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FROM the
A Few Words about
by FRED

A cameraman thinks nothing of the danger as he perches here to photograph Richard Arlen

participant of all that transpires on the screen. They have praised the writers and directors responsible for the development of this technique, but they, like the public, have generally ignored the men who actually make it possible for the audience to enjoy this participation—the cinematographers. For it is through their eyes—or rather through the eyes of their cameras—that the audience sees the picture. It is through this eye that the audience participates in the romances, the tragedies, and the thrills of the screen.

And in giving these sensations to the audience, the men at the cameras are at times more than vicarious participants in the scenes—particularly in the thrills! This is perhaps most noticeable in the aerial films now so much in vogue. Of these, the most outstanding is of course Howard Hughes’ Hell’s Angels. The aerial sequences of this film have aroused the excited comments of both critics and laymen for the amazing manner in which they make the spectators virtual participants in the thrilling sky battles. At times the sky seems black with airplanes twisting, turning in every manoeuvre of actual combat. And right in the midst of these battles flies the audience, brought there by the skill and daring of the cameramen. Though these scenes last only a short time on the screen, they required no less than two years of ceaseless work in the making. Two years of combat flying—the most hazardous of all—during which time, as one of the cameramen has told me, hardly a day passed without at least one of the many cinematographers on duty missing death by the barest fraction of an inch. Two years crowded with perils enough to shake the stoutest nerves—yet these same men are now at work on new aerial pictures for other companies—carrying on, undaunted.

This spirit of “carrying on” is a tradition of the camera profession. No matter how precarious or unusual their position, these gallant gentlemen persist in thinking of the picture first, and of themselves only secondarily. A classic example of this is the time, some years ago, when Norman de Vol kept grinding his camera while the airplane he was flying in crashed in a northern forest. The pilot is authority for the statement that when informed that they were about to crash, young de Vol merely replied, “Let ‘er fall!”—and kept on grinding.

The same spirit was exhibited by an eastern newsreel photographer who recently ascended in a large plane, and after crawling

F ROM the Director’s viewpoint, the production of a motion picture is very like the solution of an intricate equation in which there are an infinite number of variable quantities, and but a single definitely known factor. That known factor is the cameraman. Upon him the Director can invariably depend. Like the director, his sole business in life is to put the best pictures on the screen in the most efficient manner. It is traditional that no cameraman will permit anything to interfere with the fulfillment of this aim.

What a boon this is to a harassed director can be imagined. At the same time, however, it tends to work a grave injustice upon these same cameramen, for everyone has come to be so accustomed to their unvarying accomplishment as to be all too often blinded to the magnitude of these accomplishments. As a result, when the picture reaches the screen the name of the cinematographer is frequently lost amid a long list of costumers, theme-song writers, and the like—all undoubtedly people deserving credit for their work but by no means responsible for so large a share of the film’s success as is the photographer.

For, in the final analysis, a motion picture is essentially the product of three individuals: the author who conceived the idea, the director who clothed it in flesh and blood, and the cinematographer who made a permanent photographic record of the achievements of the other two. None of them should be denied the full credit due his achievements. For if the picture is a success, it is such by virtue of a very high degree of sympathetic understanding and cooperation between these three creative artists.

For some years the director has been receiving his share of the popular honor due this trio: since the coming of talking pictures the writer, too, has gained more recognition; but the cinematographer, whose contribution is fully as important as those of the other two, and necessary for the completion of their efforts, is still popularly neglected.

Many eminent psychologists have attributed much of the phenomenal success of the photoplay to the fact that it enables the spectator to become a vicarious
out on the wing to photograph nineteen parachute jumpers leaving the 'ship,' calmly jumped off himself, that he might give the public a photographic taste of the 'chute-jumper's sensations.

But the cameraman's hazards are by no means restricted to the air. Every thrill sequence in which the audience, through the camera's eye, is made to participate, furnishes its photographers with abundant perils. Though few of my own films would come under the heading of "thrill" pictures, in them, as in others, the cinematographers have counted no position too perilous to be used as a camera-support, if a good picture could be had from it. Racing-cars, roller-coasters, fire-engines, and locomotives have all served as very mobile tripods. At times, too, the situation has been reversed, with the cameraman entrenched in an uncomfortably small pit, while herds of cattle stamped at them, or fifty-ton locomotives thundered overhead. At times the cinematographer is denied even this protection. One of Director W. S. Van Dyke's favorite stories of his experience in Africa during the making of *Trader Horn* relates to such an occasion. At one time, he and George Nogle were called upon, while in the open plains country, to face the charge of an enraged rhinoceros. During the first seconds of the charge, Nogle turned to the director, and asked, "Say, Van, do you know of anyone who'd like to buy a nice, second-hand Bell & Howell?"and calmly kept turning his camera's crank.

Speaking of *Trader Horn* naturally brings to mind Clyde de Vinna, who was chief cinematographer on the production. Clyde has a wife who is possessed of a deep-seated aversion to the risks that her husband is always taking. Some time ago he was working on a film whose action centred around a captive balloon. Mrs. de Vinna was appalled at the thought of her husband's working in the balloon, and extracted from him a promise not to go up in it. I like a good married man. Clyde promised. But at the same time, as chief cinematographer, it was naturally his duty to photograph the scenes which had to be taken from the balloon. So when the time came to get them, Clyde diplomatically remembered that he had only promised not to go up in the balloon—and spent many days suspended below the basket, and lashed to various parts of the rigging around and above the envelope.

De Vinna's persistence in getting the picture makes me think of the phrase of a celebrated newsreel photographer who said, "You can't put excuses on the screen: always bring back the picture!" No better summing-up of the cinematographer's creed could have been made.

However, I have had one experience wherein I actually did put excuses on the screen. It happened many years ago, when I was in Russia. My profession at the time was that of a travel-talker: I travelled in the summer, and brought back films and lantern-slides with which I illustrated the lectures I gave during the winters. Some of these pictures I made myself, and some of them I 'directed', if you can call it that, having them made by more experienced cinematographers than I. In this particular instance I was accompanied by a French cameraman, whose name I cannot for the moment recall, but who was sent to me by Messrs. Pathé, from Paris. We had done very well in our Russian travels, but we had not succeeded in getting any pictures of the famous Kremlin, in Moscow. Photography in that holy spot was absolutely forbidden, and nothing that I did succeeded in getting us anything nearer the coveted permit than vague promises, and innumerable polite Russian equivalents of "manana." But one day while we were browsing around the locality we found a regiment of soldiers marching into the Kremlin for the solemn ceremony of being blessed before going to a distant garrison. A large crowd was following the soldiers, and this gave us both an inspiration. I looked at the cameraman, and he looked at me: then, without a word we gathered up the outfit and trailed with the crowd into the forbidden precincts. Our interpreter, as soon as he perceived what we were doing, turned pale and beat a hasty retreat. He had no wish to dare fate—and the Czar's police! But we two were out for a picture, police or no police. Soon the camera was set up and busy grinding out a record of the forbidden scenes. Almost immediately the police evidenced themselves, descending threateningly upon the miscreant at the camera. True to his professional traditions, my friend kept on cranking, and motioned the officers to speak with me. Fortunately I spoke no Russian, and they spoke no English, so I wasn't able to comprehend their protests until my col-

(Continued on Page 22)
Top right, The "moonshiner's camp." Center, Venard's early home. Bottom, scene from an agricultural film.
Agricultural Movies
Details Must Be Correct in Down-on-the-Farm Movies
by C. L. VENARD

A motion picture can be no better than the idea behind it. And if that idea is lost in treatment and development your picture will not be worth much. Nowhere is this more true than in making Agricultural Movies. In analyzing farm films I think of them as a combination of elements: the idea, the story, the continuity, direction, action, photography. I may be criticized for this order, but in farm films, the farmer is more concerned with the subject and its development than he is with the photography. They like a beautiful shot, but want instructive action more. And in our business we have to give them what they want. However, being a lover of good photography, I try to give them the combination equally good.

I have been in the photographic business almost all my life. So far. I had my first camera when I was 13 years old and lived on a farm in Kansas. My dark room was in the cyclone cellar and believe me that cyclone cellar was used many times for both purposes. I left the farm when I was 20 years old and paddled my canoe along the various channels of photography, mostly portrait, for a number of years. Then commercial, and then the movies. Even today I would ten times rather tinker with the camera than direct the action of the pictures.

It falls to my lot, however, to take the idea of some manufacturer who has a desire that his advertising or good will message should reach the rural audience of the agricultural states. Write an interesting story around it which the rural audience will appreciate and understand. I see it and distribute it to many thousands of farm folks throughout the United States. Ours is a task that few have tried and very few have succeeded in. This, I believe, is because so few producers are farm-raised men and I do not believe anyone who has not lived on the farm and kept in close touch with the progress of the rural people really understands them. We must know the farm situation very thoroughly, not only from the standpoint of the practical old-fashioned farmer who still exists in far too large a majority, but from the standpoint of the scientific farmer, the business farmer, and the agricultural college graduate.

The American farmer of today, contrary to the popular belief, is one of the keenest individuals with whom we come in contact. The successful farmer requires a higher degree of intelligence than is required in almost any other ordinary business venture. He must be something of an agronomist to understand soils and crops. He must have a knowledge of animal husbandry, veterinary science, and horticulture. He must know something of law, too, for he is thrown largely on his own resources. To be successful he must be a keen student of business economy as applied to agriculture. In other words he must know his costs and after all, no matter how well he knows these costs he has nothing to say about his selling price. Therefore, we are confronted with the problem of reaching this audience with a story that will appeal to their particular line of reasoning.

Our pictures must be produced with the greatest care from the standpoint of logic and some of the great rural productions that have been made by some of our best-known producers have been so far from the actual truth that they have been comedies to the farm folks.

I hope the readers of this article will not get the idea that the rural people do not appreciate art and beautiful photography—they do just as much as does any other class of people—and perhaps more. for they see more of it in everyday life and naturally learn to love the beautiful things of nature. Artistic things, therefore, are not among our worries. We do not have to try to outdo the other fellow in the building of elaborate sets. Our actors do not have to be highly emotional and unnatural as do many of the best known screen actors. Our job for the most part is to take people who understand the conditions under which we work and the people whom we portray and develop them into actors who can live the parts as they should be lived. This we have been successful in doing. so successful in some cases that we have lost them to the professional stage, screen, and broadcasting studio. But we are happy in our thought that we have contributed something perhaps to their success, that we have developed a latent talent that they had no idea existed before they took part in one of our farm films.

Our pictures for the most part are two reels and are built around a human interest story with an educational background. They are usually sponsored by manufacturers who have a message of good will or an advertising message which they wish to convey to the rural people. They are then distributed to community centers, rural high schools, rural churches, county farm bureaus, and shown under the auspices of all types of agricultural leaders.

Of course I have written and produced some films for general distribution in the past. More particularly, however, were they stories that had a rural bearing. Some years ago I produced a story for one of our best known authors, an author of many best-sellers. After the picture had been shown to him I was very much pleased to receive a letter which read in part: "I have had many stories filmed, but when I have seen them on the screen I have always felt ashamed and wanted to hang my head for fear the people would think I had (Continued on Page 26)"
An Eskimo Merriwell

Even Alger Couldn’t Match Aghnichack

by HAL HALL

This is a story about the only Eskimo assistant cameraman in motion pictures. He was born in Candle, Alaska; was raised on whale blubber, tallow candles and the like: dreamed in the Alaskan wastes of becoming an engineer; fought his way from poverty to what he considered wealth; came to Hollywood and made good—and still has an occasional hankering for a nice, juicy piece of whale blubber.

Aghnichack! No, that is not an exclamation. It is the name of this enterprising Eskimo. But as there are few around the motion picture studios of the Fox company who can say it without sneezing, he is better known as Ray Wise, capable assistant of the capable Cinematographer, Daniel Bryan Clark, A. S. C., one of the Fox camera “Aces.”

It was slightly more than 24 years ago that a proud Eskimo mother first looked into the eyes of little Aghnichack, who bawled just as lustily as do the babies down in California. And little did she think then that she cuddled a youngster who was some day going to help photograph the biggest stars in the picture business. In fact, she didn’t know there was anything like motion pictures. Life for her and her family was not so rosy. It was a constant battle for a mere existence.

Little Aghnichack’s father had headed for the “States,” and the family of quite some number was left to fight it out alone. In a few years the mother died and Aghnichack wandered back and forth between the homes of relatives and found life a trying proposition. But he was a plucky little fellow, and found work in mining camps and stray places and did his share of fishing, which was an important economic feature in their lives. Finally, when the lad was about fourteen he landed in luck. The town of Candle had to have water. But there was no water system there, and the river was quite some distance from the town. So, Aghnichack secured two five-gallon oil cans and started a business of his own. He carried water from the river to the town for twenty-five cents a bucket, or, rather, a can. This proved a money-making venture for him.

“I made as much as $40 and $50 on some days,” he said, “and had so much money I couldn’t believe it. I didn’t think there was that much in the world. One mining company had a big garden and they secured a rate of fifteen cents a can for water because they used so much to water the flowers.”

Most people think Alaska is always a place of snow and ice,
but in the summer they have wonderful weather and flowers.

After accumulating a pocket full of money, Aghnichack decided that he wanted to go to school and learn to be an engineer. He had that idea for some time, after seeing the mining engineers of the big gold companies. So he headed for Seattle. To save money for future use, he got a job as a cook on a vessel, a tramp schooner.

"It was a bad break," says Aghnichack. "For I was no sailor and when the weather became bad I became sick. I just thought I couldn't keep going. Then the stove rolled out of the galley and I went to my bunk and went to bed. They couldn't get me out. And when we reached Nome I went ashore.

"There I met a man who had come to Alaska to secure motion pictures of the country. He was making some sort of a picture in which there was a story running through it, and he wanted to carry it along and cover up the scenic part. He took a notion to me, apparently, and asked me if I wouldn't like to learn to use a camera. I finally decided I would, so he hired me at $20 a month and my board.

"I thought this was great, but I discovered after a year with him that he had used me as the leading man in his picture, as his assistant cameraman, his interpreter, his assistant director, his cook and general all-around handy-man. But he taught me how to crank a camera and care for it and set it up. In fact, I shot most of his picture even though I was just an Eskimo boy of sixteen years. During this time we had wandered all over the northern part of Alaska.

"The man I worked for finally left and, even though he had promised to take me to New York, he left me behind. My money played out in time and I secured a job at a mining camp. Then I went back to carrying water, and then became a waiter in a mining camp where I stayed for two years.

"There I met Miet LaVois, a cameraman from Hollywood. He was shooting some stuff for Fox. I asked him about a job, but he only said that he would meet me some day in Seattle. That made me hungry for the States and Hollywood. I had decided that I wanted to be a cameraman. So in a few months' time I took the money I had saved and went to Seattle. And there I ran into LaVois who told me that if I came to Hollywood in January he would see I got work in 'Frozen Justice.' I was happy and went to San Francisco where someone stole all my money.

"I had to do something quick, so I sold my best clothes and raised enough money to get to Los Angeles by boat. I will never forget the first day of my arrival. I came by train from the boat to Los Angeles and had no money to ride to Hollywood. So I walked all the way out to the Fox studio only to find that LaVois would not be back until the next morning. I was waiting for him in the morning and he loaned me ten dollars and introduced me to Ben Jackson, the studio manager who told me that they would use me in 'Frozen Justice,' but explained that I could have a job in the labor gang to keep me until the picture started.

"Two weeks on the labor gang just about finished me, for the heat was terrific and I thought I was going to die from it. Then Jackson and Director Stoloff came along one day and I surprised them by speaking to them in English (you see, they thought I couldn't speak English). I told Jackson I didn't like the labor gang and wanted to become an assistant cameraman. He took me up and gave me a job. The first picture was 'Slaves of Beauty,' and I was tickled to death."

"Frozen Justice" was then started and Charles Clarke, A. S. C., was sent to Alaska for certain shots. His trip is history now, almost tragic history, for he and some of his companions went through terrific hardships when they became lost with their plane. But Aghnichack was sent along, too. He was held back when the party reached Alaska, and was not with Clarke when he became lost. However, he followed later in another plane.

"It was my first plane ride," says the Eskimo. "I was thrilled to death. And then I looked down and discovered we were flying right over the town where I was born. We came down and my relatives were mighty proud when I stepped out of the plane. They couldn't believe their relative had come out of the skies. It was a thrill. I told them all about it, and then we went on. Then as we were flying close to the ice one of the wings broke loose and we had a forced landing. The pilot fixed the wing with piano wire and we went on to Point

(Continued on Page 33)
Credit President Hoover
Director Edward Cline Gives Some Inside Facts

by HAL HALL

For years the Mack Sennett "bathing beauties" were to the screen what the Ziegfeld chorus has been to the stage.

From the bathing beauty ranks have come many of the greatest feminine stars of the screen, just as from the ranks of Mr. Ziegfeld's choruses have come women who have risen to heights on the stage.

But we bet a plugged nickel against a Mexican two-cent piece that there is not a reader of this magazine who knows that Herbert Hoover, President of the United States of America, is the man who is responsible for the starting of the bathing beauty comedies on the Sennett lot. It is our candid opinion that not even President Hoover knows it himself. But, it is a fact!

Director Edward Cline, who appears on the cover of the Cinematographer this month, revealed this fact the other day when he and the writer were talking over the old times and the new in the picture game. Incidentally, many people give Mr. Cline credit for starting these comedies, because he directed the first of them. But Eddie, as he is better known in the profession, is slightly different than a lot of picture people in that he believes in giving credit where it is due.

"The world war was on", explains Eddie, "and Herbert Hoover had just been made Food Administrator. We had not become participants yet, but Hoover was organizing the economic resources and was attempting to conserve on certain lines of food.

"Mr. Hoover conceived the idea of having the motion picture producers cooperate in a campaign by making propaganda pictures along certain lines. Each studio was given an assignment, and to Sennett's studio came the word to make a picture advocating the eating of more fish. Mr. Sennett called me in and told me to get an idea circulating in my head and go out and make a picture.

"I had been directing comedies there, so naturally, my thoughts went in the comedy line. I finally decided to give them something a bit different, so gathered together the girls of our stock company, dressed them up in the best looking bathing suits we could find and took them all down to a fish market and photographed them as they trooped in in their bathing suits and bought fish. Then we all went to the beach and shot more stuff of them fishing. But we still lacked a lot of footage.

"Down to Venice we went on a Sunday and with eighteen girls in bathing suits, we staged a baseball game. It was a wow. And when we had it cut and titled a few of us gathered in the projection room and looked it over. Sennett, Sid Chaplin and I were all laughing at the thing when suddenly Chaplin shouted, 'Mack, you have a great idea here. Make some bathing beauty comedies'.

"Sennett decided right there and then to do it, and we started in. So you see, the bathing beauty comedies were really started by Mr. Hoover, for if he had not asked us to make the fish thing we probably would never have thought of them."

Cline has made remarkable strides since the days of the first bathing beauty comedies, and at this writing is directing a big production, "Leathernecking", for R-K-O. He is one director who has taken sound "in stride", as it were, and has more than held his own. The best proof of this is the fact that, although he is a "free lance" director, he worked fifty-two weeks out of last year and from present indications will work another fifty-two this year. Which is quite a record for any man in pictures. One of the reasons for Cline's success is the fact that he believes that the main thing the theatre patrons want in a picture is entertainment. And he tries to give them just that with the result that he is one of the most successful directors of box office pictures.

"An artistic wave of the hand is great", says Eddie, "but a good laugh is much more pleasing to the audience, and you will always hear movie goers telling others about a picture when they have been given a lot of entertainment."

Then, too, Cline has never been afflicted with an over-developed Ego. Some people in pictures swell up until one is afraid to touch them for fear they will burst like a balloon. But not so with Cline. He is still the same jovial Eddie he was in the days when he was doing extra work on the Mack Sennett lot. He has watched "big shots" come and go, but he seems to go on forever, like the bubbling brook.

"How about sound and its effect upon the people of the old silent screen days?" we asked.

"Now listen", replied Cline. "Sound disturbed a lot of people when it first arrived. But it has done nothing but improve pictures. It has made possible the presenting in pictures of entertainment that we could never have had otherwise. True, there have been some directors and some players who have been dropped by the wayside because they couldn't seem to click with sound. In the case of the players it has been the matter of voice. In the case of the directors it has been a matter that is hard to explain. Probably the mental hazard was too great for the directors to overcome. I never worried about sound. I decided it was here to stay, so jumped in and tried to meet the new order of things. truthfully, I have found it no more difficult to direct in sound than in silent days.

(Continued on Page 38)

"Still" of first bathing beauties in first bathing beauty film. Pick out those who became famous. They are here. So are Director Cline and Cameramen Floyd Jackman and Keonekamp.
New Silent Arc from Creco, Inc.
Can Be Used Two Feet from "Mike," Firm Claims

by DELBERT E. DAVENPORT

ORN, a husky baby (arc), christened the Creco Mute. And, quite unlike all other species of infants, this one makes its advent into the world without the proverbial initial "big squawk," and, according to its manufacturers, never will it be heard by man or microphone for the whole of its life, irrespective of its longevity. For this is a lamp designed at considerable cost to light sets on sound stages without letting its presence be known to anyone—even the well-known "mike" though it may stand within two feet of it. Tests, already made successfully, have proved, according to the makers, that this latest development in the way of illumination will eliminate one of the banes which has existed and persisted to the dismay of soundmen since the day Al Jolson started letting his crooning of "Mammy" be heard in a movie studio. In other words, there will be no more of the extraneous noises for which the arcs have been responsible.

As near the inception as possible, it should be remarked that this latest Creco triumph is another white feather in the cap of one C. Slim Roe, whose business genius and electrical wizardry has become very prominent in studio circles during the last nine years. A full year ago he looked ahead and got busy spending thousands of dollars on the then so-called "doomed" arc light, while most everybody else was rushing pell-mell into the arms of the more tranquil incandescents, suddenly shoved into the foreground of popularity due to its ability for keeping a-glow without bursting the ear-drums of anyone. The final result is the aforementioned Creco Mute, so named because it is as much without the forces of making sound as an oyster lying at the bottom of Chesapeake Bay.

When Mr. Roe asked the chief electrical engineer of one of the major studios of Hollywood to try his new lamp out on a sound stage, there naturally was a great deal of speculation, but when it developed that the soundmen themselves did not know the said lamp was even on the set, although it was in full operation all the time and within two feet of the microphone, the speculation was converted quickly into amazement, an amazement which led to Creco putting no less than twenty expert mechanics to work immediately, building these Creco Mutes as rapidly as possible to meet the demand which came instantly.

There are a great many things the masters of the technical side of it would like to know about this new lamp, which promises so much in the way of aiding to perfect sound on a properly economical basis. One of the main things is involved in the question: "What about the feed on the positive head, the negative one not bothering us in the least?"

(Continued on Page 18)
Miniature Golf

From all over the country comes a protracted and dismal wail from theatre owners anent the craze of the "Tom Thumb" or miniature golf courses that have been springing up throughout the land. They declare that these courses have been cutting deeply into the theatre receipts.

The producers should bend their ears to this cry. If they do not, they may be sorry, for there is no doubt but that the courses are keeping many patrons from the cinemas. The chief reason is very evident. It is because these courses are attractively laid out and lighted. They furnish excellent amusement for city folk who have been cramped up all day in stuffy offices. They furnish a certain amount of wholesome out-door exercise, too. But, above all, they furnish entertainment. Pictures of late, generally speaking, have not been so good in the matter of entertainment, and producers had better take stock and turn out better entertainment. The great public goes where it is entertained. If pictures are made sufficiently entertaining the little golf courses will not hurt them. After all, it is up to the producers to furnish pictures so good that nothing will keep the public away.

The Doldrums

We are again in the midst of that season which seems to affect business and keep it at a rather low ebb. The thought occurs that perhaps the business men themselves are to blame for this annual condition. Most of us sit back and bewail the fact that everyone is away on vacations and business is bad. Why not make this the season of the year when we put on a determined drive for business? As a rule business does not come in the door and say, "Please, may I have your attention". You usually have to go after it. So, why not go after it just a bit harder during the dull season? Increase the advertising, pep up the salesmen, go after the business, and when the Autumn season with its increased trade arrives you will be in full stride.

Recognition

It is gratifying to note the increasing attention that is being given the matter of cinematography in the press and pictorial criticism throughout the entire country. Critics, as a rule, have devoted practically all of their space to the work of the director and the players for so many years that forgetting the photography and the cameraman became more or less of a habit. However, of late the critics have begun to give credit to the men whose genius with the lights and the camera often saves a mediocre picture from failure, and we are glad to see this recognition.

Only recently the picture reviewer in "Life" while declaring that the "Song of the Flame" was not so great in his opinion, had admirable photography by Frank Good, A.S.C. and Lee Garmes, and was the most pleasing thing about the picture. Critics praised the photography of Sol Polito in "The Isle of Lost Ships." Critics universally praised Hal Mohr's photography in "Broadway." Dan Clark's photography in "The Lone Star Ranger" received as much mention as the picture itself. This is as it should be. The cameramen are artists. They have placed American pictures at the top of the world from the point of beauty. Why shouldn't they receive their just praise when they do an unusually excellent piece of work?

Congratulations!

NE of the most attractive special numbers that has come to this desk in many a moon was the Convention number of the International Photographer, the magazine of the Hollywood Local 659, edited by Mr. Silas Snyder. The Union and Mr. Snyder are to be congratulated upon this issue which not only was a magazine of unusual beauty and attractiveness, but contained a wealth of informative material.

As It Should Be

Just as we were going to press with this issue of the American Cinematographer we received word that Daniel Ryan Clark, former President of the American Society of Cinematographers, and still a member of the Society's Board of Governors, and one of Hollywood's finest cameramen, has been made a Director by the Fox company with whom he has been connected for the past twelve years.

So, we take this opportunity of congratulating a news story and editor in the film business. Mr. Clark starts his first picture as a Director on September first, according to the present schedule, and we very confidently predict that his first picture will be an excellent one, for Mr. Clark is one of the most experienced cinematographers in the profession, has photographed every conceivable kind of picture, has splendid conception of story values and has the ability to secure cooperation from everyone about him.

We congratulate Mr. Clark, and wish him the greatest of success. He has worked hard for his opportunity and deserves the success that will come his way.

This writer has long been championing the cause of the cameraman and in his small way has been advocating the idea of finding our new directors in the cameramen's ranks. For some strange reason producers for years, with few exceptions, have not seemed to realize that in the ranks of the cameramen are men who can be of untold value to the picture makers if given the opportunity. We all know that for years good cameramen have been as much responsible as anyone else for the success of many pictures. This writer has frequently seen cameramen absolutely make a success of new and inexperienced directors on their first directorial assignment. That is, when the new director has had the wisdom to turn to his old and experienced cameraman and frankly tell him that he needs help because of his inexperience. Many directors in Hollywood today frankly admit that their cameraman is their principal staff on which they learn. So, why not give these men the opportunity to direct instead of going out into other fields and dragging in men who frequently have never been inside a studio?

To be a successful cameraman one must be a real artist. To be a successful director one must also be an artist; at least have an artistic sense. A cameraman with years of experience has worked with countless directors and has acquired the valuable methods of these men. He has been able through the years to see the mistakes of directors and profit by them. He has been able to see the little tricks of the trade that help make successful pictures. He has been through it all. He has acquired a sictor of story values that can be obtained nowhere quite so well. And—add to that the fact that he KNOWS photography, which, after all, is just about the most important element in making pictures, and what more could you demand of a directorial prospect.

A few cameramen in the past have been given the opportunity to direct. And they have MADE GOOD! Irvin Willat, Clarence Badger, Phil Rosen, Bert Glennon, Roy Pomeroy, Victor Fleming—just a few of them. And none of them have "flopped"!

And now—Dan Clark. Let us hope that the producers will continue. We predict that the picture business will profit if more of the cameramen are given their chance. In the rubber industry they select men who know rubber for promotion. Why not apply the same idea in picture making?

Mr. Kershner

On the opposite page Mr. Glenn Kershner this month gives us a cartoon that is deserving of special mention. He has seen the Cinematographic Annual as it has been compiled. He knows that in the technical field of the motion picture this book dwarfs anything yet published, and he has given us a pretty fair idea of its greatness in his cartoon.
Food for Thought
New Silent Art from Creco
(Continued from Page 15)

Well, this feed is not intermittent for the sole purpose of avoiding that annoying click, which is inevitable with every revolution.

"Then, what about the gears, the noisiest part of any mechanism?"

There is a lot of technical ground to cover in answering this question. First comes the well-known fact that heat and cold have different effects upon metals. Secondly, it must be taken into consideration that in order to avoid these disadvantages adequate substitutes must be provided. Creco, seemingly, has provided them, for, as a result of experiments covering a period of a year, Mr. Roe and his electrical engineers discovered that the material entering into the construction of gears need not be entirely of metal. Therefore, comes into vogue in motion pictures, just as it did in the manufacture of automobiles years ago, the material known as "special composition," in which metal is a part, but not predominating. To be exact, the gears used in the Creco Mute are composed of materials such as will not cause the clashing which results in noise, but will automatically lubricate to avoid that very undesirable effect. This, as a matter of course, averts the calamity of any looseness in gears which might impair the entertainment values of a picture. Because whether they are running on a pitch line or not makes no difference. The matter of the expansion and the contraction is taken care of without the aid of man.

Granted that care is exercised in the selection of carbon which is free from gas pockets, no trouble. Its makers claim, will be experienced from the most common source of annoyance, namely: carbon noise, because Mr. Roe and his electrical experts have contrived a choke coil which does a lot more work than was ever asked of it before in the way of giving direct help to the makers of sound pictures. Sputters, such as have caused countless re-takes and re-recordings, are almost impossible when the Creco Mute is being used, according to the claims of its sponsors. "Not as an afterthought, but as a part of the whole scheme to provide an absolutely silent baby sun-arc for sound pictures," says Slim Roe, "we have discovered a way in which to build this lamp at a weight little in excess of an incandescent and certainly not more than one-fourth the weight of the ordinary arc of the same light producing capacity. In short, you can move this lamp around as if it were a baby and not tire yourself out while getting the best possible results, both from a lighting standpoint and a recording one."

By way of conclusion, it might not be amiss to state that a lot of enthusiasm is in evidence throughout studio land as a result of the announcement that Slim Roe had hit upon another great idea for since the year of 1921 this same Slim Roe has been hitting upon ideas which have helped the advancement of the motion picture industry prodigiously. Now, his Creco Mute looks like the high peak of his mountains of success in picturedom.

Walker Takes Vacation

VERNON WALKER, A. S. C., has just taken the first vacation he has had in five years. San Francisco, Yosemite and other points were on his itinerary. For the past two years Walker has been at First National with Fred Jackman doing trick and process photography. He left First National and is enjoying a vacation he says he has been looking forward to for years.

Milner on Leave

Victor Milner, who has been with Paramount for the last six years, has been granted a three months' leave of absence and has gone North for his first vacation in twelve years.

Len Roos

Len Roos, general manager and vice-president of the Tanar Corporation, has just bought a new Cord automobile.

Schoenbaum Shoots Color

Charles Schoenbaum, A. S. C., is shooting the Technicolor sequences in "Leathernecking," for Radio Pictures. He recently completed color in "Under Western Skies" and "Old Heidelberg."

Rosher Returns

Charles Rosher, A. S. C., has returned to Hollywood. For more than a year he has been at Elstree, England, where he was ace cameraman for British National Pictures. He says he is going to remain here.

BEFORE THE GREAT ADVENTURE

Above is an unusual picture of Commander Byrd, Arctic and Antarctic explorer, daring flyer and idol of a nation. It shows him with Al Gilks, A. S. C., snapped at Paramount's Hollywood studios just before he left for the South Pole. Byrd took time out to place upon the talking film his plans and the object of the trip.

Craft

RCA recording equipment has been installed in the plant of the Craft Film Laboratory at Flushing, L. I.

Wilding with Metropolitan

ANNOUNCEMENT is made of the affiliation of Wilding Picture Productions, Incorporated, Detroit, pioneer producers of sound and silent motion pictures for commercial purposes with the Metropolitan Sound Studios, Incorporated of Hollywood, California. The latter organization is headed by Al and Charles Christie, who need no extended introduction to the readers of the American Cinematographer.

This move is of particular significance to the industry, because it places in the field an organization which has not only gained a national reputation in the creation and production of industrial and educational talking pictures, but is now backed by Hollywood facilities, experience and personnel.

Wilding Picture Productions, Incorporated, Division of Metropolitan Sound Studios, Incorporated, will extend their activities over the Central West territory under the direction of N. E. Wilding, president, assisted by X. F. Sutton, Vice-President, at Detroit, and C. E. Moore, Vice-President, in charge of the Chicago district.

Talking Pictures will be produced by Western Electric Sound System.

End Ground Noises

A DEVICE, which it is claimed, will solve the problem of ground noises, has been developed at RKO studios, Hollywood, by Hugh McDowell, Jr. This device, its inventor claims, will enable the recorder to lower the sound level or raise it to undreamed of heights, thus making possible the recording of the most subtle nuances of music and diction.

Rose With Stahl

Jackson J. Rose, A. S. C., is photographing "The Woman Surrenders" for John M. Stahl. In the cast are Conrad Nagel and Rod La Rocque.
Business Is Good!

The first half of 1930 has established a new all-time record for volume sales in Hollywood . . .

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Astro Pan-Tachar 75 mm. F:2.3 lens, mounted 120.00
Astro Pan-Tachar 100 mm. F:2.3 lens, mounted 150.00
Astro Pan-Tachar 150 mm. F:2.3 lens, mounted 210.00
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WANTED...
An Editor-Manager for the Society of Motion Picture Engineers. Applications are hereby invited for the combined position of business manager of the Society and editor of the Society's Journal. The editor-manager will be supplied with capable editorial and clerical assistants, and his duties will be (a) to edit the Journal under the jurisdiction of the Board of Editors; (b) to transact the routine business of the Secretary and Treasurer and the various committee chairmen, and (c) to assist the President in co-ordinating the various activities of the Society. Desirable qualifications of the applicant include a pleasing personality, managerial and technical editorial ability, and a broad knowledge of the motion picture industry. The salary will be not less than $6,000 per year. Applications should be forwarded to J. H. Kurlander, Secretary of the Society of Motion Picture Engineers, 2 Clearfield Avenue, Bloomfield, N. J.

From the Director's Chair
(Continued from Page 9)
league signalled that he had all the scenes he wanted. Until then I babbled desperately on in English, bluffing to the best of my ability, and producing every official-looking document I owned, from my passport to my New York State drivers' license. Only when I knew that we had what we wanted did I allow a gleam of enthusiasm to cross my face. Then I hastily and apologetically bowed myself and my colleague from the scene, and together we walked off with the only films ever made within the Kremlin.

Many a time since, in my work in Hollywood, I have seen this ability to keep on grinding in the face of the unexpected prove a virial aid to both director and cinematographer. In Ben Hur, for instance, the greatest thrill in the Race sequence was secured because the cinematographers kept on grinding while an entirely unscheduled accident occurred before them. In making these scenes we knew that we had but a single day on account of the tremendous expense of the thousands of people employed. Therefore Percy Hilburn, who was in charge of the photography of the sequence, took pains to place expert cinematographers at every conceivable vantage point. When his plans were perfected, there was not an inch of the vast set which was not under the eye of at least two or three of the 42 cameras he used. This careful planning has been amply repaid in the normal course of events, but when the unexpected happened it enabled the cinematographers to bring one of the outstanding moments of the completed picture to the screen. Everyone who has seen the picture remembers the thrilling scene when one of the chariots unlimbers, loses a wheel, and the chariots following behind crash into it at breakneck speed. This occurrence was in no way staged, but, though it was unexpected, Mr. Hilburn's plans were so well laid that no fewer than six cameras caught the crash. And through it all, the six cameramen, though as surprised as we all were, kept their eyes glued to the finders, and their right hands revolving regularly, so that every split-second's action was captured.

But these spectacular instances are by no means the full story of the cameraman's achievements. After all, motion picture making is a business, and, like all businesses, must wherever possible avoid such unusual conditions of production. This may tend to make production work resemble drab, routine labor, but, even under such conditions, the cinematographers' unvarying loyalty and perseverance are equally outstanding. Their ability, for instance, to "carry on" in the face of almost any condition is truly amazing. A rather extreme example of this is that of a company which, some years ago, spent several weeks far from civilization, in the Sahara desert. During that time, the chief cinematographer, Robert Kurler, through experience and desert fever, photographed more than 75,000 feet of film so perfect that every inch of it was usable. A somewhat more humorous situation is that of Percy Hilburn, who is one of the most successful photographers of marine films, despite the fact that he is a decidedly poor sailor, and has a great aversion to the sea.

Another generally unnoticed habit of most cinematographers, and one which has a great appeal to the executive mind, is the way that they frequently apply their great stores of technical knowledge to the practical purpose of saving the company time and money. But these important acts are so much a part of our daily lives that we are too often inclined to overlook them. One example that I happen to recall just now occurred when Oliver Marsh and I were making Camille, with Norma Talmadge. The scene called for a number of night scenes on a Paris street set. Now, night work is expensive, especially when the sets are so large, and have to be filled with a lot of people. So Oliver came to me and suggested that we shoot the scene by day. I knew that previous attempts in that direction had not been overly successful, but I also knew that if he said it could be done, it could be done. At any rate, it was worth trying. And I had Oliver's ideas in repainting the set, etc., carried out. Then Oliver got busy with his filters and other things, and before I knew it, we had made all of our night scenes by daylight, just as effectively as though they had really been done at night, and economically enough to have saved the company nearly $20,000.

All of these things are important, but from the director's angle, undoubtedly the biggest qualification of the expert cinematographer is the way he can cooperate with the director in securing any given emotional effect. For every effect that the
Left to right—Billy Bitzer, Fred Niblo, George Barnes and Alvin Wyckoff, A. S. C.

director can get with dialogue and action can be heightened by sympathetic cinematography. In this respect, such great cinematic artists as Oliver Marshall, Percy Hilburn, Tony Gaudio, Henry Sharp, George Barnes, Victor Milner and Billy Bitzer, with all of whom I have been privileged to work, have a happy faculty of so perfectly cooperating with a director that they seem more like an alter ego than a separate individual. For instance, when Oliver Marshall and I are working together I don't suppose that we exchange twenty words a day, yet on the screen my every idea is expressed in surprisingly beautiful photography. Our cooperation is so perfect that he seems almost able to read my unspoken thoughts. To me, such perfect cooperation is the greatest aid that a director could possibly have, for only under such conditions can he feel free to do his best work. In the course of even the best-planned production some unexpected difficulties will always arise; but with such a spirit of mutual cooperation existing between the director and the cinematographer in charge of the production, no obstacle can be held insurmountable.

W. E. Business Good

Despite the expected seasonal slump at this time of the year, contracts for the installations of Western Electric Sound Systems are coming into the home office of Electrical Research Products at a normal winter time gait. Among the theatres whose contracts have been approved recently are: The S. Elmo, Houston, Texas; the Strand, Mendota, Illinois; the New Astor, Ruston, Louisiana; the Davidson, Milwaukee, Wisconsin; the Alhambra, Atturas, California; the Audian, Cour D’Alene, Idaho; the Community, Solvay, New York; the Electric, Laramie, Kansas; the Palace, Kinsley, Kansas; the Cameo, Mountain Grove, Missouri; the Uptown, Hammond, Indiana; the Lincoln, Memphis, Tennessee; the Eden, Brooklyn, New York; the Arcade, Manchester, Vermont; the Central Park, Birmingham, Alabama; and the Gem, Wichita Falls, Texas; the State Theatre, Hollister, California; and the 16th Street and Avon Theatres in Brooklyn, New York.

In an endeavor to help the young film art workers and the French film industry, the young film authors have formed an association in Paris, known as “Union des Jeunes Auteurs de Films,” under the presidency of C. F. Perier-Leclerc.

Dubray Heads Chicago S. M. P. E.

The first meeting of the Chicago Section of the Society of Motion Picture Engineers was held recently, at which time officers were elected. J. A. Dubray was elected Chairman and J. Elliott Jenkins Secretary, Dubray, Jenkins, O. F. Sphar and O. B. Depue were made Governors, and Dubray, E. S. Pearall, Jr., and Fred Kranz were made members of the paper program committee with Dubray acting as Chairman. B. W. Depue was appointed to handle publicity.

The boundaries of the Section were set as a line running north and south through a point 50 miles west of Cleveland and a line running north and south through a point 50 miles east of Denver, the north and south boundaries to be those of the United States.

It was also decided that a dinner meeting shall be held once every month.

Audiphones Increasing

More theatres are listening to the box office possibilities of Western Electric's Audiphones for the Hard of Hearing. C. W. Bunn, General Sales Manager of Electrical Research Products, announced Saturday that contracts for this equipment had been signed by the Adelphi Theatre, Chicago, the Alcyon Theatre, Highland Park, Ill., and the Indiana, Indiana Harbor, Indiana.

Approximately 600 seats will be wired between the three theatres and approximately 100 sets will be installed immediately.

France

It is stated that in view of the high price of sound reproducing equipment, as compared with other sound producing and reproducing devices, such as musical instruments, phonographs, etc., the French Administration of Taxes tended to submit these equipments to the 12 per cent luxury tax. M. Francois-Poncent, Under-Secretary of State of National Economy, was approached in this matter by the Chambre Syndicale which presented a report of M. Andre Debrue, together with certain legal arguments. M. Francois-Poncent, is reported to have communicated with the Directeur General des Douanes on the subject, with the result that now the equipment is to be subject only to the 2 per cent tax.
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**Editor-Manager for S. M. P. E.**

The Society of Motion Picture Engineers has announced that it will employ a permanent, paid Editor-Manager to edit its monthly Journal and manage the headquarters of the Society. As soon as this position is filled, permanent offices and headquarters for the Society will be established in New York.

"Heretofore," according to John I. Crabtree, President, "the business of the Society has been handled voluntarily by its members who devoted a great deal of their time and labor.

"Publication of the monthly Journal, begun the first of the year and carried on by a Journal Committee headed by L. A. Jones, placed a further burden upon the members until now the tremendous growth of the Society and its increased activities makes the new plan necessary. This is made possible now through the co-operation of a number of firms in the industry which have subscribed to Sustaining Memberships in the Society.

"The Editor-Manager will be supplied with capable editorial and clerical assistance and his duties will be to edit the Journal under the jurisdiction of the Board of Editors, to transact the routine business of the secretary and treasurer and the various committee chairmen and to assist the president in co-ordinating the various activities of the Society. Desirable qualifications for the position include a pleasing personality, managerial and technical editorial ability and a broad knowledge of the motion picture industry.

"Today the Society occupies an important position in the industry, and its tremendous growth is evidence of this fact. Since its publication, the Journal has met with unusual success and is now regarded as a valuable medium for providing and spreading technical knowledge of the advances being made in the motion picture industry. With permanent headquarters and a paid staff to handle the business of the Society, we believe that it will be able to make even greater contributions to the industry in the future."

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**Motion Pictures Sell Real Estate**

REALTORS Find Varied Sales Uses for Motion Pictures' is the title of an article in a recent issue of the National Real Estate Journal. In this article the writer enumerates the uses of movies for such varied purposes as chain store leasing, securing loans, industrial property development and promotion, farm land sales, general brokerage promotion, and selling subdivision homes.

With regard to chain store leasing, he tells how a Kansas City firm uses motion pictures in checking locations, not only to show the volume of traffic but whether men or women predominate and whether the traffic is high class or otherwise.

Mills & Sons, Chicago realtors, who in the last few years have built over 1,600 homes in one development alone, are referred to in connection with the use of a Filmo camera in taking movies of this development which were submitted to a New York life insurance for securing a loan. The result was a much larger loan than was expected. The insurance company officials stated that this was an ideal method to use in coming to them for a loan because it showed so clearly what the security was.

E. Ray Evans, realtor-builder, of Columbus, Ohio, according to the article, has a thirty-minute film showing how he builds from cellar to garret and how mass production provides better homes at lower costs. Starting with excavation, the picture shows the construction of the foundation, the erection of the walls, the laying of the floors, putting on the sheathing, the roofing, the grading and the gardening. Later when the house is finished the picture shows the arrival of the salesman and a family of prospects. The architectural and structural fine points are shown and then the savings made possible by means of standardization. More than three thousand people saw the film at a recent Columbus better homes exhibition.

In Miami, Florida, recently, the article states, a builder erected a home for a northern client. To keep him informed of the progress of the work, the builder took movies during the course of construction with a Bell & Howell Filmo and sent the films to the client who projected them in his home.

A Milwaukee realtor shows travel pictures, etc., at public meetings or luncheons and stipulates that he shall show at least one real estate film of building activity or property for sale at the same time. Many sales and loans have been traced to persons attending these showings.

A Geneva, Ohio, realtor finds movies a great help for arousing interest in farms, suburban property and lake frontage.
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Name

Address

City

State
Agricultural Movies
(Continued from Page 11)
written such stuff. I had no such feeling, however, when I saw your version of my book on the screen; on the other hand, I was moved as one is always moved by an effective piece of art."

I naturally prize this letter very highly and preserve it very carefully for I may never get another one like it.

Our work in agricultural movies takes us into all branches of industry. We must go into the steel mills many times for parts of our stories. We have even gone so far as to photograph the inside of a blast furnace with the steel boiling at a temperature of 3,000 degrees. In the making of consequently very special preparation and many, many tests before it was accomplished. We have used the airplane very extensively in our work and as a matter of fact when airplane photography was more of a novelty we had two planes of our own and we find in the making of many films we have to call in sequences into our stories. We have gone into the coal mines for sequences, we have gone into the limestone quarries in connection with soil building stories, and into farm implement manufacturing plants. We have actually had to portray the growing of crops under ground, the action going on in the soil beneath the surface. All these things and many more we must accomplish in two reels and still leave room for human interest drama in order that the film will be used and enjoyed by the agricultural people.

We, of course, have our share of thrilling experiences. About a year ago we did one of our films in the United States and it was necessary for us to climb to the highest mountain in that part of the country in order to get a certain scene which it was very necessary for us to get. We climbed some 3000 feet and traveled more than seven and a half miles on foot to get there. We enjoyed the beautiful scenes that were unfolded before us at every step. But like most people in our line of business, we were not satisfied with just the angle that we had reached and began to look about to see if we could not find a better angle, when suddenly our guide, who, by the way, was familiar with the country, silenced us and told us to step behind trees which we did without argument. For a few hundred feet away we could see a thin tongue of blue smoke issuing from a thicket. Our guide cautioned us to be quiet until he returned. He advanced a hundred feet or so and gave a call which is peculiar to the mountains, but which was not answered. He kept on, however, and presently returning he said everything was all right. Still, we knew no more than we did in the first place, although we had a pretty good idea what it was all about—and sure enough we had guessed right that it contained a very modern moonshiner's still. It was a very friendly place indeed and accommodations were made up principally of 45 Colt revolvers and 30-30 rifles. The equipment was of the very best and scrupulously clean. The moonshiner himself was a fine fellow—born and raised on that very mountain. He told us his father was a moonshiner and his grandfather was a moonshiner. We made a motion picture and still pictures of his equipment and of him. This to our surprise he appreciated very much. He did not ask us for a promise of secrecy and when I asked him why, he said he believed he knew people well enough to know that it was not necessary. We spent the night at his cabin on top of the mountain and listened to the most marvelous radio reception I have had the pleasure of hearing. Of course there is a lot more to this story, but I am a great believer in leaving much to the imagination. Dope it out for yourself.

Of course, in the line of thrills we have been chased by as many mad bulls as anyone else. I suppose, and have waited as many hours for some animal, bird, or form of vegetation to take just the motion we wanted it to take before we photographed it.

We often hear people marvel at the wonderful accomplishments of the motion picture industry but when we consider the great variety of circumstances and activities that are confronted in this industry it is any wonder that so much has been accomplished. There is never a moment of monotony connected with any phase of this business for me. I have given to every other producer of motion pictures. There is a constant changing of ideas and with us in this section of the country, it is necessary for us to grasp those that suit our purpose best and put them into practice, improve on them if possible, and strive at all times to originate new ones. It might be of interest to some of the readers of The American Cinematographer to know that the writer has never visited Hollywood or a studio where big productions have been made or were being made and yet it is a matter of considerable satisfaction to us to have the cameramen and technical men from prominent studios drop in and tell us just how interested they are in our methods of procedure. Perhaps we should not be too sure of our compliments as these cameramen and technicians for the most part are very diplomatic.

And now from the standpoint of variety we are confronted with sound and sound to my way of thinking is variety a plenty, but it is here and must be reckoned with and we are going right along and soon will start producing sound pictures for rural distribution, but first our users must have sound equipment and it is going to be up to us to find a plan whereby these non-theatrical users can finance the purchase of such equipment. But this will come and quickly, too.

Peoria is often referred to in movies, stage productions, etc, as typifying the 'hick town,' but I extend this invitation to any wandering cameraman, no matter to which local he belongs, to drop in and try to get the address of the fellow I visited in Kentucky.

Curved Gates in Optical Printers

In certain types of optical motion picture printers, it is desirable for the film, in its printing position, to be curved along its length. This course may be dictated by the type of pull-down used, or by the possibility of dispensing with pressure pads and thus avoiding the difficulties attendant upon accumulated dirt, grease, and emulsion.

The question arises: When a curved object gate is used, what should be the shape of the image gate in order that the image formed by the printing lens will fall on the raw stock? Assuming a lens with a flat field, the problem has been solved analytically for the general case. It was found that a curved (circular) object gate is imaged as a conic section (ellipse, hyperbola, parabola) and that by making the curvature of the object gate a particular function of the printing magnification and of the focal length of the printing lens, the conic section becomes a circle. In cases where it is impractical or impossible to adopt this value of the curvature of the object gate, an approximate method is outlined to the actual image curve, can be computed.

"The Photographic Treatment of Variable Area Sound Films"
By J. A. Maurer, R. C. A. Photophone, Inc., New York City.
An abstract of paper read at S. M. P. E. Spring Meeting.

This paper discusses both theoretically and experimentally the effect of photographic treatment on the quality of variable area sound films. The curves of sound records, when reproduced photographically, the points to be considered are high frequency response and volume range. It is found that the best procedure is to work for a density of 1.3 in both negative and positive, but this is not at all critical. Contrary to early opinion, it is considered better to work at low densities than at very high ones. Densities as high as 2.0 are particularly to be avoided.

Rumanian Domestic Feature Films
Domestic feature films have been started in Rumania. A film section of the "Regina Maria" company, of which Queen Marie is the president, has been recently created under the name of **Soremar.** Two feature films are now underway, it is stated. One of them entitled "Symphony of Love," is starring Vivian Gibson and Grit Hald, together with Rumanian artists; the other, "Duty and Sacrifice," has an entirely Rumanian cast. "Soremar" further intends to release a Rumanian weekly review. A cameraman was sent to Syria, Egypt and Palestine to accompany Queen Marie and Princess Ileana of Rumania on their recent oriental trip, and returned with a topical film containing landscapes of oriental countries and measuring approximately 2,000 to 3,000 meters. The picture is scheduled for release before the end of the month.
In every state in the U.S.A. and in 36 foreign countries professional and amateur cinematographers, as well as men and women in various branches of the motion picture art, read

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DOUGLAS SHEARER, A.S.C., recently remarked to the writer that one of the besetting ills of professional sound recording was that far too much attention was being paid to the equipment used, and far too little to the technique of its use. He might easily have said the same thing about amateur cinematography. All of us know of individuals who consider themselves amateur cinematographers by virtue of possessing de luxe outfits representing investments of hundreds or thousands of dollars for cameras, lenses, and accessories, but who cannot to save their lives produce an even passably photographed scene. They have, apparently, everything imaginable to work with, yet they cannot produce anything to show for the time and money they have spent on their hobby. What, they wonder, can be the cause of this? Why is it that they cannot do as well with their wonderful equipments as their neighbors do with their cheap, motographic Brownies?

The answer is simple. Though they may have every accessory that money can buy, they have not the two vital ones which it cannot purchase: Common Sense and Experience.

The Priceless Accessories

These two accessories, though intangible, are like jewels of great price. They cannot be bought, but without them success in any activity is impossible.

Of the two, Common Sense is the most valuable, for with it one can easily gain useful experience. Applied to the field of cinematography, common sense dictates that advancement should be made slowly and logically—step by step toward the desired goal. Above all, no new step should be taken until every previous step is fully mastered. If you cannot make satisfactory animated snapshots, it is futile to attempt the more artistic cinematic endeavors. If you have not mastered lighting and exposure with the simple, fixed-focus lens with which your camera was originally equipped, you will be merely wasting money by having a faster focusing lens fitted. If you have not mastered the technique of normal exposure-frequencies and normal-angled lenses, you have no business trying to use slow-motion mechanisms, or telephoto lenses. If you cannot get a good black-and-white picture, it is not useful to try to get a good picture in natural colors. We must all creep before we walk, and walk before we can run.

The First Step

The first thing to be mastered in any form of photography is proper exposure. In cine cameras, this should be simple, for two reasons. In the first place the emulsions coated on amateur film allow a very great deal of error to be made without noticeable ill effects to the picture. In the second place, practically every 16 mm. camera has somewhere upon its surface an excellent guide to exposures for most subjects. If only these guides be followed, correct exposures will be had in most cases; and where there is a slight error, the latitude of the film will automatically compensate therefor.

But if you feel yourself in need of further help in computing exposures, there are several accurate exposure-meters which will measure the light for you, and provide you with the exactly right exposure for every condition you may meet. But if you prefer not to spend the extra ten or fifteen dollars which these meters cost, common sense can soon bring experience to your rescue. Think it over carefully: upon your camera you have an exposure-chart that is exact enough for all general use; in your head you have a brain, equipped with the faculties of memory and judgment. Now, is there any reason why you cannot use the guide the camera-maker has supplied you to so train your memory that by experience you will learn to judge exposures with at least reasonable accuracy?

A further help is recalling that the exposure must be governed by the amount of light reflected from the objects photographed, and the color of that light. To the ordinary film, blues and lavenders reflect the most light, then the yellows, and, lastly and least of all, the greens and reds. Therefore, if your background is, for instance, dark green shrubbery, it will want slightly more exposure than if it were a creamy stucco wall, and still more than if it were a brilliant blue sky or sea. Furthermore, the colors of the figure or figures being photographed will also influence the exposure needed. A dark-clad figure against a dark background, for instance, will demand more exposure than a light-colored one against the same setting. This suggests, too, that it is advisable to try to have some tonal contrast between the figures and their background. Lastly, remember the famous old adage, "Expose for the shadows, and the highlights will take care of themselves."

Where Does the Light Come From

The second step to be mastered is simple lighting. The direction from which the light falls upon a subject is vitally important. Perhaps the easiest demonstration of this difference may be suggested is to stand before a mirror, and watch the effect upon your own features of light coming from different angles, as you move a single bulb from side to side, and from front to back. The same effects are obtainable with a camera and daylight, save that instead of moving the light your must move your subject. We all remember that the instruction books that came with our first "Brownies" told us that we must always have the sun behind the camera. This rule does not apply in the case of cine cameras. Instead, its cinematic equivalent is that the sun should be over the cinematographer's shoulder. This makes the light strike the subject obliquely from the front and side. It is the most useful lighting for most purposes. A straight side-lighting is sometimes good, but it is inclined to give a harsh effect, with overly deep shadows on the dark side of the face. For the same reason, an absolute top-light is undesirable, for this makes the casts are most unattractive. Likewise, a pure front-light, though it casts no shadows, is to be avoided, for it gives an effect of flatness, and robs the picture of character.

Now, most cinema cameras are equipped with good-sized lenses, and they can therefore be used with lightings that are normally verboten for the average still camerist. Back-lightings, for instance, are highly effective. The light may strike the subject from almost any rearward angle, as long as the direct rays of the sun are kept from the lens by the lens-hood, or by some other natural or artificial shade that does not interfere with the picture itself. In such cases, however, the exposure must be calculated to be adequate for the shadowed portions, and, as usual, the highlights will take care of themselves.

But light can be controlled, and the result obtainable with controlled lightings are far and away superior to the ones naturally obtainable. The instruments by which this control is effected is a reflector, a very simple device consisting of a large square of light-colored material, placed so that it throws back the light into the shadowed parts of the subject. The simplest form of reflector is a sheet of white cloth—it may even be a literal bedsheet. This will serve acceptably, but its reflective power is not of the best; a better reflector can easily be made of plywood or compo-board, enameled white, or coated with aluminum paint. This is the so-called "soft" reflecter, which gives a nice, diffused light that is adaptable to most purposes. The "hard" reflector is a similar surface coated with burntinsoil or aluminum leaf. This reflects a far greater percentage of the light falling upon it, and gives in consequence a stronger illumination, and a more marked beam. It is more

(Continued on page 36)
Professional

John Arnold, A. S. C., Uses

by WILLIAM

Two of Mr. Arnold's joys—his Filmo and the newest camera "bungalow" he has designed for silencing cameras on the set

tively engaged in cinematography, having photographed many outstanding pictures, among which have been "The Big Parade," "The Broadway Melody," and "The Hollywood Revue." But without doubt his outstanding achievement is the invention and perfection of the camera "Bungalow," which was one of the first mobile camera coverings, and freed the cinematographers from the restrictions of the unwieldy camera booths demanded by sound-photography. Since then, he has constantly improved his "Bungalows," each model of which has seemed perfect to everyone save its creator, who has promptly started work on a new, and better design.

Concerning these achievements, Mr. Arnold is characteristically modest. "Well," he will tell you, "something had to be done, so I figured that it was up to me to do it. I don't know that these 'Bungalows' are so wonderful, though. Of course, they're better than the booths—but that isn't saying much. I'm working on a new one now, though; come around next week and I'll be able to show you some-

F THERE is any truth in the old saying that there is no rest for the wicked. John Arnold, A. S. C., must at some time have been quite an outstanding mal-factor, for today he is one of the busiest individuals in motion pictures. He is the head of the Camera Department of the Metro-Goldwyn-Mayer Studio—a post which gives its occupant very little time for rest or anything else unconnected with the supervision of the several dozen cinematographers who photograph the M-G-M pictures. In addition to this, Mr. Arnold is also the very active Treasurer of the American Society of Cinematographers—the vigilant guardian of the Society's funds, and the particular nemesis of those members who become so engrossed in their work as to forget when to pay their dues.

Filling two such posts as actively as Mr. Arnold does these would seem enough to keep most men busy—but not this incredible person. He somehow manages to find the time to invent all sorts of improvements in both machinery and methods for the production of sound pictures, and to be one of Hollywood's most enthusiastic users of 16 mm. apparatus. In addition to all this, it has been reported on good authority that Mr. Arnold has at times been observed to breathe, and even to eat. To date, however, no one has been known to catch him napping.

Mr. Arnold has been with the Metro Company so long that he seems almost as permanent a fixture as Leo, the Lion. During much of this time he was ac-

John Arnold, A.S.C., with his Filmo
thing really good.”

He is equally reticent about his activities as a 16 mm. amateur. So reticent, in fact, that it was only by accident that I learned of his interest in this direction. When I did, however, I went immediately to his office at the studio, where I found him on what he called one of his easier days. As I arrived he was in the middle of a heated argument with several agitated members of the sound department, and at the same time trying to supervise the preparation of the photographic equipment of a company just starting out on an extensive location trip. After half an hour or so of this, he finally found a moment to devote to himself, and I pinned him down in a handy corner to tell him why I had come to see him.

“Well,” he replied. “Of course I use a Filmo, but I don’t know that I’ve ever done anything worth talking about with it. I’ve certainly had a lot of fun with it, though. I’ve had several 16 mm. cameras—had ‘em ever since they started making them—but I’ve used the things more for my own pleasure than for anything else. I’ve shot quite a bit of film with them: probably about 25,000 feet. I’ve got films of practically every star I’ve ever worked with. That’s the most interesting sort of a record that I could have of them, you know, and the most personal. Besides, it was a lot of fun in the making.

“I’ve always carried the camera with me whenever I went on location, and I’ve often brought it to the studio with me, too. And when I travel, there’s always a cine camera handyly tucked away in the car with me. I’ve made that a fixed habit, because long ago I found that whenever I left the camera behind, I’d be sure to lose some interesting scene or other.

“What sort of pictures do I make? About every kind. I guess, just the way all other amateurs do. Mostly they’re the simple little ‘gag’ stories that folks in the show business can get a lot of fun out of doing in their moments of relaxation. And, you know, it’s surprising how many of the actors and directors I find to be cine-amateurs already. This is just as true of the people who have come to us from the stage and the opera as it is of regular picture people. For instance, two of our newest arrivals, Grace Moore and Lawrence Tibbett — both of them internationally famous opera stars—are ardent amateur cinematographers. Personally, I’m inclined to give a great deal of the credit for the remarkable way both of them have adapted themselves to the requirements of screen acting to the fact that they are both proficient with their cine cameras. When I suggested this viewpoint to Miss Moore the other day, she quite agreed with me. Her work with her own Filmo, she told me, had been a great help in teaching her how to time her movements when she faced the

(Continued on page 34)
OF INTEREST TO AMATEURS

NOT all users of 16 mm. cameras have sufficient money to carry out the film plans they would like. Some of us have to count our pennies if we wish to take that vacation. So, we are passing along a tip given us by one of our friends whose camera not only pays for all the film used by its owner, but helps pay the vacation expense as well. This bright young man conceived the idea of making commercial pictures with his 16 mm. camera. So, he sold the idea to a realty outfit and his first "job" consisted of making an attractive picture of the section which the real estate people were pushing. He did a mighty fine job and was well paid. The reality concern was well repaid, also. I understand the picture helped sell a large number of home sites. Just a hint for other progressive owners of 16 mm. cameras who would like to earn that extra dollar now and then.

WILLIAM Sullivan, head of the Hollywood Camera Shop, has worked out a novel idea in connection with his special reel showing Hollywood and which is selling all over the world. The idea is simply to shoot a few feet of a prospective purchaser in some well known spot in Hollywood and cut it into the "Hollywood" reel. Of course this requires the purchaser’s presence in Hollywood; but for those who visit this famous city and buy one of Mr. Sullivan’s 16 mm. reels it is a nice idea to see themselves right in it.

USERS of 16 mm. cameras will find much of unusual interest and worthwhile value in the Cinematographic Annual which the American Society of Cinematographers is publishing. This book, which will be ready for delivery within a few days, contains a section devoted entirely to the Amateur, and prepared by William Stull, who conducts the Amateur department in this magazine. Mr. Stull has done a remarkably fine piece of work, and no Amateur can afford to be without this book. Incidentally, the professional section of the book will be of value to the serious Amateur. The edition is limited and some will be disappointed if they do not get their orders in early.

New Movie House

RALPH EMERSON, who came to Hollywood as an actor, and made good, has entered the 16 millimeter movie supply business, and has one of the most attractive business places on Wilshire Boulevard. Mr. Emerson has taken over the former location of the Leavitt Cine Picture Company, at 3150 Wilshire Boulevard. Associated with him as sales manager is Rollin King, widely known in Hollywood and Los Angeles amateur circles. A complete line of Bell & Howell, Eastman and Victor cameras and equipment is being carried. Mr. Emerson is on a vacation of absence now from the studio where he is under contract, and after getting his business established will go back to acting, at least for a time. Emphasis is being laid upon the fact that he and his firm will give service after sales.

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A New Eyemo Camera with Multiple Speeds, Turret Head and Hand Crank

NEWSREEL industrial and exploration motion picture cameramen, also amateurs and semi-professionals who prefer 35 mm. film, will be interested in a new Eyemo camera announced by Bell & Howell as available July 1.

The new Eyemo includes the major features of the Filmo 70-D Camera, having seven film speeds (4, 6, 8, 12, 24, and 32), a built-in turret head accommodating three lenses, a variable area viewfinder, and a relative exposure indicator.

In addition to these features, the new Eyemo has an integral crank which permits hand cranking whenever it is desired—for instance, when an exceptionally long scene is encountered which runs beyond the spring capacity of the camera, or when single frame exposures are to be taken. For hand cranking, the speed indicator may be set at the speed desired. The governor then acts as a brake and makes it impossible to turn faster than the previously established speed.

The new Eyemo presents the cinematographer with remarkable versatility in a light, compact 35 mm. camera which can be held in the hand or used on a light portable tripod, such as the new B & H All-Metal Tripod.

An Eskimo Merriwell
(Continued from Page 13)

Barrow while I watched the patched wing, wondering if the wire would hold. It did."

On the return from Alaska, Aghnichack was assigned to be assistant to the second cameraman on the "Air Circus," on which Dan Clark, A. S. C., was chief Cinematographer. And Aghnichack, who had become quite expert at shooting "stills," shot the stills for it. A friendship between Dan and Aghnichack sprang up and Aghnichack was made Dan's assistant.

"I was worried about assisting a big time cameraman," says Aghnichack, "and was afraid I would do something wrong. But Dan was a great fellow and did much to help me. I have been with him now for two and a half years, and hope I stay right with him until the day comes. If it ever does, when I will be a first cameraman myself. So many people think that we of the north can't live down here, can't become as the rest of you, that I want some day to show the world that an Eskimo boy can, if he works hard enough, become anything he wishes. The picture people have been wonderful to me. No one in the world could have been nicer. And the cameramen have been wonderful. I can't say enough in praise of them. I only hope I can become artist enough to become one of them with the title 'chief Cinematographer' attached to my name."

"How about the whale blubber," we asked, "Do you miss it?"

"I'll tell you a secret," he replied.

"I get awfully hungry for it sometimes, and when I was in Alaska with Charles Clarke and stopped off at our village, the first thing I did was ask for some. It sure tasted good."
Professional Amateurs

(Continued from Page 31)

studio Bell & Howell. Besides, it had taught her the biggest lesson that a stage-player can learn about pictures—that the camera will take your performance to the last row of the theatre if you will only play to it. This is something that any stage-trained artist can learn from using a Filmo, and, knowing that Miss Moore has had its expert coaching, I can readily subscribe to all the nice things that the publicity department is saying about her screen work.

"The other day I brought one of the new 70-D Filmos onto Miss Moore's set to show her, and the intelligent interest she showed in it certainly proved what kind of an amateur cinematographer she was. Since then, I’ve been more than glad to show her a number of the finer points of Filmo camera work,

"Some of them might be worth passing along to other amateurs. For instance, there are two little things that are so much a matter of course to the professional cameraman as to be in his mind as elementary as the use of a loaded camera instead of an empty—a fact that is known to all amateurs—yet I know that lots of amateurs overlook them. They are the use of a tripod, and the use of reflectors. I suppose that every professional cameraman who has ever broken into print has advocated them—for they really are essential.

"After all, the only way to get perfectly steady pictures is to have the camera absolutely steady—and the only way to do that is to mount it on a tripod. Of course, it may seem like an awful lot of trouble to go to when using such a compact little outfit as a Filmo, but it’s worth it; and with such a quickly set up tripod as my new Filmo tripod, there is really no trouble at all. And as for reflectors, they make all the difference in the world in your pictures, for they enable you to balance your lighting, and get exactly the effects you want. And they are particularly useful in Kodacolor work, where you need all the light you can get, and, most of all, an even illumination.

"Another useful little pointer is this: use a K-1 filter and a 50 neutral grey filter together, and then cross the light on your subject. This combination, with Panachromatic film, gives a beautifully soft picture that is most pleasing.

"What’s the biggest value of this amateur work to professional picture people? That depends on the person. To most of us, I think, the biggest return is the fun we get out of it. It may sound like the old joke about a postman’s spending his holidays hiking; for a professional cinematographer to say he enjoys making 16 mm. movies as a recreation, but it’s true just the same. I get a big kick out of it, and I notice that most of the other boys do, too.

"But, as far as I’m concerned, there is another angle on it, too. I get a lot of fun out of my Filmo, but I do a lot of off-the-cam hinder experimentation with it, too, at a whole lot less cost than if I used standard film. I’ve fixed up a fair little laboratory at my home, and in it I do my own developing and printing, and I’ve been able to try out several new ideas in that line there before adapting them to studio requirements. I’ve built a little optical printer, and I’ve had a lot of fun doing 16 mm. trick stuff with it. More important than that, I’ve worked out several new devices on it that I’m patenting, and that I’m going to embody in professional equipment.

"Another thing, the Kodacolor work I’ve been doing has revived my interest in color cinematography. I’m using my other 16 mm. camera—a Cine-Kodak—now in some experiments I’m making with a two-color bi-pack process. I’ve had the gate rebuilt to take two films, and I’ve managed to get some very encouraging results. Of course the bi-pack principle is new, but I’m getting some new angles on it, and my 16 mm. experiments are leading me on to something that may some day be worth while professionally. And at the same time they’re giving me a lot of pleasure.

"So, you see, as far as I’m concerned, my little amateur work, even tough it isn’t so sensational, is not only giving me a lot of pleasure, but now and then some professional profit, too."

At this moment, the office phone rang, and, simultaneously, the door burst open to admit a cameraman and a sound man, disagreeing stridently, who pounced on Mr. Arnold, and bore him away to straighten out some difficulty on a distant stage. And there, wrapped in the studying of the good fortune of both the motion picture industry and the amateur film movement at being able to count among their members such a man as this.
CHINESE PROFESSOR USES CINE KODAK

Above, left to right, Dr. E. P. Chang, Professor Chi and Mei Lan-Fang, three of China's most famous men, as they stepped from a T-A-T plane at San Diego. Professor Chi, an ardent amateur movie maker, as well as China's most noted educator, had his ever-present Cine-Kodak with him. He has made a rather complete photographic record of the American trip.

Australia

It has been reported that the small arms factory (owned by the Federal Government) at Lithgow has obtained a contract from an American company to manufacture talkie projection machines, according to Assistant American Trade Commissioner H. P. Van Blarcom. It is known that the Munitions Supply Board is opposed to the manufacture of outside orders, but the Minister for Defence is enthusiastic and has given assurance that every effort would be made to manufacture articles which are now imported.

Harringtons Ltd. of Sydney, have acquired control and distribution of Ray Cophone Australian talkie equipment. This machine, first marketed about a year ago, is capable of reproducing both sound on film and sound on disc. However, Harringtons plan the immediate manufacture of a special model to reproduce sound on film only, the machine to be sold at less than £1,000 and to be suitable for houses of up to 1000 seating capacity.

Warsaw

The first domestically-produced sound-film is being exhibited at the Casino cinema in Warsaw. It was released by the "Heros" production company and is based on a popular comedy of Gabriele Zapolaka, "The Morals of Mrs. Dulska." The first "national" sound-film is enjoying considerable success, it is stated. The recording system used was the German Lignose-Breusing system, and the Polish composer, Ludomir Rozyczki, is responsible for the musical part.

In certain districts of Poland, the local authorities have prohibited the exhibition of German sub-titles in films. The German part of the population has appealed to the Government for a removal of this prohibition.—(German Press).

At Last It Is Possible!

For many years Directors and Camera Men have desired special effects in their films after the sets have been shot and dismantled, or it is too late or too expensive to make a retake. Such effects as making a long shot into a close-up, putting in lap dissolves and fades, making a miniature of a scene and double exposing it over another scene, and other special effects.

To meet this situation, the Burton Holmes Laboratory has installed one of the new DEPUE 35 mm. Optical Printers which will do all of the above stunts and many more.

Keeping abreast or ahead of the times has always been the policy of this organization.

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Possible!
This discussion of focusing brings to mind the repeated query of the novice, “If you can get cameras with lenses that do not need focusing adjustments, what is the use of spending a lot of money for a focusing lens, when it just brings so much extra trouble?” The answer is this: that the so-called automatic focus lenses are no different from the focusing ones except that they are set in the camera at a position from which all objects between about twenty-five feet from the camera and infinity are relatively sharp. Mind you, relatively sharp. No lens will give you absolute sharpness on more than one plane at a time, but by careful construction of the various lens surfaces a fair degree of sharpness can be secured on objects at some little distance before or behind that plane. This is called Depth of Focus. As the aperture of the lens diminishes, the Depth of Focus increases, and vice versa. Similarly, the shorter the focal length of the lens (i.e., the separation measured between film and lens when forming an image of distant objects), the greater this Depth of Focus may be. Therefore, with lenses of such short Focal Lengths as are commonly used in cine cameras, and with relatively small apertures, the Depth of Focus will be relatively large, and thus such lenses may be set at the point at which this depth is greatest, and used for normal scenes without adjustment for distance. But, to gain this advantage, the lens must sacrifice speed, or, in other words, must be of so small an aperture as to only admit enough light for use under the most favorable conditions. One way to secure a larger aperture in a lens, so that we may work under all sorts of illuminating conditions, is to use a larger aperture, which in turn reduces the Depth of Focus, and makes it imperative to have a means of adjusting the focus upon objects at varying distances. Similarly, the adaptability in focus makes it possible to photograph subjects at any distance from the camera—a hundred feet, fifty feet, fifteen feet, or even two or three feet—with perfect sharpness assured.

Reaching Out for the Picture

Once these matters of Exposure, Lighting, and Focus are mastered, we may count ourselves ready to attempt photography with other lenses than the original one furnished by the camera maker. Probably the wisest initial step is the replacement of the original lens with one of identical focal length, but of greater speed, and capable of adjusting the focus. It will be found to obey all the laws which governed the other lens, and will quickly teach one how to make adjustments of focus. Once it is mastered, we may count ourselves ready to try lenses which embrace a different angle of view—lenses of different Focal Lengths. According to the fixed laws of optics, if two lenses of different Focal Lengths be used upon a film or plate of identical dimensions, the one with the longer Focal Length will give the larger image of the subject. That is, if with one lens we may show the full figure of a person, we can in another magnify them so that their heads only will be in view, to say, a close-up shot of the subject’s head. In other words, the longer Focal lens will reach out for the picture. The greater the Focal Length of the lens, the smaller will be the angle of view covered, and the larger will be the picture gotten.

These long-focus lenses obey all the laws that govern their smaller brothers. Stop for stop, their speeds will be the same, necessitating identical exposures. They will be identically affected by the angle of the light upon the subject. Their focus must be adjusted in the same way, but here is a great difference: since the Depth of Focus diminishes as the Focal Length increases, they must be focused far more accurately than the others. And if with a smaller angle and give a larger image at a greater distance, the camera must be absolutely free from vibration or unwanted movement; therefore a tripod should be invariably used with lenses of more than two inches in Focal Length. And in the case of lenses of extreme Focal Length—especially anything greater than three or four inches—the very greatest pains should be taken to see that they are mounted firmly and in proper alignment. This matter of alignment of such lenses brings to mind the classic example of Lindbergh’s need for accuracy in navigation, for if he had at the start of his famous flight missed just one degree, he would have missed Paris, his goal, by six hundred miles!

The question is often asked, “What are Telephoto lenses?” They are lenses which give the same effect as long-focus lenses but which require a considerably smaller separation from the film. Their advantage, particularly in 16 mm. cinematography, is obvious. For example, a six-inch lens would require a mount separating it from the film by six inches, but a six-inch Tele-
photo lens would give the same effect, but require an extension of but three inches, or thereabouts.

Camera Speeds

Multiple camera speeds are in a sense parallel refinements to speed and telephoto lenses. They are not essential, but they serve to increase the adaptability of the camera. Pictures taken with them must all be exposed lit; and focused like those taken at normal frequencies. The chief differences to be noted are that the lens opening must be altered to compensate for the exposure-changes made by the changed frequencies—increased, for faster taking-speeds, and decreased for slower ones. Similarly, the effect of these taking speeds on the action must be borne in mind: faster speeds slow it down; and slower ones speed it up.

Color

Color cinematography likewise is essentially the same as black-and-white camerawork. The chief thing to be noted about it is that the filters used to separate the colors absorb a great part of the light, and that therefore Kodacolor scenes should not be attempted when the normal black-and-white exposure would be more than ¹⁄₈. In Kodacolor work, too, accurate focusing is doubly essential.

Otherwise, all these refinements obey the same basic laws of cinematography that the most elementary scenes do. Therefore, the only wise thing to do is to learn these laws, and master these elements before attempting, or even thinking of attempting the more advanced processes. Learn to walk well—then run all you want to.

Sundry Records for W. E.

WESTERN Electric Sound Systems have established several records during the course of the last twelve months' installations in every part of the United States.

The largest installation has been in the Atlantic City Auditorium, capable of holding 40,000 people. The smallest has been in the 200 seat Piedmont Theatre at Spruce Pine, North Carolina.

The most northerly installation has been in the Savoy Theatre, Fort Kent, Maine and the most southerly in the Strand Theatre, Key West, Florida.

Western Electric Sound System has also gone into what is believed to be the oldest theatre in the country, the Masonic at New Bern, North Carolina. It was founded in 1812.

France

FRENCH films, originally dominators of the Swiss screen, are now imported into that country in decreased numbers. The fact is revealed in a report sent to the French Government by the Swiss Chamber of Commerce on the situation in regard to the French cinema and Swiss market. The situation has grown worse consistently since 1920, and French pictures originally in a pre-eminent position are now at the bottom of the list of imports. The Chamber of Commerce asks the French Government to take immediate action to protect the French film and to create a special office on behalf of their product. This office, it is suggested, should rent the films instead of, as previously, selling them outright, and to wage an intensive propaganda campaign on their behalf.

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<td>Photo-Era</td>
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Foreign Notes

England

London West End cinemas are faced this year with a serious crisis due to the Film Act, which requires the exhibitors must show a minimum of 7½ per cent of British films in their year's programme. The booking executives of these theatres declare that there are not sufficient British films available of a quality to stand up in West End houses, and to show British pictures of inferior merit is simply to ruin the business and reputation of their houses. It is a matter of simple calculation. There are eight premiere West End houses alone faced with the same problem—the Plaza, Empire, Capitol, Rialto, Tivoli, New Gallery, Astoria, and the Carlton. Six, at least, of these houses cannot show films which have been elsewhere in the West End. Their necessary quota of British Films for the year is roughly about seven feature films. That is to say, nearly 50 British feature films of the West End standard are required for the present Quota year. There is a prospect of about forty British features being available.

Austria

The Austrian Federal Government has worked out new laws in regard to the theatre and the cinema. These new regulations give special consideration to the sound film and its recent development. All kinds of sound-film will be considered as films in the sense of the law. The obligation to show all films prior to their public presentation for the inspection of the magistrate will apply to the film only, and not to the sound. It will not be necessary to employ a certified operator in the case of the exhibition of non-inflammable films if the presentation does not take place in a cinema.

Credit President Hoover

(Continued from Page 14)

"Of course, it meant the end of the men who used to 'shoot from the cuff', as it were. Now you must know your story. Must know just what you are going to do and cut your picture in your mind before you shoot it. No more can you shoot several hundred thousand feet of film hoping that out of it you will find stuff that by proper use of titles will save the day. You must know your subject now or you are completely lost. But that is no hardship. "Sound has brought its advantages in other ways. Take the case of the cameramen, for instance. For a time cinematography was sacrificed for sound. But that has been overcome and we are getting some magnificent photography. The use of as many as a half dozen cameras on the set has done a lot to make better pictures. We get shots now that are perfectly natural. In the old days the close-up was beautifully posed for by the star. Now we get a natural one because we shoot it at the same time as the long shot."

"The use of many cameras has made it bad for the stars whose noses do not photograph well from any angle. But we will live through that, also. We do not care so much for beauty of face now as for excellence of speech and year."

The Oscillaplan Holding A. G. has recently been formed in Zurich. With a capital of 180,000 francs, this company will deal with patents, agencies and the general business of radio apparatus, tone film equipment and talking machines of all kinds. The address is Falkenstrasse 14, Zurich VIII.

An interministerial commission has been organized in France in order to examine the position of the entertainment industry with regard to taxation. It includes representatives of the Parliament, of the Ministries of Public Instruction, Interior, Hygiene, and Finance, as well as members of the Dramatic Authors Society and trade personalities.
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<td>Fred Gage</td>
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<tr>
<td>W. B. Rayton</td>
<td>Associate Member</td>
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Perry, Harry—Caddo Prod.
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I want to congratulate you on the excellent performance of Mitchell cameras.

The fact that more than 70% of the cameras used in filming "Hell's Angels" were Mitchell cameras is proof of our high regard for them.

Sincerely yours,

THE CADDIS COMPANY INC.

[Signature]