds, in spite of the vastly increased overheads caused by higher studio rents and bigger salaries, the number of pictures turned out per year has actually increased since the outbreak of the war. True, the number of picture theatres is still scanty, especially as far as lighting and camera are concerned—though this now may be due to the exigencies of war. But, in principle, there is everything modern studios have anywhere, and it seems only a matter of time until the differences are levelled out.

Note: Capt. F. Berko—better known as just Berko—is a still photographer, a cinematographer and a director of distinction in India. Working there since 1928, first in the Indian Film Institute, then in his own studio and, since 1944, in Military Training and Recruiting Films, he has been a contributor to this magazine since 1939. His article "Handicaps Against India's Film Production", which appeared in two parts in the February and March, 1940, issues of the CINEMATOGRAPHER, aroused a certain amount of controversy for its outspokenness. A part of it was recently quoted by Beverly Nichols in his "Verdict on India". In the present article Berko reviews the position of the Indian film as it is affected by the war, and, incidentally, brings up to date his "Documentaries Attaining Full Swing in India" which we published in the November, 1940, issue. As in his previous articles, Berko, by recognizing the weaknesses and dangers in the present situation but not fearing to criticize, is living himself upon considerable potential criticism by certain factors in India. But, he is also aware of the fact that the better elements welcome the constructiveness of his criticism.
—The Editor.
Fades and lap-dissolves do much to help make a film more artistic and more effective. They are both comparatively easy to do.

There are various methods of making fades. If you have a camera with an adjustable shutter, which may be opened or closed while the camera is running, you make your fade by either opening or closing the shutter. Some types of cameras have full-closing lens diaphragms which makes lens-fades a simple matter. If your camera has neither adjustable shutter nor full-closing diaphragm, fades can be made with a fading glass, i.e., a long neutral-density filter graduating from clear glass at one end to opacity at the other. If this glass is slid across the lens it produces a perfectly smooth fade.

A lap-dissolve is merely a fade-in double-exposed on top of a fade-out. In making a lap-dissolve you fade out on the first scene, being careful to note exactly how much footage has been consumed in the fade. You rewind this footage and start your next scene with a fade-in of the same footage. Be sure your shutter is closed or the lens is covered before you start rewinding.

If you really want to do something fancy in the way of dissolves you might try a "jig-saw" dissolve. It is quite tricky, and requires patience and accuracy, and is designed for the purpose of dissolving a new scene onto one already photographed and processed.

You start by making an enlargement of the first frame of the new scene. Mount this on heavy cardboard and cut 't up into a regular jig-saw puzzle. Next, place the camera on a vertical titler, with the lens covering a field the same size as the jig-saw enlargement you have already made. Now put one piece of the jig-saw puzzle picture in proper place under the camera and expose just one frame of film. Put in the next piece and expose another frame, and so on until you have put the entire puzzle picture together. When your film has been processed you simply splice the end of your animated picture to the first frame of the scene from which the enlargement was made. On the screen the scene puts itself together like a jig-saw puzzle and then continues normally.

Today most of the professional fades, dissolves, wipes and many other tricks which once were done with the camera, are made in an optical printer. If you are mechanically minded, you can build an optical printer for your 16mm. and if you have a lot of fun experimenting with these shots. And you can make some amazing scenes, too.

Perhaps you have been wishing you could make some under water scenes, but didn't have equipment to make them under water. If so, there's a way to make your under water scenes on dry land. You stretch fine barbinette gauze on wooden frames. Suspend two of these screens close together about six or eight inches in front of the camera lens. To get the proper effect, some light, coming preferably from the side of the camera, must strike the screens.

When shooting the scene the two screens are moved slowly past each other, in opposite directions. Your effect depends on the relative movement of the meshes of the two screens, and no increase in exposure is necessary. With this trick you can make excellent miniatures of submarines, sunken wrecks and a multitude of other things. Suspending the miniatures on invisible wire, place before the proper background, and you will get under water illusions that are perfect, and exciting.

Recently an amateur friend of mine came to me with a problem. He said he was planning to make an action film in which he wanted to show a young man dashing out of a house, with an irate father chasing him. The boy was to run to the street, jump into an automobile and dash away with great speed. But—my amateur friend explained that because the average car will not accelerate quickly enough to get over the effect of the car starting at once and with great speed. What to do, was his problem.

Well, if you have a camera fitted with a governor that permits shooting at speeds both below and above the normal 16 frames per second rate, it is simple. It is common knowledge that the higher speeds give the effect of slow motion, while the slower speeds in taking give the effect of increased speed. In making your printer you should provide means of focusing visually through the lens on a ground glass. The projector head should be able to take two films: the positive being optically printed, and a matting film to matte off any areas desired for double-printed wipes, etc., etc.

"Glass Shots" are interesting for the enthusiastic amateur, providing he has the ability to paint, or has an artist friend who will work with him. He also must have a camera which permits focusing the full frame through the lens and the camera must be so accurately aligned that the real and the painted scene must be so precisely the same size as the glass scene that the actual scene must be so precise.

In making glass shots, part of the scene is real, and part is painted on a pane of glass suspended in front of the lens. The actual scene, the painted scene and the camera must be so accurately aligned that the real and the painted parts of the picture merge into one, and look as though they belong together.

If you have the patience, the equipment and the ability to paint, you can have a lot of fun experimenting with these shots. And you can make some amazing scenes, too.

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It's very difficult
to say anything new
about the World's best
professional negative film
excepting the fact—

ALL
the best photographed
of all the best
Feature Motion Pictures
are on

EASTMAN
PLUS X

J. E. BRULATOUR, Inc.
FORT LEE • CHICAGO • HOLLYWOOD
COLONEL Melvin E. Gillette, now overseas, used to keep a gold-plated elephant near his desk at the Signal Corps Photographic Center in Astoria. It was white when the previous tenant of the huge carbarn of a studio presented it to the Colonel as a symbol of its constant emptiness and disuse during the last decade.

Colonel Gillette, a neat, keen-eyed figure slightly past 50, says it reminds him of the great change wrought in Paramount’s first talkie-factory, where once Valentino made torrid love to Vilma Banky before the cameras, and Chevalier chirped for the American screen; where Harpo Marx honked on his first sound track. Today cameras and sound recording units turn on as many as a dozen sets daily, while chevroned directors write scripts at sweating private actors. The Paramount-built studio, long idle, has come into its own at last.

Nominally and literally, the Signal Corps Photographic Center is a military reservation, complete with gun-toting sentries, side-armed officers of the day, and military barracks for the enlisted men living on the post (married men may live at home, if they wish, and report for work daily at 8:30). That this happens to be, at two square blocks in Long Island City’s war plant district, the only studio where the film is made, as Signal Corps policy forbids making stars or labeled actors, do so much more for the Army, even if not the reverse. “Name” actors who do happen to be around are avoided completely for the same reason. They are detailed to camera or general utility work, to make use of their technical knowledge and experience, when it is indicated. A great many such men attend the Eyemo school at Astoria, where they learn the operation of this hand-held newsrel camera for future combat photography overseas.

Back and forth from the projection rooms on the upper stories to the sound stages in the basement stream busy uniformed men, some with makeup on their faces, some carrying scripts or cans of film. Informality and haste are the keynotes. From the day’s beginning until shooting stops around six, one does not see a salute inside the building; there just isn’t time. When the lights are out and the “dailies” are being run in Projection Room ‘A’, the voices of privates pop up in comment as often as those of majors and lieutenant-colonels, although the “sir” is never left off.

The Signal Corps Photographic Center is probably the only Army post in the country where someone dressed in a Nazi Field Marshal’s uniform with waving arm and peaked cap could strut around unchallenged, peek into a writer’s office and cry “Achtung!” without causing a ripple of excitement. On some weeks Japanese soldiers (quite spurious, of course) are no uncommon sight in the mess halls, eating with men in the Army of the United States. If the script called for Hirohito to appear, the make-up and costume departments could manufacture him out of Corporal Johnnie Doughboy for Hirohito to appear, the make-up and costume departments could manufacture him out of Corporal Johnnie Doughboy

Activities of A.S.C. Members

Forty-two films were before the cameras in Hollywood as this issue of the CINEMATOGRAPHER went to press, with members of the American Society of Cinematographers filming the following:

Columbia Studios

M-G-M Studios

Monogram Studios

Paramount Studios

RKO Studios

Republic Studios
Robert Pittack, “You’ll Remember Me” (William Wilder Production).

20th Century-Fox Studios

United Artists
Roy Rennahan, “Duel in the Sun” (Vanguard Films, Inc.); Charles Lawton, Jr., “Getting Gertie’s Garter” (Edward Small Production); Russell Metty, “Whistle Stop” (Nero Productions); Lucien Andriot, “Diary of a Chambermaid” (Benedict Bogeaus Production); Archie Stout, “Ahline.”

Universal Studios

Warner Bros. Studios

By NEwTON E. MELTZER
Editor, Canadian Paramount News

GREAT GOLD ELEPHANT

It can demonstrate processes or happenings—inside high-calibre railway guns, for instance—invisible to the naked eye.

All of this started less than six years ago, when the Colonel was a Captain trying to sell a skeptical War Department on the growing importance of visual aids. A staff of six, housed in a small building at Fort Monmouth, N.J., was the Photographic Center then. There were three cameramen, two civilians and Gillette himself; a sound recordist, two animators, and a writer-production man who are still on the job today. The Astoria quarters aren’t large enough to accommodate all the animators and writers, and they have spilled over to a second Photographic Center on East 32nd Street, in New York City. Most of these men were drafted in Hollywood and reached the film factory through the Army’s various classification centers. With one or two exceptions, the Army’s scenario writers are enlisted men, ranging from several plain buck privates up to Master Sergeants. Likewise for film editors and cutters. Cameramen are, most frequently, officers with one or two silver bars on their shoulders; among all categories are a sprinkling of civilians too. Actors are generally recruited from the location camp where the film is made, as Signal Corps policy forbids making stars or featured players out of Army personnel, even if not the reverse. “Name” actors who do happen to be around are avoided completely for the same reason. They are detailed to camera or general utility work, to make use of their technical knowledge and experience, when it is indicated. A great many such men attend the Eyemo school at Astoria, where they learn the operation of this hand-held newsrel camera for future combat photography overseas.

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the United States. If the script called for Hirohito to appear, the make-up and costume departments could manufacture him out of Corporal Johnnie Doughboy within a day. Desert outposts, huge tanks and half-tracks, foxholes in the Solomons or just plain close order drill may be grist for the Army cameras’ mill in any one day.
No wonder this Kodak aerial lens dwarfs the wrist watch shown with it for comparison. It’s roughly 1500 times as big and weighs about 1100 times as much. You couldn’t use such a giant lens, yet what it is—what it stands for—vitaly concerns you.

"Big Boy" is an important weapon of war, for, when mounted in the proper camera, it makes 9 x 18-inch pictures from great altitudes—30,000 or 40,000 feet—up where the flak is scarce. They’re pictures of critical definition that reveal amazingly the smallest details of military objectives.

What’s more, this lens is important to you because it embodies the same lens wisdom you can expect from Kodak in your postwar picture-making equipment.

Kodak-Designed—Kodak-Made

Kodak is uniquely qualified for the production of lenses like this great 48-inch f/6.3 Telephoto. It required a vast amount of designing skill, resources, manufacturing ingenuity . . . plus the sensational qualities of Kodak’s new rare-element glasses. And this applies as well to other Kodak aerial lenses. When new types were needed, the starting point was simply sets of extremely exacting performance specifications. Kodak designed the lenses . . . manufactured them . . . delivered a total of many thousands to our Armed Forces and those of our allies.

These aerial lenses constitute only one part of the complicated optical jobs Kodak is contributing to the war effort. In all of them Kodak is piling research upon research . . . experience upon experience. Remember this when you think about postwar photographic equipment . . . because it’s the lens that matters most.

Better Lenses for War

. . . Better Pictures in Peace

You won’t have occasion to use a "Big Boy." You may never need an aerial lens. But you can be certain that in producing these objectives, along with a variety of other vital military optical equipment, Kodak has solved some of the toughest lens-making problems in the world . . . So it’s easy to guess who will have the most to offer you in fine lenses after the war.

Eastman Kodak Company
Rochester 4, N. Y.

Remember—in equipment it’s the lens that matters most.
O UR editorial hat is off to Hal Wallis, head of his own producing unit, releasing his films through Paramount Pictures!

For the past two years this writer has been campaigning steadily for better recognition of the cameramen who photograph the great motion pictures. We have been calling for better screen credit and for credit in the advertising of the films.

And now Hal Wallis, always a fearless leader in Hollywood, steps out and has been campaigning steadily for better recognition of the cameramen who photograph the great motion pictures. We have been calling for better screen credit and for credit in the advertising of the films. We have been calling for better screen credit and for credit in the advertising of the films.

And now Hal Wallis, always a fear¬less leader in Hollywood, steps out and gives Lee Garmes, A.S.C., credit for his photography of “Love Letters” in the advertising, right along with the stars, the director and the writers in full page advertisements in the trade papers of the industry. That section of the advertisement showing the credits is reproduced above.

Mr. Wallis, or will you permit us to call you Hal, you have made a great step forward by your recognition of the worth of the cameraman. We sincerely hope that other producers in Hollywood will follow your lead, for the director of photography is worthy of more than his hire—he is worthy of public recognition.

The publication of the story about Ira Morgan, A.S.C., in the July issue has brought to light a matter of unusual interest.

In the story about Mr. Morgan we stated that he was the first cameraman to use Panchromatic film in making a feature entertainment motion picture. Now we find that Glen Gano, A.S.C., made a feature picture with home-made Panchromatic film before Eastman had brought its new Panchromatic film on the market. Gano, during the first World War, worked in the Photographic Research Department of the Bureau of Standards. They had to have faster film than was available, so the scientists in the group went to work on developing a fast film, along with experts of the Eastman Kodak Company, according to Mr. Gano, and turned their findings over to Eastman.

When Mr. Gano returned to Hollywood he says he took Orthochromatic film and resensitized it, making it a fast film. He then photographed “The Silent Call,” starring the dog Strongheart. That film was released in 1921. “Janice Merideth,” exteriors of which were photographed on Panchromatic by Mr. Morgan, was released in 1924. However, Mr. Morgan still holds the distinction of being the first cameraman to use the commercial Panchromatic film, made by Eastman, in a feature picture. We hope, and feel sure, nobody’s feelings or prestige has been injured by this peculiar combination of events as reported here.

WHILE reading the recent issue of the Journal of the British Kinematograph Society I was greatly impressed with the remarks made by President A.G.D. West of that organization when he addressed the society on the occasion of his starting his seventh term as its head. In discussing the problems facing motion picture development, he laid before his fellow members what he termed his “ten-year plan” for motion picture advancement.

After pointing out the problems of theatre acoustics, uniformity of sound reproduction (with 100 per cent intelligibility), uniformity of screen brightness, maintenance of quality in picture, dupe and sound dubbing, standardization in the use of push-pull recording and improvements in 16mm. sound, he came up with his 10-year plan idea, which is well worthy of reproduction here.

“I allot the first two years to the problems of rehabilitation,” said Mr. West, “with particular attention to the subjects of acoustics and sound standardization (the talking film is here, and it still has not learned to talk clearly and intelligently). These two subjects alone provide plenty of food for thought; they should be tackled together.

The recording, laboratory and reproduction processes by the various systems need a degree of mutual standardization, in terms of the average acoustic conditions (if they would only be average) of both studio and theatre.

“The next two years I assign to the color situation, with the much hoped for solution of the problem of stabilization of screen brightness. We rely on the chemists for the former and the physicists for the latter, which will also include the development of systems (electronic in operation) for the automatic maintenance of standard and constant screen brightness (for example, after the change-over of projectors).

“Then I give two more years by which we should have developed a serviceable and commercial equipment and system for large screen television in the cinema. It is here that we find our first departure towards a new picture which is electronic in operation, involving camera pick-up devices, cable or radio distribution, and cathode-ray projection; with the added problem for our commercial people, to decide the best way of making use of such a remarkable and far reaching method. (Be it noted that the brain experts undoubtedly regard headaches as coming within the scope of electronic control.)

“A further two years should see the completion of color television in the cinema. It is already an engineering possibility for the home, and the improvement in what might be called the greater understanding of the picture by color contrast is very considerable. It has already been demonstrated in a limited way on a theatre screen, but the perfection of a black-and-white system is of greater immediate importance.

“Lastly, I allow the final two years for the achievement of full 3-D stereoscopy on the large screen. It has already been seen on a small screen for limited viewing positions. I saw a good demonstration once in Paris. It was cer-

(Continued on Page 279)
The tremendous increase in the use of microfilm and motion pictures in modern business offers the owner of Houston Film Processing equipment a tailor-made opportunity right in his own community.

Department stores and banks use microfilm for copying, posting and recording. Corporations use motion pictures, both 16 mm. and 35 mm. for sales and training programs. These and many other users of microfilm and motion pictures need on-the-spot processing. So do studios and photographic supply stores. In fact, you can probably name a score or more prospects right in your community.

This field is wide open. It's profitable—it's permanent. And Houston equipment can help you capitalize on it.

Houston equipment offers fast, complete and fully automatic film processing. Machines are precision-built and completely self-contained. No extra equipment needed. Write for illustrated folders and prices.
Among the Movie Clubs

Utah Cine Arts Club

Recent Gadget Night of the Utah Cine Arts Club was an interesting affair, with members showing numerous gadgets they have cleverly perfected to improve their picture making. Dr. C. Elmer Barrett exhibited a home constructed reflex finder which, although made for a 35mm Leica, could possibly be adapted to Cine use.

Bill Loveless displayed a control panel whereby he can control projector and room lights at will.

President George Brignand's offering was an alignment guage to eliminate parallax on his Filmo. After viewing the picture it enables him to slide the camera up so that the lens occupies the viewfinder position.

John Allein's gadget was a many-in-one proposition. It eliminated parallax via the alignment guage method, and supported a track or guide to hold masks, wipe-off disc, scrolls, etc., for various trick filming effects.

The patented Morton Remote Control was demonstrated by its inventor, Al Morton, who pointed out that sometimes gadgets by amateurs offer commercial possibilities. By placing it between the camera and tripod, he was able to start and stop the camera at will any distance up to thirty feet. It operated on four flashlight cells, and required no camera alterations.

T. R. Pope brought his 16mm key-stone for which he had constructed a turret head to hold three lenses with matching viewfinders. Two of the lenses were equipped with adapter rings to make them the same size as the third, so filters can be interchangeable. He had also installed a backwind on it. He exhibited his Leica, too, which had a bracket on it which carried a piece of ground glass and clamp to hold movie film so he could make negative copies of frames from 16mm film.

Pete Larsen demonstrated his gadgets in the showing of his picture, "Music in the Evening." His gadgets consisted of a dualturntable outfit, a projector stand and a stroboscope disc for his projector sprockets, illuminated by the glow from a small stroboscope lamp. By watching the disc he could keep his projector operating at a constant speed of 16 frames.

San Francisco Club

Leon Gagne was the highlight of the July meeting of the San Francisco Cine- ma Club with a special showing of newly made color slides of dazzling beauty. His subjects consisted of a series of views of Tioga Pass and the Tuolumne Country, and Tahoe in Winter.

Club President Charles D. Hudson announces future club meetings will be held the third Tuesday of each month.

Tri-City Club

The following new officers were elected at the final meeting in the 1944-45 season of the Tri-City Cinema Club:

President, Miss Margaret E. West, Davenport, Iowa.
First Vice-President, Tom Griberg, Moline, Ill.
Second Vice-President, Roger Spittas, Moline, Ill.
Sec-Treas., Elmer Jansen, Davenport, Iowa.
Trustees: Mrs. C. D. Snyder, Peter DeVos and Claire Smick.

Also on the evening's program was the awarding of the prize to the member whose picture won the honors as the best film of the year. This award, a year's subscription to the American Cinematographer, was given to Tom Severs of Moline. The prize was offered by the American Cinematographer.

Westwood Movie Club

Members of the Westwood Movie Club are already busy on plans for the organization's big Exposition to be held in September. All Northern California movie clubs are being invited to share the evening with the Westwood members.

Recent Westwood club program consisted of:

"Movie Club Picnic", 16mm sound-on-film by Ray Luck.
"Muharam", 16mm Kodachrome by Don Wallace.
"Sun Valley, Idaho", Kodachrome by Harold Roucher.
Talk by Ed Franke on "How I'd Make a Contest Picture".

La Casa Movie Club

The July meeting of the La Casa Movie Club of Alhambra, California, was an all-woman project, and was reported to be an excellent program. Mrs. Lester Conrad was chairman, and provided the following:

"San Diego Zoo", 16mm by Mrs. Fred W. Gill.
"The Great Northwest", 16mm by Miss Monda Taylor.
"Friends", 16mm by Mrs. Lester R. Conrad.
"Yosemite", 8mm by Mrs. Dorothy Hill.
"Jasper National Park", 8mm by Miss Erma Donahue.
"Progress of 35 mm Slides", 35mm by Mrs. Pearl Hall.
"The High Sierras", 35mm by Mrs. Erna L. Johns.

The club will hold a picnic on August 19th at the Arcadia County Park.

New York Eight

A short test film, made by Joe Hollywood, proved so interesting to the members of the New York City 8 mm Motion Picture Club recently that it was repeated immediately upon insistence of the members. Other pictures on the program were:

"Canadian Rockies", by George Keller.
"The Midnight Guest", by George Valentine.
"It's V-E Day", by Terry Manos.
Fred Furman gave an illustrated talk on "How to Plan a Film".

272 August, 1945 • American Cinematographer
FIDELITY . . . at its Finest

From the delicate call of the thrush . . . to the mighty crescendo of a Shostakovich Symphony, Victor Animatophones reproduce a trueness of tone quality not equalled in any other equipment. Victor's exclusively designed sound lens and stationary drum make possible the ultimate in sound projection . . . whether that sound be voice, instrumentation or other tones. No moving parts . . . nothing to wear out . . . thus nothing to impair sound quality. All parts are keyed and instantly removable for cleaning.

An exciter lamp many times more powerful than that used in any other 16mm equipment, combined with the Victor exclusive wide angle sound lens, produces a collimated beam that overcomes difficulties when using old, dry and shrunken film.

If you want "Unsurpassed Sound" — then you want Victor.

Have You Ever Heard A Heart Beat?
Even so faint a sound as a heart beat is faithfully projected by the Victor Animatophone. Picture (to right) is from Erpi's "Action of the Heart."

VICTOR

ANIMATOGRAPH CORPORATION
Home Office and Factory: Davenport, Iowa
Chicago (11) 188 W. Randolph

MAKERS OF 16MM EQUIPMENT SINCE 1923

AMERICAN CINEMATOGRAPHER • August, 1945 273
There are at least three good reasons why beach photography should prove more popular this year than ever. First, wartime travel restrictions are going to produce more "stay-at-home" vacationists ... and movie makers. Secondly, critical film shortages leave but a few of the sub-standard brands on the market for civilian use, and being somewhat less sensitive than the more popular varieties, are more ideally suited to brightly lighted areas. And thirdly, the possibilities there for the aggressive cameraman are plentiful.

Taking pictures at the beach, as referred to here, needn't suggest only the common, and over-done "bathing beauty" type of shot. Rather, it is the writer's intention to be concerned primarily with something longer lasting, and with more universal appeal.

Take a glance at the scenes reproduced along with this article, for example. Sort of want to look at them "more than once", don't you? And there's a reason. The little girl daring to go in the water, yet just a wee bit afraid of getting her "tootsies" wet ... the three youngsters busily engaged building castles in the sand ... the boys with the shovels and pails, attempting to "move" the lake ... the child engrossed in the art of "writing" in the wet sand ... the jubilant youths giving the girl friend a "ducking" ... the "framed" shot between the trees ... these are "human interest" shots of the truest variety.

Not one of these scenes is dependent upon "dazzling damsels" or "curvacious cuties" to draw your attention, yet each has what it takes to catch the eye ... and hold it. What's more, pictures like these will continue to "pack a wallop" 'till the sprockets wear out. Furthermore, if they possess the desired "punch," they will prove equally entertaining wherever and whenever shown, even if those taking part in the scenes are unknown to the audience, or even the cameraman. Identity of the "actors" is secondary in a movie with "snap."

Warm summer suns and golden sand ... swirling water and splashing feet ... young America at play! There's plenty of action here, and that's your cue ... heed it! Take your cine camera to the beach!
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KEEP YOUR EYE ON ANSCO—FIRST WITH THE FINEST
Pictorial Cinematography

(Continued from Page 260)

Scenic pictures are probably of most importance to the average movie maker. Fig. 1 shows the picture space divided into nine equal rectangles. The dividing lines have four points of intersection, and it is generally found that the main object or mass is best placed about one of these points, while a secondary balancing mass may fall on one of the opposite points. The horizontal “thirds” suggest approximate positions for the horizontal line, visible or imaginary. The horizon line should not bisect the picture.

Many a landscape subject which looks attractive to the eye is a failure on the screen. It lacks main interest. The "lead in" is usually to the extreme right or left of the bottom third spaces. The "lead in" may be cleverly disguised, but is generally a track, road, river, log and so on. So, "lead in" at the side, and do not center your main object, but place it about one of the intercepting points according to requirements. These are the elements of good shots. In distant views there should be something or something in the foreground. Open views without foreground objects are rarely successful. The simplest scenes may often be rendered quite impressive by this method.

Scenic pictures are mostly based on elliptical or circular construction. Many very successful pictures are on these pleasing lines. The elliptical arrangement is a safeguard against the eye wandering out of the picture, as can easily happen with other more rigid construction. This is the reason why we frame views with trees and branches—they help keep the eye about the main interest.

Avoid the use of eccentric stunt camera angles except when the viewpoint is dramatically justified. It is easy to be over-enthusiastic on the subject which merely results in the bewildermant of the spectator. If justified, a higher viewpoint will effect a better arrangement of the subject. A high viewpoint will subconsciously impress the spectator with a pleasurable feeling of superiority. On the other hand, a low viewpoint is often useful when it is necessary to convey a scene of awe or uneasiness.

How can you learn more about composition? There are excellent books on the subject in any public library. There you will get the rudiments of composition as well as advanced achievements, and you will soon begin to see everything pictorially.

Study good professional films. Study the infinite variety of well-known pictures. Analyze them and find out the reason why they impress you. As you progress you will see your subject as a pattern in lines and masses. Composition can become a habit, like everything else, and the more one works at it the easier it will become.

[The above article reprinted through courtesy of the Movie News.]
"The Hi-lite of Modern Photography is the Arc"
RAY RENNAHAN, A.S.C.

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Films in India

(Continued from Page 265)

Technicians

The technicians, always the underdogs in India, unfortunately cannot do much for themselves. The general level of their salaries has risen. But they are still underpaid, although a trifle less so than before the war when a good sound or camera technician would have to stay at 100, 150 or 250 Rupees for a long time. Now anybody can start off with 150 Rupees; purely because it is compensated by the rise in living costs, which are in an even greater proportion. Although there are a few top salaries of from 1500 to 2000 Rupees per month, the average technician’s pay is still much too low considering the work he does. Their union, feebly and ineffectively as it was, petered out some years ago. Recently it has been reorganized and it now seems to be heading in the right direction. It plans to build on a broad basis, trying to raise funds enough to send members abroad regularly, exchange with foreign technicians, and become strong enough to effectively put forward its demands. The difficulty is that the technicians are not united among themselves. Their own-interest-first sort of business prevents a good strong get-together and it may of course not be easy for the few really well-paid ones to have the tendency to make hay while the sun shines rather than make sacrifices to support a long-range policy.

Newcomers

Newcomers’ prospects, under the circumstances, are quite good and will be still better after the war. It is easy to understand that, with the money involved in production, producers, always a bit conservative in this respect in this country, now are especially reluctant to take any risks. That is why experienced actors and actresses and, occasionally, technicians are being paid so much. The same goes, of course, for directors who always have been quite well-off, and there is a tendency to make hay while the sun shines rather than make sacrifices to support a long-range policy.

Training

It seems a great pity that there is no proper training center right now with production is more limited and exclusive than it will be after the war. There have been some attempts in this direction, but far one can hardly say that they have been hardly more than efforts to recruit new, cheap labor for a producer or a particular group of producers. A proper film industry, sponsored by Government, is the only answer. There should be a film library containing books and all outstanding films from all over the world, as well as a collection of all Indian films of historical interest (already practising a valuable task). There should be a complete staff of experienced instructors in touch with all the latest developments in the industry abroad, so that all the various branches of such a young industry would be taught, including script writing, directing, acting, cinematography, make-up, sound, laboratory, etc. Only when it is built on a solid foundation—and an institution of this kind will be a dynamic, idealistic, incorruptible—it seems not influenced by interests in the film trade, would go a long way toward building such a foundation—only then will the general standard of the film improve.

The Future

From the aforesaid, it seems a foregone conclusion that there is a big future for the industry in India. As for the foreign markets, they will not likely be in any way comparable to the home market. For, while it will be possible to have an over-increasing home consumption until most of the 400,000,000 people of India will be able to see films, the number of Indians abroad—ever increasing, as far as big money is concerned. It is interesting to see how the producers, realizing that the number of theatres are going to increase rapidly after the war, are already making every effort to maintain their golden status by trying to persuade Government that there should be more films produced after the war in order to “avoid overproduction.” In short, they are trying to consolidate their monopoly position caused by the licensing system. This is no use unless there is a certain interest in ambitious, well-made films for shipment abroad, the standard of even the most ambitious of those will have to be much improved if they are to have anything more than just curiosity value. The English-speaking productions, which are increasing just now, will, I believe, continue to be failures for a long time to come. However, with the tremendous possibilities of a country like India, and the general interest in it, it is more likely that it will be the short films that might have success abroad.

Short Subjects

The continuation and expansion of what the Information Films of India are doing now plus, it is hoped, dozens of small concerns comprised of enterprising young men and women not primarily interested in money, seems to be one of the most promising features at the present. It is quite possible that, like in England, the best brains and the greatest talent will go into documentary film production. Maybe they, too, will have to be sponsored by far-sighted industrial concerns and Government branches until they have created a market of their own. But, although conditions are very different, more complicated, and, I’m afraid, more adverse than in England, there is no reason why it should be assumed that it is impossible to establish the Documentary Film in India. And this will certainly have a market abroad. Thank God the following work has been done.

1. Information Films of India—formerly Department of Information and Broadcasting, formerly Film Advisory Board—started at the beginning of the war in the face of violent opposition. It seems to have settled down and found its feet on the ground in the last two years. Apart from the fact that people have simply become used to it and that the internal and political opposition has mostly been overcome, this is also due to the fact that the standard as a whole has kept rising slowly. It has done very valuable work in getting people interested in short films and themselves and it has added in addition to giving political information—and it seems it will be doing some more valuable work by training young people in their jobs and preparing post-war reconstruction films.

2. The Indian News Parade—starting early from the beginning and only just possible that in spite of the money-grabbers’ invasion and exploitation of this field, a great amount of good will be done.

3. There also exists quite a large group working in 16mm.; either filming in 16mm., or reducing 35mm. to 16. This group has its own independent direction and is ready to increase rapidly as soon as the war is over. So far it has worked mainly educational, and it would be very desirable if it should continue. Its mobile units have access easily to the so-far untouched, remote parts of the country. However, there are signs that seem to indicate that the lure of big profits will make them concentrate on entertainment material rather than on the educational ones which could do such an estimable good to the welfare of this country by spreading information. But with the development of the Documentary Film, and with a Government keeping its eyes open, it is just possible that in spite of the money-grabbers’ invasion and exploitation of this field, a great amount of good will be done.

4. Finally, there are the manufacturer-sponsored films. Here, too, a big development can be expected. Even before the war some of the more advanced firms were more than just interested, and a few advertising films were produced. At the beginning of the war a further few were turned into public-
relations films, while those that could not be changed according to the new regulations, along with projects for quite a number of additional films, had to be shelved for the duration. Not only will there be a very definite interest and demand, but the rudiments of the machinery to deal with this demand will already exist and will only need developing.

**Conclusion**

Within all the various branches of film production there is going to be a big scope for enterprising men and women. In order not to have their work spoiled by big business and personal interests they will need protection, far-sighted subsidies and regulations. But with this, and a lot of enthusiasm and hard work, the tremendous possibilities the film has to offer in this country can be realized, and the great social responsibilities it has in all its varied forms will be fulfilled.

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**A Crumbled Movie Empire**

(Continued on Page 276)

Highest Bidder" with Madge Kennedy, Lionel Atwill, Selder Sears, directed by Wallace Worsley with Joe Sternberg assisting and George Peters and Lester Lang at the camera. Other directors were Hugo Ballin, Paul Bern, Edwin Hollywood, Allan Dwan and Larry Trimble.

Then Doublier and I started for the Solax Studio, bordering at the foot of the George Washington Bridge in Fort Lee. All that is left here are the film vaults, the laboratory and the cement floors of the studio stages, the property and scenic house, the electric power house, costume department. There was the incline through which the studio technicians had taken the scenery. This studio was once a very busy production center. In 1919 Albert Cappellani directed, "Oh Boy!" with June Caprice and Creighton Hale. In this studio, we were closer to Cottesvile, so we ventured on to the site of the old Champion Studio. This studio was built and operated by Mark Dittenfass about 1909. How well I remember some of the tales of the old west being made here.

Most of the cowboys were Eastern trained, being paid $3.00 per day for man and costume, and $5.00 per day for horse and saddle, if one owned a horse. Real and home made Indians were always among the groups.

Champion was one of the well known trade marks on films of that time. This company was one of the first operating in the Fort Lee area. Here too, Kessel and Bauman made the Bison and Triangle, Keystone Comedies and Kay-Bea also, got their start. Close by was the Rambo Hotel, then known to all in Fort Lee for its Western like saloon where the cowboy hitched his hoss. While the Rambo was always known as a hotel, it has but four rooms. Many stars ate their luncheons there. The exteriors for "The Perils of Pauline" with Pearl White were made in this vicinity. Gus Becker who used to manage it for its former owners, now owns the Rambo Hotel and lives in the upper rooms.

It's been fun remembering those old days when Fort Lee was the center of the movie industry. But when I had finished my tour of the now deserted place I felt sad, for I had just visited a Crumbled Movie Empire.

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**B & H Gets 31 Universal Films for Filmosound Library Release**

Thirty-one new "Universal" features, becoming available for approved non-theatrical locations during the rest of 1945, are described in detail in the Bell & Howell Filmosound Library catalog supplement No. 37, just off the press. Release dates are specified for the various types of 16mm. use, including "shut-in," armed forces, and general.

The supplement lists also 55 major and independents on which prior location approval is not required, plus three new features in color, and 30 Westerns.
These people buy a battleship—every week!

Meet John S. and Mary D. John works at an electronics plant on Long Island, and makes $85 a week. Almost 16% of it goes into War Bonds. Mary has been driving rivets into bombers at an airplane plant on the West Coast. She makes $55 a week, and puts 14% of it into War Bonds.

John and Mary are typical of more than 27 million Americans on the Payroll Plan who, every single month, put half a BILLION dollars into War Bonds. That's enough to buy one of those hundred-million-dollar battleships every week, with enough money for an aircraft carrier and three or four cruisers left over.

You've backed the attack—now speed the victory!

THE AMERICAN CINEMATOGRAPHER

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

"Michael Strogoff" Secured by Filmosound Library

By direct arrangement with its producer, J. N. Ermolieff, the notable film spectacle based on the Jules Verne novel "Michael Strogoff" is being released for the first time in 16mm. by the Bell & Howell Filmosound Library. The picture was released theatrically, by RKO, under the title "The Soldier and the Lady." For non-theatrical use the original literary title will be resumed.

New Standards List

A new list of all American Standards and War Standards approved to date has just been published by the American Standards Association and is available free of charge. Requests should be mailed to American Standards Association, 70 East 45th St., New York City.

There are approximately 800 standards listed in the booklet, covering specifications for materials, methods of tests, dimensions, definitions of technical terms, procedures, etc., in the electrical, mechanical, building, transportation, textile, and other fields. For ready reference, the standards are listed alphabetically as well as by engineering fields. There is also a separate list of the War Standards—jobs carried through since Pearl Harbor at the specific request of Army, Navy, or industrial groups.

Judges Named for Amateur Film Contest

The executive board of International Theatrical & Television Corporation has announced the following eight members of a board of eleven judges to select the prize winning films in the International Amateur Movie Contest. Six of these judges are well known Hollywood personalities.

This committee to date consists of Louella Parsons, Hollywood columnist, Jesse Lasky, producer, Veronica Lake, Paramount Pictures star, Hal Mohr, A.S.C., Universal cameraman, Bill Meiklejohn, talent and casting director for Paramount Pictures, Mitchell Leisen, director, and Norris Harkness, Photographic Editor of the New York Sun, and Executive Secretary of the National Photographic Dealers Association, and Russell Potter, Director of Institute of Arts and Sciences, Columbia University.

The eleventh judge will be George A. Hirliman, President of I. T. & T. The remainder of the judging committee will be appointed from the 16mm field.

This judging body will not only select the first prize winning film which will receive the $10,000 award, but will also select the additional ten films which will be commercially distributed, and for which the winners will receive a royalty percentage that will be comparable to that given to professional producers throughout the country.

Out of the hundreds of films that I. T. & T. will receive, approximately one hundred of the best will be selected by the executive board of that company, and it will be this group that will be shown to the judges in both New York City and Hollywood. The final selections will be made from this break-down in entries.

Fairchild's Future Plans

The Fairchild Camera & Instrument Corp., New York, has received many inquiries from the press, and from dealers and users of photographic equipment about its post-war production plans. C. A. Harrison, Fairchild vice-president, answered these inquiries with the following statement:

"The Fairchild corporation's two plants are still almost 100 per cent in war production of aircraft cameras, aviation instruments, and electrical and electronic equipment, but it appears now we may have some advanced amateur cameras for dealers' stocks in about 15 months—possibly in time for the Christmas 1946 trade. Design work on these amateur cameras has been started.

"Present expectations are that we will offer still cameras for advanced amateurs, and cameras for professional, industrial, medical and special fields. We are now delivering one model medical camera (the 70-mm. fluoro-record), have another near production, and a third in design. Production quantities and delivery dates depend entirely on the length of the war and the status of Fairchild's government contracts."

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The New York Color Slide club, composed of several hundred camera enthusiasts whose special interest is in color photography, has purchased its second "Filmo Slide Master," still projector for showing color or black and white 35mm. slides. This was revealed coincidental with the announcement by Bell and Howell Company, pioneer Chicago producers of high-precision motion picture equipment, that the "Filmo Slide Master" will be offered in the company's line of post-war products. Made in limited quantities before the company converted almost entirely to war production, the projector had been Bell and Howell's first entry in the still projector field.

The projector has 1,000-watt illumination and a 7½-inch, F.4.8 lens, providing sufficient brilliance to permit auditorium projection of 2" x 2" slides for viewing by the club's entire membership at one time. It will be used for instructional and exhibition purposes. The club conducts a varied program of lectures, field trips and contests for its members.

Features of the Slide Master include use of a "base-up" lamp which may be changed while hot without the use of gloves; use of 500-, 750- or 1,000-watt lamp without modification; a motor-driven cooling fan, the speed of which is automatically regulated to provide proper cooling for the lamp being used; double heat filters in the condenser assembly, and, optional interchangeable lenses, 3½- or 5-inch F 4.5, or 7½-inch F 4.8. The rack-and-pinion focusing mechanism is operated by turning a large knurled knob, and the lens may be locked in focus.

The slide carrier is of die-cast metal which cannot warp or bend. It shifts horizontally to permit change of slides while one slide is being projected. Special air passages provide free circulation of cool air around the slide, forced by the fan. Self-locking tilt mechanisms, front and back, provide upward or downward tilt up to 12 degrees, either way, from level. Two convenient switches, one releasing current to the entire projector while the other operates only the lamp, are provided. The lamp cannot be turned on unless the fan is running. There is no light "spill." Light escapes only through the lens.

The Slide Master operates on 100- to 125-volt AC or DC. It accommodates both glass and paper-mounted slides. Housed in rigid, non-warping aluminum-alloy die-castings, it is finished in light brown wrinkle enamel, with chromium trim and control knobs of walnut bakelite. The carrying case has compartments for the projector, lenses, slide carrier and the ten-foot cord, with special, covered compartment for slides.

John Boyle, A.S.C., Shooting Color in Nebraska

John Boyle, A.S.C., writes from Omaha, Nebraska with two messages. First to inform us that he is shooting color film in Nebraska. Second to say: "Congratulations on the last (July) issue of THE CINEMATOGRAPHER." (We think you're good, too, John.—The Editor.)

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And when they're available again, you'll want either a DeVRY 35mm. motion camera--the camera that film Academy Award winning "Desert Victory," or a DeVRY 16mm. camera--the kind that is preferred by professionals for their personal shooting. DeVry Corporation, 1111 Armitage Ave., Chicago 14, Illinois.

 Only 5-time winner of Army-Navy "E" award for motion picture sound equipment.
Virgil Miller, A.S.C. in Great Britain

A letter from Virgil Miller, A.S.C., written aboard ship, indicates that he will be one of the busiest cameramen extant during the next few months. In part he writes:

"Spent a month covering Nova Scotia and Cape Breton Island—3500 miles. I know it well by now. Eight days from Halifax to Liverpool. Arrive there tomorrow. Making six pictures in Britain. One each in Wales, England, Ireland, Scotland, one in Isles of Man, Wight, Guernsey, etc., another in the Hebrides off Scotland. May also go to Germany if plans go through. Back to the States by September first, if possible.

"Give my best to all the boys of the A.S.C. I will look up some of the Cinema Technicians while here. Will have to use a "first" cameraman as well as crew—a condition we had to meet in order to operate. The "first" will have to be taught to use Monopack."

Miller is photographing Fitzpatrick Traveltalks.

Film Contest Winners

The American Humane Association, from national headquarters at Albany, N. Y., has announced winners in its first annual Motion Picture Contest for Amateurs, for which $300 in cash prizes were offered. The contest will be repeated next year, President Sydney H. Coleman of the American Humane Association, discloses in The National Humane Review, official publication of the Association. The 1945 contest winners and titles of their pictures are:

Mrs. Warner Seely, 2171 Middlefield Road, Cleveland, O., "Pets," first prize, $100.

John Larson, 196 Clinton Avenue, Brooklyn, N. Y., "Bettas," second prize, $75.

Walter Bergmann, 30 Alto Drive, Mt. Vernon, N. Y., "A Day at the Zoo," third prize, $50.

Helen Bornmann, 5888 Henry Avenue, Philadelphia, "My Dog," fourth prize, $40.


The judges were Dr. Grace Fisher Ramsey, Curator of School Relations, American Museum of Natural History, New York, chairman; John TecVan, New York Zoological Park; Arthur Edwin Krows, author of "Motion Pictures Not for Theatres," New York City, and Leo J. Heffernan, president, Metropolitan Motion Picture Club, New York.

Haltation

Light penetrating an emulsion may reflect from the back of the base and strike the emulsion once more, causing haltation around the image of bright objects. Antihaltation base or backing is designed to absorb such light and prevent haltation.
helped with the gags, and the main idea was to get a big laugh and complete the picture as soon as possible. We didn’t give any thought to big production values.”

There were “doubles” and stunt men in the old days, as now, but Archie says many of the stars refused to let others take risks for them.

“Mabel Normand,” says Archie, “took all of her slapstick falls straight and without benefit of proxy, and Charlie Chaplin himself drove a Model T through a bridge into a river below, all for the sake of art.”

Archie was born in Iowa. Early in life wanderlust got into his blood. He went into the hotel business, and his journeys took him to Honolulu and Japan. In 1909 he returned to America as executive secretary to the commission in charge of the Hawaiian exhibit at the American Yukon Expedition. He then went to Los Angeles for a fling at the real estate business, and from there worked the forest service, from which he graduated to the profession of photography.

It was Archie’s work with an Akeley camera and a telephoto lens that took him out of the field of slapstick comedy. For a long time he wanted to shoot drama, but found that he was “typed” as a comedy cameraman. Archie decided to do something about it, so purchased what he claims was the first Akeley camera in Los Angeles. He bought a complete set of lenses, including a 17-inch telephoto lens. Then he started experimenting with it. For some time no one would give him a chance to show what he could do with his Akeley. Then, in 1923, Bert Glennon, who was cameraman for DeMille, decided to give him a chance. Glennon told Archie to go ahead and shoot whatever he wanted so long as he didn’t get his Akeley off film. After Archie had been shooting for a couple of days, he shot a scene that had been planned for a special effect. One night DeMille was shooting a scene where he had to project a house onto a bridge with a telephoto lens. DeMille made Archie a “free agent” cameraman on “The Ten Commandments.” Told him to shoot how and what he wished. Archie made a tremendous number of unusual shots, and the upshot was he was handed a five-year contract with Famous Players-Lasky, and he said goodbye to the film funnies.

“I feel very happy over the work I did in those days with that Akeley camera,” says Archie. “For several years I shot special scenes on every picture made by Famous Players-Lasky. I actually believe that my work with that Akeley was the father of all dolly shots, for until I made follow shots with that camera, our cameras never moved. With the introduction of camera movement, cameramen had the opportunity of improving their art. Mobility of the camera has done much for cinematography.”

Archie achieved his ambition of being director of photography on a dramatic picture when he photographed “Man Slaughter,” This was Claudette Colbert’s first picture. Since then he has photographed many impressive productions.

Stout has had some thrilling experiences in his work. He was shooting a picture for Director Victor Fleming down in Texas. One day while peering through his Akeley he suddenly heard Fleming say, “Don’t move you feet, Archie. Don’t move you feet.” Suddenly he felt something drag across his foot. Then he heard a snap and looked around. A rattlesnake had crawled between Archie’s feet, and Fleming had reached down and grabbed it by the tail and snapped its head off.

Fleming also almost shot one of Archie’s fingers off with a pistol. He was a good shot and was doing some trick shooting. Archie held a lighted cigarette out for him to hit. Vic missed the cigarette and the bullet split one of Archie’s fingers.

His most exciting experience took place in 1922 when he was “shot down” while making pictures of San Quentin Prison from the air. Permission was supposed to have been obtained, but one of the prison guards apparently had not been informed, for he let drive at the plane with a rifle. The pilot crash-landed the plane on the tide flats of Mill Valley. The plane was wrecked. The pilot broke his leg, but Archie wasn’t hurt.

Among Stout’s most recent pictures are “I Happened Tomorrow,” “Tarzan and the Amazons,” “Summer Storm,” “Dark Waters” and “Captain Kidd.”

A cloud of sadness hangs over the Stout home where he and his charming wife live quietly, because his only son, Junius, a Naval aerial photographer, was killed over the island of Jersey in the English Channel in the present war. It was a sad blow to Archie, and his many friends share his sorrow.

But, typical of the man, he says nothing about it to his friends, and plunges into his work with the same enthusiasm he had when he started his first picture. Archie is an Ace in more ways than one.

“I want to talk to you after the rushes are over,” said DeMille.

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But, typical of the man, he says nothing about it to his friends, and plunges into his work with the same enthusiasm he had when he started his first picture. Archie is an Ace in more ways than one.

“I want to talk to you after the rushes are over,” said DeMille.

DeMille made Archie a “free agent” cameraman on “The Ten Commandments.” Told him to shoot how and what he wished. Archie made a tremendous number of unusual shots, and the upshot was he was handed a five-year contract with Famous Players-Lasky, and he said goodbye to the film funnies.

“I feel very happy over the work I did in those days with that Akeley camera,” says Archie. “For several years I shot special scenes on every picture made by Famous Players-Lasky. I actually believe that my work with that Akeley was the father of all dolly shots, for until I made follow shots with that camera, our cameras never moved. With the introduction of camera movement, cameramen had the opportunity of improving their art. Mobility of the camera has done much for cinematography.”

Archie achieved his ambition of being director of photography on a dramatic picture when he photographed “Man Slaughter,” This was Claudette Colbert’s first picture. Since then he has photographed many impressive productions.

Stout has had some thrilling experiences in his work. He was shooting a picture for Director Victor Fleming down in Texas. One day while peering through his Akeley he suddenly heard Fleming say, “Don’t move you feet, Archie. Don’t move you feet.” Suddenly he felt something drag across his foot. Then he heard a snap and looked around. A rattlesnake had crawled between Archie’s feet, and Fleming had reached down and grabbed it by the tail and snapped its head off.

Fleming also almost shot one of Archie’s fingers off with a pistol. He was a good shot and was doing some trick shooting. Archie held a lighted cigarette out for him to hit. Vic missed the cigarette and the bullet split one of Archie’s fingers.

His most exciting experience took place in 1922 when he was “shot down” while making pictures of San Quentin Prison from the air. Permission was supposed to have been obtained, but one of the prison guards apparently had not been informed, for he let drive at the plane with a rifle. The pilot crash-landed the plane on the tide flats of Mill Valley. The plane was wrecked. The pilot broke his leg, but Archie wasn’t hurt.

Among Stout’s most recent pictures are “I Happened Tomorrow,” “Tarzan and the Amazons,” “Summer Storm,” “Dark Waters” and “Captain Kidd.”

A cloud of sadness hangs over the Stout home where he and his charming wife live quietly, because his only son, Junius, a Naval aerial photographer, was killed over the island of Jersey in the English Channel in the present war. It was a sad blow to Archie, and his many friends share his sorrow.

But, typical of the man, he says nothing about it to his friends, and plunges into his work with the same enthusiasm he had when he started his first picture. Archie is an Ace in more ways than one.
Industrial Films Announces Expansion Under New Name

Industrial Films celebrated its second anniversary as a production organization with an announcement of a change of name and an enlargement of staff and facilities. The group, which was organized in 1943 with Stephen Bosustow, Dave Hilberman and Zachary Schwartz, all former Disney men, as co-partners, has just taken over the entire top floor of the Olesen Lighting Building, 1558 No. Vine St., Hollywood, and is now functioning under the new name of United Film Productions.

Under the new set-up, Bosustow takes over as General Manager. Hilberman is now with the Armed Forces in the Long Island Photographic School and his interests in the new firm are being represented by his wife, Libbie Hilberman, who is in charge of bookkeeping. Schwartz retains the supervision of all art work. Robert Cannon, formerly with Warner Bros., has been signed as head of Animation; Ade Woolery, also former Disney man, is new Production Manager; Mary Cain is supervising the Ink and Paint Department. Ed Gershman, formerly with Disney’s is Comptroller for the new firm and Ben Lowell is in charge of Sales and Promotion.

The industrial firm was organized originally to turn out the animated color cartoon for the Roosevelt campaign called “Hell Bent for Election.” This was shown non-theatrically to approximately ten million people. The firm continued to turn out pictures for the Army, the Navy, the OWI and for various industrial firms.

With the new set-up and under the new name, the firm is working on animation films for both the theatrical and non-theatrical fields and on live-action films for the non-theatrical field. At present, they are engaged in turning out a 1000 foot animated cartoon in color on “Races of Mankind,” and on a series of films on “Flight Safety” which are being produced for the Navy. United has also just completed their first release for theatrical distribution—a cartoon based on the letters in the book “Dear Sir” by Juliet Lowell. The firm has secured the rights to the material in the book which has been on the best seller lists for the last six months, and to other material by the same author. United plans to issue this material in a monthly release. They have also just completed their first live-action industrial film for Higgins Radio, in color.

Among plans for the future, United is now considering a story treatment based on an American classic to be made into a full-length animated cartoon.

G-E Voltage Stabilizer Aids Color Printing at Ansco

Maintenance of constant color temperature during printing operations is substantially aided by use of a General Electric voltage stabilizer at Ansco’s San Francisco Laboratories, and is regarded by photographic experts there as the most efficient means for eliminating one of the most disturbing variables in the processing of color transparencies and color prints.

The stabilizer—a compact, automatic device—is conveniently and readily installed closely adjacent to the load. By simply plugging it into any 115-volt outlet, a constant power supply is made available for powering the filament of the photo-enlarger lamp, regardless of line voltage fluctuations up to ±15 per cent.

Technicians at the Ansco laboratories point out that constant voltage must be maintained for accurate printing of color values, and that the color content of the lamp used in exposing and printing will vary with changes in voltage. Use of the voltage stabilizer to help provide illumination of unvarying brightness was introduced as a part of their research to simplify color printing to the point where it can be done by photographers in their own dark rooms. Ansco has postwar plans for general distribution of two new color products whereby color prints can be made (1) by a single exposure using a color transparency in positive form, or (2) through a negative in complimentary color.

Second Chicago International Color Slide Salon Announced

Announcement has been made by the Chicago Color Camera Club that the Second Chicago International Color Slide Salon will be held next October at the Chicago Historical Society, Chicago, Ill.

The Salon is sponsored by the Chicago Color Camera Club, and slides will be exhibited through the facilities and cooperation of the Chicago Historical Society. The Salon last year has been proclaimed the leading color slide salon of the season. It attracted top-notch color slide photographers from not only every state in the Union, but Canada, Mexico and Italy. All accepted slides will be awarded stickers, with medals and ribbons being awarded to the best.

Slides will be displayed Tuesday, October 9, Thursday, October 11, and Friday, October 12. Entries close on September 22, 1945. For entry forms write to William Head Gray, Salon Chairman, 7217 Division Street, River Forest, Illinois.
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N. Y. Camera Club
June P.S.A. Winner
Results of the June contest in the Continental Print Competition of the Photographic Society of America place leading camera clubs in both sections within a few points of top position.
The Camera Club, of New York, N. Y., won the June contest in the "A" group with 61 points. California Camera Club, of San Francisco, Calif., was second with 60 points. Cleveland Photographic Society, of Cleveland, Ohio, was third
with 56 points, and St. Louis Camera Club, of St. Louis, Mo., and Queen City Pictorialists, of Cincinnati, Ohio, were tied for fourth with 54 points each.
High score in the "B" group, also 60 points, was won by the Photographic Society of San Francisco. Winnetka Camera Association, of Winnetka, Ill., was second with 52 points. Germantown Photographic Society, of Philadelphia, Pa., was third with 50, and Missouri Pacific Camera Club, of St. Louis, Mo., was fourth with 48.

"So Ends Our Night"
to Pictorial Films
Mr. Milton J. Salzburg, President of Pictorial Films, Inc., of 1270 Sixth Avenue, New York City, announces the acquisition of the 16mm. sound film world distribution rights for "So Ends Our Night," an excellent adaptation of the famous Collier serial "Flotsam" by Erich Maria Remarque.

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THE FRONT COVER is an informal shot showing Director of Photography, Joseph Valentine, A.S.C., preparing to film a scene for “Tomorrow Is Forever,” starring Claudette Colbert (in center), Orson Welles and George Brent. Irving Pichel is the director. The film is by International Pictures.
Any Luck?

The element of "luck" helps to make fishing interesting.
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BIGGEST news of the past month, naturally, was the ending of the war with Japan—although the introduction of the atom bomb may in time come prove to have been the biggest news, not only of the past month but perhaps of all time. Look for cycle of films shortly dealing with the atom.

Influence of Television

Indication that motion picture executives are already beginning to think of the possibilities of television comes with the report that Director George Sidney, in the selection of players for "Holiday in Mexico," is looking for players suitable for both regular film projection and television. It is pointed out that players with nervous habits and inclinations toward the exaggeration of facial expressions will have to be especially shunned. While films already demand greater repression than was ever typical of the stage, television will require this quality to an even greater degree.

Picture for Italy

It is reported that 20th Century-Fox will set up a distributing outlet in Italy for all major studios wishing to handle product through pooling arrangements. Deal is said to have received the okay of the Psychological Warfare Branch, and the arrangement is slated to go into effect this month. Five companies are reported thus far in the pool, but they will maintain their own respective selling staffs.

Wage Control Lifted

Of significant importance to everyone in the film industry was the announcement by the Treasury Department of the lifting of control over wages and salaries. Now salary increases can be given, and technical and other workers in motion pictures can negotiate the salary problems without having to submit them to the Wage Stabilization division for approval. Lifting salary controls will be a boon to the free-lance cinematographers.

16mm Films for Europe

Interesting is the news from Europe that America's major film companies are being forced to distribute 16mm films in order to service the thousands of small theatres equipped with 16mm projectors installed by the Nazis during their occupation. Decision to distribute major films on 16mm stock was reached after a survey in France revealed that more than 5,000 theatres and screening places in that country alone were equipped only with 16mm projectors. A large number of these theatres are in rural districts, but in some regions all the theatres in entire cities have only the 16mm projectors. Many of these were put in by the Germans to replace wornout or destroyed 35mm equipment. But in hundreds of places the Germans established 16mm theatres in order to get their propaganda before the people. Use of 16mm equipment in theatres in Europe was practically unheard of before the war. It is possible that 16mm projection in European theatres might lead to changes over here in the future, especially since there undoubtedly will be a large increase in educational films here, made on 16mm.

Taxes

While wages and salaries will probably go up, there is no definite indication that taxes will go down in the near future, despite rumors and wishful-thinking stories that come out of Washington. This applies both to individual income taxes and theatre admission taxes. Those in the know of Washington say theatre admission taxes definitely won't drop before sometime in 1946. While some Congressman, always thinking in terms of potential votes, talk about cutting income taxes, are proposing tax reductions, best guess is that there will be no tax reduction for at least another year...somebody has to pay for the war.

Hollywood and Radar

Now it can be told that Hollywood technicians played a vital part in the success of radar in the war. It is now revealed that the 18th AAF Base, Motion Picture Unit, at Culver City, California, made films on radar that were of inestimable value, especially in the bombing of Japan. A minutely detailed scale model of Tokyo and its environs was built by technical experts directed by Major Roy Seawright, Warrant Officer John Glass and T/Sgt. Joe Westheimer. This was used in filming a briefing short that was used to make all pilots familiar with Tokyo before going over to drop their bombs. Seventy-five per cent of the men at the Culver City base are from the Hollywood film studios. Their skill was of untold value to bombing pilots.

Films and Racing

Motion pictures will now be used to promote clean horse racing. Hollywood Park officials are going to film all races this fall on 16mm from start to finish in each race. Every horse, every jockey, will have special magnifying lenses, making it possible to observe distinctly the movement of every horse and every jockey. Thus, by viewing the film, judges and stewards will be able to make quick and just decisions in cases of irregularity or contest. It is felt that jockeys will not try any tricks when they know the camera is trained on them.

Television Sets

It is reliably reported from Washington that the present applications for 224 television stations now on file will be acted upon within the next sixty days, and that by Christmas transmission of television programs from new transmitting towers in Washington will be under way. Representatives of companies prepared for television transmission predict television sets will be widely distributed within a year.

Here and There

Watch for decline of gangster films, and other types which might give peoples of foreign lands wrong impression of American way of life... Warner Brothers Studios reported contemplating making film on the life of Winston Churchill... if Churchill continues his criticism of the United States for stopping lend lease it might not prove to be a happy venture... End of war was barely announced when big manufacturers started drive for exploitation tie-ups with film companies. Auto makers especially want to get their new cars on the screen in every picture possible... Film shortage headaches are ended with lifting of government restrictions... Stanley Adams of the WBP in announcing the lifting, said "Motion picture people have been more cooperative than most. Generally speaking, I have found they have been most willing to do their part in our program."—H.H.
The Production of Scientific Films for Biological and Medical Purposes

(On 16mm Film Stock)

By J. Yule Bogue, Ph.D., M.R.C.V.S.

The production of scientific films for medical and biological purposes presents problems peculiar to this field which necessitate modifications of standard film technique. We are, in fact, recording living phenomena on film, and it is essential therefore that the active producer and director should appreciate the significance of the procedures carried out in demonstrating the mechanisms of living processes. He must be fully aware of the fact that living things are in a continual state of change, and that the changing is due to the adaptation of the living system to changes in its environment. If the system is to live normally, then changes great or small in the external environment must result in a series of reactions designed to keep the internal environment of the tissue constant within the very narrow range within which life is possible. It is desirable, therefore, that the director be medically or biologically qualified.

The techniques used in the demonstration of living processes must of necessity involve the introduction of new variables and some degree of abnormality, for example, anesthesia. We attempt, therefore, to control these variables as much as possible. When, in addition, the demonstration is to be recorded on film, special attention must be given to the additional variables introduced, such as the heat generated by the lighting equipment.

For the purpose of this discussion, the films will be classified into two main groups: that which includes those which do not make a new contribution to knowledge, but present in a suitable form knowledge which is at our disposal and which we wish to disseminate; and that group in which the film makes a new contribution to our knowledge of living processes or scientific technique. These two groups may be divided into two classes, that comprising a planned series of demonstrations, each of which logically follows its predecessor, and that class made up of single films which do not form part of a series.

Considering first the group in which the film does not make any new contribution to our knowledge, but is used to "put over" scientific knowledge in a scientific manner. Anything which is experienced in this particular field, though there are a number of skilled individuals who, working on their own, have produced some excellent work. Even here, perhaps, the completed film could have been better for a variety of reasons. There are, however, quite a number of long term experimental procedures which do not lend themselves to the help of a professional film unit, if only on the grounds of expense. To these cases, professional script assembly, titling, and other services can be of great value.

These remarks, therefore, are addressed to two groups of people; those who are professional film makers with little scientific knowledge, and those who are medically or biologically trained and who are not really familiar with the full scope and possibilities of the film.

It is essential that all the preliminary work, writing of the script, camera position and angles, lighting, and exposure tests in difficult subjects, experimental procedures and so on should be fully completed before a single foot of the actual film is exposed.

The procedure, therefore, is to write the script, put on to paper what is to be demonstrated, decide definitely on the effect desired. The film may be a complete demonstration in itself, or it may be one of a series; if the latter, then at least two, preferably three, of the scripts should be worked out. Otherwise it is difficult to establish good continuity in the series. Each film should, however, be complete in itself and, at the same time, be in such a form that the succeeding film can be cut off. When the series has been seen by the student, he should carry away with him a vivid memory picture and a good general knowledge of the field covered.

The subject should first be considered from the viewpoint of its suitability for film treatment. The purpose of any film is to demonstrate motion or change. If there is no motion or change, then, in other than very exceptional circumstances, it is better to use lantern slides or charts, since they are much more effective, cheaper and less trouble. Some branches of anatomy can be taught very effectively with suitable film treatment, event though the structures may be static. There are cases in which the use of the film together with the lantern slides is much more effective than either alone. This will be mentioned again later.

Having arrived at a favorable decision on the use of the film, the method of presentation must be decided. Here, of course, a knowledge of film technique is indispensable. It cannot be emphasized too strongly that if the film is to be an imprecise source of knowledge, then the subject must be faithfully represented and, further, it should be done in such a way as to show the basic facts in a manner as possible. It should not be manipulated, but all unessential fields of view, e.g., apparatus, especially oscillating or rotating components, should be ruthlessly eliminated from the screen, as they only serve to distract the attention of the audience from the very point you are wishing to demonstrate. Trick or technical effects might also be mentioned here, though they will be dealt with more fully later. A dissolve, wipe, or split screen, for example, should only be used when it helps to clarify or connect a particular point; it should never be used for the sake of the effect, since the audience is more likely to be impressed by the effect and lose the thread of the demonstration.

Before proceeding to the actual writing of the shooting script, there is a controversial problem on which a decision must be made as it influences the type of script. The problem is—silent or sound. In my own mind, there is no doubt. In all cases where the teacher's opinion has to be considered—SILENT. If, however, the film demonstrates the discovery of a particular scientist, or is used to demonstrate an application technique by an acknowledged expert in the field, e.g., anaesthesia or plastic surgery, then most certainly SOUND. If possible the commentary should be written, or, even better, both written and spoken, by that authority.

In films dealing with the mechanisms of living processes, there is much difference of opinion on the interpretation of detail. Therefore, these films should

Note: The article by Dr. Bogue is printed through the courtesy of the Photographic Journal, official organ of the Photographic Society of Great Britain. —The Editor.

American Cinematographer • September, 1945 295
Shooting Production Under Fire

By SGT. HERB A. LIGHTMAN
U.S. Army Signal Corps

As a motion picture cameraman in Europe with the 167th Signal Photo Co., it was my job to get on-the-spot combat newsreel coverage, both for release in the States and for tactical analysis by Army intelligence officers.

But in addition to this mission, the particular four-man photographic unit of which I was a member received a number of assignments to shoot documentary feature productions at the front. The purpose of these films was to provide orientation features for our troops, as well as informational films for release on the civilian screen in America.

Our commanding officer, Capt. Merle H. Chamberlin, who in civil life is chief of projection at M-G-M studios, had consistently held to the theory that even in actual combat it was possible to portray the various facets of war if careful pre-planning were utilized along with as many studio production techniques as were practicable under the circumstances.

Hitherto, a cameraman on assignment shot more or less haphazardly, using a stereotyped formula and hoping that when he had finished there would be enough continuity to enable a coherent story to be cut from his footage. According to our plan, everything was to be worked out on paper before a foot of film was run through the camera, and this diagrammed script would be followed as closely as the changing situation would permit.

Our first chance to use this technique came when Lt. Col. Eric T. Tebow, photographic officer of the 12th Army Group, called our unit into his office one morning and told us that a request had come through from SHAEF for a documentary film to show in finest detail the workings of an Army Civil Affairs team in helping to bring a newly liberated city back to normal life.

General Patton's Third Army was at that moment maneuvering into position before the fortress city of Metz, drawing up in battle formation for the attack which was to liberate the city. We decided that Metz was perfect for our purpose.

Within the unit we planned to "specialize" our jobs rather than to duplicate our efforts. S/Sgt. Gene B. Coogan, former stunt-man at M-G-M, who later became 1st Sgt. of our company, was operating cameraman. Gene was known as the most dare-devil cameraman in the E.T.O. He would go anywhere and do anything for a picture, whether it meant hanging by his ankles from the side of a cliff or dodging enemy bullets for a shot that would add that authentic combat touch where needed.
behind-the-scenes phase of battle which would arise. Action was the keynote of to be shown. Yet enough leeway was directly all phases of the subject that had to be sure that we would record correlated pool.

I started to work on the shooting script. It was written in the finest detail to be sure that we would record correctly all phases of the subject that had to be shown. Yet enough leeway was allowed to provide for the filming of unforeseen situations which we knew would arise. Action was the keynote of this script. We wanted to show rather than tell our story. We wanted it to have the human touch and to show the "behind-the-scenes" phase of battle which we knew our audiences back home were eager to know about.

In order to give a general scope to the film and to imply that this particular Civil Affairs team was just one of hundreds that had gone into liberated cities with our advancing armies, we started the script off by writing in a montage that began with the D-Day invasion, showed the battle across France, the human misery and suffering in the wake of war, and the efforts of Civil Affairs to restore order. The script then narrowed down to our one specific team and brought out every detail of its work in Metz.

The script was submitted to 12th Army Group and was approved without revision. We began to pack our equipment. A Mitchell silent camera and a Wall single-system sound camera were available in the company. But since we knew that we would be shooting under very precarious conditions, portability of equipment was very important. So, instead of the heavy cameras, we took with us a standard spider-turret, motor-driven Eyemo with 400 ft. magazine. Our lenses varied from a 1-inch wide-angle to a 12-inch telephoto.

For off-the-cuff shooting which we knew would be the only way to catch certain sequences we took along a single-lens, 100 ft. Eyemo of the "bomb-spotting" variety. We had extra batteries, magazines, and a supply of DuPont Type 2 film.

Sixty per cent of the scenes called for in the script were interiors, which meant that we would need lights. The lights issued by the Army were of the large "dish-pan" type which took a No. 4 photoflood and were useful for general illumination. Each of these had adjustable barn-doors to allow some measure of control. In addition we rigged up some spots using sheet-metal and tin cans for condensors and using Eastman reflector-spot lamps. We ended up with four of the photofloods and two spots.

Electrical current was a problem. We couldn't depend upon local current because many of the power stations had been bombed out of action. So we took along our own current in the form of two small 25 kilowatt generators which we mounted on a trailer and hitched onto our jeep. We added a "gaffer" to our crew to act as general utility man and to work the generators.

When equipment and personnel were all present and accounted for we set off to join our Civil Affairs team in the town of Thionville, France—which at that moment was very much the combat zone. The Moselle River cuts this industrial town into two halves and we arrived to find one half rather uncertainly held by American forces, while German troops were firmly entrenched in the other half. Both sides were shelling each other furiously.

In a building a scant 200 yds. from the river and very near a park which for obvious reasons the doughboys had dubbed "Purple Heart Square," our Civil Affairs team was busily ministering to the needs of the liberated half of the town, as well as preparing for their entrance into Metz when that city should fall.

We introduced ourselves to our "cast" and started shooting immediately. For "sets" we used the actual offices being used by the team. Lights were set up, props arranged, the camera was placed in position, and we were ready for action.

Here, just a word about our lighting. As I have pointed out before, our main objective was to make every foot of film, even though partly re-enacted, as realistic as possible on the screen. This applied to lighting as well as to camera movement and action. Each scene had its own diagram of light placement, camera angle, and approximate composition in the frame.

In designing the lighting we were very careful to avoid anything that was "arty" or of the Hollywood glamour variety. We strove for a sharp, documentary effect, which meant that we duplicated source lighting as nearly as possible. If a character was sitting at a desk so that his face were strongly illu--

(Continued on Page 306)
Do you remember the days of the "Nickelodeon" when a nickel admitted an adult or two children to a moving picture show? When half of the admittance ticket permitted you to stay for an extra show? When the projection machine broke down or there was a change of reels and a slide appeared reading, "One Minute, Please"? When advertising slides were shown? When the show was interrupted with a slide reading, "Madam, Your Baby is Crying Outside," and many of the women edged their way by you, rushing up the aisle, going to the street to find out if it was their baby? Do you remember when the lights went on between shows and an attendant walked up and down the aisle spraying perfumed disinfectant over your head which you didn't mind, because you liked the odor? Do you remember such slides as "Do Not Spit on the Floor—Remember the Johnstown Flood," or "Ladies, Please Remove Your Hats," or when the film appeared upside down and when the audience stamped their feet and whistled to let the operator know that something had gone wrong, he would show a slide that read, "Please Don't Whistle or Stamp on the Floor"?

Those were the days when I saw my first moving picture in a nickelodeon. I was one of the two kids who went in to see the show for a nickel, about the year 1908. Then and there I sought the owner of the store nickelodeon and began asking a lot of questions, "What makes the movies move?" "How were they made?" "Who makes them?" "Are they real people?" In fact, I asked many questions the owner could not answer. The only information he could offer was that he booked his films in Union Square; that real people were in them, and if I went to Union Square I could find out more about them. At that time I lived in Harlem, New York City, and a trip to Union Square was quite an adventure. But I had to know about the movies, so I made the trip which was my introduction to motion pictures. I learned that a good deal of the film was made in studios close by, in the Union Square area. The Majestic and Reliance Film Companies were in Union Square. The Biograph was at 14th Street, near Fifth Avenue, and much of the film was made in other parts of the city, in open air stages and in New Jersey.

In a remote street in the Bronx, Thomas Edison built a large studio especially for the production of moving pictures to be shown on the screens in this country and in Europe. This Edison Studio is situated at 2826 Decatur Avenue, Bronx, New York, and is now known as The Filmcraft Studio. There is a brass plaque hanging between the reception room and hall on the main floor with the inscription, "In Memory of a Great American, Thomas A. Edison, Who on This Site, in the Year 1904 Erected New York's First Motion Picture Studio." The present Filmcraft Studios has a new concrete front added to the original building. The glass top has been removed, which was so necessary in most of the studios of the early years. Close observance of the illustrations of the original Edison Studio and the present Filmcraft Studio will reveal that change.

The Edison Studio cost $100,000 to build. It had a large glass top and the building measured 100 feet in length, sixty feet in width, and forty-five feet in height. It had an area of twenty-four hundred square feet, and there was a water tank built into the concrete floor stage with a capacity of 130,000 gallons of water for filming aquatic scenes. Prior to this studio, Edison manufactured...
Right, the famous Black Maria—the first motion picture studio in the United States, built at West Orange, N. J., in 1893.

August 20, 1909, Edison released a 600-foot subject called "The Wright Brothers Aeroplane"—A Film of Achievement.

Released September 14, 1909—"Little Sister," length 975 feet, listed as dramatic, written especially for the Edison Company by Edward W. Townsend and listing a cast of characters as:

Little Sister...Miss Ethel Browning
Dicky, her brother...Mr. Bertram Yost
Mr. St. Clair...Mr. Tefft Johnson
Mrs. Manning...Miss Josephine Fox
Mrs. McGlinn...Miss Maggie Weston

In the October 1, 1909, issue of Kinetogram, the editor took the pleasure of introducing the first of the gallery of players to the readers of Kinetogram. William J. Sorello, an actor of fifteen years training and standing high in his profession, having been connected in the dramatic profession with Faversham, Savage, Jefferson, E. H. Sothern and Robert Mansfield.

October 15, Kinetogram introduced Herbert Bostwick, hailed from the critical eye of the wizard of the stage, David Belasco.

November 1, Mile. Pilor Morin was introduced and she in her interview tells of the value of the silent Drama or Pantomime in Acting.

[Continued on Page 316]
Cine-Chronized Sound On Wire

For Amateurs

By LISLE CONWAY, S.M.M.A.

With the ending of the war will come an almost entirely new device for the amateur movie maker and the professional cinematographer to experiment with—the "sound-on-wire" or the magnetic wire recorder and reproducer. This device, the development of which has been spurred by the exigencies of war, has come to the fore as an important means of quickly and easily obtaining sound recordings from almost any location that 110 volt, A.C. power can be had. Even without this power source the recorder can be operated in the field from a battery vibrator power supply.

The combination recorder and reproducer is a complete, self-contained unit, weighing only a little more than the average portable typewriter and but slightly larger in size. Microphone, microphone cable, amplifier, recording and reproducing mechanism, along with a built-in speaker and power cord are complete in one case.

Essentially the recorder performs the operation of magnetizing small sections of wire flowing through its recording head. These sections are magnetized in proportion to the frequency and intensity of the sound wave which the microphone picks up. The wire used, only .004" in diameter and loaded on a 3/8 inch spool, is about two miles in length. It will record over a half hour of speech and music continuously when run at normal speed. However, when recorded at half speed over an hour of speech may be recorded with some reduction in quality. After recording and rewinding, the wire is run through the combination recorder—reproducer head and its magnetized sections furnish the magnetic energy, which in turn, operates the amplifier and speaker to render a reproduction of the sound originally recorded. This recording may be played back over and over again without any apparent loss of quality. When the recording is no longer desired it may be wiped off or "erased" while a new recording is made on the same section of wire simultaneously. Recordings may be made and played back indefinitely on the same wire.

(Continued on Page 312)
WE THANK YOU——
for
your patience
your understanding
your friendly helpfulness
in our difficulties of
the past four years——

WE PROMISE YOU
from this time forward——
A complete and extended program
of
BRULATOUR SERVICE
with
EASTMAN FILMS——

J. E. BRULATOUR, Inc.
— Distributors —
THANK God, the war is ended! Let us all pray that we will never have another. Let us pray that we will never have to drop another atomic bomb; that the slaughter of women and children never have to be repeated, and that we will not have to drop another atomic bomb.

HANK God, the war is ended! Let us pray that the leaders of the many countries that have been involved in war and conflict will vanish from the earth; that men will learn to be men and not savages; that greed and hatred will disappear from the hearts and minds of everyone; that out of the suffering, slaughter and destruction we will construct a new world in which all men will have an equal right to live a life of freedom and happiness.

But while we pray, we also wonder—wonder whether or not the leaders of the many countries that have been involved in war and conflict will vanish from the earth; that men will learn to be men and not savages; that greed and hatred will disappear from the hearts and minds of everyone; that out of the suffering, slaughter and destruction we will construct a new world in which all men will have an equal right to live a life of freedom and happiness.

W E have just received another letter from our good friend John Dore, esteemed member of the American Society of Cinematographers, and War Correspondent in the European area for Paramount News ever since the start of hostilities. We wrote him some time ago asking him to tell us something about his experiences, but John is too modest to give us much. He says he is now in Norway and adds:

“It is difficult for me to tell things about myself. If I told you the truth about those experiences they might sound like boasting. The fact remains, however, that since I became a newsreel war correspondent, beginning from Anzio beachhead and up to V-Day in Germany, I am known as a real ‘front-work’ man, sticking always with the most forward units with the deep-in-my-heart-admired and respected G.I.’s. If one does not stick with the ‘head-on’ fighting units he gets no pictures that show what war really is. I did my bit of that kind of stuff. Have covered the fighting in Italy before the fall of Rome, and then on up to Lehigh with the Fifth U. S. Army. Then the invasion of South France, with the 7th Army. Then with the U. S. 6th Army Group through Rhone Valley, Vosges, Alsace and into Germany. Crossing of the Moselle and Rhine at Worms (both rather hot jobs!). Then the conquering of the Saar, piercing the strongest part of the Siegfried Line, and later with the 9th U. S. Armored Division, the capture of the Remagen bridge, sweeping into Germany up to Checko-Slovakia. Am mighty glad the war is over.”

That’s it, as related by John. We bet he could tell some really thrilling stories of his adventures, if he would.

IT IS our sad duty to inform our readers of the untimely death of Chief Photographer’s Mate Jack MacKenzie, Jr., who photographed a large part of “The Battle of Midway” safely, but who was killed recently in an automobile accident while returning from a very dangerous mission at the Murac Army Base. Jack was Photographer’s Mate 1st Class Ed Roach. Severely injured was Photographer’s Mate Herbert Wolf. All three formerly worked in the Hollywood film industry and enlisted in the Navy and were assigned to photographic work. MacKenzie enlisted in the summer of 1941. At the battle of Midway he stood on the roof of a power plant and calmly photographed the battle while Jap planes dropped bombs all around him. For some time he has been working with the National Defense Research Committee and scientists at California Institute of Technology on an important new rocket weapon.

E. C. Watson of the California Institute of Technology paid Jack and Ed a beautiful tribute in a letter sent to Commander Al Gilks, under whom they worked. It read in part: “I hope you will inform the families not only that our boy has gone out to them, but that their loved ones did not live in vain. Their contribution to the winning of the war was no small one, and they will continue to live in the beautiful and valuable films which they took so skillfully and so daringly. The lives of those of us who labored with them have been enriched by their work and the lives of many others have been saved by the accomplishments in which they had so important a part.”

ONE of the most interesting activities of the American Society of Cinematographers is the monthly stag dinner held in the organization’s club house. These dinners are interesting because following the dinner outstanding speakers talk on technical problems, new photographic methods are revealed and discussed, and unusual films are screened. An advanced amateur would find such a meeting to be something he had always dreamed of but had never experienced.

One of the most largely attended of these dinners was that of August 27th. More than one hundred of the top directors of cinematography of Hollywood were on hand. Following the dinner, Emery Huse of the Eastman Kodak Company, an authority on color, gave a talk on color from its inception to the present. It was one of the most interesting talks ever given at these meetings.

MERICA’s millions of radio listeners should send a message of thanks to the famous Masquers Club of Hollywood next month.

Ever since the beginning of commercial radio broadcasts weary and patient listeners have had to listen to whatever a sponsor has wanted to give them in the way of a radio program. This writer has often turned from one side of the dial to the other in an effort to find some program of interest. The Masquers—and the program—then turned the radio off and has gone to bed cursing radio programs.

But the Masquers Club, composed of three hundred of Hollywood’s leading personalities, has conceived another type of radio program which should gladden the hearts of all radio listeners. The program will be built from the requests of radio listeners throughout the United States and Canada. It will be called “Request Performance,” and is being sponsored by the Campbell Soup Company. It will be heard from coast-to-coast each Sunday evening, starting October 7th, at 6 p.m. to 6:30 p.m., Pacific Time.

All you have to do is write “Request Performance,” CBS, Hollywood 28, California, telling what motion picture, radio or stage star you want to hear on the program, and also telling what you want that star to do. President Charles Co. the famous Masquers says, “We will do the rest. We will fill every request humanly possible.” Each program will be made up from the requests. So the listeners now can ask for what they want—and get it, according to Mr. Coburn, who is one of Hollywood’s most brilliant actors and an Academy Award Winner.

This writer, for one, is happy about this idea and congratulates the Masquers and Campbell Soup Company for giving the public a chance to build its own radio show.

(Continued on Page 319)
Houston Film Processing Equipment is designed and built by men who know the needs of this industry. Fully automatic, compact and completely self-contained, these machines require no extra equipment. Write for illustrated folder and prices.

Houston Model 10 — Processes 35 mm. negative and positive film. Processing speeds up to 2400 feet per hour.

Houston Model 11 — Processes 16 mm. negative, positive and reversal film. Processing speeds up to 20 feet per min.

Today’s business operations are being speeded and simplified by the use of microfilm and motion pictures. By offering facilities for fast, local processing of such film, the owner of Houston Film Processing Equipment can build a profitable, permanent business.

Users of film are everywhere. Mercantile establishments, financial institutions, government agencies and others use microfilm for copying and recording. Manufacturers and sales organizations use both 16 mm. and 35 mm. motion pictures for training and sales. Studios and photographic supply stores constantly need film processing.

To these and scores of other users of film the Houston owner offers a needed service—a service becoming increasingly necessary to every community. Houston equipment is the proven answer.

* * *

Houston Film Processing Equipment is designed and built by men who know the needs of this industry. Fully automatic, compact and completely self-contained, these machines require no extra equipment. Write for illustrated folder and prices.
SOUND has had its place with motion pictures, and sound is not a mere picture itself. Since the days when the old so-called silent pictures came into being as an industry, sound in one form or another has been progressing along with the cinema art itself. We can remember the first movies we saw, with some magician of the keyboard pounding out a piano obligato to a potent love scene dripping with "Hearts and Flowers," or a stirring chase of the villain through a rocky gulch. Why not take advantage of it?

The playback feature of two of the turntables should then be so arranged as to enable the operator to control them individually, and they should be fed into the cutting head. This allows the operator to place on one record the multiple effects that can be achieved fading or dissolving the music from one table into that of the other. The microphones may be placed in the circuit to allow narrations being recorded supported by a background of appropriate music or sound effect.

If you are still with me, perhaps it would be of interest to briefly describe the process of making the sound for a picture including narrations.

Our first step is to carefully edit our pictures, for interest and continuity, keeping in mind that we are now editing for sound as well as visual enjoyment. Therefore, it is well to have transitions from one type of scene to another not too abrupt as the musical transition is more easily handled when changes are slow and smooth. After the main, credit, and end titles have been added, we are ready to project the picture for the purpose of selecting the appropriate musical background.

Select various recordings that you feel will be expressive for the type of pictures you are showing for the first two or three minutes and play it as the picture is being projected. When you are satisfied with the music selected, make a note of the music and its spot in the picture and continue to the next two to three minutes of film. When all of the music has been selected, run through the entire picture, making notes on the cue points in the picture at which the music is to change.

Now you are ready to prepare the script for the narrations. These should be written so that the descriptive portion commences before the scene or action takes place and continues until the scene or action is under way on the screen. When the script is completed (if it isn't daylight, you are lucky), make enough test runs so that the narrator, the recorder and the person operating the music changes are all familiar with their respective parts and their cues. When this is accomplished you will all probably be ready to quit from sheer exhaustion, but persevere—the results should be gratifying.

Make your recordings singly. By that we mean do not attempt to record the entire picture non-stop. If you have scored the music as outlined, you will find your cues to be about three minutes apart which will record very well on ten-inch recording blanks. When all of the recordings have been cut, wipe the now profuse perspiration from your respective brows and run the entire show through with your new records and enjoy it thoroughly at this time, as you will find that at each subsequent running you will be making mental notes on the many things you wished you had done instead of what you did.

Then have a cup of coffee; and as the early light of dawn breaks in the East, start thinking up the alibis you are going to use to make your wife believe you are not completely and hopelessly off your nut.

I am glad to submit a list of interpretive music for use as a guide in selecting music for your pictures. These numbers are, for the most part, available at all times. I hope that you will find this so and that your three minutes in "sound with your pictures" will be as great as others who have tried it before you.
Plenty of “points” for discharge—but these “fighting CINÉ-KODAKS” are rated “indispensable” in the Pacific

ON the “point system,” Ciné-Kodaks Special and Magazine Ciné-Kodaks could have won their honorable discharge long ago... they have taken part in every major campaign since Pearl Harbor... they have served with distinction in the Armed Forces’ training programs here at home... they have made photographic history in reconnaissance and combat with the Army and Navy and Air Forces overseas.

Because pictures, particularly motion pictures, have been so important to our Army and Navy, most Ciné-Kodaks Special and Magazine Ciné-Kodaks are still on active duty in the Pacific war theater. The few remaining here at home, right now, must go to high-priority industries and educational institutions.

As for Ciné-Kodak Film—again the Army and Navy have first call. Soon—maybe—you’ll be able to secure a more generous supply. And in the not-too-distant future, let us hope, you can have all you want. Keep in touch with your Ciné-Kodak dealer.

EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

Most Ciné-Kodak Film is on “active duty,” too.
Shooting Production
Under Fire

(Continued from Page 297)

minated from one side by a window, we would duplicate the effect with our lights, letting the other side of his face go black with just enough fill to bring out detail.

Similarly, we used top-lighting and back-lighting only to separate our characters from the background and give them depth. Certain sequences called for unusual lighting, such as one set-up in the operating room of a field hospital, which demanded an effect as if all the light on the scene were coming from a single shaded bulb over the operating table.

Another sequence utilized candlelight as an integral part of its subject matter and we had to produce high, flickering shadows on the walls while maintaining an effect as if all our light were coming from that single candle source. These effects were difficult to achieve with our "dish-pan" floods, but by careful placement of lights, manipulation of the barrel masks, and the use of our two homemade spots, we were able to produce these moods quite realistically.

The key of the lighting was always slanted to the subject matter. Certain sequences definitely demanded low-key, while others were only effective when brightly lit. In every case, however, the lighting was keyed solely to the dramatic demands of the sequence, and not to what the cinematographer thought might look nice on the screen.

Our shooting at Thionville proceeded without incident except for the fact that now and then the shellings became so intense that cast, crew, and equipment were forced to retreat to the air-raid shelter until it had subsided.

We were able to get the "front-line" feeling into this sequence by shooting uncontrolled footage of our mortar and artillery positions shelling the Germans in the other half of town. Then we set up our camera on the top floor of an abandoned observation post, zeroed in our 12-inch lens, and filmed some screen-filling close-ups of our shells blasting enemy targets on the other side of the river. The enemy must have spotted reflection of the sun on our lenses, because the observation post suddenly became a hotly pounded target. We got out of there just in time to see a shell knock the top floor of the building off.

Meanwhile Sgt. Coogan left the unit to become 1st Sergeant of the company.

We received word from Army intelligence that the city of Metz was about to fall, and we made plans to go in with the first waves of Infantry. It was essential to our story that we record the atmosphere of the city as it was imme-

We spotted various human interest types in our finder, flipped lenses for a change of image size, and got the shots our script told us we needed. Shooting through the small tarp-flap with the 12-inch telephoto lens we were able to get screen-filling close-ups of people thirty feet from our camera without those people realizing that they were being photographed.

We used this "candid" technique in later sequences whenever we wanted natural, unstudied, poignant shots of the populace. We would set up our lights for an interior sequence and mark the camera behind a door with just the lens peering out. Then when a dramatic bit of action developed we would start the camera grinding, flip lenses and have the sequence "in the can."

Although we avoided any forced cinematic techniques, there were sequences in the film that very definitely called for dolly shots. Since the Army didn't provide us with any booms, we managed to build a very acceptable dolly from a low steel cart of the type used to haul heavy boxes. It had rubber wheels and we built a wooden camera platform on top big enough for the camera, camera-man, and an assistant to follow-focus. This dolly was portable and efficient for interior work. For exteriors we placed the camera in the back of the jeep, let some of the air out of the tires for smoothness, and we had a very passable camera boom.

We shot footage on the activities of Civil Affairs for thirty days straight, during twenty-one of which the city was subjected to heavy shelling from the forts that still stubbornly held out. That, plus the ever-present snipers made things hectic at times.

We filmed every phase of the reconstruction work: the refurbishing of public utilities, emergency water-purification and distribution services, the distribution of captured enemy food to the hungry civilians, the registration of people and the establishment of 24-hour travel, the huge job of caring for thousands of abandoned slave laborers of every nationality.

From time to time our script demanded that we shoot atmospheric street scenes for inter-cutting to show the gradually mounting tempo of life in the city as it gradually came back to life again.

Naturally a great deal of our action had to be controlled, but it was presented strictly according to the actual situation, and was directed with emphasis on the human interest phases of the story. We wanted our audiences to know these people as they really were, to understand their problems, and to see what Civil Affairs was doing to help their plight.

Most of the cast were civilians, and my biggest difficulty in directing them had to do with language differences.
"PROFESSIONAL JUNIOR"* TRIPOD

with Removable Head

Acclaimed the finest for every picture taking use.

The friction type head which is unconditionally guaranteed for 5 years, gives super-smooth 360° pan and 80° tilt action. It is removable, can be easily mounted on our "Hi-Hat" low-base adaptor or Baby "Professional Junior" Tripod base. The large pin and trunnion assures long, dependable service. A "T" level is attached. The top-plate can be set for 16mm. E. K. Cine Special, with or without motor; 35mm. DeVry and B & H Eyemo (with motor), and with or without alignment gauge.

The standard size tripod base is sturdy. "Spread-leg" design affords utmost rigidity and quick, positive height adjustments. Complete tripod weighs 14 lbs. Low height, at normal leg spread, 42". Extended height 72". All workmanship and materials are the finest.

ADAPTABILITY: below are illustrated (1) the "Hi-Hat" ready for the friction type "Professional Junior"* tripod head (2) to be affixed. Under the "Hi-Hat" is the finger-grip head fastening nut that firmly holds the removable tripod head onto either the "Hi-Hat," standard tripod (3) or "Professional Junior" Baby Tripod (4). Note the positive-locking, fluted, height-adjustment knobs and tie-down rings on the standard (3) tripod base. The Baby Tripod has a "T" level, weighs 5½ lbs., is made of Aluminum, with Dural legs having spurs. Extended height—21 inches, depressed—16 inches. It's compact and sturdy. Quality throughout.

"Professional Junior"* Tripods, Baby Tripods, Developing Kits, "Hi-Hats" and Shiftover Alignment Gauges made by Camera Equipment Co. are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by many leading Newsreel companies and 16mm. and 35mm. motion picture producers.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

* Patent No. 2318910

The new "Professional Junior" Baby Tripod, shown ready for the Removable Head.
Among the Movie Clubs

Now that the war is over we undoubtedly can expect to see manufacturers of photographic equipment start an all-out effort to get new and better product on the market for civilian use. Competition will be keener than ever before. Equipment will be better—and in many instances perhaps lower in cost. But—it will probably be quite some time before the new equipment reaches the civilian market in sufficient quantity and in many instances perhaps lower in price.

The manufacturers of photographic equipment for three years with equipment that has been repaired and repaired to the point where no more repairing is possible.

Greatest advances probably will be in the field of color with color in time practically taking the place of black-and-white in the field of entertainment films—as well as in the educational, industrial, traditional and documentary fields. Eastman's Monopack and the monopacks of DuPont and Ansco will probably play a big part in the advancement of color, along with Technicolor which has been unable to supply the demand to date.

There will probably be some interesting developments in 16mm cameras and sound for 16mm, for both professional and amateur use. And in the projector field, too, there will probably be new and improved products on the market within the next year. It is logical to guess that all manufacturers will pass on to the civilian trade those improvements which have grown out of lessons learned in the war where equipment really had to take a beating, and still bring back the pictures.

Detroit Photographer Elected PSA President

Charles B. Phelps, Jr., F.P.S.A., of 1054 Bishop Road, Grosse Pointe 30, Mich., has been elected President of the Photographic Society of America to succeed John S. Rowan, F.P.S.A., of 508 Morris Blvd., Baltimore, Md., whose second term expires this year. Other new PSA officers are:

First Vice-President, Stuart M. Chambers, A.P.S.A., of 7 Hortense Place, St. Louis, Mo.; Second Vice-President, John G. Mulder, of Building 29, Kodak Park, Rochester, N. Y.; Third Vice-President, Victor H. Scales, 50 East 10th St., New York; Secretary, Mrs. Anne Pilger Dewey, A.P.S.A., of 4428 Malden St., Chicago, Ill.; and Treasurer, Charles Heller, of 1115 North 65th St., Philadelphia.

Southern Club

Highlights of the recent meeting of the Southern Cinema Club was the appearance of its former president, Don Hunt, home on furlough from service as combat cinematographer in Europe.

Hunt described in detail the work and experiences of the combat cameramen in Italy to the audience that was held spellbound by his talk.

Westwood Movie Club

The Westwood Movie Club of San Francisco will hold its annual Amateur Movie Makers' Exposition on the evening of September 28th, in the St. Francis Community Hall, Ocean Avenue and San Fernando Way.

In previous years this affair has been very successful in bringing together movie clubs, amateurs, home-made gadgets, available equipment, good 8mm and 16mm films and a large attendance. This year, through the efforts of vice-president Fred Harvey, a showman of many years standing, it has been enlarged upon to include semi-professional Hollywood effects, stage settings and acts. There will be no games, raffles or admission charge. All persons who are interested are welcome to attend, according to announcement by publicity director Edward Franke.

President George Lochrnsen will start the program with a three-minute address. The following will each speak for only one minute: Erik Unmak, Dr. I. C. Gobar, Jesse Richard son, Edward Franke, Don Campbell and Edna Spree.

Clubs participating in the display, demonstration and operation of photographic equipment, home-made gadgets and inventions will be the Sherman Clay Movie Club, Cinema Club of San Francisco, San Rafael Movie Club, Vallejo Movie Club and the San Jose Movie Club.

Ten 8mm shows will be operating simultaneously while the demonstrations are going on. Later the following 16mm films will be screened:

"Service With the Colors," by Fred Harvey.
"Ten Pretty Girls," by unknown photographer.
"Elegant," by Walter Johnson.

Despite the large amount of work necessary to plan the exposition in September, the club held a picnic and a regular meeting in August. That's enthusiasm.

L. A. Cinema Club

Glenn R. Kershner, A.S.C., adventurer, cinematographer and musician, is billed as top feature on the coming September meeting of the Los Angeles Cinema Club. Kershner will give an instructive talk and screen one of his films.

Also on the program will be a Walt Disney film, "The Amazon Awakens." Judge William J. Palmer will present an unusual group of Kodachrome slides under the title, "Photography When You Can't Get Far From Home."

Utah Club

The July picnic meeting of the Utah Cine Arts Club at Mill Creek Canyon was such a success that the club did a repeat at the same spot for the August meeting.

Four films were screened at the August meeting. They were:
"Canyon Trails," 8mm Kodachrome, by Bishop C. E. Schank.
"The '30ers," 8mm Kodachrome, by Al Morton.
"Rocky Mountain Sundaes," 8mm Kodachrome, by Al Locken.


Club boasts its largest membership since inception.

La Casa Club

As usual, the August meeting of the La Casa Movie Club of Alhambra, California, was a success both in attendance and quality of the films screened. On the program were two 8mm, two 16mm and three 35mm pictures. They were:
"Travesty on Golf," 8mm, by William A. Ware.
"Clouds Over Snow," 35mm, by Dr. G. E. Baird.
"Colorado to Arizona," 8mm, by H. A. McHenry.
"California Scenes," 35mm, by Dr. Harold R. Lutes.
"Bowling On The Green," 16mm, by Charles Manaman.
"Mexico Today," 55mm, by Guy Nelli.
"Pendleton Roundup," 16mm, by Mrs. P. M. Stiverson.

San Francisco Club

A very unusual and interesting program was presented the members of the Cinema Club of San Francisco at its August meeting. It was an Army Pictorial Service Program, arranged by Lt. Col. M. T. Lewis.

1. The armed services have used visual methods for training, orientation, information, education and entertainment to great advantage. Some of the army equipment was on display, and Col. Lewis outlined its use.

2. Major Tom Lewis, one of the six Signal Corps photographers who photographed the "Battle of San Pietro," discussed combat photography.

A popular Army orientation film, "The Battle of Russia," was screened.
Victor’s Safer Projection

**gives Complete film protection**

Films are valuable, whether owned or rented. Victor’s many exclusive safety features give maximum protection.

- **SAFETY FILM TRIP** — Guards against breakage — sprocket hole damage — automatically stops projector if any film loop is lost.
- **SCRATCH PROOF CHANNELS** — Guards against film scratch, because picture and sound areas do not touch stationary parts.
- **DUAL FLEXO PAWLS** — Exclusive Victor system guards against punching holes in film, due to soft cushioned action of pawls.
- **SWING-OUT LENS MOUNT** — Guards against dust-grit film damage. Instantly accessible for cleaning. Opens to 180°.

"Never Embarrassed when I use VICTOR Equipment" ... say thousands

Ask almost any VICTOR user ... they’ll tell you that there are less breakages, less embarrassing "hitches" when VICTOR shows the pictures.

And rented or borrowed film are *always* returned intact ... in good shape. Never any embarrassment here either. VICTOR’S features, many of them exclusive, assure a good show and full protection for valuable, costly films.

That’s why VICTOR is the favorite of schools, industries, churches and homes ... everywhere.

**Other EXCLUSIVE FEATURES THAT HAVE ESTABLISHED VICTOR LEADERSHIP**

- "Spira Draft" Lamp House — Much longer lamp life and greater efficiency.
- Sound Fidelity — The ultimate in true sound reproduction.

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MAKERS OF 16MM EQUIPMENT SINCE 1923
Making the Most of the Film Situation

By James R. Oswald

Critical film shortages have played havoc with picture taking plans this summer, but the moviemaker who can content himself with black and white filming for awhile, and whose camera isn't of the magazine loading type, will find solace in the fact that there is a reasonable substitute for the popular reversal films which have practically disappeared from the market, providing he is willing to forgo the advantages of daylight loading stock in favor of buying his film in bulk.

No, I'm not daydreaming when I say that dealers' shelves are literally stocked to the hilt with this film, and further more I'm not having hallucinations when I tell you that you will experience the greatest economy in movie making you have ever encountered. This may all sound like a bit of soap box oratory, but here are the facts:

Professionals and advanced amateurs are already familiar with positive film ... its use in the motion picture laboratory ... its title making aspects. But for those who are not so well acquainted with its characteristics let's elaborate a little on the subject.

The positive emulsion, so called because its primary use is for making positive projection prints from master negatives on a motion picture printer, is of extremely high contrast, which brings to light why it lends itself so well to title making. The film is usually developed in much the same way as a regular film negative, the black portions of the original, or of the title, becoming white, and vice versa. This further explains why amateurs have come to appreciate its value towards making their own titles ... titles made with the ease of black ink result on the screen in clear white letters with a crisp black background.

Wanting to explore the possibilities of regular movie making with positive film, developed by the customary reversal method, I set out to conduct a few experiments along this line, to see what the results would be. Since that time, practically all my black and white filming has been done on positive film, which, indeed, was the solution to my film problem last year.

For those who wish to do a little experimenting of their own, I am happy to pass along this information which may prove helpful to interested readers.

Positive film comes spoiled on a core, not on a reel, and must be handled in the darkroom, under a red safelight. It costs approximately one dollar per hundred feet in 16mm., but this does not include developing. In the darkroom, the film is spoiled on a discarded camera or projector reel, emulsion side in. Thence 'tis threaded in the camera in the conventional manner. Since there is no allowance made for leaders, the entire film is coated with picture taking emulsion, so no footage need to run off to get to the "starting point," as is usually done in the case of regular reversal film.

Upon completion of the reel, the film is unloaded, under the red safelight of the darkroom, where it is carefully sealed against the light, packed, and forwarded to one of a number of independent film processing laboratories, specifying development by the reversal method. Developing charges range from 85 cents to $1.25 per hundred feet, 16mm.

It is not the writers intention to "glamorize" positive film as being equal to, or greater than, the familiar reversal types. As a substitute, however, the accompanying frame enlargements speak for themselves. When purchasing positive film, simply ask for 8 or 16mm. positive, as the case may be, and open the way to continued movie making. As to exposure, it compares favorably well with orthochromatic type films, and is suitable for outdoor filming.
Amprosound "Premier 10"

A new 16mm. sound projector embodying many basic improvements derived from Wartime Experience

War is a hard teacher—but a good one! Ampro made good projectors before Pearl Harbor, but the war taught us how to make better ones. The new Amprosound "Premier 10" is dramatic proof of this fact. For here is a machine with numerous important refinements and improvements that reaches new high levels of projection efficiency. It is now available in restricted quantities for civilian use. For the complete story of this new projector, write today for special folder on the Amprosound "Premier 10."
to the professional cinematographer or recordist this means that the enormous waste of sound recording stock lost in bad "takes" may be eliminated as the wire may be substituted in its place. If a bad "take" is made it may be magnetically erased or wiped off while a new or subsequent "take" is being made. Then when the final "take" is made, completed, and approved, it may be transferred to the film by the process of re-recording or dubbing. Also the necessity of having to record a script or narration and then go back over it for correction of inflection, tempo, etc., offers undreamed of savings when the final expenditures of such operations are tallied at the end of each fiscal year.

To the amateur movie maker, a new, low cost method of adding sound to his home movies is within his budgetary grasp. The great expense of recording a sound track on a separate film, and then having it and the original silent film printed to a third film bearing the picture and sound track, along with the expense of buying and maintaining a sound projector, is completely eliminated. In addition the amateur will retain the original quality and beauty of an original Kodachrome projection, usually lost by duplicating procedures. It is with this phase—that of sound on wire for the amateur—that I wish to enlarge upon. The following discussion will take up both the pros and cons of utilizing sound on wire for home movies.

To start, let us turn back to the July 3rd meeting of the Syracuse Movie Makers Association. At this meeting a synchronized, 8mm. motion picture, sound on wire demonstration was carried out.

Previous to the meeting, three members of the Syracuse club along with the author and the narrator, gathered one evening at the Radio Workshop of Syracuse University. There, in two hours time, two 8mm. productions (one 16 minutes and the other 4 minutes in length) were post-recorded with synchronized narration and music on the Workshop's G. E. Model 51 Magnetic Wire Recorder. The first film, "North Lake, Gem of the Adironacks," was recorded simultaneously on wire and by conventional methods onto a 16", 33 1/3 rpm disc. The second film, "A Day at the Zoo," was recorded on wire only. These two films were synchronized to the recorder by means of a strobeoscope disc mounted on the take-up spool of the wire recorder. The "spill light" from the projector's gate was directed by means of a mirror down to the strobeoscope disc revolving with the recorder take-up spool. When the projector was running in step with the recorder, the bars of the strobe disc appeared to stand still. The slightest deviation in speed on the part of the projector or recorder could readily be detected and exact synchronization could be easily re-established by slowing or speeding the projector a trifle. Mr. David Reid, the narrator read a prepared script against a film which, up to that evening, he had never had the opportunity to review. In fact some of the scenes were yet to be edited into the film so only the 8mm. sections represented the length or duration of these scenes. Had he made any mistakes, it would have been a simple matter to erase the entire, or any part of the take and do it over again.

Then on July 3rd, the wire recorder was brought down to the clubrooms of the Syracuse Movie Makers and before an audience of members and guests assembled, the demonstration was run off. The setup for the demonstration was extremely easy. The only equipment needed other than the recorder-reproducer, projector and film, was a mirror and strobeoscope disc. The correct speed of wire had previously been threaded into the machine so that no time would be lost in getting underway. In as much as the General Electric model 51 recorder employs both separate input and stroboscope disc. The correct speed of wire had previously been threaded into the machine so that no time would be lost in getting underway. In as much as the General Electric model 51 recorder employs both separate input and output jacks, we were able to plug the line from the stage and screen speakers directly into the output jack of this recorder. The recorder's amplifier had more than sufficient power to drive the two screen speakers at a comfortable listening level. Approximately ten minutes was consumed in setting up the projector, the recorder, and aligning the mirror onto the strobe disc, mounted for playback purposes on the take-up spool of the recorder. With the show on the screen, only a very slight difference could be detected in the sound from the wire recorder and the sound from a standard 16mm. sound film projector. The difference consisted of the slight wire sing in the background, heard only in quiet spots. The narration and music unrecorded, there, was perfectly synchronized with the picture—and furthermore, synchronized by a person who had never attempted to do such before.

After the first picture, the film was rewound and was again screened, but this time the sound came from the disc.
to recorder due to differences in "braking tension." It may or may not prove serious depending upon the individual voltage regulation of the various locations where this equipment is used. Of course the changes in speed means a corresponding lowering or raising of the pitch of all recorded or reproduced sound. Maybe this is not important where speech alone is considered, but it is definitely objectionable where music or a musical background is employed along with the speech, especially so if the fluctuation occurs during and in the middle of a musical recording.

Second, there is a degree of wire noise or "sing" to be heard from all recorders and spools of wire. This degree of "sing" will vary with the different spools apparently due to slight differences in the diameters of the wire passing through the record-reproduce slot. With some spools the "sing" will only be heard in the background on low level passages or between words and sentences. On other spools the "wire sing" may be heard all through the recording, except for the loudest passages which masks the "sing out." This may be remedied by being sure that the "lacers" are operating in the same direction and are located in the same relative position as the wire is as the latter is fed off the supply spool either during recording or reproducing operations. Incidentally, if the wire scraped the feed or "anti-chatter" pulleys just before and after the record-reproduce head a similar result will be heard. The remedy for this is to wider the "V" of the pulley on a lathe so that such scraping against its side does not develop. Also it may be necessary to shim the recording head slightly to accurately line up the feed pulley bottoms and the record slot. This is supposed to be done by the factory, but use in the field may throw the pulleys slightly out of line and cause a source of distortion that is troublesome to track down.

Another factor which seriously affects the sound quality is the grounding or lack of grounding of the recorder when fed by associated equipment. Lack of good grounding will result in introduction of hum into the recording. Also if the microphone supplied with the equipment is held closer to the recorder than three feet, or if either the microphone or the recorder is operated in a strong magnetic field, hum induction into the recording will occur. In the first instance the hum will be induced into the microphone by its proximity to the powerful magnetic field set up by the recorder itself, and in the second place the recorder or microphone will be affected adversely by the external magnetic field.

On the G. E. model 51 and earlier models of this make, there is no provision made for aural or visual monitoring of the signal that is being recorded other than a small neon "overload" flasher. This is a distinct disadvantage as to the quality of the sound can not be determined until playback—when it may be too late for a retake. Consequently, sound volume can only be determined by watching for the occasional flash of the neon glow lamp caused by excessive volume peaks and resulting in some distortion of the recorded sound.

Although we have not experienced any wire breakage so far in either recording or reproduction operations, the two local radio stations have had this form of trouble. Breakage of wire does not mean that the spool is ruined or that the wire has to be discarded. The broken ends are annealed by a hot soldering iron or the lighted end of a cigarette, tied together, in a square knot, pulled tight, annealed again and the ends clipped off with a pair of scissors. The wire will then feed through the mechanism with no apparent trouble. We have two breaks in one of our spools (caused by improper winding,

(Continued on Page 320)
FONDA
DEVELOPING MACHINES

COMBINATION 35mm. and 16mm.

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Principle that Cannot
break your Film

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and
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PSA Inaugurate Permanent Collection of Photographs

Collection of contemporaneous photographs for the purpose of preserving examples of the best pictorial work of the times has been inaugurated by the Photographic Society of America. Invitations have been issued to members to submit prints before October 10 next for consideration during the initial selection.

Only superior photographic prints with outstanding salon records or other substantial reasons for believing they will be of interest to posterity will be included in the PSA Permanent Collection. Entry blanks may be obtained from PSA Headquarters, Franklin Institute, Philadelphia 3, Pa.

The Collection will be in charge of five trustees, who will also act as a jury of selection, and who will from time to time add or eliminate prints in order to maintain quality. Selections will be made at regular intervals.

The Trustees in charge of the Collection are: Charles B. Phelps, Jr., FPSA, Chairman, Detroit, Mich.; Frank R. Fraprie, FPSA, Boston, Mass.; Stuyvesant Peabody, FPSA, Chicago, Ill.; Lloyd E. Varden, FPSA, Binghamton, N. Y.; and Chester W. Wheeler, APSA, Rochester, N. Y.

Stabilized Low Voltage Rectifier Announced

High voltage low current rectifiers with electronic stabilization have been known for many years. Green Electric Company announces further advance in the rectifier field—stabilized equipment with low voltage high current output.

The unit illustrated is rated at 200 amperes, voltage range zero to 3 volts. Any voltage selected in range is maintained to within 50 millivolts over load variation from zero to 200 amperes, and with line voltage variation of plus or minus ten percent.

Voltage stabilization system includes motor-driven Powerstat and simple electronic pilot device. Principle is widely applicable to larger or smaller rectifier units. Descriptive data available from Green Electric Co., 130 Cedar Street, New York City.

New Coronet Slidefilm Series Announced

A new series of 35mm. slidefilms or filmstrips to be made from Picture Stories appearing in CORONET Magazine has been announced by the Society for Visual Education, Inc., of Chicago. The new series will include eight slide-films to be released one each month from October, 1945, through May, 1946. Each slidefilm is accompanied by a reprint of the Picture Story in CORONET which serves as a teacher’s manual. The slidefilms become the permanent property of those who receive them.

The October Picture Story is “THE LIBERATED” . . . a story of people who have been freed all over the world. It will be followed in November by “THE STORM” . . . a documentary story of storms. “THE GERMAN” is the subject for December. It will be an analytical story of the kind of people the Germans were before the war and what we may expect of them in post-war.
Shooting Production Under Fire

(Continued from Page 306)

Things went along fine as long as I was able to direct them in French. But the slave laborers were Russians, Poles, Yugoslavs, Czechs, and Greeks, who understood no French or English. The only alternative was sign language. I'm told I looked pretty funny giving them directions in pantomime, but strangely enough the sequence in which these people appeared turned out to be the most poignant and realistic in the picture.

Don was meanwhile having his own troubles with exposure. We had only a Weston 50 film available, and the weather was so overcast even at mid-day that we couldn't get anexposurable reading outdoors. So we found ourselves shooting exterior scenes with an array of floodlights for booster illumination.

We shot from just after sun-up to just before sundown every day, with our evenings given over to the writing of captions on the day's work and the planning of the next day's shooting schedule. Each night we would sit down together and decide just what we were going to shoot the next day—camera angles, lighting, action patterns, special effects—so that when we walked onto the set in the morning there were no arguments, confusion or waste of time. Each man knew exactly what he was going to do and we could go ahead and get what we wanted in the quickest possible time. Sometimes split-second timing was necessary in moving from one locale to another—but because of adequate pre-planning we never once missed our story.

When the shooting was finished I was ordered to London to work on the cutting, and spent several weeks at Army Pictorial Service making the rough cut, creating the opening montages from library stock, keying the narration, and selecting background sound and musical score.

This feature, released under the title: "G-5 in Action," was the first of a whole series of production documentaries which our unit continued to film under fire up until V-E Day. They varied in subject matter from "Yankee Ingenuity" to counter-sabotage. When the shooting was finished I was ordered to London to work on the cutting, and spent several weeks at Army Pictorial Service making the rough cut, creating the opening montages from library stock, keying the narration, and selecting background sound and musical score.

The important point was that we had proved our commanding officer's theory, that fully pre-planned documentary films could be shot effectively under fire using a number of basic studio production techniques. We were satisfied.
Cradle of Cinema
(Continued from Page 299)

On May 15, 1910, Edison announced that each and every film released by him will bear the register upon the film the fact that that film has received sanction of the National Board of Censorship of Motion Pictures, then established by the Peoples Institute of 318 East 15th Street, New York City. Slowly, and formidably, did the Edison Company begin to advertise the name of the star as in "The Piece of Lace," especially written by Edward W. Townsend for Mlle. Pilor Morin. Among the pictures produced and announced are the following:

"His Just Deserts"—Molodramatic, length 265 feet, listed as an iron foundery story, date of release February 4, 1910.

"The Surprise Party"—Comedy, length 260 feet.

"The Livingston Case"—a detective story, length 265 feet, 1910.

"An Equine Hero"—introducing Don Dulan's The World's Greatest Living Horse, length 725 feet.

"A Queen of the Burlesque"—a musical comedy, length 260 feet.

An announcement of the completion of Richard Harding Davis's "Ransom of Old Polonia." On May 15, 1910, issue I found this letter published:

New York, May 14th, 1910.
The Edison Studio, New York City, New York.

Gentlemen:

In my recent trip to Panama, I had occasion to stop in St. Louis and was attracted by the advertisement of a Moving Picture House, announcing the presentation of my story, "Pardners." I dropped in to see it and now take my first opportunity to express to you my sincere appreciation of the excellent manner in which you produced this. I was much impressed with the pains-taking care with which you em\nployed at the New York Studio, when I witnessed the rehearsal of this picture; and it is gratifying to see such a result. You did full justice to the merits of the story and this promises well for the success of the further stories in the series of mine, the exclusive rights to which you have contracted for.

Faithfully yours,

REX BEACH.

There were no player credits, no direction or photographer credits, but now and then there was an author credited with the production of the film. In the early days, we find that the producer had nothing to sell the public but the name of a well known author. The public chose to know the names of the players as you will readily learn in this article. What really played a great part was the written review of the story, the title, releasing date and the footage. There were suggestions for music for piano to be played with each picture as per example on the film.

"A Case of Identity" suggestions are as follows:

At opening: Moderato "Amaranthus"—till man drops to floor.

Agitato—till tailors office.

Moderato—"Amaranthus" till detective scene.

Agitato—till auto comes down street.

"Galley Gays"—Vive till deck of steamer.

"Allegro—Chunt San Paroles" till state-room.

Slow Waltz—"Roses Honeymoon"—till deckhand at work.

Barcarole temp—"Goodbye, My Lover, Goodbye" till detective scene writing on deck beam.

Agitato—till two sweethearts meet on deck.

Slow Waltz—"Roses Honeymoon"—till detective enters state-room.

"Pizzicato—Le Secret" (Intemesso) till girl sees detective.

Agitato—till two men have struggle.

Dramatic—till detective makes exit with prisoner.

Slow Waltz—"Roses Honeymoon"—till finish.

Can you imagine the sorrow of the heroine, the sincere, heavy dramatic content of the story? Well, it's difficult to believe that the producers went to all this trouble, a mere thirty-five years ago.

On February 1st, 1911, Edison announced some of his best known writers, listing them as, Ellis Parker Butler, Richard Harding Davis, Roy Norton, Edward W. Townsend, Samuel Clemens (Mark Twain), Rex Beach, Thos. W. Hanshaw, O'Hare, and John Luther-long as distinguished authors who write Edison scenarios. February 15th, 1911, he announced Miss Mary Fuller as a new Edison stock player. April 1, 1911, the Edison Company began to take cognizance of the importance of listing its players by name, then came, "Monsieur" drama, 1000 feet by Thomas W. Hanshaw, with its players Marc McDermott, Nancy Avril, Miriam Nesibitt, Robert Conner, 1000 feet. April 15th, 1911, Mary Fuller, Frank McGlynn, Guy Coombs, Louis B. Foley, "The Strike at the Mines," 955 feet, Charles Ogle, Nancy Avril, Edwin A. Clark, Frank McGlynn, William West, "Silver Threads Among the Gold," 500 feet, Marc McDermott, Miriam Nesibitt, William Bechel. At all times the Kinetogram kept selling the New Edison model B, projection kinetoscope with outside revolving shudder, guaranteed absolutely for one year, the cost was $225.00.

April 15th, 1911, "The Hunted Sentinel Tower," a legend of Morrow Castle, Cuba (made at Morrow Castle, in Cuba) listing the players as Herbert Prior, James Gordon and Mabel Trunelle. As time rolled on, sets as well as acting changed for the better. Gladys Hulett, made her first appearance in a 500 foot release of June 7th, 1911, under the title of "Father's Dress Suit." She had just completed a triumph in a great Broadway success, "The Blue Bird."

It was about 1912 when Edison designed the "Home Kinetoscope" a portable projector with a three section film, which was run forwards then a shift of the lever moved the center of the film, while you cranked backwards, then shift again and crank forward to run the whole film. Edison produced all types of films for these projectors which were manufactured in great quantities. If you think you have any original ideas on film production, just look at this line-up, which anti-dated your idea by more than thirty years. Here are films released for the Home Kinetoscope under many classifications; these films were produced by Edison in 1914:


"Charlie's Reform"—1000 feet produced in cooperation with the Russell Sage Foundation.

"Children Who Labor"—995 feet, produced in cooperation with the National Labor Committee.


I can recollect about 1912 when I would take the elevated to the Edison Studio in the Bronx, in search of extra work. I remember too, playing kid parts with Yale Boss, then a featured child star. Because the down town studios were more accessible, I stopped visiting the Edison Studio until I was called there for work.

The present Filmcraft Studio is as busy a studio as any in this area. Musical shorts are produced here for Columbia Pictures release. Soundies are made, as well as commercial subjects and now and then a feature. Recently I had occasion to photograph a three reel film at the Filmcraft Studio, produced by the Emerson Yorke Studio, directed by Emerson Yorke for the National Tuberculosis Association, featuring Gene Lockhart, with a fine cast of players from many of the best Broadway plays.

I sincerely hope that some day, this studio will become a National Museum, sponsored by the Motion Picture Indus-

(Continued on Page 322)
Bell & Howell Company Given New Type Award

A new type of recognition for private industry, a flag awarded for outstanding record of employment and training of veterans of World War II, was bestowed for the first time today on Bell & Howell Company, pioneer Chicago manufacturer of optical and motion picture equipment. The award, first in a proposed nation-wide series, was made jointly by the National Association of Personnel Directors and the national organization of Disabled American Veterans. The ceremony was witnessed by 113 returned veterans who are already at work in the five Chicago plants of Bell & Howell and approximately 1,400 workers in the company's Lincolnwood plant, 7100 McCormick Boulevard. J. H. McNabb, president, accepted the award for his company.

Dr. F. C. Jeths, Illinois commander of Disabled American Veterans, told company workers and officials of the national program to encourage employment of veterans which his organization has undertaken in conjunction with the association of personnel directors. The program entails operation of placement offices for veterans in principal cities, patterned after the office which has been operating in Chicago since July 1, and the recognition of firms or industries by awards similar to the one made to Bell & Howell today.

Wilding in Full Production on Civilian Orders

Norman E. Wilding, president of Wilding Picture Productions, Inc., announces that their extensive schedule of wartime Navy productions is wound up and re-conversion to civilian work has been gradually taking place over the last six months. "The studios and personnel of the Wilding organization are in full production on a huge back-log of civilian orders. We have been fortunate in having received a clean-cut break on the majority of our Navy training film subjects and the personnel which has been occupied on Government work is now bending every effort to render prompt service to our civilian clientele," states Wilding. "We now enjoy the greatest back-log of civilian business in our history and is it any wonder, with the job industry has to do to incite the minds of their retail outlets and sales personnel to the new horizons of peace time, that they should turn to the visual medium which has so effectively proved its merit in the problems of training masses of people most effectively in the shortest length of time during our war period. "Every effort is being made to expand our staffs with competent people in the New York and Cleveland offices and in the Detroit, Chicago and California studios to handle our ever-expanding schedule of pictures for old clients, as well as the many new accounts who have requested our counsel on visual training and sales promotion problems."

Craig Distributes New Cycon Metal Printer

Introduction of the new Cycon 5x7 Metal Printer for distribution throughout the United States has been announced by Craig Movie Supply Co., Los Angeles, Calif.

Bradley Heads New Project

The appointment of John G. Bradley, Chief of the Division of Motion Pictures and Sound Recordings in the National Archives, as Director of the new Motion Picture Project of the Library of Congress is announced by Luther Evans, Librarian of Congress.

CLEAR... Clear as a Bell

Clarion clear reproduction of every wave in the wide range of 16mm. recorded sound frequencies—whether it be speech, song, instrumental music, or sound effects—you get for your films with your new DeVry 16mm. sound-on-film projector: a 3-purpose unit that (1) SAFELY projects both sound and silent films: (2) that shows both black-and-white and color film without extra equipment; and (3) whose separately housed 25-watt amplifier and sturdy 12-inch electro-dynamic speaker afford portable Public Address facilities, indoors or out. DeVry Corporation, 1111 Armitage Ave., Chicago 14, Illinois.

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AMERICAN CINEMATographer • September, 1945 317
Production of Scientific Films for Biological and Medical Purposes

(Continued from Page 295)

be silent and with a minimum of captions. Captions should only clarify procedure and should be so made that they assist the fluid continuity of the film. Where possible it is desirable to make a silent and a sound version. Some take all their shots at sound speed so that a sound track can be added if desired.

Considering, then, the writing of the script for a teaching scientific film, a note should be made of all that is to be demonstrated and the demonstrations should then be split up into a series of stages or sections, beginning with the simpler and building up to the more complex. The script at this stage should, in fact, be more or less in the form of a series of lecture notes. If the script is not coherent, the film has no chance; it is likely to exaggerate the effects of imperfect planning. It is important to visualize as much as possible its appearance on the screen.

Using these notes as a basis, each part should be rewritten from the beginning, in full detail; every step in procedure should be put down. Particular points which should be stressed, which are likely to be missed or which may be difficult to understand, should be underlined or noted. Notes should be made of the approximate time required for each step. This is important as processes which may take place within the space of a few microseconds, or many months, have to be expanded or condensed so that they are demonstrated within the space of a few minutes; yet the audience must appreciate the relative time factors. Those parts which necessitate reference to the same subject of experiment should be carefully noted.

We now have all the information necessary for the writing of the shooting script with full camera instructions. With experience, it is possible to get a clear mental picture of the lens field, and to train oneself to think in terms of different focal lengths. When working with colleagues who have difficulty in appreciating the camera field, I use an optical viewfinder, such as that which can be detached from the Kodak Special, and ask them to view the fields from different angles and at different focal lengths. This is very satisfactory. It has resulted in great time savings due to the similar characteristics to the optical viewfinder. Lens computers might note this and produce a much-needed "zoom" lens for 16mm work.

The writing of the shooting script with full instructions is probably the most difficult of all. Only those shots which are essential to the demonstration must be made, though, of course, it is better to take too much than too little, as this can be put right by the cutting, but reliance must not be placed on cutting and editing to correct mistakes. Many factors must now be considered. Can the utilization of some film technique assist in clarifying difficult points in the demonstration? Or, again, is it desirable to use accelerated or slowed motion? If it is decided that the motion should be accelerated, remember that all movements in the field are accelerated. For example, a slow change may be taking place in a subject in which the respirations are also visible; if less than the standard number of frames per second is taken, say four, then when the film is projected at normal rates, the picture will show such rapid movements of the whole subject that it will be difficult, if not impossible, to see what is going on. This can be overcome by arresting respiration during the shooting, provided it is possible, and does not affect the result, as in the case of an X-ray cinematographic record of the slow contraction waves of the stomach. If respiration cannot be arrested the difficulty might be surmounted by a series of dissolves. If, however, you wish to impress the audience with the gradualness of the change (and at the same time show the extent of the change), then a normal shot followed by split screen photography will do this very well, the split screen showing the same part before and after the change. It can be further extended to show the effects of two different procedures on the same organ. This technique has been used by the author to demonstrate the effects of two different types of drug on the contractions and color of the spleen. It is also useful when comparison of blood pressure curves or other types of curves is desired.

There is no doubt that the time lapse work is of great value in kinemicrography and in the botanical field, in fact, much new information has been obtained by this method, so ably demonstrated by Warren H. Lewis and P. W. Gregory in their films on the developing ovum.

(To Be Continued Next Month)
starvation and disease in the lands of our Allies; to cause unemployment at home; to cause lonely hours in the lives of men who must stay overseas. America's Victory chest—your chest and mine—is helping to counteract this aftermath of war through the efforts of its 110 united agencies.

Remember that President Truman said in a speech on August ninth—"Europe is hungry. As the winter comes on the distress will increase. Desperate men are likely to destroy the structure of their society to find in the wreckage some substitute for hope. Unless we do what we can to help, we may lose next winter what we won at such terrible cost last spring." Our Victory Chest is going to try to take care of the distressed and the hungry.

The community services provided by the Victory Chest cannot be called charity. They are supported by everybody for everybody. They safeguard our community health, protect the community's children, help families and individuals who need help of any kind. Everybody benefits because everybody gives.

One of the great projects of United China Relief—an agency of your Victory Chest—is to provide seeds for the scorched earth of China. Whether it be relief for our Allies, comforts and relaxation for our armies of occupation, or help for returning veterans and others who need assistance in our own community, the 140 agencies of your Victory Chest are on the job. So, why not give at least one day's pay to your Victory Chest?

New Filmosound Library Releases Announced by B & H

HI GOOD LOOKIN' (Universal)
No. 2562—6 reels
New twist to the Pygmalion theme. Radio big shot goes out of his way to aid little girl from country, only to find himself first threatened with and then saved from eclipse by his romantic generosity. (Harrriet Hilliard, Kirby Grant, and various top-notch radio bands and stars) Available from September 24, 1945, for approved non-theatrical audiences.

LADIES COURAGEOUS (Universal)
No. 2564—9 reels
The saga of our women ferry pilots, a civilian outfit, later admitted to the Army Air Force. (Loretta Young, Geraldine Fitzgerald, Anne Gwynne, Diana Barrymore) Available from September 17, 1945, for approved non-theatrical audiences.

PEOPLE OF THE PONDS
No. 5848—10 min.
A study of the microscopic life inhabiting a pool in an extinct volcano. Remarkable photography of beating heart of Water Flea, seen through its almost transparent body. Trumpet Animalcule, Rotifer Cyclops, Hydra. Varied reproductive methods. (Produced in Australia)
Cine-Chronized Sound  
(Continued from Page 313)

the consequent "backlash," and breakage during rewinding), and these, after splicing, have been run through repeatedly with no trouble. Frankly, we have never been able to detect where these "splices" are by listening nor have they so far come apart.

A word about the permanence of recordings. The manufacturer claims that the recordings are permanent, until erased magnetically. We have had over sixty playbacks of one recording and so far can not detect any loss in volume or quality. The wire is made of medium carbon steel—and as such is subject to rust in a moist atmosphere, even though the wire is coated with a rust preventative grease. In three months of operation only one of our wires have so far shown any signs of rust or deterioration. However, the grease has caused some trouble by collecting in the recording slot. This results in the necessity of occasional cleaning of the slot to avoid fuzzy, weak recordings and reproductions. This can best be done by using a piece of bone or plastic ground down to .004" in thickness and utilizing it to scrape the dirt out of the slot.

From the standpoint of acceptable quality, the wire must be run at the full speed of 400 revolutions per minute on the take-up spool. This limits the length of any one recording to a total of thirty-three minutes, where speech is concerned. At the 200 rpm speed of the take-up spool (this is accomplished by internally changing the belt driving the take-up spool), about an hour and six minutes of understandable speech may be recorded. However, at this speed there is a very serious loss of all frequencies above 2,000 cycles per second and a consequent muffling of some speech sounds. This speed is not recommended except where speech and music is concerned. At the 200 rpm speed of the take-up spool, an hour and six minutes of understandable speech may be recorded. However, at this speed there is a very serious loss of all frequencies above 2,000 cycles per second and a consequent muffling of some speech sounds.

Some or most of the preceding disadvantages may be remedied by the time the war is over or as further development progresses. Also it may be possible to mechanically link the recorder to projectors to maintain mechanical synchronization by means of cables for recording and reproduction purposes. If a synchronous motor is used in both the recorder and the projector an electrical interlock system or Selsyn drive could be used to maintain synchronization, similar to our present day "double system" film recorders. However, until something better comes along, the system of stroboscopic synchronization of projector and recorder now utilized, will work very well and with a minimum of effort on the part of the projectionist.

All in all, and in spite of the existing disadvantages, the advantages of the wire recorder as developed today offer to the amateur movie maker an inexpensive, simple, and practical method of adding sound to his home movies, be they 8mm., 16mm., or 35mm.

* It is reported that Western Electric direct 16mm recording will now record an 8,000 cycle note on 16mm film.

New Bolex L-8 Camera

FOR SALE
Bell and Howell
FILMO
MODEL 70A
With 1 inch F3.5 lens and carrying case. 
Good as new.
Price: OPA ceiling.
For information write
Box 1022, American Cinematographer

The American Bolex Company has announced details of its new Bolex L-8 motion picture camera. It is explained that this camera shies away from complicated mechanisms, but offers simplicity in operation with maximum photographic results. One feature stressed is this camera offers constant motor speed whether spring motor is fully wound or not. Camera operates at one speed only.

The new Bolex L-8 is equipped with the Kern-Paillard ½ inch f/2.8 lens in micro meter focusing mount.

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An unusually fine variety of basic photo chemicals always in stock.

320  SEPTEMBER, 1945  •  AMERICAN CINEMATOGRAPHER
Research Council Adopts Release Print Revision

The Research Council of the Academy of Motion Picture Arts and Sciences has announced the adoption of the 9th revision in the Standard Release Print Leader, which is placed on all prints issued to theatres.

This Release Print Leader was first established by the Academy in 1931, and has been in use as an industry standard since that time. It specifies the markings on the beginning and end of every reel of release print sent to the theatre, to provide the projectionist with an easy means of properly threading up the projector and a visual signal on the screen for proper changeover from one reel to the next.

The principal revision just adopted specifies a change in the identification leader to include six frames on which is printed LENGTHWISE WITH THE FILM the reel number and the picture title. The inclusion of this information lengthwise with the film will be of material assistance to the projectionist so that he can now read the title and reel number much more easily when the reel is on the projection machine.

The Standard as revised is now under consideration by both the American Standards Association and the British Institute of Standards for possible eventual approval as an international standard.

This standardization was handled by the Research Council Basic Laboratory Committee, with J. M. Nickolaus, head of Metro-Goldwyn-Mayer Studio Laboratory, Chairman, and including George Crane, Michael Leshing, George Seid, Sidney Solow and Ray Wilkinson.

India Likes Movies

"The people of India are enthusiastic movie fans and when their purchasing power increases, as it surely will, they may provide one of the greatest film markets of the world," according to P. R. Young, manager of the India branch of Western Electric Company, Ltd. Mr. Young has just returned to this country on leave after five years in India.

"At present there are only 2,000 cinemas in India for a population of over 400 millions," says Mr. Young, "but all theaters are wired for sound and over half use American equipment. Native films may run for a surprisingly long time, sometimes a full year.

"Although film is rationed (now 12,000 feet per feature), Mr. Young points out that the number of showings is not rationed. Consequently there is a great backlog of pictures with not enough theaters in which to show them.

Mr. Young gives credit to the Indian government for a compulsory educational film program. To improve the education of the masses, the government produces films on such subjects as methods of agriculture, industry, and hygiene, and requires every cinema to show one of the films on every program.

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B&H-THC Ciné Lenses are not merely ideally corrected for today's monochrome and color work; their design anticipates the possibility of future improvements in film emulsions. Thus they are long-time investments. Write for details.

AMAERICAN CINEMATOGRAPHER • SEPTEMBER, 1945 321
Telefilm to Expand in 16mm Field

Plans for post-war expansion in the 16-millimeter film field have just been revealed by Joseph A. Thomas, president of the Telefilm Studios, in announcing the appointment of Ralf M. Spangler and Associates as public relations counselors and Advertising Production Agency, both of Los Angeles, to handle increased publicity and advertising programs on a national basis.

Thomas stated that the new Telefilm studios to be erected immediately on Hollywood Boulevard would be the most elaborately equipped 16-millimeter color film and sound plant in the world. Telefilm has produced films during the war for the government, Armed Forces, Lockheed, Douglas Aircraft, Standard Oil, Food Machinery Corporation, Santa Fe Railroad and other large corporations. Now that war-time shortages and restrictions will be removed, the studio’s intention to become the “little MGM” of 16-millimeter will be realized, President Thomas declared.

Crade of Cinema

(Continued from Page 316)

try. Here, should be housed personal effects, depicting film ventures and apparatus which were used by the companies, represented by such men as Edison, Gaumont, William Fox, Lewis J. Selznick, William A. Brady, Lubin, Kessel & Bauman and other pioneers who in a great measure were responsible for the rise of the film industry.

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Classified Advertising

FOR SALE

WE BUY, SELL AND RENT PROFESSIONAL AND 16mm EQUIPMENT, NEW AND USED. WE ARE DISTRIBUTORS FOR ALL LEADING MANUFACTURERS. RUBEN CAMERA EXCHANGE, 729 Seventh Ave., New York City. Established since 1916.

ARRIFLEX CAMERA, 200 FOOT MOTOR DRIVEN, HAND AND TRIPPOD CAMERA, WITH 32MM F2-600MM F1.8-7.5MM F1.8-125MM F2.8, ALL PAN TACHAR LENSES, 2 CARRYING CASES, 2-200 FOOT MAGAZINES, FILTERS, VOLT METER, TOOL KIT, TACHOMETER, COMPLETE 16MM STUDIO EQUIPMENT: HERNDT-MAUER MODEL D, RECORDER, 2-400 FOOT MAGAZINES, VICTOR FILM PHONOGRAPH WITH SYNC MOTORS: BELL & HOWELL 16MM 1200 WATT SOUND PROJECTOR: 17 FOOT EXTENSION MICROPHONE BOOM; DOLLY, DOUBLE CONSOLE TURNSTABLE FOR SOUND EFFECTS; BELL AS UNIT OR IN PART. 2 BARNETY BLIMPS FOR MITCHELL OR BELL & HOWELL CAMERAS. NEW PRESTO DISC RECORDER, 78 AND 33 1/3 RPM. AURICON RECORDER WITH POWER PACK, MICROPHONE BOOM, EXTRAS. COMPLETE DOUBLE SYSTEM RECORDING UNIT: BOLEX CAMERA 16MM 200 FOOT MAGAZINE, SYNC MOTOR, TRIPOD, AURICON RECORDER, 200 FOOT CAPACITY, AMPLIFIER, VINTEN GYRO TRIPTOP; CINEMATOGRAPHERS HAND BOOK, $4.95; GEAR TRIPPODS; 500-1000-2000 WATT SPOTLIGHTS, FRESNEL LENSES, REWINDS; 16-35MM GRISWOLD NEW. USED SPILCERS; AKELEY CAMERA COMPLETELY EQUIPPED, LENSES FROM 50MM TO 17". DE BRIE MODEL L, NEUMANN-SCINCLAIR, EYEMOS AND DEVRY CAMERAS, BELL & HOWELL. TELEGRAPH, BELL & HOWELL 70DA, FLEXO D. WRITE FOR CAMART TRIPTOP CIRCULAR.

CAMERA MART 70 WEST 45TH STREET, NEW YORK

BACKGROUND PROJECTION OUTFIT WORTH $10,000.00, now $4,950.00; latest RCA Phonophone dry galvanometer microphones, $375.00; RCA ribbon microphones, $65.00; complete Recording Truck for studio or location, $7,575.00; Recording Amplifier with condenser microphone, $125.00; Neumman-Scinclair 35mm camera, lenses, magazines, tripod, motor, cases, accessories, $1250.00; Continuous Contact 16mm. Printers, Picture, Track or Both, $375.00. Send for Summer Catalog. S. O. S. CINEMA SUPPLY CORPORATION, NEW YORK 18.

FOR SALE — WESTERN ELECTRIC-AKELEY Single System Camera, 12-volt motor, two 1000-ft. 16H magazines, 46mm., 50mm. 75mm. Astro F.2.3 lenses with matched finder lenses; frosted head tripod; new variable intensity galvanometer, portable amplifier, vibrator B supply, Cables, Cases and RCA microphone. Blue Seal Sound Devices, 7 Grace Square, New York City.

MISCELLANEOUS

SOUND RECORDING ENGINEER, WITH THOROUGH experience in all phases of motion picture work, desires position. Prefer complete charge of sound department. Box 1023, American Cinematographer.

EDITORIAL CHIEF OF MOTION PICTURE company would like to change for wider opportunity. Thorough knowledge all phases of picture business. Would like to develop into production manager. American Cinematographer, Box 1025.


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WANTED TO BUY FOR CASH CAMERAS AND ACCESSORIES MITCHELL & H EYEM DEBBIE AKELEY ALSO LABORATORY AND CUTTING ROOM EQUIPMENT CAMERA EQUIPMENT COMPANY 1000 BROADWAY, NEW YORK CITY 19 CABLE: CINEQUIP


SOUND PROJECTORS, CAMERAS, TRIPPODS, STUDIO, LABORATORY OR RECORDING EQUIPMENT. HIGHEST PRICES PAID. S. O. S. CINEMA SUPPLY CORPORATION, NEW YORK 18.

EASTMAN KODAK, SOUND BLIMP, RCA sound Camera, 400 ft. magazines. No lens. Eastman Kodak, 119 volt, Synchronous motor for Cine Special. 16mm, measuring machine. 16mm, synchronizer. 16mm Moviola editor. Bell & Howell Editor, Craig Editor, 16mm. Sound projector. Sam’s Electric Shop, 35 Monroe St., Passaic, New Jersey.

Buy Victory War Bonds

September, 1945 • American Cinematographer
HEART-WARMING as the familiar pictures of small boys slipping into the circus, this shot from the South Pacific is pretty good evidence that Yanks run true to form.

Their urge to enjoy a glimpse of home life is overwhelming. So, at odd moments, often under the weirdest of conditions, fighting men see the latest Hollywood pictures . . . sooner, frequently, than they hit “Main Street”!

Every night—all over the world—more than 5000 movies are jammed with an estimated 1,500,000 service men and women. The movies easily reach the places where entertainment matters most.

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One of a series of advertisements by KODAK testifying to the achievements of the movies at war
Dreaming About a New Home Movie Camera?

Then Here's a Timely Warning
By J. H. McNabb, President, Bell & Howell Company

Home movie cameras . . . and projectors, too . . . will soon begin to reappear in store windows.

But don't buy too hastily! Remember this: the fine equipment that you'll want . . . and must have to get movies of the quality your taste will demand . . . may be the last to become plentiful.

Why? Because makers of fine equipment will be engaged the longest in war production.

At Bell & Howell, for example, we can now build only a few Filmo Cameras and Projectors for civilian use. Most of our facilities are still required for making precision photo and optical instruments for our Armed Forces.

This long-continued demand is, we feel, the finest of tributes. You can probably get delivery on other movie equipment before you can on ours. But the equipment that's so widely preferred . . . Bell & Howell . . . can be yours if you will wait a little longer.

Mail This Coupon Today!

Bell & Howell Company
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Please send information on silent ( ) 8mm. ( ) 16mm. motion picture equipment; sound ( ) 16mm. film projectors—for ( ) personal ( ) commercial ( ) school ( ) church use.

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Since 1907 the largest manufacturer of precision equipment for motion picture studios of Hollywood and the world
In This Issue...
Telefilming Horse Races
Sensitive film meets a watchful eye

As newly coated Du Pont wide stock film emerges from air-conditioned drying chambers, it is met by the keen eye of an expert inspector.

S-L-O-W-L-Y . . . the film moves through the faint illumination of both transmitted and reflected safelights. The inspector has ample time to scan every inch of the coated surface. Should an imperfection appear, its exact position on the roll is recorded, and later that part of the film is cut out.

This is not a final inspection by any means. It is simply one of many such operations in the Du Pont plant that help assure quality products. This care in manufacturing Du Pont Motion Picture Film explains why America's leading cinematographers give it their wholehearted stamp of approval.

E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware.

In New York: Empire State Building
In Hollywood: Smith & Aller, Ltd.

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CHECK THESE FEATURES
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• 3. Color balance
• 4. Fine grain
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• 6. Contrast
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Eyemo

...THE AIR CORPS' SUPER-SNOOPER

Eyemo fights, too. Members of Camera Combat Unit F go aloft for their first aerial photographic flight armed with Eyemos. Official Army Air Forces Photo.

ALOFT, Eyemo films sharp, clear, accurate records of enemy defenses . . . spots gun emplacements . . . points out hidden landing strips . . . discovers how many enemy men are where in the combat area.

In the hands of well-trained, capable youngsters like the two above, Eyemo also films battle actions . . . helps keep a continuous history of the way we're winning the war on every front.

It's natural that Eyemo should be entrusted with these vital wartime tasks. It's always been the camera for men of action. It's always been the camera that gets the scene . . . that can take the punishment of constant knockabout use . . . because we designed and built Eyemo as a newsreel camera . . . to be used by men who must film the news fast, accurately . . . who must depend on their cameras to get the shot the first time . . . or not at all.

And today Eyemo is the first choice of seasoned news cameramen wherever news happens from New Guinea to New England.


Bell & Howell

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AMERICAN CINEMATOGRAPHER • October, 1945 327
CONTENTS

Review of the Film News................................................. 330
Aces of the Camera (Glen Gano, A.S.C.)............................... 331
The Men Behind the Combat Cameramen, By SGT. HERR A. LIGHTMAN 332
Hollywood's Smallest Studio.......................................... 333
Telefilming Horse Races............................................. 334
The “Guzap” That Went to War........................................ 335
A.S.C. Around the World............................................ 336
Through the Editor's Finder.......................................... 338
Home Movie Projectors, Era of 1912................................. 340
The Production of Scientific Films for Biological and Medical Purposes......By J. YULE BOGUE, Ph.D., M.R.C.V.S. 342
Among the Movie Clubs............................................. 344

ON THE FRONT COVER is a scene from “Never Say Goodbye,” a Warner Bros. production starring Errol Flynn. At the camera is Director of Photograph, Arthur Edeson, A.S.C. Photo by Mac Julian.
There is no practical projection feature or operating convenience which the Animatophone lacks. Every need of the user, and every conceivable operating condition has been anticipated and provided for in this, the greatest projector of them all.

In many schools, in homes, in churches, the young folks set up, thread, run and re-wind the Animatophone. It’s easy . . . it’s foolproof. During the late war, entirely untrained soldiers, sailors, WACs and WAVES found the Victor Animatophone the easiest to operate, as well as affording the most faithful sound projection and brilliant screen images.

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**ABUNDANT FINGER ROOM** — Easy accessibility makes threading a pleasure.

**SWING OUT LENS MOUNT** — Exclusive Victor feature which adds to ease of threading.

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MAKERS OF 16MM EQUIPMENT SINCE 1923
LOOK for both American and British film industries to start producing motion pictures in the German language soon. It seems that at least a thousand important German film production personalities, including many in the creative branches, have assembled in Vlotho to see what can be done about reviving German film production.

With an eye to a future big money distribution field, British and American film company representatives are reported offering fat contracts to many of the Germans to leave Germany and work on German language films in London and Hollywood. With most of the better German film creators already out of Germany, it looks as though German film production business will be hit its final blow if the remainder of its creative brains leaves for Hollywood and London. But such a move would give British and Americans a lush future film market.

**Industrials by Majors**

With Monogram studios leading the way with an industrial film, made for a group of Los Angeles clothing manufacturers, it is more than possible that major companies in Hollywood will soon be delving into the industrial field which is rapidly becoming a very lucrative spot. Industrial made by Monogram is a 60-minute film on Kodachrome, and is in the nature of a lavish fashion show. It was paid for, according to reports, by a group of sixty Los Angeles clothing manufacturers and is being shown to buyers and patrons of leading department stores.

**American Films in Netherlands**

A strong contradiction of widespread rumors that American films have been banned in the Netherlands by a government decree, comes from Renier Urge of the Netherlands Association of Cinema Owners (Nederlandsche Bioscoop Bond). Mr. Urges declares that the royal decree issued by the Netherlands government in London in 1944 only made the importation of films into the country subject to government license. However, this decree is now invalid and there are absolutely no restrictions upon the importation of American motion pictures. The main drawback to a larger importation of American motion pictures has been the scarcity of foreign exchange, but large amounts now have been made available for the purchase of films abroad. He also brought out the fact that the Ministry of Education, Arts and Sciences had announced that two royal decrees concerning the purge of the film industry of Nazi elements would be published shortly and that in the meantime no motion pictures will be made inside the Netherlands until the producers have been given a clean bill of health by the Film Purging Commission. Adding a general survey of the Netherlands film industry, Mr. Urges said that an additional complication has been the shortage of film materials which made it impossible for the industry to make sufficient copies for wider distribution.

**Independent Production**

Of particular interest to free-lance cinematographers in recent news is a move toward decentralization of motion picture production, which bids fair to increase in coming boom post-war era. It is revealed that 43 independent producers will make at least 75 of the feature pictures which will be released by major companies during the coming year. This is exclusive of the group who release pictures through United Artists. With increased independent production there should be greater demand for top free-lance directors of photography.

**16mm Challenge**

Judging from the news, America’s theatres are going to face tremendous competition from the 16mm industry in the not too distant future. In Hollywood alone there are at least a score of production companies that are planning to produce entertainment film programs for 16mm, and it is reliably reported that a number of groups are making efforts to line up 16mm circuits to reach the home projector owners. New 16mm producing companies are planning to make good pictures of highly entertaining type. Major companies that now sell 16mm rights to their films do not release them for at least a year after they have played the theatres, and it is felt the new narrow gauge films planned will cut drastically into the majors’ year old releases as well as make a dent in theatre grosses. Large number of army and navy cameramen who have been trained in use of 16mm cameras are also said to be planning to get into the new field.

**Raw Stock**

Fear that increased shipments of raw stock to foreign countries might cut in on needed supply for American film companies were allayed by statement from Washington that control over raw stock exports will be retained, at least until the middle of October and maybe longer, by the War Production Board and the Foreign Economic Administration. It had previously been announced that all controls would be lifted. New moves assure American film companies of all the raw stock they need. Washington announcement said war-expanded facilities for raw stock production permit a maximum quarterly production of between 585 and 600 million linear feet.

**Television**

From New York comes word of the establishment of a permanent television film unit by the American Broadcasting Company. It is interesting to note that the company is employing only union cameramen, which indicates that television broadcasters realizes that motion picture cameramen, with their years of practical experience, are what television needs. At start of television the engineers attempted to have cameras manned by engineers, but eventually have learned that the only substitute for a good cameraman is another good cameraman.

**New Trend**

With the close of the war a new trend in production policy has come to the fore. New policy brings in movies relating to the problems of service men returning to post-war life in America. Practically every studio in Hollywood has one or more films of this nature either in production or preparation. Method in which various studios are treating the films dealing with readjustment and rehabilitation of the veterans varies from bitter dramatic indictments to light musicals and comedies.—H. H.
ACES of the CAMERA

GLEN GANO
A. S. C.

By HAL HALL

GLEN GANO, A.S.C., has created more mechanical devices pertaining to the picture business that have eventually been patented by other people than any other man in the motion picture industry.

While Glen is a cinematographer by profession, he is a scientist at heart, and throughout his quarter of a century in the profession he has spent years in research, with results that have been of tremendous value to everybody but himself. And—he is not through with his research and inventiveness yet—we predict that one day before too long he will be heard from with another forward mechanical step in the photographic field, but this time Glen will become a business man for a change and will profit from his labors.

In 1917, during the first World War, a group of 65 men from the film studios, under the leadership of Lee Lawson of Universal Studios, went to Washington, D.C., where they formed one of the units of the camouflage division. For a time they were together as a part of the 40th Engineers. Glen didn't like being a soldier. He wanted to be transferred to some other outfit where he could use his knowledge as a cameraman. Not being able to make any headway toward a change by letter writing, he decided he would have to get to the proper people in Washington in person. So he arranged to be made a cook in his unit. As a cook he got every other day off, so he went to various governmental departments in Washington every other day seeking some means of being of better service in some department where his camera knowledge could be of value.

Finally, he succeeded in reaching Herbert E. Ives, distinguished scientist, who immediately requested that Glen be transferred to the Aviation Section of the Photographic Science and Research Department. Professor Robert A. Millikan headed this department. Among the scientists and physicists connected with the department were Ives, Dr. Duff, author of Duff's Physics, Dr. Merrill of the Mt. Wilson Observatory, Adolph Neitz of Eastman Kodak Research Laboratories, and many others.

What was needed was film fast enough to photograph camouflaged objects on the ground from airplanes flying at various altitudes. Glen worked in close collaboration with Ives and Dr. Duff. The others came in from time to time to check up on the progress being made in the developing of the fast film. Facilities for experimenting were unlimited, and Glen spent hours in the laboratory studying and working with Ives. A pilot would take Glen up each morning to make his photographic tests. The remainder of the day was spent in the laboratory. The final result was fast panchromatic film. This was for the government.

After two years in this experimental laboratory, Glen was instructed to compile all the data and formulae pertaining to panchromatic film. When that was done, his report was shipped to the Eastman Kodak Company laboratories in Rochester. At the end of 1919 Glen returned to Hollywood, brimming over with enthusiasm and new photographic ideas which he had learned in his two years of experimenting. Among these new ideas was the idea of shooting night shots in daylight. Glen hit upon this by accident.

He had sensitized some film in the laboratory, and from the top of a hangar was some test shots. He had used the wrong combination of filters, so when the film was developed it appeared to have no image on it. He kept it going through the developer until highlights finally started to appear. Then full development brought out the picture which looked exactly as though it had been shot at night. He started at once to experiment with different filters and sensitizing solutions until he finally obtained the perfect effect. He put this into prac-

(Continued on Page 348)
The Men Behind The Combat Cameramen

By Sgt. HERB A. LIGHTMAN
U. S. ARMY SIGNAL CORPS

We first spoke of it on board ship during our recent voyage home from overseas. A group of us, all combat motion picture cameramen of the 167th Signal Photo Co., were sitting up on deck talking over the year we had just spent filming the European war.

We all agreed that the company had done well on its assigned tactical mission. The mission had not been an easy one. As official photographer for General Bradley's 12th Army Group, it had been our job to accompany front-line troops into action, to shoot under fire newsreel release to troops overseas and to the folks back home.

Our record spoke for itself. The 167th had participated in four major battle campaigns, shot footage during a period of 250 consecutive combat days, and had been presented with the meritorious service award. In addition there were numerous individual awards for valor.

The photographic record, too, was impressive. Combat units covered the European theatre of war.

As I look back now, I can say that my career as an Army cinematographer began in the offices of the Research Council of the Academy of Motion Picture Arts and Sciences way back in Septem-ber, 1942. At that time the Army needed trained cameramen and needed them badly. The Academy had accepted the challenging job of recruiting these cameramen for the Signal Corps.

I recall now the various types of men who passed through the offices of the Academy to be first interviewed, then either accepted or rejected for the service.

We were a mixed group. Some of us who had come from the studios knew only production camera techniques and were used to having such aids as booms, dollies and fancy lights. We knew that off-the-cuff combat photography was a far cry from the sound stage.

Others in the group were veteran newsreel cameramen used to on-the-spot coverage of fast action. But they, too, had to be trained the Army way.

A third large group was composed of amateur cameramen eager to join up. Some of these were indifferent hobbyists who looked on motion pictures as a now and then time-killing pastime. They were ruled out. But others—serious, advanced amateurs who wanted more than anything else to make motion pictures—these had something to offer besides mere enthusiasm. Many had been active in cinema clubs. Some had made commercial, industrial and educational films as an avocation. A good number had developed a very professional style of shooting a camera.

It was the job of the Academy to interview each man personally and to determine if that man could be trained into the type of cameraman who would make good motion pictures under fire. For we were told, then and there, that our mission would be strictly combat.

When the job of selecting the right men had been completed, the next step was to train these men in the fundamentals of combat cinematography, to give them all a common basis for carrying out the important task ahead. This is where the men of the American Society of Cinematographers stepped in.

First came four weeks of intensive training in photographic chemistry and physics under the tutelage of Emery Huse, A.S.C. For the more advanced candidates this was valuable review. For the less experienced it provided an indispensable fund of background knowledge. For all of us it was four weeks of gruelling study and mental gymnastics.

(Continued on Page 355)
Hollywood's Smallest Studio

By HILDA BLACK

YOU'VE got to hand it to Gene Blakely, for the lad has patience, courage and drive to back up a terrific ambition. Cameraman, artist and "fellow-with-a-dream," Blakely operates a parking lot on Las Palmas, just south of Hollywood Boulevard.

But—between running cars back and forth on the lot, this lanky, likeable, Gary Cooper-ish looking young man bounces in and out of the attendant's hut where he has maintained, since March, 1941, what is probably the most unique and certainly the smallest, movie studio on record. It's only eight by five feet, and Blakely has to stoop a little to enter, but in this little studio in odd moments when he is not parking cars, he has created "Siegfried," a film that may set a new standard in entertainment for animated short subjects.

Using the old Scandinavian Saga of Siegfried and Brunhilde as the basis for his story, Blakely has done right nobly by those characters. Beautiful heroine Brunhilde is his idea of Olive de Havilland. "Not so much in actual appearance," he explains, "but more as a character study. To me, Miss de Havilland is the personification of all the wonderful qualities the Norse maiden possessed."

For heroic Siegfried of Poetic Edda fame, he used himself as model, studying facial contours and proportions in the mirror. (I know another artist whose cartoon hero is patterned after himself; look closely at "Red Ryder" and you'll see his creator, Fred Harman.)

Blakely has drawn a Wotan, not terrible nor awe-inspiring, but more resembling a pranksish Little King; three delectable Rhinemaidens with guile, seashell combs and Lana Turner curves; Mimi and Alberteh, the peculiar gnome-like dwarfs who covet, not the Maidens, but their precious Rhinegold. And last, but by no means least, there is the villain of the piece: the evil dragon.

"Perhaps having a small son of my own makes me acutely aware of one (Continued on Page 356)
As this article was being written eight days after opening of the Hollywood Park horse race meeting, no jockey had been accused of foul riding, or suspended. This unusually serene situation followed a wild series of rough riding complaints at the Del Mar track, just closed.

Critics claimed the sudden good behavior of the jockeys wasn't all a case of any saintly desire to reform. Instead, observers said it was induced by a motion picture innovation at the track called "Hollywood Park Telefilm Control."

Under this telefilm system, which cost the Park a small fortune to install and operate, 16mm telefilms are taken of every race from start to finish.

Cameramen are perched in six towers around the track, shoot "head on" footage of the action from the starting gate to the finish line, catching the horses as they round the turns and hit the straightaways. Jockeys are conscious that the camera eye is trained on them to record their every move—including any of the 1000 tricks in a jockey's bag.

When the race is over a man in a station wagon rounds the track, picking up film which slid down a wire from each tower. He rushes the film to a darkroom where it is hastily printed and dried (under a secret process claimed by the Telefilm studios) and is ready to be shown six minutes after the race on a six by eight foot screen in a miniature theatre if the board of stewards so desires. Any infraction of the rules will be plainly visible, it is claimed.

Joseph A. Thomas, Telefilm Studios president, takes a bow for devising the system and maintaining it in operation. Jack Mackenzie, Hollywood Park general manager, is accredited with having conceived the idea of enlisting Hollywood's movie brains in an effort to raise the standards of racing.

When his studio received the lucrative contract, Thomas rolled up his sleeves for a terrific task. Fortunately, he already had surrounded himself with top men of the industry. Several of his men had been Army and Navy cameramen, had worked under fire in Africa, Italy,

(Continued on Page 354)
The "Guzap" That Went To War

The oft-repeated war-time cliche—"Such-and-such has gone to war," was more than just a threadbare alibi to account for the shortage of 16mm. motion picture cameras for civilian use. In fact, that monotonous refrain was the only proper way to express what had become of the Filmo 16mm. camera, produced since the early 20's by Bell & Howell Company, manufacturer of professional and amateur movie equipment, but soon to be available again.

The Filmo went to war as the "GSAP"—pronounced "guzap"—which is Air Force diminutive for "gun-sight aiming point camera," or—"Camera, Gun, Type AN-XE." And, as the guzap, it rode in the nose, wings or elsewhere on combat planes, recording the shooting exploits of combat pilots. When the guns start firing, the guzap jumps into action within an eighth of a second, showing where the bullets went, what havoc they wrought, and how the victim reacted. The reaction is recorded by the guzap, "on its own," as it were. Because it continues taking pictures for a pre-set one to five seconds after the firing has ceased.

The pilot does not have to be a photographer to operate the guzap. But he has to be a good gunner to bring back a prized roll of film showing a kill. He needs only to press his trigger—his gun trigger—to start the shooting of both bullets and pictures. Where the gun points, and fires, the guzap "looks" and records what transpires, actuated by an electric motor supplied with current from the plane's electrical system.

Many breath-taking sequences, some of which have reached the news-reel screens, have been brought back from combat encounters by the guzap. The "pilot's eye-view" of enemy installations or equipment being shot up, of enemy planes disintegrating in mid-air, has been the product of this three-pound, ever alert picture maker which, in its peace-time version, was so popular as a recorder of home movies for the amateur picture devotee.

In going into the fight aloft, the guzap version of the Filmo had to be fortified for conditions and rugged usage never encountered in the hands of the movie amateur, however. Temperatures, in all climates and at all altitudes; vibrations set up by aircraft power plants or aircraft guns; quick starting lest the battle to be recorded be over before the camera started functioning—these were but a few of the requirements or conditions Bell & Howell engineers had to work out with engineers of the Photographic Laboratory, Engineering Division, Wright Field.

Because the guzap had to function perfectly at extreme altitudes, while temperatures are encountered fit to freeze even a camera with only its lens sticking out of a plane wing or nose, a heater had to be provided. The guzap has its own electric heater, thermostatically controlled, right inside the camera case. The heater draws only two amperes, but assures operation at temperatures from sixty degrees below zero to one hundred and sixty-five above zero, Fahrenheit.

(Continued on Page 349)
SEEING BERLIN—Here we see Captain Ted McCord, A.S.C., and Lt. Col. Crump, writer at Warner Brothers Studios, in the heart of ruined Berlin. They covered the famous Big Three Meeting at Potsdam, and in this scene they are about to make lasting film records of what our bombers did to Berlin. A.S.C. men were at every front during the war and played a big part in recording it on film for posterity. Capt. McCord is now out of the service and is back at Warners.

HORSLEY HONORED

M/Sgt. David S. Horsley has been presented the Legion of Merit by Colonel J. K. McDuffie, Commanding Officer of the 18th AAF Base Unit (Motion Picture Unit), Culver City, at a ceremony held at that installation.

Sgt. Horsley was awarded the Legion of Merit for the performance of outstanding services during the period of September 1944, to March 1945, in connection with the invention and development of a secret device which materially added to the success of briefing B-29 crews for Jap operations.

Formerly employed as a cameraman by Universal Pictures, Inc., Sgt. Horsley is a member of the American Society of Cinematographers, International Photographers, and a past member of the Valley Radio Society.

Sgt. Horsley and his wife, Mrs. Alma V. Horsley, reside at 11304 Burbank Ave., North Hollywood, California.
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for
your patience
your understanding
your friendly helpfulness
in our difficulties of
the past four years——

WE PROMISE YOU
from this time forward——
A complete and extended program
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THROUGH the EDITOR'S FINDER

THREE new members were added to the roster of the American Society of Cinematographers, and one other member who has been out of the A.S.C. for some time resumed membership; he is John Alton. The new members are Vincent Ferrar, resident member; Nicolas Toporkoff of Paris, France, and Robert J. Sable of Chicago, Ill. They are non-resident members. We are also glad to welcome the return from the Armed Service of Ted McCord and Wilfrid M. Cline. Captain Henry Freuldig, M.C., is also reported back in the States from the South Pacific, but still in service.

FILM Producer Jack L. Warner should be praised for his stand in regard to the making of motion pictures with economic themes in the post-war era. "Post-war film makers should not hesitate to concern themselves with such problems as economic stability, full employment and the stamping out of intolerance," says Mr. Warner. He explains that his company has made so-called war pictures because "I felt that a motion picture art which failed to concern itself with the impact upon the individual of the greatest military conflict in history would be a very sterile medium indeed."

Mr. Warner adds, "When the atomic bomb hit Hiroshima, every man, woman and child in the country became aware of their personal stage in the maintenance of peace. And when an airplane plant or a shipyard closes down, the subject of unemployment becomes of vital interest to the men and women who are out of work. I doubt that motion pictures can neglect these themes."

Right, Mr. Warner. Films have passed the custard pie stage. They have become a vital factor in our everyday lives. They should not hesitate to deal with the problems that are paramount in our lives.

INTERESTING, indeed, is the statement that aerial photography as an aid to policing Germany and Japan should become an integral part of our plan in those countries, made by Sherman M. Fairchild of the Fairchild Camera and Instrument Corp., New York. "Air photos were responsible for 90 per cent of our military intelligence in World War II, and it is more than logical we continue to use photography to assist our occupation of the conquered countries," Fairchild said. In his opinion, regular photographic observation of occupied areas can determine whether the Japs and Germans are fully living up to terms of surrender in the reconstruction period. The photographs, when studied by Army and Navy photo-interpreters, from Fairchild said had proved to be "America's secret agents No. 1," can thwart any attempts of the citizens in the conquered countries to "go underground" or "pull funny tricks."

Fairchild, an outstanding authority on aerial photography, added that no comprehensive planning for rebuilding bombed and shelled areas can be done by merely walking through the ruins. Instead, aerial photographs can be used as a map for sensible, economical reconstruction.

"Both the Army and Navy have thousands of aerial cameras at their disposal," he said, "and this equipment should be as fully used as an instrument of peace as it was a weapon of war."

To accomplish this task, Fairchild feels an overall Army-Navy organization be set up for the purpose, with full cooperation from the occupied countries.

Fairchild said aerial photography has already successfully been used as a health measure, too, aiding in malarial control in certain Pacific areas wrested from the Japs. Study of photomaps, supplementing sketchy ground survey, paved the way to proper drainage and cutting of malaria-producing brush areas. Through this method, modern medical science has been able to eliminate malaria in many sections, notably in Guadalcanal.

Certainly, photography is becoming a more and more important factor in our lives.

PRACTICALLY the only big business that has not and does not spend vast sums in telling the world what it has done in helping the war effort is the motion picture industry. The aircraft industry, automotive and rubber industries, railroads and countless other industries have spent untold thousands of dollars for paid advertisements in every conceivable type of publication touting their part in the war. But the motion picture industry has continued to go quietly along, doing a terrific part in helping win the war but saying nothing about it.

Perhaps no industry in the world has done so much to keep up the morale of the men in the service as has the film industry. To every far-flung fighting front went actors and actresses from Hollywood to bring cheer and entertainment to our troops. When morale was low at some given spot the war department merely asked the film industry for help, and away would go the greatest film stars in the world to entertain the men and bring their morale up to standard. Practically every member of the film entertainment field was pledged to go wherever he or she was needed—and they went.

But of still greater importance, perhaps, was the contribution of motion pictures to the men in the services. Francis Harmon, War Activities Committee chairman for the film industry, has just reported that the motion picture industry gave films on 16mm stock to the armed services totaling a value of $38,500,000. This represents 43,306 prints of feature films and 33,326 prints of short subjects. These were not old films—they were the newest films made in Hollywood. In some cases films were re-released to the men in the service before they were shown in America in the film theatres. And—these films were GIVEN by the industry. The airplane and automobile manufacturers sold what they made for the government—and yet they bought page after page of space in magazines and newspapers to tell about their contribution, which they had a perfect right to do. But, the film industry said nothing—just served.

Approximately 150,000,000 feet of 16mm raw stock was used in making up the industry's gift to the services, which started a few weeks after Pearl Harbor. One-third was contributed by Eastman Kodak and the photo products division of DuPont. The balance was paid for by donor companies, and the processing laboratories waived all profits. It is time the world should be told of the service of the film industry in winning the war. Perhaps members of Congress, always eager to pick on the motion picture industry and condemn it, might come up with red faces if someone should read into the congressional record the story of the magnificent job the film industry did during the war... and for free.

ONCE again we harp on the subject of giving directors of photography more credit on the screen and just simply CREDIT in the advertising of entertainment motion pictures. To the best of this writer's knowledge the only production head who gives advertising credit to a director of photography is Hal Wallis who releases through Paramount.

As we have said many times before, one of the most vital and important elements in the making of a good motion picture is the photography. Without photography we would have no picture. No matter how great the ability of a director, if his cinematographer cannot get the proper mood in his lighting that director's job will be injured. No matter how great the ability of an actor, his performance is hurt by bad angles and poor lighting. No matter what the mood desired by the writer, it is lost if the cameraman doesn't do his job properly.

The director of photography is one of the key individuals in the making of a film, so why shouldn't he be given equal billing with the other key figures?
"Carbon arc lamps give excellent light quality and quantity, and control."

William V. Skall, A.S.C.
Home Movies Projector Era Of 1912
By R. REES LUMLEY

WITH the introduction of 8 and 16mm films, cameras and projectors the "Home Movie" has been made popular and practical. The thousands of films available for rent or purchase, the never ending flow of gadgets of every description, new this, new that, make the home movie fan quite able to do most anything he may desire.

There was an era of home movies, however, which was not so fortunate as to have much assortment of equipment; no cameras, no gadgets. It did have a selection of films from the short, crudely made, "nickelodeon" pictures.

This era was during the time of the "Edison Home Kinetoscope" which was placed on the market about 1912. (Fig. 1.) This little projector has two features, at least, which are found on theatre projectors today; the safety fire shutter and Geneva Cross intermittent.

The mechanism is simple and quite modern in its makeup. (Fig. 2.) The continuous belt system, metal reels, rewind crank on upper reel shaft, even the reel arm position and shape is suggestive of its having been copied by modern projector designers. In Fig. 3 there is more evidence that there is "nothing new under the sun"; the door type gate, the intermittent teeth below the aperture, the recessed film track and the flat spring tensioned gate. Note the three apertures.

The projection lens is positioned permanently to the top of the main casting and by means of a rack and pinion shift (Fig. 4) the intermittent movement, gate, and reel arms can be moved side-

Figure 1
Figure 2
Figure 3
Figure 4
Figure 5

(Continued on Page 350)
THE FILM'S
THE THING!

THE million details of production—from script and casting to the final take—have only one purpose: to flash a particular pattern onto a ribbon of film. It's the film itself that must make the picture. When all is done, the film is the picture.

A good reason for choosing Ansco Supreme Negative.

For this outstanding film has the ability to make the most of everything it sees through the lens.

Its smooth gradation, fine grain and high resolving power, in competent hands, permit negatives of unsurpassed quality—negatives which will yield beautiful release prints.

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KEEP YOUR EYE ON ANSCO — FIRST WITH THE FINEST
The Production of Scientific Films for Biological and Medical Purposes

(On 16mm Film Stock)

By J. Yule Bogue, Ph.D., M.R.C.V.S.

(Continued from Last Month)

Slow motion following normal motion should always be used where very rapid changes are involved, but only where you can catch the nature of the change to be demonstrated, such as the movements of the wing in flight, the sequence of events in the contracting heart, the break down of tissues under stress and so on. It is also desirable when demonstrating a surgical technique where rapid movement is essential.

Animation and superimposed outlines are also valuable, but this technique should only be used when it is not possible to portray clearly in your effort to record the method by other photographic means. Animation is a great help in many films, and in some cases is essential. It must be done really well. Most of the animations we see create a ludicrous atmosphere due to poor animation or animation which is too slow. The animation must be smooth as possible, and great care must be taken with the outline registration. There is nothing more irritating than a figure which squirms and shimmies on the screen. Whether the drawings be animated or static, they should be left until all the living shots have been made. One reason for this being that the drawing should not be too stylized; it should be a much simplified though faithful representation of the subject. The general form of the outlines should be based on enlarged frames of the actual film, or from stills taken at the time of filming. In the case of static outlines, to assist the audience in orientation, the outline must be made from one of the actual frames of the sequence. Instead of having a drawing preceding or following an actual scene, it is preferable to superimpose the outline over the actual scene and to fade it in or out as required. Diagrams and animation should, of course, be fully noted in the script.

At this stage we come up against a delicate point. I believe that in the type of film we are making (remember the film is not making any new contribution to knowledge), we should send the film script to a large company; they cannot often differentiate between commentary and camera instructions and insist in altering grammar in both because they feel they must do something.

In the case of films for export, we must, I think, use a small panel of experts, as the film must give a balanced statement of the scientific progress and generally accepted opinions of the country which is making this film. It is essential when the purpose of the film is to demonstrate a particular technique or discovery associated with a living worker who has taken part in the production. If the person concerned has not taken part in the production, then he should be consulted at every stage and his approval of the final result obtained. It is far better that criticism should be levelled at the script stage, before any of the shots have been made, than when the film is completed, as it may be impossible to effect the necessary amendments.

When the final version of the script has been completed and approved, the means of recording must be studied in detail. In biological and medical subjects many of the phenomena are likely to be unrepeatable; in most cases half a dozen retakes cannot be made on the same subject. In many cases where a re-take of necessary the unit may have to wait for another case or a new subject to enable them to replace their unsatisfactory shots, and to repeat a longer sequence in order to obtain case unity. In the case of surgical films the camera man must go and watch the type of surgical procedure he is going to record and examine the surroundings in which he is to work. Operations cannot be held up for the camera, though in some cases there may be a fair amount of latitude. The camera must not get in the way of the surgeon, nor, of course, must the surgeon's hand or head obscure the field. In other words, the surgeon and camera must work as a team, each must anticipate the other's movements. The camera has to be fitted into the routine of the operating theatre and must not constitute a hazard. If the camera can operate from an overhead framework, so much the better. Here, the camera, camera-man and lighting can be separated from the subject by sterile cloths draped over the camera and lighting, and a transparent window sewn into the cloth for direct observation.

It is usually necessary to make two complete takes of any surgical procedure. The first is useful as a trial and is instructive; the camera-man can alter his lighting, fields and angles; the surgeon, the position of his hands, and so on. The camera must never endanger the success of the operation.

In the case of experimental procedures there is a further freedom. It is possible to take liberties and the experiment must be so organized that it assists the camera. The ideal case, in which camera consideration comes first, is not by any means always possible. The experiment may have to be carried out in a certain laboratory possessing the facilities peculiar to the work, but it may have many disadvantages from the viewpoint of the camera. The laboratory may be too small for other photographic means; glass cupboards may have to be draped.

There is always some serious snag to be overcome if the experiment cannot be set up in a room adaptable to studio requirements. Camera-men may be disturbed by the noise of the machine they have to work. There is, however, one consolation in laboratory work; it is rarely necessary to include an area greater than two square feet. In going over the negatives it has been noted that, with the exception of three, the area has never been greater than one and a half square feet, usually much less. Even so, the range is enormous; it may be anything from 0.1 mm. square, with an object of study only a few thousandths of a millimetre long, to about 0.2 of a square meter.

Some laboratories may have a floor pit; working in this, with the preparation a few inches above floor level, gives the camera and lighting greater freedom in laboratories of small size. Whenever possible, more than one camera should be used, preferably with rapidly interchangeable magazines or some speedy method of reloading of the cameras. Here, the fact that one of the phenomena may take a fair time and must be fully recorded, an electric drive on one camera is essential. It is most irritating to have to rewind the film and lose time when it runs, say, sixty instead of forty feet. Though careful editing and cutting may do much to retrieve the loss, it cannot introduce an intermediate stage which has been missed.

A battery of lenses is very pleasant to have, but most of the work can be done with a one-inch f/1.9 and a two-inch f/2.9 with drawtube focusing; a longer focus lens about four inches with wide aperture is also desirable. Visual focusing is essential for critical work. When a microscopist is viewing a field, such as a blood smear containing parasites, he continually alters the focus in order to study detail. This should also be done when the field is being filmed; it shows up more detail and converts what would
Now Available Without Priorities—The Finest Tripod Made—The "Professional Junior"

The friction type head is removable, fits the Standard, all-metal "Baby" and "Hi-Hat" low base adaptor. Unsurpassed versatility.

The "Professional Junior" tripod affords rock-steady, super-smooth 360° pan and 80° tilt action. Top-plate takes all 35mm and 16mm camera even with motors and large film magazines. Compact yet provides camera height usage from 72" high to 42" low. Weighs 14½ lbs. Has all refinements, large knurled knobs and wing-nuts for tension and locking adjustments. Positive acting leg-locking knobs simplify handling. Extra sized trunnion for long, dependable service. Tripod head is unconditionally guaranteed 5 years.

"Professional Junior" tripods, collapsible dollies, "Hi-Hats," shift-over alignment gauges are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by leading Newsreel Companies, 16mm and 35mm motion picture producers.

CAMERA EQUIPMENT COMPANY
1600 BROADWAY (Franzucker) NEW YORK, N. Y.
AMONG THE MOVIE CLUBS

St. Louis Club

The Amateur Motion Picture Club of St. Louis this past summer changed its policy from that of other years. In the past the club has held no meetings during the summer months, but this year it was decided to hold meetings each month, with a happy result.

One meeting took the form of a picnic at which the members photographed the various games and other events. These pictures will be shown at an early fall meeting. Another meeting was scheduled for the night the surrender of Japan was announced, and instead of parading the streets 45 members showed up at the meeting where the following films were shown:

"It's West Again," 8mm, by Werner Henze.
"Christmas Spirit," 16mm, by James Bialson.
"Ginger," 8mm, by Ryne Zimmerman of the Milwaukee Club.
"Honeymoon is Over," 8mm, by Lon Wadman.

La Casa Club

Three 35mm, one 16mm and one 8mm films made up the program at the September meeting of the La Casa Movie Club of Alhambra, California. The following films were screened:

"High Sierras Vacation," 8mm, by D. M. Gardner.
"Yosemite in the Spring," 35mm, by R. B. Vail.
"Canadian Rockies," 35 mm, by Elva M. Walker.
"Travelogs," 16mm, by John Cook.
"Mexico, 1945," 35mm, by Guy Nelli.

L. A. 8mm Club

"Thunderheads Over the Pacific," a 16mm sound film in color, highlighted the September 11th meeting of the Los Angeles 8mm Club. The film was made in 1941 by Captain Darrel Brady, and shows the islands of the South Pacific before the war. The late President F. D. Roosevelt requested Captain Brady to screen this film for him in person.

On September 28th the club members held a picnic at Mineral Wells in Griffith Park.

New York Eight

Two outstanding 8mm films highlighted the September meeting of the New York Eight Millimeter Club. They were the Maxim Award Winner, "In His Own Judgment," by Joe Harley, and "Sunstruck," by George Mesaros. The latter film received honorable mention in the list of 1945 amateur films.

M. M. P. C.

The Metropolitan Motion Picture Club of New York City opened its current season with an excellent program on the evening of September 20th, at Hotel Pennsylvania. Following are the events:

"A Day at the Zoo," 16mm Kodachrome by Walter Bergmann.
"Mount Rainier," 16mm Kodachrome, by Frank Gunnell.
"Elementary Introduction to Light and Color," a 15-minute illustrated lecture by J. R. Hefele. This is the first of a series of technicolor lectures scheduled for the year.
"Russian Easter," 16mm Kodachrome, by George Serebrykoff.

San Francisco Club

The Cinema Club of San Francisco held its September meeting in the Defender’s Room of the Women’s City Club. The following program was presented:

Display and demonstration of the latest Eastman 16mm silent projector.
A black-and-white 16mm Orientation film.
Kodachrome slides of Sequoia National Park, Rainbow Bridge and some desert scenes, by Lewis N. Rice.
Kodachrome slides of Crater Lake, by Leon Gagne.

Chicago Club

More than 200 amateur movie enthusiasts attended the gala opening night in the new quarters of the Chicago Cinema Club on the evening of September 6th. Feature of the evening was the screening of a 2,000-foot 16mm travel film made by Willa T. Dombon. The film covered China, Japan and the Philippines before the war, and made a great hit.

At the September 20th meeting Leon F. Urbain presented his unusual color film, "Springtime in California," and for the climax of the meeting he presented "Wedding of Flowers," a unique color slide program synchronized to music and representing the courtship and marriage of various flowers.

Westwood Movie Club

Insasmuch as this issue of the Cinematographer will be on the press before the Fourth Annual Amateur Movie Makers Exposition is held on September 28th under the auspices of the Westwood Movie Club of San Francisco, we cannot report on the event at this time. We do hope to give a detailed account of the affair in our next issue.—The Editor.

The Cameraman

By Isa L. Wright

E sing our ringing praise of picture queens;
We laud him high—our hero of the screens;
We even credit him who writes the scenes;
For picture fan.
But who, in numbering the ones of worth
That bring us picture gleams of joy or mirth,
Remembers that there even lives on earth,
The camera man?

Nay, no Adonis he, nor fair of face,
Nor hath he idyl’s charm of winning grace;
The ladies do not worship him in space,
Nor buy him flowers.
They do not send him eggs with pinky bows;
To get an interview with him, nobody goes;
No magazine his poseful picture shows
For musing hours.

But he’s the man behind the things that be;
From pole to pole he scrambles desperately;
And though he’s not a raving sight to see,
In lime-light glare,
There’s nothing that he does not dare to do;
There’s nothing that he doesn’t make come through.
In fire, and flood, earthquake and warring, too,
He’s always there.

Mayhap, some time, since humble service brings
A sprouting impetus to mortal’s wings, Untrammeled by the taint of earthly things,
He’ll fit away;
And tripping lightly through the night of stars,
He’ll let down all those high celestial bars,
Stealing an eight reel wonder play of Mars,
And win the day.
"Making news into history" is an everyday job of Kodak's Recordak System

Your standard size newspaper compressed to postage stamp size...on enduring microfilm instead of newsprint that yellows and crumbles with the years...Newspapers all over the country are having it done every day.

Because news is the stuff that history is made of.

These newspapers, as they are published, are sent to the Recordak Laboratories. By means of the ingenious Newspaper Recordak incorporating the superb Kodak Micro-File Ektar lens, they are automatically photographed down on Recordak Micro-File 35-mm. film—in a matter of seconds.

The master negative film goes to Kodak's fireproof, air conditioned film vault—today's "time capsule." The individual newspaper orders positive films—or prints—for its own files and for other subscribers. Thousands of these go to public and university libraries.

Three little rolls of film carry every word and picture America's biggest newspaper prints in a month...with a saving in space of 98%.

To look up a story, the film covering the correct week or month is inserted in the Recordak Film Reader. Pages are flipped through at the touch of a finger...There, brilliantly projected on the screen—40% larger than the original paper—is the date, the page, your story—easier to read than the day it came off the press.

"Making news into history" is only one of hundreds of services which Recordak is performing for banking, business, industry, Government, education, science, and the arts...in the end, each a service for you.

EASTMAN KODAK COMPANY
ROCHESTER 4, N.Y.

Serving human progress through photography
Production of Scientific Films for Biological and Medical Purposes

(Continued from Page 342)

otherwise be a lantern slide into an active demonstration. Camera makers instruct you to hold the camera steady. This is wrong. It should never be held at all; always use a tripod, rigid stand or visual bench according to the nature of the work. Frictionally controlled movements are not very satisfactory, gyroheads or well greased gear-driven mechanism being preferable. In the latter case, make sure that all backlash has been taken up. Optical bench slides, tracking rails and so on should be smooth.

All biological subjects are sensitive to heat; we may want much light, but it is of no use if we have too much heat. By trial and error I have found that a maximum of four photofoils, No. 1 type, and four 500-watt incandescent lamps at two and three feet respectively is about all that living organisms will tolerate without change for longer than sixty seconds. Even this will produce drying effects on exposed organs in less than two minutes. These lights are all housed in matt reflectors. All exposed tissues should be covered with warm saline pads until the shooting actually begins and should be re-covered between shots. Ideal lighting for small area close work is two, or possibly three, projector bulbs in cooled housings fitted with suitable heat filters and focusing attachments. These are mounted on cross arms attached to the tripod head, the lights being made to converge on the area to be photographed. The camera and lighting in this case are moved as one.

The use of mirrors in order to get light into awkward fields is of assistance in certain types of close work, and since this type of work usually involves exposed organs, it is desirable to know something about the reflecting properties of the mirrors. Both heat and light are, of course, reflected, and in the mirrors which are likely to be used there is a tendency for the longer wavelengths to be reflected rather more than the shorter. Since it is possible, in some cases, that we are working on the limit of heat tolerance, this factor might be significant. It is of interest to compare the percentages of normal incident light reflected from three surfaces which might be used. The surfaces are silver, rhodium and aluminum. The following figures can be found in any suitable reference book.

<table>
<thead>
<tr>
<th>Wavelength in A.U.</th>
<th>Percentage of normal incident light reflected</th>
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<tbody>
<tr>
<td></td>
<td>Silver</td>
</tr>
<tr>
<td>2,500</td>
<td>75</td>
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<tr>
<td>3,000</td>
<td>75</td>
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<td>10,000</td>
<td>3</td>
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<tr>
<td>12,000</td>
<td>1</td>
</tr>
<tr>
<td>White light</td>
<td>(approx.) 50</td>
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</table>

Recent developments in the deposition of aluminum on glass would seem to indicate the use of an aluminum mirror in preference to the other surfaces, since the heat and light are reflected in about equal proportions.

The camera distance at which most work is done varies between four feet and eighteen inches, with the lighting between two and three feet away unless lamps are available which can be flooded and spotted. The average aperture lies between f/5.6 and f/8.0 at normal taking speeds using Kodachrome A.

It might be mentioned here that, if necessary, sterility of the atmosphere may be obtained by using U.V. lamps before shooting begins. The intensity required is about fifty to sixty micro-watts per square centimeter.

With regard to choice of film stock, I find reversal most satisfactory for black and white, especially Super X or Super XX. I prefer, however, to use Kodachrome and make the black and white dupes from it; the quality is excellent. We are, of course, in the hands of the processing department. We should have fixed attention on processing service at our disposal, of the Offenhauser type. Some try to get all their stock of the same emulsion number and then send it off to be processed at the same time. Under controlled conditions this is correct; but under present conditions there does not seem to be much advantage, though it is good practice. When the film has been processed, get the dupe made at once, and use all the work on that which the original.

There is one additional practice which is useful. When the script has been completed and broken down into shots, put each shot to be taken on an index card — six inches by four inches — together with full instructions and a grid in which is recorded the stop, lighting, camera distance, frames per second and shot number. When the card is completed transfer the data to the shooting file. The shooting file gives one the opportunity of making certain types of continuity shots on preparations which are being made for other purposes, e.g., the preparation of an arting for cammulation.

A few words on the actual procedure of taking the shots. Camera loaded, spare magazines nearby, leaders run off, lighting tested, spare bulbs, carbons and films at hand, distances checked, the demonstrator should have been instructed to read up these rehearsals are at last satisfactory, do a final rapid check up, especially on focus and stop. The various settings should be called out individually and check off on the index card. In experimental work all runs much more smoothly if the demonstrator is also the director, otherwise number one cameraman, or, of course, a proper director. The take is then numbered in the usual way, and shot. The word "cut" should only be ordered by the demonstrator; it does not matter what appears to have gone wrong. While this statement is obvious in ordinary practice, it is of special significance in biological work, since, when something does go wrong, it may result in an unexpected reaction or effect being demonstrated which might be very difficult to produce to order. This should therefore be recorded and put aside for use in some future film.

Cutting and editing, as is known, can make or break a film. This is really a matter of experience. The film should move with a steady tempo and should, in its final form, be a complete lesson. It should be on the point of repetition. The minimum length for a scientific film is, in my opinion, twenty-five minutes; the ideal length being between ten and fifteen minutes. This statement should be qualified if the film demonstrates (a) a technique, and (b) the results obtained by means of this technique. Then two reels of about fifteen minutes each are quite permissible. In other words, films should not be used to replace a lecturer, but to be part of his discourse.

Diagrams and animation should be made at the editing stage, taking the precautions already mentioned. If the diagram involves the tracing out or indication of a pump or other type of circuit, then this must be done slowly and deliberately; the pointer should not be waved about in the air. While this indication is finished, the diagram should be allowed to remain for a few feet so that it can be absorbed, the same applies before indication. Animation is better than a pointer. Where complicated apparatus or systems are involved, a diagram is essential. Here it is often useful to send out lantern slides with the film. This saves footage and also gives the lecturer ample time to describe particular points and to give the audience some idea of what to expect at important stages. For students the film should also be used in conjunction with their textbooks. They should have been instructed to read up the text concerned and a preliminary lecture should be given at the time of the presentation of the film. In order to assist the teacher, booklets should be sent out with the film. They should contain a brief introduction describing the film and a short description of each shot together with references to authors and scientific papers. These references

(Continued on Page 351)
The growing acceptance and use of microfilm and motion pictures as an integral part of modern business is one of the most important developments of our day. And the processing of such film offers the Houston owner an insured and a profitable business future.

Every community has users of motion picture film. Large department stores, banks, and government agencies, local, state and federal, use microfilm for copying and recording. Manufacturers, wholesalers and retailers use 16 mm. and 35 mm. motion pictures for training and selling.

These, and other users, such as studios and photographic supply stores need professional film processing. And the Houston owner can provide it—completely, quickly and profitably!

* * *

Scientifically designed and precision built, Houston Film Processing Equipment is fully automatic, compact and completely self-contained. No extra equipment is needed. Write for illustrated folder and prices.

Processes 16 mm. negative, positive and reversal film. Processing speeds up to 20 feet per min.

Processes 35 mm. negative and positive film. Processing speeds up to 2400 feet per hour.

THE HOUSTON CORPORATION
11801 W. OLYMPIC BLVD. • LOS ANGELES 25, CALIF.
tical use in his first film made after he
returned to Hollywood—that was the
first of a series of Strongheart films.
Two or three years later another man
made public claim to having perfected
the idea, but Gano didn't even bother to
refute his claims, although he has the
original picture he made with the date it
was made on it. That's typical of Gano.
He doesn't go around seeking credit.

For several months after his return
from the army he went from studio to
studio seeking work. No one seemed to
think that he had made himself more
valuable by his two years of experi¬
mental work. Each studio executive
would merely say: "What pictures have
you photographed during the last six
months?"

"I've been in the army for the last
two years," he replied.

"Sorry," came the answer.

Finally he got a break at Mack Sen¬
nett's studio. He worked on Sennett's
comedies, then Hal Roach's Vanity Fair
Girls and on Universal serials. Then he
met Larry Trimble. Trimble had been in
England where he heard of the develop¬
ment of a new film that was more sensi¬
tive to the colors of the spectrum and
would produce clearer and better pic¬
tures. He was looking for someone who
had some understanding of this develop¬
ment. A friend told him to see Gano,
which he did.

Trimble and Jane Murfin were plan¬
ing a series of pictures starring the
dog, Strongheart. Beautiful outdoor
scenery was to be the background for
the stories. Trimble wanted top photo¬
graphic results. He hired Glen, who had
worked in Washington on the first part
of the fast film development. Glen at
once ordered 50,000 feet of the new film
from Eastman. Imagine his dismay when
he was informed the film was not yet
ready to be placed on the market. Glen
knew how to sensitize the film, but had
no equipment. So he set to work and
built the necessary machinery, and made
it portable, too. The company went to
the mountains and the famous picture,
"The Silent Call," was started.

Then came the question of developing
the negative. This needed special
handling in the dark. The timing had to
be precise, and other details had to be
considered, with which the laborato¬
ries until then never had to be con¬
cerned. Glen faced a lot of opposition from those
who were opposed to anything new. So
he very quietly developed his negative
himself. He says he had an able young
assistant; a boy who after school would
work in the laboratory with Glen at
night, counting off the seconds in the
dark by tapping on a tin can. That young
assistant is now one of Columbia Studio's
most able and best liked executives—he
is Duncan Cassell.

Trimble and Jane Murfin needed a re¬
lease for their film, so when the first
three reels had been completed they
showed them to executives of the old
First National Pictures Company and
secured the release, as a super-feature.
A new man took over the manage¬
ment of the production company and shooting
was resumed on the picture. This new
manager, Glen says, didn't know any¬
ting about laboratory work, and didn't
intend to let a mere cameraman tell him
what should be done. So, when Glen left
word that the negative he shipped in
from location was not to be developed
until he returned the manager ordered it
delivered immediately. When the
filming was ended and Glen returned to
Hollywood he found that every foot of
it, except his three reels, had been
completely ruined in development.
Trimble knew it wasn't Glen's fault, so
he and Glen left on location again. For
two weeks they shot. They shipped their
negative secretly to another laboratory
where it was held. Then when Glen re¬
turned he developed it himself. It was
perfect, and started the great Strong¬
heart series which was so popular. This
first picture was in 1921. After making
a number of Strongheart films, the firm
dissolved.

Glen then went with Thomas Ince.
While with him Margaret Livingston
would have no other cameraman but
Glen. He did all the specials for all the
Ince pictures, too. Glen had been study¬
ing color for years, and had worked out
a process, and Ince and he started plans
for a color laboratory. Glen was con¬
structing his color camera, and equip¬
ment was being assembled for the lab¬
oratory. The color plans were in the

THIS LITTLE EYEFUL is Linda Stirling, under
contract to Republic Pictures as a featured
player. Photo by Roman Freulich.
The "Guzap" That Went to War

(Continued from Page 335)

Vibrations not encountered in the hands of even the most nervous or polished amateur taking pictures with the peace-time Filmo had to be considered, and the guzap proved able to function in spite of the turbulence set up by adjacent machine guns spewing out bullets at the rate of many hundred per minute. The standard inspection test for the "overrun control" mechanism, for instance, calls for three minutes of vibration at a frequency of "2,200 cycles per minute and an amplitude of one thirty-second of an inch." That's buzzing!

The quick-starting requirements, demanding that the guzap be operating full tilt before the first bullet had gotten many yards away from the gun muzzle, required some new concepts of mechanical alertness. Machine guns are fired in short bursts. Five seconds of continuing firing represents a respectable salvo. So, the 24-volt motor which actuates the shutter and the film advance was called on to reach maximum speed in the length of time, at sixteen frames per second, required for two frames to be exposed. This adds up to the eighth of a second previously mentioned.

Another requirement had to do with "effective distance." Without detailing the shorter ranges, it is enough to say that acceptance tests include try-out of the camera at 1,500 yards. Amateurs conversant with 16mm camera use can appreciate the obstacles to satisfy results at such distances—just a few hundred feet short of a mile!

The guzap operates at speeds of sixteen, thirty-two or sixty-four frames per second. It is a magazine loader and an amber filter which screens out much of the objectionable, picture-fogging ultra-violet light encountered at high altitudes. The filter also protects the fine lens.

In addition to producing combat records, the guzap has been used extensively in gunnery training. In showing a pilot's mistakes, as well as his accomplishments, it has served to improve marksmanship. Its use by flying branches of the armed services had produced a pictorial record of successful combat tactics never before available.

Henning and Cheadle Form New Film Company

A new firm, Henning and Cheadle, formed to handle films and film programs for training and promotional purposes, is announced by the two owners, Lester A. Henning and George R. Cheadle.

The new firm, located in the Book Building, Detroit, Michigan, will prepare and produce motion pictures, slide-films, and printed literature, and coordinate these media into complete programs.
HEART OF THE FLYING FLASH CAMERA

(Continued from Page 340)

ways as a unit for positioning any one of the three rows of pictures behind the lens. To show a complete reel the projector is cranked forward in normal manner with one outside row of pictures behind the lens, then when the end of the film is reached a shift-over is made to position the center row or pictures behind the lens. The projector is cranked backwards to show this row of pictures, which rewinds the film to the start of the roll. Another shift is then made to align the other outside row of pictures behind the lens and the projector cranked forward again in normal manner. The film would then be rewound to the top reel by the crank on the upper reel shaft. Pretty slick. There are no upper or lower feed sprockets but in their place are two guides or fingers, equipped with light springs, which maintain large loops or slack in the film between the gate and the reels. These guides dampen out the intermittent jerks on the film and are constantly letting out and taking up this slack.

The name plate on the front of the mechanism is interesting (Fig. 5). Mustn't charge admission but maybe six old buttons would be all right.

The film used with the Edison Home Kinetoscope has three rows of pictures and two of perforations. The picture image on this film is very near the present 8mm in size. I have seen only two lengths of film rolls (Fig. 6), the longer being about 75 feet, and the smaller about 35. They are just rolls of film on a wooden core, as the reels are always a part of the projector and one side of the reel is removable to allow of placing the film roll on the real shaft.

The films which I have seen had real "box office" appeal in their titles, for instance, "Fathers Dress Suit" and "Amateur William Tell" or maybe you would rather see "The Capture of the Burglar." These three particular pictures were copyrighted in 1911 by Thomas A. Edison, Inc., Orange, N. J. According to Eastman Kodak Co. authorities, this film stock was first supplied in June, 1911, slit and perforated by the Edison people and was called No. 1 Positive Film. It has a cellulose nitrate base but with a so-called non-inflammable overcoating which materially reduced the fire hazard. The records not being available, it is quite possible that Edison later changed from No. 1 film to Safety Film.

Here for the first time is a photo of the repeating flash tube device which played a leading role in the defeat of Germany, Italy and Japan.

The device, called the General Electric (repeating) Flash Tube, is being fashioned in the Lamp Development Laboratory of G.E.'s Nela Park, Cleveland. It is shown here with the popular No. 5 mighty midget photoflash bulb.

With machine-gun-like rapidity, the unique flash tube shoots brilliant "bolts of lightning" earthward from reconnaissance planes equipped with special electronic auxiliary equipment. The device permits the taking of countless night aerial photographs from altitudes up to two miles, swift reconnaissance of enemy territory, and the recording of nocturnal troop movements and similar vital information.

The G.E. repeating flash tube consists mainly of four elements: a coil tube; a special gas; two electrodes; and, mounting. The five-turn coil is made of finger-thick quartz tubing. The powerful flash-producing are travels between the electrodes through an atmosphere of gas. The tube's mounting includes a base equipped with terminal posts, a handle, and a cylindrical protective jacket (three inches in diameter and open at the bottom) of pyrex glass.

Included among the numerous uses sighted for the flash tube after the war are applications for lighthouses and in airway beacons.

Now Florez, Inc.

Reflecting the expanding scope of its postwar services for business and industry, Visual Training Corporation of Detroit has announced adoption of a new name, Florez, Inc.

To accommodate clients' increasing demands for more diversified services in the fields of training, market development and promotion the company has realigned its executive personnel. Genaro A. Florez, founder of the Visual Training Corporation, continues as president and chairman of the board of directors.

Home Movie Projector Era of 1912

Captain Pope Named

Capt. Loverne A. Pope has been appointed director of photography for the U. S. Navy bureau of aeronautics. He replaces Capt. Robert S. Quackenbush, Jr., assigned to sea duty.
Production of Scientific Films for Biological and Medical Purposes

(Continued from Page 346)

should be listed at the end of the booklet as is done in a scientific publication.

An ordinary film is so made that it is unnecessary to repeat anything and this is also the case in the majority of scientific films. There are however some cases in which a recapitulation is desirable. This is likely to be the case when a complete technique is demonstrated for instructional purposes. Here the completed demonstration is followed by a brief run over the various precautions or special points brought out in the film. An excellent example of this can be seen in the recent film on ether anaesthesia.

We might include here the use of film loops, whereby a particular sequence is repeated over and over again. The recently completed Technicolor film on the movements of the tongue in speech is so made that it can be broken down into a series of loops thereby making it possible to have new techniques in presenting speech to the eye. The series of movements and sounds accompanying them are presented to the subject over and over again. In the case of deaf mutes with a small amount of residual hearing the signal from the sound track can be amplified and fed into earphones thereby giving each patient a hearing aid.

There are specialized fields in which the professional film unit is at a loss and where the filming is best done by the members of the laboratory. In some cases the whole film may be of this nature; in others it may be that such special work forms only a part of the finished production. Here the film camera is a natural part of the scientific equipment, and it is obvious that the research worker, performing the experiments with the help of his technical assistants, is the person best qualified to carry out this type of work. Even here it is obvious that, technically good though the film may be, they can often be given a final polish by the utilization of professional servicing under scientific direction, e.g., titling or effects which might be added by means of an optical printer.

Examples of such specialized films are—"The Microscopical Observations of Living Tissue," by Ebert, Florey and Sanders, and by the X-ray cinematographic films by Ivy and Little, Russell Reynolds, Barclay and Janker.

It is not possible to become an expert in all techniques; therefore it is desirable to get the help of the best experts in each field and work together. If this is not done, not only will the results be poor, but there may be danger, as would be the case in X-ray work.

It is unfortunate that 16mm. sound and projection facilities are poor, especially the former. Further, owing to the mobility of 16mm. equipment, the lecture theatres and rooms which are used for screening are, in many cases, far from ideal. Every effort should be made to ensure good projection and presentation. None of the audience should be nearer than twice the screen width, and the farthest not more than ten times screen width, with a maximum angle of 30° for viewing. Sheets with fold creases, yellow walls, roller screens torn at the roller juncture, distemper on warped plywood, and even sheets of blotting paper, all of which I have experienced, do not constitute screens. It is also difficult to give a good showing when shafts of sunlight fall on the screen as the result of billowing blinds.

Century Ties With G. E.

Century Projector Corporation has recently entered into contracts with the Western Electric Export Corporation, a subsidiary of the Western Electric Co. for the exclusive representation of Century projectors, accessories and replacement parts, in all countries of the World with the exception of Canada and the United States. In Canada these products are distributed by the Dominion Sound Equipments, Ltd. and in the United States by Independent Theatre Supply Dealers.

Are YOUR Films Safe from REEL Damage?

Films can be damaged beyond repair by reels which corrode, allow side-slippering, or saw on film edges. Avoid these dangers to your often irreplaceable films by using B&H & Howell reels.

B&H reels are of rust-proofed spring steel, rigid yet so resilient that they will not take a set. They have no sharp edges to cut film or fingers. Their B&H "touch-threading" hubs eliminate hunting in the dark for a slot. Their film-footage calibrations are another convenience feature.

HUMIDOR CANS

Give Added Protection

B&H humidor cans for these reels are equally well built. They are rust-proofed and are easy to open without a prying tool. Heavy ribs add to their rigidity. Satin surface permits writing anywhere. Built-in humidifier pads have exclusive tell-tale disc to indicate when pad is dry.

Actina Expands

Mr. Erich Schuler, president of Actina, Inc., of 265 East 42nd Street, New York City, exporter of reproduction and photographic equipment and supplies, announces the appointment of Mr. John Wiederkehr as vice-president.

Mr. Wiederkehr was formerly sales manager of Campbell & Co., of Newton, N. J. Before the war put a stop to imports into the United States, he was the exclusive American distributor of various Swiss products used in the photographic industry.
$2,000 Polaroid Filter Contest Announced

A $2,000 Polaroid Filter Contest for a pair of pictures of the same scene, one taken with a polarizing filter over the camera lens and the other taken with no filter, has been announced for photographers throughout the country.

Prizes will go to contestants who photograph subjects that best demonstrate the usefulness of Polaroid light-polarizing filters in photography. Picture pairs entered in the contest should show how undesirable lighting effects such as window reflections, washed-out skies and sunlight reflected from a water surface are corrected by the Polaroid filter.

There are duplicate prizes for color and black-and-white entries. A first prize of $500 will be awarded the contestant who submits the outstanding color pair and another $500 first prize will be awarded the contestant who submits the outstanding black-and-white pair. In addition to these two first prizes, there are two $190 second prizes, two $95 third prizes, two $50 fourth prizes, and two $25 fifth prizes and two sets of ten runner-up prizes of $10 each.

Sponsored by Polaroid Corporation, Cambridge, Mass., the contest is to be judged by a board of newspaper and magazine editors and photographers. They are Fritz Goro, science photographer, Life; Philippe Halsman, president, Society of Magazine Photographers, Inc.; Robert Shelly, science writer, Christian Science Monitor; Augustus Wolfman, editor, National Photographic Dealer; David O. Woodbury, contributing science editor, Collier's.

The decision of the judges will be based primarily on the degree of improvement evident in the photographs taken through the Polaroid filter and on pictorial interest and composition.

Particularly effective are scenes including either pale white clouds against a light blue sky, a lake or pond with sunlight glancing off its surface, a highway, table top or other non-metallic surface obscured by a film of glare light, or store merchandise hidden from view by an annoying reflections on the showcase window. A combination of two or more of these subjects in the same scene enhances the eligibility of the entry for one of the large cash prizes.

Contest entry blanks are to be distributed through photo supply stores. Both amateur and professional photographers are eligible to compete in the contest. There is no limit to the number of entries any one contestant may submit. However, a contestant can receive no more than one cash prize.

All entries should be postmarked not later than midnight, November 15, and addressed to the Polaroid Filter Contest, Cambridge, Mass.

Coronet Announces New Catalog of Instructional Films

A new catalog of approximately fifty 16mm sound motion pictures for classroom and other group instruction has been announced by Coronet Instructional Films. One of the most unusual features of this new film catalog is that the majority of the films listed have been produced in Kodachrome and prints are available either in full natural color or black and white. Another unusual feature is that the catalog, itself, is attractive and appropriately illustrated with full color "stillies" from the motion pictures.

The various groups of motion pictures announced in the new catalog include the Biological Sciences, Civics, Economics, Psychology, Health, Industry, Physical Education, the Physical Sciences, and Social Studies, and Vocation Guidance.

Outstanding among the films in color are five on the American Indians of the Southwest, three on life in Mexico, nine on colorful birds of the United States, and an unusual picture showing the growth of flowers. The physical education series includes films on basketball, field events, swimming, tumbling and volleyball. One of the more advanced films for psychology classes has the imposing title, "Color Categorizing Behavior of Rhesus Monkeys," although the majority of the films listed are for use in elementary and secondary schools.

The new catalog, "Coronet Instructional Films," is available free to those who use 16mm sound motion pictures for training purposes. Requests for it should be addressed to Coronet Instructional Films, Glenview, Illinois.

New Filmosound Library Releases Announced

TOP MAN (Universal)
No. 2553—8 reels
When father retreads his way to the wars, teen-age junior becomes "top man," as the family carries on. His growing recognition and execution of his responsibilities, in school and elsewhere, is shown interestingly, and his leadership takes his student body into local war work for part time work. (Donald O'Connor, Peggy Ryan, Richard Dix, Lilian Gish.)

SWISS FAMILY ROBINSON
No. 3320—8 reels
Film follows book closely. Shipwreck in tidal wave, rescue on tropic isle. Robinson Crusoe life on family scale, amusing and thrilling adventures. (Thos. Mitchell, Edna Best, Freddie Bartholomew.)

BIRDS OF THE BARRIER
No. 5843—10 min.
Nesting sea birds by the million. Life history, from egg to adulthood.
Ampro Corporation has announced the appointment of E. A. Petrtyl, formerly assistant general manager of Motion Picture Engineering Corporation of Chicago, to a post in which he takes charge of Ampro's public relations and office management. He brings to Ampro a vast knowledge of office and sales procedure.

Where They're Working

(Continued from Page 336)

R.K.O.
Gregg Toland—"The Kid from Brooklyn" (Samuel Goldwyn). Joe Valentine—"Heartbeat." Karl Struss—"Tarzan and the Leopard Woman." Nick Musuraca—"Some Must Watch." George Barnes—"From This Day Forward." Frank Redman—"The Bamboo Blonde." Robert De Grasse—"Badman's Territory."

Republic
Tony Gaudio—"Concerto." 20th Century-Fox

Universal

Warner Bros.
Peverell Marley—"Night and Day." Arthur Edeson—"Never Say Goodbye." Carl Guthrie—"Her Kind of Man." Ernie Haller—"The Verdict."

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Resolution falls off at high and low exposure values, reaching a maximum at some intermediate exposure at which the resolving power figure is selected. The loss of resolution with over and under-exposure is an important reason for exposing miniature negatives correctly.

Contrast

A negative which tends toward under-exposure is lower in contrast as well as lower in density than a fully exposed negative. A negative which is greatly overexposed is also lower than normal in contrast but of high density.

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Properly housed in its own "blimp" or silencing case, the NEW DeVRY 16mm sound-on-film projector's performance is quiet . . . steady . . . purposeful. Film moves smoothly, safely from reel to reel . . . no flicker, no weave, no blur, no jump. The NEW DeVRY, in simple to thread, focus and maintain, is undisputed leader in the field of audio-visual equipment for the classroom, conference room, auditorium or living room . . . . it is so ruggedly built that you are assured years of continuous, trouble-free service. Write DeVRY CORPORATION, 1111 Armitage Ave., Chicago 14, Illinois.

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Teletifming Races

(Continued from Page 334)

Germany and the South Pacific, and would not become fluttered by a mere horse race. Some of them were veteran A.S.C. men long recognized as “tops.” If any crew was ready with personnel and equipment to give service his was.

In their first test they amazed Hollywood officials by shooting a race and projecting it on the screen in 8 minutes. They cut this figure to 6 minutes and in several trials proved that they could maintain that speed in regular operation.

The camera crew consists of Brydon Baker, chief of staff, Floyd D. Croshy, Elmer G. Dyer A.S.C., Leonard T. Galezio, John Stevens Jr., Albert Wetzel, A.S.C., and Frank Blackwell. Lab men are Howard Jeffries and John Fitzsimmons and projectionist is John J. Hill.

The entire film world has taken a keen interest in the work at the track. Metro-Goldwyn-Mayer sent their newsreel cameraman, Norman Alley, to the course to shoot the modus operandi. Many Hollywood cameraman and lab men, producers, directors, and actors, forget their sizable wagers on the bangtails long enough to take a professional interest and rubberneck at the telefilm boys in action.

Horse race followers see in the telefilm system not a mere experiment but a sound idea that will be adopted at tracks throughout the world, and one which will create a permanent visual record of all races.

Heretofore judges and fans have had to rely on binoculars to determine to the best of their visual ability whether there was “dirty work at the crossroads.” Among riders on the back stretch, far turn or coming down the straightaway. Now they have an accurate way of checking and the jockeys seem to realize it. At least, such would seem to be the logical conclusion after the first several days of racing at Hollywood Park.

Film Review of Bee Picture
From Moscow, U.S.S.R.

Filming “Sunny Tribe” required infinite persistence and patience, and it was well worth it. Produced as a short educational produced by the Military Technical Film Studio and now showing on Moscow screens is a fascinating supplement to the numerous books and treatises that have been written on the life of the bee.

Everybody knows—or less—how bees make honey. In “Sunny Tribe” audiences actually see it being done. The camera eye shows a large cluster of bees building a hive. In a close-up a bee flies up to the top of the cluster. Then with legs and jaws it works wax scales on its abdomen into the requisite shape. Finally the comb is finished.

Warrior-bees mount guard at the entrance to the hive. We see them pounce on a wasp who has come to steal some honey. After a brief engagement the enemy is left prone and lifeless at the foot of the tree.

A sultry summer day brings another danger—the oppressive heat threatens to melt the hive and wipe out the fruit of long and painstaking labor. But the population of the hive mobilizes to stave off the danger. No sooner has the hive begun to trickle than hundreds of worker-bees rise to hover all around it and beat their wings to create a breeze.

One of the most interesting moments is the return of the queen bee after mating. She goes from cell to cell laying eggs—several thousand of them a day. Following her everywhere are worker-bees who clean up and feed her the purest honey in the world.

The cameramen who filmed “Sunny Tribe” spent long weeks and months at the hollow of the tree where the bees built their hive, patiently waiting for the shots they needed. Besides studying the bees they had to accustom them to their presence. When they were stung they had to make it just as patiently. There were times when a cameraman had to lurk motionless for days on end to give the bees a chance to forget him and go about their business as usual.

The most eventful part of the film is the second half in which a new generation appears in the hive. Following their own secret laws, the young queen and the old queen engage in a mortal duel, for both cannot reign. The queen who had just been supreme is killed and cast out. Then comes the turn of the drones, who are done away with as soon as they are no longer needed.

We see the new generation swarm off to build a new home. First scouts are sent out. They find a sunnny meadow abounding in flowers. With the sunsets pointing the way, the new generation rushes out to set up for itself.

“Sunny Tribe” shows how a man has studied the life of the bee and by influencing it increases the usefulness of these insects to human society.

Director of this film is A. Vinnitsky, Soviet specialist on educational about insects.
The Men Behind the Combat Camera
(Continued from Page 332)

Mr. Huse was a fine instructor—keen, understanding, and with an unexcelled knowledge of his subject. If some of us wondered at the time why we had to dwell on these technicalities we found out soon as we got into combat.

Over there we ran into all sorts of technical problems, and there was no time to sit down with paper and pencil to work out equations. It was the training we had under Mr. Huse that enabled us instinctively to make the correct technical decisions. Working at top speed with the ground erupting all around us, we still managed to get pictures of quality on the screen. It was the background of our classes in photographic theory that made these responses automatic.

Next, we went into four weeks of camera work under John Arnold, A.S.C. Mr. Arnold, for many years head of the camera department at M.G.M., was the logical man to supervise this phase of the course. He knew all there is to know about cameras: all the little tricks that made a difference in technique, all the time-tried principles of camera handling.

We used to marvel at the speed with which he could thread a Mitchell camera. We found out later how vital this little knack could be. Our combat cameras held a scant 100 ft. of film. When the going got rough it was often the loss or gain of seconds in reloading our cameras that determined whether we would get our story or lose it.

There was drill and more drill in setting up cameras, tearing them down, making the numerous mechanical adjustments—until all of this became second nature. Mr. Arnold was satisfied with nothing less than perfection—we were glad of that later on.

Joseph Ruttenberg, A.S.C., and Karl Freund, A.S.C., both Academy award cinematographers, helped us in many ways, giving freely of their time and vast experience to teach us the things you could otherwise learn only through years of working with cameras.

They taught us the short cuts: how to save time without sacrificing the quality of the picture, how to work fast and sure with that camera, how to care for our equipment.

All of us who had worked with cameras professionally felt, for instance, that we knew how to clean and service lenses—but when Karl Freund showed us a new way to clean a lens we listened and learned because we remembered his superb camerawork in films like “The Good Earth” and we knew that he had put these principles into practice.

Similarly, when Joseph Ruttenberg lectured on light and exposure we paid attention because we had seen the sure techniques of M.G.M. pictures and we knew that that smooth, crisp photographic quality had won him two Academy awards.

When we started shooting practice stories on the back lot at M.G.M. a new factor entered into our training: pictorial continuity. Here Alvin Wykoff, A.S.C., stepped in to give us the benefit of his experience. As a top-flight cameraman who had worked for many years with the best directors, Mr. Wykoff knew whereof he spoke.

“Your shots, no matter how well executed, will have no meaning unless they tie together into a clear continuity pattern,” he told us.

Continuity was the hardest thing for the class to learn. A man might know his camera technique thoroughly, but unless his scenes made sense when put together on the screen, all of his careful camerawork would have no value.

The class worked hard under Mr. Wykoff learning this phase of our work. We shot complete stories in four scenes (100 ft. roll of film can accommodate only four to six good scenes, and if we could get a complete story on one roll, so much the better).

We learned how to select angles and image size so as to put emphasis into our stories, to give them “approach,” to provide connecting links between scenes. This paid off at the front. There we could not control the action to suit our cameras, but the principles of continuity had become so deeply ingrained that we instinctively shot pictures that “made sense” on the screen.

We went overseas—our company and other Army and Marine Corps photographic units trained in these same Hollywood studio classrooms and by the same capable instructors. The record speaks for itself. The combat newsmen, we put on the nation’s screens, the tactical films which helped our field commanders to plan future campaigns, the documentary and training films we shot at the front to orient our fellow soldiers—all of these, I can safely say, had their start back in Hollywood.

The war is over now. Every man who did his part toward this end has a right to consider this his victory. The combat cameraman knows how much pictures have meant in this war. But the men of the Academy and A.S.C. who trained him, also have a right to rejoice in the knowledge of a job well done, for it was they who were, in effect, the men behind the combat cameraman.

During the War—
E. M. BERNDT CORP.
produced sound-on-film recording equipment that went to the Armed services.

NOW—
We hope to furnish the same high quality and service to our peace-time customers.
A MESSAGE
FROM
Goerz American

Now that peace has finally come to the world, we, like many other manufacturers, are occupied with plans of replenishing our war-depleted stock of lenses suitable for professional and amateur photography.

Because of the many types and such a large number of focal lengths of each type, which will doubtless be in demand, the build-up of our stock will naturally take time.

Fortunately we are not facing any reconversion problems, because during the war years we were exclusively engaged in producing photo-lenses for our Government.

In the near future there will be announcements in the various photographic magazines regarding our progress in making available again through photo-supply stores.

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We wish to take this occasion to thank those, who have wanted to buy our lenses during the past war years, for their interest shown in our product. Every effort will be made to enable them to obtain our lenses soon in the photographic market.

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Hollywood's Smallest Studio (Continued from Page 333)

fact, but I honestly believe that too many cartoons are more grotesque than they need be," says he. "I would like to give entertainment to children without scaring them to death in the meantime. Also, I try to inject a certain amount of humanness into all of my characters. I think they should be at least half-way normal and appealing."

And appealing they certainly are. The dragon even has a sense of humor, I understand. And another thing—Blakely has given them eight fingers and two thumbs—even as you and I. That's two more than other cartoonists allow their characters.

Actually, Blakely first thought of doing "Siegfried" as a children's book. That was in 1942. He was told that the story was too unfamiliar to children, and would be more successful as an adult's book. So he redesigned it along those lines, only to have publishers tell him that, with the government restrictions on paper and colors, they couldn't consider the book unless he eliminated much of the color. That he refused to do, being of the opinion that without color, most of the effectiveness of the drawings would be lost. So he discarded the idea of "Siegfried" as a book and hit on the idea of making it into a cartoon short subject.

A matter of fact, it is not the first cartoon film Blakely has made, but it is the first that will be seen. Unfortunately, after he had worked for over two years on a film using "Willie Whipple" as the central figure against a Yosemite background, an accident to the film scratched it so badly that it could not be salvaged. And worse luck, in his effort to keep expenses down, its producer had only one negative. He learned a lesson on that—and now figures the cost of duplicates small enough insurance on two years creative endeavors.

He's philosophical about the loss, though. "It was a stinker," he admits. "I had made the mistake of writing the script myself—and I discovered right there that I'm a better cartoonist than I am writer. From here on in, I intend to stick to well-known stories for my plots, and then I know I can't go wrong."

As to what those stories for future series might be, Blakely has some definite ideas. Operas that are in public domain offer a great variety for cartoons and lend themselves to his type of work, so would other Viking stories and King Arthur Tales. He feels that a series such as he plans could be readily adapted to theatrical release for short subjects or even feature stories, or for use as educational pictures in classroom instruction (a pet idea of his), or certainly for musical interpretation for use in schools and elsewhere.

Right now he's endeavoring to get a studio release; with that he can get all the backing he needs to carry on. Several important "name" people in Hollywood have seen his work and think very highly of it, and some have offered to help him make a good connection. Also, the fact that "Siegfried" will soon be televised by Don Lee has Blakely doing nip-ups.

So far as we have been able to discover, nothing like this film has ever before appeared on the screen. It combines opera, travelogue and cartoon with music and commentary, and runs about 9 minutes. The story of Siegfried's adventures is related by colored cartoon paintings which lap dissolve with real life scenes photographed by Blakely at Yosemite. Among other things he caught on film is a terrific storm high up in the mountains, with blinding streaks of lightning and a raging torrent where a peaceful stream had been. Just the right background for the sequence where the treasure-thieving dwarfs steal the Rhinelander. These and other things will be superimposed over the storm.

Above the music, at intervals, the narrator's voice will be heard telling the Saga of Siegfried. Gayne Whitney will do the commenting, and Blakely is hopeful of getting Stokowski's permission to use his recording of Wagner's "Siegfried" music. With that in mind he has already fit the characters to the music, rather than fitting music to the characters, as is usually done.

Blakely does all his work with a simple magazine loading Filmo 121 16mm camera. The quality of his films is so good they can be enlarged to 35mm. film and shown in regular movie theaters. But to those familiar with his background, his present success in getting excellent results is no accident.

And he isn't a novice, either, for he received his first motion picture camera when he was nine years old as a gift from his father. Dr. C. L. Blakely. Gene's father, is a well-known physician and surgeon at Baker, Oregon, where Gene was born. It proved a good hobby for the boy who took an active interest in camera work from the beginning.

He used to entertain the neighborhood kids in his backyard where he had rigged up an old phonograph machine with turn-table, by recording their voices while he shot motion picture film. Then, by some ingenuity known only to the very young, he performed a feat of Edison with bits of copper wiring, string and various other odds and ends, with the result that he was making "talkies" fully two years before we had them on the screen.

About the same time, he made his first commercial sale. Together with another boy, he went on a fishing trip, with of course, the inevitable camera. Fishing is real sport in Eastern Oregon, and when Gene went out in a rowboat to try his luck, his buddy stood watch on shore and
ready to follow Gene's directions, which were: keep on filming the action no matter what happened! And plenty happened! The powerful sturgeon proved almost too much for the boy and for a bad few minutes it looked like he would be carried down-river with the big fish. He yelled frantically for help, but his friend stood his ground and kept right on getting that action on film!

Afterward Blakely was grateful, for he sent it to Eastman Kodak and made his first commercial sale. Subsequently he sold many things to Eastman, among them Indian Ceremonial dances taken at Glacier Park and National Boy Scout activities there. In 1930 he was on hand at a Pendleton, Oregon, Rodeo and got some stuff that Eastman is still selling for five dollars a foot.

Young Blakely scooped the country once, too. It was on the occasion of the first non-stop flight from Moscow to Los Angeles. But something went amiss, and the Russian fliers radioed to the Army Barracks at Vancouver that they would have to land. A medical officer, friend to the family was stationed at the Barracks and he called Gene on the phone to tell him the news. When the Russians landed at 3 a.m. a lone cameraman photographed that historic event. Later, other photographers arrived, but all they got was shots of the fliers on the ground, and the plane ditto. The kid made his first chunk of dough on that deal—$300.

Attending Vogue School of Commercial Art in Chicago and studying advertising layout, etc., did not dampen his interest in photography, either. Instead, when he went back to Oregon and set up his own business in Portland, one of the first things he did was to convince a couple of clients that what they needed was commercial motion pictures. They did, and Blakely was in a new business, Commercial Production.

Gene believes there's only one way to get things done: do them. It's a rule he follows, and it seems to work, for he is now on the verge of becoming a successful producer of something new in cartoons. And he's done it alone and on his own. The whole business!

How does he ever get any work done with cars coming in and going out all day long? Easy! "When I want to work and not be bothered," he grinned, "I just run up the fifty cent sign. That does it!"

Leaving the tiniest studio in Hollywood, I glanced back. The fifty cent sign was up! Blakely was probably going into production again!

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The complete story of civilization, in all its richness, can never be fully visualized, but the school children of today can have the opportunity, through motion pictures, to see world events and situations which, taken in their entirety, depict the outstanding milestones of, and the continuity in, our modern civilization.

Visual Education Libraries, a New York producer of educational films, is releasing a series of such films under the general heading of The Story of Civilization. A portion of this series deals with people in all major economic stages, under such titles as Hunting People, Fishing People, Primitive Farmers, and others concerning people in more highly organized and mechanized society.

In addition to these economic units, the various physical environments under which men live are covered by appropriate films. This regional presentation of geography, divorced from political boundaries, has proven especially effective in this day of rapidly changing political units. Hence in this Story of Civilization there are separate units on Jungle People, Desert People, Arctic People, Forest People and the like.

The social impact of great inventions and industrial achievements completes the Story of Civilization with such subjects as the Story of the Microscope, Story of the Telescope, the Atlantic Cable, the Panama Canal and others.

The first twelve of these one-reel subjects are now ready for immediate delivery and thirty more are already in production. The entire series, when completed, is expected to require from 75 to 125 separate reels.

For many years teachers in public schools have made much use of activity projects and tours whereby the entire class took trips to visit mills, mines, power plants and such other important projects as were readily accessible. Today educators are recognizing that sound motion pictures can present the same subjects matter together with many other subjects not so readily accessible, accompanied by voice commentary, with greater richness of material and accuracy than was possible through the verbal comments and field observations of the old activity tours.

It is contended by the sponsors of this extensive series of films that only through the motion picture can the schools of the future bring the essentials of the constantly increasing content of our civilization into the curriculum. With this background of experience the graduates of our high schools and colleges can understand better the currents of the world in which they live and will thereby be able to choose their vocations and take their places in the life of the community more intelligently. 

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A high price to see a movie? Not a bit. For in thousands of theaters all over the country, when Americans paid $18.75 and more to see a single show, the admittance was really "on the house."

To motion picture exhibitors—long accustomed to doing their bit in the interest of community undertakings—helping put over the War Loan Drives was a cheerfully accepted duty. The 15,618 free days which exhibitors gave "The Mighty 7th" are just a sample of this public spirit.

The coming "Victory Loan" campaign can expect the same type of unselfish support. For in peace as in war, the motion picture house continues as a modern counterpart of the old town meeting in spirit and in action.

Eastman Kodak Company, Rochester 4, N. Y.

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Among the first Bell & Howell projectors to be available will be the 16mm. Filmo "Diplomat"—the finest and most complete projector of silent movies for the home.

New and improved, the Filmo "Diplomat" is fully gear-driven... even to the feed and take-up spindles. B&H pre-alignment gauge assures maximum illumination from 750-watt lamp. This, coupled with Filmo's unexcelled optical system, results in uniformly brilliant screen pictures.

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How to Get a Filmo "Diplomat"

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Wheels spin as coated rolls (wide stock) of Du Pont Motion Picture Film are slit into standard 35 mm. rolls. Safelights enable experienced operators to operate the high-speed slitters, maintaining precise dimensional accuracy.

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Note the spotless tiled walls of the room shown at the right... typical of the hospital cleanliness maintained throughout every section of the Du Pont film plant.

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NEWS happens fast, and a newsreel man does his stuff the same way... or not at all. For when news breaks, he can't stop to figure angles and lighting effects. And no retakes if he misses!

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SINCE 1907 THE LARGEST MANUFACTURER OF PRECISION EQUIPMENT FOR THE MOTION PICTURE STUDIOS OF HOLLYWOOD AND THE WORLD

American Cinematographer • November, 1945  363
CONTENTS

25 Years of Service..............By Leonhard Smith, A.S.C. 367
25 Years of Progress..............By Farciot Edouart, A.S.C. 368
Aces of the Camera (Glenn R. Kershner)........By Louise Dutty Carle 370
The Technique of the Documentary Film........By Herb A. Lightman 378
Lucite and Lantz Came Through for the Navy........By Hilda Black 372
Membership Roll of the A.S.C.........374
The History and Origin of 16 Millimeter........By Alexander F. Victor 376
Formation and Progress of Amateur Movie Clubs........By C. W. Cadarette 382
Peacetime Engineering Outlook........By D. E. Hyndman 384
Among the Movie Clubs........386
Special Effects for the Amateur........By F. C. Moultrie 388
Say It With Titles........By J. R. Oswald 390
Mark Hawley Urges Audio Visual Program for Schools........By Geo. Butterly 403

ON THE FRONT COVER is a photograph on the set of Warner Brothers' "Confidential Agent" showing Director Herman Shumlin rehearsing Lauren Bacall in a scene for the picture. Director of Photography, James Wong Howe, seated, watches. Photo by Pat Clark.

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Entered as second-class matter Nov. 18, 1937, at the postoffice at Los Angeles, California, under the act of March 3, 1979.
Here it is, the

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The "Mitchell 16" was designed to meet the requirements for a high grade 16mm camera. Incorporated in this camera are many of the well known features of the famous 35mm Mitchell that has been the standard of the motion picture industry for 25 years.

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THE CAMERAMAN

The man who wields the camera must be a thoroughly decent fellow or else he could not hold his position, as he must be contented with not much aid laid upon his makeup band which should be flawless—characterly direct, faculty chemically, or faculty dark, in the dark room.

The importance of the cameraman is paramount. Without him no good picture can be taken. He must be a many-sided individual, for the many sides of motion picture taking are all required at the same time, and every cameraman is liable to mistakes, liable to start on a scene without thought, liable at times to be out of focus, for he has little, many things to think about, and he has to think quickly, and to be prepared for emergencies.

The average cameraman is in a fatalist and a stoic, and he must have the temper of a saint, for the best of directors are irritable at times, and as cameramen are liable to mistakes, liable to start on a scene without thought, liable at times to be out of focus, for he has little, many things to think about, and he has to think quickly, and to be prepared for emergencies.

The modern cameraman is far the most silent individual he is more or less perplexed with his work, and has much time to mix with the players. He has to prepare his camera and magazines in the morning, and yet he knows that his name is not likely to be mentioned when the players do their work, though he knows that his name is not likely to be mentioned when the players do their work. He has to give to the pictures in person, and he must have his own identity through orig-inal photography while cooperating with the reliable cameramen of executives— the men who make motion pictures.

The modern cameraman is far the most silent individual he is more or less perplexed with his work, and has much time to mix with the players. He has to prepare his camera and magazines in the morning, and yet he knows that his name is not likely to be mentioned when the players do their work, though he knows that his name is not likely to be mentioned when the players do their work. He has to give to the pictures in person, and he must have his own identity through orig-inal photography while cooperating with the reliable cameramen of executives— the men who make motion pictures.

He must stand steadily by his work when some wild beast comes menacingly close, when the other members of the party can run to shelter. He must be a man of courage, and he must be a brave man. He must be a man of courage, and he must be a brave man.

The temper of a saint, for the best of directors are irritable at times, and yet he knows that his name is not likely to be mentioned when the players do their work.
T WENTY-FIVE years ago this month the first issue of the American Cinematographer came off the press. As magazines go, it was not a very impressive looking publication, as you may see from the reproduction on the opposite page of page one of that first issue. Impressive or not, it was the start of a sincere move on the part of the members of the American Society of Cinematographers to render a service to its members and to other cinematographers.

We members of the ASC were mighty proud of that first issue. We had talked and talked about creating some sort of a publication, and here, at last we had one. What we did not know then was how great the influence of our magazine was eventually to become. Little did we dream that some day the American Cinematographer would be read each month in all parts of the world; that thousands upon thousands of home movie makers would look to it for inspiration and guidance; and that professional cameramen in foreign lands would eagerly await each issue to learn the latest scientific developments in the American field of photography, together with news of allied subjects, such as sound, laboratory and projection.

I suppose the magazine at the start was just a house organ, designed to keep all the members of the ASC acquainted with what their fellow members were doing. But gradually the little publication began to change, both its format and its contents. In it the members began to find scientific news. Soon it was awaited by the members for its technical and scientific reports as well as its news. From a four-page paper it gradually grew into magazine form, with highly technical articles by the world's greatest scientists and experts in cinematography, optics, lighting and allied fields. Coated book stock replaced the cheaper paper, and physically it assumed magazine form. It had arrived.

Gradually cameramen in other parts of the United States began subscribing for it, and in due course of time it was being read by members of the profession in all American centers where motion pictures were made. Then the big commercial organizations who manufactured photographic equipment and film recognized its value as an advertising medium. Eastman Kodak, Bell & Howell Company, National Carbon, DuPont, Goertz, J. E. Brulatour, distributors of Eastman Films; Smith & Aller, distributors of DuPont Films, the Mitchell Camera Company, Mole-Richardson and many others were among the first to place their advertising in its columns.

A file of the Cinematographer from its beginning to date contains perhaps more technical history pertaining to cinematography than that of any other journal. Since its inception the magazine has been the first to carry the story of every new development that pertains to photography in any way. In its pages have appeared the detailed announcement and description of every development in cameras, lighting equipment, film, optics, special effects and process photography, together with articles dealing with new methods and inventions.

In 1929 the magazine, recognizing the need for imparting technical information to the rapidly increasing number of home movie makers, started publishing articles slanted toward the amateur, with particular emphasis on the advanced amateur. Then an entirely new group of readers came into existence. Amateurs by the thousands began reading the magazine because nowhere else could they find instructional articles written for them by professional motion picture cameramen; men who gave of their rich experience to help the amateur make better amateur films. The magazine has solved the problems of untold numbers of home movie makers who could find their answers nowhere else.

And then the manufacturers of 16mm. and 8mm. equipment joined those making professional equipment in placing their advertisements in the Cinematographer. As circulation and advertising increased, the ASC increased the size and the quality of the publication, with the result that today subscribers to the Cinematographer are found in more than twenty foreign countries and in every State in the Union.

We of the American Society of Cinematographers are proud of our publication; proud of the service it has rendered during the past quarter of a century. We promise every reader and every advertiser that we shall continue in the same spirit to constantly improve the magazine and make it even more valuable with each passing year.
viewing the motion picture industry from today's vantage point is a Janus-like experience. Any conjecture we might make as to this great industry's future, and any remi-

niscing we might indulge in as to its past, is thought-provoking. From out of our past grows our future; we are but stepping stones for those who will follow us. Considering the achievements of the past, we feel safe in predicting great things for the future. Planning ahead, we look back and acknowledge those "old masters" who have made this industry possible.

It is not enough to say that the past ten, twenty, or fifty years have seen almost unbelievable advances over their earlier predecessors. It is only half-truth to say that we have made gar-
gantuan strides toward our goal for a finer, a more entertaining and a more nearly perfect product. Sound on film was science fiction when it was introduced, yet even its advent could not overshadow the obvious fact that it, and every other development in the motion picture industry, is only the natural out-
growth of what has gone before.

We are forever indebted to those pio-
ners in the arts who, long before motion pictures were dreamed of, de-

vised methods and had ideas which later became the very warp and woof upon which this great entertainment medium was built. Many of those men spent long years of study, research, experimenta-
tion and development. Not a few ob-
tained patents on their work, but for every man who patented his findings, there were dozens who received no men-
tion at all. Yet they, too, contributed to what was later to become the fifth larg-
est industry in the United States.

Today, the Motion Picture Industry has become both an Art and a Science, profoundly affecting not only our indi-

dual and national lives but is interna-
tional in aspect as well. It is an inva-

lible tool and pattern to those working in other associated Arts and Sciences.

There are few activities of civilized man today in which the advent of motion pic-
tures has not made its influence felt or played a so prominent a role.

Outside of war itself, there is no other industry that requires the diversified applica-
tion of so many branches of tech-
nical knowledge, and the employment of so many of the Arts and Sciences to complete its production. Here, above all other industries, we seek and will find we

have and use substantially the same process today; ours is merely an out-
growth and refinement of his method.

Then in 1892, a patent was issued to Seymour for a back projection process.

This process was designed for use with the stereopticon and combined a pro-

jected image and an actor. We've incor-

porated and utilized his idea.

Another name, one of the greatest of import-

ance, in the advent of motion picture industry, is that of Thomas A. Edi-

son, who, back in 1892, invented a con-

traption known as the Kinetoscope, which device applied the "perception-of-vision" factor of the human eye to retain an image, thus utilizing a natural human function which makes motion photograph-

y possible. It revolutionized the art of story-telling, and with it Edison gave to the world the forerunner and first prac-
tical application of make-believe. That possibility of creating an international make-believe medium of entertainment was destined to become the great Motion Picture Industry, which today represents an investment of well over two billion dollars.

Working with Edison to bring motion pictures into being was Dickson, making pictures of моделиing, developing optical exposure and masking along the lines of the Cool-

idge process.

Then, in 1896, another name loomed large on the horizon: George Melies, a

Frenchman. From 1896 until 1906 Melies

produced over 900 "trick" films. Their lengths were very short and ran from one to two minutes. Melies, who had started his ca-

reer as actor, theatrical technician and professional magician, applied his varied skills to the new medium, and made it an important contribution to the motion picture industry: the lap dissolve and multiple exposure.

He used combinations of miniatures and a form of cutouts and some of his effects required up to ten exposures. As they wore too slow, they would turn the forerunners of our present-day methods. Melies produced highly imagi-
native stories such as "Gulliver's Trav-

els," "Blue Beard," and many fairy tales. To him must also go the credit for pro-

ducing the first writing by the new medium a musical score at its opening. That was "The Kingdom of the Fairies," the most ambitious film up to that time. Produced in 1906, it ran 1223 feet and cost the staggering sum of $7500.

One of Melies' contemporaries, an Eng-

lishman named Robert Paul, produced much the same sort of film, the best

known of which was "The Haunted Curiosity Shop." Incidentally, there still ex-

ists in Hollywood, some of Melies' first pictures, and the Motion Picture Museum is an actuality, it is planned that duplicates made from these old films will be placed therein.

In the years that followed these early experiments, many ideas and methods were evolved. But it is worth noting that many of our present-day processes —masking, dissolves, double, triple and quadruple exposures, ghost shots, split screens, etc. etc.—mostly date back to old basic methods. We have merely amplified, refined and improved upon them and brought them to a new height.

The "glass shot" as we know it today in Motion Picture parlance was patented and first used by Walter Hall, who came to Hollywood in 1916 to work with D. W.

Griffith on his picture "Intolerance." Hall had been a sign writer and scenic pa-
tiner on the New York stage, and he was an expert on perspective. It was for "Intolerance" that he utilized painted cutouts and glass shots and perfected them for motion picture use.

Fred Harms, in 1912 Eng-

gelsman had patented a process combin-

ing actors and painting on glass. And even further back than that, in 1864 Cal-

ticott patented a glass process which was used for stage illusions. That, of course, was long before motion pictures had even been thought of or come into being.

I harken back to these old patents merely to drive home a point, which is simply this: while we have made rapid strides in our profession, we, in the main, have been evolving improvements on basic ideas conceived years before, many of them before the advent of motion pic-
tures. Our task has been one of, not

pioneering so much, as it has been one of broadening the application of old prin-
ciples to modern technique, of development and refinement of some of the other men have passed on to us.

It is no reflection against our present-
day technicians that we look to the past in this manner. Every phase of the In-

dustry does that. The actor, for instance, looks back to the old Greek drama, stud-

ies the classics, learns Shakespeare. Like everything else, the acting profession

368 November, 1945 • American Cinematographer
has evolved along the way, has developed new techniques, or in borrowing from the older drama, has adapted and modernized it to present needs.

Our musical departments do likewise. Beethoven and Wagner are still very much in evidence in musical scores, and although our composers bring to the screen much that is new and original, they also wisely draw from the rich musical heritage and reservoir of the past. In much the same way do we technicians look back to our own “old masters” and realized that they paved the way for our present high standards and accomplishments.

And now, coming up to more recent years, we have Frank Williams, patenting one of the first variations of the matteing process in 1918. In 1922 Max Handschiegl obtained a patent using complementary color as a matteing process.

One of the comparatively few new ideas to be introduced in the past 25 years was the complementary matte idea. Entirely new, it was nevertheless short-lived, and has now mostly been superseded by the rear projection or transparency process.

In the early days of the silent “movies,” audiences found a new medium of entertainment and flocked to the theaters to see them. Great pictures like Griffith’s “Birth of a Nation” and “Intolerance,” C. B. DeMille’s “The Square Man,” etc., etc., and the early films of Mary Pickford, Marguerite Clark, Douglas Fairbanks, Charles Chaplin, George Arliss, John Barrymore, Eric Von Stroheim and a most of others—all were highly successful.

The legitimate stage, which for years had held the imagination of the public, had gradually lost its place of eminence to its younger sister, the “flickers.” Even vaudeville had come and gone, and remained practically only a memory.

And then, just as suddenly as silent motion pictures had soared to fame, they hit a snag. There was something missing; the novelty of the pantomime was wearing off. The screen had neither the tradition nor the color of the legitimate theater. Screen plays were becoming stereotyped and standardized. There were no live actors or live action to sustain the interest. Frankly, silent pictures were stagnating. As an entertainment medium, they had gone as far as their horizons could reach. It became obvious that, if they were to continue to develop their horizons could reach. It became obvious that, if they were to continue to please a fickle public’s taste, something drastic would have to be done somehow.

New life must be injected into motion pictures to make them more interesting—or to make them live.

And so, in 1927, as though by a miracle, the “talkies” were born. Sound was not new; Edison had used it, so had Bell. But synchronized voice and sound on film was revolutionary. Never before had this kind of sound been used as an integral part of picture making. No mechanical invention heralded its coming; no single technical development spelled its success. Sound was made possible by the development of electrical recordings and reproduction from disc phonograph records, plus the advent of the vacuum tube. Created of a fusion of electronics, acoustics, optics, photography, new laboratory practices, mechanics, and electrical phonograph recording, the science of motion picture sound-reproduction drew freely upon the accumulated knowledge of workers in all of these fields for its existence.

Almost overnight it transformed the entire motion picture industry. There was a frantic scramble to secure the equipment for large-scale production of talking motion pictures. Hollywood was in a turmoil. No branch of the industry remained untouched. Silent motion pictures had been dying, atrophying; with sound they were rejuvenated—came to life again.

And close on the heels of sound, two other new developments arrived almost simultaneously: Panchromatic film and Incandescent lighting. They fitted perfectly in the over all picture—in fact, were a necessary adjunct of sound, since sound had effected the lighting then in use.

Rejuvenation and conversion was evidenced in every phase of the Industry; for example:

**Photography:** Open cameras for silent films were noisy and could no longer be used, since the sensitive equipment picked up every slightest noise. Open cameras had to be discarded, or boxed in and soundproofed.

**Lighting:** With silent films we had been using arc lights. The fact that they sputtered and whined made no difference then, but with sound, that sputtering was picked up and presented a major recording problem. And so Incandescent lighting was devised and utilized. One of our greatest lighting problems in the early days of sound engineering was due to the fact that we were required, or so we thought, to shoot long shots, medium shots and close-ups simultaneously. If there were two or three principals in the cast, it necessitated possibly having four or five cameras on the set, which we soon found to be unnecessary. Also, now, choke boxes for the arc lights made them quiet and once more available for our use.

**Film:** Orthochromatic Film had been used, and it was satisfactory for use with arc lights, which burn on the blue end of the visible spectrum. Panchromatic Film, being sensitive to the full range of the visible spectrum, thereby made possible the use of Incandescent lighting, burning as it does on the red end of the visible spectrum.

**Special Photographic Effects:** Silent films were shot at a speed of 16; sound is shot at a speed of 24, which had been set up as a standard for sound. This represented more problems and well—trick shots were mostly bi-passed at the start.

**Laboratories:** It was necessary to develop for sound as well as for the picture and here is where real and precise gamma control entered as a required laboratory function.

**Sets:** Silent stages could be noisy, and no harm done. Sound called for soundproof stages, and all stages had to be reconverted. Floors and walls had to be silenced. Even the air-conditioning sys-
"A D V E N T U R E," says Glenn R. Kershner, A.S.C., "is like a drug. It lifts you up into the most exciting realms of existence, and then lets you down adrift, sometimes penniless, and leaves you with the urge to set forth again and again. As a trade, it can break you financially, but never make you rich!"

Globe-trotter Kershner's first yen for adventure at the age of fourteen culminated in an unsuccessful attempt to "join up" during the Spanish American War. His father caught up with him, and dug him out of a pile of straw behind a mule corral. When once again under the family's guiding hand, he was put to work in an oil field.

For two years, young Glenn worked in the oil fields, meanwhile laying careful plans for another escape into the exciting world that lay beyond his home town, Findlay, Ohio. He contrived a plan for working his way across the country as a one-man band.

He travelled west via Cripple Creek and Leadville to San Francisco, and at the age of seventeen, was earning a makeshift living playing in Barbary Coast honky-tonks. His band was ingenious to say the least. He rigged up a mouth-harp suspended by wires from his shoulders, played a guitar, and banged on a unique percussion instrument made of tin pie plates attached to the inner sides of his knees.

Life was too tame for the boy, however, and he itched to travel somewhere, perhaps China or the South Seas, where he could use the precious long focus Premo that was then his prized possession. He settled for Alaska and the Klondike, but not having the necessary thousand dollars for passage, he made three unsuccessful tries at stowing away in Alaska-bound vessels.

The third time, he was tossed unceremoniously from the boat to the wharf, and landed—hard—right at the feet of an astonished sailor, who promptly signed the boy for a run to South America on his three-masted sailing ship.

Glenn had just mastered the first rudiments of sailing. On calm days, he loafed and daydreamed of the magnificent scenery of South America, and the wealth of material it held for a photographer. An ill-timed storm blew up off Ensenada and left a beaten boat and a beaten boy stranded on the shores of Mexico! He started back to the states on foot. The grueling trip evidently satisfied his yen for adventure. He returned to his home in Ohio and studied music in a conservatory. There he learned to play the flute.

In 1914, when Henry Ford sent a very fine band on a tour of the United States, Glenn Kershner went along—as flute soloist. From there he was placed in Ford's newly organized Photographic Department, where he made the famous animated cartoon depicting a boy smoking a cigarette and turning into a coffin.

It was in the Ford laboratories that Kershner's photographic career began. During the first World War, he was assigned the task of filming airplane construction from start to finish. "Slim" Lewis, famous test pilot, and Kershner once flew a sputtering plane 5700 feet into the air, and set the plane into a tail spin. Kershner ground away at his camera while "Slim" pulled the plane out of the spin about 500 feet from the ground. When the film was flashed on the screen, Kershner counted twenty-two complete spins.

In early 1918, the young photographer took time out from his regular duties with Ford to film a picture, half of which was recorded in Mexico, and the other half in the United States. It was probably one of the first "good will" trips ever made into Mexico. Arriving by train at Hermosillo, where he was to meet a fellow American, he unloaded his paraphernalia and wandered around the station platform. His friend was not there to meet him. Several dark-eyed M e x i c a n o s crowded (Continued on Page 400)
The Technique Of The Documentary Film

By HERB A. LIGHTMAN

THE documentary film is at last coming into its own. The demands of war, which resulted in the vast speeding up of various fields of scientific development, also gave a shot-in-the-arm to the particular brand of filmic journalism we call “documentary”.

We have seen such films as “Attack!”, “Fighting Lady,” and “The True Glory,” filmed by cameramen of the armed forces. We are also acquainted with the “March of Time” and “This Is America” series released by R.K.O. Studios. Films such as these have been very successful in keeping the fighting man as well as the folks back home well informed as to America’s part in the war.

We may look forward to seeing this type of film, which has been so useful during the war, become a potent medium for recording the new era of peace and reconversion. But what, exactly does the word “documentary” mean? What is it that sets this type of film apart from other types of motion pictures: the newsreel, the training film, the photoplay?

First of all, the documentary film is not merely a “record” film. It goes beyond the plain recording of facts. Rather, its function is to picture and evaluate varied phases of our contemporary social scene—not just the shabby side, but all sides. Unlike the newsreel, which presents facts strictly as they happen, the documentary goes behind the scenes, asks “why?”, analyzes the factors involved, and usually arrives at a conclusion based on the facts.

Like the newsreel, it is a form of cinemactic journalism, but whereas the newsreel resembles an average news item that sketched the facts, the documentary can be compared to a newspaper feature article that treats the subject with a much wider scope.

It differs, too, from the training film which tells how to do this or that—also from the photoplay, the main function of which is entertainment. And yet, it has some elements of all these types: the newsreel, the training film, and the photoplay.

The documentary is not so much like a mirror that reflects life exactly as it is; it is more like a realistic painting that takes the facts, groups them into a forceful composition, and adds the color of its own particular technique, thus enriching the observations that are made.

Its function may be historical, educational, or purely informative. But in any case, it is a social force to be respected. Like all social forces it could be misused, could become an instrument of silly propaganda. It is the responsibility of the documentary film maker to guard against this and to present only the truth on film.

The Concept

The documentary motion picture depends upon an idea—that is its only reason for being filmed. But the idea must be worthy of the medium; it must be important enough to hold the vast audience that will see the picture. A trivial idea will never make a forceful film, no matter how clever the screen technique used in filming it.

Once the idea is conceived, an aim automatically follows. You want to put your idea across to an audience for a certain reason. That reason is your aim. An analysis of the idea, plus the aim, will then determine what “approach” is to be used in putting the story on the screen.

Approach is important. A bad approach can ruin even the best cinematic idea. But an approach keyed to positive audience reaction that every film reaches out for.

Ideally, the documentary should deal with people in relationship to their everyday surroundings. While it may be that the choice of idea subject matter is unlimited, it is human interest that gives life to any film. All of us are more interested in people than we are in inanimate objects. This holds especially true on the screen, a medium that demands human action.

We have said that the documentary is a realistic medium, and so it is. But reality in everyday life is often undramatic; events occur at random, and at widely separated time intervals. Therefore, what we strive for on the screen is realism rather than reality. We take the elements of the true situation, but point them up selectively, tighten up the time lapses, and often re-arrange the sequence of events for more forceful effect.

The documentary should arrive at some sort of a conclusion. Either it clearly presents both sides of an issue and ends up by letting the audience form its own opinion on the basis of the facts presented; or it takes a question and proceeds to answer it in terms of the facts depicted.

In any case, it should be truthful, should avoid dogmatic stands on controversial issues, and should steer clear of misleading propaganda.

The Script

Once the concept of the film is clear, the next step is the writing of the script. As in all types of filming, a definite screenplay should be written, for the script is the backbone of the documentary.

We will not go into the format of the screenplay here, because everyone who films documentary seems to have a different system of putting it on paper. But certain forms are common to all styles. Each scene should have an individual number, and each sequence (a separate set of scenes) should have a sequence letter.

The script should be written in greatest detail, incorporating camera directions, directorial touches, special effects, and even set-up diagrams. The more complete the script, the better chance the director will have of getting exactly what he wants on the film.

But the screenplay should be flexible enough to allow for changes and additions, since the situation when encountered may be vastly different from what it seemed to be when the script was written.

This is one reason why the screenplay should be written only after thorough research has been done on the subject. “Know your subject” is a rule that cannot be overemphasized. Only when the film-maker knows all the facts involved will he feel truly at home in his subject.

A well-written script is tightly knit. It follows a definite kinetic pattern, being careful not to go off on tangents. It should start at a level that is familiar and understandable to the audience for which it is being filmed.

Beginning at this common level, it gradually introduces less familiar facts of the situation, building all the while to a final and logical climax. This sequence, as an entity in itself, builds toward a conclusion, but all contribute to the main point which is established toward the end of the film.

In the course of this pattern, the story should move ever forward, using cautiously such complex devices as flashbacks and intertitles. To repeat itself unless such repetition is skillfully planned for effect.

A direct, coherent, and well-integrated script is the framework for an intelligent and interesting picture. Careless screenwriting can only result in a sloppy film.

The Director

The director of a documentary film is the guiding force of the production. He is not as specialized as the director of a Hollywood photoplay. Rather, he is often his own producer, as well as collaborator on the screenplay. The success or failure of the picture depends upon how successfully he integrates the various factors involved in filming.

Direction of a documentary is not a simple affair. The director must keep the original concept as well as the approach of the film in mind at all times. While telling a story that is factual and of social importance, he must yet inject enough showmanship to hold his audience.

The realism we spoke of earlier, the feeling that something significant is actually taking place, depends upon the director’s ability to keep his action simple yet dynamic. He must be selective, capable of extracting those elements of the situation that are most meaningful, and of emphasizing them on the screen.

(Continued on Page 378)
Lucite and Lantz Came Through
For The Navy

By HILDA BLACK

PRACTICALLY every moviegoer is familiar with Walter Lantz Cartoon characters: Woody Woodpecker, Andy Panda, Wally Walrus and the others. But comparatively few people know anything about Lantz' cooperation with our government in turning out twenty-two training films for the U. S. Navy. And they're worth hearing about, too, because among other things, a new method developed during their production, has opened up hitherto unexplored fields in the realms of education and industry.

Lantz himself, quiet, pleasant, unassuming, has made his entry into the motion picture industry's Hall of Fame in a completely unorthodox and uniquely un-Hollywoodish manner. In a town where short contracts are the rule and frequent turnover of personnel is the expected thing, Walter Lantz is unusual. For he has a phobia against job-changing and traces his connection with Universal Pictures through seventeen uninterrupted years of successful growth. In fact, Lantz' tenure at that studio dates back to the regime of "Uncle" Carl Laemmle, its founder.

When Lantz and his staff first undertook the job of turning out training films for the Navy they found they were up against a towering obstacle: Time, spelled with a capital T. Those pictures had to be turned out, not only well, but, as Lantz says, "Yesterday!"

With Germany and Japan undefeated, there was no question of "take your time, boys, and give us a good job." The government couldn't afford to sit quietly by and wait for training films. New recruits had to be given the quickest possible instruction; those boys were needed on the battlefield, in the air, on the water and under the water. And— they had to be well-trained.

That's where the motion picture industry came in. Hollywood had facilities and the "know how" of telling a story—any story, whether romance, comedy or instruction to kill—better than could be done through any other medium. The government knew it; negotiated and gave contracts to carefully selected Hollywood producers to furnish the needed pictures. Those were important films to all of us! Films rushed to training centers throughout the country where they would play a major role in the gigantic job of equipping American boys for the grisly business of war. Films that would hurry the day of total annihilation of our enemy, and bring our boys safely home again.

And so "speed" and "rush" became the order of the day. With every split second precious, Lantz knew he was up against a tremendous responsibility. He estimated that the first picture alone (which dealt with bomb fuses) would take a whole year to produce, if old methods of animation were employed. Obviously, a new method had to be devised; a method that would save time,
yet not lessen the efficacy of the film. And so he and his staff entirely discarded old ideas of cartoon animation and set to work to discover that "new method."

First, it was decided that, wherever possible, actual parts of the bomb fuse would be used. For other parts of the fuse plastic was employed, thus making it possible to photograph right into the fuse and show its actual workings. The almost microscopic parts were then enlarged so that they and their functions were clearly discernible. Workings of the fuse were shown in stop-motion. Incidentally, all of the machine work was done in the Lantz studio.

By thus showing the various mechanical devises set in plastic, the Navy recruits did not have to guess or imagine how a bomb fuse worked—they got a true picture of its actual operation. Of the twenty-two Lantz training films, eleven were on Bombs and Bomb Fuses.

Other films included "Enemy Bacteria"—the only training film they made in color—and pictures on torpedo instruction. "Enemy Bacteria" combined live action with animation and was shot on Monopack film, a system that requires a single exposure process similar to Kodachrome. It represents a considerable saving on original film and it is further desirable because it does not necessitate the use of a special Technicolor camera. Any camera can be used for the Monopack system, Lantz thinks it will be used almost exclusively for the color pictures of the future.

The Torpedo pictures were very interesting and had to show the various wakes of ships, and the course taken when the torpedo was fired. For these, rear-projection screens were devised, with the wakes of torpedoes and wakes of ships being worked out with lighting rather than drawings. Also, instead of drawings of the ships, exact replicas, furnished by the government, were used. Perfect down to the smallest detail, these miniature ships ranged in size from four inches to one foot in length.

To get the correct effect, it was first necessary to decide where the wake should be, then it was superimposed on the back of glass by a special mechanical devise. It could be made to animate. By the same process, the course of torpedos going through water could also be shown. Blowing up of ships was very realistically reproduced with electrical flashes of light showing explosions.

One of the biggest problems was solved when they decided to shoot through transparency. At first, shooting through glass was attempted, but too many difficulties arose. Glass was hard to handle, couldn’t be machined, picked up reflections, scratched easily and heat from the lamps cracked it. After a few other unsuccessful experiments, Lucite was finally selected as being the most adaptable for their needs. Desirable in every respect, not the least of its good qualities was its flexibility, an important item when machining to specific shape.

(Continued on Page 392)
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ALMOST every writer of motion picture history has, of late years, had his own and differing version of how 16 millimeter motion pictures came into existence. It is my privilege on this, the twenty-fifth anniversary of the American Cinematographer, to give the facts of how this standard of film came about.

In 1923, I designed and placed on the market the world's first 16 millimeter projectors and cameras. The Eastman Kodak Company made the world's first 16 millimeter film.

Of almost greater importance, however, is that in 1918 I proposed, at a meeting of the Society of Motion Picture Engineers held at Rochester, New York, the creation of a new and separate standard for motion pictures used outside the theatre, or in which is usually called—the non-theatrical field.

Up to that year many attempts had been made by manufacturers to introduce motion pictures of various film widths smaller than the theatre width standard of 35 millimeter. The reason why they were made smaller than the theatre width was chiefly to save in raw material. These film sizes varied, some being as small as 9 millimeter. There was in all these attempts, one mistaken viewpoint—each manufacturer believing that he could monopolize the film supply. The films were, therefore, deliberately made non-interchangeable with the products of competing manufacturers.

In 1918, I arrived at two conclusions. The first—that as long as 35 millimeter film was offered to the non-theatrical user, there would never be an industry. This, because no insurance company would write insurance on any building in which this film was used, due to its high inflammability unless fire-proof booths were installed. The second conclusion was that no individual manu

facturer had the necessary finances to produce a sufficient supply of film if using an arbitrary and individual style of film.

My solution to these problems was exceedingly simple. I proposed that a separate standard be adopted for amateurs, schools and industries. With this in mind I presented a paper at a meeting of the Society of Motion Picture Engineers in Rochester, in 1918, entitled—"THE PORTABLE PROJECTOR, ITS PRESENT STATUS AND NEEDS" in which I advocated the standardization of a non-theatrical film and apparatus, so differing from the theatrical standard that interchangeability with theatrical 35 millimeter film was impossible, and that all such film be made from non-combustible material instead of nitrocellulose.

From the perspective of 1945, it does not seem possible that such a simple proposal, under which no manufacturer was compelled to manufacture either machine or film, could have raised such a storm of protest. But as a matter of fact, it took many months of the hardest kind of persuasion and work to obtain the required number of votes to secure the acceptance of this proposal. The new film was 28 millimeter in width and became known as "the safety standard" to distinguish it from the so-called "theatre standard." Considering the great success of the non-theatrical industry and its magnitude at this time, one wonders why so much opposition was offered and why so many acrimonious discussions had to take place.

The safety standard had one weakness. Although of narrower width than the theatre standard, it was more expensive on account of the higher cost of the raw material. Therefore, aside from the absolute safety, it had nothing to offer and unscrupulous manufacturers continued to sell and advocate theatre standard projectors for use in places where no adequate protection was offered against film fires, of which there were many.

During my struggles to introduce the safety standard, I was supported by two staunch friends, the Eastman Kodak Company and Willard B. Cook of the Pathé-Scope Company of America. Had it not been for these two, I do not think the safety standard could have become adopted. As it turned out, the Eastman Kodak Company offered to manufacture the new type of film, spending a great deal of money installing the necessary equipment.

In 1923 the Eastman Kodak Company perfected the Reversal Process for motion picture film. Although this process was not new, having been employed in color photography, its application to motion pictures was a great innovation.

This process had two advantages. It was finer in grain structure and, therefore, a film having a smaller area gave

(Continued on Page 384)
For 25 Years . . . . .

the American Cinematographer has been serving professional and amateur movie makers in a splendid manner. We extend our hearty congratulations on this 25th anniversary.

For 18 Years . . . . .

we have been providing the motion picture industry with the finest lighting equipment that could be made . . . Since Pearl Harbor, we have also been serving the Armed Forces.

Now the war is ended . . . . .

we promise the film industry even better service than before the war. There will be new Inkies soon.

MOLE-RICHARDSON, Inc.
HOLLYWOOD, CALIFORNIA
25 Years of Progress

(Continued from Page 369)

teams had to be silenced. In fact, all equipment had to be silenced—even to the shoes we walked in.

Make-up: With the new Panchromatic film, new make-up had to be devised, and the so-called Panchromatic make-up was developed.

Acting: Personality, an attractive face and figure, and the power of pantomime were necessary requisites for silent films. But for “talkies” more was needed: a voice, a personality, an ease of the screen. It was found that sound would develop spontaneously as technicians and utilized equipment and materials which made it practical. These key developments were made possible by the introduction of the first super-sensitive panchromatic emulsions, which for the first time afforded the high film sensitivity necessary for rephotographing the projected background-image. With these elements available, it became inevitable that Cinematographers in practically every major studio should put them together to form, in actuality, a system which for years many of us had pondered in theory.

Our goal in this field is always to achieve the well-known indelible “projection shots.” As a matter of fact, when we are able to fool other Special Photographic Effects men, and have them think our shots are the real thing, then we will have achieved our purpose. To paraphrase Abraham Lincoln: we would like to “fool all of the people all of the time.”

As to the possibilities of the future, I predict that the utilization of the sciences in motion picture photography and photographic methods have unlimited possibilities. We have barely scratched the surface of new ways. The invention of electronics, optics, scientific discoveries will be devised, refined, developed. I visualize the time in the not too distant future when we will be able to set up a television camera at Times Square, put our actors through their paces here on the set in Hollywood, superimposing the Hollywood scene over the New York scene, and rephotographing them in a good believable composite. This may sound far-fetched, but when you consider the progress we have already made to produce the Atomic Bomb, Radar and other recent scientific and war developments, this is completely within the realm of possibility—possibly even in stereoscopic color—if you please!

It is unfortunate that it takes a war to bring forth mighty developments and inventions, but such is the indisputable truth. War is a creature of waste: waste of life, of material, of money and effort. But it would be impractical, impossible to invest so much during peace-time; it is simply not economic. World War II has greatly by it.

Now, at last, film-makers realize that careful composition helps to tell the story more forcefully. The camera is such a flexible instrument that it can adopt unlimited point of view; but here, too, the documentarian should be careful not to let the camera run away with him, for any technique that calls attention to itself is a bad technique because it is bound to detract from the subject matter of the scene.

The angle suited to the subject will have dramatic punch, and the rule follows that any camera technique should be motivated by the demands for the situation. The novice, for instance, is inclined to “spray” the landscape with his camera. However, in a documentary camera movement a “pan” or “tilt” should mostly be used to follow action, rarely on a static subject, and never as a substitute for action within the scene. In shooting uncontrolled action it is sometimes necessary to lide the camera from view and shoot “candid” in order to keep crowds from looking right into the lens. Similarly, two or more cameras trained on the same scene may be necessary to record a variety of coverage on a sequence that cannot be re-staged.

The camera should not overdo the use of reflectors in outdoor scenes, as the rather harsh quality of natural sunlight (except, perhaps, in large close-ups) has a realistic feeling to it that is desirable in documentary. There is a growing tendency toward the use of filters. In this work, you cannot have a fine rotogravure quality, but he consistent. If you start out with filters, follow through with them, otherwise the scenes will not match when intercut together.

(Continued on Page 408)

The Technique of the Documentary Films

(Continued from Page 37)

Action cannot always be controlled. At times his only alternative will be to set his camera up and shoot, hoping that the action he seeks will develop. But most of the time he will be able to direct people in re-enactment of an actual situation. This is perfectly permissible in fact, it is the only way to get certain sequences. The director should not hesitate to apply direction where needed.

However, the director must be careful not to overdirect, or he will get stilted performances from the non-actors with whom he is working. He should put these people at ease by gaining their confidence before hand. Next, he must try to provide as many elements of the real situation as he can.

Then he must answer in his own mind the question: “What is the meaning of the action in this scene?” remembering that the scene bears a direct relationship to the ones immediately preceding and following it. Keeping the simple and real as possible, he then re-hears the scene with his people until it is correct. Diverting the subject’s attention away from himself and toward the subject matter, is of prime importance if realism is to be achieved.

By keeping himself inconspicuous, by holding his action to a simple pattern, and by avoiding obvious “arty” touches, the director can produce a true documentary feeling on the screen.

The Camera

The camera is the “eye” through which the picture is recorded, and photography is no small factor in the quality of the final film. There used to be a theory that poor photography in a documentary made it more “real”—but this idea has long since been revised. The “March of Time,” regarded as tops in the documentary field, maintains a high standard of photography and profits greatly by it.

(Continued on Page 402)
Eliminates Film Damage Due to Faulty Threading

Here is a welcome innovation for both expert and amateur. With this new improved design of film threading mechanism, both film sprockets open for threading and close automatically as the gate opens and closes. Either sprocket may also be opened individually to adjust film loops if necessary without opening gate. This new feature not only saves time but eliminates possibility of damaging valuable film because of improper threading.

Owing to the still urgent demand for Ampro projectors by the U.S. armed services—all Ampro civilian production for the balance of the year will be allocated to the accumulated orders now on hand. Because of this unusual demand, all new orders are being booked for early 1946 delivery and will be filled in the order in which they were received. If you wish Ampro quality and features—and they are well worth waiting for—we urge you to place your orders now so that delivery can be made at the earliest possible time. Your patience will be rewarded by the superb quality and features of the new Ampro projectors.

The Army-Navy "E" has been awarded to Ampro for excellence in the production of 16 mm. motion picture projectors.

AMPRO CORPORATION • CHICAGO 18 • A General Precision Equipment Corporation Subsidiary
WORLD-FIVE years ago this month the first issue of the AMERICAN CINEMATOGRAPHER made its appearance. Members of the American Society of Cinematographers were proud of that first issue, but they never dreamed that it would some day develop into a journal that is recognized as the leading field throughout the world; that it would some day number among its readers thousands of home movie makers who from its pages glean information that helps them make better home movies.

This writer is proud of two things in connection with the magazine. First that it was he who introduced an annual department in the magazine back in 1929. Second that he has guided the magazine as its editor for a total of five years and six months of its existence: three years and three months at one period, and three years and six months since the death of Editor William Stull in July, 1943. During that time we have been happy to see the increase in enthusiastic readers in all parts of the world—and to have been able to serve them.

When I stepped in to help out on the death of Bill, I had no intention of remaining at the editorial helm; just planned to stay on until another editor could be found. Well—I kept staying on all this time. Now the increase of my main business, Public Relations, has become so great I no longer have the time in which to edit this publication. So, with this, the Silver Anniversary issue, I am resigning as editor, and am turning the reins over to my good friend Walter Greene, who assumes the editorship as of November first. I want to thank the many readers for their wonderful letters of commendation that I have received through the last two years. I really hate to part company with you readers, but I must. And I am sure Mr. Greene will continue to give you the same high standard magazine you have been receiving each month.

Goodbye, folks. God bless you all. H.H.

Keeping Track of A.S.C.
Members in the Studios

As this issue of the Cinematographer goes to press members of the American Society of Cinematographers are filming the following pictures:

Columbia

Metro-Goldwyn-Mayer

Monogram

Paramount

P. R. C.
Franz Planer, “Once and for All.”

RKO

Republic
Tony Gaudio, “Concerto.”

20th Century-Fox

United Artists

Universal

Warners
Ernie Haller, “The Verdict.”
How to foil a fidgety actress!

MAKING indoor movies of temperamental young children isn’t easy.

Use too bright lights, and your subject recoils. Squints. Protests! Focus on your star in one position, and he (or she) is certain to move to another.

A good answer is Ansco Triple S Pan Film. It’s fast—plenty fast. So fast you can make good indoor shots with a very minimum of light. So fast you can stop down for extra depth of field—keep pictures sharp even if your subject does move closer or farther away!

Try Triple S Pan. See how it improves your photography. We’re doing our best to make enough of this fine film to supply everyone. If your dealer’s stock is exhausted today, try again tomorrow.

Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation.

ASK FOR

Ansco
8 & 16mm
TRIPLE S PAN FILM
Formation and Progress of Amateur Movie Clubs

By CLAUDE W. CADARETTE

At the outbreak of World War II, the War Department, realizing that there were not enough professional cameramen, sent an urgent appeal to the amateur photographers of America to volunteer for assignments in all branches of the government's photographic departments. Thousands of men responded and served in all capacities of the Signal Corps and Air Force Photographic units. Their services were doubly valuable in view of the fact that they required a minimum of training and could be readily assigned to important tasks at a time when speed was paramount in the preparedness for war.

The War Department was aware that these amateurs were qualified for their assignments in still and motion picture work because the photographic amateur is, as a rule, more familiar with all phases of his hobby than any other type of hobbyist. The Army, Navy and Air Forces also realized that photographers cannot be trained in a few months or a year. They needed these men and turned to the amateur clubs of America for their source of supply.

The results of the amateurs' work in the war effort are amply recorded in the files of the War Department. Many have died but their work always paved the way for invasion fleets and battleground maneuvers.

Let us review the history and background of the clubs where these men were members and officers.

Photographic clubs are not new. In the days of Daguerre it was not uncommon for small groups of photographers to meet and discuss their work with each other.

One member's advancement or achievement was not kept as a secret but was shared with the others to help improve their work. This is still the practice in clubs today. It is this spirit of good fellowship and helpfulness that has proved so successful to clubs and to the photographic industry as a whole.

Although motion pictures for the amateur photographer were introduced in 1923 with the advent of the 16 millimeter camera and equipment, the cost of the equipment limited the sales to only the wealthier families in each city. Little was known about technique and the use of accessories, so filming was confined to family capers and portraits.

A few years later, lower production costs and improvements in the equipment brought the camera within the scope of the average salaried man and created an incentive in thousands of people to own a camera. Soon, small groups would meet at their favorite dealer and discuss their photographic results. These meetings were the nucleus of the formation of clubs.

In 1925, the first clubs were organized but their activities were confined to purely social gatherings and viewing films. Interest in filming techniques and scenario type pictures did not become very evident until 1933. By that time, superior cameras, accessories and films had created a desire in the amateur clubs to do all that was possible to emulate the results of the professional cameramen. Scenario type film and good editing provided an incentive for the members to outdo their fellow members in their club and other clubs throughout the States. Inter-club; inter-state and international contests were inaugurated and annual contests became the highlight of all club activities.

About this time, the eight millimeter camera was introduced to the market at a much lower operating cost than sixteen millimeter equipment.

This brought movie making into thousands of homes and into hands of young people with a tremendous urge to make their own scenarios. Eight millimeter clubs were formed by the hundreds during the first two years after the introduction of the equipment and the photographic hobby took a sudden leap to the foreground and was all other types of hobbies. Competition rose to new heights between sixteen millimeter and eight millimeter films and in my opinion, based on the results of the American Cinematographer International Contests, eight millimeter films won the distinction of winning more places in these contests than the sixteen millimeter entries.

Inter-club; inter-state and international contests were inaugurated and interest in movies thrived.

Inter-club meetings are constantly held and most club meetings have turned from the purely social type to the educational. Club members demanded enlightened talks on photographic problems from professional men and discussions among members to aid them in producing better motion pictures. Amateurs made exhaustive tests and trials to learn and achieve effects they had seen on the professional screen. This interest among members made clubs prosper and flourish.

Film exchanging between clubs became popular and guest speakers were provided for inter-club meetings. Contests were held monthly and annually with keen competition, but always guided by the feeling of good fellowship and pure Americanism.

In this atmosphere of club functions, the amateurs learned, experimented, tried and retired, gained effects and in general overcame most of the problems which confronted them in mastering their photographic skill. This was the background and training which the War Department needed and acquired after they had made their appeal to the clubs.

During the war, by careful planning and pooling of transportation facilities, the clubs survived the rations, problems and kept their activities alive. Club banquets on the West Coast and in critical war areas were held during daylight hours to eliminate night dim-out driving and air raid alerts. Shortages of film threatened the very existence of many clubs, but the members helped each other in many respects and through cooperation, every member was able to obtain film necessary to meet urgent demands. All clubs which survived the war years are now definitely well enough established to overcome any emergencies or catastrophes which may now occur. They prospered and flourished during the depression years and survived the world's greatest armed conflict.

The old clubs, namely Hartford Camera Club, New York Camera Club, Chicago Cinema Club, Los Angeles Cinema Club, Los Angeles Eight Millimeter Club, Long Beach Camera Club and many others have become institutions which can withstand any difficulties and live indefinitely. Hundreds of other smaller clubs are rapidly coming to the foreground and providing strong competition for these older groups.

The spirit of helpfulness among these groups has contributed to their stability and progress. Within these circles, members have made hosts of friends and the membership rolls will reveal that men in all types of industry, from the Gas Station Operators to the Aircraft Executives meet on common ground to discuss their filming results.

Survey Shows Increase In 16mm Outlets

A total of 70,000 outlets for 16 mm. films, which includes schools, churches, clubs, and business firms, are now available in the United States, according to figures released after a survey made by Telefilm Studios of Hollywood, it was announced by Joseph A. Thomas, President.

Thomas also revealed that a circuit of 350 theatres for 16 mm. pictures, to be erected in small towns throughout the country, is planned by one exhibitor's organization.

The Telefilm chief said that theatres for 16 mm. films are at present being erected in European countries to replace many of those destroyed during the war. Advantages of the 16 mm. houses are lower cost of building during the shortage of materials, easier installment of equipment, and less fire hazard.

Thomas said that 16 mm. equipment definitely will be more adaptable for television, especially because of shipping advantages, the narrow measure film being non-combustible.
Here's Why... Modern business has accepted the use of motion picture film in streamlining its business procedure. Financial institutions, mercantile establishments, schools and colleges, governmental agencies, commercial film studios and photographic supply houses are among the greatest users of 16 and 35 mm. film as a part of their daily business routine.

With Houston's new Models 10 and 11 Film Processing Machines, it becomes a simple matter for the community processor to acquire a large share of the lucrative and profitable processing business.

Houston's processing machines and methods make it possible and practical for film to be completely processed days and weeks ahead of present day "out of town" processing schedules.

Business establishments want processing done when and as they need it. With the Houston Models 10 and 11 Processors in action, it's done "Johnny on the spot" with a maximum of speed, accuracy and privacy and a minimum of delay. Houston's processing machines handle the entire job from camera to screen with each processing step under full automatic control.

You can be assured of a safe, sound, dependable future by becoming a community processor.

Write today for illustrated literature.

THE HOUSTON CORPORATION
11801 W. OLYMPIC BLVD., LOS ANGELES 25, CALIFORNIA

HOUSTON MODEL 11
Handles 16 mm. negative, positive and reversal film. A complete self-contained, portable unit requiring no extra equipment. Dimensions: 64" long, 54" high, 24" wide. Processing speeds: Reversal film 15 ft. per min., negative film 5 ft. per min. at 8 min. developing time, positive film 20 ft. per min. at 2 min. developing time.

HOUSTON MODEL 10
For 35 mm. negative and positive film. Dimensions: 168" long, 82" high, 34" wide. Capacity: 600-1200 ft. negative film per hour at developing time of 6-12 min., 1200-2400 ft. positive film per hour at developing time of 3-6 min. Streamlined, compact. Requires no extra equipment.
Peacetime Engineering Outlook

By D. E. HYNDMAN

President, S. M. P. E.

(Continued from Page 376)

MANY articles have been published extolling the miracles of scientific and engineering progress made because of research and development done to produce new and effective materials for World War II. Some have stressed the panacea that will exist now that peacetime has arrived pointing out special new gadgets made of plastic, light-weight metals, special new-type materials, etc.; even to predicting the early availability of wrist watch radios, book-size television sets, gadgets that do all housework, and even atomic powered automobiles. Perhaps some of these Buck Roger developments will materialize, but let us not be led to expect too much—to expect more than the scientist, engineer, and producer are capable of giving. Let us remember that reliability and quality of performance require careful study, often considerable time, and ample proving tests.

This type of careful study and investigation of problems or projects is fully representative of the high engineering standards practiced in the past and planned for the future by the Society of Motion Picture Engineers.

The Society is an engineering organization of a group of individuals associated in general partnership to conduct a business paying no salaries to officers or members, but operating on a non-monetary principle to recommend engineering procedures, to guide to some extent research and development, to encourage improvement, and to lead standardization in the Motion Picture Industry. From the initial organization of the Society in 1916 it has led the Motion Picture Industry to accept technical improvements that have been major contributions for continually increasing the efficiency of operation in production, distribution, and exhibition, and patronage at the box office.

In cooperation with those interested, the Society plans:

1. Group engineering at an accelerated rate on problems and projects directly related to production, distribution, exhibition, film, equipment, accessories, etc.

2. Further detailed work on the interrelations of the television art and the entertainment field of motion pictures, involving such specific projects as: studies of frequency allocation and band width requirements in relation to screen definition, private addressee systems, study of problems in installing and operating television equipment in theaters, follow-up on hearings before the Federal Communications Commission, etc.

3. More efficient work in standardizing procedures, methods, data, specifications, equipment, and the like, which brings economy to production, distribution, and exhibition.

4. Careful supervision of all engineering and technical projects on Motion Pictures with the American Standards Association and any International Standardizing Groups in order to maintain the Motion Picture Industry in a position to steer equipment design throughout the world. This would tend to assure that American Motion Pictures could be distributed or exhibited anywhere. Much of this cooperative work has been done in the past, but as a result of the war it is imperative that this international cooperative engineering be followed to the fullest extent.

5. Correlating, assembling, editing, and original preparation of material for needed engineering reference books and/or reports on:
   (a) Cinematography,
   (b) Sound Recording and Reproduction for Motion Pictures,
   (c) Motion Picture Laboratory Practice,
   (d) Film Exchange Practice,
   (e) Motion Picture Process Photography,
   (f) Motion Picture Projection,
   (g) Motion Picture Theater Engineering,
   (h) Preservation of Motion Picture Film for Valuable Record Purposes,
   (i) Theater Television Installation and Operation.

These books or reports are urgently needed not only in the industry but also as text books for the teaching of courses on Motion Pictures in colleges and universities. Such courses are now proposed in answer to numerous requests from members of the Armed Forces as well as from civilians who, in past years, have often asked the Society to recommend institutions giving courses in Motion Picture Production, Distribution, and Exhibition.

Mutual understanding and close cooperation of those who appreciate these problems in the related fields of production, distribution, and exhibition are necessary to bring about engineering advances which might otherwise lay dormant for many years. Let us work together to make American Motion Pictures continue leading the World.

The History and Origin of 16 Millimeter

By August, 1923, we were in production. The world's first printed announcement of the Victor Cine Camera and Projector and the new Eastman film was made in the form of full page advertisements in the two leading Davenport, Iowa, newspapers on August 12, 1923. That day I definitely relinquished all interest in the 28 millimeter standard. Why? When the Eastman Company brought this process to my attention, I became very much interested. Here, it seemed, was the true solution to the problem of a safe standardized film for non-theatrical use, and especially since it lent itself to amateur photography where the user himself made his own “movies” independent of other sources of supply. I reasoned that if enough people bought cameras and projectors for the purpose of making their own pictures, it would follow that field and would be opened for commercial films made for the projectors, or copied from existing theatrical material. In fact, I saw that here was the perfect solution to my dream of safe movies for the home, the school and industry.

It was proposed, from some quarters, that the new film should be made one-half the width of the theatre film, or 17½ millimeters. The objection to this width was that inasmuch as the type of raw stock used for 35 millimeter was cheaper it would make possible a “black market” in which unscrupulous persons might split regular thirty-five millimeter film and nullify the entire effort for a safe product.

It was decided that the new film should be made 16 millimeters in width, which was a millimeter and a half less than a split thirty-five, and with film channels made to a 16 millimeter dimension it would prevent the use of split theatre film.

With these preliminaries out of the way and the assurance of the Eastman Company that it would make the new film and would process this film for amateurs, I immediately began the work of designing a 16 millimeter camera and projector.

By August, 1923, we were in production. The world's first printed announcement of the Victor Cine Camera and Projector and the new Eastman film was made in the form of full page advertisements in the two leading Davenport, Iowa, newspapers on August 12, 1923. That day I definitely relinquished all interest in the 28 millimeter standard and have since that time advocated and devoted my company's energies to the 16 millimeter width.

Although I had the good fortune to be the first to design and manufacture 16 millimeter cameras and projectors, it does not mean that I am entirely responsible for its superlative growth. To Eastman Kodak Company belongs a
"PROFESSIONAL JUNIOR"*
FRICITION TYPE
Removable Head Tripods

Tripod handles all 16mm cameras, including Ektar Special, Bolex, etc., even when motor driven and with large film magazines.

Knurled knob, easily accessible, fastens any make camera on top-plate.

Rubber-gripped guide handle is removable, fastens under tripod when carried.

Large knurled knob adjusts tilt action tension.

Wing lock for positive setting of tilt head if fixed angle is desired.

Very large trunnion insures super-smooth tilt action with minimum wear.

Tilt head design permits extremely wide arc of high and low tilt action.

Wing lock for adjusting pan movement tension. Also acts as positive lock in any position.

"L" level aids in setting tripod to true horizontal and vertical position.

Tie-down rings permit using tripod on moving platforms such as dollies, auto roofs, etc.

Non-loosening nuts hold legs on base securely.

Maple, long-grained, hand-rubbed, splinter-proof, weather and warp-proofed is used for tripod legs.

Quick-release fluted knobs set between each leg afford positive locking in controlling tripod height adjustments.

Acclaimed the finest for every picture-taking use, "Professional Junior" tripods are compact, versatile, rugged. Super-smooth 360° pan and 80° tilt action; positive, simple, leg-height adjustments; compact and light (weighing 14 lbs.); allowing 72" high and 42" low usability—no finer tripod is made. The inset shows the full tripod mounted on our all-metal Collapsible Triangle which is used to prevent tripod from slipping when used on hard or slippery surfaces.

Pat. No. 2318910
Trade Mark Reg.
U. S. Pat. Office

Now available to camera owners and dealers—"Professional Junior" standard and baby tripods, "Hi-Hats," alignment gauges, portable dollies, collapsible triangles, etc. They are used by the U. S. Navy, Army Air Bases, Office of Strategic Services, Signal Corps and other Gov't agencies—also by leading Newsreel companies, 16mm and 35mm motion picture producers.

Tripod Head Unconditionally Guaranteed 5 Years

Write for Details

FRANK C. ZUCKER

1600 BROADWAY NEW YORK CITY

Cable: CINEQUIP
Circle 6-5080
AMONG THE MOVIE CLUBS

Westwood Club
Three excellent films in Kodachrome and a talk on flood lighting decorated the October meeting of the Westwood Movie Club. Films screened were:

“A Tuolmune Vacation,” Roy Olson.
“The Centipede or My First 50 Feet,” by L. F. Forden.

Eric Unkock in his talk on lighting spoke on the subject of “Make Indoor Movies this Winter.”

The November meeting will be devoted entirely to the showing of contest winning pictures. Winners will be selected at a preview of all entries before three judges: Jesse Richardson, Ed Franke and Dr. J. A. Thatcher. None of the judges will be permitted to enter a film in the contest. November twentieth has been set as closing date for entry of films in the contest.

Annual election of club officers has been set for December, and President George Loehrsen has announced the following nominating committee: Don Campbell, Dr. Gobar and Jesse Richardson, all past presidents.

Tri-City Club
Highlight of the October meeting of the Tri-City Cinema Club of Davenport, Iowa, and Moline and Rock Island, Ill., was a talk on composition by Elizabeth Moore, Director of the Davenport Municipal Art Gallery. Her talk was illustrated with Kodachrome slides.

Two films were screened. They were “Brookfield Zoo,” by Joseph O. Booth, and “Ten Thousand Miles;” a western scene furnished by the Eastman Kodak Company.

Officers of the Tri-City Club are: Margaret West, President. Tom Griberg, First Vice-President. Roger Spitznas, Second Vice-President. Carl Armussen, Secretary-Treasurer. Miss Georgie First will handle national press releases.

Brooklyn Amateur Cine Club
A Ten Best Winner, “Baie St. Paul,” by Frank Gunnell, was included in the program at the October meeting of the Brooklyn Amateur Club.

Other 16mm Kodachromes shown were “Air Currents” by Francis Sinclaire, “Surprise Party for the Doctor” by Samuel Luskin, and “World’s Fair” by John Larson.

Los Angeles 8mm Club
The Los Angeles Eight Millimeter Club met October 10 for its regular monthly meeting, and a preview showing of “The Stillwell Road” filmed in China.

Two other films were previewed at the meeting which were photographed by two members who have just returned from overseas. They were “Saipan and Guam” by Louis B. Reed, and “China and India” by James B. Ridge. It has been announced that the annual banquet is to be held December 15th.

Cinema Club of San Francisco
The October meeting of the Cinema Club of San Francisco was held jointly with the Westwood Movie Club at the Women’s City Club.

An unusually fine selection of films were enjoyed by both clubs. The evening’s showing was as follows:

“Colorful San Francisco”, an 8mm Kodachrome by George Loehrsen.
“The Home Front,” a depiction of home news as related by a mother to her son in the service.
“Our Garden”, an unusually beautiful 8mm Kodachrome by Joe Pissott.
“Baie St. Paul”, a ten-best award 16mm Kodachrome by Frank Gunnell.
“Pictorial Jewels”, Kodachrome slides by Leon Gugne.

La Casa Movie Club of Alhambra
Through the courtesy of the Walt Disney Studios, the Alhambra Movie Club viewed a series of 16mm late sound and color pictures at its October meeting. Also shown, were 8mm scenes of the Arcadia train disaster, photographed by Paul C. Knepp.

Other films viewed were an 8mm Kodachrome by Earl Martin titled “Cuba”, “An Eastern Trip” by John Cook, “Our Anniversaries” by R. A. Battles, and a 35mm film by C. L. Wachholz, “Western Scenes.”

Los Angeles Cinema Club
An instructive talk by J. H. Maynard of the Color Film Processing Department of the Eastman Kodak Company was a feature of the October meeting of the Los Angeles Cinema Club.

Films shown at the meeting were as follows:

“Odd Shots of Mexico” by Guy Nelli.
“Bird Life” by Andrew G. Orear.
“Yosemite’s Water Falls” by L. S. Franks of Kansas City, Mo.

Thanksgiving Movies
Thanksgiving Day is not far away, so why not get busy now in preparing a well thought out scenario to record that event at your place on film.

Most home movie makers think only of filming the family sitting down to dinner, and perhaps the activities after the meal. But why not think about the preparation of the feast. Give mother a break this year. An interesting film can be made showing the creation of that dinner, starting with mother selecting the turkey, purchasing the various vegetables, stuffing the turkey, basting it as it turns to a golden brown, making the pumpkin pies, etc. Top that off with scenes showing how quickly all of mother’s work disappears down her family’s throats and you will have a film record worth while in years to come.—H. H.
Ciné-Kodak Film is on the way
Here's news about Kodak Film, too

8mm. and 16mm.
magazine and roll...
full-color Kodachrome
and black-and-white

AT YOUR CINÉ-KODAK DEALER'S—SOON

SOME Ciné-Kodak Film will come in the familiar prewar Ciné-Kodak Film cartons... some, in the new-style cartons you see here... but all, dated on the outside of the cartons for your protection, is, as ever, uniformly dependable! Your dealer may not have all you want the first time you see him. Soon, he will have plenty.

More still camera film
Although quantities of "still" film, both black-and-white and color, continue to be supplied to the armed forces both overseas and in the U.S.A. for military and for personal use, more and more is being delivered to your Kodak dealer each month. Keep in touch with him.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.
Special Effects For The Amateur
By F. C. MOULTRIE

AMBITIOUS amateur cinematographers often find themselves at a disadvantage in obtaining certain effects, as a consequence of the limited facilities provided on the majority of sub-standard movie cameras,—to say nothing of restricted “exterior” means.

Few, if any, use optical or contact printing, back-projection, or other devices which will secure “special effects”, and the amateur feels that he is tied down to straight photography of the real life scene, or he must leave it alone. Yet some of the effects and tricks referred to constitute the “punctuation marks” of a film and their absence is somewhat analogous to the situation we might face if presented with a book consisting of words only, with no asterisks, query or exclamation marks, commas or periods!

Apart from the call of necessity that we sometimes produce a made-to-order image when the actuality is difficult (if not impossible) to obtain, it is always desirable to lend polish to any film, whether it be a family record, a travelog, an industrial or a photoplay.

In preparing a script and planning a film, it is almost invariably found that the story would be much more agreeably told if this, that or the other detail could be incorporated. Professional motion picture studios utilize the services of Special Effects Departments, whose duty it is to devise ways and means of securing made-to-order photographic images more inexpensively than the shooting of the real thing would be or else to contrive a system of photographing images which would, factually, be impossible. Any amateur would find it very profitable to establish for himself a “special effects” department, even if it merely took the form of individual time spent upon efforts to solve current cinematic problems.

When an artist commences a painting, he has his colors and his blank canvas, plus a mental picture of that which he wishes to convey to the ultimate viewer. Substituting the camera and the raw film for the colors and canvas, that is exactly what one should have when constructing a motion picture, remembering that the manner in which the succession of images is registered on the film is immaterial, so long as one’s aim is achieved. It was early observed that scenes arranged in sequence in motion pictures, become related in the viewer’s mind. If one were presented with a scene showing a bill-fold lying on the ground, followed by a shot of a person stooping as though to pick up something, one would conclude that it is the bill-fold that is being taken up, even though the scenes may have been in fact many miles apart.

No attempt will be made in this article to cover all the tricks that an amateur might use to accomplish a desired outcome, for individual ingenuity must be brought to bear on the problems of the moment. However, it is hoped that the remarks and ideas here given will provide a foundation for constructive conceptions, and offer interesting fields of (Continued on Page 398)
VICTOR wants to come home, too...

VICTOR has served long and well; VICTOR wants to come home to again serve Schools, Churches, Industries and the home user.

Thousands of letters ask, “How soon? When can we have the Animatophone?” As you know, we’ve been working for Uncle Sam; his demands for VICTOR have been of gigantic proportion . . . for both military and industrial training. Meanwhile the VICTOR dealer has patriotically waited. Today it’s natural to ask: “When?”

Our reply? “Soon, we hope!” Even now, we are delivering to Uncle Sam who still thinks VICTOR best for his boys, on land and sea and air. Meanwhile, civilian shipments are being made in limited amounts. It won’t be long before VICTOR, heaped with the honors of war, will be available for any and all requirements.

VICTOR ANIMATOGRAPH CORPORATION
Home Office and Factory: Davenport, Iowa
New York (18)—McGraw Hill Bldg., 330 W. 42nd Street
Chicago (1)—188 W. Randolph
MAKERS OF 16MM EQUIPMENT SINCE 1923

American Cinematographer • November, 1945 389
OF THE vast majority of movie makers, only a comparatively few are consistent users of titles in their films. The others are either unaware or negligent of the importance of a few explanatory titles towards rounding out a silent movie. Perhaps this not knowing or not caring attitude can be attributed to the fact that Mr. Average Movie Maker is so intrigued by those shots of junior playing with his electric train, or sis admiring her new party dress, that he sees no faults whatsoever in his cine material.

Such a perspective is easily understood, for most filmers are inclined to view their pictures from a purely personal standpoint, in which case such films are naturally "tops." But let Mr. Movie Maker call in some of his friends—or better yet, total strangers, to analyze his pictures from a strictly neutral viewpoint. Then, and then only will he get the frank, unbiased opinion of the outsider! And such "critics" should not be considered cold and hard-hearted when they fail to have the same reaction to those tender scenes as those more closely associated with their making.

Not knowing anyone taking part, these "judges," by their constructive criticism, are well qualified to rate a film on its merits only, and are best able to judge real "human interest." By separating true "human interest" from the sometimes closely allied "sentimental shots" they are doing the filmer a great favor.

Having depleted all undesirable scenes, chances are nine times out of ten titles will be suggested to make presentation of the remaining scenes more effective. Titles are a natural "bridge" for linking seemingly far-fetched scenes in interesting story-telling sequence. To determine their worth in any particular film, all that is required is that the reel be projected, and any bit of action that causes the spectators to question how, when or where, titles are not only advisable, but a necessity.

One need not be a skilled artist to set up attractive title cards. Still photographs, magazine illustrations, and travel folders provide excellent background material, while letters can be traced from newspaper headlines, drawn free-hand, or typewritten. Commercially made letter outfits of wood, metal, and plastic, made exclusively for titling purposes are available at camera stores, whereas die cut, gummed paper letters, in a variety of colors may be procured at the 5 & 10 cent store. Or, if the movie maker prefers not to fuss at all with making his own titles, there are many laboratories throughout the country offering titling services, with the customer furnishing but the copy.

Some filmers may be inclined to photograph their titles as they go along, but this usually is not the best practice, since hastily gotten together words seldom are as effective as those well planned to fit the occasion. There are exceptions, of course, as in the case of "natural" titles, such as highway markers, townlimit signs, hotel marquees, etc., which must necessarily be filmed "on location." Sometimes, if cleverly used, these "on the spot" titles are most appropriate.

As a person becomes better acquainted with the pleasures of titling he will strive for the more elaborate effects of the pro-

(Continued on Page 392)
Service of Information

For a quarter of a century, the AMERICAN CINEMATOGRAPHER has rendered an immeasurable service to photographers all over the world . . . The CINEMATOGRAPHER has been the guiding light in the dissemination of authentic information on the newest developments in the photographic world . . . We salute the CINEMATOGRAPHER on its 25th anniversary.


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Photographers have always looked to us with confidence for the best service and highest quality . . . We have never failed them in the past, and we will not fail them in the future.

SMITH & ALLER, LTD.
Pacific Coast Distributors
For
E. I. du PONT de NEMOURS & CO.,
Photo Products Dept.
Lucite and Lantz

Come Through

(Continued from Page 373)

As to the actual operation of shooting through Lucite, Lantz offers a simple comparison: suppose you remove the gold case from your watch, enclose it in a transparent material, then observe the inner workings of the watch's mechanism. That's about the effect accomplished in those training films.

Lantz estimates that, with this new process, the time required to make a picture was cut one-fifth, the cost one-tenth. The studio turned out twenty-two pictures in twenty-eight months, and of course that was in addition to his regular Cartunes. His staff had to be augmented, but not considerably, for with this process four men were able to do the work of thirty men in animation. It eliminated inking on celluloids, painting, air-brush work and drawing of backgrounds.

The government furnished complete scripts and also sent their technical advisors for every subject covered; and these scripts guided every set-up before it was shot.

Lantz thinks the Navy has done a tremendous job in its wartime film production. So has the Army, of course, but they were better equipped at the beginning of the war, having an already operative Special Services that immediately went into the production of training films. The Navy had no such organization and had to start from scratch. The Army turned out more films, but even so the Navy Department made over 900 pictures per year during the war. A staggering figure, when you consider that the entire annual output of Hollywood is about 450 features.

Films made by Lantz, plus the actual models for display purposes, are now in use by the government. The government, thinks Lantz, has gained lots of sources of useful and effective training through these developments of his and other producers. Particularly have they benefited in the field of teaching. Undoubtedly, training of both Army and Navy personnel in the future, will largely be undertaken via the approved training film. Previously, all classwork training was given via the usual instructor-textbook road. Now, while instructors and textbooks will not be discarded, neither will they carry the full load. They will be augmented in most helpful fashion by training films, which will be an integral part of every course.

Time required to master any subject will thus be cut to a minimum, no longer will the instructor be required to draw elaborate charts and graphs on the boards to explain technical points from textbooks. That will all be covered—and amply—in the training film.

Industry, too, will greatly benefit from this new method, avers Lantz. With a technique for showing internal operation of any machine: whether automobile, sewing machine, refrigerator, vacuum cleaner, etc., a new field has been opened to industry. Much of the strife that arises among workers in factories from a misunderstanding of their jobs will be eliminated. Manufacturers will be able to instruct their personnel as to the actual operation of the device or utility factory, where thousands of men work on one small—and to them unimportant—job, ignorant of what preceeds and follows it, enlightening knowledge can be given to such employees through these films.

It would take years of study and research to master all of the operations that go into the creation of some of our modern machines, and no working man has that much spare time to devote to such an undertaking. But with the animation pictures he can be shown the operation of the plant generally, and his own part in it. While his job may have seemed trivial and unimportant before, when seen in the light of the whole production, his job would take on added significance.

Lantz believes that the animated cartoon is better able than live action to make such films, because effects impossible to obtain with live action pictures can be accomplished easily and well with animation.

He also thinks that in the near future the government will wish to furnish pictures to the rest of the world. Films sanctioned by government and by various philanthropic groups on a variety of subjects such as hygiene, disease prevention, the cure and remedy of disease, and so on, will increase both in number and in distribution.

As to films made for foreign consumption, he thinks that's as good a place as any to get in some of our American propaganda. Lantz feels very keenly on the subject of Democracy, U.S.A., a subject wrong, to his way of thinking, with democracy, or in all of us doing a little more sincere, honest flag-waving. In fact, he thinks we, as a nation, do entirely too little of it, and sees no reason why we should wait until we are embroiled in a war to start thinking of the Star Spangled Banner. It Lantz had his way, our National Anthem would be played at least once an evening in every theater in the land.

As to the importance of the use of films for educational purposes, Lantz grows enthusiastic. Every school has its vocational department, and these films will be of tremendous help in departments particularly where such subjects as electricity, carpentry, work shop are taught. He believes it is only a question of a couple of years when every school will use them. There's nothing wrong with these films, which will be an important part of their training program, starting with kindergarten and continuing throughout every grade. Today's four year's study course could be cut to one year with such educational films, in Lantz' opinion.

Another thing of great value, not only to our youth, but to our future as a nation, is some good, fundamental groundwork in American history, and what it means to present-day American life. Lantz would like to see every school teaching our history through educational films. By that he doesn't mean that the School Boards should spend a couple of million dollars on a film showing Washington crossing the Delaware.

He means short subjects with a purpose—a definite objective behind each picture. Something, he says, with "a little glamour, a little dressing." Show short incidents, make them vital, real, alive. Show why certain things in our history happened as they did, how they happened, what they mean to us as a nation.

In this suggested program, Lantz would include up-to-date lessons on topics like: "Why Do We Have Taxes?" and show why it is necessary. Subjects like that. Make our youth proud of the fact that they're United States citizens. Show them reasons why, instead of griping, they can all contribute something of a constructive nature to their government. Consider the problem of war, too lightly, says Lantz, we gripe but that's about all. The best way to improve conditions, is to know more, to be better equipped to help. To hasten this happy state of affairs, educational films are of prime importance.

When asked if his new process would help in the production of his regular Cartunes featuring Woody Woodpecker, Andy Panda and Wally Walrus, Lantz shook his head dolefully.

"No, I'm afraid not," he said. "We still haven't figured out a sure way of shortening our work on making cartoons. It's just a tough grind and we have to keep on plugging. Start cheating on cartoons, and they become jumpy and the cheating shows. Frankly, though I love the business, I've got to admit: it's one helluva way to earn a living!"

Say It With Titles

(Continued from Page 390)

Titles should always be used skillfully and sparingly. Copy should be brief and to the point. Often a humorous touch will increase interest in the title and make it less dull reading. It's a remarkable film, indeed, whose continuity is so flawless, whose editing is so perfect, that titles are totally unnecessary. Even in such a rare exception however, an introductory and end title are always in good taste. If a film is worth presenting at all, it's worth presenting well. So, next time your movies have something to say and they lack just what it takes to do it, let them say it with . . . titles!
THE BABY KEG-LITE (shown above) is a lightweight 500 or 750 Watt spot for use as a key light, and for special lighting jobs. Sturdily built, the design assures low temperatures, uniform heat expansion and elimination of heat noises. All light ranges between a 4 degree spot and 44 degree flood, controlled by a small lever from front or back. Fresnel type lens gives maximum light pick-up. Stand extends from 4'2" to 8'6". Total weight 25 pounds.

B & M Lighting Equipment was originally designed for color as well as black and white. Our engineers, in consultation with the ace camera men of Hollywood, have evolved a complete line of lights and accessories which meet every requirement of the Motion Picture Industry. War production has developed added improvements which have made our spots better than ever.

B & M Lights are efficient and noiseless. They operate at a low temperature and the optically correct lenses permit full illumination with a smooth field which can be controlled for all requirements. They are the accepted standard for excellence throughout the industry.

Place orders now for early delivery. No priorities required.

Write for literature describing the Baby Keglite, The Dinky-Inkie, The Junior Spot (1000-2000 Watts), The Senior Spot (5000 Watts), the Single and Double Broads, and their accessories.
M/Sgt. Fred Mandl
Gets Army Honor

M/Sgt. Fred Mandl, member of the American Society of Cinematographers, and resident of Los Angeles, has been awarded the Certificate of Merit for his service with the United States Army Signal Corps in the European theater of operations.

Sergeant Mandl's citation was presented for outstanding performance of military duty while serving as an instructor in combat photography. By his expert knowledge of the military problems involved, and his qualifications and experience along the lines of combat motion picture coverage, Mandl was highly instrumental in evolving a successful plan of operation for motion picture cameramen in the field.

Now It's Major Warrenton of the Army Air Forces

Gilbert Warrenton, A.S.C., who has been in the Army Air Forces for the past three years, has just been promoted to the rank of Major. He has no idea when he will be released from the service.

Dr. Clark Promoted

The Du Pont Company has announced that Dr. John M. Clark, assistant production superintendent of the Chambers Works, Deepwater, N. J., has been appointed to the newly created position of general superintendent of the Photo Products Department with headquarters in Wilmington, Del.

A native of Chicago, Dr. Clark is 38 and a graduate of Cornell University. He received his master's degree in industrial chemistry in 1931 and his Ph. D. degree two years later. Immediately afterward he joined the Du Pont Company as a chemist in the Organic Chemicals Department. He has been at the Chambers Works since that time.

New Optical Printer
For Telefilm

Joseph A. Thomas, president of Telefilm, has announced completion of an optical printer, used for special effects. It is one of the few optical printers employed in 16mm. production in the industry and includes several improvements made by Telefilm Engineers.

Color Photography Calls For Good Lighting

Color photography is really coming into its own, now that the war is over. All of the cumulative developments which were being held in abeyance "for the duration", are now being released for public and commercial use. These developments have been so revolutionary, and the results so satisfying, that black and white photography may be as much of a curiosity as the tintype in the near future. Sure! We'll have black and white photography, but there will be less excuse for it.

In color, however, there is one requirement which must be met at all costs... adequate lighting. Fortunately, the development of certain locally manufactured lighting equipment has been well in advance of this requirement for the past 15 years. Bardwell & McAlister Inc., of Hollywood, one of the pioneer firms in this field, has maintained intimate contact with the ace cameramen of Hollywood; and B & M Lights have been designed to keep pace with the exacting requirements of the Motion Picture industry.

C. Bardwell, Executive Vice President of the company, who has been in the business since the days of Erich von Stroheim's "super-colossals", points out "that mere candlepower is not enough for good color photography. Light must be controlled. Special lenses, such as are used in B & M lighting equipment, are necessary to eliminate 'hot spots' which would ruin the most careful setup. On our lighting units, from the Baby Keg-Lite and the Dinky Inkie, to the 5,000 Watt Senior, it's possible to focus light from a four degree spot to a 50 degree flood; giving a smooth, even field which is ideal for either color, or black and white.

"Again, for keeping the light within desired areas, they have developed 'Barn-doors', 'Foco Spots' and other accessories which assure the desired control."

Bardwell and McAlister have devoted their entire output to war production since 1940. Three times the Army-Navy "E" has been awarded to their employees for excellence in turning out war material. Their enormous production for Uncle Sam has brought out many new developments in their products which it is claimed have materially improved them.

These lights have now been released from priority restrictions and are available for civilian use. Production of the new models is being speeded up daily, to fill orders from photographers who have been forced to operate with what they already had... "for the duration."

Fairchild Honored

Fairchild Aerial Surveys, Inc., Los Angeles, has received an award from the U. S. Army Map Service "for excellence in production of maps for the armed forces."
Congratulations

to the

American Cinematographer

on its

25th Anniversary


TECHNICOLOR MOTION PICTURE CORPORATION

Herbert T. Kalmus, President and General Manager
OPENING A NEW ERA OF PRODUCTION
WITH THE
new MAURER
16-MM
PROFESSIONAL MOTION PICTURE EQUIPMENT

With the introduction of the new Maurer 16-mm Professional Motion Picture Camera and its companion, the new Maurer 16-mm Sound Recording System, expensive, complicated equipment is no longer required to produce films of top professional quality.

Though its results are not surpassed by the finest Hollywood apparatus, its many technical advancements make this new Maurer 16-mm equipment remarkably simple in set-up and operation. Various mechanical difficulties that can develop from complex design and construction are reduced to a minimum. The fire hazard is eliminated, and the savings effected in time, film and other forms of money will pay for this advanced Maurer 16-mm equipment over and over during its many years of trouble-free, top quality performance.

Send for full details and specifications. Address Dept. C-11.

J. A. MAURER, Inc.
37-01 31st STREET, LONG ISLAND CITY 1, N. Y.

Three Travel Films for P.A.W. Airways

Three new travel films, in color, have just been completed for Pan American World Airways by The Princeton Film Center. Production of the new subjects was supervised by the Motion Picture Department of J. Walter Thompson.

Designed to stimulate public interest in various areas served by the far flung lines of the Pan American System, the new motion pictures deal respectively with Alaska, Bermuda and Latin America.

All of the films feature interpretive musical scores which were specially composed and recorded for these pictures. Early release of the subjects to audiences throughout the nation is planned.

Near East Market

Near East countries can provide a sharply expanding market for American motion pictures and for American theater and recording equipment, according to R. E. Gowar, manager of Western Electric Company (Near East), who has just arrived in this country from Egypt. This market, Mr. Gowar says, depends, of course, on early solution of the monetary exchange problem and the resulting modification in existing import restrictions.

BUY MORE VICTORY BONDS

“Holland Carries On” Acquired by I. T. & T.

A new film on Holland has just been acquired from the Netherlands Government by the Instructional Films Division of International Theatrical & Television Corporation and will shortly be released for national distribution by that Company. The film, “Holland Carries On” is a two-reeler, sound, with running time of approximately 18 minutes and was produced by the Netherlands Information Bureau, New York City.

The History and Origin of 16 Millimeter

(Continued from Page 384)

...major share of the honors. The first few years of 16 millimeter were far from rosy. There was a period when the Eastman responsibility of supplying and processing the film was a liability to that corporation. Eastman Kodak Company, however, never faltered in its self-assumed responsibility. We owe much to this company for the present high standard of quality and the world-wide service it has given. Last, but not least, a tribute must be paid to Bell and Howell of Chicago, who introduced the first spring-driven 16 millimeter camera, doing away with the tripod—a very important item in the success of 16 millimeter, and, in addition with a great deal of courage, invested heavily in a nation-wide advertising campaign.

When sound was added to motion pictures, I conceived the Continuous Sound Reduction Printer, which made sound on 16 millimeter film a practical reality. Today almost every foot of 16 millimeter sound film is made under this process, which, while much publicized at the time of its introduction, was not patented. My reason for not patenting this basic idea was to speed up the production of film so that we and the others in the apparatus business would find a larger market for our product. While the Radio Corporation of America must be given credit for having put the first commercially-acceptable sound on 16 millimeter, this sound track was re-recorded on 16 millimeter negatives and printed by contact. In my Reduction Printer the sound was printed directly by reduction from 35 millimeter, obviating the cost of making a special negative.

Since that time there have been many improvements and refinements in the design and construction of 16 millimeter equipment and there will be further improvements in the days to come. Sixteen millimetre today has become one of the great industries.

Almost daily new uses and applications are found for the 16 millimeter camera and projector. America, in the post-war years, will benefit from the work we in the industry have achieved in the past, the experiments we are carrying on today and the discoveries and inventions that still lie in the future.
*Yes, there are that many halftone dots in this picture. Count 'em if you're skeptical. We don't mind if you doubt our estimate, but we do mind it a little if you fail to appreciate the craftsmanship which went into reproducing this fine photograph.

When a beautiful shot like this one reaches the engraver the photographer's work is finished. His work of art is at the mercy of a stranger—a craftsman, however, like himself. When that craftsman is an artist in his trade the result can be as you see it here—perfect reproduction of shadows and highlights, fidelity as true to the original as the twin sciences of printing and engraving can combine to produce.
Special Effects for the Amateur

(Continued from Page 388)

exploration. If one is fortunate enough to possess a camera in which there is sufficient space for fitting a mirror or prism behind an aperture in the gate pressure-plate, it would be found well worth while to have such an alteration made, since one may then make direct focusing and framing adjustments through the lens onto a piece of matt film, much increasing the scope of the camera. Unfortunately, however, the majority of sub-standard movie cameras are designed with a view to compactness, which demands utilization of every square centimeter for the essential parts. Only the higher priced models so far embody the refinements which lend any degree of flexibility. Hence the necessity for amateurs to apply brainwork in order to circumvent such constructional deficiencies. It is regrettable that a low priced but versatile camera has not yet been available now at your Filmo dealer's... or he may possess sufficient lighting equipment to illuminate such a large area and our shot required only to be of the utmost brevity. These considerations discouraged the trip.

Finally we hit upon the plan of asking the publicity dept. of the B.B.C. for a large panorama photograph of one of the transmitter installations. This was supplied for a small sum and the picture was set up before the movie camera in the same manner as a title, a very slow "pan" shot was taken of the scene in the "still." The result was astounding and was quite indistinguishable from the shot one would have expected had the movie camera been set up on the actual location.

The trick of panning briefly and slowly gave the effect of life and realism. This leads us to our next suggestion,—so far untried by the writer,—but based on the success of the foregoing:—

Photographically Produced Scale Models

In view of the fact that the power of suggestion, through association of ideas, is so potent a feature of cinema, it is customary to take advantage of the possibilities lying therein to the fullest extent, not only for the presentation of the story in general, but also as a time and money saver for the producer. This is particularly the case where a long shot is to be taken in sequence with a CLOSE UP of what purports to be a portion of the same scene. The scene depicted in the long shot may be a huge viaduct, a boat, a city street,—but if it is of a nature difficult to obtain or to stage in any other form, use is made of scale models. Only the exceptional cine photographer, however, can boast the skill or afford the time to build models, with a sufficient degree of scale accuracy and surface finish, to adequately fool the camera, and it is here that photography might conceivably again come to the rescue.

Through the use of a good view or graphex type of camera, scale photos could be taken of the various facings of the objects required for one's model, cut-outs made and the edges stuck together to form the models desired. One can visualize the building of a complete miniature "set" by such means,—a "photographic model" shack, mounted on sand, with "photographic trees," fences, etc. placed around about,—and all much more accurately produced than their equivalent made by handicraft.

Sets With False Perspective

False perspective may be used where a full size or a miniature set is to be built in a limited space or where full size objects are not obtainable,—although it will involve the operator in some careful calculating and preparation.

Suppose one has to establish a set representing the interior of a church, a temple, a dance floor, or the like, in an area much less in length than that to be represented in the finished film. "False perspective" may be built into the set by such tricks as converging the walls, floor-mats, foot-walks, hanging lamps, etc. and placing door and window frames (at the back) of dimensions which would be accurate for a room of the length to be represented,—not the actual length. Of course, such an arrangement demands that all action shall be confined to the foreground,—otherwise one might have a laughable if not disastrous situation!

Where it is necessary to depict large objects, vases, idols, etc., in the extreme foreground and provided such need not necessarily appear in sharp detail, quite small models may be placed very close
to the camera lens. After one of two
tests, a point should be found where
the desired proportions are registered.
There is considerable scope for experi-
mentation along these lines. Mirrors,
lenses, plain glass and prisms, may be
employed in many instances, but such
arrangements have already received con-
siderable attention in various articles on
titling and trick-work, and further en-
largement here would be superfluous.

Interposed Screen
The writer has given this name to a
scheme he devised but has not as yet
given a trial. Its purpose is to permit the
use of a matte box or any other utility
in conjunction with an ordinary sub-
standard movie camera. By setting up an
ordinary view camera (or graflex) one
may find it possible to fit a matte box
to the same, mounting the cine camera
in an inverted position (so as not to
disturb the movement-sequence) by
means of a simple bracket behind the
ground glass, photographing the
action cast thereon, as one would
film a title. The writer sees no reason
why this set-up could not be manipulated
for a considerable range of transitions and "manufactured" impressions.

Black Screening
Circumstances may arise whereby
sundry applications of black screening
may be the easiest way around a diffi-
culty. Since it is light that "paints our
picture," absence of light, conversely,
will fail to create an impression on the
film, so that, in many instances, black
screening may be used to take the place
of masking before or behind the lens. It
is already well known as an effectual
means of producing "ghost" shots, but
it may also be set up as a device for ac-
complishing multiple exposure.

A large black curtain or screen may,
for example, be hinged on a thin, black
support, dividing the center of the set
vertically. The black curtain is first
drawn to one side, closing off one half
the set. An actor may then be filmed
carrying out his business in the "open"
half. When the act is completed, the
film footage is rewound, (in a dark room
if the camera has no rewind), the cur-
tain changed over to the opposite side
and the actor steps over to run through
the additional act as his own comple-
ment. This method proves as reliable as
that employing the use of masks or
mattes.

Color Toning and Dyeing
Under this heading we would like to
recommend, for amateurs at least, a re-
vival of a film finishing custom which
was very prevalent in early movies, but
which has been almost entirely discon-
tinued during recent years. In the pro-
duction of "night scenes" modern pro-
fessionals appear to have reached a
unanimous agreement that the best re-
sults are obtained, in black and white
filming, through judicious use of special
lighting and filtering.

This writer feels, however, that at
least insofar as amateurs are concerned,
Aces of the Camera
(Continued from Page 370)

around Kershner, but could offer no help in the situation, for the photographer spoke no Spanish. After staring curiously at the equipment stacked on the platform, the Mexicans went into a huddled discussion and then disappeared.

The wailing afternoon wore on and Kershner’s friend had not arrived. Kershner, however, several of the Mexicans reappeared, and one spoke to him in perfect English: “I shall take you to the gentleman you are to meet,” he said, bowing slightly.

Kershner looked from the Mexican to a waiting automobile. In the front seat were propped a rifle and a shotgun. Strapped to the Mexican’s side were a brace of authoritative-looking pistols.

In spite of a hunch to refuse the kind offer of assistance, Kershner piled his boxes of film and camera into the back seat of the car. After several miles over rough, dusty roads, the car drew up in front of a ramshackle adobe hut, where sleeping arrangements were made for the visiting American.

He slept soundly that night, exhausted from his trip and the long, anxious wait at the station platform.

In the bright tropical sun the next day, he discovered all his luggage and film boxes had been rifled while he slept. The Mexican bandits had believed the heavy boxes were filled with gold.

Kershner stepped quickly into the next room where he had left his camera standing in the corner. Half a dozen men sprang forward with lowered pistols and rifles. They believed the camera was a new type of machine gun. After several minutes of earnest conversation with the one Mexican who spoke English, Kershner learned that the “machine gun” shot nothing but pictures.

The Mexicans went wild with excitement and insisted that Kershner shoot reel after reel of films for their personal amusement. The results, he discovered later, were excellent. The completed film was titled “Between Friends.”

It so pleased Mexican officials that he was invited to Mexico to shoot photographs and motion pictures in eighteen different states, and returned to the United States with hundreds of feet of interesting film.

Later, in 1923, Kershner contributed an article and series of pictures to the American Cinematographer, which was published under the title “Picture Jaunts into Mexico.”

In 1931, Kershner packed his camera for a jaunt to the north country to shoot Labrador and Baffinland in color. On the shoot Kershner was wanted by a skipper and a crew of college men, Kershner crossed the Belle Island Straits to Labrador. When he sailed up past Hebron and Cape Chidley, he felt he had come to the last outpost of the world.

The Bowdoin was due for a rough trip in the Antarctic. When an iceberg hove into view, the man on watch called the warning, “Hard aport,” or “Hard starboard.” More often than not the Bowdoin churned head on into the iceberg. Fortunately, the ship was built to withstand the strain.

Plans for the expedition were to work the schooner to a base, and then wait for the chartered plane to contact them. When the plane arrived, equipment was loaded into the cabin, and Kershner and the pilot took off through the fog looking for something to shoot farther inland.

The plane was equipped with pontoons only, and the pilot depended solely on landing on the water. In the cold wasteland, it was impossible to set the plane down any other way.

During all the runs in the plane, the pilot flew the plane high enough so it would glide to the sea from any point inland at which the photographer was working. The procedure worked well when the wind was blowing off the water. When the wind shifted, it came from the land, Kershner and the pilot ran into the toughest flying conditions. The water temperature stayed at about 28 degrees. When the warmer air from the land passed over it, an impenetrable fog resulted without the slightest warning, making it impossible for Kershner to get any shots for days at a time.

When the pilot spotted a veil of fog he shot down into the dicey blanket of fog looking for water on which to land. It was then a case of waiting for the fog to lift, or “wave-hopping” back to the Bowdoin.

More outstanding in Kershner’s memory than the hazardous conditions of getting his pictures, are the motion pictures he took from the plane of the Great Falls of Labrador, a feat never before accomplished. Glenn Kershner’s greatest reward for the dangerous mission was not monetary, but an intangible sense of accomplishment and adventure.

His strange insatiable desire for adventure has taken him into countries around the world. He has tangled with timber wolves in Canada and bandits in Mexico.

He has photographed Mt. Vesuvius in Italy, and has received the Diploma Di Collaborazione for the best photographed picture of 1923. He went to Rome to photograph a large part of the Technicolor for the production, “Ben Hur.”

He has been adopted by the natives of the Society Islands in the South Seas. They gave him the name “Manu Reva Mata Ara Ara,” which means the bird that comes and goes, the bird that sees everything but never sleeps. He considers the South Sea islands the most beautiful place in the entire world.

He has been under water in a diver’s outfit, and chased by sharks. He has lived with the Indians. He has frozen while running dogs in the far north, and belled in safaris across the deserts. He has taken shots hanging on fire.
trucks, trains, airplanes, and the brink of a volcano. He has learned to expose ten feet of film in the dark mountains, the next ten feet on a hot desert, the next ten in a driving rain storm, and the next with Kleig lamps—all on the same film.

He has published a book, "Brown Barriers," a romantic novel of the South Seas.

With all these adventures in foreign lands behind him, Kershner's most rugged ordeal took place in his own country.

He was a photographer on a motion picture that called for shots of river rapids. The company set out for the Colorado River. A party of thirteen men started down the river in six small boats, measuring from sixteen to eighteen feet.

When they embarked on the river trip in Utah, men who knew the river warned the group that the trip through the Cataract Canyon would be impossible. It was late in the season, and tributaries of the Colorado were frozen, and the great river itself was low and full of ice in many places.

They worked their way down the Colorado to Cataract Canyon. Very few men have ever come through the treacherous rapids alive.

Life preservers and determination brought the photographers and crew through the canyon, but the most desperate situation was yet before them. Their short wave radio transmitter broke down, and they were out of touch with civilization. Then the rations gave out.

Then men were officially reported dead—drowned in the Colorado River rapids.

Nearly a month passed by before they reached civilization, and when they finally returned, Kershner discovered the insurance companies were completing arrangements to pay off his life insurance policies.

The picture company had the pictures it wanted!

Glenn has given up seeking adventure, at least for a while, and is working with Howard Anderson making every conceivable kind of trick photography shots. He is a master at trick photography, and many of the studios send their difficult jobs to Anderson. Glenn is in his glory making the "impossible" shots come true on the screen . . . and he's happy.

RecorDisc Announcement

Home movie makers who make their own "sound tracks" through the medium of home recording discs will be interested to know that the RecorDisc Corporation of 305 Broadway, New York City, have announced a new policy whereby they offer improved quality RecorDisc home recording blanks at lower prices. This, contrary to present, generally prevailing upward price trends.
The Technique of the Documentary Film
(Continued from Page 378)

Indoor lighting, too, should be realistic, and this can largely be achieved by the duplicating of source lighting. Avoid over-artistic effects. On a large set it is sometimes better to light the main area, or planes, of action, rather than to try to pour in enough light to flood the whole set. Spots should be used as well as floods to give a more modeled effect. The documentary cameraman, who usually has to get around fast, will find portable lights very convenient.

Editing and Scoring

The last operation in the making of film, editing and scoring, is of utmost importance. It is here that all the elements are welded into the filmic whole that will appear on the screen.

The cutting of the film should be dynamic, in keeping with the style used in the script, direction, and camerawork. Cutting to the script is the surest way of preserving the quality that has been captured on the film.

A documentary must have pace, but pace means more than cutting off short strips of film and splicing them together. The pace of cutting depends upon the pace of filming. For instance: a bit of action that requires only ten frames for complete execution on the film, may be cut to ten frames without any loss of meaning. But if you have a scene that is complete in fifteen feet and you hack off ten frames, you will have but a meaningless fragment of a complete action. Thus the pace of cutting must be guided by the pace in filming.

Many cutters, attempting to force pace into a film, succeed only in slurring over important points. Pace should be gauged to the audience, and it should not clip along at a constant rate of speed. A sequence should build to a climax, and then start over on a new sequence at a lower pace. Light and shade in editing adds variety and audience interest.

One important feature of cutting is that it can condense the element of time and pack a great deal of action into a shorter space of time than is the case in real life. When it is necessary to condense a broad general impression into a short length of film, montage is a very valuable device.

The cutter's biggest job is to put the emphasis in the right places, and to keep the filmic story moving forward to its final resolution.

Closely allied to cutting is the sound dubbing of the film. Documentary can be shot more easily and effectively if the sound is added later instead of directly during filming. The narration should not repeat exactly what is shown on the screen, but should add a bit more from a different angle; so that, in reality, the audience is receiving two complementary impressions at once. Proper music and sound effects will add immeasurably to the force of the film.

The documentary is a vital motion picture form, one that has untold possibilities. It has had an impressive beginning, but its future will be even more important.

New SMPE Officers Announced at Meeting

Newly elected national officers of the Society of Motion Picture Engineers and new officers of the Society's Atlantic Coast Section, whose terms of office will begin Jan. 1, were announced by Donald E. Hyndman, president, at the opening of the society's 58th Semi-Annual Technical Conference in New York.

National officers with terms expiring Dec. 31, 1945, and those elected to them for the ensuing year are: Engineering vice president; J. A. Maurer; financial vice president, M. Richard Boyer; secretary, Clyde R. Keith, and treasurer, Earl I. Sponable.

Five members of the society were elected to the board of governors for terms beginning Jan. 1, as follows: From the Atlantic Coast area—Frank E. Carlson, General Electric Co., Cleveland, re-elected; Alan W. Cook, Anseco, Binghamton, N. Y.; and Paul J. Larsen, Johns Hopkins University, Washington, D. C.; from the Pacific Coast area—John G. Frayne, Western Electric Co., Hollywood, Calif.; and Wesley C. Miller, Metro-Goldwyn-Mayer Pictures, Culver City, Calif.

Frank E. Cahill, Jr., Warner Brothers Pictures, New York City, was named chairman-elect of the Atlantic Coast Section of the SMPE, and James Frank, Jr., National Theatre Supply Co., New York City, was named secretary-treasurer-elect.

New managers-elect for the Atlantic Coast Section are Herbert Barnett, International Projector Corp., New York City; Hollis D. Bradbury, RCA Victor Div., Radio Corporation of America, New York City; and Jack A. Norling, Loucks and Norling Studios, New York City. Managers whose terms continue through 1946 are G. T. Lorance, W. H. Offenhuaser, Jr., and H. E. White.
Mark Hawley Urges Audio Visual Program for Schools

By George Butterly

EXPERIENCE with the production and use of teaching films in the Navy has convinced Mark Hawley of the crying need for a complete audio-visual program for the nation's schools. "The Public," he says, "has heard a lot about jet propulsion, television, new household appliances, air transportation and now atomic energy, with their probable effect on post-war domestic life. But, what about developments for post-war education?"

Comments Mr. Hawley, "It should be realized that the integrated use of audio-visual aids in education is as important a step forward for civilization as was the printing press."

"The development of these modern methods and their application to teaching during the War will have a profound effect upon post-war instruction. Heretofore, the educational possibilities of radio, recordings and motion pictures have been obscured by entertainment, and it has been difficult to reconcile radio and the films with 'the little red school house.' Half-hearted attempts have been made to shower benevolence upon the teacher by making available to schools advertising pictures and old radio shows taken off the air on transcriptions. But the attempts at circulating such items has only served to make the teacher wary. She has discovered that the moving picture (sometimes pawned off as an educational film) was designed to sell merchandise—not to help her teach her subject matter she is interested in—was designed for entertainment not for teaching. Besides, as purely supplementary material it takes too much time from her already full schedule.

"To present her with an acceptable audio-visual program it is necessary to understand the technical complexities which comprise each of these media. The phonograph record, the film strip, the motion and still picture and the study guides are used most effectively as devices to amplify curriculum subjects—each in its own field. However, to understand why a motion picture lacks the effectiveness of a still picture in certain instances, or why a film strip might be more explicit than a movie, or why a set of records can be a better teaching tool than pictorial aids in some subjects—are problems which require a versatile knowledge and experience in all these fields of production and knowledge involving the technical, pedagogical and economic values of each."

Specifically, Mr. Hawley believes that the radio cannot be a substitute for the record where repetition and study are required. "However," Mr. Hawley con- objective, "the radio lacks its effectiveness in carrying the impact of the 'present,' and in this it has no substitute and won’t have until television is fully developed. What happens to radio then is still in the realm of speculation. It is already showing a tendency toward becoming more of a utilitarian service—filled with news reports, road conditions, weather reports—and music. If this should become the case, entertainment would be relegated to a secondary function of radio, with the Frequency Modulation stations and television stations gradually assuming radio’s role in the field of entertainment.

"It is easy to understand how specialists could become so immersed in the development of their own particular field as to consider their specialty the 'be all and end all' as a mass medium for whatever purpose. In the light of the past four years, however, this is a rather limited view. It has also resulted in much confusion on the part of industrialist and educator alike who have earnestly sought the best medium with which to put their messages across to the public, the employee or the student. Often he has found himself the hub of a high pressure selling wheel, each spoke trying to convince him that the radio, the film or the film strip, were the best and cheapest method of reaching his audience.

The general practitioner approaches the field of audio-visual aids on the premise that the elements are complimentary and not competitive—and his objective is to use any or all audio-visual media to develop in his audience—whatever group it may be—a more immediate comprehension, (1) of a process, (2) a theory, (3) an historical event, (4) a psychological attitude or (5) a straight sales message.

"One of the greatest problems in this fast moving world is the time it takes to absorb background and technical knowledge and still keep abreast of the

(Continued on Page 404)
Mark Hawley Urges Audio Visual Program

(Continued from Page 403)

times. Any device which helps the in-
dividual absorb and retain information is
one very good answer to this problem. Aural-
visual aids can telescope cultural
processes; likewise, they can provide the
dramatic impact necessary to increase the
power of retention. The result can be
an increase in the net intelligence of
the present and future generations.

“We emerge from this War where we
might have been in 1940—had science and
invention progressed at the same pace as when we entered the conflict.
That an effective audio-visual training
program be developed for our service-
men was a necessity of War. Those so-
called 90-Day Wonders, who skippered
their own ships, the young bombers’
pilots who—after a few months of train-
ing—were able to chart their courses and
carry out bombing missions with pin-
point accuracy, were both the products
of audio-visual training. Navigation,
seamanship, communications, radar, are
but a few of the courses that used these
modern training methods for our now
victorious youngsters. They are a gen-
eration of peace-trained high school and
college youth, catapulted overnight into
the grim business of war. And, what a job
they have done!

“We’re on the threshold of a great
new era of learning. The process of co-
ordinating these new teaching devices has already begun. A complete audio-
visual program based on curriculum sub-
jects will be offered shortly to the schools.
It is not only our hope—but our sincere
belief—that definite results can be ex-
pected within a very few years, and that
the ‘Quiz Kid’ of today is no smarter than
will be the average American school child
of tomorrow.”

Filmosound Library Releases

PARDON MY RHYTHM (Universal)
No. 2570—6 reels
Managerial miss drives teen-age band
with a red-hot drummer to a radio cham-
ionship and has nearly everyone else
crazy with one weird stratagem after
another. (Gloria Jean, Patric Knowles,
Evelyn Ankers, Bob Crosby and Band).
Available from November 19, 1945 for
approved non-theatrical audiences.

HOMETOWN, U. S. A.
No. C3548—Color, 20 min.
No. 3548—Monochrome
Engrossingly human story of everyday
life in typical American town—your
town and mine, as it is and as we want
it to be. Excellently directed, photo-
graphed and narrated documentary.
Thought-provoking, cheerful basis for
discussion in groups of any age, enjoy-
able by all. (Look Magazine)

War-Time Research Will
Be Theatre Aid

Prospects are bright for the early ap-
lication of war-time research in the
modernization of motion picture theaters
throughout the world. E. S. Greene, vice
president and general manager of West-
ern Electric Export Corporation told as-
sembled managers at the company’s first
international conference recently at the
Waldorf Astoria.

The thirty managers have gathered in
New York from all parts of the world
for a preview of the newest recording and
reproducing equipments and other elec-
tronic products distributed by Export
in the world market. As Mr. Gregg
pointed out, through these latest designs
of sound equipment, which embody ad-
vancements learned by Western Electric
as one of the largest wartime producers
of communications and electronic equip-
ment, exhibitors will be able to provide
new standards of excellence. A public,
patient during war, will expect rapid
cancellation of any “rationing in qual-
ity” induced by the restrictions of a mili-
tary economy.

At the opening session of the confer-
ence, T. K. Stevenson, president of Ex-
port and vice president of Western Elec-
tric Company, welcomed the managers,
many of whom are in the United States
for the first time.

In addition to sound equipment, the
managers will view and discuss during
the two weeks convention the other prod-
ucts to be distributed abroad by Export.
These include a full line of theater ac-
cessories, booth equipment, the new
Model 63 hearing aid, the Fastax Cam-
era, acoustic instruments, and other
products of research in related fields.

Off Priorities Again
“Professional Junior” Tripods

Civilians may now obtain “Profes-
sional Junior” tripods, Frank C. Zucker
of Camera Equipment Co., New York City,
anounces.

Since the out-break of war, “Profes-
sional Junior” tripods were on all fight-
ning fronts, used by Army, Navy and
Signal Corps photographers in many
cases to take pictures for Government
archives, and oftentimes for civilian use
in newswires of American reconquest from Japs.

Because of their extreme ruggedness,
versatility and light weight of only 14½
lbs., these small replicas of professional
studio tripods, have proven that most of
the finest pictures to come out of the
war were photographed, even under bat-
tle conditions, by cameras mounted on
tripods because in that way only can
unwanted distortion and motion of the
camera be avoided. The removable head
feature of “Professional Junior” tripods
allowed cameramen to quickly shift the
pan and tilt head from standard tripod
legs to low-base adaptors called “Hi-
Hats.” “Hi-Hats” allow picture taking
from floor level, or when mounted in
airplanes, the photography of aerial
views even during actual combat.
25 Years of Progress

(Continued from Page 378)

War I developed aviation; World War II opened up a new chapter of science. One improvement always forces the other. Television, for example, will force us to improve motion pictures.

We are using today, many devices which are indispensable. Optical printers, glass shots, matte shots, transparencies, miniatures, split screen methods of combination; all of these are indispensable. For the most part, they are the outgrowth and refinement of those older patents which have been developed to their present day efficiency. However, we cannot stand still. Our pictures of today will not be acceptable five years from now. The very fabric upon which this medium of expression is built, calls for constant growth, expansion, perfection.

Developments for future motion picture pictures will, I believe, come in the main from men now within the industry and from the new blood of our nation's leading scientific workers brought into our industry to interest and apply themselves to our problems. However, our industry is a heterogeneous composite of trained creative specialists and artists and we have learned long ago that for the best results, there is still no substitute for experience.

Our need now, as always, is for fullest cooperation and respect for each other's contributions. Above all, there must be no conflict, open or hidden, between artistry, management, craftsmanship and the science of technology. For among these, there is an essential necessity for underlying unity, the realization and encouragement of which is a fundamentally essential condition for the continued growth and success and achievement of this great industry.

Wabash Announces Two New Flash Midgets

New to the trade and now available to the public for the first time since Pearl Harbor are two new Superflash Photolamps which Wabash has been manufacturing for the U. S. Government since 1941. Both are midgets in the same bulb shape and size as the Wabash Press 25.

The No. 25B, a blue Superflash for daylight color films, is announced as the most powerful blue midget flash ever made, with a total light output of over 14,000 lumen seconds. It is designed for use with Daylight Anseco Color or Kodachrome Regular, at synchronized speeds up to 1/200th second, and operates on battery currents from 3 to 9 volts. It has a color temperature of 6,000 degrees Kelvin. Its blue filter color has been especially developed to match with and substitute for daylight, to provide more faithful color rendition whether used in combination with natural daylight or indoors as a substitute. It will be a welcome addition to the standard No. 2B and No. 3B color flashbulbs.
STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933,

Of The American Cinematographer, published monthly at Los Angeles, California, for October 1st, 1945.

State of California
County of Los Angeles

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Hal Hall, who, having been duly sworn according to law, deposes and says that he is the Editor of the AMERICAN CINEMATOGRAPHER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postage, rates and Regulations, printed on the reverse of this form, to wit:


2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereafter the names and addresses of stockholders owning or holding one percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) A.S.C. Agency, Inc., 1782 No. Orange Drive, Hollywood 28, Calif., a non-profit corporation wholly owned by the American Society of Cinematographers, Inc., 1782 No. Orange Drive, Hollywood 28, Calif., Officers of the American Society of Cinematographers, Inc., are: President, Leonard Smith, 1782 N. Orange Drive, Hollywood 28, Calif.; First Vice-President, Charles G. Clarke, 1782 N. Orange Drive, Hollywood 28, Calif.; Second Vice-President, Joseph Walker, 1782 N. Orange Drive, Hollywood 28, Calif.; Third Vice-President, Charles G. Clarke, 1782 N. Orange Drive, Hollywood 28, Calif.; Treasurer, Roy Bannahan, 1782 N. Orange Drive, Hollywood 28, Calif.; Executive Vice-President and Treasurer, Fred W. Jackman, 1782 N. Orange Drive, Hollywood 28, Calif.; Secretary, Roy Bannahan, 1782 N. Orange Drive, Hollywood 28, Calif.; Sergeant-at-Arms, George Folsom, 1782 N. Orange Drive, Hollywood 28, Calif.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant’s full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustee, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve month preceding the date shown above is _________. (This information is required from daily publications only.)

Sworn to and subscribed before me this 28th day of September, 1945.

(Signed) HAL HALL, Editor.

Notary Public in and for the County of Los Angeles, State of California.

(My commission expires Feb. 21st, 1948.)
Brains and skills from the motion picture industry helped to do one vital teaching job... and now are doing it again.

Now, with reconversion a reality, movies are teaching new peacetime skills. It's almost as big a task as the movies' wartime role of helping switch hundreds of thousands of new workers to the specialized skills of war production.

Motion picture methods, which saved a substantial amount of training time in industry during the war, are a logical choice in this great new responsibility.

So, while the industry can be proud of the wartime training record of motion pictures, it can be just as proud as it watches the movies do another big training job to help win the peace.

Eastman Kodak Company, Rochester 4, N. Y.

J. E. BRULATOUR, INC., Distributors

FORT LEE	CHICAGO	HOLLYWOOD

One of a series of advertisements by KODAK testifying to the achievements of the movies in peace... as in war.
...OF FAMOUS

Filmo Firsts

Filmos are the original spring-driven cameras . . . were first to permit movie making without a tripod.

Filmos introduced the original eye-level viewfinder . . . were first to permit making movies from the natural viewpoint.

These and other Famous Filmo Firsts (some of which are pictured at the left) have helped give Filmo Cameras and Projectors general acceptance as the world's finest.

More firsts are in the making. Previewed below, for example: the new, improved Filmosound 16mm. sound-on-film projector . . . destined to be the leader in its field.

Now, as quickly as B&H precision production permits, you'll discover improvements and refinements in even the finest B&H models. Look to Bell & Howell for cameras and projectors that will set completely new standards of enjoyment for your home movie screen.


BUY AND KEEP MORE VICTORY BONDS

WHAT KIND OF MOVIES WOULD YOU LIKE TO SHOW AT HOME?

Travel, sports, late Hollywood hits, authentic battle scenes? You name it . . . you'll find it in the Filmosound Library.

This great store of entertainment, education, and instruction is being called upon constantly by the armed forces for training subjects . . . by industry for job teaching films . . . by schools for help in educating your children . . . by the Red Cross . . . by churches . . . and by thousands like you for enjoyable home movies.

What kind of movies do you like best? Undoubtedly you'll find your favorites among the Filmosound Library's thousands of subjects. Send the coupon for information.

Visit Your Schools During American Education Week Nov. 11 to 17

OPTI-ONICS—products combining the sciences of OPTics • electrONics • mechanICS
In This Issue . . . .
THE U. S. REPORT ON AGFA COLOR PROCESS

December 1945
Foremost cinematographers commend these features of Du Pont Motion Picture Film

1. Retains latent image
2. Extreme wide latitude
3. Color balance
4. Fine grain
5. Speed
6. Contrast
7. Excellent flesh tones
8. Uniformity

Dust, lint, powder, stray hair haven’t a chance in the Du Pont film plant. Here we see an inspection room operator being "brushed off" by air, before entering the darkened area in which Du Pont Motion Picture Film is inspected.

Behind the grille, huge suction fans create a whirlwind of air that whisks away all trace of dust or dirt. It’s not unlike a giant vacuum cleaner.

Hospital cleanliness is the rule in making Du Pont Motion Picture Film. The operators wear uniforms, caps and gloves of lint-proof Irish poplin; and these are specially laundered within the plant. Cosmetics, face powder, nail polish are taboo, and even jewelry must be left aside.

This cleanliness helps assure a product of dependable quality. It helps cinematographers to do their best at all times.

E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware.

In New York: Empire State Building
In Hollywood: Smith & Aller, Ltd.

WRITE A CHRISTMAS LETTER TO THAT BOY STILL IN THE SERVICE

DU PONT MOTION PICTURE FILM
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
Three Years of Combat Service
Have Proved Anew Its Superior Qualities

Once more you can order a Bell & Howell Eyemo—and get it in reasonable time. For Eyemo Cameras are back, ready once more to guarantee that what you see, you get.

For the past three years Eyemos have been everywhere—recording indelibly every step of the long march to victory ... in Europe, on the Pacific Islands, in the air, on the high seas. They are on the job now in Germany and Japan, getting the news in sharp, clear motion pictures ... getting it fast.

Because Eyemos have a record of perfect performance under every possible condition of weather, war, and peace, most newsreels are now Eyemo-filmed.

Eyemo is the 35mm. camera that can do your job, too. Seven standard models, plus a complete selection of correlated accessories, make it the personal camera, tailored to your own individual needs. And like all B&H equipment, Eyemos are simple to use, easy to load and handle.


Bell & Howell

SINCE 1907 THE LARGEST MANUFACTURER OF PRECISION EQUIPMENT FOR MOTION PICTURE STUDIOS OF HOLLYWOOD AND THE WORLD

BELL & HOWELL COMPANY
7148 McCormick Road, Chicago 45
Please send me information on Eyemo Cameras and accessories.

Name
Address
City State
Review of the Film News ........................................ 414
Aces of the Camera (John P. Fulton, A.S.C.) ....... By Hilda Black 415
New Horizons for the Documentary Film. By Sgt. Herb A. Lightman 418
Jame Wong Howe, A.S.C., Replies to Comment on Cameramen .... 419
Unusual Pictures Are Right Where You Are . By Louise Doty Carle 420
Through the Editor’s Finder .................................. 422
Among the Movie Clubs ................................. 428
Movie Song Fest .......................................... 432
Soviet Documentary Film Production .......... By Dagmar Stein 434
Index to Volume XXVI—1945 ............................. 438
No 16 mm. Projector Surplus ................................ 440

ON THE FRONT COVER is a photograph on the set of Walter Wanger’s Production for Universal, “Canyon Passage;” with director Jacques Tour¬neur rehearsing Dana Andrews and Susan Hayward for an exterior scene. Director of Photography Edward Cronjager stands beside the Technicolor camera, with brother Henry Cronjager seated as operative cameraman. Photo by Sherm Clarke.
THE HOUSTON CORPORATION

takes pleasure in announcing the appointment of

CAMERA EQUIPMENT COMPANY

as Eastern Distributor for

HOUSTON 16 MM. and 35 MM.
Processing Machines and Studio Equipment; including Camera Dollys, Camera Cranes, Editing and Cutting Equipment and other photographic apparatus now in course of design.
The entire HOUSTON line will be on permanent display at headquarters of

CAMERA EQUIPMENT COMPANY

1600 BROADWAY, NEW YORK, N. Y.
Most important news of the month is the report that the newsreels are planning to make widest use of world events coverage via 16 mm. negative and equipment. According to information at hand, one of the companies is laying out format whereby newsreel correspondents will shoot newy events in 16 mm., pack and ship the negative by air express to New York headquarters, and the editors will select clips for each edition to blow up to 35 mm. size.

Such a procedure holds many advantages; most important being the mobility and operation of the 16mm. camera in shooting. Lesser weight of the exposed negative will allow compact and economical shipment to New York by air express; with editing headquarters a maximum of 50 hours away from any portion of the globe through fast and frequent airline schedules.

The operation is not intended to supplant the regular camera staffs of the newsreel—rather it is to supplement the latter in remote countries not generally covered by staff newsgatherers. The idea opens up opportunities for the advanced amateur and 16 mm. professional photographers in the hinterlands to become accredited correspondents for one of the newsreels, thereby having the privilege of submitting footage from time to time.

At the present writing, it's not known exactly when the specific newsreel will be ready for the 16 mm. operation—but its definitely on the fire.

It's interesting to observe the gradual release of information on secret photographic equipment which the Army and Navy used to excellent effect during the war. There is no doubt that many of these cameras or tools will eventually be adapted by the manufacturers for professional and civilian use.

For example, during the past month, news dispatches carried disclosures of hitherto secret cameras utilized by the Army and Navy. The Army camera is said to give the novice photographer an opportunity of making perfect still pictures in either color or black and white, of fast action from six inches to 12 feet in front of the lens. Camera was perfected by Army pictorial service for special use by Army surgeons; and has a quartz vapor tube as built-in light source to provide brilliant flashes greater than sunlight for about 1/25,000th of a second.

Navy's camera was devised to handle underwater photography to assist in the inspection and identification of sunken vessels. It did yeoman service all round the world to expedite raising of ships, planes, etc. According to Navy announcement, the special waterproof and pressureproof cameras and equipment were developed by Photo Utilities, Inc. and other firms. It was electrically-operated multiple-exposure camera capable of operating to depths of 225 feet. Standard film was used, along with filters and flashbulbs in the pressureproof box, with operation controlled from the surface. In peacetime, it is noted, the undersea camera will undoubtedly be used for salvage operations and divers' surveys of river and harbor bottoms.

When Loew's International, foreign distribution subsidiary for Metro-Goldwyn-Mayer product, announced a few months back that it would release 16 mm. prints of both features and shorts outside of the United States and Great Britain in order to greatly expand bookings in smaller communities that could not support the 35 mm. film and equipment, it was a foregone conclusion that other major companies would follow suit.

Warners, at least, are not being left far behind. From inside reports comes word that WB is setting up a battery of 16 mm. printers at the studio laboratory in Burbank; and expectation is that the release prints of the smaller gauge will be rolling out for foreign release when sufficient number of 16 mm. sound projectors are available for the smaller communities of the world market—which might not be for at least two years.

Surveys by major producer distributors during the past two years have indicated that at least 5,000 additional theatres can be set up with 16 mm. apparatus in Europe, Africa, Central and South America, and Asia in the coming five years. Although the individual booking fees admittedly will be small, the aggregate volume will increase foreign income for the film companies.

Warners is the first of the major companies to formulate plans for the production of educational, training and commercial pictures as an adjunct to its regular entertainment productions. President Harry M. Warner is personally directing organization setup for the non-theatrical films in New York. According to latest information, Warners will utilize the old Vitagraphe studios in Flatbush as production headquarters for the enterprise, thus entirely separating activities from the regular production at the coast Burbank studios. During the war, Warners produced a large number of indoctrination and training films for the armed services which provided the company with intimate details of the different technique of production in contrast to regular features.

Walt Disney has already set up an educational department in his studios, with long-range plans to turn out training and industrial films for commercial firms. Walter Lantz, who produces cartoons for Universal release, is another entry into the commercial film field; as are George Pal, making series of Puppetoon shorts for Paramount, and Jerry Fairbanks, also contributing shorts to the latter program.

Cecil B. De Mille has just organized a separate company in association with William C. Thomas of Pine-Thomas, and Ralph Jester who has had practical experience in regular film production. Firm, using the De Mille name, intends to produce non-theatrical and promotional films for corporations or trade associations, with Thomas and Jester being active parties in the enterprise.

The Last Bomb

Look for general theatrical release during the early months of 1946 of a spectacular feature produced by the Army Air Force photographers in the final weeks of the war in the Pacific. Picture, now in final stages of editing and scoring, was made by a large staff of AAF cameramen, and covers territory from the Philippines right into Japan itself. Reports state its very spectacular footage, and will graphically reveal the success of the Air Force in pounding the Nips to force them to surrender.

Improved Color Film Stocks Due

Indications point to early introduction of improved color film negative stock designed for commercial use in the 16 mm. field.

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DECEMBER, 1945 • AMERICAN CINEMATOGRAPHER
The future still holds most of the important things I've planned to accomplish," says John Fulton, newly appointed head of Process Photography at the Samuel Goldwyn Studio. "I haven't come any place close to doing what I've visualized in my career." The record, however, proves that this young man has accomplished more than most men could ever hope for. But he's not satisfied—there's still much that hasn't been done.

For many years he was head of Universal's Process Department, and it is to Fulton's combined technical ability and imaginative resourcefulness that credit must go for making that studio the leader in the field of weird and unusual pictures. "Frankenstein," "Dracula," and "The Invisible Man" chillers owed their box office popularity to Fulton's successful creation of new methods for achieving grotesque, uncanny and supernatural effects.

Even so, this man, responsible for some of the most effective dramatic highlights in the screen's top mystery thrillers, claims he can't take himself seriously. Often, he wonders why so much emphasis is placed on every scene. "As if," he smiles, "it would last forever. We are not creating something that will remain for thousands of years. A picture is not a pyramid—it's more like a feather in a hurricane."

Yet Fulton's actions belie his words. He may not take himself seriously, but paradoxically, no man in the motion picture industry works harder than he to achieve perfection. Freely, he admits that clock-watching defeats ambition, and insists the only way to succeed in a career is to forget everything—clock, family, hobbies, interests—everything but the job. That's what it takes, and when necessity demands, that's what he gives.

If a problem arises, it isn't locked up and left behind in the office for the night; Fulton takes it home with him, claims he does his best worrying in bed, and can't sleep as long as there's an unsolved issue on his mind. On occasion, he's worried right through two or three nights before a stickler unravelled itself to his satisfaction.

Fulton, who believes that "trick" camera work is a combination of a great many things: engineering, physics, camera technique, laboratory work, artistry and an open mind, had the best possible background for his present position. His father, Fitch Fulton, one of the best artists in Hollywood, was a theatrical scenic painter for a number of years, and the boy grew up backstage. The elder Fulton was fully convinced that no phase of the theater was a proper career for his son. So John studied electrical engineering and, on leaving school, went to work as a junior engineer for the Southern California Edison Company. But it didn't take him long to discover that full-fledged engineers earned only slightly more than he, and so, with characteristic foresight, he quit the job and went in search of work with greater possibilities for the future.

Just why he cornered a fellow in a comedy outfit that was forming, or why he told the man he was going to hang on until he was made his assistant, Fulton will never know. But he did, and that's how he became an assistant cameraman. He wonders what would have happened if he'd cornered the director, or producer, instead.

When that picture was over, he went to Universal, where he's been for the past twenty-two years except at brief intervals when he worked for the Frank Williams Laboratory and at a couple of other studios. It was at the Williams

[Continued on Page 430]
U.S. Government Report
On Agfa Color Process

PROGRESS in the development of color film emulsions will be materially speeded by present plans and policies of the United States Department of Commerce. All American raw film manufacturers will have access to details of the improvements in manufacture of color raw stock, and the techniques of processing both negative and release prints as perfected by the German Agfa plant during the past five years.

In addition to distributing a summarized report on the Agfa process—as compiled by Lt. Col. R. H. Ranger of the Signal Corps and a team of investigators of the Technical Industrial Intelligence Committee of the Joint Intelligence Objective Agency—the Department of Commerce has invited raw film manufacturers either without restriction or under license from the government.

During the war years, Agfa technicians continued to improve its color process. This was forcefully demonstrated in Hollywood recently when a seized print of “Girl of My Dreams” (“Frau Meiner Träume”) was shown to interested technicians. The development program of the German film industry had the complete backing of the government, and the improved techniques developed for color film by Agfa engineers during hostilities are now just coming to light.

U.S. Report on Agfa

Report of the Publication Board, Department of Commerce, states:

Since 1939, Agfa, the subsidiary of IG Farben in Wolfen, near Leipsig, has perfected the negative-positive color process.

The negative-positive process has the advantages that it is the normal photographic sequence, giving the opportunity for multiple copies of equal quality, for ready enlargement and for tone correction on positive printing.

One of the greatest difficulties with color work has been the spreading of the dye in the three color layers, materially reducing the sharpness of the image.

The present process overcomes this by hitching a long fatty chain to the dye radical which has no other function than to restrain the infiltration of the entire molecule, either laterally across the film or vertically between the successive color layers.

To record the color, three successive layers of color sensitive emulsions are built up on the normal film base. From top to base, these layers are successively blue, green, and red sensitive.

The complete visual spectrum is divided into thirds with these three primary colors centering the respective sensitivity bands.

The filter frequencies overlap quite generously so that a fairly uniform response is accomplished for any visual frequency in the successive layers.

Taking advantage of any possible simplifications, the top layer is just the ordinary silver bromide emulsion which, as is well known, is blue sensitive.

Practically any emulsion would be blue sensitive, so to avoid blue reaction in the succeeding layers, a yellow filter is inserted between this top layer and the bottom two; this is the usual plain silver emulsion which has been used in the photographic art for some time, as a shutout for blue light.

The second layer is green sensitive by a mixture of Rr 340, four parts; Rr 1650, three parts; and Rr 1523, two parts.

The third layer is red sensitive by including Ma 1088.

The usual green anti-halation dye in synthetic resin is applied to the back of the filmstock.

The thickness of the layers is approximately as follows, expressed in microns:

Blue layer .......... 6 microns
Yellow layer ....... 2 microns
Green layer ....... 6 microns
Red layer ........  6 microns
Film base ......... 150 microns
Anti-halation (less than) 1 micron

Total ........... (approx.) 170 microns

The film has a sensitivity measured in German photo units of 150 din, which corresponds to approximately 24° Weston.

Too rigorous an interpretation of the entire color process in terms of original and complementary colors is neither necessary nor practicable. The main idea is to get color emphasis in three parts of the visual spectrum which can be approximately recorded and then finally be made to modulate the intensities of these clean-cut colors which by their combination will subtract from the light which comes to the eye such frequency energies as to give a resultant net desired color for that particular portion of the picture.

To this end, a second dye is included in the emulsion, each layer which will give it the final desired color to accomplish this result.

The top layer which is blue sensitive will record as latent silver images all the frequencies of light in their respective intensity in the region of blue. A yellow dye is added in this emulsion for the blue layer. It would be better to describe it as a latent yellow dye, as it only shows up wherever the special developer acts to reduce the silver in the latent images in that layer.

The theoretical explanation of the oxidation of the latent dyes by the developer is given on pages 11 and 12 of “Die Farbenphotographie” by Dr. W. Schneider, 1944.

The final developed colors in three negative layers are as follows:

Layer Sensitivity Final Color
Top Blue Yellow
Middle Green Purple
Bottom Red Blue-Green

Some practical points noted in an actual observation of the development are: keep the temperature quite constant at 18° Centigrade. Very necessary to use...
intensive washing (fresh water entering the bath, and overflowing out) for removing all traces of the developer.

The development sequence is as follows:

10 minute development (the anti-halation disappears immediately)
2 stop bath
15 flowing washing
3 weak bleaching to remove yellow filter
3 washing
4 final bleaching
5 washing
5 fixing in neutral sodium thiosulphite
15 final washing
20 drying (forced)

Care must be taken in drying that the temperature does not rise above about 30 Centigrade.

The green anti-halation disappears immediately because of the alkali in the developer.

After the silver deposition has accomplished its purpose of catalyzing the coloration, it must be removed from the film by bleaching. All of the steps up to the final bleaching should be in complete darkness.

Sectional filters are mounted in frames through which a print from the color negative may be made. The print is developed in the normal manner, and then a selection is made from the various shadings to determine the best color filter to be used in making the final print.

An enlarging projector has been fitted up with filters arranged in three sets under hand control by means of which any combination of filters may be selected by the operator quickly for the final print.

It is to be noted that two types of color filters only at a time are necessary. The three filter colors are yellow, purple and blue-green, to reduce respectively the amount of light transmitted in blue, green and red. If the test print is lacking, for example, for only the second two filter shadings are used.

With experience the operators become able to interpret true color values in the negative, and make approximate test prints accordingly. This increases the speed with which final true color prints may be accomplished.

Quite naturally, a continuous motion picture film developing setup has been made using the normal tubes with the successive solutions or drying chambers. There are naturally more such tubes than necessary for black and white development. The development is normally at a three meter per minute rate, with the length of the running film in the respective tanks determining the time in the successive solutions.

Sound recording requires special consideration. The recording is made along side the selection in the print. It therefore would come out in colors too.

A special blue sensitive photo cell of antimonicaesium has been developed by Zeiss Ikon in Dresden, also by AGE in Berlin.

With the sound recorded in blue in the top layer only a very fine quality of recording may be accomplished. This requires the change to the new type photo cell in all projectors, however. The new cell is equally good on old type black and white sound recording.

Another answer was to leave the silver in that portion of the print where the sound strip is. To this end, the bleach is supported in a very viscous solvent known as "Tulose or Colorcell." It is oxymethylcellulose.

This viscous bleach is applied between two little guides which confine the bleach to the picture part of the film and leaves the sound track unbleached. This sound track may then be used with normal photo cells.

According to Professor J. Eggert, it is possible to get practically as good sound recording with this latter device as with normal black and white, but quite naturally greater care is necessary to achieve this.

The sound reproduction in the film, "Frau Meiner Traume" was excellent; and I was surprised that I could follow it better than I could regular spoken German; the reason is—of course—that it is far more carefully spoken, and the action conveys much of the meaning.

The color of the picture was excellent, although the definition was still a little short of what is expected from black and white sound recording.

All grades of tone are judged before the final printing to determine visually the best tone filtering necessary in consideration of the particular emulsions being run, as well as the subject to get the best net effect. Of course, it is to be noted that the color may be modified at will to get special effects when desired.

An automatic printer sets the color filters for the proper printing of each successive scene in the final positive film.

The color film manufacture was better set up in Paris than it was in Germany.

This was because the UFA studios in Berlin were never completely working due to construction delays and bombing. The celluloid dropped out of time in the war; to the growing unrest of the people. Expensive gowns, high salaries to the artists, with want increasing on all sides, did not please the people in spite of the fact that the movies were their only possible relaxation.

Stanley Horsley, A.S.C., has been appointed head of the special photographic effects department at Universal studios, succeeding John Fulton, A.S.C., who resigned recently to organize a similar department for Samuel Goldwyn Productions.

New appointee, recently discharged from two years' service with the Army Air Force motion picture unit where he received the Legion of Merit for performance of outstanding services, was actually born into the motion picture industry. His father, the late David Horsley, was one of the pioneer film producers, and Stan had an intensive film education from the time he could walk.

While still in school, he worked during summer vacations at the Morocco laboratories at the old Realart studios; and on graduation from high school in 1922, Horsley started as an assistant cameraman at Universal. Those were the days when the assistant carried the tripod and camera over the hills of Newhall and Saugus for filming of westerns, and—in addition—operated the still camera. He soon graduated to post of operator and second cameraman, leaving Universal about 1927 to become aide to Fulton at Inspiration Pictures, handling both regular photography and process work.

Back to Universal several years later when Fulton established the process and special effects department at that studio, Horsley became an expert in that field as assistant to Fulton. Upon honorable discharge from Army duties two months ago, he rejoined the Universal special effects department, and received term contract as head on resignation of Fulton. Horsley is the youngest—in point of years—head of a studio special effects and process department.
New Horizons for the Documentary Film

By HERB A. LIGHTMAN

In last month's issue of American Cinematographer we discussed the technique of the documentary film and stated that this form of motion picture would be a potent factor in the shaping of our post-war world.

Actually, the documentary is not a new form of cinema. It has long been used as a source of information by various agencies, governmental and private. During the past years there have been some notable examples of this technique. Some years ago Pare Lorentz, a former film critic, produced two remarkable films for the government. One of these, "The Plow That Broke the Plains," traced the development of scientific agriculture in this country and analyzed the farmer's problems in regard to soil erosion and conservation.

The other film, "The River," portrayed the plight of farmers living along the Mississippi Valley. It made the audience feel the impact of the floods and other natural catastrophes with which the river-bottom farmers had to contend. Both films were distinguished by superb cinematic technique. Photographically, as well as directorially, they were powerful and strictly in key with the subjects presented. No one viewing either film could fail to be drawn into the situation and to realize subjectively that these farmers were undergoing.

There have been other fine examples of the documentary technique in the past, but up until very recently this type of motion picture was looked upon as a sort of experimental novelty whose potentialities as a social force were either ignored or minimized. It took World War II to make us conscious of the power of this medium.

When the war began and our men began to be drafted there were a good many of them who grumbled because they frankly did not understand why they were being asked to don a uniform. So factually, logically and forcefully presented was the subject matter that it hit every man personally; the war became his personal battle, there was no longer any doubt.

The armed forces continued to present information in motion picture form to service personnel, and because this was so our forces became the best-informed fighting men in the world. The documentary film proved itself in war.

But the war is over now and we are in the midst of that "post-war" era when our problems shall be lasting peace and reconditioning. It is now recognized that the documentary film can be an important tool in achieving these goals.

It's biggest use will be in the field of public education. Americans are an inquisitive people. They want to know the "why" of things. They have a right to know. But in a complex, bureaucratic government such as ours, the reasons behind various policies and acts of state are not always self-evident. In spite of analyses in our newspapers and over the radio, the motion picture still remains the most kinetic medium of analyzing an abstract situation and presenting it in an interesting and forceful manner.

The Office of Information in Washington has, therefore, set up a comprehensive program of documentary production for the future. Many of these films will be of general interest, while others will be slanted for certain segments of our national population, such as for the farmers of the nation.

An important feature of this latter type is a film titled: "Farmers Face the Future." The subject is directed entirely toward presenting the farmers' post-war problems and discussing their solution. Another film: "The Common Cause," shows soil conservation districts and how they further more efficient agriculture and better conservation of our soil.

But perhaps the most important film which the Department of Agriculture has in production is one titled: "Veterans and the Land," which will show the returning veterans how and where to get information regarding farming and the many current agricultural considerations which may help the veteran to determine whether he is suited to farm life and should take up farming as a vocation.

Of general interest are films such as: "Meats With Approval," which shows how Federal Meat Inspectors work in protecting the health of the consumer; and another film in color titled: "Freezing Foods and Vegetables," showing the methods of quick freezing of products. Two films narrated in Spanish are now in production for showing in Puerto Rico. The first, "Querer es Fonder," deals with the principles and practice of better nutrition amongst the people of the island. The second, "La Tierra Nuestra," deals with better means of production toward building a more advanced farm program.

As production facilities expand, we may expect our government to broaden out its scope of subject matter, analyzing various phases of the social scene for the American people. A film program is also underway to acquaint the peoples of Europe with the American way of life, thus providing a basis for mutual understanding. This is an especially important phase of the re-education of Germany, Italy and Japan toward a democratic national life.

The use of documentaries as an educational aid may be expected to boom into a very wide field very shortly. Educators agree that informational subjects presented visually are more easily absorbed and are retained for longer periods than when they are presented in any other manner. As an adjunct to more conventional methods of education the documentary will meet wide acceptance in our schools and universities.

The field of commercial films is beginning to lean heavily toward the documentary technique also. Realizing that Americans are interested in knowing the background of various products on the market, commercial film-makers are now producing informational films skilfully dressed up with production techniques that will hold the audience's interest. Commercial and industrial films with the documentary slant appear high on the list of tools which American business expects to use in achieving its goal of maximum efficiency in operation and distribution of commodities for our coming industrial expansion.

The documentary technique has also been used by Hollywood in the past, notably in such films as Steinbeck's, "Forgotten Village," and "Grapes of Wrath." More recently, "The Southerner" and "The House on 92nd St." have made fine use of this style in bringing a more realistic type of photo-play to the screen. We may expect a wider use of the documentary style in many picture pictures of our common-wood, especially those calculated to re-

(Continued on Page 442)
James Wong Howe Replies to Comment On Cameramen

WHEN Stephen Longstreet, nationally-known novelist, editor, critic and currently a motion picture scenarist, made passing comment that "brilliant cameramen are the curse of the business" in an article appearing in August issue of the Screen Writers Guild monthly publication, The Screen Writer; he generated a quick retort from James Wong Howe, A.S.C.

Replying with an article published in the October issue of The Screen Writer under title of "The Cameraman Talks Back," Howe describes the important contributions of the director of photography to the overall results of a motion picture production. It's one of the best explanations of the many responsibilities and achievements of the director of photography, and makes decidedly interesting reading.

"I agree with the criticism of placing camera gymnastics and an epic of sets over, or in place of, story values. I take issue with the statement that this is the fault of brilliant cameramen and that 'dumb cameramen' are a necessity for good pictures, along with less money, a good script, old standing sets and some lights and shadows. Who makes the lights and shadows which create emotional tones on the screen? They don't come on the old sets. The cameraman makes them, "writes Howe, who continues:

"The trouble with many critics and ex-critics is that for all their skillful talk they don't understand the techniques of motion pictures. They still criticize movies from the viewpoint of the stage. This results in any number of false appraisals, but the one which I am concerned here is that this approach leaves out the cameraman entirely. For the stage, there is the audience eye. For movies, with their wider scope and moving ability, there is the camera eye. If these two ware one and the same kind of production, the cameraman's part would merely be to set his camera up in front of the action as a static recorder, press a button and go fishing. Let the lights and shadows fall as they will, or better still, paint them on some old sets. The director, the actors, the writers, the producers, the bank, and the audience and critic, would object to this, but there you have the recipe for making movies with a dumb, or inanimate cameraman."

"This critical ignorance affects the cameraman in still another way. Usually when the photography of a picture is good, the critic praises the director for his understanding and handling of the camera. It is true that a good film director knows and makes use of this knowledge, but the good cameraman is not merely a mechanic to carry out his orders. His contribution may be technically expert and artistically creative. His understanding of the dramatic values of the story will carry over into his creation of mood. His manipulation of lights for such effects requires both technical skill and imagination. His handling of the camera on certain action produced by the writer and interpreted by the director may well contain some added dramatic value of its own, which enhances and further interprets."

"Camera gymnastics and strange angles are not what I would call the stock of a 'brilliant cameraman.' A man of limitations, director or cameraman, may use these mechanics to cover his thinness of understanding. Some of the most well known writers possess technical skill and slickness and very little else. A limited writer can do far more harm, or lack of good, than a limited cameraman, because of the power of word and thought. I believe that the best cameraman is one who recognizes the source, the story, as the basis of his work."

"Under the best conditions, the writer, the director and the cameraman would work closely together throughout the production. In spite of the present set-up, a measure of cooperation is achieved, especially between director and cameraman. Writers have often consulted me on how to get over certain scenes with lighting and the use of camera lenses."

"Sometimes, as now, I am tempted to detail some of the work of a cameraman in an effort toward further cooperation. By its varied parts, he faces a job of integration on his own. Throughout the picture there is that shared responsibility of keeping to the schedule; this with all its other implications means the executive ability to keep the set moving. He has a general responsibility to fuse the work of all the technical departments under his direction in order to achieve the equality of the story. He is concerned with the makeup and the costume coloring. He works with the art director to see that the sets are properly painted to bring out their best values photographically. I refer here to black and white, as well as color film. For the same reason, he confers with the set decorator as to the colors of furniture, drapes, rugs. Too much, too little, arrangement, often enter into the composition, and composition affects mood. The cameraman alone is responsible for the lighting, which is a part of photography but often referred to separately."

"Naturally the cameraman studies the script. His main responsibility is to photograph the actors, action and background, by means of the moving camera, (Continued on Page 437)"
Unusual Pictures Are Right Where You Are

By LOUISE DOTY CARLE

"Photography is artistry of a sort," claims French Richardson, "and fascinating as any of the arts." In addition, it can be—as in his case—an engrossing hobby. For, although Richardson is an auditor by profession, this camera enthusiast has been an amateur photographer for over fifteen years. He freely admits he is not at all above taking advice from better qualified persons, and high on his list of experts who have helped him clear the photographic hurdles, is the man who first did his developing when French was a novice finding out about his first camera, a Brownie.

In the darkroom, through having his mistakes pointed out to him, this fledgling photographer learned gradually, if not how to take the perfect picture, then at least how not to get one. For, like most cameramen, he learned by the trial and error method. And he's still at it!

Back in the summer of 1939 when he got his automatic Rolleiflex, Richardson and his wife started out on an automobile trip that took them through Glacier National Park to big eastern cities including Washington, D. C., New York, Boston and Montreal. Enroute, as you've probably guessed, that Rolleiflex did extra duty. In two months the Richardsions covered 13,500 miles and took over 600 pictures. After every day's journey, the film developed in hotel bathrooms across the country from California to Maine, with the aid of innumerable pitchers of ice supplied by the bell-hops.

Richardson got some good shots on that trip, but still regrets missing what would probably have been the best. One day they were driving through open country when a few sheep ambled through a broken fence and started across the road directly in front of their car. They stopped the car to wait and in no time at all, the entire flock had followed the leaders and were swarming all around the car: in front of it, behind it, on all sides. Not until the flock was safely across the road, and the Richardsions a couple of miles away, did they look at each other in consternation. So interested had they been in the unusual sight of a flock of sheep surrounding their car, that neither had thought of the camera!

What made it worse, was the fact that it was just the sort of shot Richardson likes to get. Even when he photographs buildings, he always tries for a sense of activity. He objects to the sort of photography he terms "still life." He wants movement and action in addition to good composition. Another thing Richardson strives for is unusual black-and-white effects. In many of his pictures, he has achieved this dramatic effect amazingly well. Many of his studies look like silhouettes.

He is a perfectionist, and has on occasion, taken hundreds of shots before being satisfied with results. He made repeated trips to the Santa Barbara Mission and shot well over a hundred pictures before he got just what he wanted. He tried shooting with people entering and departing, walking up and down the steps, but that threw his composition out of line. He found that, with no one in the picture, the effect was one of those aversions of his: another "still life."

[Continued on Page 424]
J. E. Brulatour, Inc.
Extends
FRIENDLY
GREETINGS
and
GOOD WILL
for
CHRISTMAS
and
The NEW YEAR
to
THE CINEMATOGRAPHERS
of
The Motion Picture Industry—
THROUGH the EDITOR'S FINDER

WIN DUP of the year 1945 terminates a four year drought of camera equipment, accessories and film stocks for both the professional and amateur cinematographers. But we know that everyone who had to economize on shooting the raw stock so necessary for the armed forces to successfully terminate the war on both fronts, is happy in the knowledge that the individual minute contributions in film savings at home rolled up totals of millions of feet of raw stock that the Army, Navy, Marines, etc., used to the greatest advantage.

From a survey of suppliers, there will be a gradual (but not too rapid) return to near-normal availability of new projectors, cameras, accessories, correlated equipment and film stocks. Indications point to an easing up in shortages during December, with general normal flow of supplies—especially film—due shortly after the first of the year.

Manufacturers of motion picture equipment and film fortunately do not have reversion problems to the extent of numerous other plants that switched from peacetime goods to war equipment. It was a case of all-out manufacture of cameras, projectors and film stocks for the services to meet modern warfare demands for photographic assistance in carrying out strategic campaigns. In turning over virtually all output for the war, it was natural that restrictions were invoked on sales to civilians for what were considered non-essential filming activities.

In again turning production facilities to peacetime requirements, the motion picture equipment suppliers face no serious re-tooling or reversion problems. Output—aside from diminished orders from the Army and Navy—goes quickly and directly to the distributors and dealers.

Certainly there will be impressive improvements in various types and styles of both professional and amateur motion picture photographic equipment and accessories. Re-designing of cameras for lighter weight, greater ease in operation and servicing under demands of combat conditions, will be incorporated in new models to be introduced shortly by various manufacturers: “Combat cameras” they were identified by the services, and embrace both 35mm, and 16mm. models. When finally available in sufficient quantities, they will prove a boon both to the directors of photography in the studios, and the semi-professionals and amateurs in the 16 mm. fields.

Sharper and faster lenses produced in the United States, will greatly aid in increased photographic quality. It is known that the American lens manufacturers—spending up research and development under wartime requirements—have surpassed the previously-imported product by a wide margin. In view of this fact, there will be no bottleneck in delivery of either cameras or projectors while depending on resumption of lens production abroad.

We are grateful to subscriber Sol Negrin of the Motion Picture, N. Y., for sending along a film column by Kate Cameron and published in New York Daily News of Oct. 28, in which Miss Cameron calls readers’ attention to the camera direction on “Confidential Agent.” It’s good to see top film critics recognizing the accomplishments of directors of photographers and giving due credit. Miss Cameron commented, “James Wong Howe, one of Hollywood’s outstanding camera artists, had charge of the photography on the mystery thriller.”

Although virtually everywhere around the Technicolor plant is secretive, it is known that the company is well along with plans for greatly increasing capacity and annual output. A new battery of Technicolor cameras are reported to be under construction, and it is likely that additional I. B. machines will be set up to take care of the increased volume of print processing in the laboratory. However, just when the new equipment will be available is a question, as it’s all highly-precisioned work that takes plenty of time and expert machinists for construction.

ARMY, NAVY, AIR FORCE

Continue Film Units

Motion picture production units of the Air Force, Navy and Army’s Signal Corps will be continued as permanent branches of the respective services, according to information at hand. The three branches of service found motion pictures invaluable for training and instructional purposes, and will utilize films for visual teaching of the peacetime forces.

The Air Force 18th motion picture unit, which has headquartered at the former Hal Roach studios since late 1942, is moving from that base by December 31 and will conduct future activities at Lowry Field, Denver.

Army’s Signal Corps photographic division will continue to maintain headquarters at the Astoria Studios, Long Island; while the Navy centers its film setup at the Photo Science Laboratories at Anacostia, near Washington.

WITH increasing frequency come announcements that production organizations are being set up in other countries, with the major idea of competing for world-wide box office dollars with the Hollywood studios. This particularly applies to J. Arthur Rank in England, who controls a large portion of the best theaters in the British Isles, in addition to owning whole or partial interest in some of the best film production units established in that country.

With plenty of finances—Gabriel Pascal’s “Caesar and Cleopatra” was recently completed in London with outlay of around $5,000,000—Rank is going first class in aiming for suitable portion of the world film markets. Picture, by the way, is the most costly of any made to date.

However, Rank is not overlooking the necessity of the finest technical advantages for his British productions. There seems to be a continuous stream of English engineers and studio technical men making visits to Hollywood, to get an insight into how things are accomplished at film headquarters of the world. These visitors are giving maximum cooperation, and shown everything in both the studios and the plants of the suppliers.

The same goes for representatives of any foreign producing companies. Recently there was a group of studio officials and producers from India who spent several weeks probing into the latest production technique. Officials and technicians of Mexican studios are also around frequently.

Important is the disclosure that film production resumes immediately in France. Jean Leduc, president of Societe Nouvelle des Estabs Gaumont, and general manager of Compagnie des Comp-teurs, brought five technical engineers of his staff to Hollywood to secure firsthand information on photography, sound, lighting and other factors necessary to provide the best production mounting. French Gaumont, in which Rank holds a substantial interest, reportedly bought the former Paramount studios in Joinville, near Paris, and shortly launches a large production program. Company, in addition operates an extensive theatre circuit in France, besides three processing laboratories.

Film Shortage in Denmark

Palladium, one of the largest production companies in Denmark, has been forced to close its studios due to shortage of raw film. Firm expects to secure new stocks for resumption in three months. Danish producers have been securing raw film from Belgium for many years.
"For perfection in 'CONTROLLED' sunlight, or moonlight, use arcs." Carl B. Guthrie, A.S.C.
Finally, he found just what he wanted: two automobiles parked beside the steps, where they added the appearance of life and activity and also, fortunately, broke the lines in just the right spot for excellent composition.

One of his most striking black-and-whites is a study of the old Mission at Monterey. It perfectly exemplifies the contrasts he strives for. The entire effect is black and white, white picket fence with its contrasting shadows, black statue silhouetted against a white wall, and white statue against the dark background of a tree. Richardson made several trips to the Mission before he got that effect.

An inspiringly simple study is his Chapel at Harvard University. The Chapel's spire rises through ancient trees to pierce fluffy clouds of a summer sky. It would definitely be "still life," if not for the fact that Richardson set his camera, waited till one of the students had walked down the steps from the Chapel, crossed the street, and was nearly out of camera range. That was what the photographer wanted; just a touch of activity, yet not too much, so that the observer's interest would not be distracted.

Also at Harvard, Richardson got another of his black-and-whites when he photographed the building across from the Charles River. There he was confronted by a problem: there were two white markers by the water's edge and they upset the balance of the scene. He set the camera and waited, hoping that the lad who was maneuvering the scull a mile downriver would turn and move close to the markers. He got his wish, and when the scull was at a distance to lend perfect balance to the markers, Richardson got his picture. And a good one it is, too.

In accordance with his ideas of seeking advice from experts, Richardson got amazing results with his night shots taken at the San Francisco Fair. Knowing that the Kodak people had already made thousands of test shots, he went to them for advice. Result: not one bad night shot, but some dramatically effective views of the Tower of the Sun, Cavalcade of the West, and other exhibits and buildings. A few of these photographs, mounted or framed, line the Richardson living room walls, and lend a charm that could be surpassed by few paintings.

French Richardson has found, in the fifteen years that he has been taking pictures as a hobby, that some of the finest possibilities for good shots are always right where you are. He listens and smiles while other photographers recount their yearnings for Europe or Asia or Africa. As to Richardson, he thinks wonderful pictures can be obtained no matter where you are. There is always something of interest, and though to the person who has seen a spot before it may seem dull, to strangers it may be tremendously exciting.

He cites an incident from his grandfather's life to illustrate his point. Seems the old gentleman had made quite a fortune in oil, and then he lost all his money. Broke, the family had to relinquish their beautiful home. His grandmother regretted more than all else leaving her rose garden. And well she might, because within a year after the Richardson family moved away, an oil gusher came in on that property—in the old rose garden!

Richardson says that taught him it's wise to look for your good where you are. That's why he can't get too excited about better pictures in some other country, on some other continent. They can be had here too.

Another thing he's discovered about photography, is that it increases the power of observation. Let two men go on a trip, one of them a cameraman,
WHAT gives life and action to the movies?
What actually makes a motion picture?

When you come right down to it, it's the film!

For even the finest acting, producing and directing have but a single purpose—the reproduction of a scene on film.

And when competent hands team up with a film like Ansco Supreme Negative, great photography is the result. The kind of photography that wins awards.

For Supreme Negative film has a sensitive response—a long, smooth gradation scale—a subtle combination of balance and high speed—that certain something cameramen call "quality."

Try Ansco Supreme Negative film today.
General E. P. "Ted" Curtis, one of the most widely known executives of the motion picture industry, has been retired to inactive status by the U.S. Army, and returns to Eastman Kodak Co. as a vice president.

As an officer of EK, Curtis will direct world-wide distribution of Eastman's 35 mm. film and the 16 mm. professional type stocks; in addition to handling general supervision of the company's European business, including cameras, kodaks and roll film.

Curtis started with Eastman Kodak in the accounting department at Rochester in 1920, later being assigned to duties in the plant, and was appointed general sales manager of motion picture film in 1928.

In the fall of 1940, Curtis received leave of absence from his Eastman Kodak position and commission of Major in the Army Air Forces. He was stationed in Washington handling executive and organizational duties until June, 1942, when he was promoted to rank of Colonel and assigned to the Eighth Air Force in England.

Raised to the rank of Brigadier General in the fall of 1942, Curtis was assigned as Chief of Staff of the North-west African Air Forces—which comprised the combination of American and British forces—for the African invasion and campaign. He was stationed in Africa for a year, and then spent three months in Italy. Returning to England early in 1944, General Curtis functioned as Chief of Staff of U.S. Strategic Air Forces, with promotion to rank of Major General. He held this post until the unconditional surrender of Germany.

His Army record, as briefly detailed, points up the brilliant executive ability of Curtis. It might be pointed out that he was placed on inactive duty with the highest rank of any of the numerous members of the film industry who participated in the global war.

L. A. Cinema Club Launches New Member Campaign

Los Angeles Cinema Club is one of the first amateur organizations to launch a drive to attract new members. In addition to having present members contact cinema enthusiasts for applications, the Los Angeles group is broadcasting invitations for those interested to attend the regular meeting on the first Monday of each month.

Officers of other clubs throughout the country can well follow the lead of the Los Angeles Cinema Club in reaching out for new members. It might be pointed out that there are thousands of returning service men who became camera addicts through shooting pictures of themselves and friends in various war zones—generally with cameras borrowed from friends or buddies.
Now available to camera owners and dealers—"Professional Junior" standard and baby tripods, "Hi-Hats," alignment gauges, portable dollies, collapsible triangles, etc. They are used by the U. S. Navy, Army Air Bases, Office of Strategic Services, Signal Corps and other Gov't agencies—also by leading Newsreel companies, 16mm and 35mm motion picture producers.

Tripod handles all 16mm cameras, including EK Cine Special, Bolex, etc., even when motor driven and with large film magazines. Knurled knob, easily accessible, fastens any make camera on top-plate.

Rubber-gripped guide handle is removable, fastens under tripod when carried.

Large knurled knob adjusts tilt action tension.

Wing lock for positive setting of tilt head if fixed angle is desired.

Very large trunnion assures super-smooth tilt action with minimum wear.

Tilt head design permits extremely wide arc of high and low tilt action.

Wing lock for adjusting pan movement tension. Also acts as positive lock in any position.

"L" level aids in setting tripod to true horizontal and vertical position.

Tie-down rings permit using tripod on moving platforms such as dollies, auto roofs, etc.

Non-loosening nuts hold legs on base securely.

Maple, long-grained, hand-rubbed, splinter-proof, weather and warp-proofed is used for tripod legs.

Quick-release fluted knobs set between each leg afford positive locking in controlling tripod height adjustments.

Acclaimed the finest for every picture-taking use, "Professional Junior" tripods are compact, versatile, rugged. Super-smooth 360° pan and 80° tilt action; positive, simple, leg-height adjustments; compact and light (weighing 14 lbs.); allowing 72" high and 42" low usability—no finer tripod is made. The inset shows the full tripod mounted on our all-metal Collapsible Triangle which is used to prevent tripod from slipping when used on hard or slippery surfaces.

Pat. No. 2318910
Trade Mark Reg.
U. S. Pat. Office

Cable: CINEQUIP
Circle 6-5080

Now available to camera owners and dealers—"Professional Junior" standard and baby tripods, "Hi-Hats," alignment gauges, portable dollies, collapsible triangles, etc. They are used by the U. S. Navy, Army Air Bases, Office of Strategic Services, Signal Corps and other Gov't agencies—also by leading Newsreel companies, 16mm and 35mm motion picture producers.

Tripod Head Unconditionally Guaranteed 5 Years

Write for Details

FRANK C. ZUCKER
1600 BROADWAY NEW YORK CITY

American Cinematographer • December, 1945 • 427
L. A. Cinema Club

Los Angeles Cinema Club will hold its annual banquet meeting night of January 7, 1946, at the Breakfast Club, at which time election of officers will take place and members will view winning contest pictures.

Pictures must be entered in the contest up to Dec. 21, 1945, and delivered to Contest Committee Chairman, James H. Mitchell, 333 Roosevelt Bldg., Los Angeles. General lack of photographic materials in the past resulted in postponement of the annual contest, which has become a highlight in activities of L. A. Cinema Club for many years.

November fifth meeting was held in the Fine Arts Room of the Elbell Club, with capacity audience of 450 viewing a splendid program of subjects. Bill Easley's "Canadian Wonderland" is expertly photographed in color, accentuated by a fine musical soundtrack of exceptional quality. Capt. H. L. Messinger presented his color-sound subject, "Under Water Sport Fishing;" and Jorge Laiset, consul of Ecuador exhibited "Down Where the North Begins," a very interesting color-sound travelog of Ecuador.

Garlock Heads L. A. 8mm.

At annual election meeting of Los Angeles 8mm. Club at Bell & Howell Auditorium on Nov. 13, W. D. Garlock was selected to head the organization as president for 1946. Other officers elected include: J. R. Hornady, vice president; Sylvia Sailey, secretary; and Herman Hack, treasurer. Retiring officers comprised Erwin C. Dietze, president; John R. Boaz, vice president; William V. Dorris, secretary; and Claude W. A. Cadarette, treasurer.

November meeting was highly informative, with George Cushman giving demonstration of making titles, and L. B. Reed exhibiting balance of picture he made on Saipan and Guam.

Annual contest films are to be submitted to the judging committee by Dec. 8, and winners will be announced at the 11th annual banquet to be held evening of Dec. 15 at Scully's. In addition to installing the new officers, contests awards will be presented, and some of the winning entries exhibited.

Westwood Movie Club

Annual contest meeting of the Westwood Movie Club, San Francisco, was held at St. Francis Community Hall on Nov. 30th, with prize winning pictures selected by the judges being shown. Election of officers will take place at the December meeting, while plans are being formulated for annual dinner at the January meeting for induction of the new slate of officers.

Subscriptions Offered For Contest Prizes

With the post-war revival of contests by amateur cine clubs, chairmen of such events in the various organizations are reminded that AMERICAN CINEMATOGRAPHER will donate a year's subscription as a prize. This policy was adopted several years ago to encourage amateur contests, and to further activities in the 8 and 16 mm. fields.

Contest chairman can automatically set the subscription as a prize on the list, and advise AMERICAN CINEMATOGRAPHER of the name and address of the winner of the award.

Brooklyn Amateur Cine Club

Brooklyn Academy was new meeting place for the Brooklyn Amateur Cine Club on Nov. 9th in order to accommodate the large crowd attending for the initial guest night of the season.

Exhibition of "In His Judgment," photographed by Joseph Hartley, president of Metropolitan Movie Club, proved a highlight of the evening. Other films on the program included "Bettas," by John Larson; "How Green Is the Earth," contest winner photographed by Charles Benjamin; and "V. E. Day Celebration," photographed jointly by Charles Ross, William Morris and Irving Gittell.

In line with requests of members that meetings be of an instructive nature rather than devoted entirely to exhibition of films, the club is setting up programs that will include run off of series of reels on basic film technique photographed by Ken Space for the Harmon Foundation; and demonstrations on splicing and other fundamentals.

San Francisco Club

Meeting of the Cinema Club of San Francisco, held at Woman's City Club evening of Nov. 20, presented an all-color film program for the assembled members, with the four subjects equally divided between 8 and 16 mm. Kodachrome.

Films included: "My Island of Golden Dreams," (8mm.) by Eric Unmack; "The Boss Comes to Dinner," (8mm.) by Ryne Zimmerman; "Autumn Splendor," (16mm.) by Leon Gagne; and "Our Billy," (16mm.) by president Charles D. Hudson.

Nominating committee for selection of 1946 officers of the club was appointed, and members were informed of plans for December meeting on the 18th which will be a dinner session to celebrate the holidays.

Metropolitan

"Sound For the Amateur Movie Maker," a 15-minute illustrated lecture by J. C. Vogel, highlighted the November 15th meeting of Metropolitan Motion Picture Club, held at Hotel Pennsylvania, New York City. Film program of the evening included: "Butterflies on Parade," by Dr. R. A. Albray; "Call of the Lonely Woods," by Warren S. Doremus; and "Christmas At Our House," loaned by Mrs. Olaf N. Olsen of St. Paul, Minn.

Metropolitan is conducting a novice contest, with entries closing Jan. 2, 1946. Films will be judged at the January meeting by the full membership.

Amateur M. P. Club, St. Louis

Regular meeting of Amateur Motion Picture Club of St. Louis was held at the Hotel Roosevelt on Nov. 13th, at which interesting program was screened. Subjects presented included: "Random Recollections," by George A. Valentine of Glenbrook, Conn.; "Little Genius," by Mrs. Merle Williams of Los Angeles; "Riches From the Sea," by T. J. Courtney of Halifax; "A Missouri Farm in the Fall," by Ben Betts; and "An Evening with the State Guard," by Raymond Halbruegger. Next meeting will be held on Dec. 11th.

La Casa Club

La Casa Movie Club of Alhambra, California, held its regular monthly meeting Nov. 19 in the Y.M.C.A. Building, attracting the usual large attendance of more than 200.

Program comprised: "Island of the Pacific," (8mm) by L. B. Reed, just returned from duty with the Navy in the Central Pacific area; "Western Scenes," (16mm) by C. L. Wachholz; "Southern California Scenes," (35mm) by William F. Axtman; "Our Anniversary," (16mm) by R. A. Battles; and "Pre-War Germany" and "Wyoming Herford Cattle Ranch," two 16mm. reels presented by Mrs. Mildred Zimmerman, secretary of the Los Angeles Cinema Club.

New York 8mm.

Program of the Nov. 19 meeting of New York 8 mm. Club, held at Pennsylvania hotel, included "We Dude It" by March McGregor; and Fred Murman's "The Hard Way" and "Looking Back at the World of Tomorrow."
Biggest movie-making news in four years...

CINÉ-KODAK FILM IS COMING!

CINÉ-KODAK FILMS . . . Full-color Kodachrome and black-and-white . . . magazine and roll . . . 8mm. and 16mm.

Your dealer may not have all the Ciné-Kodak Film you want—first time you see him. But more and more is being distributed every week . . . in all the familiar types you see on this page.

That's the biggest movie-making news in four years!

There's little need to tell you about Ciné-Kodak Films and good movie making. Since 1923 the two have been synonymous.

And all good movie makers are alert to the many picture opportunities of the season. Stirring shots of winter's fast-moving outdoor activities. In-the-home shots of the first truly merry Christmas in five years. There's a lot to catch up with—in full-color Kodachrome or brilliant black-and-white—and you can't begin too soon.

Get out your movie camera. Start—now—to make up for lost time . . . and lost movies.

(Some Ciné-Kodak Film will come in the familiar prewar cartons . . . some, in the new-style cartons you see here—yet all will be dated on the outside for your protection.) Eastman Kodak Co., Rochester 4, N. Y.
Aces of the Camera

(Continued from Page 415)

Laboratory that he first became interested in photography, and he was well grounded in its fundamentals by Williams, a man Fulton considers one of the real geniuses in this field.

Fulton has come a long way since then, and has contributed much that is valuable to what is now known as Process Photography or Special Photographic Effects, but was then termed "trick" work.

Recently, when Goldwyn was making the Danny Kaye picture, "Wonder Man," he borrowed Fulton to handle the highly intricate special photographic effects. So pleased was the producer at the results that he made Fulton a very attractive offer which was accepted.

As head of Goldwyn's Process Photographic Department, Fulton anticipates a happy association with Goldwyn. For one thing, the producer spares no expense on film photography. He believes the object is to turn out an excellent product without pinching budgets. If the picture is good, it can't avoid making money, is Goldwyn's sound reasoning. Fulton likes the way Goldwyn operates; in addition, he has the prospect of eventually directing his own films.

For years that has been his ambition. He feels it is the natural outlet for the cameraman, for who knows better than he what good picture-making requires? Working with top-flight directors has given Fulton an understanding and knowledge of first-rate directing. He believes he is well equipped for a directorial venture.

Success, thinks Fulton, is more than just making a lot of money, though that may be part of it. Success, as he sees it, is the satisfaction of realizing your ambition, doing what you've long planned.

It's a funny thing, but Fulton never feels permanently entrenched, no matter where he is, or what he's doing.

To him, there's something transitory about everything. His attitude is always "What next?" Perhaps his work heightens and accentuates that feeling, because process photography is never dull. No one situation is ever handled exactly the same way. It's the new frontier he's interested in. And flying is modern. Asks Fulton, "Why shouldn't we take advantage of the newer inventions? These things work to our advantage—why live in yesterday?"

He golfs a little, and fishes, too. Has flown to distant places to fish: Jackson Hole, Wyoming, various spots in Mexico. However, he admits it's not the fishing as sport that takes him on those jaunts—but the excuse to be "going somewhere else all the time, and fishing offers the perfect alibi. If the fish don't nibble, then Fulton is off and away to a spot where they do; and that proves his point, he thinks, because a real fisherman wouldn't give up like that!

It's the same when he's on location. It's probably saving him a great deal of money by hopping off in his plane and seeking—and finding—good location sites. Often, he's left the studio at four or five in the afternoon, flown several hundred miles, found just what was needed, then returned, with only six hours to spare. Once he flew to the High Sierras and was back next day. That same trip, by train and automobile, would probably have taken weeks. But Fulton has found that most people do not appreciate his flying enthusiasm. He can't understand why, for to him, it's the only sensible way to travel and do business.

Fulton has never been able to interest his wife in flying—she'd much rather stay on the ground! The Fultons have two children, a boy and a girl. No geniuses in the family, just normal brats, laughs Fulton. However, knowing the Fulton family background, you never can tell! There was a fellow named Robert Fulton in the family back a little over a hundred years, then there's Fitch Fulton the artist, several other artists, musicians, and men of note. Even John's grandfather had a certain contact with Hollywood: he was a Nebraska doctor, and can be credited with bringing into the world two babies who later grew up to become famous movie stars—Harold Lloyd and Robert Taylor. By coincidence, Fulton is now working on a picture with Harold Lloyd.

John Fulton manages very nicely to combine his wanderlust with good, sound, business sense. He's a son of Mexico, and likes to travel there. Mean- time, for the past two years, he's been part owner of a Sculptured Ceramics plant located at Cuernavaca, near Mexico City. Sixty to seventy persons are regularly employed, and they can't make those attractive little figurines fast enough to furnish the U. S. market. In fact, they're kept busy supplying Mexico.

Fulton would some day like to make pictures in Mexico; he's full of ideas about stories and locales. He thinks the wealth of wealth of Mexico is just spoiling to be turned into first-rate pictures. Too, he likes the people, and for a couple of stories he has in mind, he'd have an all-Mexican cast.

Who knows, perhaps some day before too long, he'll get his wish. When he turns to it, John Fulton should be one of our best directors. And, even though pictures aren't pyramids, built for the ages, as long as there are men like John Fulton helping to make motion pictures, the world can always be assured of having darned good entertainment. And that's not bad, either!
The tremendous increase in the use of microfilm and motion pictures in modern business offers the owner of Houston Film Processing equipment a tailor-made opportunity right in his own community.

Department stores and banks use microfilm for copying, posting and recording. Corporations use motion pictures, both 16 mm. and 35 mm. for sales and training programs. These and many other users of microfilm and motion pictures need on-the-spot processing. So do studios and photographic supply stores. In fact, you can probably name a score or more prospects right in your community.

This field is wide open. It's profitable—it's permanent. And Houston equipment can help you capitalize on it.

Houston equipment offers fast, complete and fully automatic film processing. Machines are precision-built and completely self-contained. No extra equipment needed. Write for illustrated folders and prices.
MOVIE SONG FEST
By JAMES R. OSWALD

If you want to liven up your next home movie program, surprise your audience by including a reel in which they may have an active part, a "community sing." Audience participant programs are ever popular, and present no major problem in filming or synchronizing with music. Musical accompaniment is furnished either by phonograph records, or if a member of your group plays a musical instrument, so much the better.

Elaborateness of the song reel ranges from simple title cards shot entirely on a titler, to actual motion picture backgrounds, over which the wording is superimposed. In the latter case, the printing only is photographed on the titling device, it being then double-exposed over the background scenes by running the film through the camera a second time.

After the desired song has been selected, it is "broken down" at appropriate places and the title cards set up. In order to synchronize properly with the music, all that is required is that the recording be played over several times, or the accompanist do likewise, as the title cards are being filmed. In this way it's an easy matter to have every scene length timed properly and, in projection, this synchronization should be maintained. Although it is preferable to splice the completed song trailer on the end of the concluding reel of the program, if desired to be used separately, it is a good idea to splice a blank leader of sufficient length on the beginning to allow picture and music to "get on the beam" while screening.

Filmosound Releases Four Color Travel Reels of India

Bell & Howell Filmosound library is currently releasing four 16 mm. color travel reels of India, all produced by Ambalal J. Patel, head of Educational Films of India.

"Dance Revival" carries soundtrack of native music by R. Bhatodekar and narration by William F. Kruse, and is released in both color and monochrome. Other subjects in the group include, "Mysore," "Baroda," and "Eclipse Stakes at Bombay." Films are available from Filmosound for either rental or outright purchase.

New Filmosound Library Features Announced

GHOST CATCHERS
(Universal)
No. 2568—7 reels
Utterly unpredictable combination of haunted house and musical nonsense, with a "Topper" technique and a Southern accent. Played by the champion zanies of the modern theater and a star-studded cast. (Olsen & Johnson, Gloria Jean, Leo Carrillo, Morton Downey, Andy Devine, Lon Chaney, Martha O'Drisell.) Available from December 20, 1945, for approved non-theatrical audiences.

THIS IS THE LIFE
(Universal)
No. 2567—9 reels
Overnight when Angela became eighteen, she tried to put her childhood twenty-five years behind her. A "crush" on an older hero is cured nicely, because this is a nice picture about truly nice people. Pleasant music, fun, romance. (Donald O'Connor, Susanna Foster, Peggy Ryan, Louise Allbritton, Patric Knowles.) Available from December 2, 1945, for approved non-theatrical audiences.

SECRETS OF THE SEA
No. 5845—10 min.
The fantastic life of the sea revealed by collection by dredge and tow nets. The complete life history of a swimming sea slug, the Nudibranch. (Produced in Aust.)
Your Animatophone — home from the fighting and production fronts with the honors of war — is now again available.

Ever increasing production and plant expansion is endeavoring to meet the tremendous demands of schools, churches, industry and homes — in this new era of better teaching, training, selling and entertainment, through 16mm sound motion pictures. Animatophones are being delivered according to date sequence.

Get in line by ordering yours now. Victor Cine Cameras will soon return to serve discriminating movie makers.
NOT "TOMORROW"--

THE New MAURER 16-MM PROFESSIONAL CAMERA AND SOUND RECORDING SYSTEM

PRODUCERS who have long awaited some post-war "Tomorrow" for improved 16-mm equipment need wait no longer. Important technical advancements bringing simplified operation and superior results distinguish the new Maurer Professional Camera and new Maurer Sound Recording System. And they can be ordered today.

Although designed to operate independently, these two new Maurer instruments when used together will do a superlative job in 16-mm motion picture and sound production. Having a common origin of technical skill and precision construction, it is natural that each of these new Maurer products should complement the work of the other and give you an excellence of picture and sound production hardly obtainable with instruments of different "parentage." Moreover, they achieve their superior results at substantial savings of time, trouble and money.

Better investigate right now. For full details, including specifications and deliveries, address Dept. C-12.

Soviet Documentary Production

By Dagmar Stein

[Editor's Note: The following article was received by radiogram from Moscow, and is a Soviet-approved report.]

Documentaries are among the best Soviet films today; their production rising steadily throughout the war and now almost equal total output of feature films. There are many studios in the Soviet Union working on feature films, but all documentaries are produced by the Moscow central documentary film studio.

Besides getting out newsreels, the latter studio also produces short films dealing with problems of immediate general interest, and full length documentaries. A special branch of the studio is devoted to the production of a children's newsreel called "Pioneer."

During the war, many outstanding films came out of Moscow Central studio. Peter Kopalin was awarded the Stalin prize for his "Defeat of the Germans near Moscow." Recently, with Pera Atashcheva, Kopalin completed a film on Czechoslovakia.

Another documentary, which showed the heroism of the Russian people via the screen, was Poselski's "Battle of Stalingrad." Going westward with the Russian army, producers Gikov and Stepanova depicted another great victory in "Battle of Orel"; while in his "Berlin," Reisman presented to the world the final defeat of the Germans.

Originally documentary film producers Kopalin, Poselski, Varlanov and others were joined in the difficult and hazardous task of cinematically portraying the history of the war by producers of feature films. Outstanding among these are Yutkievitch, producer of "Liberated France"; Reisman, author of "Berlin, Finland"; and Zarhki, who—with Kopalin—is now working on a film about the victory over Japan.

Head of the studio, or Kinochronika, as it is called in Russia, is another film producer, Gerasimov. His deputy and chief editor is the well-known script writer, Vladimiritch Bolshintov, author of "Great Citizen," film based on the life of Kirov Emanuel.

The man whom the general Soviet public always identifies with the studio is cameraman-producer Karmen. He covered all war fronts with his camera, including Abyssinia, Spain and China. Recently his name reappeared on the screen introducing an interesting short on Albania.

Now that the war is over, there are no signs at Moscow central studio pointing to a slowdown in activities. Future
G.E. Develops Miniature Flash Tube

Most startling application of the G-E repeating flash tube to date is incorporated in a new fool-proof automatic camera, developed by the Army's Signal Corps for the Surgeon General's office. The device is designed to take extremely close-up photos—either in color or black and white—with microscopic accuracy. It also can take equally accurate photos up to distances of 12 feet.

Equipped with a new G-E flash tube, the Signal Corps camera will doubtless find many applications in postwar industrial and commercial fields, according to Ed Noel of General Electric. Herefore, he pointed out, only an expert photographer using "tricky" equipment could take satisfactory extremely close-up pictures, in color or in black and white. With the new flash-tube-equipped camera, a mere novice need only plug the extension cord of the new camera and its auxiliary equipment into an ordinary light socket, frame his subject in the camera's view finder . . . then press a button.

The new G-E flash tube, a very small repeating flash tube, heart of the new automatic camera perfected by the Army's Signal Corps. The tube, made of quartz, and its doughnut-shaped reflector were developed in the Nela Park laboratories of General Electric, Cleveland, Ohio.

Here is the new circular shaped G-E repeating flash tube, heart of the new automatic camera perfected by the Army's Signal Corps. The tube, made of quartz, and its doughnut-shaped reflector were developed in the Nela Park laboratories of General Electric, Cleveland, Ohio.

During the War—E. M. BERNDT CORP.
produced sound-on-film recording equipment that went to the Armed services.

NOW—
We hope to furnish the same high quality and service to our peace-time customers.

Auricon division
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5515 SUNSET • HOLLYWOOD 28, CAL.
MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

COMPLETE . . . B&H Filmotion Editors

16mm. The new B&H Filmotion Editor, finest that money can buy, draws the film through a scratch-proof channel, casts motion pictures brightly on a \( \frac{3}{4} \times \frac{3}{4} \) -in. ground glass screen, recessed for easy viewing. Framing and focusing controls. Complete with Viewer, Model 136 Splicer, and two Heavy-Duty Rewinds. Parts available separately.

8mm. The same Editor as described above . . . with film channel and optical system designed for 8mm. film. Image on viewing screen is \( 2\frac{1}{4} \times 1\frac{3}{4} \) in. As in the 16mm. Filmotion Editor, you see your films as actual miniature movies. Spots cutting points easily and quickly. Complete with Viewer, Model 136 Splicer, two Rewinds on extension arms. Viewer can be purchased separately.

Heavy-Duty Rewinds
Attach rigidly to each side of Splicer. Take 16mm. reels up to 2000 feet. Geared for 2 speeds or "free wheeling."

SEE YOUR FILMO DEALER NOW
B&H editing equipment is available now at your dealer's . . . or he can get it promptly. See him, or write Bell & Howell Company, 7148 McCormick Road, Chicago 45.
Make sure of Christmas pictures

Use the New, Improved G-E Exposure Meter


General Electric Company
Schenectady 5, N. Y.

Get a new G-E ... 3 meters in one!

Type DW-58

$23.75

Federal tax included

Use the New, Improved G-E Exposure Meter

Current Assignments of A.S.C. Members

As this issue of American Cinematographer goes to press, A.S.C. Directors of Photography are assigned to the following feature productions:

Columbia Studios
Rudy Mate, "Gilda," starring Rita Hayworth and Glenn Ford.
George Meehan, "Smoky River Serenade.

Metro-Goldwyn-Mayer
Harry Stradling, "Holiday in Mexico," (Technicolor), starring Walter Pidgeon, Ilona Massey, Jane Powell.
Charles Rosher, "The Yearling," (Technicolor), with Gregory Peck and Jane Wyman.
John W. Boyle, "Star From Heaven," (Cinecolor).
Robert Surtees, "No Leaf, No Love.
Hal Rosson, "Three Wise Fools," with Margaret O'Brien, Lionel Barrymore, Lewis Stone, Edward Arnold.

Ira Morgan, "High School Kids."

Paramount
Lionel Lindon, "Mondivier Beaumarchais" starring Bob Hope.
Stuart Thompson, "Ladies Man," starring Eddie Bracken.

RKO
Harry Wild, "Till the End of Time," with Dorothy McGuire.
Milton Krasner, "Thanks God, I'll Take It From Here," starring Claudette Colbert and John Wayne.
Ted Tetzlaff, "Notorious," starring Cary Grant and Ingrid Bergman.

Republic

20th Century-Fox
Harry Jackson, "Johnny Comes Marching Home," with Martha Stewart and Richard Crane.
Arthur Miller, "Anna and the King of Siam," starring Irene Dunne and Rex Harrison.
Roy Hunt, "Black Beauty."

United Artists
James Van Trees, "Adventure in Casablanca," starring the Marx Brothers.

Universal
Edward Cronjager, "Canyon Passage," (Technicolor) starring Dana Andrews and Brian Donlevy.
Woody Bredell, "Tangler," starring Mario Montez, Robert Paige, Sabu.

Warner Brothers
Ernie Haller, "The Verdict," starring Sydney Greenstreet and Peter Lorre.
Wesley Anderson, "The Beast With Five Fingers."
Howe Answers Critic

(Continued from Page 419)

composition and lighting to one end; expressing the story in terms of the camera. I believe in a minimum of camera movement and angles that do not violate sense but contribute intrinsically to the dramatic effect desired. 'Unseen' photography does not at all mean pedestrian photography; in its own terms it should express emotion, and that emotion according to the story may be light, somber, sinister, dramatic, tragic, quiet. Within this frame there may be 'terrific shots,' but there should be none outside it for mere effect. Photography must be integrated with the story.

"The cameraman confers with the director on: (a) composition of shots for action, since some scenes require definite composition for their best dramatic effect, while others require the utmost fluidity, or freedom from any strict definition or stylization; (b) atmosphere; (c) the dramatic mood of the story, which they plan together from beginning to end; (d) the action of the piece. Because of the mechanics of the camera and the optical illusion of the lenses, the cameraman may often suggest changes of action which will better attain the effect desired by the director. Many times, a director is confronted with specific problems of accomplishing action. The cameraman may propose use of the camera unknown to the director which will achieve the same realism.

"Here is an obvious example: an actor was required in the story to slap a woman brutally, refused to do this through the many takes the director would like to make. The woman, furthermore, could not have endured it, her face having already swollen after the first action. The scene was a very important one. Omission was not possible, since playing it down destroyed the dramatic effect the director wanted. By use of the camera, I was able to show how this action could be made to appear on the screen in all its reality, without the actuality of blows. These things may amount to no more than ingenuity and a technical trick, but they carry over into the dramatic quality of a scene. There are many studio workers behind the scenes whose contributions toward the excellence of a motion picture never receive credit because outsiders have no way of discovering where one leaves off and another begins."

Eisenhower Joins Telefilm

Lowell Eisenhower has been appointed director of animation for Telefilm Studios. Recently discharged from the Marine Corps where he supervised production of training films, Eisenhower has background of many years experience as an animation expert in various eastern studios.

American Red Cross Film Program

Joe Weil, head of the motion picture section of the American Red Cross, is currently in Europe gathering factual motion pictures of Red Cross operations with the American armies of occupation and emergency relief to civilians. A portion of the film gathered will be incorporated in a forthcoming March of Time documentary for the Red Cross, while other footage will be used in the Red Cross newsreel subjects. Weil visits France, Belgium, Holland, Germany, Austria, Greece and Yugoslavia before returning to New York headquarters.

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A MESSAGE FROM

Goerz American

Now that peace has finally come to the world, we, like many other manufacturers, are occupied with plans of replenishing our war-depleted stock of lenses suitable for professional and amateur photography.

Because of the great many types and such a large number of focal lengths of each type, which will doubtless be in demand, the build-up of our stock will naturally take time.

Fortunately we are not facing any reconversion problems, because during the war years we were exclusively engaged in producing photo-lenses for our Government.

In the near future there will be announcements in the various photographic magazines regarding our progress in making available again through photo-supply stores

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We wish to take this occasion to thank those, who have wanted to buy our lenses during the past war years, for their interest shown in our product. Every effort will be made to enable them to obtain our lenses soon in the photographic market.

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**Academy Award Winners** 1945: 114.
Academy War Film Library, The: 261.
Aces of the Camera—
- Elmer Dyer, ASC: 42.
- John P. Fulton, ASC: 226.
- Glenn Kershner, ASC: 370.
- Ira Morgan, ASC: 233.
- James J. Seely, ASC: 79.
- Archie Stoak, ASC: 45.
Adel Color Camera and Surgiscope, The: 152.
Aerial: 42; 43; 86; 245.
Aerial Aces of the Camera—
- Major Elmer Dyer, ASC: 42-43.
Among the Movie Clubs: 22; 58; 92; 128; 164.
- 200; 234; 272; 308; 344; 386.
An All-Friction Drive for Developing Machines: 122.
Artistic Titling Tips: 24, 60.
Bell—"Requirements of Educational Film Presentation": 52; 87.
Berko, Capt. F.—"Films in India": 263.
Black—
- "Lucite and Lantz Came Through for the Navy": 342.
Bogue—
- "The Production of Scientific Films for Biological and Medical Purposes": 329; 342.
Bosco—
- "Aces of the Camera": 7; 124.
- "An All-Friction Drive for Developing Machines": 122.
- "The Adel Color Camera and Surgiscope": 152.
- "Harman Unveils New Animation Unit": 150.
Brownings—
- "A Crumbled Movie Empire": 282.
- "Cradle of American Cinema": 296.
- "Eugene Augustin Lauste, Inventor—Sound Movies": 10.
- "Julien Bryan, Film Reporter": 118.
- "The Documentary Film": 44.
- "The Museum of Modern Art Film Library": 372.
- "University Film Courses": 156.
- "Where Will You Fit in Television": 80.
Briqonsi—"Re-recording 35mm. Entertainment Films for 16mm. Armed Force Release": 323.
- "Bringing the Bible to the Screen": 8.
Burry—"Mark Hawley Urges Audio Visual Programs for Schools": 403.
C
cadour—"Formation and Progress of Amateur Movie Clubs": 382.
Camera Versus the Microphone in Training Film Production, The: 342.
Cameras: 152; 193; 335.
Cardiff—"Filming Western Approaches": 116.
Cardie—"Aces of the Camera—Glenn R. Kershner, ASC": 370.
"Unusual Picture Are Right Where You Are": 420.
Cine-Chronized Sound on Wire for Amateurs, A: 300.
Cinematographer Speaks, A: 120.
Close-Up King: 300.
Commercial Processing of 16mm, Variable Area: 56.
"Cost Goes to War": 84.
Conway—"Cine-Chronized Sound on Wire for Amateurs": 390.
Crumbled Movie Empire: 282.
Crumbled Movie Empire: 262.
D
Developing: 122.
Device With Which to Film a Fly's Eye, A: 226.
Director: 226.
Director Who Recognizes the Importance of Cinematographers, A: 224.
Educational: 52; 87; 403.
Effect Facts to the Front: 46.
Fades, Lap-Dissolves and Other Tricks: 266.
Filming "Western Approaches": 116.
Films for 16mm. Armed Force Release": 232.
"I'll Be a Photographic Illustrator": 232.
Formation and Progress of Amateur Movie Clubs: 382.
"Guest That Went to War, The": 335.
F
F Hall—
- "Academy Award Winners 1945": 114.
- "Aces of the Camera": 79; 156; 187; 223; 259; 331.
- "Aerial Aces of the Camera": 42-43.
- "Harman Unveils New Animation Unit": 190.
- "Hartford—"Telefilming Horse Races": 334.
- "History and Origin of 16mm.": 376.
- "Hollywood's Smallest Studio": 333.
- "Home Movie Projectors, Era of 1912": 540.
- "Hove, James Wong, A.S.C., "Replies to Comment on Cameramen": 410.
- "Hubbel—"Home Movie Projectors, Era of 1912": 540.
- "Hove, James Wong, A.S.C., "Replies to Comment on Cameramen": 410.
- "Hubbel—"Television Camera, The": 150.
- "Ira Morgan, ASC": 223.
- "Glenn Kershner ASC": 370.
- "Gutap That Went to War, The": 335.
- "Great Gold Elephant": 282.
- "Great Gold Elephant": 282.
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- "Great Gold Elephant": 282.
- "Great Gold Elephant": 282.
- "Great Gold Elephant": 282.
- "Great Gold Elephant": 282.
Membership Roll of the American Society of Cinematographers: 195; 374.
Men Behind the Combat Cameramen. The: 322
Method of Film Conservation in Motion Picture Photographing, Processing and Reproduction: 182.
Millet—"Transitions": 94.
Modernizing Your Old Projector: 166.
Moultrie—"New Film Script Technique for Amateurs": 126.
"Special Effects for the Amateur": 388.
Movement in Movies: 194.
Movie Song Fest: 432.
Napolitani—"Modernizing Your Old Projector": 166.
New Film Script Technique for Amateurs: 126.
New Horizons for Documentary Film: 418.
No 16mm. Projector Surplus: 440.
Oswald—"Making the Most of the Film Situation": 310.
"Shooting Tulip Time in Holland": 238.
"Take Your Cine Camera to the Beach": 274.
"Movie Song Fest": 432.
Palmier—"Fades, Lap-Dissolves and Other Tricks": 266.
"Wipes—How to Use Them": 228.
Peelee—"Film Conservation": 188.
Peacetime Engineering Outlook: 384.
Photographing Tokyo From the Air: 86.
Pictorial Cinematography: 269.
Post-War Motion Pictures: 160.
Practical Cure for Convergent Verticals, A: 240.
Pratt—"Pictorial Cinematography": 260.
Production Designing: 82.
Production of Scientific Films for Biological and Medical Purposes: 295; 342.
Projection: 166.
Pyle—"Industrial Film Review": 198.
Requirements of Education Film Presentation: 52; 87.
Review of the Film News: 222; 258; 294; 330.
Ruckers—"A Device With Which to Film a Fly's Eye": 225.
Say It With Titles: 24; 60; 390.
Smith, Leonard, ASC—"25 Years of Service": 367.
Smith Heads ASC for Third Year: 150.
Sound and the Amateur: 304.
Soviet Documentary Film Production: 434.
Special Effects: 12; 94; 194; 228; 240; 266; 388.
Stein, Dagmar, ASC—"Soviet Documentary Film Production": 434.
Tailor Made Fades and Laps With a Cine Special: 12.
Take Your Cine Camera to the Beach: 274.
Technique of the Documentary Film: 378.
Telefilming Horse Races: 432.
Television: 80; 158; 193.
Television and Motion Pictures: 158.
Through the Editor's Finder: 20; 56; 88; 234; 275; 302; 335; 359.
Tinting: 24; 60; 390.
Transition: 94.
Travel: 84; 86; 154; 238; 265.
25 Years of Progress: 369.
25 Years of Service: 367.
University Film Courses: 156.
Unusual Pictures Are Where You Are: 129.
Victor, A. F.—"The History and Origin of 16 Millimeter": 176.
Weather, Biggest Problem of Aerial Photographers: 245.
Weston—"Kine-Micrography in Biological Research": 192.
What ASC Members Are Now Filming: 30.
Where Will You Fit in Television?: 90.
"Wipes": How to Make Them: 388.
Wyckoff, Alvin, ASC—"Bringing the Bible to the Screen": 8.

Telefilm Processes
Planet Pictures, which has launched production of a series of 16 mm. sound and color entertainment features for general release, has completed arrangements to utilize technical facilities and personnel of Telefilm Studios in Hollywood. Planet, headed by Richard Talmage and Harvey Perry—both of whom have had experience in regular studio production—has lined up a schedule calling for 12 16-mm. features annually.

Molin Promoted by DuPont
Karl T. Molin has been appointed director of sales for Photo Products Department of the DuPont Company, succeeding the late L. L. Allison. Molin was promoted from the post of assistant manager of the Defender Division, with Leonard R. Moore, control manager of Defender, succeeding Molin. C. Clifford Lyons takes over as control manager.
There'll Be No 16mm Projector Surplus

For many months past amateur and semi-professional cinematographers have enthusiastically been looking forward to early release of 16 mm. silent and sound projectors and other photographic equipment by the Surplus Property Board.

Let's face the facts. There will be little usable equipment and apparatus now or later in the line of 16 mm. projectors. Machines that might eventually be offered to the public will—in practically every instance—be declared by various government agencies to be discards and no longer in shape to be operated efficiently without extensive overhauling and rebuilding that might easily cost more than new equipment, and at best deliver haphazard service.

It is true that the armed services—since 1941—have acquired thousands of 16 mm. silent and sound projectors for visual instruction, and these have already been allocated throughout this country, and for the entertainment of army, navy, air force, marine and other personnel stationed in all parts of the world during the war. There was a wild scramble in 1941 and 1942 by the army, navy, etc., to acquire the necessary large number of 16 mm. projectors—all types and models were obtained from every conceivable source. Projector manufacturers stepped out to the maximum to meet demands. Added to this supply were second-hand machines acquired from private individuals, camera stores, etc.

But many of these projectors, not built for the hard and tough usage to which they were subjected behind the battle lines on various fronts, soon were out of service. Many instances of inept mechanics in the field were able to keep performances going by taking parts from one projector for repair of another. Eventually, however, most of the early makeshift projectors were replaced by new equipment from the manufacturers, and the former were tossed into the discard.

However, the new projectors also were subjected to greater than normal wear and tear through constant use for months on end under toughest projector conditions in all parts of the world. That the 16 mm. projectors held up as well as they did in the frigid Aleutians, the humid South Pacific, and the dusty African desert, is a tribute to the American manufacturers who designed and built the equipment.

But now the armed forces are being gradually returned to this country, and by all appearances, there should be a supply of surplus projectors available for public purchase. The expectant bargain-hunters will be disappointed.

Although the war is over, the army, navy and other services intend to hold on to all of the projectors that are in topnotch shape for the post-war showings of instructional and training films—in addition to entertainment features—to the service men still stationed in camps in this country. The number of such projectors is reported to be only a rather small fraction of the total acquired during the past four years, and may not even be sufficient for the visual training and instruction programs being expanded for our peacetime forces.

What few usable 16 mm. projectors will eventually become available for re-sale will have been subjected to which they were subjected behind the battle lines on various fronts, soon were out of service. In many instances of inept mechanics in the field were able to keep performances going by taking parts from one projector for repair of another. Eventually, however, most of the early makeshift projectors were replaced by new equipment from the manufacturers, and the former were tossed into the discard.

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Soviet Documentary Productions

(Continued from Page 434)

plans are even greater than the past accomplishments. By the end of the year, at least 10 to 15 films will be completed.

Outstanding among the new releases will be a film about Soviet children in wartime, "Story of Our Children," by Ovanesova, who has produced the children's newscast for many years. Producers Kiselov and Belayev are working on an epic film detailing the war contributions of Soviet villages and collective farms; and it will be issued under the title of "Victors." Central studio cameramen are currently shooting material for a group of films on the Saratov-Moscow gas pipeline, Austria, Bulgaria and Hungary.

Varlanov plans to complete a film showing the heroic struggle of the Yugoslav people. Picture will be compiled and edited from extensive footage shot by Soviet cameramen who accompanied Marshal Tito's armies.

Although a large number of the forthcoming documentaries will be devoted to foreign countries, the republics of the Soviet Union are not forgotten in the program. It is planned to wind up the current year's production with films on Crimea; also the war effort of the Central Asiatic republics—Tajikistan and Etkaistan.

Central documentary studio is closely following new technical developments in its effort to improve and perfect output. At the moment, attention is being directed towards a new medium—color—which has caught the imagination of Soviet film workers and engineers. We may expect, in the near future, new documentaries brightened up with color. This "is the happiest epoch in cinematography," as one Soviet producer calls it.

Dutch Theatres Resume

Resumption of showings of American pictures in the theatres of Holland after nearly five years, is proving a bonanza for exhibitors of that country, according to report of the Netherlands Information Bureau. It is disclosed that 26 motion picture theatres and 10 per cent of seating capacity were completely destroyed; damage to extent of $4,500,000 was done; and the Germans stole $750,000 worth of sound and projection equipment.

Current American features being shown in Netherlands theatres include: "Tales of Manhattan," "It's a Date," and "Theodora Goes Wild."
PSA Installs New Officers

Newly elected officers of the Photographic Society of America were installed at recent annual meeting of the Society. Charles B. Phelps, jr., EPSA, of Grosse Pointe, Mich., functions as president; with other officers comprising: first vice president, Stuart M. Chambers of St. Louis; second vice president, John G. Mulder of Rochester; third vice president, Victor H. Scales of New York; secretary, Mrs. Anne Pliger Dewey of Chicago; treasurer, Charles Heller of Philadelphia; executive secretary, Mrs. Dorothy L. Barto of Philadelphia; and past president, John S. Rowan of Baltimore.

Directors include: Robert A. Barrows, Mrs. Rowena Fruth, Fred S. Herrington, Glen E. Matthews, Edward C. Crockett, Mrs. Helene Sanders, Lloyd E. Varden, and Jack Wright. Division chairmen: Camera Club, Cecil B. Atwater; Color, H. J. Johnson; Historical, L. L. Vernon; D. Tatem; Nature, Mark Mooney, jr.; Pictorial, Stuyvesant Peabody; Press, Robert M. Beer; and Technical, Frank E. Carlson.

Optical Glass Substitute

A method for manufacturing lenses, prisms and other optical elements of plastic instead of the customary glass, far more precise than ever before achieved in plastic, was developed for the war by Polaroid Corp. It was disclosed in a joint announcement by the Office of Scientific Research and Development, the War Department and the Navy Department.

The new plastic optics were used in telescopes, binocular attachments, an experimental aerial camera lens and a Schmidt type lens system ten times more efficient than a fast f/2 camera lens. The Schmidt system required a lens of a peculiar shape which could not be produced in the required thousands by any other manufacturing methods then available.

An outstanding advantage of the Polaroid mass production technique for plastic optical elements is the complete elimination of lengthy grinding and polishing operations required for all other high precision optical materials.

New Horizons for Documentary Film

(Continued from Page 418)

fleet our modern social scene. It is a style that embodies the essence of reality. And so we may say that the documentary film is at last coming into its own. It is out of the experimental stage and has passed its tests with flying colors. We can look forward to seeing more films of this type in every field where contact with the public is vital. It is an active medium for understanding between man and man, as well as between nation and nation. New horizons are opening for the documentary. It will do much toward making our future world happier and more secure.

Race Tracks Negotiate for Telefilm

Filming of horse races at midwest and eastern tracks is indicated by current conferences of Talcott Seaver and Buddon Baker of Telefilm with officials of racing strips in New York and Kentucky.

Initial filming of complete races was installed at Hollywood Park, Inglewood, during latter's recent meeting, with operations in charge of Telefilm technicians and engineers. Cameramen operating 16 mm. cameras were perched on six towers spaced around the mile track so that each shot a sequence of a race as the horses came within camera range. Developed within a few minutes, the film gave the judges a complete running to check any infractions by jockeys during the event. Enthusiasm of Hollywood Park officials for the installation resulted in inquiries to Telefilm from other tracks around the country.
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Make Home Movies Part of Your Holiday Entertainment

Thousands of films are available through the Filmosound Library for rental or purchase. For home movie shows during the holidays you can choose Bible stories . . . happy cartoons for the children . . . sports and travel . . . Hollywood hits—whatever you prefer.

For full information on Filmosound Library films, see your Bell & Howell dealer, or send the coupon, today.

Now you can see the new, war-improved Bell & Howell cameras and Filmosound and silent projectors . . . the home movie equipment you have waited for so long!

Even the finest Filmo Cameras have been refined and improved, so that more than ever they are easy to carry, easy to load, easy to use with assurance that you'll get movies of professional quality.

Filmosound and silent projectors, so simple to operate that anyone can show fine movies, produce uniformly brilliant pictures without flicker or interruption. Sound reproduction is clear and free of distortion at all volume levels.

See the new B&H models—precision-built by the makers of Hollywood's preferred studio equipment.

And here's a suggestion . . . if your Bell & Howell dealer cannot fill your order before the holidays, get a Filmo Gift Certificate. No remembrance will be more appreciated.
