CINÉ-KODAK NEWS

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KODAK AT THE NEW YORK WORLD'S FAIR

HIGHLIGHTS OF THE GREATEST PHOTOGRAPHIC SHOW ON EARTH—READY TO WELCOME YOU APRIL 30

CERTAINLY the New York World's Fair will be the target of more cameras this year than any other single event. Brilliantly colorful, open to the sun by day and generously floodlighted at night, few will visit the Fair without cameras. And fewer still will leave the Fair without seeing the Eastman Exhibit, which can, without reservations, be called the greatest photographic show on earth. If every page of this issue of "Ciné-Kodak News" were devoted to a description of this exhibit, you would still have received little better than a sketchy outline of its wonders. You simply must see it with your own eyes—and here are some of the things you'll see:

Projected Kodachrome pictures from 35 mm. transparencies, on an enormous screen, twenty-two feet high and one hundred eighty-seven feet long, extending along the entire inner circumference of a Great Hall of Color. On the screen, in single panoramic views and in groups of pictures, will pass the most amazing show of color photography ever seen. This great screen will reflect the full-color light rays thrown upon it by eleven specially designed and constructed projectors, individually weighing a ton, operating in synchronism with a matched sound film. Visitors may view a twelfth projector, on display at the entrance of the Great Hall of Color, and thus learn something of the miracle of projection they are to enjoy. New-design gates and shutters will permit truly startling photographic dissolves. A single panoram will frequently fill the entire screen area . . . then dissolve into the same scene in a contrasting season.

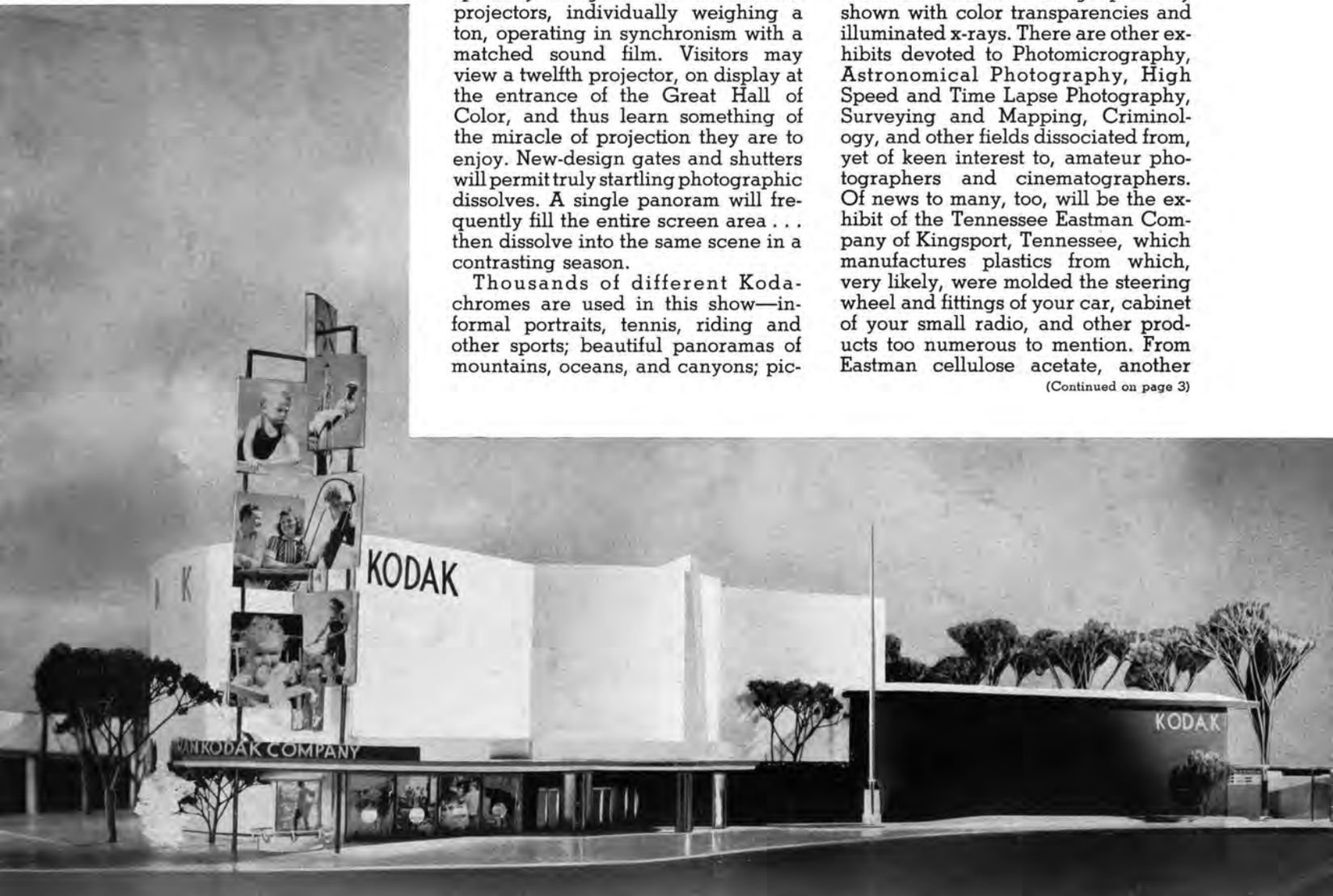
Thousands of different Kodachromes are used in this show—informal portraits, tennis, riding and other sports; beautiful panoramas of mountains, oceans, and canyons; pictorial studies made at the beauty spots throughout the length and breadth of our country; action pictures teeming with color; still-life studies, and countless others. All are included. All in full color. Every one magnificently enlarged to show you the very finest detail. Such is the spectacle to be seen in the Great Hall of Color of the Eastman Building.

Technical Photographic Exhibits

A large lighted globe, slowly rotating in a seven-foot wall aperture, will show the location of Eastman plants and branches in fifty-three countries. The importance of photography in the medical field will be graphically shown with color transparencies and illuminated x-rays. There are other exhibits devoted to Photomicrography, Astronomical Photography, High Speed and Time Lapse Photography, Surveying and Mapping, Criminology, and other fields dissociated from, yet of keen interest to, amateur photographers and cinematographers. Of news to many, too, will be the exhibit of the Tennessee Eastman Company of Kingsport, Tennessee, which manufactures plastics from which, very likely, were molded the steering wheel and fittings of your car, cabinet of your small radio, and other products too numerous to mention. From Eastman cellulose acetate, another

(Continued on page 3)

Made from a model of the Eastman Exhibit, this illustration shows the striking and attractive design of building and grounds



WESTERN HOLIDAY • BY HAMILTON JONES

MORE THAN 150,000 PEOPLE HAVE SEEN MR. JONES' 16 MM. KODACHROME MOVIES IN THE BETTER THAN 250 "SHOWS" HE HAS GIVEN

THERE are two ways of making movies—catch-as-catch-can, and premeditated. Your allegedly expert amateur cinematographer, if he is truthful, will confess to making both kinds. But when he really settles down to work to make a movie worthy of the name, he at least will have a mental conception of what he expects the finished pictures to be. And if he is a careful worker, he'll have a written outline.

"Western Holiday" was, in a large measure, a planned picture. I had the good fortune to travel through the Canadian west in the past, so when, early in the summer of 1937, I finally planned my return with a good supply of Kodachrome, definite ideas were in mind for the new film. A rough scenario or working plan had even been put down on paper, saving time and film.

I traveled directly across the entire Dominion, and started filming in Victoria, the capital city of British Columbia, often referred to as the most British city in North America. Its picturesque tree-lined streets with sidewalks down one side only, and many attractive public gardens, proved to be a field day for Kodachrome. When I started out in earnest on my picture-taking expedition around the city of Vancouver, a close-up of a traffic light, changing from "Stop" to "Go," preceded by a short shot of the front of a sight-seeing bus marked "Seeing Vancouver," gave me my opening. The sight-seeing bus, an observation street car, and a tally-ho, pictured at various times throughout the Vancouver scenes, suggested our means of transportation. Stanley Park, the world-famous park in the city proper, offered opportunities for a separate sequence in itself. A touch of humor was added with shots of a huge out-of-doors concrete checker board where some of the elderly citizens of the city gather for a daily bout of mental gymnastics. Those players really looked before they leaped—and this gave me a "running gag" for the Stanley Park sequence. After three flashbacks to the game, still at the same stage as at the beginning, I got a series of short and fast moves, ending the checker game and the Park sequence. I followed these shots again with a close-up of the front of the sight-seeing bus "Seeing Vancouver," and another shot of the traffic light—this time changing from "Go" to "Stop," placing an unmistakable (.) after my Vancouver story.

I then turned to one of my favorite subjects in filming—railroads, and for the next several minutes in the film, trains told the story as I left the Pacific Coast and headed eastward.

I shot a generous amount of film from the train, at all times using a tripod or firmly bracing the camera against a portion of the cars. Many feet of film are spoiled under similar conditions by amateur movie makers in trying to hold the camera in the hands, expecting the body to absorb any shock or movement. In reality, the effect is just the opposite, for a hand-held camera on a train, or in an automobile, not only passes on the movement of the vehicle, but also that of the person holding the camera.

A Sequence for Every Subject

As I spent several days in the vicinity of the Mount Robson station in British Columbia, each day, twice a day, I would walk up on the track, find some unusual angle, and get my daily double of shots of the east and west bound trains. I shot them from dizzy heights from the cliffs above the tracks. I stationed myself far below the track level. And once—just once—

stood inside a tunnel, after making reasonably sure there was room for both the train and myself. The resulting picture of the train rounding a curve, entering the tunnel, and literally blacking out the picture brought my railroad sequence to an exciting and somewhat unusual climax.

A Theme for Every Sequence

The next portion of "Western Holiday" was the pack trip from the ranch at Mount Robson to Berg Lake—16 miles of trail-riding through some of the most spectacular mountain scenery in the Canadian Rockies. I kept at least one horse and rider in the picture at all times, against the backdrops of a tremendous waterfall, glacier-filled valley, or snow-capped peak. Our arrival at Berg Lake, after a full day in the saddle, presented another opportunity for a bit of comedy to relieve the scenic theme of the picture. I suggested—just suggested, of course—that none-too-comfortable feeling experienced upon dismounting after an all-day saddle trip.

A sunrise on Mount Robson gave me some almost unbelievably beautiful shots. I started shooting about 5 a.m. and took short shots over a period of five hours of the miracle of a mountain sunrise.

We next gave our attention to the Tumbling Glacier. The cabins at the Berg Lake Camp directly face the glacier across the lake, and I used the opening of the cabin door as a fade-in. The glacier offered unusual and exciting picture possibilities. Exquisite coloring in the icy crevasses. Great or small blocks of ice falling away from its face into the lake with a resounding roar. I entered one of the crevasses for a picture inside the glacier, and took Kodachrome shots of the delicate blue and blue-green sunlight filtering through solid ice.

The closing of the same door in the cabin at camp gave me a fade-out for my record of the glacier and Mount Robson, whereupon I traveled on fifty miles eastward into Jasper National Park, Alberta, and spent three more weeks completing "Western Holiday" among the delightful surroundings of Jasper Park Lodge.

Early last summer I finally bought the camera I have had hopes of getting for the past three years—a Ciné-Kodak Special. Now, when I contemplate a sequence—or a complete reel—I feel certain that my finished picture will not only be as good as I have optimistically imagined, but perhaps even better, due to the constant inspiration supplied by this versatile yet trouble-free camera.

KODAK AT THE NEW YORK WORLD'S FAIR

(Continued from page 1)

Tennessee Eastman product, you may well discover came the material for your tie, suit, dress; and other apparel.

A model of every Eastman camera will be exhibited. There will be other sections showing the contributions to the photographic field of the famous Eastman Research Laboratories. There will also be a complete demonstration of sensitized materials, papers, shutters, lenses, home movie equipment, commercial photography, photo-finishing, photo-accounting, record projection, filming and recording, and aerial photography. In the Hall of Light will be shown an exhibit of outstanding prints from the United States and abroad. At a special counter, where nothing will be sold, experts will be on hand to answer questions and distribute literature. Outside the Eastman Building will be a "photographic garden" where you will be instructed by other experts in the making of pictures of your friends against most attractive backgrounds.

There are, indeed, a great many reasons why you will want to visit the New York World's Fair. And not least among them is the Eastman Kodak Company Exhibit.

●

Golden Gate International Exposition Open Now

Treasure Island, the West's own gala greeting to 1939, is already in full stride. Located on a 400-acre man-made island in the middle of San Francisco Bay, certainly this colorful show will draw heavily from the West. And the Midwest and East as well.

Because its colorful architecture is strongly reminiscent of the Mayan, Cambodian, Incan and Malayan, the trigger fingers of visitors approaching Treasure Island on the stupendous Bay Bridge, or by ferry from San Francisco's famous old Ferry Building, will itch to press the exposure buttons of their Kodachrome-loaded cameras. Truly, this Pageant of the Pacific is a pageant of pictures.

West side, East side—in both coasts' biggest towns—there are offered for your pleasure this year the greatest camera-inviting spectacles of our generation. And all along the routes to either Fair, prideful localities are staging their own carnivals, expositions, rodeos, and festivals to intrigue your eye and camera.

A glistening jewel in the middle of San Francisco Bay—the Pageant of the Pacific, Mecca of picture makers of the West and Midwest.

A LENS IN THE MAKING

—IN WHICH WE LEARN THAT A LENS IS FAR MORE THAN A PIECE OF GLASS WHICH KEEPS OUT DIRT AND LETS IN LIGHT

IF the sole duties of a photographic lens were to pass light through to the film, just about any piece of clear glass would fill the bill.

But a lens—a good lens—has a far more important task to perform.

It must, in the first place, "bend" light rays so that they are directed to a sharp point on the sensitized film. For without a lens to control its behavior, a single point of light would spread over the entire film area. The negative would develop to an over-all black, the positive to a washed-out white.

You'd get exposure—but no image.

First, then—the matter of glass.

Glass is essentially a mixture of silicates, lead, and other oxides—as well as certain chemicals which are added to make it clearer, change its refractive power, and the like. We know that it is the ability of glass to bend light rays that is important to photography. Unfortunately, however, all glasses bend light rays of different colors to a different degree. This property is known as dispersion. The combination of a collective lens of crown glass—having a relatively low dispersion—with a dispersive lens of flint glass produces a "color-corrected" lens known as an achromat. It is the job of the lens designer to pick and choose between the many types of crown and flint glass until his computations and experience convince him that the ones finally selected, when properly shaped and spaced, will result in a lens which will produce images sharp and brilliant—from the picture center out to all four corners.

This is how it works in actual practice:

Let us consider, for example, the problems encountered in designing the extremely popular and efficient Ciné-Kodak 2½-inch *f*.2.7 lens. This lens, of moderately long focus and wide aperture, was required to cover a picture area of relatively small dimensions in proportion to the distance from the lens. This suggested the "Petzval" type of lens—a design noted for its fine central definition as the result of its excellent correction for spherical aberrations, and one which, having only four glass-air surfaces, produces negatives of exceptional brilliance.

The Development of a Kodak Lens

The type of lens having been decided upon, the work had just begun. The Petzval system consists of two widely spaced achromats, each incorporating a collective lens of crown glass cemented to a dispersive lens of flint glass. The selection of the most desirable glass for the several elements and their thickness and curvature had to be decided, as well as the separation of the front and rear lens components—because it is only by the proper combination of all these factors that lens faults can be corrected. These calculations frequently require the time of several lens designers over a period of months, or even years. After considerable trigonometric tracings of numerous selected rays through the entire lens system, and the making of changes necessary to reduce lens faults to a minimum, the expert lens designer—and there are few more exacting professions—is ready to have his computations executed in glass and metal. And here, again, is work for craftsmen of the highest calibre—an absorbing story in itself which will be brought to you in a subsequent issue of the "News." Later, the lens must pass many precise and exacting tests, and, if it performs exactly as planned, it is ready for production.

Thus, briefly, was evolved one Kodak lens—and every Kodak lens—whether for a Kodak, Ciné-Kodak, or Kodascope.

Such is the story of lens making—from the mind of the lens designer, to the final assembling of the lens in its mount. Few picture-takers, certainly, have any conception of the infinite amount of genius and toil represented by those bits of glass fitted to their cameras. But, because the computations of the lens designers are so carefully made and their execution so skillfully carried out, Kodak lenses have justly earned a world-wide reputation for uniformly high quality and accurate performance.

● Before this completed 2½-inch *f*.2.7 Ciné-Kodak telephoto stand the many individual elements from which it was assembled.

GOOD SHOTS

IN each issue of the "News" twelve shots are reproduced from the many film clippings (not less than four inches in length, please), full-length scenes, and complete reels sent in by movie makers. For each shot selected, two Etchcraft Junior enlargements will be prepared and mailed to the winners. The original movie film is not in any way harmed or cut. All film is returned. Unsuccessful contestants receive friendly, constructive criticism.

From now on, too, we expect to reproduce "Good Shots" as enlarged by you with the Kodak 16 mm. Enlarger.

Why not send in your good shots? Pack them carefully and address them to Editor, Ciné-Kodak News, Eastman Kodak Company, Rochester, N. Y. To avoid possible customs delays or complications, Canadian contestants will please direct their entries to Canadian Kodak Company, Ltd., Toronto—together with a note stating that the film is submitted for the Ciné-Kodak News "Good Shots" contest.

First column, top to bottom

● Any self-respecting exposure meter would have told Mr. Robert C. Bach of Columbus, Ohio, that there was not enough light for good results when he made this 8 mm. black-and-white silhouette sunset scene—yet underexposure oftentimes makes a "Good Shots" winner.

● The most telling shots are almost invariably close-ups. The beaming baby is from the 8 mm. black-and-white reels of Mr. Robert C. Shoemaker of Cincinnati, Ohio.

● To Lt. C. R. Low of Kelly Field, Texas, goes credit for the dramatic 8 mm. black-and-white shot of the sleek aviation training ship. Credit for an assist goes to a red filter—important to all black-and-white shots of, or from, the sky.

● Another good camera angle—and a lovely shot. This yellow-filtered scene of Dottie Lou was filmed with 16 mm. "Pan" by her justly proud father, Mr. Wilson G. Tyler of Birmingham, Alabama.

● There is more comedy in five minutes at a zoo than almost any place you can mention. Dr. Albert N. Mueller of Rock Island, Illinois, made the 16 mm. black-and-white penguin shot at Chicago's Shedd Aquarium.

● Every month more and more cinamateurs are discovering the virtues of sky as a background, whether their film is black-and-white or Kodachrome. Mr. Hugh R. Gray of San Diego, California, red-filtered this "Pan" shot of the cross on Mt. Helix.

Second column, top to bottom

● You probably like the shot of the diver as well as any on this page. But there would have been nothing to this scene had Mr. Nelson Robinson of Chicago, Ill., failed to use a red filter to "hold back" the sky and "snap out" the clouds.

● A screen-filling picture is our next enlargement made from the 16 mm. Kodachrome reels of Mr. W. A. Kimball of White Plains, N. Y., who, as is true of most travelers, prefers Kodachrome for his movie of the tropics.

● Fixed-focus cameras will make close-ups, too—a fact well known to Dr. Kenneth P. Wheeler of Brattleboro, Vt. A 75-cent portrait attachment on his Ciné-Kodak Eight, Model 25, produced the lovely close-up of the boy and the skis.

● Other movie makers can duplicate the depth-giving framing of the Niagara shot filmed in 16 mm. Kodachrome by Mrs. Stuart G. Bowren of Fulton, N. Y. But they can never make quite the same picture—for the bridge you see here was carried away by the ice floe just a year ago.

● Close-ups for Kodachrome—and with a blue sky background! Mr. M. Rayhack of Garfield, New Jersey, found just the right angle for his 16 mm. Kodachrome shot of the trumpeter.

● Another 16 mm. Kodachrome shot, and far better than a "We're Off!" title, is the close-up of the ship's siren by Dr. H. J. Davis of Topeka, Kansas.

Make-Up

"I recently undertook the job of recording in extreme close-ups every member of my class in school. We used artificial light and gave every scene full exposure in the making of this cinematic year book.

"We got the pictures—but were somewhat surprised to discover that the faithfulness of your color film is not always flattering. Some of the class members who we thought had marvelous complexions were a bit 'shown up' in these pictures. Next time I won't work so close to them." Miss E. L. N., Denver, Col.

Kodachrome, as its enthusiastic users will testify, does a thoroughly workmanlike job in reproducing colors "as is."

Which is exactly what this color film was designed to do.

Yet some picture makers—particularly those specializing in close-up filming—may occasionally bemoan its honesty. Thoroughly desirable for mirroring a beautiful complexion, it is no less efficient in highlighting an unfortunate skin blemish over which make-up—ordinary make-up—is not always a sufficient veil. Of no great consequence to the average filmer, this fidelity sometimes proves awkward for the advanced picture taker.

Realizing the fidelity of Kodachrome reproduction—its ability to search out and reveal the flaws of ordinary make-up in extreme close-ups under concentrated lighting—Helena Rubenstein, the cosmetic expert, set up a studio and by actual Kodachrome tests has worked out a make-up foundation which she calls *Photochrome*. This product is said to cover skin blemishes whenever they exist, and also to enhance in Kodachrome all the true color and texture of the most beautiful skin. The *Photochrome* foundation is a base on which face powders and rouge are added to suit the model's complexion. It is said to be non-irritating to even sensitive skins, easily applied, and to produce a natural rather than an artificial effect.

If you are interested in *Photochrome* make-up, inquiries should be directed to Helena Rubenstein, 715 Fifth Avenue, New York City.

Super-XX Caution

"Just how fast is this new Ciné-Kodak Super-XX 'Pan' Film? If it's as fast as I hear it is, how can you use it outdoors on a bright day?" A. B. L., San Antonio, Texas.

More than twice as fast as Ciné-Kodak Super Sensitive "Pan," four times as fast as regular Ciné-Kodak "Pan." Those who have used the new 16 mm. Ciné-Kodak Super-XX "Pan" Film need not be told that it is the fastest film indoors and at night that has ever flowed past a lens aperture. It is so fast, in fact, that you will often overexpose it in brilliant sunlight, even when you stop down to *f*.16. The solution is to obtain a Neutral Density Filter No. 2, slip it over the lens, and then follow the standard outdoor exposure guide for regular "Pan." Perhaps many readers will recall the N. D. 2 Filters from the days of Kodacolor filming . . . may even have these filters remaining. If so, they can be used today with Ciné-Kodak Super-XX.

Daytime Kodachrome Indoors

"Color movies in our living room are easy. But lots of the activities we like to take pictures of in our home occur at midday. There isn't enough daylight for regular Kodachrome, and if we use Type A Kodachrome with Kodaflector everything near the windows goes blue. We have tried pulling down the shades even though this doesn't add to the attractiveness of the living room or dining room, and the shades reproduce in blue.

"What to do?" M. B., Philadelphia, Pa.

The answer, we believe, has just been announced by the General Electric Company. They have introduced new type Photofloods for indoor filming with regular Kodachrome. Known as Daylight Photofloods, their blue glass eliminates the need for filters to color-balance regular Kodachrome when filming under artificial light. Simulating daylight, they suggest this combination for indoor daytime filming: regular Kodachrome . . . all possible daylight from windows . . . Daylight Photofloods in Kodaflector. The No. 1 Daylight Photoflood—$.50; No. 2 Daylight Photoflood—$1.

Lamp Reductions

Also recently announced is a Photoflood price change lowering the price of the regular Nos. 1 and 2 Photoflood bulbs from $.25 and $.50 to $.20 and $.40.

Likewise reduced are the prices of Kodascope projection lamps—an exception being the $.25 lamp for the Kodascope Eight, Model 20.

The 300-watt coil-coil lamp for Kodascope Eight, Models 50 and 80, was $4.15 . . . is now $3.85. The 400-watt lamp for 16 mm. Kodascopes has been reduced from $5.35 to $4.95, the 500-watt lamp from $5.45 to $5, the 750-watt lamp from $6.65 to $6.

Cameras for Still Kodachrome

"I've switched to Kodachrome for my movies 100%—and I'd like to do the same for the still pictures I take. Only my snapshot camera does not take Kodachrome Film. How much must I pay for a Kodak that will really take good Kodachrome 'stills'?" M. S., Indianapolis, Indiana.

Not very much—since the introduction of the Kodak 35's. Capable, economical, they fit neatly into the family equipment picture. And not only do they take Kodachrome Film—either regular or Type A, but Kodak Panatomic-X Film, Kodak Plux-X Film, Kodak Super-XX Film, and Kodak Infra-Red Film as well. Kodachrome is available in 18-exposure rolls. Pana-

tomic-X, Plus-X, and Super-XX in 18- and 36-exposure magazines. Infra-Red is supplied in 36-exposure magazines only.

Kodak 35, *f*.3.5.

Here are some details about these three fine miniature cameras:

THE KODAK 35, *f*.5.6, has a 50 mm. Kodak Anastigmat *f*.5.6 lens focused by rotation of the front element, and Kodex shutter with speeds of 1/25, 1/50, 1/100, Time and Bulb. The finder is of the folding optical eye-level type. It has an automatic film counter and film-centering device. The finish is fine pin seal grain molded into the body, with fittings in natural metal and black lacquer. The loading of this model, as with all the Kodak 35's, is facilitated by the sliding off of a one-piece bottom and back. The Kodak 35, *f*.5.6, is available at the new low price of $14.50.

THE KODAK 35, *f*.4.5, has a 51 mm. Kodak Anastigmat *f*.4.5 lens, focused by rotation of the front element, and a Diomatic shutter designed to prevent double exposures. The speeds are 1/25, 1/50, 1/100, 1/150, Time and Bulb. A delayed-action unit is built into this camera. The finder, film counter and finish are the same on this model as on the *f*.5.6 model. The Kodak 35, *f*.4.5, is now priced at only $24.50.

THE KODAK 35, *f*.3.5, has a 51 mm. *f*.3.5 Kodak Anastigmat Special lens focused, as in the others, by rotation of the front element, and a Kodamatic shutter with speeds of 1/10, 1/25, 1/50, 1/100, 1/200, Time and Bulb. As in the Kodak 35, *f*.4.5, the shutter is fitted with delayed action mechanism, and is designed to prevent double exposures. The finder, film counter and winder as well as the finish are the same on this model as on the other two. Reduced to $33.50.

Focusing

"I have been reading a lot of advice recently—not in Ciné-Kodak News, by the way—stressing the importance of accurate focus while making indoor shots and suggesting the use of a tape measure for measuring the distance from camera to subjects.

"Frankly, don't you think this is too much of a good thing? There must be some easier way to check focus than this bothersome method." S. A., White Plains, New York.

There is. The Kodak Pocket Range Finder.

Especially useful for accurate focusing with indoor shots, where wide apertures are generally used of necessity with resulting shallow depth of field, the Kodak Pocket Range Finder is a mighty handy little accessory for the movie maker who experiences trouble estimating the distance from camera to subject. You look through the eyepiece, turn the knurled knob until two halves of a split image are lined up, and the distance from finder to subject is indicated on the scale. That is how simple it is, and, though only the size of a pocket knife, it is extremely accurate. You can use it with equal effectiveness for focusing your camera and checking on the distance from lights to subject. The price of the Range Finder is only $7.

If it looks "right" in the Pocket Range Finder at 6 feet—that's the focusing distance.

Photographic Library

"I have read your movie book from cover to cover. Not once—but several times. This is the first book on photography that I have stumbled upon which speaks the amateur's language. It makes movie making—good movie making—seem like fun. What's more, it's fun to read. Does Eastman publish any other books on photography like 'How to Make Good Movies'?" R. L., Chicago, Ill.

Yes. *How to Make Good Movies* was written to do the specific job you so kindly assure us it accomplishes. There is a snapshot counterpart of it entitled *How to Make Good Pictures*—and several other Eastman publications are equally well focused on their targets. All of these volumes are obtainable from or through your Ciné-Kodak dealer:

How to Make Good Movies. A thoroughgoing and nontechnical discussion of amateur movie making. Fully illustrated with movie enlargements. Over 200 pages. $2.

How to Make Good Pictures. Everything from choosing a camera to making the print—a complete and fully illustrated handbook for the amateur. 256 pages. 50c.

Photography, by Dr. C. E. Kenneth Mees. The history, science, and uses of photography, by a world-renowned authority. Illustrated. 227 pages. $3.

Elementary Photography, by Neblette, Brehm, Priest. Photographic theory and practice for the beginner. 253 pages. $1.

The Fundamentals of Photography. Authoritative textbook on photographic theory and practice. 123 pages. $1.

Photomicrography. An introduction to photography with the microscope. 122 pages. $1.

Photography of Colored Objects. A commercially valuable study of the photography of colored objects in monochrome. 125 pages. $1.

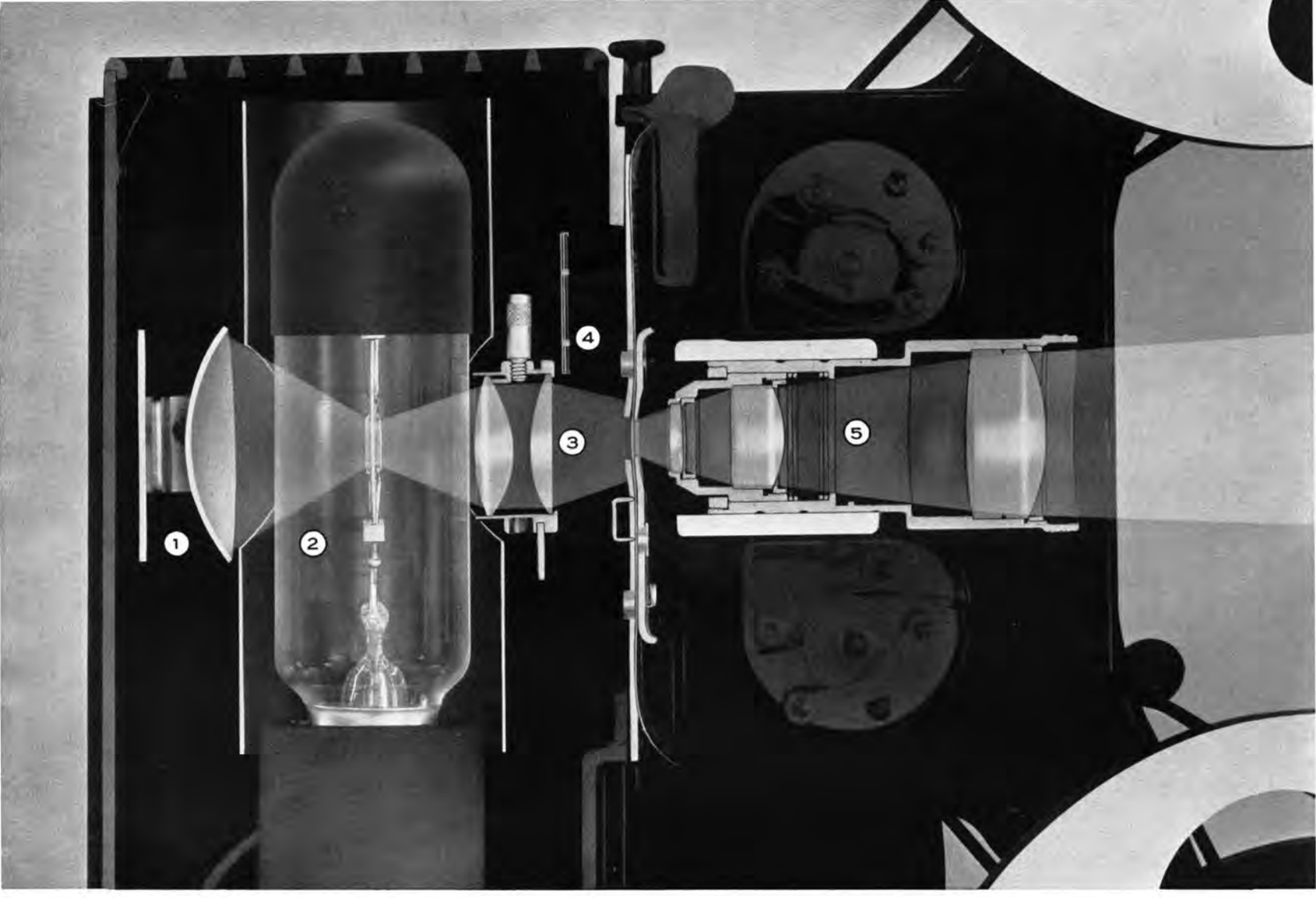
Elementary Photographic Chemistry. A textbook of photographic chemistry with formulas for developers and baths. 143 pages. $1.

Wratten Light Filters. Complete information, illustrated with charts, on absorption values, uses, and prices. 95 pages. 50c.

Photography by Polarized Light. The use of Pola-Screens for eliminating reflections. 50 pages. 50c.

KODASCOPE LIBRARIES DISCONTINUED

Because most leading dealers in amateur movie equipment now have their own libraries of silent and sound films for entertainment purposes, and likewise frequently represent other sources of 8 mm. and 16 mm. releases, the Kodascope Libraries Division of the Eastman Kodak Company will be discontinued, effective April 1.



WHEN AND WHERE THE WATT IS ESSENTIAL

THE IMPORTANCE OF GAUGING PROJECTION BRILLIANCY AT THE SCREEN AND NOT IN THE LAMPHOUSE

THE watt is an elusive quantity. You know that you have a so-many-watt lamp in your projector. A really powerful lamp, perhaps. And you therefore feel that you must be obtaining screen images easily as bright as the next fellow. But this is not necessarily true. The ratio of lamp watts to screen illumination . . . to screen *lumens*—the true gauge of picture brilliance—varies widely among projectors. It varies as much as six to one.

Why that one projector is outstanding makes, we think, an interesting story. It's the story of the harnessing of the elusive watt in Kodascopes so that you can use a lamp of modest wattage that costs less to buy and to burn and yet get all the light you need for average home showings. And also, when you are to show your movies before large groups, you can use a brighter lamp and know that you are getting peak effectiveness from it.

There are several important reasons why Kodascopes give you your money's worth in watts, and the projection lamp is the least of these because all good projection lamps are quite similar. All of the light emanates from those tiny filaments at the lamp's center. The trick is to deliver to the screen as much of the light generated by these filaments as possible. And this is how it is done.

The first step is to utilize every possible watt—to deliver as much of the light as possible to the screen. You can see how effectively this is accomplished in Kodascopes such as the 16 mm. "G" and "EE" by peering into the lamphouse. The lamp is enclosed in a metal jacket perforated fore and aft for the light aperture and reflector, respectively, and is crowned with a metal cap. The reflector, in these Kodascopes, is of nontarnishing, polished aluminum—a finish which indefinitely maintains its reflectivity.

Direct Alignment of Parts Spells Efficiency

In the photograph above, the reflector is Figure 1, the lamp, obviously, Figure 2. Please note that the entire optical system is uniaxial—a one-direction arrangement of all units. It is this direct alignment which makes the Kodascope optical system especially effective—with each of the three projection lamps. The three lamps supplied for the "G" and "EE" are not only interchangeable but also self-aligning. When you bed any of these lamps in the socket with a simple twist of the wrist the correct filament position is automatically arrived at.

● The "cut-away" photograph (at the left) of the Model G illustrates the efficient, close-coupled optical system that makes the most of every lamp watt in 16 mm. Kodascopes.

Temporarily taking a different tack, it should be mentioned that another factor which "wastes" light is the premature demise of normally long-lived lamps. Faulty ventilation, evidencing itself in blisters and bulges on the lamp, results in premature failure. Kodascopes do not overheat—even after hours of continuous operation.

Figure 3 represents the two condenser lenses, which collect and transmit as much of the lamp light as possible. Kodascope condensers are not merely molded. They are made from high-transmission, heat-resisting glass, ground and polished to traditional Eastman standards of perfection.

Next in order is the safety shutter—Figure 4, projector shutter, light aperture, and film gate. The safety shutter automatically drops into position between lamp and film when "stills" are shown with the Kodascope G, or when either the "G" or "EE" is run at extremely slow speeds.

And now we come to the projection lens—Figure 5, an item little appreciated by many picture makers who would use nothing less than the best taking lens on a camera. Yet their duties are almost identical.

If they are good lenses, they transmit sharp images. If they are "fast" lenses they transmit abundant light. If both these virtues are combined in one lens, this is the lens to use. In picture taking, a precision-made "fast" lens means better exposed pictures under poor light conditions. In picture projection it means crisper, more brilliant screen images per lamp watt.

So don't think of projection lenses merely in terms of focal length—1-inch, 2-inch, or 3-inch. What kind of lenses are they? How well made? How "fast"?

Kodascopes G and EE are equipped with Kodak-made lenses composed of five individual elements, ground and polished to within approximately 3/1,000,000 of an inch of perfection, which make up a fully corrected lens, eliminating color fringes, permitting screen pictures that are needle-sharp from the center all the way out to the screen edges. Their purity and efficiency enable them to transmit the greatest possible illumination per watt.

The Story in a Nutshell

It all boils down to this: In Kodascopes it is really possible to put the watt to work where and when you want it because of a better utilization of lamp light by a scientifically designed and close-coupled arrangement of reflector, lamp, condenser lenses, shutter, aperture, and projection lens units.

And this, in turn, can be summed up in a phrase which wise picture makers know means more than most phrases: *All Eastman-made, designed to work together.* Which is why each of the five lenses of different focal lengths supplied for Kodascopes G and EE work at full efficiency, render superb definition, with the one optical system. Yet it is obvious that one lens-lamp combination can not supply correct illumination on all types and sizes of screens at all distances. That is why Eastman 16 mm. projectors are offered with a choice of five projection lenses: 1-inch *f*.2.5, 2-inch *f*.2.5, 2-inch *f*.1.6, 3-inch *f*.2, and 4-inch *f*.2.5. The lamps: 400-, 500-, and 750-watt. From these fifteen lens-lamp combinations you can select the one which will be exactly right for the conditions under which you show your movies—whether you project in a compact library, average-size living room, or auditorium. And the chances are that a lamp as powerful as 750 watts in Kodascopes is not at all the one for you to use.

Too Much Light As Harmful As Too Little

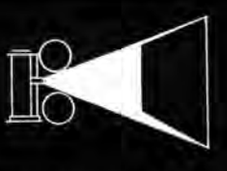
Some cinamateurs feel that the greater the projection illumination, the better the picture. This is not necessarily true. You can "overexpose" a film image by playing too much light through it just as effectively as you can overexpose the original picture by allowing too much of the light reflected from it to pass through the camera's lens.

You want the right amount of light. Just that—nothing more, or less. Yet, if maximum brilliance is really necessary, use the 750-watt lamp in Kodascope EE or G with full knowledge that this lamp, in these projectors, supplies unsurpassed screen illumination.

Lens-Lamp Chart for assuring "tailor-made projection" with Kodascopes EE and G for varying distances with beaded or aluminum screens.

Based on illumination of 8 foot-candles for a beaded screen, and 4 foot-candles for an aluminum screen. A minus sign (−) indicates slightly less than ideal illumination . . . plus sign (+) indicates excess brilliance under the given conditions.

Lens-to-Screen Distance	*Screened Picture Size*	*Lens*	Lamp, for Use With	
			Beaded Screen	*Aluminum Screen*
10 feet	34″x45″	1″ *f*.2.5	750-watt	400-watt
20 feet	34″x45″	2″ *f*.2.5	500-watt	400-watt
20 feet	34″x45″	2″ *f*.1.6	400-watt	+
30 feet	51″x68″	2″ *f*.2.5	−	750-watt
30 feet	51″x68″	2″ *f*.1.6	750-watt	400-watt
30 feet	34″x45″	3″ *f*.2	400-watt	+
30 feet	26″x34″	4″ *f*.2.5	400-watt	+
40 feet	68″x91″	2″ *f*.1.6	−	750-watt
40 feet	45″x60″	3″ *f*.2	750-watt	400-watt
40 feet	34″x45″	4″ *f*.2.5	400-watt	+
50 feet	57″x76″	3″ *f*.2	−	500-watt
50 feet	43″x57″	4″ *f*.2.5	750-watt	400-watt
60 feet	68″x91″	3″ *f*.2	−	750-watt
60 feet	51″x68″	4″ *f*.2.5	750-watt	500-watt



Big pictures, short throws, in the library.

Average-size pictures with average-length throws in the living room.

Extra-size pictures and full brilliance in classrooms, auditoriums, or at the club.

IS EDITING AN ACQUIRED TASTE?

YES. EMPHATICALLY YES. YOU HAVE TO TRY IT—JUST ONCE. THEN, IF YOU ARE LIKE MOST CINAMATEURS, YOU'LL EAT IT UP

THOSE who don't like film editing at the first attempt fail to develop a taste for it simply because they do not use the right equipment. It's genuine fun if you're properly equipped.

Chief trouble is, however, that a not inconsiderable number of movie makers have never made that first attempt.

If you're one of the dubious ones, reserve decision, please, until you've read this article. For here is the story of the several helpful aids to better movies made by Eastman for both 8 mm. and 16 mm. film. The fact that you may not know how to use them need not dismay you. Remember the first time you tried to load a camera? All thumbs. Then, suddenly, there was nothing to it. That's the way it is with editing—and don't think for a minute that fixing up your films doesn't offer as much fun, is not the same inviting challenge to your ingenuity, as is movie making.

Movies Are "Taken" with Camera..."Made" on Splicing Block

You already have a splicing unit if you've a Kodascope, for a Junior Film Splicing Outfit is supplied with each Eastman projector. It is not, however, the type of equipment this article intends to talk about. Satisfactory for repairing occasional film breaks, it was never intended for really serious editing. That duty falls upon the Kodascope Rapid Rewind and Universal Splicer, and the Master Rewind.

The former is supplied for both 8 mm. and 16 mm. film, and is fitted with a new splicer termed "Universal" because it handles both 8 mm. and 16 mm. film. The Rewind is built upon a rubber-footed wooden base thirty inches long, on which are mounted two standards with winding spindles, operated by handles with both high and low speed gears by means of which the film may be rapidly whipped in either direction. The Universal Splicer is mounted at the right, center, of the base—and this splicer is a truly talented gadget.

The two film ends you wish to weld together may be quickly clamped onto its blocks. Then you pull down the two-bladed shearing knife to neatly trim off both film ends with the one operation. Just in back of the splicing blocks are two tiny bottles with brush-tipped caps. One bottle contains water, and you spread just a hint of it on the left film end showing beyond the clamp. This softens the

film emulsion so that you can shave it off right down to the film base by merely drawing the secured scraper on the shearing arm back and forth across it. The other bottle contains film cement. You touch its brush to the cleaned film tip, swing the other hinged block across and down to lap the film ends—and you've made a splice which will both stay put and flow through your projector without a trace of a "jump."

This is the best equipment you can have for splicing. But splicing is not film editing. This engrossing pastime is concerned with the business of deleting poor scenes, trimming long ones, and arranging many short sequences in the order promising the smoothest and most interesting screening.

There is not sufficient space here to outline the simple technic. This information is readily available in Eastman's cinematic best seller, *How to Make Good Movies.* See page 7.

To See What You're Doing

Genuinely serious film editors will certainly want the Kodascope Movie Viewer, which attaches to the Rewind base to the left of the Splicer. The Viewer plugs into a light socket and shows *movies* of the film threaded in its gate. You see these movies on its ground glass screen as you wind the film forward or backward, just as your projector shows them on your movie screen. With its aid you can gauge scene length, locate just the spot for a cut, a title—even for an enlargement. A spring punch, located alongside the gate, cuts a harmless identifying notch on the film edge outside the picture limits—a nick easily located by eye or finger tip.

Here, in the Rapid Rewind and Universal Splicer, plus the Movie Viewer, is the complete editing outfit for the average cinamateur. Yet many will appreciate the added ease brought to editing by the $1.35 Kodascope Editing Bracket. This consists of a slender standard which attaches to the Rewind base and holds four extra 8 mm. or 16 mm. reels from which to "feed" or "take up" separate sequences.

Other movie devotees who really go in for editing in a big way will cast their vote for the Master Rewind—a larger, more substantial rewinding device designed to take 16 mm. reels, only, up to 1,600 feet in film capacity. The Master Rewind, though not supplied with Splicer, Viewer, or Editing Bracket, is designed to accommodate all three.

It is with these trouble-banning and time-saving devices that those who are getting the biggest kick out of their movies put in a few busy minutes now and then grooming their film libraries.

Are you still dubious? Do you still genuinely feel that editing is not for you...that you simply haven't the brief time to spare?

Yet don't deny your film the benefits of editing. Let someone else do it for you. Perhaps your dealer will help out. If he won't, Kodak will. Send your short reels of film to Ciné-Kodak Service Department, Eastman Kodak Company, Rochester, N. Y. Here, for example, four 100-foot reels of 16 mm. film will be spliced together and returned to you on a 400-foot aluminum reel, in a film storage can—priced at 60 cents each—for a total charge of $1.45. Four reels of 8 mm. film will be spliced together on a 200-foot aluminum reel and returned in a film can for $1.05—just 25 cents more than the cost of the equipment.

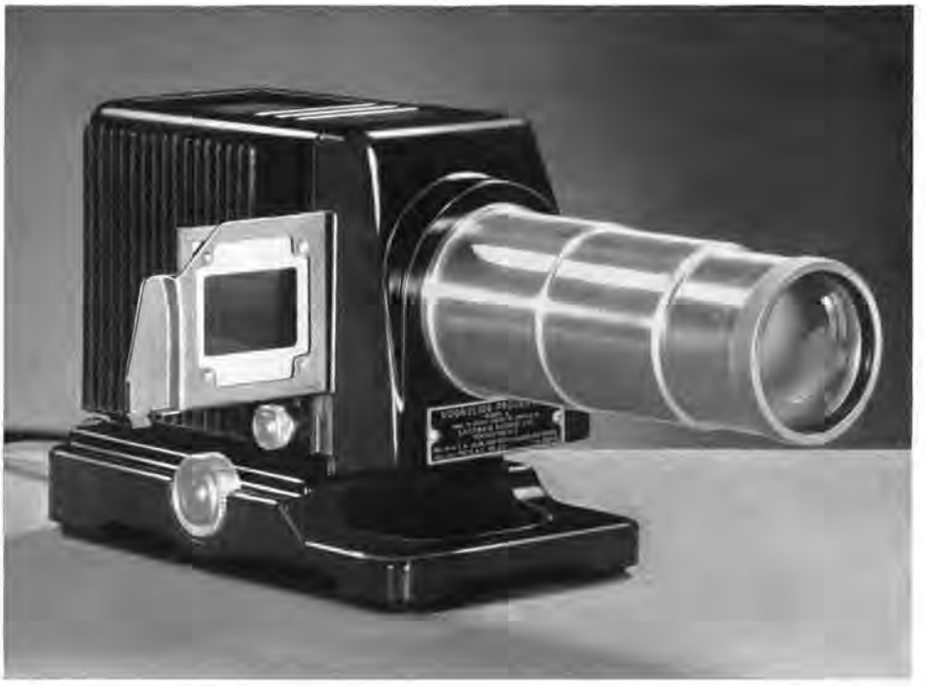
Too, if you accompany your 8 mm. or 16 mm. film with specific instructions for the cutting of shots and their rearrangement, editing experts will carry them out for you at a very nominal charge. Titles can be ordered at the same time, as well as duplicates. Remember that Eastman is now duplicating 16 mm. Kodachrome in color!

And so, whether you reel your own, or elect to have others do your editing for you, don't deny your films its benefits.

This free movie accessory booklet describes Eastman editing aids. Your dealer has a copy for you.

A NEW PROJECTOR FOR KODACHROME "STILLS"

KODASLIDE PROJECTOR, MODEL 2, LOWERS PROJECTION COSTS, OFFERS MANY NEW CONVENIENCES



A HANDFUL of brilliant projection ability—that's the new Kodaslide Projector, Model 2, for 35 mm. and Kodak Bantam transparencies.

It's tiny—measuring in the neighborhood of six inches in both height and length, and even less in width.

It's simplicity itself to operate—while one slide is being viewed the next is slipped into the slide carrier and instantly comes into position when the carrier is shifted.

It supplies ample light for average home showings on a screen four feet, or more, in width. Pictures that are needle-sharp from corner to corner. Credit, here, is due to its precision-made 5-inch *f*.3.7 projection lens. If longer throws are desired, a 7½-inch accessory lens is available.

There's no need to tell you that the Kodaslide Projector, Model 2, is smartly styled—the illustration above convincingly conveys its jet black and chrome beauty. But if you are at all interested in "still" Kodachrome, you will certainly want to examine this splendid little projector to learn how easily, how competently, and how inexpensively it teams up with Kodak miniatures such as the Kodak 35's (see page 7) in producing crystal sharp color images for prolonged enjoyment on your home movie screen. Kodaslide Projector, Model 2, with 5-inch lens, $33.50; with 7½-inch lens, $52.

The Kodak 35's—see page 7—and Kodak Retinas take regular or Type A Kodachrome Film, priced at $2.50 for 18 exposures . . . Kodak Bantams take 8-exposure Kodachrome priced at $1.35. These prices not only include processing by Eastman—*they now include even more.*

The New Ease of Kodaslides

Eastman now supplements its practice of returning full-color transparencies in the form of picture strips ready to be cut apart and made into Kodaslides. After April 1 all Kodak Bantam (No. 828) and standard 35 mm. Kodachrome Film (No. 135), processed in the U.S.A., will be mounted in Kodaslide Ready-Mounts, suitable for projection, at no extra cost. The Ready-Mounts are 2-inch squares of specially prepared pressboard, die-cut to receive each color transparency, which will be varnished on the emulsion side as a protection against dirt and finger marks.

This extra service is optional, however. If you wish your film returned as a strip of pictures, you need merely clip a corner from the address tag attached to the cloth mailing bag in which Kodachrome Film is sent to the processing laboratory, and attach first class postage to it.

Kodaslide Projector, Model 2, is designed to take either Ready-Mounts or the familiar glass slides. The already popular Kodaslide Projector, Model A, however, designed to take only the glass Kodaslides, requires the use of a Ready-Mount Adapter (ready April 1—price $3) for the use of these more convenient mounts. Kodaslide Projector, Model A, is now reduced to $39.50.

Semi-Automatic Projection

A Kodaslide Ready-Mount Changer, for Kodaslide Projector, Model 2, is an invaluable accessory taking up to fifty Ready-Mounts, automatically feeding them one at a time into projection position by means of a 30-inch cable release, and moving them into a receiving magazine *in the same order* in which they were fed from the Changer's supply magazine. The Ready-Mount Changer is priced at $12.

Which leaves only the matter of already processed unmounted color transparencies in strip form. For these, after April 1, Ready-Mounts will be available in boxes of fifty for $1.50. Ready-Mounts, please remember, can only be used in their standard form with the new Kodaslide Projector, Model 2. So, in order that users of other existing projectors may also avail themselves of the convenience of these new mounts, special metal frames will likewise be available on April 1 which take Ready-Mounts and fit them for use in projectors such as the Kodaslide Projector, Model A. Ready-Mount Metal Frames—six for sixty cents.

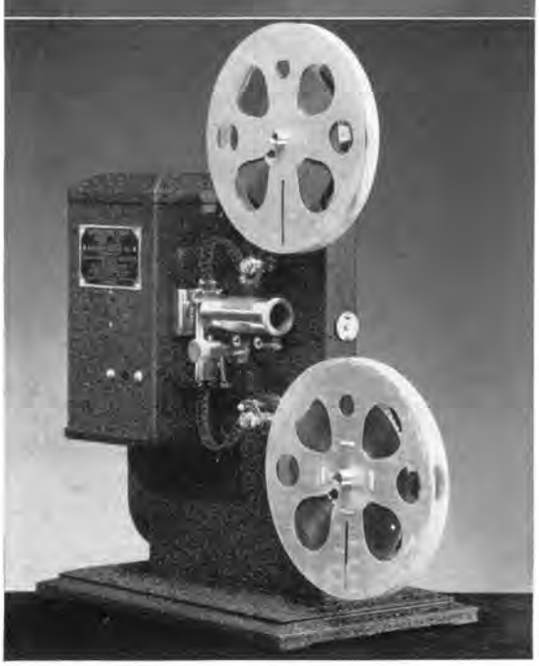
Owners of the Model A, in other words, may either obtain a Ready-Mount Adapter, or slip Ready-Mounts into these Metal Frames.

Still Kodachrome has proved to be an absorbing field for those introduced to color pictures through the medium of their movie cameras. More and more cinamateurs are finding that the two go hand in hand. Recent Eastman economies and improvements make this picture companionship increasingly desirable.

Efficient, cool, compact, the essence of simplicity to operate—Kodaslide Projector, Model 2, is a quality-built projector at a markedly low price.

New Low Prices

ON POPULAR MOVIE EQUIPMENT



CINÉ-KODAK EIGHT and KODASCOPE EIGHT, Models 20—the "Eights" that popularized 8 mm. movies—are now reduced to $29.50 for the camera, and $24 for the projector. A thoroughly competent 8 mm. movie outfit for just a fraction over $50!

And the famous Ciné-Kodak K *f*.1.9—the 16 mm. camera that is used by most movie makers—is now priced at only $80.

Their popularity explains their new low prices. Their ability explains their popularity.

$53.50 BUYS THIS 8 MM. CINÉ-KODAK AND KODASCOPE

Ciné-Kodak Eight, Model 20, makes movies in black-and-white or full-color Kodachrome, is fitted with a precision-made Kodak Anastigmat *f*.3.5 lens—fixed focus, automatic footage indicator, full-vision eye-level finder incorporated in snap-back carrying handle, securely fastened winding key, built-in exposure guide, self-locking exposure button that permits operator to get into picture. Now only $29.50.

Kodascope Eight, Model 20, is motor driven, rewinds by motor, has a still picture attachment, is simplicity itself to operate, performs on 60-cycle, 105- to 125-volt A.C. lines. Now only $24.

THE MOST WIDELY USED 16 MM. MOVIE CAMERA, NOW ONLY $80 WITH *f*.1.9 LENS

Year in, year out—Ciné-Kodak K has led the 16 mm. field. Its ultra-fast Kodak Anastigmat *f*.1.9 lens, focusing from 2 feet to infinity, is interchangeable with six telephoto lenses and a wide-angle lens. The "K" has both eye-level and waist-height finder systems, two speeds—16 and 8 frames per second, automatic footage indicator, built-in exposure guide, loads with all Ciné-Kodak black-and-white films and both regular and Type A Kodachrome, is richly finished in genuine leather and chromium. And it's now priced at but $80—or at $91.50 with de luxe carrying case for camera, film, and accessories.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.