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... and other features

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Next Month

- A vivid and colorful story of the experiences of a cinematographer who just returned from globe trotting . . . . Telling how to handle various notions so as to make picture taking easier.

- Matching interior and exterior in color photography will be an interesting subject to those involved in this type of picture making.

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GENERAL ELECTRIC
MAZDA LAMPS
Is All This Color Ballyhoo Justifying Itself?

Some few weeks back, in a local newspaper column given to film flatter, appeared an amazing pair of paragraphs. They quoted Hal Mohr, A.S.C., then engaged in filming Green Pastures and doing a right good job of it, predicting that his was the concluding major production to be photographed in black-and-white; that all following productions were to be in color, that he and his fellow cinematographers were storing in mothballs their hard-won cinematographic arts in favor of this new chromatic medium which had bloomed overnight to dominate the Hollywood studio production schedule.

Of course, Mohr never said any such thing. Indeed, for the record, he is currently engaged in filming the famed features of the Mile, Gaynor, Bennett, Young and Simon under the guiding eyes of Darryl Zanuck. The work is in black-and-white.

But the important item is, why was such a hyperbolic statement ever composed? It reveals traits of press-agent origin. It is of a piece with sundry similar inspirations, not entirely unlike stock-selling effusions, that extoll color’s purported usurping sweep.

Reports filtering back from London expose the surprising opinion widely held there that the influence of color on Hollywood production is of magnitude comparable only to the advent of sound in its revolutionizing effect on film fabrication.

Companies are being floated, paper is peddled for public purchase, cinematographers cast wary eyes on the published impending doom. So, again slipping into the guise of an Inquiring Reporter, we calmly probe about for facts and figures that correctly illumine the situation.


The Motion Picture Herald, esteemed for its reliability, reports four hundred and eighty-five features projected for the coming production season by the ten largest companies. Three are in color.

Becky Sharp, a color film, was released on June 28, 1935. At this writing two other color films have been released; Trail of the Lonesome Pine on March 13, 1936 and Dancing Pirate on May 22, 1936. During this period some five hundred black-and-white films have been made and released.

It would appear, to put it gently, that black-and-white seems to be holding its own.

Twentieth Century-Fox has Ramona, in color, in its cutting rooms slated for release on October 23, 1936. Also in cutting rooms is The Garden of Allah, in color, by Selznick for United Artists release of unannounced date. Shooting is Warner Bros. God’s Country and the Woman, release date not determined.

With these three color contributions unveiled, the color scorecard by studios will read: RKO-Radio two and one each for Wanger-Paramount, Twentieth Century-Fox, Warner Bros. and Selznick-United Artists.

So far as can be ascertained from studio executives, no more color features are in any definite stage of contemplation by any of these studios, nor by Metro-Goldwyn-Mayer, Paramount, Universal, Columbia or other larger studios.

It would appear, again to put it gently, there is and will continue to be occasion for studios to utilize services of orthodox cinematographers.

Now to consider box-office reports as indication to the commercial practicability of color. Becky Sharp, as is known, was no howling financial success nor was it highly regarded as a theater attraction by exhibitors.

Trail of the Lonesome Pine, as is also known, fared much better in its tour of the trade. It was a highly successful and profitable venture. But let us pause for a moment of analysis of the factors impelling the profits; let us see to what degree color influenced the balance sheet.

In the story, Walter Wanger had a proven parcel of theater property. It had been filmed before and profitably. He used stars of box-office value. He produced the picture with eye to story, unfolding of drama and entertainment content. He instructed Director Henry Hathaway to “throw away the color.” In an interview carried by Motion Picture Herald, Wanger declared, “The goal we set at the start of production and never deviated from, was to hew to the story line and let color fall where it may.” Unusual precautions were taken to keep the color subdued and of secondary interest.

On top of this, the picture received intensive selling pressure. Story, stars and selling are axioms for picture profits.

It is difficult to see how color can be singled out for individual credit for “Pine’s” success. It seems scarcely in conformity with fact for it to be hailed as a staggering color triumph. Rather, it looms as a shrewdly-handled picture that made money—and incidentally happened to be in color.

How much, if any, color contributed to the box-office pull can not be estimated with any degree of accuracy. Some exhibitors say it offered nothing. Others are non-committal. This point simmers down to — Did color alone bring in sufficient dollars to offset the added cost of putting it in the picture? Would not the picture have played to equal money in black-and-white? And returned equal net profits?

Dancing Pirate didn’t do so well in a cruelly critical world. It is reported, as the saying goes, a flop. It is reputed to have cost someone a pretty penny. One exhibitor comments, “The producers missed fire here. In making a great picture you must have names that sell at the box office. A fairly good picture to poor business.”

The inference is plain. Color can’t carry the picture. Most evidently, story, names and production are needed to carry the burden of color.

Thus, on color’s traceable performances at the ticket window to date there can be found little to enthuse producers in the main to jump picture costs another third by calling in the involved and highly technical processes.

Continued on page 378
New

of face and head. Both the system and the materials have been proven in actual use on major-studio productions, with amazing results.

The originator of this new school of make-up is Jack Dawn, head of Metro-Goldwyn-Mayer’s makeup department. Like most make-up craftsmen, Dawn bases his work upon earlier training as an artist; but unlike most of his fellows, who approached make-up through a study of painting and pigments, Dawn is a sculptor. To him, conventional make-up technique was basically wrong. It sought to gain a three-dimensional result by two-dimensional methods. In other words, it sought to change contour by painting it over with variations of light and shade.

As Dawn says, “Suppose I have a baseball. I may paint it in any way that I wish so that it will look like a cube—and it is still a sphere. But if I turn the baseball, or move myself to a different viewpoint, the cube vanishes, and I have only a painted baseball.

“Then is the weakness of today’s so-called ‘corrective’ or shaded make-up. Our ultimate picture may be flat, but our actor’s face isn’t. And the camera and actor both move around, so that the make-up is not regarded from one fixed viewpoint. Cosmetic painting can give a smooth texture to the skin, and a photographically even coloring at all points. As far as texture and color go, such make-up is good from all angles: but while our painted highlights and shadows can give an illusion of altered contour—if viewed from certain specified angles—they cannot be expected to do so from all angles, or under all conditions.

“To illustrate: suppose we have an actor with a thin face and a receding forehead, but who should, to fit his role, have a full face and a prominent forehead. Under normal conditions, we would try to suggest this by contrasted light and shade in the make-up. To a certain extent we could subdue the cheek-bones by carefully shading them with a darker shade of make-up, and render the concave cheeks more rounded by applying a lighter shade of make-up. Careful highlighting with lighter make-up could also render the backward-sloping forehead somewhat more prominent. In a still picture, where the relation of subject and lighting is rigidly fixed, and where the camera regards the subject from but one angle, this sort of make-up can work wonders. But in a motion picture, where both subject and camera can and do move in relation to each other and to the lights, such a make-up is not nearly so effective. Let our actor simply turn his head, and the elaborate pattern of painted light and shade on his cheeks may easily be revealed for the trick it is. And while the highlighted forehead can fool the camera as long as the camera views it full-face, as soon as the head is turned to show the profile, the forehead recedes. No painting or shading can produce a cranial development which isn’t there!”

Since painting could not solve this problem, Dawn reasoned, sculpture might. The thin cheeks could be moulded into the desired roundness; the receding brow could be built out as much as necessary. On the stage, such effects have to some extent been secured by using the traditional cheek-pads, nose-putty and waxes. But the intimacy of the screen makes these tricks of little value. In a close-up, a

For thirty centuries, actors have been painting their faces. Today, we have evolved better paints, and more subtle methods of applying them; but the common concept of make-up is still a painted face. Thirty centuries of make-up had evolved nothing fundamentally new.

Within the past few months, however, this picture has been changed. A fundamentally new range of make-up materials has been evolved, based on a fundamentally new approach to the problem of make-up. This new system literally creates new contours, remodeling the actual shape
Make-up
that is
Sculpture-like

by
William Stull, A.S.C.

face built up with putty or wax is mask-like—expressionless. For successful contour-correcting screen make-up, an absolutely new material is necessary. It must be flexible, so that the natural movement of the facial muscles will move the built-on make-up into normal expressions. It should not be cracked or collapsed by ordinary rough usage, nor melted by ordinarily high temperatures. And it should provide a skin-like texture for the overlying make-up which blends it with the rest of the face.

This seems like an impossible order—but Dawn has actually developed such a material. After many years of exhaustive research, he has created a material which looks and feels like human skin, which may be used in a microscopically thin coating, or modelled half-an-inch thick, which is shock-proof, heat-proof, moisture-proof — and flexible. With it, our thin actor's cheeks can be filled out, and the receding forehead built forward so that at all angles the camera sees a full face and a high brow. Moreover, when the actor moves his expression muscles, the expression is reflected on the surface of the make-up: when he smiles, the built-up cheeks also smile—and smile naturally. When he wrinkles his forehead in thought, the artificial brow reproduces the natural wrinkles, if the "heavy's" Sunday punch lands on the forehead (or a built-up nose, for that matter), no harm is done. If the stage is hot and the temperature soars, the make-up does not melt or run, and a special sub-coating can be applied to absorb perspiration.

The first step in applying this three-dimensional make-up is to take an accurate cast of the player's head. While Dawn and his staff have worked out certain improvements in the technique of cast-making, this is done in substantially the usual manner. This cast is a microscopically accurate reproduction of the player's head and face, complete in every detail. Using this cast as a basis, everything except the final minute details of a make-up can be worked out at leisure, without having to keep the actor for hours in the make-up room. On this, too, headpieces, such as built-up foreheads, noses, and the like, can be made ahead of time. When, later, they are fitted to the actor, they must invariably prove a perfect fit.

Then-either on the cast or upon the player's actual face—Dawn or his assistants begin to model a new character. The material used for this is a special preparation, the result of Dawn's many years of research. It looks like flesh-colored dough, and it is spread on the face much as a plasterer spreads plaster on a wall. When the desired contour has been roughly approximated, Dawn models the final detail exactly as a sculptor would finish a clay figure.

Where only a thin coating is required, the same compound, but in liquid form, is used, and may be brushed on as desired.

The result is uncanny: it looks exactly like natural skin, and even feels like it. When a normal make-up is applied over it, neither the eye nor the lens can detect any trace of artifice.

To work with this new preparation, Dawn found it necessary to evolve a completely new group of auxiliary preparations. To hold the molded headpieces in place, some

Continued on page 383
Shooting Technicolor on the Sea Bottom

NATURAL-COLOR cinematography is always interesting; so is underwater filming. And when you combine the two, you get problems—and results—that are a distinct departure from the beaten path of routine camerawork.

When Pioneer Productions sent me to Tahiti with a Technicolor unit, part of my assignment was to find out how Technicolor behaved under water. The tests we made weren't the first color scenes filmed underseas, for several of Mack Sennett's cameramen had filmed some very effective submarine scenes in bippack; but ours was the first venture in taking a modern three-color camera under water. And though the shots we made were brief, and strictly tests, they proved remarkably successful.

Of course we used a standard Technicolor three-color camera: the only modifivation made was in fitting smaller magazines, to minimize the size of the camera and its water-tight blimp. The magazines ordinarily used hold three full 1,000-ft. rolls of film, and are naturally rather bulky. With an ordinary black-and-white camera, one would simply use one of the old-type 400-ft. magazines, but as the three-color Technicolor camera is a recent development, no such magazines were available. Therefore we had built a special magazine with a capacity of 335 feet of each of the three negatives; this enabled us to divide our regular 1,000-ft. rolls into three equal, smaller loads without waste.

The water-tight camera-box was of essentially conventional design, but planned with an eye to the simplicity necessary for successful underwater camerawork. It was specially built by the Fried Camera Company, and in appearance looked not unlike any ordinary metal blimp. At the front, a generous sunshade shielded an optical-glass window over the lens. The whole rear of the camera was removable, and bolted down to form a water-tight door.

A large meter-switch and a generous focusing dial were carried on this door, and large inspection ports were provided over the focusing-scale, footage counter, etc. The finder—an ordinary Mitchell type—was carried in a separate water-tight box in the usual place on the left side of the larger box. It has the usual pivoting movement to correct for parallax, though this had to be adjusted by hand, as far the sake of simplicity, the usual refinement of interlacing finder and lens-focus was omitted. The finder calibrations were particularly large, so as to be easily read underwater.

The entire construction of the waterproof case was Duraluminum and steel, and the most important feature of the design was the provision of four large tubular hand-rolls—one on each side—at the top of the box.

The tripod was a conventional type fitted with regular Mitchell legs, and with the head enlarged and modified to serve as a free-head for the large camera-box. As most of our work was done where there was a soft sand bottom, Continued on page 379
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A.S.C. MEMBERS ON PARADE

- Don Clark, A.S.C., on his return from his vacation fishing trip in Oregon did not have time enough to drop in to tell us about the big one that got away. He was immediately assigned to Canada to start the second Quintuplet picture.

- Arthur Miller, A.S.C., last week started another picture at 20th Century Fox with Director Butler.

- Robert Pettick, A.S.C., Harry Wild, A.S.C. and Stanley Cortez, A.S.C. all made Directors of Cinematography within the past 30 days are hitting the high spots on their first productions. Pettick is shooting at Columbia studios on the Bing Crosby production; Wild is at R. K. O. lensing "The Big Game;" and Cortez is controlling photography on "Four Days Wonder" at Universal. Good luck you sprouts.

- A. S. C. Members hospitalizing were Geo. Folesey who is out and at it again at M.G.M studios and Charles Lang, Jr. who returned from his vacation to take another in the hospital—but he is also out again and returned to the Paramount lot.

- Henry Kohler, A.S.C., who was cameraman for Harold Lloyd for many years passed away this month. He was credited with being one of the first cinematographers to come to Hollywood.

- The cause of death was heart attack. Kohler was 46 years of age, a native of Chicago and a resident of Los Angeles twenty-three years. During the world war he served in the 69th infantry.

Afterwards he joined the Hal Roach Studios.

He leaves his widow Mrs. Irene Kohler, his parents, Mr. and Mrs. Conrad Kohler and a sister Mrs. Mildred Conroy.

- Henry Freulich, A.S.C., takes the floor to inform us that he is the youngest Director of Cinematography in Hollywood, even younger than William Mellor who was credited as being in the fledgling class. However, may the best man win.

- Ray Foster, A.S.C., with Warner Bros. eastern studios has been spending the past six weeks in Hollywood studying studio practice and technique as practiced by the Hollywood cinematographer. Foster claims it is the most profitable six week he has ever spent toward furthering his profession. During his stay the fine courtesy extended to him by every member of the A.S.C. in the studios has permitted him to gather information that he believes would not otherwise have been available to him. Foster returned to New York the latter part of August.

- Al Gilks, A.S.C., who recently went to England missed the California sunshine on the first session of cloudy days to hit London. Al decided to visit Ostend in Belgium in an effort to pick up a few violet rays. When he arrived there he found John Boyle, A.S.C., Ned Mann, A.S.C., and Eddie Cohen, A.S.C., attempting to find Old Man Sol. None were successful, the clouds followed Al to Ostend.

Is All This Color Ballyhoo Justifying Itself?

In some quarters it is held that the fate of Ted Garden of Allah will have much bearing on color's uncertain future. Here again it will be difficult to distinguish and isolate for evaluation the drawing power of the color content. The story is a popular one and sure-fire for filming. It has great box-office names, Marlene Dietrich and Charles Boyer. It has been superbly directed by Richard Boleslawsky. Myron Selznick has produced it in grand manner. It is being expertly exploited.

Those who have seen some of the reel's report the picture headed for sensational success, color or no. We have seen some of the stiffels; they are breathtaking in beauty. They are black-and-white.

- Is the picture as good a picture in color as it would have been in black-and-white? Can the color match in box-office lure the popular appeal of the story, of Marlene Dietrich and Charles Boyer, the majestic sweep of the production itself? Will it pay its way in surplusage of receipts? These are questions that defy answering at this moment, but they are something to think about. After all, the producer does contribute a few items to his picture, be it black-and-white or color.

- Scaling of these factors leads to the opinion that color has been balloonized by ballyhoo into seeming importance it does not possess under cold-blooded production and exhibiting conditions. The alleged rising tide of color leaves Hollywood quite unscathed!

The occasional color films—and may we always have them with us—are pleasant and interesting interludes in our production season. Practical and seasoned studio production men find many experiences in contact with budding young scientists.
But nowhere is there admissible evidence indicating that cinematography is becoming a lost art. Cinematographers hard at work to pay off the family mortgages need not necessarily take the color or propaganda too seriously. As in the Hall Mohr incident, it may be biased—for reasons of its own.

Valentine's Technique
Continued from page 372

type; new bulbs, cables, electrical paraphernalia. Light control on the set has been made orderly.

Projection rooms have been standardized with uniform throws to screens that the cinematographer may better judge finer details of his rushes.

Every facility and encouragement is laid before him. It is not to be wondered, therefore, that Valentine and his conferees at Universal are perpetrating photography comparable to the highest levels. May it be of the record that here is one producer's pronouncement that speedily materialized as advertised.

In this environment, Valentine works deftly and swiftly. Set-ups are consummated in sparse periods. Scenes seem fairly to flow into the magazine of his camera. He operates smoothly, calmly and with the soft-spoken confidence that indicates his complete mastery of the task at hand.

Few directions are voiced. His is a clockwork unit. He has installed a useful gadget on his camera. It is a twotoned French automobile horn taped on the blimp. When he is ready for the take, he squeezes it from its two musical toots. And from various directions come in silent file the director, stars and other members of the company. It's a great help, all agree.

A coodle craftsman is this Valentine. He harbors no hallucinations as to his profession. He perceives the public fancies and frankly caters to them. He is less concerned with artistic Art and more with the practical factors of showmanship. Hence his emphasis and enhancement of physical beauty.

He is the preferred portraitist of beautiful women—and their accessories, handsome men—superimposed on settings that are convincing real, artistically composed, and staunchly supporting in their complimentary relationship to his calcified characters.

Shooting Technicolor on the Sea Bottom
Continued from page 376

approximately 265 lbs. Working on the surface, this would be almost too heavy for comfort; but underwater, it was actually too light, due to the displacement of the camera-box, so we ballasted the box with about 20 lbs. of lead, and secured just the right balance. Underwater, I could easily pick up the outfit with one hand!

Our working routine was simple enough. We worked from a raft, rather than from a boat. The camera would be loaded, and placed in its box; and the outer focusing scale was uncalibrated, we would begin by connecting its control with the lens, and checking the calibrations on the lens-mount, marking the outer scale with a wax pencil. In this way we could always be sure there were no mechanical errors in our focusing hook-up. Then, loading the camera and diving equipment on the raft, we would towed to wherever we wanted to work. Once the raft was anchored, I would put on a diving-helmet and go down to pick my set-up. When I was ready, I would signal the men on the raft, and they would lower the tripod for me to set up. When that was done, down would come the camera. Now, even on a large and steady raft, lowering an unguainly 265-lb. camera box over the edge would be a tricky task:

so we made the raft with a generous hole cut away in the center. With an assistant on either side of this opening, each gripping one of the handrails on the camera-case, it is easy to lower the camera quickly and safely to the bottom. Once the camera got down to me, and was mounted on the tripod, focusing and lining up the shot could proceed substantially the same as on the surface. However, in focusing underwater, there is an additional factor which must always be considered. This is the refraction of the water. It effectively lengthens the focus of the lens by two-thirds, so that in order to cover the same angle we would get on the surface with a 2" lens, we would have to use the widest-angled, short-focus lens possible—in this case, a 35mm. The refraction also plays tricks with your focus, so after measuring the actual distance to your object, you should set the lens for two-thirds of that distance—setting at 6 feet if the actual distance is 9, and so on.

To take the place of the usual tape measure, we used a metal rod, with the feet marked in colored paint. We had no trouble with exposure. The Tahitian waters are clear, and the white sand of the bottom acted almost as a reflector; working in the middle of...
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New Make-up that is Sculpture-like
Continued from page 375

adhesive is necessary; and the conventional spirit gum would not do, so Dawn evolved his own liquid adhesive, which not only holds better, but can be removed only by its special solvent. Similarly, in warm weather, or on hot stages, a player may be expected to perspire under a large molded headpiece. To remedy this, Dawn has devised a special perspiration-absorbent. This is simply brushed on before the sculptured make-up is applied.

One of the most important uses of the new product is in creating bald heads, receding hair-lines, and the like. At times it is necessary for a player to appear either bald or with a greatly altered hair-line; under ordinary circumstances, using traditional methods of make-up, this is very costly. When Reliance Productions filmed "The Last of the Mohicans" recently, Bruce Cabot was cast as an Indian—an Indian of one of those tribes whose braves shaved their heads almost completely, leaving only a bushy scalp-lock. No known type of wig suited the camera, though extensive tests were made. The only possible course, it seemed, was to have Cabot's head actually shaved; this would of course involve a special bonus to the actor, and further retaining him under salary until his hair grew out again. At the last moment, Dawn was called into consultation. He applied his make-up, and on the first test it was determined that neither Cabot's hair nor the producer's budget need suffer. This make-up was applied very simply. Using a cast of Cabot's head, a thin, tight-fitting cap was made of Dawn's preparation. The flowing scalp-lock was woven through this like an ordinary wig. All that was necessary was for Cabot to slip the cap over his normal hair, and to apply over it the same dark make-up which gave the rest of his head and body the color of a redskin. The dividing-line between the cap and the real forehead, neck, etc., was of course carefully blended by applications of the Dawn liquid and plastic make-up, and the normal outlines of the bony
Structure of the skull faithfully reproduced.

Much the same course was followed on a larger scale in making "The Good Earth." In addition to several of the prominent principals, there were nearly 1,300 Chinese extras who must appear with shaven polls and old-style queues. Such a number of shaven heads, stellar and otherwise, would have overstrained "The Good Earth's" generous budget. But Dawn's make-up solved the question perfectly: during working hours, the players were properly bald and pigtailed, yet when they left the studio, each was socially correct in his normal head of hair.

Dawn's plastic make-up played an equally important, if less conspicuous, role in making the Occidentals cast in the principal parts look convincingly oriental enough to work believably with the really Chinese members of the cast. The conventional way of creating a screen Chinaman is to lift the outer corners of the eyes and eyebrows with tape. Actually, a Celestial's eyes do not slant upward, Dawn discovered: instead, they droop slightly downward. This droop is in the upper eyelid; and with the new plastic make-up at hand, it can very easily be duplicated. As a result, Dawn promises really convincing impersonations of Chinese in "The Good Earth."

This make-up is equally useful for revising tiny details under ordinary conditions.

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make-ups. A trace more fullness here or there may make a face more attractive photographically; a little rounding out just below the lower lip may banish an impression of weakness; a squarer jaw-line add strength. Sagging cheeks may help a young man to appear older. All of these take but the slightest application of Dawn's new plastic. But they make the difference between an ordinary make-up and a thoroughly convincing characterization.

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It is not too much to say that Dawn's invention is capable of revolutionizing the practice of make-up. Certainly it opens new possibilities to character make-up; in the hands of a skillful artist, it can be even more valuable in the corrective phases of routine application. Combined with the present high development of cosmetic make-up, Dawn's sculptured make-up is beyond doubt the most significant development in the art for many years. Its potentialities can hardly be gleaned from mere description, nor even from seeing what it can do: as its inventor says, it will require many years of use before we can fully appreciate what a powerful aid has been given Make-up Artists and Cinematographers in their efforts to create more convincing pictures.

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this issue

Clothes Closet Laboratory
Salvaging Vacation Shots
Let Your Films Speak
Two Filters Are Enough
Newsreeling a War
... and other features

SEPTEMBER, 1936
HERE'S A TIP ON AN INSIDE JOB!

Fall and winter mean more inside movies. And these interior sequences often put a cinémathèque's skill and ingenuity to severe test—unless he's using a film made for indoor work.

So here's a tip... to help you make the kind of inside shots you're proud of: Use Agfa 16 mm. Fine-Grain Superpan Reversible Film. It’s specially designed to meet all sorts of indoor lighting conditions.

Its much higher speed permits many types of movies heretofore impossible. Its wider latitude minimizes errors in exposure. Because of its high sensitivity, all colors—including red—are given correct tonal values.

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Next Month . . .

- We will again take you into one or two of
  the studios and let the professional craftsmen
  tell you how you can apply their methods to
  amateur movie making. These tips will be
  very timely, as you are ready to cut and edit
  your vacation films and you will find much in
  their advice that will be helpful.
Converting

The small motion picture film and the miniature camera may be appropriately accompanied by a miniature laboratory, particularly for those who have limited living quarters in cities. My only possibility for a laboratory was to use a closet 34"x52" inches in a space actually smaller in square inches than my office desk top. In planning the maximum use for a small laboratory, it was necessary first to make a complete analysis of all the jobs which are done with the movie film in miniature photography. Second, it was necessary to measure all the equipment used in doing these jobs. Third, drawings were made to show exactly how related equipment could be grouped and placed for the greatest convenience. Since one does not edit motion picture film at the same time one develops miniature film, it is possible to have the same space assigned to multiple uses.

It is the purpose of this article to describe how provision is made to carry out each job performed in connection with amateur cinematography and miniature photography.

Space for Operator

I allowed 18 inches just inside the closet door for space for the chair and the operator to be seated to work at a table 16 inches wide. An electric fan was placed on the floor and a vent provided at the top of the closet to furnish adequate ventilation when the closet was used as a dark room.

Making Movie Titles

One of the first jobs of the amateur movie maker after the film is returned from the laboratory is to make necessary titles for editing the pictures. Illustration 1, shows how the laboratory is set up for the making of titles. A small drawing board is screwed to the table top with the center of the board in line with the mounted movie camera above. The camera is mounted on a short piece of oak flooring which may be moved up or down between two other pieces of flooring, arranged with the tongue and groove to correspond to the piece of flooring to which the camera is screwed with a regular camera screw. A small clamp placed below the camera holds the camera in the desired position for shooting the titles.

Movable metal letters are then placed upon the drawing board and squared with the board by the use of a T-square. White letters are used on a black background and black letters are used on a light background. Literally thousands of the silhouettes have been clipped from magazines, classified and filed for use in making artistic titles. Likewise, numerous backgrounds with attractive pictures have been drawn on cardboard of the appropriate size for this outfit.

It will be observed from the illustration that the sliding arrangement for the camera goes no closer to the title board than the camera can possibly focus. Likewise, the camera slides no higher than it can go and clear the lower corner of the sliding arrangement. For those of us who use Cine Kodak K the optimum distance for the front of the lens above the title board is 28 inches. The sliding arrangement I have devised allows a variation of 14 inches in distance from the title board.

Editing Movie Film

(See Illustration 2.)

To edit motion picture film it is necessary first to look at the film. A Keystone viewing glass was mounted in the top of the table and immediately under it placed an opal glass 2"x3" and under that placed a very small light bulb controlled by a switch placed at the front of the table. In line with this film viewer and with the rewinds, mounted on the table top was placed a Craig, Sr., splicer. A small box with a hinged bottom was built under the splicer to hold all of the scraps of film until such time as I wanted to unhook the bottom of the box and empty the contents into the waste paper basket. A Victor film cement bottle was placed at the table top at the place most convenient for use in connection with the splicer. Two sets ofrewinds were used so that a positive and negative or two films might be edited simultaneously. All four rewinds are placed in the same line so that film may be wound from any one to any other. There is less strain on the film, and rewinding can be done with rewinds placed very close together as the case of the rewinds one above the other. Two plans are used in handling small strips of film in the process of editing. For small strips which have been taken from a recently developed film and which are to be used much later, I use a system of small round pill boxes. Window parting strip mould for sale at any lumber yard is exactly the same thickness as these pill boxes. A series of ten drawers, each with a capacity of fifteen pill boxes was made from this mould with book binders board, 20 pound weight, for the bottoms of these drawers. Cup hooks were used for draw pulls. Gummed paper marked the contents of the boxes. Thus, a pill box may be used over and over again by pasting labels one above the other as the contents of the box are changed.

In the handling of the small strips of film for immediate editing I use the rack at the back of the table made of quarter-round moulding into which are placed hook screws.
Clothes Closet Into Laboratory

by Haskell Pruett

at 1 1/2 inches on centers. The film is labeled with a small piece of paper hooked over the end of the film by the use of a paper clip which is then used to hang the film on the small hooks on the editing rack. Once the shots and titles are arranged in the proper order it is a very simple matter to splice and complete a well edited film.

It will be observed that the 400-foot reels and also the 100-foot reels are conveniently arranged for revision in editing as new pictures are acquired.

Miniature Photography
I use the Leica with numerous accessories, but I believe that the same plans I have worked out could be used effectively for users of any other miniature equipment.

Loading Film Cartridges
A 4" shelf is made in line with the left side of the table top to the edge of the door. On the edge of this 4" extension is mounted the Leica film winder. The 4" shelf is used to hold a cutting guide, the film cans, and the film while the cartridges are being loaded.

Developing Miniature Film
The correx tank is used in developing the film and is usually done at night in the kitchen or bathroom, although it is sometimes done in the small laboratory.

Making Contact Prints
In the lower right corner of Illustration 3, there will be observed a home made printer for contact prints from the miniature film. The light box is immediately below the printer. The box contains a small ruby lamp controlled by a switch on the side of the box, and a large bulb controlled by a foot switch. Such an arrangement leaves both hands clear for handling the film in the groove while printing is being done.

Making Enlarged Prints
The upright column of the regular enlarger has been remounted into the table top so that it remains permanently as shown in Illustration 1. Illustration 1 shows the edge of the enlarger on a special mounting when it is not in use. Illustration 3 shows how the enlarger is placed on its upright column when it is in use. When enlargements are being made the film viewer may be removed to allow more room on the table top. The empty movie reels on the re-winds, as shown in the picture, are usually removed in the process of making enlarged prints. The double electric outlet in the corner is convenient for enlarger and the addition of a time clock. A small ruby lamp is placed at the edge of one of the bottom shelves and controlled by a pulled...
 Salvaging Vacation Film With "Stock-Shots"

by Wallace Black

If all the incomplete vacation films were laid end-to-end, there wouldn’t be a big enough shelf in the world to hold them. And that’s where most of them land—on the shelf. Nobody wants to see or to show a film that is full of gaping holes which must be explained at each running by embarrassed alibis.

There’s no use saying, after all the shooting is over, “Well, I should have gotten a shot of this—or that—or something else.” By that time it’s too late to get it. Instead of apologizing, why not try to salvage your picture? It can be done!

The gaps in most vacation-films fall into one of two classes. First, there’s the fellow who was so busy getting more or less “candid” shots of people that he put off making his scenic shots until too late. And at the other extreme, there’s the fellow who was so busy exposing anecdotal compositions and unusual filtrings that he cleared out how important close-ups of his fellow-vacationers would be.

And there’s a remedy for each filmer’s troubles.

It is “Stock Shots.”

Scenes that can be made, bought or borrowed later, which will fill the gaps in continuity acceptably, it not indeed perfectly.

Let’s see how the idea works. Take the entire hypothetical case of Joe Dookes for the first example. Joe, Mrs. Joe and the assorted little Dookeses spend their vacation at Yellowstone Park. Joe brought back five feet, 16mm. of Old Faithful. More too good a shot, at that.) And he brought home 245 feet of very good close shots of his Frau, and of the little Dookeses admiring the bears, feeding the chipmunks, and so on. Unfortunately, these shots look as though they could have been made almost anywhere; there’s nothing to prove they were made in Yellowstone.

Here’s what Joe did. He prowled around among the ads and dealers until he found a 200-foot scenic on Yellowstone National Park for sale at a price he liked. He bought a print. And having paid his good money for a 200-ft. strip of film, he took his shears and proceeded to cut it to pieces! There were shots—really good ones—all of the scenery his camera had missed—the geysers, the bubbling mud-pots, Yellowstone Falls, the canyon, and so on. Cut into his own picture, they filled out the continuity to perfection. Then, he had left over some good shots of the animals: he used them to introduce the shots he had made of his family feeding the animals. Maybe they weren’t the same identical bears; most certainly they were different chipmunks—but they looked the same on the screen. In all, out of his 200-foot purchase, he used nearly 150 feet, which, with his 245 feet (yes, he discarded his own second rate shot of Old Faithful when he found he had bought a really good "stock-shot" of it!) made a really complete 400 foot picture.

But one thing still bothered Joe: the film he had bought was printed on light yellowish-amber stock, while his own shots were plain, ordinary black-and-white. So he spent a few cents more, and bought a tube of "Soloid" yellow stain and toned his own shots yellow. He had broken the rolls down into individual shots anyway, so the toning job was easy. And he had a picture that told the complete story, and that was toned almost the same color all the way through. It really looked like one complete picture. Joe was proud to show it.

Joe’s neighbor (I think his name was Smith) saw what Joe had done, and tried the same medicine for his ailing film of Yosemite. But instead of buying a commercial travel-reel, Smithy found that a fellow-member of his cine club had made some fine scenic shots of Yosemite last year. Smith promptly arranged to borrow the reel while a "dupe" was made. Dupe or original, the "stock shots" he got worked just as well for him as Joe Dookes’ had for Joe.

Several thousand miles away, another of these charmingly hypothetical people—one who didn’t know that Joe and Smithy existed, or how they’d salvaged their films—came back from a summer in New Hampshire and Maine with a scenic film that didn’t have a single personal shot in it to tell that he and his family had been anywhere.

In this case, the same shoe pinched the other foot. And the same sort of remedy cured things. But since the void in this fellow’s film was in lack of the intimate shots of his own group, he couldn’t very well buy or borrow the shots he needed.

But he could make them!

In a close-up, you can’t tell very much about the background. Even in a longer shot, a tree in Central Park looks a good deal like a tree in central New Hampshire. And one granite rock can generally double for any other. And the sky is the same everywhere.

So our ingenious filmmaker began his salvaging by running and re-running his vacation epic. He planned just where he would cut in shots of his own, and even spotted a few scenes where he could use a shot of himself and his camera. He planned these "added scenes" carefully, so that he could say, "I need a long-shot of my wife coming around a granite boulder. I need a close-up of her under a birch-tree. I could use a shot of myself changing a tire to explain how I happened to catch that shot of the porcupine. And this sequence of the 'Old Man of the Mountain' really should begin with a close shot of the wife and kiddies heads against the sky, looking up."

After that, it was easy. He found himself a nice big chunk of granite, and photographed his wife coming around it. Of course he carefully matched up the direction of the lighting, so that the two shots would seem to have been made at the same time. In matching the lighting, mind you, he matched the effect on the screen—not the actual lighting of the shots: in his original shot, the light came from the East, as he made the scene in the morning; in his "added shot", the light actually came from the West, as he found it better to make the scene in the afternoon. But in both shots, the light came from the left side of the picture, so both looked alike.

Continued on page 403
Let Your Films Speak for Themselves

TRAVEL FILMS and news reels in theatres have educated movie audiences to expect a running talk from a commentator. To do this in connection with our home movies requires preparing recordings on which is a detailed description of the action.

The equipment needed will be the projector and film, a recording device, dual turntables, microphone and amplifier. The recorder is one of the magnetic pickups. It is handy to have an assistant handle the controls as this leaves you free to do the talking or vice versa, if you have an assistant who has a pleasing voice for recording purposes.

The complete method of recording is as follows:

Set up the film in the projector. Set up a musical piece with no vocal chorus on turntable No. 1. Pickup No. 1 is associated with this turntable and is connected to the input of the amplifier. This record is to supply musical background. Start the projector and turntable No. 1 at the same time and through trial and error locate a starting point on the leader of the film that will bring the music and the start of the title into action at the same time.

In order to have proper volume for the background music a trial recording will have to be made with the microphone volume control at one setting and by varying the music volume control. For potter during this trial recording simply state the position of the control. “Music volume control at one, music volume control at two” etc., or if there is no dial on the volume control say, “Music volume control one fourth on, music volume control one half on, etc.” On the playback the proper setting of the music volume control will be noted. This is necessary so the music will not drown out the voice.

The music during the title should be louder than during the rest of the film and faded down to the background volume setting when the title fades out.

Having made the test record, and the proper settings of the microphone and music volume controls noted, rethread the projector placing the start mark inscribed on the leader at the point at which it was marked in relation to the projector. It is best to have the start mark a complete frame scratched out and placed at the aperture. This was the system used during the days of the disc talking pictures. Later when photographing titles a single frame can be exposed of a title reading “START” and this used on the leader.

Set up the music on turntable No. 1 and set up the blank recording disc on turntable No. 2. Pickup No. 2 associated with this turntable is connected to the output of the amplifier. The pregrooved Victor Home Recording Records are fine for this work. Use the special needles for recording and reproducing these records. Scratch a mark in the side of the record where the needle is placed and always set needle at this point when setting up for playback. Place a slight weight on the pickup when it is used as a recorder. A full roll of tape will do nicely.

We have the background music set, the blank record set, the microphone turned on and the projector threaded. Set the music volume control higher than will be used during the comment. Start the turntables and the projector at the same time. This can be done easily by having the some electrical cord supply power to these three pieces of apparatus and by turning a single switch the machines will start.

As we have previously tested for music start, the music should now play when the title flashes on the screen. At the conclusion of the title, fade the music down to the background level. Start your talk. Watch your record and as it nears the next to the lost groove stop everything. You will have recorded approximately three minutes and about 75 feet of film. (16mm) Take a paper punch with the smallest size blade you can find and punch a hole in the frame that is now at the aperture. If your machine coasted after shutting it down try to find the frame which would have been in the aperture when you turned off the power. Punch two or three frames in the corresponding place, preferably, in the upper right hand corner, if you think you will miss one marker on showing the film.

About a foot ahead of this mark, that is on film that has been run through the projector, make another mark or series of marks. The less the better as only you, as the Continued on page 400
Two Filters Are Enough

WO FILTERS are enough to solve any problem one is likely to encounter in ordinary 8mm., or 16mm., home filming. Of course it is nice to have an extensive assortment of filters, but if you select your two filters wisely, and use them intelligently, they will do the trick as well as a larger battery — and much more simply.

When I say that two filters are all that the amateur filmer needs, I am simply preaching what I practice, for I do 99 per cent of my professional exterior scenes with only an Aero 1 and a 23-A in my filter-kit. And the exteriors we have to shoot in making professional shorts-subjects are surprisingly similar to the exteriors you and your neighbor shoot with substandard cameras. My filter-effects range from an ordinary mild correction to spectacular cloud-effects and filtered night-shots made by daylight. I can get all of them with only the Aero 1 and the 23-A to help me.

In nine scenes out of ten, all the filtering we need is a general mild correction. In other words, we want to make the film see things in about the same scale of black-and-white brightnesses that our eyes see the actual colors. Unless we use a filter — the right filter — even our best Super Panchromatic films won’t do this. The green of grass and foliage seems darker than is natural, and the clear blue sky becomes a blazing expanse of white, against which any clouds are lost.

Now, suppose we put on an Aero 1 filter. The grass is reproduced in a gray that is much more nearly the brightness our eyes expect, and the bare whiteness of the sky is toned down to a monochrome reproduction of what our eyes actually saw. Clouds stand out, not startlingly, but about as they do to the eye. Flowers and buildings, highlights and shadows take on a more natural appearance, and the general photographic quality of the picture is improved.

But, mind you, this change is nothing that jumps off the screen and shouts at you. When you use an Aero 1 filter, none of your friends will turn to you in the projection-room and remark, “What a beautiful filter-shot, how did you do it?” But they will sense a subtle improvement in the photography, and will probably remark on the pleasing naturalness of the scenes.

The Aero 1 helps out faces, too. A really pretty girl, or a youngster like Shirley Temple, doesn’t need much help; but most of the rest of us look a lot better with the help of a filter which, like this one, “cleans up” our faces. Incidentally, if you are one of those ambitious people who occasionally essays a dramatic production, complete with make-up, you will find the Aero 1 very helpful, for make-up photographs a bit differently by sunlight than by incandescent light — and using the Aero 1 for your exteriors will make the faces in the indoor and outdoor scenes match.

So much for the Aero 1; it is, in my humble opinion, the best all-around filter there is. Now, what will the 23-A do for us?

First of all, the 23-A is excellent for spectacular cloud-effect shots. It pulls the sky down to a very dark gray (almost black on some types of film), making a perfect background for the clouds. A little juggling of exposures will soon enable you to get quite a variety of cloud-shots with just this one filter.

Secondly, there are times when for one reason or another you want a definitely exaggerated filter-correction. You may want to over-correct your color-contrasts to make some certain part of the picture stand out, or to put artificial contrast into an otherwise flat scene. The 23-A is the filter for this.

Now, as to filtered night-effect shots. Until Agfa came out recently with their new Infra-red film, the way most professionals got their filtered night effects was to use a 72 filter. This filter is strictly a single-purpose filter, and in addition, it is so extremely heavy that in most cases, you have simply to shoot your scene with the lens wide open. Stopping down is out of the question. When you’re making short-subjects, you have to work fast, with as little technical phenagling as possible, so this way of getting night-effects never appealed to me. So I tried the idea of using my regular 23-A, and underexposing.

It worked excellently, and it has continued to work well for many years, and with every type of Panchromatic film I have used.

Naturally, there are certain little tricks which improve these filtered night-effects. For instance, try to choose a set-up that gives you a bare, cloudless sky; clouds rarely add to a night-effect. And don’t shoot with the light behind you: the best night-effects are those made late in the day, shooting so that you get anything from a cross-

Continued on page 398
A Family Film: Not Too Sedate or Solemn

by Barry Staley

For easy filming and amusing screening, take this scenario based on an everyday cross-section of household incident. Take it as a skeleton suggestion for your camera, you to make such adoptions as individual circumstances may demand. The prime purpose is to provide an easy-running theme of story development increasing in interest up to the punch climax, which permits all the family to take part. Typically individual characters can be portrayed and there is good opportunity for interesting unposed shots of the children in happy mood.

The script can readily be rewritten to eliminate any character or to introduce additional ones, and to add incidents that may strengthen your version of it.

Main title: Cuthbert comes home.

Scene 1: Long shot. The front of your home, centered in the front entrance.

Scene 2: Medium shot. Your front door. It opens and Mother comes out from the house, into the camera.

Scene 3: Medium shot. Featuring your letter box. Mother enters to the camera, goes to the letter box and opens it.

Scene 4: Close shot. Mother opening the letter box. She discovers a waiting letter, eagerly snaps it up. It is a plain envelope with no corner card. She tears open the envelope.

Scene 5: Close-up. Mother takes letter from envelope, unfolds it, reads it hurriedly. Her face lights up joyously as she exclaims:

"Cuthbert is coming home!"

Scene 6: Medium shot. Letter in hand, Mother skips happily away from the camera.

Scene 7: Long shot. From the same set-up. Mother skipping along the front porch and into the house through the front door.

Scene 8: Medium shot. Interior. The telephone stond in your home. Mother enters, grabs the phone and excitedly starts to dial or ask for a number.

Scene 9: Close-up. Mother is speaking feverishly into the phone, face wreathed in smiles. She is saying:

"Yes, dear, Cuthbert is coming home! . . . .

At five o'clock!"

Scene 10: Medium shot of Mother hanging up the receiver and dashing away.

Scene 11: Long shot. In your back yard, the children are playing.

Scene 12: Close medium shot getting good character studies of the children at play. Abruptly they stop and turn their heads expectantly toward camera.

Scene 13: Long shot. Your rear door from the children's viewpoint. Framed in the doorway, coming from the house is Mother. She is calling and waving her arm to children. She still has her letter, and advances to meet the children.

Scene 14: Medium shot. Mother, coming to camera, and children, entering from camera, meet in the yard. Mother's excitement is contagious as she exhibits the letter and explains:

"Cuthbert is coming home!"

Scene 15: Medium shot. The children are taking the news in a big way. (Intercut this scene with close-ups of the happy children.) Mother leaves the group to left.

Scene 16: Medium shot. Your side yard fence or hedge. Mother enters from right and sends impatient hallo into the neighboring yard.

Scene 17: Close shot of Mother leaning over the fence, eagerly awaiting her next door neighbor who comes in and joins her at the fence.

Scene 18: Close-up. Mother talking violently and happily to neighbor. By this time we can almost hear her say:

"Cuthbert is coming home!"

Scene 19: Long shot of the children running down the sidewalk. Excitement is in the air.

Scene 20: Medium shot. The children rush up breathlessly to a gathering of their playmates, about to burst with good news.

Scene 21: Close shot. Children are bouncing out the good news. Faces alert and happy. They are shouting:

"Cuthbert is coming home!"

Scene 22: Medium shot. Out of the group dashes Son as his eyes light on a pal.

Scene 23: Close shot. Son's pal, framed in the open window of his home, as Son races in and lets go with the big announcement:

"Cuthbert is coming home!"

Scene 24: Long shot. Father walking along sidewalk, on his way home from the office, nearing the camera.

Scene 25: Medium shot. As children come galloping in to Father. He halts to take their greetings. Daughter begins to let Father in on the impending event.

Scene 26: Close shot of Father as he stops the threatened flow of excited news broadcast. He knows about it, and it is leaving him very cold.

Scene 27: Medium shot. Father and the children. Father is nodding his head in patting agreement with children. It is apparent he has less than no concern in the matter. In fact, as camera pans to follow resumed progress of Father along sidewalk with Children hanging to his arms, he is openly distressed about the whole affair.

Scene 28: Medium shot. Mother on the front porch is awaiting arrival of Father and the Children, gayly expectant. They enter. Father is duly greeted.

Scene 29: Close shot. Mother and Father. Father begins to say, happy as a lark:

"Cuthbert is coming . . . ."

Scene 30: Close-up of Mother's full face as Father's finger comes up to seal her smiling lips. She shokes free to get in:

"At five o'clock!"

Scene 31: Medium shot. All the family. Son lifts Father's hand to see his wrist watch.

Scene 32: Close-up of wrist watch. It shows a fraction until five o'clock.

Continued on page 402
Oh, Ho! for the Life of a Cameraman

CENSUS EXPERTS estimate there is a camera in every American home. We are a nation of picture takers. The family snapshot album has a place beside every fireside. With the advent of handy movie cameras for personal use, scarcely a progressive home is complete without its amateur cinematographer of varying degrees of ability.

Many of these amateur camera wielders reveal an unusual flair for cinematic composition. They delve deeper into the technique. They produce films covering a wide assortment of subjects. Photographically their works leave nothing to be desired. And, in common with hordes of other individuals, male and female, of all ages, whose ears are impinged by the siren call from Hollywood, they aspire to studio jobs and imagined lives of opulence and ease.

This magazine and studio camera department executives face a steady barrage of queries from amateur cinematographers, admittedly very proficient with amateur cameras, who gaze with longing eyes on a Hollywood cinematographic post.

So let us look into the life of an ace studio cinematographer whose daily photographic creations tour the globe, and consider his qualifications and duties. Possibly the ambitious amateur will prefer retaining his simon-pure status.

Men who are filming Hollywood productions are, in the main, veterans who have grown up with the business and in so growing have contributed their share to current camera practice.

There are the pioneers—such noted practitioners as Tony Gaudio, Joseph August, Charles Rosher, Arthur Edeson and other prominent A.S.C. constituents with title Director of Photography who have been shooting pictures for the past twenty-five years. They were presiding over cameras in the gone days when studios were "camps," a two-reeler was a colossal "million dollar" feature and motion picture people were generally regarded as a queer lot.

Then, we have the great majority of practicing cinematographers who have been engaged in their profession from fifteen to twenty years. Not a man of these but has at least one outstanding, history-making picture to his credit. Each is steeped in practical studio production procedure such as can be had only by rubbing against the daily trials and tribulations that are confronted in the course of daily work. In parlance, "he knows all the answers."

There is the younger generation of up-coming cinematographers who have forged to top rank. Charles Lang, Leo Tover, Gregg Toland, William Mellor, are instances. These comparative spiriteds are pushing some of the seniors right off the bench.

But let us see what lies behind the current successes of these younger artists. In every instance, we find ten to fifteen years of severest studio training behind them.

Charles Long won the Academy Award in 1934 in recognition of the cinematographic merit of his "A Farewell to Arms." What is back of his gold statuette? A university diploma. Confining, exacting years in the studio laboratory. Years as an Assistant, lugging tripods and camera equipment. More years as Operative Cinematographer, doing re-takes and other clean-up and fill-in jobs; a scant-budgeted program picture with a cast of unknowns; finally a hesitant try-out on a minor production. All these, and other, gruelling assignments before producers gained confidence in him sufficiently to entrust a major picture with great stars, elaborate sets and throbbing drama to his handling.

Similar lengthy experience-gaining periods are behind every cinematographer who has been awarded his practicing permit within recent years.

Where can any amateur, irrespective of photographic proficiency, compare in line of specialized training and knowledge of production's peculiar problems?

Nor is the cinematographer's life any fabled bed of orchids or even roses after he has hung out his shingle. For one thing, he works longer hours than anyone on the lot. And he is working constantly while on duty. As soon as one scene is in the camera, he starts lining up the next set-up. The camera crew is the production pace-maker. Others may relax and catch up with their crossword puzzles between scenes, but not the cinematographer.

Regardless of how late he left the lot the night before, he is on the job bright and early the next morning. He visits the laboratory and inspects the light tests, and as on other phases of the previous day's shooting. He is on the set a half-hour in advance of schedule, to have the scene prepared for taking when the cast arrives.

At lunch hour, he inspects sets on other stages at request of the art department; passes on costumes in wardrobe departments; helps the star decide which hat to wear, which sweater is most becoming to wear to the tennis matches on Sunday, which necklace sets off the hero's masculine beauty to greatest effectiveness—and grabs a bite in time to return to the set and have the next scene ready to take when the cast returns from lunch.

When the afternoon shooting is done, which may be six o'clock or nine, he joins the director and other studio officials in the projection room and reviews yesterday's rushes.

Aside from the long hours, he faces technical criticism from nearly every point of the compass. The cinematographer places no restrictions on subjects provided him for photographic purposes. Set builders, art directors, wardrobe designers may go the limit; he'll photograph what they create.

And each of these separate factors appraises the photography from his own individual angle.

The stars, especially women stars, must be photographed in mode acceptable and pleasing to them.

Withal, the photography must contain requisite entertainment ingredients to satisfy the producer. Finally, when the picture is released, every photographer in the world, professional and lay, scans it for possible flaws.

Continued on page 403
Newsreeling the Italo-Abyssinian War

by

John Dore, A.S.C.

With Paramount Newsreel

with my car, headed for the British Legation, there was in the streets a lorry and a number of well armed Abyssinians, carrying things out of a house and loading them on the lorry. They were looters. A sudden thought struck me. Why not try to hire these men? When I offered them more money than they would be able to make looting, it did the trick and they became my body-guards with transportation included. During the three and a half days of looting, the prices on the "looting market" were quoted as follows: a box (ten bottles) of Champagne 5 Thalers (two dollars U. S.) a box of finest Swiss chocolate, 3 Thalers, a brand new and car (without a chauffeur) 5 Thalers, a carload of various conserves and other edibles 20 Thalers, a brand new machine gun with as many rounds of cartridges to it as one wants (from the Imperial Palace) 4 Thalers. Everything else was offered at the same ridiculously low level. But those who bought these bargains, did not go far before they were caught by other looters. My newly appointed body-guard was quite glad to accept my offer to earn more money in an honest way and to run less risk of being shot. Five of them were armed with army type rifles, revolvers and swords and one man had a portable machine gun, with a magazine holding 22 bullets. They were young, brave men, ready to show what they could do. My lorry now looked like a small fortress. They threw their hands in the things off the lorry and followed my car to the British Legation. Our way was through the main street, full of looters. The doors of the shops were broken, the windows smashed, all kinds of things were lying in the street, armed people rushing in and out of the shops, men firing rifles, pistols, revolvers, others swinging swords above their heads. It was a mad sight and a mad drive through this crowd of looters. No police, no authority anywhere. The town was at the mercy of a wild mob.

At top speed we made our way through the streets. If the car stopped, we ran the danger of being shot; stray bullets were flying all over. As soon as my things were put in the British Legation and my camera outfit prepared for action, I returned to town with my lorry and men. They took their position on the open platform of the lorry in such a way that they could shoot at a moment's notice in all directions.

With an automatic film camera I stood in front of the open platform and was able to register the scenes taking place in the streets. One had to grab things quickly in order to record this great tragedy before getting shot—we had plenty of chances of getting shot.

On the first day of looting, I concentrated on general views of the looting, of sights among the ruins, burning houses during the night, etc. and making practically all the shots without stopping the lorry. If good fortune was with me I intended to make the details and close-ups the next day. When evening came, we returned to the British Legation, where I made my film ready for shipment out of the country by the first train leaving Addis Ababa to Djibuti (French Somaliland). The railroad station of Ad
dis is at the opposite end of the town from the British Legation and to reach it, it is necessary to cross the center of the town. By this time it was night and the shooting in town was more intense than during the day. Driving through the town at night, was more dangerous than during the daytime, because one could not see, whether the looters were aiming at you or not. However, the parcel had to be delivered at the station and we made the trip. The station building was crowded with refugees, who had lived in this section of the town and had no chance to reach their respective Legations. From the railroad employees and

Continued on page 400
Kodachrome For Still Cameras

- Kodachrome film is now available for "stills" in two sizes—roll No. K828 (18 exposures) made especially for the recently announced Kodak Bantam Special. K828 Kodachrome Film is not suitable for use in the 1.6.3 and Doublet models of the Kodak Bantam, because the lens apertures of these cameras are not sufficient to give the exposure required in making snapshots.

Another size, K135 (18 exposures) is ready for Kodak Retina, Leica and Contax and similar cameras.

Kodachrome provides natural color transparencies. No extra equipment is required for all ordinary "shots." The color is in the film. The full color transparencies can either be viewed in their original size by transmitted light, or projected in large form on a screen. For projecting, transparencies should be mounted in a 2"x2" glass slide. Glass slides, special works and varied colored binding tape are made available, also a card mount for hand viewing.

If desired, the transparencies may be mounted in a 3¼x4-inch slide. Special masks are also available for this purpose. In preparation, and timed for early announcement, is a series of Eastman projectors especially designed for home or lecture showing of the transparencies.

Dufaycolor Lamps

- These lamps, according to the manufacturers enable natural color photographs to be taken in any studio or home by incandescent light, with Dufaycolor film used in any camera without any filter on the lens. These lamps are of the Photo flood type, giving a very high amount of illumination for the current used, and it is claimed they have the long life of five hours. Spectroscopic tests made in the Dufaycolor Research Laboratory have shown that the spectral energy distribution of the lamps remains almost constant throughout the life of the lamps; in other words the color rendition should be faithful during the entire useful life of the lamps.

The glass of which the Dufaycolor Wonderlite lamps are made is specially colored to give the same filtering effect as our standard 1A filter.

In using a Weston, or other photoelectric meter, it must be noted that a difference in the reading will have to be made for the following simple reason. Where a filter (such as the Dufaycolor 1A) is used on the lens of the camera, the Weston meter "sees" the white light of the photoflood lamps as it is reflected from the subject being photographed. But when taking a picture with Dufaycolor Wonderlite lamps, the light of which is deep blue, the Weston meter "sees" merely this blue light reflected from the subject.

The effect of the blue light on the meter is only about one-fourth the effect of white light on it. Hence the Weston factor must be multiplied by 4. Thus, the Weston speed of Dufaycolor film used in photoflood light being 3, it must be taken as four times 3, or 12, when estimating the exposure in the blue light of Wonderlite lamps. This will automatically correct the very low response of the Weston meter obtained in blue light.

Kodachrome Speed

- There have been two important changes in Kodachrome Film made during the past few weeks. These changes are called to your attention so that you will immediately know the correct course to follow with regard to the use of this particular film.

Change No. 1

As supplied to the market during the last six months, Kodachrome Film required a Weston speed of 4 Scheine 15. This film speed and the original developing process gave satisfactory results on cameras that were correctly calibrated. A new developing process has recently been introduced which changes the speed of the original emulsion from a Weston speed of 4-15 Scheine to a Weston speed of 6-17 Scheine.

All of the above speeds referred to are for Daylight. No information is available at the moment regarding Tungsten light.

Note that the above change was a change in the development process and not a change due to a change in the film itself.

Change No. 2

Within the last few days a new Kodachrome emulsion Film has been introduced on the market. This new emulsion, when developed by the new process, increases the speed of this film from the original value of 4 Scheine 15 to a new value of approximately 10 Scheine 19. This value is tentative and subject to revision when further tests are completed. These values are for Daylight, again there being no data available at the moment for Tungsten.

The new emulsion can be identified by noting the emulsion number. Numbers above "9120" indicate the new emulsion, which require the higher Weston speed. Number "9120" and below are old emulsion numbers and require a Weston film speed of 6 Scheine 17 if developed by the new process.

DeVry Summer School

- Formerly known as The DeVry Summer School of Visual Education, The National Conference of Visual Education easily achieved national proportions in its first session under the new name; and for the first time in the knowledge of this observer, Chicago newspapers and several magazines sent reporters to cover the Conference. Among these latter, The Christian Science Monitor, Advertising Age and Educational Screen gave extended writeups of the sessions. Other magazine representatives were from Nation's Schools, Child Life, and Sales Management. The Associated press sent a reporter and there was one European press representative.

Moreover, the Conference received invitations from New York, Philadelphia and Hollywood, to hold its next session in those cities. The Secretary reported the total registrations, including those made in advance, were 523. The actual attendance check up showed 307 present. These figures are the largest ever, and give a reliable index of the growing interest in Visual Education.

New Filters

- The Chess-United Co. announce optical glass filters, corresponding to the popular Wratten gelatine types in transmission characteristics.

The filters are made of solid colored optical glass, and are available in all sizes for every camera and lens mount.
Kodachrome, Type A, for color movies at night, indoors and out. There is an inexpensive color-correcting filter permitting the use of daytime Kodachrome at night, and another filter lending Type A Kodachrome the proper color balance for daytime filming.

And owners of 8 mm. cameras taking the standard 33-foot roll of Cine-Kodak Eight Kodachrome may match their 16 mm. contemporaries stride for stride outdoors, slip on a Kodachrome Filter for Photoflood for indoor color filming with the aid of inexpensive Kodalfilter.

Ask your dealer to show you Kodachrome movies. Eastman Kodak Company, Rochester, N. Y.
Two Filters Are Enough

Continued from page 392

light to a back-light, and with the low sun casting long, interesting shadows across your foreground. Sometimes when your night-shot concerns itself directly with a house, it helps to have a suggestion of light in the window. A professional can usually do this by simply placing a few powerful Sun Spots so that they shine out of the window; but in personal filming, this is usually impossible. I have often managed a very convincing lighted-window effect by simply using a reflector to throw a strong glare of sunlight against the glass, to reflect again into the lens.

And lastly, while we’re talking about the 23-A, don’t forget that it is one of the best filters made for cutting through distant haze in long-shots.

There have been, I will admit, times when I’ve felt I could do a little better with some other filter than either of these two. Sometimes an ordinary scene might be a shade more pleasing with the stronger correction of an Aero 2, for instance, or a cloud-effect more unusual if I had had the heavier F. But—the difference would be so subtle that only a photographic expert or a filter-fiend (they are often quite different things!) would notice it! And the two filters I use—the Aero 1 and the 23-A—have definite advantages for all-around use. The Aero 1, for example, may once in a while give you less correction than you would like; but ninety-nine times out of a hundred, it will give you just the right effect, while a heavier filter would overdo it. The 23-A may be milo, and require a little more accurate control of exposure to give you the full range of effects, but the heavier red filters not only call for far greater (and often prohibitive) increases in exposure, but they whiten the faces of people objectionably. The 23-A is not immune from this tendency to “wash out” faces, but it does not do it so noticeably that you can’t use it when there are people in your long-shot. (I don’t recommend it for close-ups at any time.) And the 23-A is light enough so that red dresses will not embarrass you. Ordinarily, a red dress photographs nearly black; but a heavy red filter will turn it almost white. With the 23-A, the red is lightened, but it is still a fairly dark gray, so if a normal scene and a night-effect scene of the same girl and the same dress are used together, you will not have to explain that she didn’t change her clothes between the two scenes.

Standardizing on these two filters simplifies the matter of exposure, too. The factor of the Aero 1 on most Pan and Superpan films is about one and one half. That means that you can put the filter on your camera and virtually forget it, remembering only to open your lens half a stop more than the meter advises. If the meter says f:16, set the lens half way between f:16 and f:11. The factor of the 23-A is approximately 4 (remember, filter-factors vary according to the kind of film you use!)—so simply open up two stops (f:8 instead of f:16, etc.) when you want normal effects. Where you are more interested in cloud-effects than in anything else, you can underexpose a bit, to give the already darkened sky less exposure, and make a better background for strongly lit, white clouds. When you are after night-effects, underexpose still more; you want strong correction, heavy shadows and a black sky to get over the idea of night, and with standard film, you must also underexpose enough to trick the automatic control in the processing laboratory. So my suggestion for night-effect exposures with a 23-A would be to increase the meter’s indication by only a stop, or even half-a-stop, shooting in a normal f:16 light at about f:11 or less, where f:8 would be normal for a regular day effect with the same filter.

Lastly, since most standard filtration is done with glass filters used in front of the lens, do not overlook the importance of a really good sunshade. Nearly everyone has, of course, had experience with the flare produced when the direct rays of the sun strike the glass of the lens; and most of them have learned that it is just as important to protect the filter from direct sunlight. But even when you’ve turned your lens completely away from the sun’s rays, if you do not use a good, deep sunshade, enough scattered light-rays will reach the filter to do a lot of undiscovered reflecting among the glass surfaces, and veil the finer qualities of your scene. So if you want my complete formula for simplified filtering, it is: use an Aero 1 for all normal filtering effects; use a 23-A for all overcorrection—cloud effects, night effects, and so on; expose accurately; and always use a good, deep sunshade. And—just try the sunshade with some of your extremely fast lenses, and long-focus telephotos. It helps there, even when you’re not using filters!

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Let Your Films Speak for Themselves

Continued from page 391

Operator, want to notice these markers. Wind the reel back about four feet. Mark the record you have just recorded cs record No. 1. Place another record on the recording turntable and set up the music again. It is customary to change the musical background to fit the action of the picture.

This time start only the background music turntable No. 1 and the projector. As soon as you see the first marker on the screen start turntable No. 2 and at the second marker continue with the comment from where you left off.

At the end of this second record make the same marks on the film. For record No. 3 we can use the reverse side of No. 1 and for record No. 4 we can use the reverse side of No. 2. At 78 r. p. m. it will take five single sides to record the complete reel.

To play the picture with the completed records, rewind the film, set your leader start mark in the aperture. Set up record No. 1 on turntable No. 1. Don’t forget to change the connection of pickup No. 2, which has been used for a recorder from the output to the input of the amplifier as we are going to use the dual turntables in their regular manner.

Place record No. 2 on turntable No. 2. Start turntable No. 1 and the projector together. If everything is O.K. in the recording and you have set the record correctly the music will boom out at the start of the title. Then it will fade down at the end of the title and your voice will come in. For instance, TITLE (music) — (music fades to background level) (voice) “San Francisco, the city by the Golden Gate. For years transbay travel has been by ferryboat. Now a mighty bridge hurls itself across the waters” —

It will be necessary, perhaps, to slow down or speed up the projector motor to keep the picture in synchronization with the record. However, a little practice makes this easy and after showing the film a few times you will get to know just where the voice should be in relation to the action.

Watch for your markers, at the first one start turntable No. 2, at the second marker, fade over or switch to pickup No. 2. You should have a neat change over and the voice will go right on talking. Your audience will not realize a change has been made and will be amazed to hear later that five or six records were necessary to complete the picture.

Turn over record No. 1 as we have record No. 3 on the reverse side. Keep the projector in sync with the playing record. You will find that should a record get seriously out of sync, that in less than three minutes another record will take up the comment and start off in sync with the markers.

Watch the markers and at the first one start record No. 3 which is on turntable No. 1 and at the second marker switch to pickup No. 1. Follow this procedure throughout the picture.

If you use the records at thirty-three and a third r. p. m. it will only be necessary to make two records. However the tone quality near the center of the record will be very bass and of very low fidelity. In the case of six records record No. 1 and No. 6 on one record; No. 2 and No. 4 together, No. 3 and No. 5 on the third record. This is so, because, if you start out No. 1-No. 3, No. 2-No. 4, then you will find that No. 5 and No. 6 will be on the same record and then it would be necessary to stop the accompaniment in order to turn the record over.

It is surprising the effect secured when using this system of describing your films. Dramatic films of course cannot be done in this manner as exact synchronization would be necessary to produce a dramatic “talkie”. For travel films or topical films though, it is sure fire showmanship. All titles can be eliminated except the opening title and “The End”.

Newssreeling the Italo-Abyssinian War

Continued from page 395

refugees a group of fifty men had been formed to defend the station against an attack by the looters. The railroad traffic had been cut off entirely and no trains were leaving the capital. The station master promised to put my porcelain on the first outgoing train.

Back again to the Legation. In the meantime the Abyssinian Red Cross building on the main street had been set afire, and while passing it, a rain of bullets was streaming out of it in all directions. The Red Cross had a stock of ammunition for their guards. This was now burning.

As the British Legation was unable to accommodate all the refugees, I had to sleep on an open porch. Stray bullets
from town and neighboring native huts were whistling past our heads, killing several and wounding a score of people right on the Legation's grounds. The shooting never stopped even during the nights to follow.

On May 4, the situation had not changed a bit. The shooting and the looting was going on, but the town was now practically in ruins. Dead bodies, of humans and animals, were lying in the streets, rotting under the hot African sun and spreading a sickening smell. Towards the evening of May 4 I had practically covered all angles. A crew and myself, during the three days of roaming around town, had become accustomed to the dangers surrounding us, and so far everything had gone fine, even groups of looters approached our lorry and greeted us and chatted with us. Among them was a group of former policemen, now turned looters, with whom I had become acquainted during my ten months stay in Addis. They knew me as a sincere friend of Abyssinia. At nightfall on May 4th we had to make the usual trip to the railroad station to deliver my film. On the way back to the British Legation we were run between two bands of looters, shooting at each other. My chauffeur made a quick turn into the yard of a nearby house in order to get out of the line of fire. But while making the turn a bullet hit one of my men, inflicting a deadly and horrible wound. He died a few minutes later. This happened due to a pitch dark night. After an hour's waiting in the yard, the firing had diminished and with lights out we managed to get away and reach the Legation without further incidents.

The morning of May 5th was spent in the grounds of the British Legation filming scenes of refugees and of the fortifications. In the early afternoon, news reached us that the Italians were approaching Addis and would enter the town late the same day. The only road to Addis from the north front, by which the Italians could enter the capital, passed the British Legation. At 4:30 p.m. the first motorized column of the Italian traps was passing the Legation and other groups followed it, lasting until the next day.

As soon as the Italians started entering the town, the shooting and looting gradually died down. Scenes of the Italians entering Addis were taken and were completed by working the whole day on May 6th. The story was finished. Now was the question of how to get the film out of the country. No trains were running. Good fortune favored me. After the first Italian column reached Addis on May 5th a train with a detachment...
of French Senegalese troops from Dire-Daoua had arrived an hour later. They had been sent to stop the looting and to protect the French interests. However, the Italian forces forbade the French troops to enter the town and had issued strict orders, they were not to leave the railroad station and to return to Dire-Daoua. A train with these troops left Addis on May 7th in the morning and I managed to get on board it with all my film. Luckily, the Italians were not organized in Addis and I was able to leave the town without being noticed. Otherwise, my film would have been taken away by the Italian authorities, to be sent to Rome for censorship and nobody knows when the film would have reached the Paramount News.

Forty kilometres out of Addis, the train was attacked by a band of brigands and their bullets were piercing the coaches. The Senegalese troops returned the fire with rifles and machine bullets and we went through this zone unhurt.

A Family Film: Not Too Sedate or Solemn

Continued from page 393

SCENE 33: MEDIUM SHOT. Son announces the hour. Children lead the way to the edge of porch, Mother following, and peer anxiously up the street. Father is bored stiff.

SCENE 34: CLOSE-UP of the line of faces, wide-eyed, staring up the street. A welcome sight comes into view. Son sees it first and points in excitement.

SCENE 35: LONG SHOT. A non-descript old sedan or delivery wagon is approaching the camera.

SCENE 36: MEDIUM SHOT. Children and Mother race to the curbing. Eyes strained up the street. Father is not among them. The old sedan drives in, comes to a jittery stop.

SCENE 37: CLOSE MEDIUM SHOT. Children and Mother crowd about the car's door. They can scarcely wait. The door opens. An elderly figure emerges but gets no reception. He turns and from the inner recesses of his vehicle brings out a shallow wooden box.

SCENE 38: CLOSE-UP of the box, from one side, as it is tenderly passed to hands of Mother.

SCENE 39: MEDIUM SHOT. Close ly surrounded by the children, their heads craned forward for better view. Mother has the box.

SCENE 40: CLOSE SHOT. Camera at level of Children's eyes. Eager little faces are peeping over the side wall of the box in Mother's hands. She lowers the box for them to see better. As the box comes down, we see chalke on the side the lettering 'CUTHBERT.' As the box lowers still further, we can see its contents—a turtle ambling about in a bedding of grass.

Or, if a turtle is not available at your local pet shop, an equally surprising denouement may be managed by borrowing a duck, caged parrot, frog or other odd sort of creature.

In shooting and in editing, tempo should increase steadily as suspense builds up. Let the climax come fast and the closing scene clearly show the identity of the home-coming traveler.
Salvage Vacation Film With "Stock-Shots"

Continued from page 390

In much the same way, he close-uped on wifie under a convenient birch-tree. He matched up the lighting, and took care to show only the tree and the lady.

As for the shots of himself changing the tire, he borrowed his neighbor's camera, and drove to a convenient and little-traveled country roadside. He made a shot of himself starting to change the tire, aiming his camera toward the car. Then a closeup of himself looking off-stage, again with only the car for a background. After this, he planned to cut a few inches of his porcupine shot. Then a shot of him grabbing his camera, and another—this time away from the car, with a woody background—apparently focusing and shooting. Then came the best porcupine footage. On the screen, it all looked as if it had been made the same day, in the same place.

The close-ups of the wife and kiddies were easy. All that was necessary was to have them put on the same clothes they wore on the trip, and stand where he could close-up on them from a low angle, getting only the sky for a background. His own front yard was all the "location" he needed for this shot. But he had to film the scene twice. The first time, he couldn't resist the temptation to use his red filter and darken the sky—and he forgot that the red filter would make his wife's dark red dress photograph very light, indeed.

Oh, Ho! for the Life of a Cameraman

Continued from page 394

No creative artist I know of works under such pressure.

Before a picture is launched, script must be studied; tests made of stars, sets, make-up, wardrobe, locations and a dozen other factors influencing photographic values. The set may be a telephone booth or occupy an entire stage, before production starts the cameraman knows the light qualities of every inch of it.

A few days ago, I was on the Warn

er Bros. lot. On one stage George

Felsey was filming "Cain and Abel." Temperatures in the open were soaring gaily above the century mark. On the set were several hundred people. An inquisitive soul smuggled in a ther-
mometer. It read 135!

On another set, Arthur Edeson was doing the next "Gold-Diggers" extravaga-

nza. The set was a small one, hem-

med in on all sides. Lights were burn-

ing the hot, stuffy, stagnant air. All

hands were devoid of excess clothing as far as the law allows—perspiration rolling from them. I took myself away from there, to the comparative cool comfort of searing sun glare.

No, the cameraman's tour of duty is not a sinecure. It has its compensations, but it carries many burdens.

Studio cinematographic berths can be won only by gradual absorption at studio technique. They can be held only by surviving sharpest competitive critical analyses.

Cinematography as practiced by the studio cameraman and the ama-
teur are two utterly different chapters. Their sole connection is the common celluloid ribbon. The most proficient amateur in the land is still the veriest beginner at studio cinematography. A deft letter-writer is not necessarily an accomplished playwright.

As Calvin Coolidge so brilliantly phrased, "When men are out of work, there is unemployment." Where to find steady employment for all of Hollywood's qualified cinematographers is a pressing problem. Vintage camera artists are out of work every day. Up-

wards of one hundred Directors of Photography are on A.S.C. rolls. Studio production seldom gets above forty features at a time even during high tide.

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1936—March, to date.
1935—None.
1934—January, March, April, July, August, September.
1933—March, June, October, November, December.
1932—All months except October.
1931—All months.
1930—All months.
1929—All months.
1928—April, May, June, July, August, November, December.
1927—All months except October and November.
1926—All months.
1925—All months except February, August, November.
1924—All months.
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American Cinematographer

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The films must be in the offices of the American Cinematographer not later than November 30, 1936.

There are no restrictions as to the number of subjects that may be entered, nor are there any restrictions as to the length of the subjects. The one strict rule that applies, however, is that no professional help is received in the making of the picture. This does not include titles which may be made at a laboratory.

The recognition of those who are given awards will be in the nature of a gold medallion which will be given by the American Society of Cinematographers who will be the judges of these pictures.

The pictures will be given classifications so that the competition may be fair to all entrants. By this we mean that an entrant having a documentary film will not compete with one who has based his on a scenario. Of course, there will be more classifications than these. The classifications will be created according to the pictures that are received.

Please remember your films must be in the office of the American Cinematographer, 6331 Hollywood Boulevard, Hollywood, Calif., not later than November 30, 1936.
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