

PHOTOGRAPHIC

THIRTY-FIVE
CENTS

BUSINESS and INDUSTRIAL PHOTOGRAPHY

AGE*

JUNE 1948



LENS-CRAFT
STUDIOS

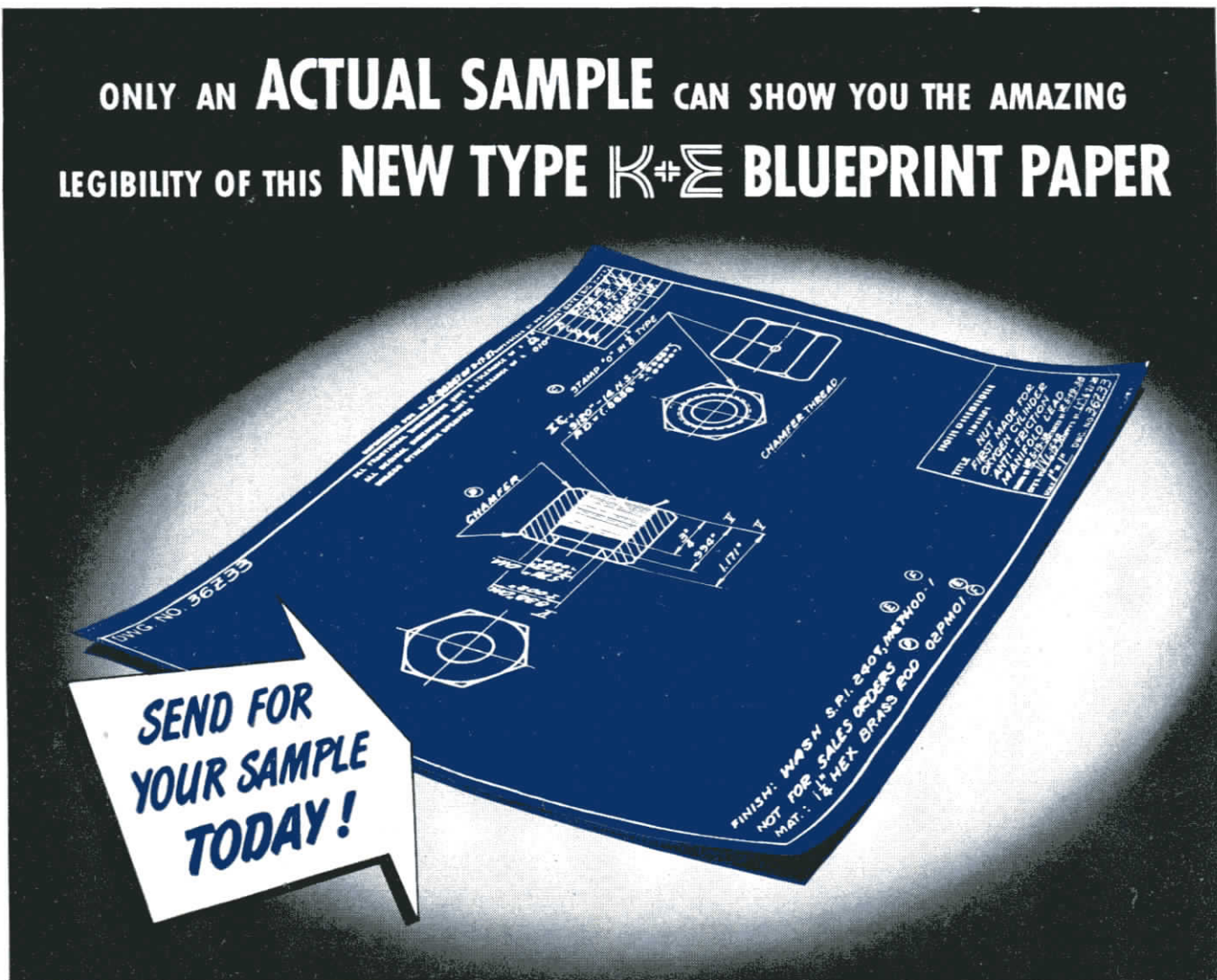
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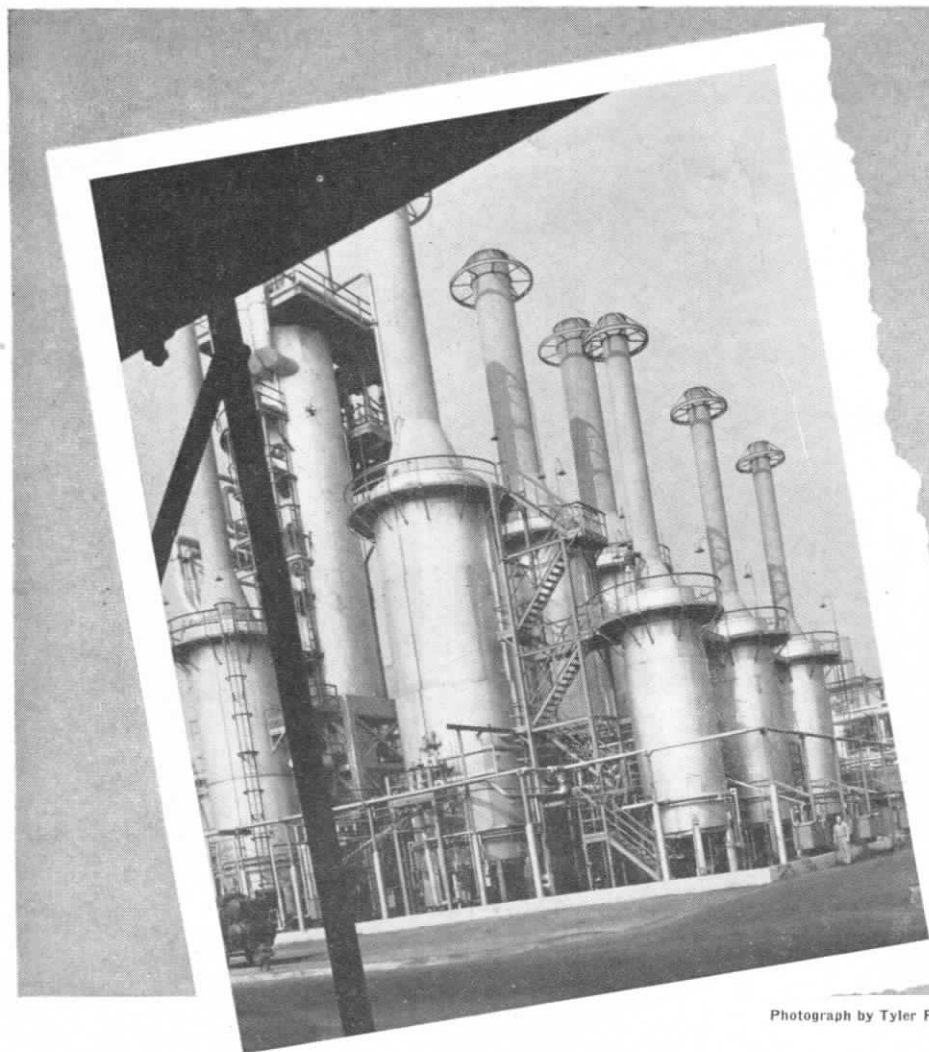
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Photograph by Tyler Fogg for Sun Oil Company

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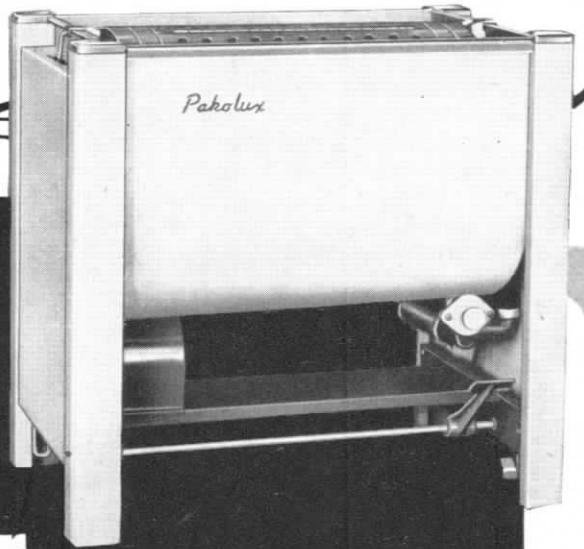


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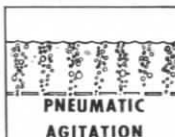
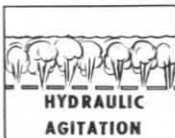
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William F. Boyce
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Joseph J. Roche
MANAGING EDITOR

Marvin H. Albert
ASSOCIATE EDITOR

Victor M. Turner
ART DIRECTOR

Al Johnston
CIRCULATION MANAGER

Thomas A. Byrnes
FIELD SERVICE MANAGER

advertising

Eastern Office
460 Bloomfield Avenue
Montclair, N. J.
Montclair 2-7101

Chicago Office
228 North LaSalle St.
Chicago 1, Ill.
Dearborn 3507

West Coast
Swain Associates
Wilshire-Wilton Bldg.
639 South Wilton Place
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PHOTOGRAPHIC

BUSINESS and INDUSTRIAL PHOTOGRAPHY

AGE

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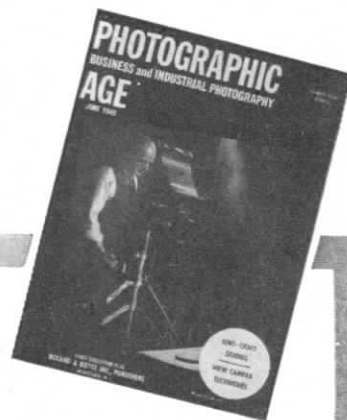
Page 6 to 9—Richard Saunders; LensCraft
Page 12—Audio Productions
Page 13—Movie Mite Corp.
Page 14—top—Americolor Services,
bottom—Mills Industries Inc.

Corrections—In the May issue, the chart on page 17: the center column of the right hand chart should read, "Tungsten Type Color Films."

In April, page 11, upper left: "The product of one-third the incident light . . ." should be "one-sixth."

the cover . . .

Noted product photographer, J. Harold Murphy, of Lens-Craft Studios, gets ready to shoot, using a view camera to get one of his excellently proportioned, sharply focussed photographs.



masters of photographic display



by
e. m. kelley

LensCraft Studios has grown rapidly, since the end of the war, to become one of the biggest photographic display organizations. It handles everything from making a small display transparency complete with light-box, to creating gigantic photo-murals and setting up photographic museum and company exhibitions.



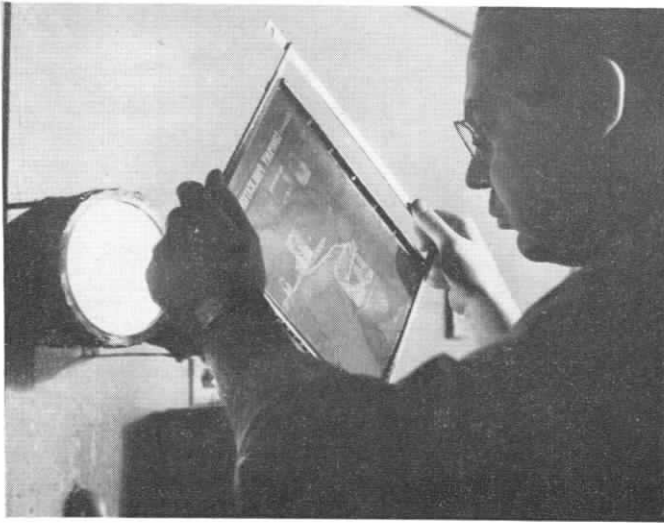
HUGO BLOCK who designs and supervises the construction of photo-murals and displays, examines photos intended for a photo-montage.



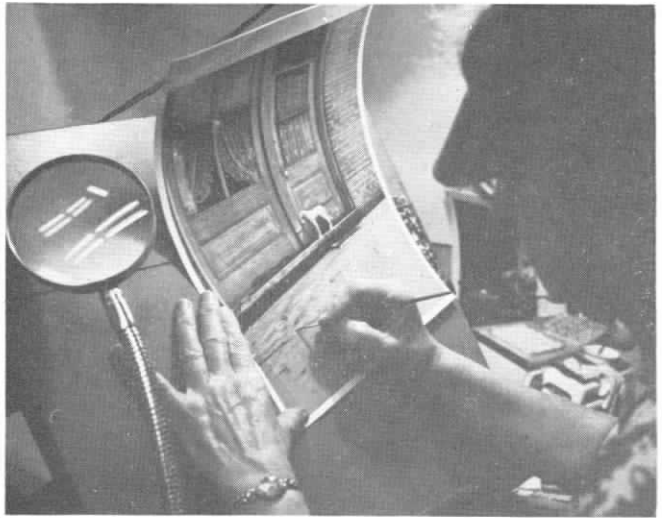
STAFF CONFERENCE. Peter Cuti, foreman of the photographic department, Xavier Sickinger, foreman of the carpenter shop, and Achilles Damiani.



PREPARING WALL area for a photo-mural. Large wall decorations such as this are a LensCraft specialty, together with displays and exhibitions.



TRANSPARENCIES are checked for flaws before being handed on to be used as part of an advertising color display. Carpenter shop makes light box.



RETOUCHING enlargement to be used in a museum exhibition. LensCraft handles everything from taking shots to building stands and frames.



STRIPPING and opaquer a transparency for use in a photographic show. Color transparencies are blown up or combined with others to make a display.



COPY CAMERA here can handle very large jobs. Often small photographs are blown up tremendously to create a striking display effect.



PHOTO-MURALS such as this one are the result of combining many photographs and parts of photographs, some bought and others specially shot.



FINISHING touches are put on the mural. The completed job has been designed to give a definite impression or center about one theme.



CARPENTER SHOP above makes light-boxes, mural frames, display stands, etc. Below: a corner of the LensCraft enlarging room.



MAIN ROOM at LensCraft Studios, below, is a focal point of all activities. Here displays and exhibitions are designed, discussed, assigned, and finished.



PHOTO enlargements . . . photo montages . . . silver prints . . . screen velox . . . location and studio photography . . . photo murals . . . lettering and layouts . . . coloring film transparencies . . . quantity printing . . . mounting in any style. The foregoing list covers about half the services handled by LensCraft.

The list looked long and a bit formidable to this reporter, but a quick inspection showed that it did not mention the preparation of exhibits (for museums, trade shows, photographic shows, etc.). Yet anyone who gets around in New York who is at all exhibit-conscious would know that LensCraft has turned out some very fine exhibits. Neither does the list include the making of furniture. The company's executives would probably say, "But we are not in the furniture business." Yet it is true that there is some mighty attractive furniture about which was designed and built by LensCraft.

It comes as a bit of a surprise to learn that this organization, now so well launched on the American photographic scene, was started only in 1941. It was founded by John H. Trowbridge, who is still its president. In its earliest stage, it was a studio engaged chiefly in transferring designs, through photography, to textiles. The plan did not work out, so Trowbridge decided to use his equipment for other purposes. There was plenty of competition from other camera studios, so he began to concentrate on the more difficult jobs not sought after by others. To this day, one of the company's chief assets is its reputation for attempting practically anything in the photographic field, or even remotely related to it.

At first glance, it might not appear that a photographic establishment would have much use for woodworking equipment. Yet LensCraft has a large carpentry shop and a woodworking plant, equipped with table, band and crosscut saws; joiners, shapers and other up-to-date woodworking machinery. Questioned about this, Trowbridge explains that early in the firm's history, a client wanted pictures mounted on a simply constructed background—so a shop was set up. Then the staff found that there was a demand for facilities for mounting in large dimensions. The more the department was enlarged, the bigger the mount-



A MURAL DESIGNED AND EXECUTED BY LENS-CRAFT STUDIOS FOR A LONG ISLAND RESTAURANT. IT IS A MONTAGE OF LONG ISLAND SCENES.

ing and construction jobs it was asked to handle. Now its woodworking jobs include the making of screens, shadowboxes, models, exhibition booths, commercial displays and exhibits, and large-scale mounting. But, there is a great deal of mounting on bases other than wood—on glass and aluminum, to name two examples.

Nevertheless, as its name implies,

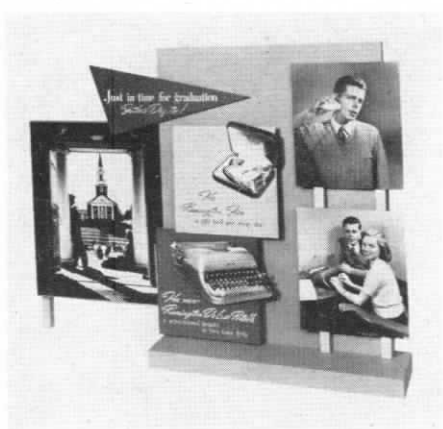
LensCraft is primarily a photographic house. It does large quantities of straight copy work and makes multiple prints by the thousand. It has the usual standard studio and darkroom equipment, though on a larger-than-usual scale. It also has plenty of not-so-usual photographic equipment. And, more important than equipment, it has a staff of experts, all of whom have a thorough

background in their own specific work.

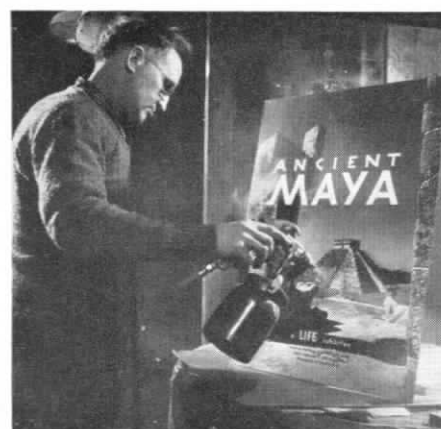
There is, for example, Achilles Damiani, commonly known as "Kelly," about whom, though he is still a young man, legends have already sprung up. His associates tell admiringly how, having an article on an intricate process trans-
(Turn to Page 32)



COLORING a transparency to be used in an advertising display. After coloring, it will be ready for mounting.



TYPICAL display. LensCraft took the pictures, lettered, built the stand, and mounted the display.



PROTECTIVE coating is sprayed on mounted enlargement before it is made part of a Life Exhibition.

HERE'S HOW SOME BUSINESSES

ARE USING COLOR PRINTS TODAY

by Lloyd E. Varden

TECHNICAL DIRECTOR, PAVELLE COLOR, INC.

For billboards, displays, sales training, direct mail advertising, research, and many other purposes, color prints are finding ever increasing popularity. The problem is in deciding between the use of color prints and black-and-white for the various jobs to be done.

PHOTOGRAPHIC color prints are widely used today in various businesses and industries. The applications are so diversified, and are growing so rapidly, that it is difficult to show categorically what commercial needs color prints meet. There are certain obvious uses, such as sales training manuals, advertising displays, business reports, layout dummies, direct mail sales campaigns, sales presentation books, product file records, etc., but no system of classification so far developed allows for the numerous, unexpected uses which arise almost every day.

The problem would be simplified if we could assume that wherever black and white photographic prints are used, color prints could be substituted just as well, and that no uses for color prints exist beyond those in which they merely substitute for black and white prints; but the *fact* is that color prints cannot be substituted for all applications of black and white prints. Economy, if nothing

else, dictates that black and white prints will not be pushed aside by color prints for a long time to come. Even if this were not a factor, there are numerous instances where black and white prints meet all necessary requirements, some of which cannot be met by color prints. But on the other hand, color prints have created an ever-widening application of functional photography. Color prints are now being used where black and white prints could never be considered. Therefore, until more businesses have had an opportunity to fully consider the possible uses for color prints, we shall have to forego attempts to *classify* color print applications.

Examples of Present Color Print Applications

By citing a number of ways in which color prints are presently being used in business and industry, further possibilities will become evident. All of the applications to be

discussed as based on actual case histories, but names shall be withheld.

A large outdoor display agency had a considerable number of billboards which had not been contracted for. A direct mail sales campaign, following the same pattern of approach as had been used by the firm previously, failed to put the billboards to use. Color transparencies of a selected group of attractive billboards were then made, and 8" x 10" color prints prepared for use in a follow-up campaign. The outcome was a phenomenal success, showing the power of color to get a message across. This application is paralleled by the use of color prints in promoting the sales of neon signs by several electric signs manufacturers.

A leading national news magazine saw the possibility for using color prints in illustrating their survey reports. A few trial reports were prepared and the response was so favorable that all their survey reports are



FOR PROMOTION purposes, photographs like these are often more effective when done in color. This is especially true where, as in these cases, color is an important selling point.

now illustrated in this manner. A lithographic printing firm producing completed window displays for manufacturers of various nationally advertised products noticed that their displays were often poorly arranged by retailers for most effective use. A photographic studio was set up to make color transparencies of each new display as it should be placed in a window. Color prints were then made and sent to the manufacturers with the suggestion that each retailer receive such a print to assure proper use of the display. Several manufacturers have taken up the suggestion and now routinely send color prints to show how each display should be used. The service is appreciated by the retailers, and the manufacturers know that their displays will have more pulling power if uniformly presented to the public.

Introducing a New Line

In certain industries where each firm has numerous competitors, such as the radio industry, the luggage and leather goods industry, etc., it is necessary to introduce frequently new designs and new models. Changes often are made so fast that it is difficult to keep field representatives and wholesale distributors up-to-date. Those manufacturers who have tried the use of color prints for quickly showing their new items to widely scattered sales representatives consider the problem completely solved.

A foreign sugar producing firm desired to establish contacts in this country. They made a series of color transparencies of their plantation and refining operations. Color prints from these were made up in book form containing seventy-two 8" x 10" prints each. In a matter of minutes it is possible for this company's representatives to impress people in this country with the size of their operation, the modern methods used, etc. The same job in four color reproductions in the short-run required would have been far too costly to consider.

Advertising

More and more advertising agencies now show color advertising layouts to clients with color prints rather than black and white photostats. This makes it much simpler for the executives of firms to visualize the final advertisement. It speeds up approvals and lessens complaints. The same agencies use color prints for dummies for promotional pieces, trade publications and house organs.

One of the leading manufacturers of railroad cars uses color prints of car exteriors and interiors in each bid submitted to its prospective customers. The same practice is followed by one of the major airplane manufacturers.

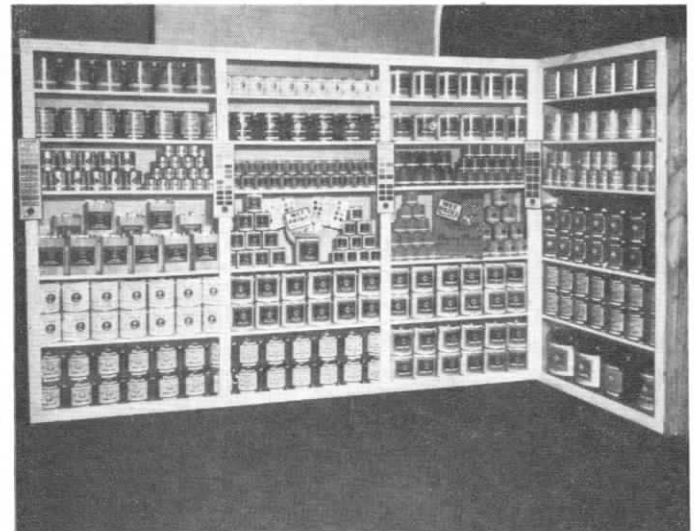
A textile manufacturer uses color prints for preliminary showing of designs and color patterns to their salesmen and buyers before actual samples are ready for distribution. The color transparencies are made from the original art work before it is sent to the factory for use in producing the fabric.

Reproducing Charts

A major distillery prepares colored charts each week for intra-company distribution to show sales
(Turn to Page 27)



COLOR PRINTS are effective for sales portfolios whenever the color of the merchandise is important.



THE ABOVE color print was sent to paint store dealers on a national scale as an aid in arranging uniform store displays.



THIS MACHINE was a bright yellow color with vital controls painted in other colors. Such color pictures are used for personnel training, maintenance and installation instructions.



Films for Selling

by *Henry Clay Gipson*

Author of "Films in Business and Industry"

Slide films and motion pictures have proved a tremendous aid to the salesman at the point of sale. An intelligently organized and presented film, designed to tell the sales story or help the salesman to tell it, is one of the most potent tools for direct selling.

THERE is so much ballyhoo connected with the production and distribution of advertising and public relations films that the important uses of motion pictures and slide-films as a direct aid to the salesman at the point of sale are often overlooked. There is a good reason for the reticence of many organizations to reveal the nature and extent of their use of films in direct selling, for such knowledge represents an important element in management "know-how." A magician does not reveal his tricks and, in highly competitive fields, it is often a good idea to keep your competition from knowing how your salesmen pull the rabbits from the hat. So, let's look behind the scenes and see just what films can do to help in selling. Their

proper use may be the spark-plug needed to set your company's sales organization rolling in the highly competitive market just ahead.

Perhaps the best way to get an overview of the field is to review the projection equipment available for use by salesmen. Projectors which are compact enough for a man to conveniently carry on calls are available for three general classifications of films—16mm sound motion pictures, sound slidefilms and silent slidefilms. Some of the silent slidefilm machines are made which take only slidefilms while there are other models which only take 2 x 2 individual slides. A third type, known as dual purpose projectors, take both slidefilms and individual slides.

Slidefilms

Sometimes the term "slidefilms" is confusing. For clarity, let us therefore state that in the industrial field a slidefilm is known as a series of individual still pictures printed in sequence on a strip of 35mm film. Each picture is held on the screen for individual observation instead of being shown at the rate of 24 per second as is done to create the impression of motion in motion pictures. In the academic and religious field, slidefilms are usually called filmstrips, which is a much better terminology and will perhaps someday come to be generally accepted in the business field.

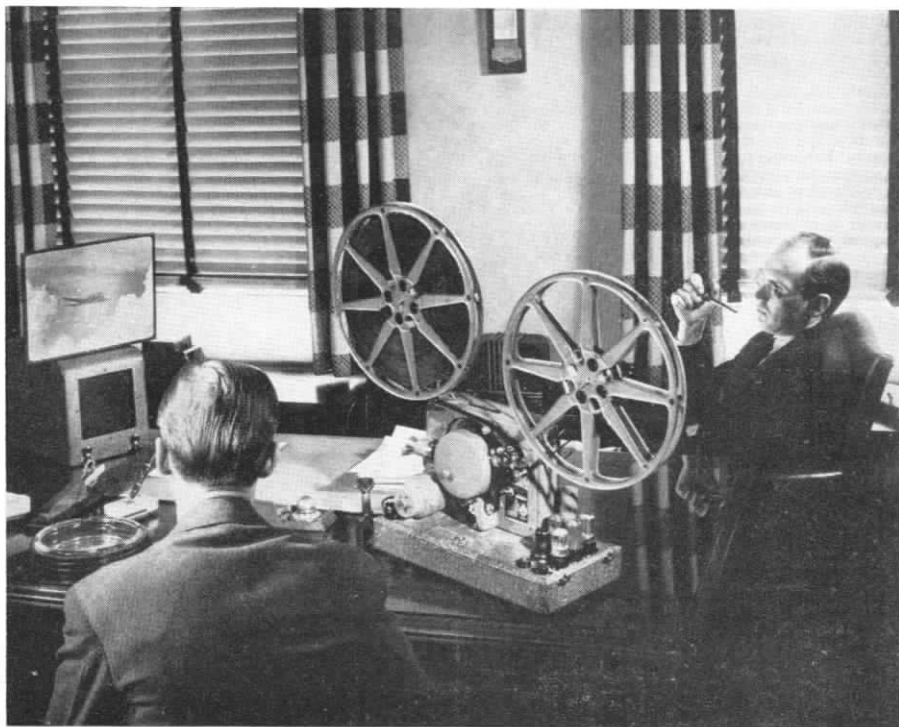
Silent motion pictures are now seldom used for sales purposes. However, if a situation presents itself where a silent motion picture seems to be best suited for the purpose, one of the numerous home movie projectors can be pressed into service or some of the old commercial models with a translux screen built into the case may be found.

Films can be produced to meet almost any sales problem, for they can sell products, services or property. A prime purpose is to show products which are too large to be actually carried by the salesman. For years, the Caterpillar Tractor Company has been using motion pictures which simply show their tractors in action. Many sales have been made from these films without the customer actually seeing a tractor. Industry now uses sound motion pictures to sell many items, with showings

made at the prospective customer's office or home. A very successful film on rock wool insulation was thus used by the Johns Manville Company and the U. S. Rubber Company has sold many tires in this way. Some such selling films are simple factual black and white productions, while

others are of a highly dramatic nature with color, music and sound effects used to full advantage.

Projected still pictures are best used to show the various styles, designs and colors of merchandise. For example, individual 2 x 2 color slides are ideal for selling rugs. Through



PORTABLE 16mm sound motion picture projectors are available which can easily be carried by a salesman. They can be quickly set up and when a short throw and small screen are used the intense concentration of light from the projector makes showings effective even in rooms which are only partly darkened.



SOUND SLIDEFILM projectors are very light in weight and easy for a salesman to operate. A soft bell or buzzer during pauses in the narration signals for the operator to change to the next picture.

their use it is easy for a salesman to carry pictures of a complete line. When they are shown, together with small swatches to show the quality of the carpet, a complete and accurate impression of the product is given. This same technique can be used for selling various types of clothes and for many other items where appearance is the main selling point.

The difference between an inte-



SILENT SLIDEFILM projectors, such as the self contained unit above, are designed for continuous operation in show windows or on counters. They are especially effective with color film.



SELF-CONTAINED sound motion-picture projectors can deliver a sales message at the point of sale or in any public place, without the presence of an operator.

grated series of individual slides and a slidefilm is slight. The ability of the salesman to change the order of the pictures or to show only a few at a time is the chief advantage—and disadvantage of the individual slide. Pictures in a slidefilm strip are always in order and always right side up. Unless a salesman is careful and well trained, individual slides will often be placed in the projector upside down and in a different order from that intended.

Recorded narration to accompany a film tends to make it more of a unit and the use of music and sound effects can add greatly to the dramatic impact of a presentation and help to create the impulse to buy. The use of sound film is, therefore, of great help in opening new accounts. Sound and silent films can often be used well together. One large organization uses a ten-minute sound slidefilm to build up general good will and then switches to individual 2 x 2 slides to show items which are most likely to interest the prospect.

A great advantage in the use of sales films is that they not only help to increase the volume of a salesman but in so doing help to train him to be a better company representative. Some sales managers feel that a silent slidefilm in which the commentary is supplied by the salesman is the best way to help in this self-training process. Others feel that the use of a recording in which an experienced narrator tells the story is a greater help. Both methods are certainly helpful and probably no generalization should be made, for the type of product, intellectual level of salesman, make each case a separate problem. When recorded sound is not provided, a carefully prepared script should be supplied to give the salesman full advantage of the best sales thinking. Of course, each man should be encouraged to adapt the script to the requirements of each presentation.

It is convenient to have a projector for each salesman, but it is not essential. Some organizations only have one or two machines for the use of a dozen or more salesmen. Each man is required to set up a definite appointment with his prospect and reserve the projector for the showing. This in itself sometimes makes the presentations more effective, for the salesman can then dramatize the showing and build it

up as something special. Furthermore, it gives his prospect time to assemble a group of his associates for the screening.

Whether the showing is made by appointment or set up on the spur of the moment, it is important that reasonable care be taken to insure the proper operation of the projector. A spare projector bulb should always be carried, and if a sound projector is used, it is a good idea to provide spare tubes. Before a showing is definitely agreed upon, the salesman must make certain that his projector works on the type of current which is available, whether it be a.c. or d.c. An extra length of extension cord should be on hand, for it will enable the salesman to place the projector at a convenient place. It should be placed so that direct light does not fall on the screen. Fortunately when showing pictures on a very small screen, the shortness of the projection distance gives brilliant screen illumination, making it unnecessary to have the room completely dark. In fact, satisfactory showing can often be made in normal room light.

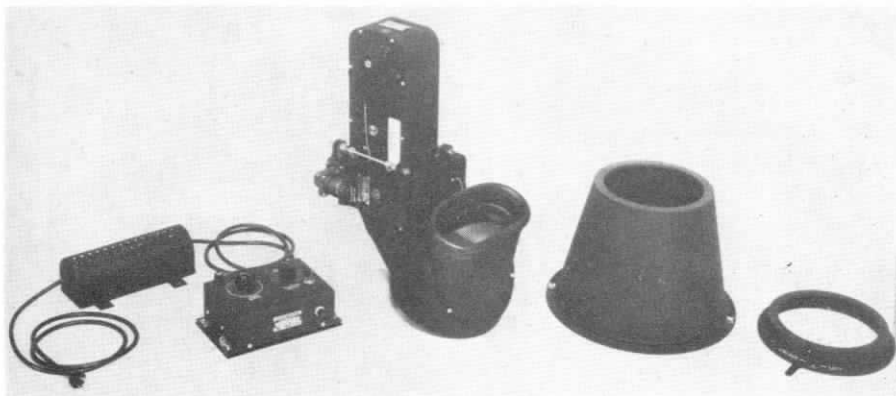
The use of sales films can be an expensive undertaking. However, it is not always necessary to start off with elaborate equipment and costly films. Hand viewers, which the customer holds up to his eye, are often very effective and they can be purchased for only a few dollars. The 2 x 2 color slides used in these viewers can be made cheaply by the company photographer, or the sales manager can even shoot them with his own camera. The use of hand viewers has, in fact, great advantages where the buyer has no office and has to be caught on the run or while on the sales floor.

Most people are curious enough to enjoy looking at slides, and an added incentive is offered when three dimensional stereoptican pictures are provided. There are several inexpensive hand-viewers on the market for showing such slides. When three dimensional slides are used for protection, special viewing glasses have to be provided, but the limited number of showings which a salesman makes, and the few people present at each showing, makes the problem of supplying viewing glasses a minor one. In fact, the use of special glasses serves to dramatize the un-

(Turn to Page 26)

THE RADAR CAMERA

Radar Photography has now been adopted for a number of peacetime uses by commercial airlines and shipping companies. The camera used has proved successful through intensive use during the past few years.



by G. J. Podeyn

THE Fairchild Mirar Camera has been designed to meet the expanding postwar requirements for radar and specialized oscilloscope photography. The Mirar design is a refinement of the standard radar camera now used by the Army and Navy and designed as a joint project for the Army, Navy and Radiation Laboratory.

Direct viewing of the radar image is provided at the same time that photographs are made. This is accomplished by means of an optical system known as a beam splitter, and both functions are carried on without interference.

Each single frame 35mm photograph records the time, the negative

number and handwritten data along one edge. This is vital data for most recording or mapping projects. All this information is provided by merely flicking a switch. The electrically operated Mirar Camera automatically makes photo records at intervals determined by the selection switch of the control box. The camera will operate at 24 volts D.C. or 110 volts A.C. or D.C.

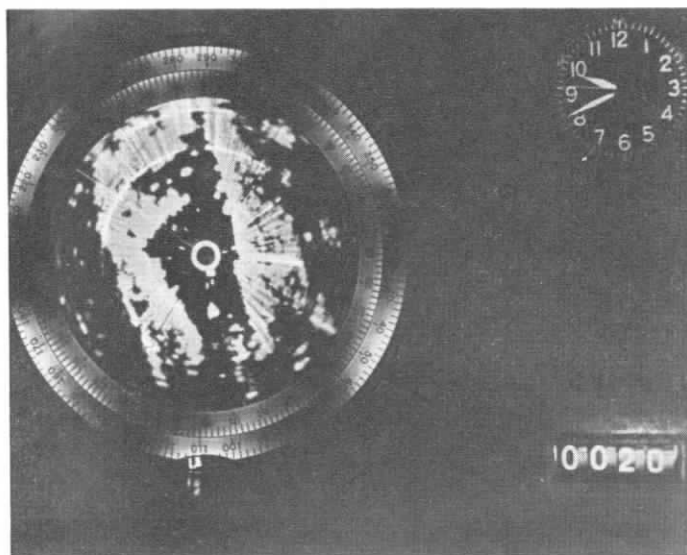
The Mirar Camera is being used for the radar charting of rivers and harbors. These charts are increasingly valuable aids to navigation as the number of radars in use are increased. The techniques used closely resemble those used in aerial surveying.

Radar charting will also be used to plot new buoy locations in rivers where the channels change frequently.

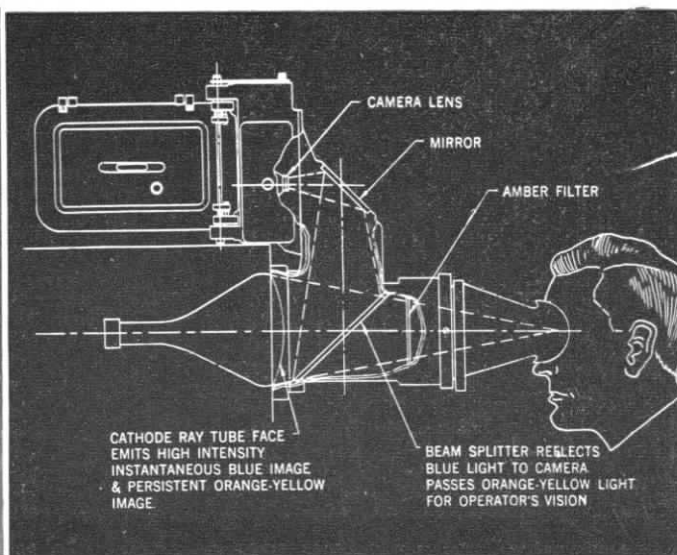
This will be a great improvement because these will actually be charts rather than mere written notice. The cost to make such charts is small and the value to navigators is great.

Another form of temporary navigation chart is easily prepared by vessels making voyages to harbors and up rivers which will not have formal radar charts for some time. The charts are merely a series of Mirar photographs which are keyed to the conventional charts by means of the automatic numbering system provided by the radar Camera. As an automatic radar log, Mirar presents a complete chart of harbor conditions every few seconds. Such a record will protect the ship owner by keeping continuous

(Turn to Page 30)



ONE FRAME from a 35mm film roll, showing marine radar scope (view of a harbor), with watch and counter.



CROSS SECTIONAL sketch of Radar camera in use. Operator can view, and thus control, what camera photographs.



HERE IS AN EXAMPLE OF THE SORT OF FOCUS AND PERSPECTIVE THAT CAN BE ACHIEVED BY THE PROPER USE OF VIEW CAMERA ADJUSTMENTS. NOTE THE LICENSE PLATE OF NEAREST CAR AND THE STREET NUMBER IN THE BACKGROUND.

A LENS, A BACK, A BELLOWS...

and something more

Many photographers say, "Give me a good lens, and any old box will do for the camera". But in using the view camera, a thorough understanding of its adjustments and "swings" is necessary for obtaining the best results.

by Victor Ellis

VIEW camera technique has been, in the past, a very neglected study as far as specific research and photographic writing is concerned. There has been very little improvement in the methods of adjusting the view camera over the last thirty years. This situation is largely due to the fact that a relatively small number of photographers have used the view camera, and while it was used mainly for portrait work only a few simple adjustments were needed. For the increasing amount of product and architectural photography that the view camera handles today, however, a much clearer understanding of the correct methods of utilizing all its potentialities is necessary. True perspective and sharp focus are the rewards of proper handling.

The main problem in using the view camera lies in the methods of obtaining proper perspective. Here we are concerned with the exact relative position of the subject to the ground-glass screen, and avoiding distortion in the image to be formed on the film or plate. The results the photographer obtains are dependent upon his skill in adjusting the various movable parts and "swings" on the standard view camera.

True perspective has a geometric basis and, as far as operating a camera goes, it is a mechanical procedure. Many photographers watch the ground-glass image and move camera adjustments arbitrarily until the picture looks or "feels" right. With consummate unconscious skill they produce marvelous results without knowing how.

Perspective in photography depends almost entirely on the position of the ground-glass screen or the camera back in relation to the subject being photographed. The lens and its position have very little to do with the perspective. A pinhole camera which has no lens, works on the same principle. The lens and its position has everything to do with the sharpness of the image. Thus we have a rule to remember: adjust the lens for good focus, the back for proper perspective.

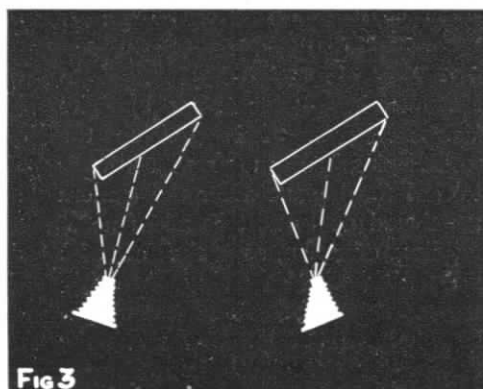
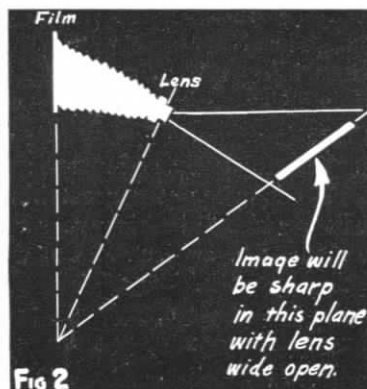
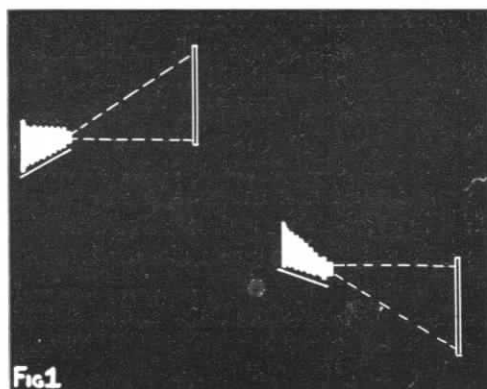
The simplest camera, with a minimum of movements, is the ordinary studio camera such as is used by portrait photographers. It has a fixed front with interchangeable lens boards. The back moves for focusing and has two swing adjustments. One, for tilting the ground-glass screen around the horizontal axis, is generally called the *back swing*. The

other, for turning around the vertical axis, is called the *side swing*. Portable view cameras with single extension bellows, used for portrait and short focus work, are of this construction, and this is the basis of nearly all view and studio cameras.

These simple cameras are all that is needed for subjects where linear perspective is not very distinct. This is true in portraiture and wherever you do not have straight vertical or horizontal lines to deal with, such as in most product and architectural photography.

Next in versatility comes the standard view or studio camera used in photographing products. To deal successfully with linear perspective in such work, especially for close-up views, many more adjustments are needed. To the simple portrait camera are added the following:

- The Rising Lens Board
- The Tilting Lens Board
- The Swinging Lens Board
- The Lateral Adjustment of the Camera Front (Sliding Front)
- The Rising Camera Back
- The Lateral Back Adjustment (Sliding Back)
- The Tilting Tripod Top
- The Sliding Base





HERE IS A CASE where it is difficult to get proper perspective, as it is a large close-up of a small object. A long focus lens should be used so that a large shot can be obtained from far enough away to retain vertical parallel lines.

These eight adjustments, together with the original two, Back Swing and Side Swing, found on the simple portrait camera, make ten in all that the skilled photographer must be able to cope with in producing pictures with correct linear perspective. Only a few cameras have all these adjustments. Usually not all of them are needed. Many photographic departments and studios have their view cameras custom made to fit their needs. Others use a standard view camera, but have the extra adjustments that they require built into it. Often it is the amount of swing that has to be increased to do the jobs that the department handles.

Let us examine, briefly, the purposes of each of the ten previously mentioned adjustments.

Back Swing—(See Fig. 1) The back swing is used to keep the ground-glass screen parallel to the desired focal plane after the camera has tipped up to take in all of a tall building, or down, as at the feet of a chair. Without this swing, the back, and thus the film, would not be parallel with a tall building when the camera was tipped up to include the

top of it in the picture. This would result in linear distortion. This can be understood by comparing the two pictures on page 19. One of them is taken with the camera back parallel to the building. The other was shot without swinging the back parallel to the buildings after the camera was tipped down to take the picture.

Many photographers use back swing to get pictures sharply focused, top and bottom, disregarding the effect on perspective. This can be done without being too noticeable when dealing with portraiture shots with a black background. But if any sort of architectural lines are present in the picture, they will be distorted by this procedure. The lens should be manipulated for sharp focus. The back swing should be used to bring the camera back into perpendicular position.

There is an exception to this rule about keeping the back perpendicular. This is when you are taking a "bird's-eye shot," looking very much down on the subject. Also when shooting at a subject high up. To obtain effective-looking bird's-eye and worm's-eye pictures, the ground-glass screen *should* be tilted, the

amount of tilt depending on the height or depth of the subject.

Side Swing—The side swing operates in a similar manner to the back swing, accomplishing the same perspective adjustments for the horizontal focal plane that the other does for the vertical plane. This can be seen by looking at Fig. 1 from the side. The side swing has a similar effect to the sliding front.

In photographing the side of a long building, as an example, the camera is turned so that it takes in the far end of the building, as well as the near end. In thus turning the camera, the back is no longer parallel to the side of the building, so that the lines of it will converge excessively toward the far end. To correct this, the back may be turned on its vertical axis, in the direction of the far end of the building, till the back is parallel with the side of it. However, for this type of correction it is preferable to use the sliding front.

These uses of the back and side swings apply exactly the same for making large pictures of small products close up. In such cases the bellows is quite extended and the back must be carefully corrected for proper perspective.

If, as is often the case, the side swing is used to get a sharp focus (which should be done by a front adjustment), it is at a sacrifice of proper perspective, resulting in too much wide angle effect and giving increased convergence. For portrait photographers this is not critical, and most view cameras, since they have only the back adjustments, must be used this way. But in architectural and product photography, the effects are all too noticeable.

Rising Lens Board—This is used to include the upper part of a tall subject, such as a skyscraper, in a picture. Rather than tilt the entire camera upwards, which makes the back incline away from the vertical plane unduly, the lens board is moved upward till the desired area is included. Tilting the camera without correcting the back would result in too convergent vertical lines.

In old box cameras, when the rising front was first added, it was found to be a great aid for handling vertical pictures. But when the camera was laid on its side for a horizontal picture with a tall building in it (such as a landscape with a

Here are examples of the proper and improper use of the view camera. The photograph below was shot with the camera pointed down, and no adjustments made. Notice how the buildings in the background lean. Above: this is a photograph that was taken after the problem here presented was carefully considered and the camera adjusted accordingly. The camera having been moved till proper perspective could be gotten, the lensboard was swung till both the near building on the left, and the buildings in the distance were in sharp focus.



church), there was no rising possible to take in the top of the church, except by tilting the camera. A rising front was added for this position, resulting in a camera that had the rising front and a *sliding front*. And thus the lateral front adjustment was born.

Tilting Lens Board—This adjustment allows the lens board to move around its horizontal axis, tipping forward or back. This is used to bring into proper focus objects that must be photographed obliquely. (See Fig. 2) An example of this sort of picture is the one of the Ford Showroom on page 16. Here the camera is up on a balcony. It is desired to bring into sharp focus the car a short distance away, below the camera. The wall and pillars and faraway cars must also be in sharp focus. The lens board must be tilted forward at the right angle to accomplish this.

The tilting lens board comes into special use with product photography where it is necessary to take large angle shots of products close-up with greatly extended bellows. To obtain the proper angle of tilt, an approximate line should be drawn from the camera back till it meets a line drawn through the focal plane you wish to keep in sharp focus. Then tilt the lens board till a line drawn from it would join the other two lines as shown in Fig. 2. This will result in a sharp image at the desired focal plane. The same thing applies in tilting the lens board upward.

For photographing very distant objects, there is little bellows exten-

sion, as contrasted with the long bellows extension when shooting close objects. As a result, for long distance shots, as with short focus lenses, the angle of the lens board makes little difference. Back and lens board can remain parallel.

Swinging Lens Board—A few of the recent view cameras have this swing front. It allows the lens board to move around its vertical axis. This accomplishes horizontally exactly what the tilting lens board does vertically; that is, it places the focal plane where you want it, since it is the plane parallel to the lens board that in sharpest focus, and the position of the lens is variable. Looking at Fig. 2 from the side will show you how the swinging lens board operates, and how to calculate the angle of swing.

The photograph of the tall buildings at the top of page is an example of the proper use of this adjustment. Note that the building in the left foreground is in focus, and so are the distant buildings on the right.

Sliding Front—This lateral adjustment of the lens board to obtain a long focus effect with a long focus lens, and a short focus effect with a long focus lens. In other words, by using this adjustment, lines can be made to either coverage rapidly in the distance or appear more parallel. By sliding the front, lines can be made to converge more or less, as you desire.

In photographing a piece of furniture, the sliding front is moved towards the end farthest away from

the camera to obtain long focus effect. This prevents the far end from appearing smaller than the near end. This is shown in Fig. 3. The way the camera is set up in relation to its subject (in the sketch on the left) the lines will converge rapidly toward the far end. In the sketch on the right this is corrected by sliding the front in the direction of the far end.

Now the far end will appear as large as the near end. After the sliding front is moved, the whole camera is turned till the image is centered again on the ground glass. In so doing, the ground glass has been placed in a more parallel relation to the front of the subject, so that the parallel lines of the subject converge less. If you want to obtain an isometric view of the subject, make the ground-glass screen absolutely parallel with the subject.

For short focus effect reverse the procedure described above. This will make the lines of the subject converge rapidly toward the far end. The results of the proper handling of the sliding front can be seen in the picture of the jewel box on this page.

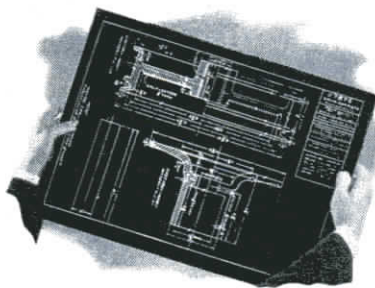
Rising Camera Back—Only recently has this vertical adjustment on the camera back been added to some of the modern view cameras. By keeping camera bed level and elevating the back of the camera, we do away with the need to *tilt* the camera to get in more foreground.

Sliding Back—This lateral back adjustment is also a recent innovation. (Turn to Page 30)

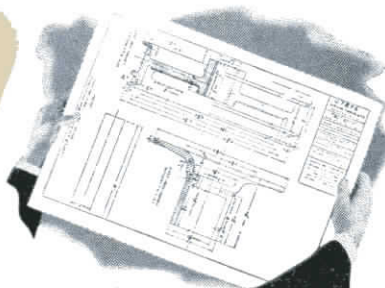


PROPER PERSPECTIVE such as in the photographs above can be obtained closeup, using a short focus lens, by correct manipulation of the view camera. Sliding the lensboard toward the far end of the object, and then turning the entire camera till the back is almost parallel with its face will do it.

Finer photo tracings from this new negative paper



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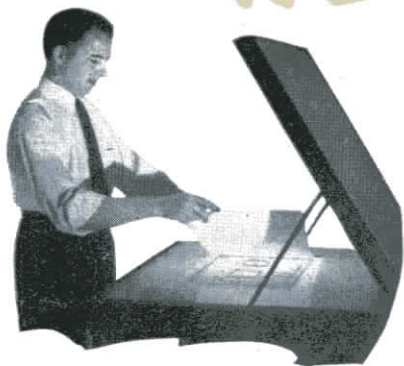


Tracing cloth reproductions show the difference. The crispness and legibility of negatives made on Kodagraph Contact Paper result in better reproductions on sensitized tracing cloth. Because of the deep, dense black backgrounds characteristic of prints made on this paper, opaquing and hand work are kept at a minimum.

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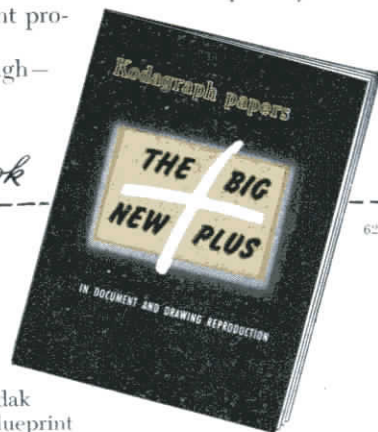
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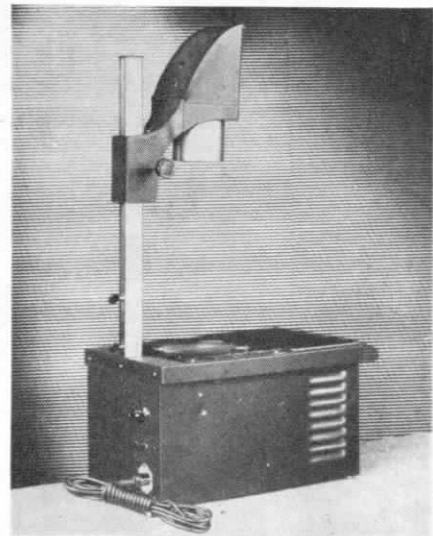
product section



Tripod Extension Head—A fully adjustable tripod extension made by the makers of the Devin Tri-Color camera, pro-head allows a full 18-inch extension up or down without disturbing the tripod. It has a positive locking 180 degree swing and tilt head with plastic knobs for easy operation. The extension tube is made of centerless ground steel, chrome plated, which converts regular tripods to new center post type. Pro-head allows copies to be made on floor. It may be clamped to any flat surface, such as a table top or ladder for angle shots difficult to make from tripod. The swing tilt head allows any possible camera angle without aid of accessory tilt heads. Pro-head Junior consists of the same precision extension tube and tripod adaptor without the swing tilt head. Booklets and additional information may be obtained by writing Photographic Products, Inc., 9032 West Pico Blvd., Los Angeles 35, Calif.

Overhead Projector—The Vu-Graph, a unique type of overhead projector, is the latest product of Charles Beseler Company. The

outstanding feature of this new projector is that it affords a large size (7" x 7") horizontal fully exposed projection stage upon which any transparent material may be placed and projected. Opaque material is projected in silhouette. The apparatus is usually placed upon the lecture table projecting its image to a screen placed on the wall at the rear of the speaker. The illumination is such that only partial shading of the screen is required and in many cases no darkening of the room is necessary at all. The apparatus consumes about 550 watts, is air-cooled by forced draft and is applicable to any 115-120 volt commercial circuit, either a.c. or d.c. Focusing is accomplished with a rack and pinion and images are centered on the screen by an adjustable surface mirror. The projector is equipped with a 4" diameter precise projection anastigmat objective lens.



Photospot Accessories—Two new accessories for the Fresnel Photospot have been announced by Display Lighting, Inc. A "barn door" and "spot shade" widen the application of this lamp to new types of lighting. The barn door fits into the diffuser clips on the front of the Photospot. The doors may be adjusted by means of the cool plastic knobs to afford any degree of shading desired. The mounting ring can be rotated so the shadow cast by the doors may be regulated to any desired angle. The spot shade also fits into the diffuser clips and carries a duplicate set of clips on its outer end. A new series of round masks fit into either the Photospot or the spot shade clips and in the latter position control the size of the spot image without affecting intensity. Three

(Turn to page 26)

The Pacemaker *GRAPHICS* for Industrial and Business Photography!



More and more industrial and business firms are realizing the value of being able to take good pictures in their own plant or office. Pictures with crisp, sharp detail are filling an increasingly important part of over-all operations, in various ways:

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Accident Reports—save time and money with on-the-spot photo records of industrial accidents.

Construction Progress Reports—accurate, visual reports of building progress.

House Organs—snappy, intimate photographic illustrations reproduce well . . . enliven interest and benefit employee relations.

Public Relations—timely photographs of your plant and personnel play an important part in a well-organized publicity campaign.

Photo File Record—quick, inexpensive photographic records of necessary papers, leases, contracts.

In the listing above (right), you have only a few of the many and varied uses for the all-purpose Pacemaker *SPEED* or Crown *GRAPHICS*. With either of these versatile cameras, you can take a close-up of fingers threading a needle! Or you can take a panoramic view of your entire plant!

Your local Graflex Dealer will gladly advise you about potential uses, and will further advise about the present availability of all sizes of the new Pacemaker *SPEED* and Crown *GRAPHICS*. For descriptive literature, write to Dept. 291.

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INDUSTRIAL

FILMS



A monthly review of what's happening in sponsored motion pictures.

by George S. Gladden

Head of the Motion Picture Department
J. Walter Thompson Co.

A Preamble. In this and succeeding issues of Photographic Age, the writer hopes to discuss viewpoints and facts related to such diverse subjects as motion pictures, side-films, glass slides, picture costs, projection equipment, sales and service training programs, and many other activities which might fall under the general heading of *sponsored visual aids* for industry.

Television Films. Let's start with films for television. Who makes them and why? Who sees motion pictures on television? Will some or most television programs and commercials of the future be on film? What are the differences in photographic technique between motion pictures for the theater screen and motion pictures for the kinescope?

Who Makes Films for Television? Everyone is getting into the act, but for the most part films for television are produced by the producers of *sponsored motion pictures*, the same or similar organizations that made armed service training films during World War II. Today these same concerns are interpreting industrial relations, executing sales and service training programs for America's industries, and nibbling at the growing television film market. There are a great many such industrial producers. How many?

Take New York City, home base for sponsored motion picture producers. Manhattan (just one of New York City's boroughs) lists in the Classified Telephone Directory five columns of motion picture producers. Each column is ten inches high, with five producers to the inch, a total of over 250 producers. Add to Manhattan,

the hundred odd Hollywood sponsored film producers, the Chicago, Detroit, Dallas and other metropolitan contingents, and the total number of motion picture producers hits around the one thousand mark. This is a fabulous number of specialized organizations aspiring to create and build motion pictures either for the screen or for television.

Naturally, these producing organizations actually are, claim they are, or hope they will eventually be,—*experts* in producing films for television. That's good. But the equally important point is that there are far more people ready to take on the job of making television films than there are television films to take on—or will be for another few years. Too, there is a recent demand on the part of network television stations that all films shown over their stations bear the IATSE label. Many producers are working "non-union" with resultant appealing budgets to the sponsor. Between the overbalance of supply to demand and the necessary eventual switch to union operation, there are bound to be many casualties, commonly known as bankruptcies.

The Growing Audience. Manufacturers of electronic equipment have caught up on the backlog of radio orders and are concentrating on producing television sets. 400,000 sets are estimated for the New York area alone, with a potential audience of 1,500,000 by the end of 1948. The ten television stations in operation in the country in January, 1947 will grow to from 50 to 60 stations by the end of 1948, reaching a potential audience of 10,000,000. The introduction of television sets in hotel rooms is already a fact. And from Chicago comes the announcement of a slow, medium and fast coin payment device built into television sets for home time payments.

What Do We See? Yes, the television audience is increasing at a fantastic rate—not fast enough to use all the facilities of all the film producers who want to get in on the bonanza but fast enough to guarantee an honest living to a reasonable fraction of them. That brings up the question of what kind of films will bring them an "honest living." The answer is that so far most films produced for television have been commercials—product plugs introduced into "live" shows, sporting events, or newscasts.

Take cigarette film commercials. Lucky Strike had led the commercial television film field with dramatic, stop motion film commercials, wherein Luckies go on parade to the accompaniment of an original musical score. It is reported that these commercials cost some \$6,000 each to produce.

Camel has made a long series of inte-

grated film commercials for their 15-minute Newsreel, a special newsreel put together by Fox Movietown News. The commercial gives an animated look-see at the T-Zone, neatly superimposed over the throat of attractive models, male and female.

Chesterfield has the Giant baseball club for television and leads off with cartoon film animation wherein a cartooned pitcher throws a smoke ball writing the word, "Chesterfield." This film opener, plus a series of film visits to America's leading restaurants and hotels (in which people are shown smoking Chesterfields) are shown between innings.

Old Gold has their series of film commercials, too. A pretty girl at a swimming pool, out of the water, hands dried, and guess what? You guessed it. She lights an Old Gold.

To depart from cigarette film commercials, Ballantine Beer and Ale, with the help of the Yankees, have several interesting film commercials, among them a continuing series which develops the copy theme of their "Some words fool you" campaign. These are a combination of cartoon animation and still photography, with camera motion obtained by camera movement.

Ford Motor Company, also in baseball, introduces the new Ford car, in action, via a television screen. Here the car's ridability, beauty and engineering features are stressed by a combination of actual photography of the Ford line with cartoons illustrating such sales points as "picture window visibility," and "living room comfort."

Television Film Entertainment. In the field of newscasting, the Chevrolet, Camel and NBC newsreels currently top televiewer interest—but there'll be more newsreels shortly and competition for viewer interest will be more keen. KTLA in Los Angeles, as a public service, broadcasts a review of missing persons and persons wanted for crimes. Photographs, of course, are the backbone of this idea.

1948 has seen almost the first packaged television entertainment material on film, with several producers working on package shows. A typical series, developed by Corcoran Productions, features low budget, 30 minute dramas. Jerry Fairbanks, who directs "Speaking of Animals" released through Paramount, has sold a series of thirteen detective mysteries entitled, "Special Investigator."

The use of old film commercials as entertainment fodder is on the way out. The films frequently do not fit and the music is oftentimes Petrillo banned. All in all, it's a good bet that by the end of 1949, 30% of all material on television will be on film.

✓ ✓ ✓



Why is the bride so faint?

... the excitement of a wedding day... no wonder! Even the camera shutter became confused. But no harm's been done. The Mallinckrodt Line offers you the chemicals required for intensifying or reducing, as well as for developing, fixing or any other darkroom work. They are dependable and photo purified.



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Films for Selling

(From Page 14)

usual nature of the presentation.

Hand slide viewers, as well as projectors, can be used to provide an interesting tie-in with other types of motion picture advertising. If non-theatrical films are being distributed to churches, schools or clubs, or if minute movie advertising shorts are being shown in regular theatres, then individual frames can be taken from these films and shown to local retailers to demonstrate the backing which is being given a product. Individual slides can also be used to show pictures of billboards or other forms of advertising. The low production cost of 2 x 2 color slides makes it possible to show such pictures in color where high engraving and printing costs might make it impractical to use color in pamphlets or other printed matter.

The use of films in stores as a direct aid in retail selling is increasing each year. Automatic projectors for sound or silent motion pictures, for silent slidefilms and for individual 2 x 2 slides are available. These machines are designed to run continuously without the necessity for rewinding or releasing. They can also be adjusted so that they operate only when required merely by pressing a button. Such projectors are considerably more than simple manually operated machines and for this reason some dealers use one of the regular hand-operated models set up on a counter or in some stray corner for use when required to put across some important sales point.

Films are being used in a myriad of ways in modern selling. Those who use them wisely do not suddenly decide that it would be a good idea to make a film and then figure out a way to use one. Rather, they constantly keep in mind the film medium as one of the most important methods of industrial communication, just as they do printing or advertising or even the telephone. Then when a situation develops which calls for the utilization of a film they make one to fill the bill. When used properly films can actually perform sales miracles. ✓ ✓ ✓



FILMS, such as "Type Speaks!" produced by American Type Founders, which show how products are made, give a better idea of the quality behind a product than any verbal message delivered by a salesman.

Product Section

(From page 22)

round masks with openings of different sizes and a rectangular mask opening are available.



Dry Mounting Press—A new 11" x 14" professional model dry mounting press that will mount 16" x 20" prints quickly on paper, fabric or plywood, was recently introduced by Campus Camera, Inc. It is



sturdy, all metal, yet light enough to be portable. ✓ ✓ ✓

Color Prints

(From Page 11)

trends of their various brands, stocks on hand, production rates and anticipated production schedules. Copies for all executives and branch heads were previously made by hand, keeping an entire staff of artists busy producing the required number of duplicates from the original. Now a color transparency is made from the original and color copies are produced in even greater number than before at a much lower cost.

A manufacturer of coloring pigments used in paints maintains a complete file of color transparencies of all laboratory tests showing the effects of the misuse of their products. For handling complaints color prints are kept on hand that vividly portray how the trouble in question can be duplicated in the laboratory how the trouble is question can be duplicated in the laboratory under conditions which are specifically not recommended. Prints from the same transparencies are used in sales room discussions and for educational lecture purposes to encourage proper application of their products.

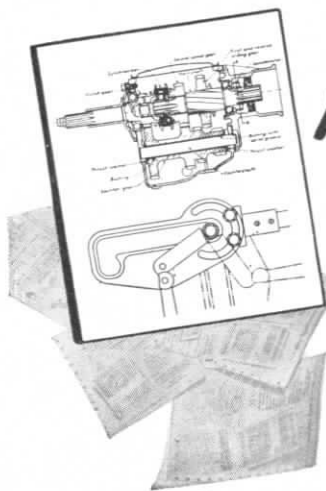
Research

A novel application of color prints has been in the old industry where they are used in showing the wearing of parts due to oil breakdowns at high temperatures, to improper oils for the particular purpose, or for any other reason. The worn metal parts show color striations which differ according to the efficiency of the oil. These colors are reproduced quite satisfactorily in color transparencies. Color prints from the transparencies are made for file purposes, technical reports, sales educational programs, etc.

Another unusual application for color prints has been their use in conjunction with color slide-film representations of the educational or sales promotion type. Color prints in this connection have been utilized in two different respects. Color prints, rather than the actual slide-films, are used for advance booking purposes since the prints can be viewed without a projector. Their use also prevents spoilage of original slide-films from too frequent handling. The color prints are used in addition as pass-outs after each showing of a color slide-film so that interested people can have a visual record of the facts discussed.

A reference has already been made to the use of color prints in connection with printed lithographic window displays. A further application with printed lithographic window displays. A further application in this field has been in determining how long a run the advertiser should have printed to make sure that no displays were left over and that enough displays are printed to meet the demand. Color prints are sent out to sales representatives covering a particular territory and within a few days it can be determined rather accurately how many displays will be required. ✓ ✓ ✓

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Photographically Speaking

Unique Underground Laboratory—One of the world's most unique optical laboratories is now under construction. Vibration-proof and designed to control temperatures to within one hundredth of a degree, the underground laboratory is being built by Bausch & Lomb Optical Company. Upon completion of the project, in itself a scientific feat, the laboratory will house engines used to rule diffraction gratings. Designed by John J. Esterheld and Michael M. Serron, Bausch & Lomb architects, the laboratory is being built on solid rock, 10½ feet below ground level. More than 175 tons of concrete and six tons of reinforcing steel will be used in constructing the building which is 30 feet long, 16 feet wide and nine feet high on the inside. The extreme precision required in ruling diffraction gratings with diamond tools explains the laboratory's unusual construction specifications. Gratings, used in spectrographs in place of usual quartz or glass prisms, are small optical surfaces ruled with 15,000 or more straight parallel lines per inch. The problem of ruling diffraction gratings has attracted the attention of physicists for more than a century. Capable of separating light waves according to color, ruled gratings have rapidly increased in importance during recent years, due to the fast diminishing supply of optical quartz. Within the next two years, the new laboratory should provide a supply of high quality diffraction gratings.

Safety Oscars—Three motion pictures and three sound slidefilms have been awarded "Safety Oscars" for their outstanding contributions to safety in 1947. Five films were given honorable mention awards and seven others were voted special commendation. The awards are made annually in the fields of traffic, occupational, home and general safety by the National Committee on Films for Safety, representing 17 national organizations. "Going to Blazes," released by Metro-Goldwyn-Mayer and produced by Herbert Morgan, was judged the best theatrical motion picture on safety. Metro-Goldwyn-Mayer and Morgan took the same honor in the 1946 competition with "Traffic With the Devil."

In the traffic and transportation classification, "Destination—Death," produced for Zurich Insurance Companies by Burton Holmes Films, Inc., was judged the best sound slidefilm. There was no motion picture award in this classification.

In the occupational division, winners were: "Diagnosis—Danger," a motion picture produced for St. Paul-Mercury Indemnity Co. by Chicago Film Studios; "Fifteen Minutes to Go," a sound slidefilm produced for National Safety Council by Sarra, Inc.

Awards in the general field were: "Safety Our No. 1 Crop," produced for General Motors Corp. by Soundmasters, Inc., judged the best motion picture; "The Fire Bug," produced for Zurich Insurance Companies by Atlas Educational Film Co., won top honors for sound slidefilms.

The following films received honorable mention:—Motion Pictures: Traffic—"Live and Let Live," produced by Aetna Casualty & Surety Co.; Occupational—"Use Your Head," produced by Denver, Rio Grande & Western R. R.; "Kodak Park Safety," produced by Eastman Kodak Co.; General—"Danger Is Your Companion," produced by American National Red Cross. Sound Slidefilms: Occupational—"Falling Ground," produced by Anaconda Copper Mining Co.

A Gonistigmatic Lens System—A lens system especially designed for projecting an image at an angle for use in cameras or

projectors, is being patented by Victor Ellis, of Montclair, N. J., who is president of Ellis & Beller, Inc., of New York City. After many years of research and practical experiments in the operation of view and studio cameras as well as projectors, Mr. Ellis has discovered a lens system which greatly increases covering power especially at infinite focus. This system is a radical departure from the conventional method of centering lens elements on the optical axis of the lens. "The limited circular image formed at infinity focus on a large ground glass screen, can with this new system, be shifted away from the center and towards the circumference of a much larger circle in the focal plane", without tilting the lens. The covering power at infinity is increased more than 50%. As the subject to lens distance becomes greater, the covering power increases even more. Mr. Victor Ellis is the originator of the "Elemental" camera on which back swings have been eliminated.

Films for Television Laboratory—Eastman Kodak Company has set up a new laboratory to study films for television, Dr. Cyril J. Staud, director of Kodak Research Laboratories has announced. Objective of the laboratory's research, Dr. Staud said, is to find films which will prove most useful in the television field. "Indications are that the films at present available, processed according to standard procedures, offer satisfactory results. In other words, our tests so far show that motion picture prints developed to give good quality on motion picture screens will also give satisfactory images when transmitted and shown on television screens," he said. Dr. Staud said that at present great deal of television program time is devoted to projection film. He indicated three categories into which films for television fall and which are expected to be studied in the laboratory:

1. Films for producing advertising shows.
2. Films for photography of the images on the television screen.
3. Films for newsreel and related uses where high-speed processing is essential.

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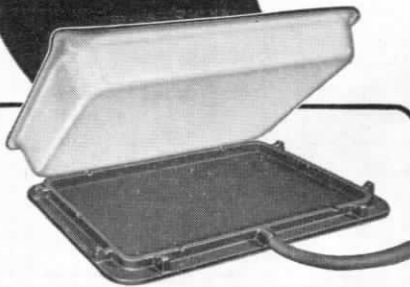
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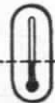


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The new Tray-Temp is of molded rubber—a reservoir base in which the developing tray rests. Its circulating water bath provides **constant** temperature control.

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Radar Camera

(From Page 15)

records of operation.

Radar operators and deck officers are trained more easily by means of photographs of the various types of images which can be made to appear on radar scopes. Actual complete passages can be studied more easily from the Mirar records than from the instantaneous scope presentation on a vessel making the passage, because on the vessel, the pictures continue to change, which does not allow time for a student to study the images in detail.

Radar charts of commercial airways have been prepared experimentally by the Civil Aeronautics Administration from photographs made with the radar camera. A complete radar record of individual flights is also easily and economically made. These uses of radar photography promises help to all weather flying safety studies.

In other installations, with the lens fixed-focused at infinity, the camera has been used as an aerial camera tripped by a timer or other electrical pulse. This produces a photographic record of the plane's course, including time and other data desired, and has been very useful on magnetometer surveys.

The camera has three outstanding characteristics that fit it for many heretofore difficult industrial applications:

1. Its automatic untended operation.
2. The wide flexibility of its electrical controls.
3. The time, data and numerical record on each negative.

The camera is of all-metal, light alloy construction, and the complete assembly consists of the units which are shown in the heading (left to right):

(1) Selenium Rectifier for 110 volt A.C. operation. (2) Control box for automatic operation. (3) MIRAR Camera and beam splitting periscope. The interchangeable magazine is the vertical rectangular unit at top. (4) Typical adapter for 12" diameter radar scopes. (5) Typical adapter for 7" diameter radar scopes.

The body houses the driving mechanism, the lens and shutter assemblies, the data recording chamber, and the electrical connections. The

magazine accepts 100-ft. rolls of 35mm film, and the negative and spacing are of standard single frame motion picture size. The control box determines the interval between cycles, according to its own setting and according to impulses received by it. The periscope is used when recording radar and oscilloscope images. Its purpose is to permit mounting the camera in a more convenient, out-of-the-way location, to transmit the image to the camera, and to permit constant observation of the image by the operator, even while it is being photographed. ✓ ✓ ✓

View Camera Technique

(From Page 20)

tion contained in a limited number of cameras. It is used for the same purposes as the sliding front. Either can be used, or both can be used together. If the front adjustment is insufficient, more adjustment can thus be gained in the same direction by using the sliding back.

Tilting Tripod Top—Although we have talked a great deal about keeping the ground-glass perpendicular, it must be understood that in looking down, as in a bird's-eye view, or far up as in a worm's-eye view, the ground-glass should not be vertical, as there should be a certain amount of convergence of vertical lines for effect. The proper method here is to use the tilting tripod top to incline the entire camera down or up. *After* the rising front has been used as far as possible, the tilting tripod top should be used till all the desired scene is included. This will result in the proper convergence of lines.

Sliding Base—This adjustment is provided in a few commercial cameras to better balance the weight of the camera on the tripod for various bellows extensions.

It is in the proper understanding of foregoing adjustments that the achievement of better photographs with your view camera lies. The photographer must know what his specific problem is, and then set about overcoming it by skillful manipulation of his camera. And, as with all photographic problems, the road to proficiency with the view camera is through carefully checked and recorded experimentation. ✓ ✓ ✓



New Booklets—Eastman Kodak Company has issued four new booklets of interest to all industrial photographers. The first, a new 12-page booklet, **MAGNIFYING TIME**, describes the use of the Kodak High Speed Camera to analyze motion too fast for study by the unaided eye. Illustrated with enlargements from motion pictures taken at 1000 to 3000 frames per second, the booklet provides examples of actual engineering and industrial problems solved by ultra-speed photography. Information is given concerning the operating characteristics of the camera and of accessories commonly used.

The second is a new 4-page catalogue describing Kodak Linagraph Films and Papers for use in instrument recording. The booklet describes 11 films and papers used to record oscillograph traces and similar phenomena. Complete information is given regarding speed, contrast, color sensitivity and other characteristics determined by the requirements of a particular instrument.

The third is an 8-page, 8½ x 11-inch booklet, describing the new Kodagraph Projection Papers for use with enlargers, projection printers, or process cameras. These papers, Kodagraph Fast Projection and Kodagraph Projection Paper, are designed to provide high quality prints from microfilm negatives or from engineering drawings or printed matter which requires additions, deletions, or changes in scale.

The last booklet, describing Kodagraph Contact Paper for contact photocopying and engineering reproduction, has been issued in a revised addition.

All these booklets are available without charge from the Industrial Photographic Division, Eastman Kodak Company, Rochester 4, New York.

Photography by Infrared—The second edi-

tion of this comprehensive text, printed in 1946, is still about the most authoritative work on this subject on the market. Written by Walter Clark, PhD., F.R.P.S., F.P.S.A., this book is a correlation of the known facts of photography by infrared. It explains its underlying principles and practice, and its applications in the various fields of science and industry. This edition has been completely revised and many recent developments and applications are described. It is 472 pages long, and includes many explanatory photographs and diagrams. Newly available information is contained on camouflage detection, focus of lenses, criminology, medical photography, photomicrography, aerial photography, forest survey, photography in total darkness, and photography of hot objects for temperature gradient determination. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York City, it sells for \$6.00 ✓✓✓

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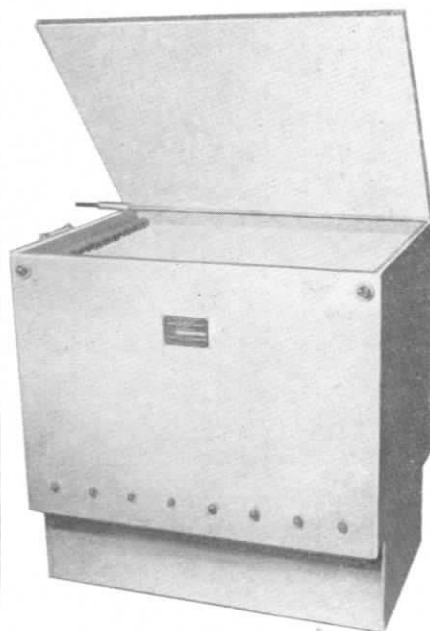
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LensCraft

(From Page 9)

lated from a foreign journal, he adapted it to his own purpose, and how he used the process for making distinctive poster-type portraits from photographs; and of his emulsions for bromide paper, which permits a degree of high-precision work.

Then there's staff member, John H. Powrie, a color and lighting expert, now concentrating on repairs and improvements in processes and equipment. His extensive background also includes work in the fields of motion pictures, photo-engraving and lithography. He is currently concerned with a method of using a grid screen—a process which utilizes electronics, and which should cut costs in rotogravure printing to a considerable degree.

Murals

One of the businesses of Lens-Craft's departments is Murals, headed by Hugo Block, formerly of Paris, who has an extensive background in decorative photography. The department handles every type of mural: single blow-ups, panels, friezes, composites and transparencies, and the most complex of photo-montages. A large job now completed was the preparation of a set of murals for Gertz's department store in Jamaica, Long Island. It consists of eight montage panels, devoted to Long Island's approaches, seacoast, farming, recreation, history and the life of its residents. In addition, there is one simple enlargement panel depicting the birthplace of John Howard Payne, author of "Home Sweet Home."

A great deal of thought and effort go into a big mural job like the one for Gertz. First there is the planning—the origination of the idea or theme, and the plan for carrying it out on available wall space. Then comes the research, followed by collecting the pictures from which must be chosen those to be incorporated (sometimes the entire photograph, sometimes only a part) into the various panels. In the case of the Gertz murals, it was not unusual for as many as twenty-one photographs to be combined into one panel; and these twenty-one might have repre-

sented a weeding out from thousands of prints. Even the relatively simple picture of a hog scratching its back on a tree was the culmination of a neat piece of tailoring, since, in the original negative, the pig had been scratching itself on a pole rather than the beautiful tree Gertz patrons now see.

After the negatives to be used have been selected, the next step in the making of a montage mural is the layout or design sketch. If the mural is to be in color, as the Gertz mural is, the color rendering comes next. Then comes the rough paste-up (with the various elements in photostatic copies); and after that the shooting of the copy negatives of the single prints, and the printing to proper scale and tone. When so many pictures are used in one panel, it can be a time-consuming task to get all of them in the same tone gradations, and in related scale. Generally speaking, the scale must be in proper proportion—for example, a dog would not appear larger than a bird. However, this is not necessarily so, as there are times when it is desirable for some object to appear proportionally much larger, or much smaller, than if it were in true scale.

The later steps are the making of the master paste-up, and photographing that to obtain the master negative; and the making of the enlargements, in single strips up to 5' x 20'. Then come the sizing of wall areas and hanging the muslin; sanding, machining and lapping the seams of the mural-strips and mounting them on the wall into the complete mural unit; and spotting, retouching, airbrushing, and possibly coloring and lacquering.

Typical of the jobs handled by the Exhibition department is the one called "War's Toll of Italian Art," shown recently at the Metropolitan Museum of Art in New York and in the form of traveling exhibits, at 24 other museums and institutions in this country. Those who are in the habit of attending photographic exhibitions will have observed that techniques of presenting them have improved remarkably within the last five years. A check-up would show that LensCraft has played a part in staging some of the more memorable of such exhibits, including those at the Museum of Modern Art in New York. Other

recent exhibits prepared by the company include several travel shows of enlargements mounted on aluminum for "Life," and exhibits for Squibb, Remington Rand, and the Grolier Society.

Strategically located in New York City, LensCraft has for its neighbors, architects, decorators, cabinet-makers, printers and editors. It overflows into two buildings, in addition to the main one. Quarters include the checking rooms and offices, the air-conditioned developing rooms, the large and small printing and bromide darkrooms, and the copy rooms. Three floors in an adjoining building are devoted to carpentry and woodwork, the spray booths, the making of displays and the art department.

An inspection of the photographic processes in the main plant impresses the visitor because of the large scale of some of the operations — of "prints" that must be handled by several men as they are washed in tremendous tanks. Masses of prints come shooting out of slots into washing tanks, and a buzzer set off in the developing room warns the laboratory worker to be on the lookout for them.

An entire department consisting of seven persons handles the work for Standard Oil Company of N. J., which has assembled an outstanding collection of photographs, under Roy Stryker. LensCraft handles the developing, printing, enlarging, captioning and arranging in albums to the end that editors, educators and others may have access to fine pictures which tell the Story of Oil in all its phases. Services performed for Standard Oil include the making of exhibits for various purposes, such as the traveling shows routed to offices and plants throughout the country.

In recent years, the making of diagrams, scale models, miniatures and exhibits has developed into a sizeable industry. The plants where such work is done have a fascination for young and old, and are often likened to Alice's Wonderland. LensCraft is such a place, but it differs from the others in that everything it turns out is a part of, or is related to, photography. You might at any given time find work being done there on a scale model of an airport to be placed in a ten-foot shadow box as part of an outdoor Esso ad-

vertisement. In the enlarging room you might find a huge aerial map, with pins stuck in it, blown up from a small negative. In the woodworking department you might find a man sawing Plexiglas into strips to be used for an industrial exhibit. On Hugo Block's desk you might find several hundred photographs, from which a selection is to be made for mural montages, and two or three paste-ups in various stages of transition for another mural job. And at the same time, into a truck in front of the establishment, you might see office furniture—made in the firm's workshops—being loaded for delivery to a client, or perhaps a well-packed assortment of exhibition or display units for "Life," International Business Machines, E. R. Squibb & Sons, or Remington Rand.

That a company specializing in so many functions, all related to photography, should have developed to such proportions in the comparatively short period of six years seems almost miraculous. The obvious explanation is that a need for it existed. Its progress is testimony to the fact that we are truly living in a "Photographic Age." ✓ ✓ ✓

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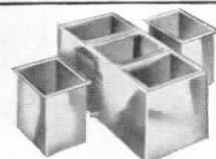
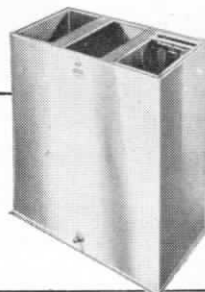
Calumet Deep-tank Photofinishing Outfits, 3 1/2, 15, 28 & 48 gal. capacity



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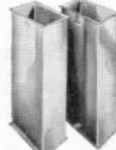
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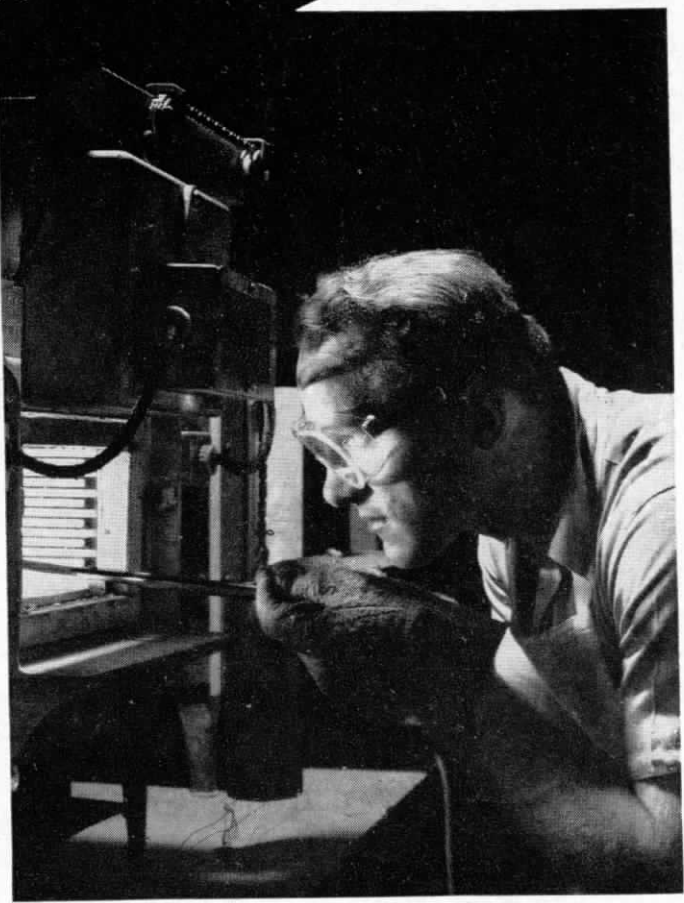
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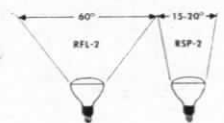
You'll like General Electric Reflector Photo lamps for your work . . . because they are easy to carry, easy to stick in tight corners . . . make for more uniform lighting performance. Lots of shots in their 6-hour life. And you get good light control too . . . with their handy built-in reflector. You also get a lot of light for the current used . . . an important advantage when lines are already well loaded.

FOR STILLS, try G-E Reflector Photoflood lamps (RFL-2). Their widespread light is approximately equal to a No. 2 Photoflood in a good reflector. Useful for movies, too.

FOR MOVIES, and for special effects, you'll want G-E Reflector Photospots (RSP-2). Their concentrated beam gives good coverage for movie use . . . and extra light means they can be back, out of the way. Grand for backlighting and other highlighting service.



Remember there are two types: RFL-2 (Photoflood) with **WIDE** coverage; RSP-2 (Photospot) with **NARROW** spread . . . for effect lighting or same coverage at 3 times the distance.

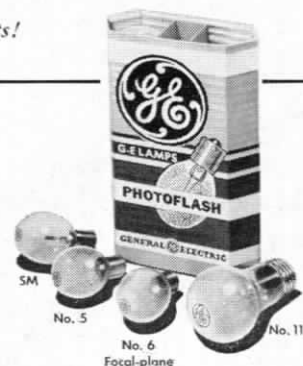


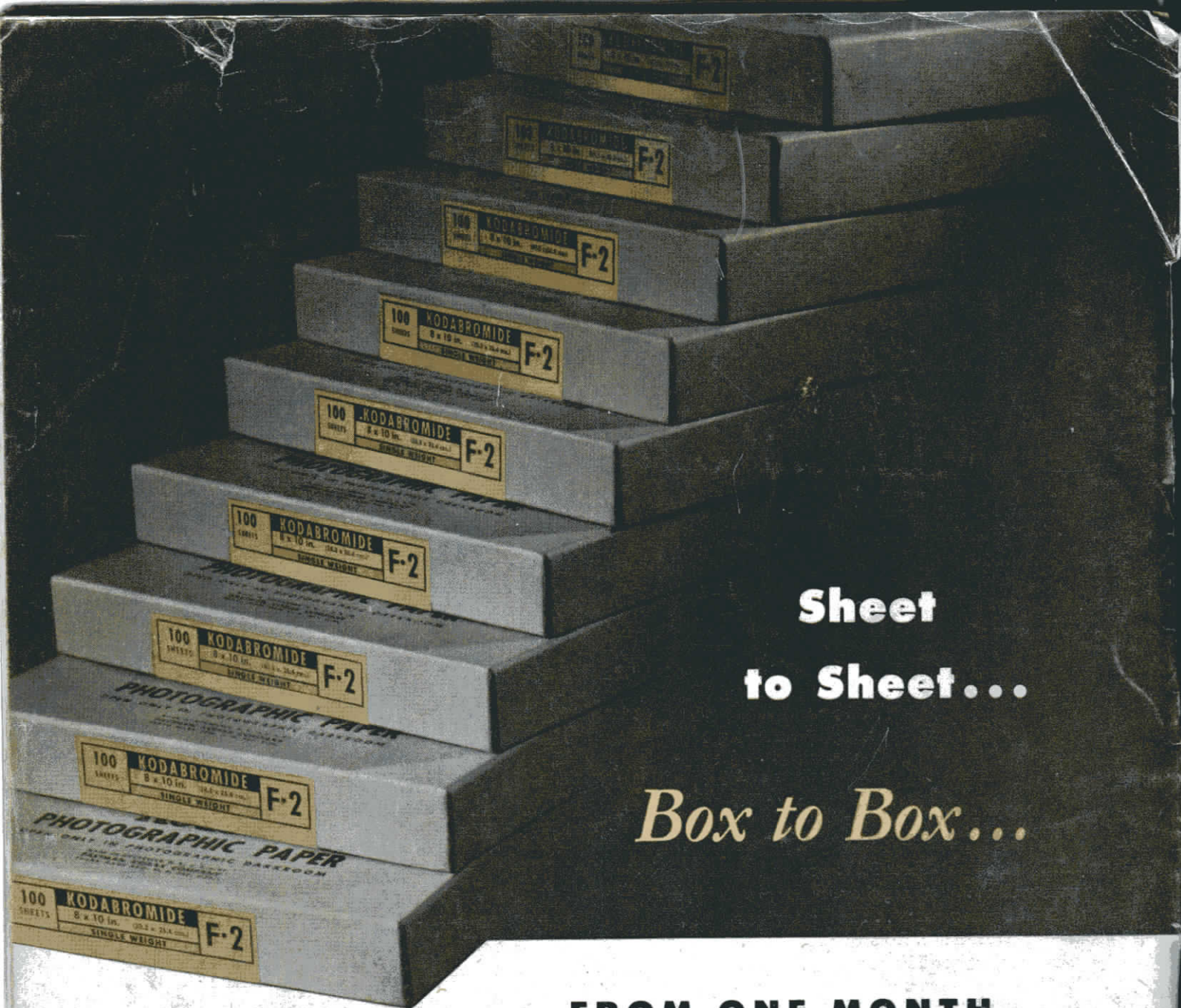
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