

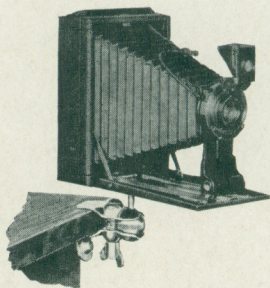
*Instructions for operating
the*

Premoette Senior

Nos. 1A, 3, and 3A

EASTMAN KODAK CO.

ROCHESTER, N. Y.



Optipod

For photographing objects at close range—wild flowers, for example—the ball and socket principle on which the Optipod is constructed will be

found invaluable. Attached to the tripod, or through its clamping device, attached to chair, table or any rigid edge, it permits the camera to be tilted to any angle desired.

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ROCHESTER, N. Y.

*Instructions for operating
the*

Premoette Senior

Nos. 1A, 3, and 3A

(Rapid Rectilinear or
f.7.7 Anastigmat Lens)

Published by
EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

Before Loading

BEFORE taking any pictures with the Premoette Senior Nos. 1A, 3 or 3A read the following instructions carefully. Make yourself perfectly familiar with the camera, taking especial care to learn how to operate the shutter. Work it for both time and instantaneous exposures several times before loading the camera.

The first and most important thing for the amateur to bear in mind is that the light which serves to impress the photographic image upon the sensitive surface in a small fraction of a second when it comes through the lens, can destroy the film as quickly as it makes the picture.

EASTMAN KODAK COMPANY,

ROCHESTER, N. Y.

April, 1921.

PART I



FIG. 1
The Premo Film
Pack

THE Premoette Senior Nos. 1A ($2\frac{1}{2} \times 4\frac{1}{4}$), 3 ($3\frac{1}{4} \times 4\frac{1}{4}$) and 3A ($3\frac{1}{4} \times 5\frac{1}{2}$) are adapted to the use of the Premo Film Pack. As the cameras differ practically in size only, these instructions apply equally well to all three sizes.

To Load Camera

Procure a Premo Film Pack(Fig. 1) of the proper size, 1A ($2\frac{1}{2} \times 4\frac{1}{4}$), No. 316; 3 ($3\frac{1}{4} \times 4\frac{1}{4}$), No. 318, or 3A ($3\frac{1}{4} \times 5\frac{1}{2}$), No. 322, according to the size of the camera.

Press up on the two metal catches at the top of camera, open the hinged back, and place Pack in the camera so that the black paper tabs protrude from the top and the red label on the Film Pack is toward the back of the camera. (Fig. 2.)

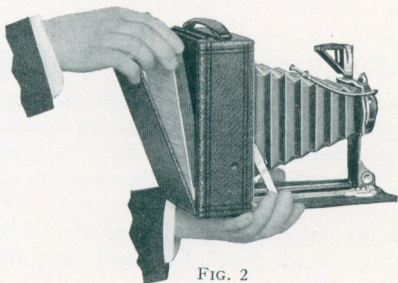


FIG. 2

Close the back of camera and the catches will engage automatically.

The camera now being loaded, proceed as follows:

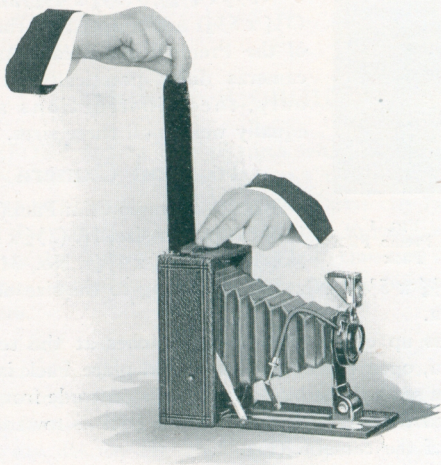


FIG. 3

Operation of the Premo Film Pack

For the first exposure gently pull out tab marked "Safety Cover," holding the remaining tabs under the finger and thumb of the other hand to prevent the possibility of pulling out more than one tab at a time. (Fig. 3.)

When the red cross line appears, tear off from left to right by bending tab backward over the metal straight edge.

The first film is now in position for exposure.

After making the exposure, pull out in a similar manner the black paper tab marked "No. 1" and tear off. Film No. 2 is now in position for exposure.

Repeat the operation of pulling out and tearing off the black paper tabs one at a time, as often as additional exposures are made.



FIG. 4

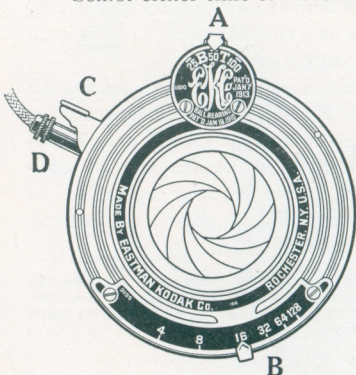
Upon pulling out and tearing off tab No. 12 the pack is rendered light-tight (Fig. 4) and may be removed from the camera in daylight, reversing the operation as shown in Fig. 2, page 3, and a fresh pack substituted.

NOTE—It is well to make it a rule to always pull out the tab immediately after each exposure, so that there will be no uncertainty when making the next exposure as to whether you have or have not pulled out the tab.

PART II

Making the Exposures

BEFORE making an exposure with the Premoette Senior either time or instantaneous, be sure of four things:



This illustration shows the shutter used on the Premoette Senior when it is fitted with the Rapid Rectilinear Lens

First—That the shutter is adjusted properly.

(For instantaneous, time or "bulb" exposure as desired).

Second—That the diaphragm lever is placed at the proper opening.

Third—That the camera is focused.

Fourth—That an unexposed film is in position.

NOTE—Exposures are made by pressing push-pin at end of cable release D or pushing down on release C. Avoid making too sharp a bend in the cable release or it will be liable to kink.

Operating the Shutter

Perfect familiarity with the shutter is essential to successful picture taking with any camera. The following directions should, therefore, be carefully read and the shutter operated several times before attempting exposures.

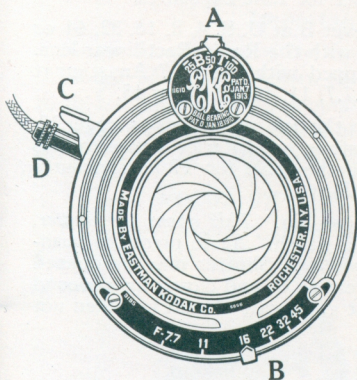
This shutter is automatic and is always set ready for an exposure so do not press push-pin or exposure lever unless you wish to make an exposure.

Instantaneous Exposures—"Snapshots"

When making instantaneous exposures or snapshots, the subject should be in the broad, open sunlight, but the camera should not. The sun should be behind the back or over the shoulder of the operator. If it shines directly into the lens it will blur and fog the picture.

"Snapshots"

For all Ordinary Instantaneous Exposures



This illustration shows the shutter used on the Premoette Senior when it is fitted with the *f.7.7 Anastigmat Lens*

Anastigmat Lens. Lever B controls the Iris diaphragm, and U. S. 8 or *f.11* is the proper opening for ordinary instantaneous exposures in bright sunlight, using speed 25.

NOTE—For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows, such as in views at the seashore or on the water, use diaphragm 16 and speed 50.

With *light* clouds or *slightly* smoky atmosphere use U. S. 4 or *f.7.7* and speed 25. With *heavy* clouds do not attempt instantaneous exposures.

First—Set the lever A at 25, 50 or 100 (these divisions represent the speeds of the shutter), according to the time of instantaneous exposure desired.

NOTE—The lever A should be used at 100 only when taking moving objects in bright sunshine, and lever B must always be placed at U. S. 4 or *f.7.7* when taking this kind of a picture.

Second—Set the lever B at U. S. 8 if the camera is fitted with the *Rapid Rectilinear Lens* or use *f.11*, if fitted with the

Third—Press push-pin at end of cable release D, or push down on release C. *This makes the exposure.*

NOTE—Press push-pin with a firm quick movement, at the same time be sure to hold the camera rigid, as a slight jarring will cause a blurred negative.

Time Exposures

First—Set the lever A at the point "T" (time). This adjusts the shutter for time exposures.

Second—Set the lever B at U. S. 4, 8, 16, 32, 64 or 128 if camera is fitted with the Rapid Rectilinear lens. If the camera is equipped with the *f.7.7* Anastigmat lens, set the lever at *f.7.7*, 11, 16, 22, 32 or 45.

See instructions for the use of the stops page 25, table for use of the stops for Interior Exposures as given on page 21, also the table for Time Exposures in the Open Air, page 24.

Third—Press the push-pin. *This opens the shutter.* Time the exposure by a watch. Again press the push-pin. *This closes the shutter.* Shutter may be opened by pressing down on release C, and closed by a second pressure if desired, but great care should be taken not to jar the camera.

Bulb Exposures

When it is desirable to make a very short time exposure this is best accomplished by making a "bulb exposure."

First—Set the lever A at the point "B" (bulb). This adjusts the shutter for "bulb" exposures.

Second—Set the lever B at U. S. 4, 8, 16, 32, 64 or 128 if the camera is fitted with the Rapid Rectilinear lens. If the camera is equipped with the *f.7.7* Anastigmat lens, set the lever at *f.7.7*, 11, 16, 22, 32 or 45.

See instructions for the use of the stops, page 25,

table for use of the stops for Interior Exposures as given on page 21, also the table for Time Exposures in the Open Air, page 24.

Third—Press push-pin or release C to open the shutter, and release it to close the shutter. *This makes the exposure.* The shutter will remain open as long as the push-pin or release C is under pressure.

Important

Do not oil any part of the shutter.

In case of accident return shutter to your dealer or to us for repairs. As a general rule, make exposures with the cable release instead of with the release C, as the cable release is less likely to jar the camera.

Focus on the Subject

Press the concealed button on the top, as shown in Fig. 1, and push down the bed of camera to the limit of motion.



FIG. 1
Opening the Front

At the front of camera bed and on the side opposite finder, will be found an index plate marked 6, 10, 25 and 100 feet. This is for focusing the camera. Before extending bellows determine the distance between the camera and the principal object to be photographed.

NOTE—The index plate is scaled both for feet and for meters and care should be taken not to confound them.

Extending the Bellows

Grasp the lower part of front board, pushing in on the spring at the left side and extend the bellows by pulling out front of camera (Fig. 2). Pull out the front until the little pointer on lower section of front board is in the slot directly over the figure on the index plate corresponding to the distance in feet of the principal object to be photographed.

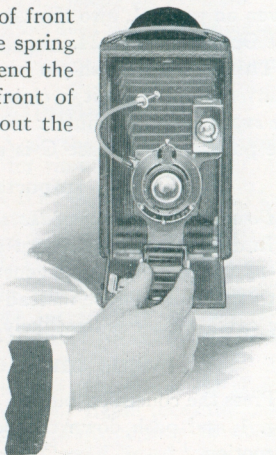


FIG. 2

Extending the Bellows and Focusing.

Except when photographing at distances of 15 feet or less it is not necessary to estimate the distance with any more than approximate accuracy; for instance, if the focus is set at 25 feet (the usual distance for ordinary street work) the sharpest part of the picture will be the objects at that distance from the camera, but everything from about 15 to 45 feet will be in good focus. For general street work the focus may be kept at 25 feet, but where the *principal object* is nearer or farther away, the focus should be changed accordingly. Everything beyond 100 feet is in the 100 feet focus. Nothing nearer than 6 feet can be focused without using a Kodak Portrait Attachment, see page 23, or a small stop opening, see tables on page 11.

Table for Use with the Nos. 1A or 3 Premoette Senior

Rapid Rectilinear	U. S. 4	U. S. 8	U. S. 16	U. S. 32	U. S. 64	U. S. 128
Anastigmat	<i>f.7.7</i>	<i>f.11</i>	<i>f.16</i>	<i>f.22</i>	<i>f.32</i>	<i>f.45</i>
Distance Focused Upon	RANGE OF SHARPNESS					
Feet	Feet	Feet	Feet	Feet	Feet	Feet
100 feet-----	35 to Inf.	28 to Inf.	21 to Inf.	17 to Inf.	12 to Inf.	9 to Inf.
25 feet-----	17½ to 46	15½ to 68	13½ to Inf.	11 to Inf.	9 to Inf.	7½ to Inf.
10 feet-----	8½ to 12	8 to 13	7½ to 15	7 to 20	6 to 32	5 to Inf.
6 feet-----	5½ to 6¾	5¼ to 7	5 to 7½	4¾ to 8½	4½ to 10	4 to 14

11

Table for Use with the No. 3A Premoette Senior

Rapid Rectilinear	U. S. 4	U. S. 8	U. S. 16	U. S. 32	U. S. 64	U. S. 128
Anastigmat	<i>f.7.7</i>	<i>f.11</i>	<i>f.16</i>	<i>f.22</i>	<i>f.32</i>	<i>f.45</i>
Distance Focused Upon	RANGE OF SHARPNESS					
Feet	Feet	Feet	Feet	Feet	Feet	Feet
100 feet-----	49 to Inf.	40 to Inf.	32 to Inf.	25 to Inf.	20 to Inf.	15 to Inf.
25 feet-----	20 to 34	19 to 40	17 to 52	15 to 93	12 to Inf.	10 to Inf.
10 feet-----	9¼ to 11	9 to 11⅓	8½ to 12	8 to 14	7½ to 17	7 to 22
6 feet-----	5¾ to 6¼	5⅔ to 6½	5½ to 6¾	5¼ to 7	5 to 7¾	4¾ to 8¾

"Inf." in both of the above tables is the abbreviation for Infinity, meaning an infinite distance from the lens.

What Depth of Focus Means

Suppose now, that the lens is used at its full opening, U. S. 4 or $f.7.7$, and the focus is set at six feet. An object six feet distant will be absolutely sharp, but objects five and one-quarter and seven feet distant will not be. Stop the lens down to 16, and those objects each side of the exact point of focus will increase in sharpness. Go further and use stop U. S. 128 or $f.45$, and everything from about four and one-half feet to about nine feet will be sharp.

It will thus be seen that the smaller the stop the greater the depth of focus, *i. e.*, the greater the power of the lens to sharply define, at the same time, objects nearer the camera and further from the camera, than the principal object in the picture, which, of course, is the object focused upon. But it is obvious that with the small stops the exposure must be correspondingly lengthened.

The tables on page 11 will be a help in determining the range of critical definition or depth of focus with the No. 1A, 3 or 3A Premoette Senior (when fitted with the Rapid Rectilinear or $f.7.7$ Anastigmat Lens) when they are focused with different stops.

How to Use the No. 1A or the No. 3 Premoette Senior as a Fixed Focus Camera

Set focus at 25 feet.

Use speed 25.

Set diaphragm at No. 8 or $f.11$.

By following the above suggestions either of these cameras can be used as a fixed focus instrument with the additional advantage of being instantly convertible to a focusing camera when conditions call for it. It must be remembered, however, that when using either of these Premos as a fixed focus type, it is necessary that the subject be in bright sunlight, in order to obtain a fully timed exposure.

Explanation

A lens is often spoken of erroneously as having a fixed focus.

There is no such thing as a fixed focus lens, but in certain cameras, $3\frac{1}{4} \times 4\frac{1}{4}$ and smaller (equipped with short focus lenses) the lens is immovable, *i. e.*, set at a distance that is a compromise, as to its focus, between far and near points. A camera with a lens so focused, used in combination with a relatively small stop, is designated a fixed focus camera.

With larger cameras this would be hardly practical, as it would necessitate the use of stop U. S. 32 or *f.22* at least, and this in turn would require a time exposure.

Use Stop U. S. 8 or *f.11*

For all ordinary out-door work when the sun is bright use stop U. S. 8 or *f.11* and use speed 25. If a smaller stop is used for ordinary snapshots, the light will be so much reduced that it will not sufficiently impress the image on the film and failure will result.

When making portraits out of doors, when the sun is shining bright, place the subject in the shade of a building or large tree, but with clear and unobstructed sky overhead,—then use stop U. S. 4 or *f.7.7* and use speed 25. By following this rule unpleasant and distorting shadows on the face will be avoided.

In views on the water when the sunlight is *unusually strong* and there are no heavy shadows, stop 16 and speed 50 may be used.

For ordinary *landscapes*, in bright sunshine with clear sky overhead, use stop 16 and speed 25.

If a smaller stop opening than 16 is used for snapshots, *absolute failure will result*, except that U. S. 32 or *f.22* may be used for extremely distant views, marine or snow scenes or clouds in bright sunshine, using speed 25.

Locate the Image

Aim the camera at the object to be photographed and locate the image in the finder. For a vertical exposure the camera must be held as shown in Fig. 3. For a horizontal picture hold the camera as shown in Fig. 4, turning the finder as indicated.

Always look into the finder from directly over it, *not at an angle*. The finder gives the scope of view and shows a facsimile of the picture as it will appear, but on a reduced scale. Any object that does not show in the finder will not show in the picture.



FIG. 3.

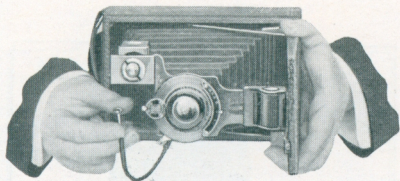
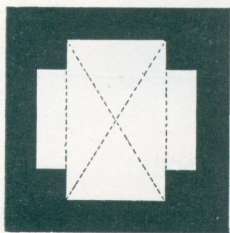


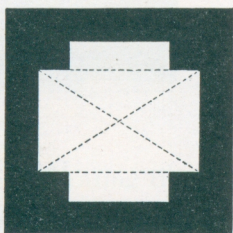
FIG. 4

It will be noticed that the top of the finder is notched, as shown in Fig. 5. This is done so that the one finder will correctly show the view included when the camera is held in either vertical or horizontal position. As the picture taken with the Premoette Senior is oblong, it will readily be seen that unless the finder was made in this manner it could not correctly show the exact view intended when held in either position.

Remember that only the view indicated in the dotted lines will show in the picture.

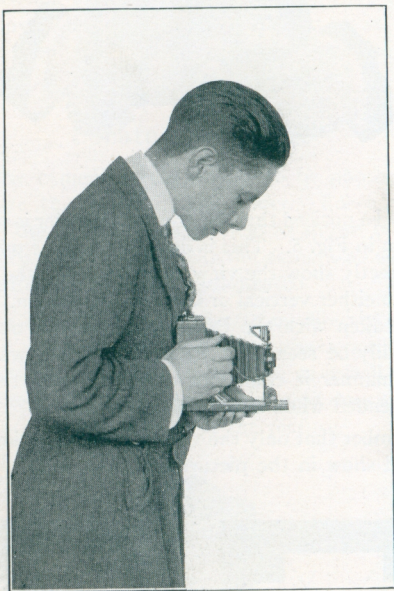


VIEW INCLUDED WHEN MAKING
A VERTICAL PICTURE



VIEW INCLUDED WHEN MAKING
A HORIZONTAL PICTURE

FIG. 5



IMPORTANT

When making instantaneous exposures, hold the camera firmly against the body as shown



in illustrations, and when operating the cable release or pushing down on the exposure lever, hold the breath for the instant.

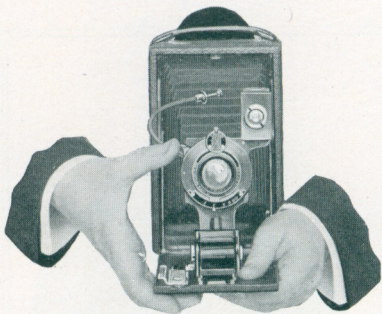


FIG. 6

Fig. 6 shows how to hold the camera when making exposures without the use of the cable release. Grasp the bed of the camera firmly with the left hand, steady it with the right and with the thumb of the right hand lightly push down on the exposure lever.

Hold Camera Level

The camera must be held level.

If the operator attempts to photograph a tall building while standing near it, by pointing the camera upward (thinking thereby to center it) the result will be similar to Fig. 7.

When making this picture the camera was pointed too high. This building should have been taken from the building opposite and at a level corresponding with the middle of the subject.

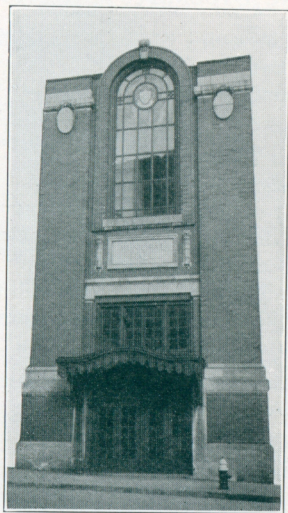


FIG. 7

The operator should hold the camera *level*, after withdrawing to a proper distance, as indicated by the image shown in the finder.

If the object is down low, like a small child or a dog, the camera should be held down level with the center of the object.

When making the exposure:

- hold the camera steady,
- hold it level,
- press push-pin on cable release.

Time Exposures—Interiors

Set camera in such a position that the finder will embrace the view desired.

The diagram shows the proper positions for the camera. It should not be pointed directly at a window; as the glare of light will blur the picture. If all the windows cannot be avoided, pull down the shades of such as come within range of the lens.

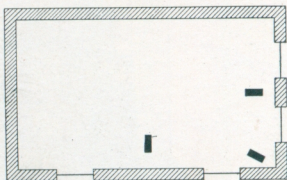


Diagram showing positions of camera

To make a time exposure, place the camera on some firm support like a tripod, table or chair and focus as before described. Be sure, however, if using a table or chair, to place the camera not more than two or three inches from the edge, so as to avoid including part of the table or chair in the picture.

Fig. 8 shows the camera in position for a vertical exposure. The camera is provided with tripod sockets and may be used on a tripod.

When it is desired to make a horizontal time exposure with the Premoette Senior, turn the camera so that the tabs of the Film Pack will draw from the side instead of from the top, turn the finder, and if a tripod is not used, pull down the lever at the side of the index plate which is to be used for the support and to keep the camera level.

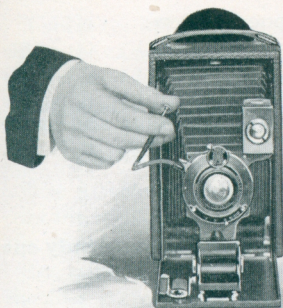


FIG. 8

Adjust the shutter for a Time Exposure as described on page 8.

All being in readiness, press the push-pin at end of cable release or push down on the exposure lever, once to open and again to close the shutter. Time the exposure by a watch. (See Fig. 8).

Time Needed for Interior Exposures

The following table gives the approximate time of the exposure required under varying conditions of light for the camera equipped with either the *Rapid Rectilinear* or *f.7.7 Anastigmat Lens*. The time given in the table is with stop 16 in the lens. If stop U. S. 8 or *f.11* is used give one-half the time; with U. S. 4 or *f.7.7* give one-fourth the time. If stop U. S. 32 or *f.22* is used give twice the time; with stop U. S. 64 or *f.32* give four times, and if the stop U. S. 128 or *f.45* is used give eight times the time of the table. The smaller the stop the sharper the picture. Stop 16 gives the best average results for Interiors:

White walls and more than one window:

bright sun outside, 4 seconds;
hazy sun, 10 seconds;
cloudy bright, 20 seconds;
cloudy dull, 40 seconds.

White walls and only one window:

bright sun outside, 6 seconds;
hazy sun, 15 seconds;
cloudy bright, 30 seconds;
cloudy dull, 60 seconds.

Medium colored walls and hangings and more than one window:

bright sun outside, 8 seconds;
hazy sun, 20 seconds;
cloudy bright, 40 seconds;
cloudy dull, 80 seconds.

Medium colored walls and hangings and only one window:

bright sun outside, 12 seconds;
hazy sun, 30 seconds;
cloudy bright, 60 seconds;
cloudy dull, 120 seconds.

Dark colored walls and hangings and more than one window:

bright sun outside, 20 seconds;
hazy sun, 40 seconds;
cloudy bright, 80 seconds;
cloudy dull, 2 minutes, 40 seconds.

Dark colored walls and hangings and only one window:

bright sun outside, 40 seconds;
hazy sun, 80 seconds;
cloudy bright, 2 minutes, 40 seconds;
cloudy dull, 5 minutes, 20 seconds.

The foregoing table is calculated for rooms where windows get the direct light from the sky, and for hours from three hours after sunrise until three hours before sunset.

If earlier or later the time required will be longer.

To Make a Portrait

Place the subject in a chair partly facing the camera (which should be located a little higher than an ordinary table) and turn the face slightly towards the camera, having the eyes centered on an object at the same level with the lens.

Center the image in the finder. For a three-quarter figure the camera should be about 6 to 8 feet from the subject, and for a full figure about 8 to 10 feet. The background should form a contrast with the subject.

Kodak Portrait Attachment

The Attachment is simply an extra lens slipped on over the regular lens, and in no way affects the operation of the camera, except to change the focus.

By using the Portrait Attachment large head and shoulder portraits of various sizes may be obtained. With the Attachment in position and the camera set:

At 6 feet focus, the subject should be placed exactly 2 feet, 6 inches from the lens.

At 10 feet focus, place the subject 3 feet from the lens.

At 25 feet focus, place the subject 3 feet, 8 inches from the lens.

At 100 feet focus, place the subject 4 feet, 2 inches from the lens.

When ordering, specify Kodak Portrait Attachment No. 3, which is for use with the Premoette Senior, Nos. 1A and 3, when they are equipped with the *Rapid Rectilinear Lens*.

When the Premoette Senior Nos. 1A and 3 are fitted with the *f.7.7 Anastigmat Lens*, use Kodak Portrait Attachment No. 13.

With the Premoette Senior No. 3A when it is equipped with the *Rapid Rectilinear Lens*, use Kodak Portrait Attachment No. 5.

When the Premoette Senior No. 3A is fitted with the *f.7.7 Anastigmat Lens*, use Kodak Portrait Attachment No. 7.

Time Exposures in the Open Air

When the smallest stop (U. S. 128 or $f.45$) is in the lens the light admitted is so much reduced that time exposures out of doors may be made the same as interiors, but the exposures must be much shorter.

With Sunshine—The shutter can hardly be opened and closed quickly enough to avoid over-exposure.

With Light Clouds—From 1 to 3 seconds will be sufficient.

With Heavy Clouds—From 4 to 8 seconds will be required.

The above table is calculated for hours from $2\frac{1}{2}$ hours after sunrise until $2\frac{1}{2}$ hours before sunset, and for objects in the open air. For other hours or for objects in the shadow, under porches or under trees, no accurate directions can be given; experience only can teach the proper exposure to give.

Time exposures cannot be made while the camera is held in the hands. Always place it upon some firm support, such as a tripod, chair or table.

For exceedingly short time exposures, as above described, use the "Bulb Exposure." See page 8.

Diaphragms

As a number of exposure meters and similar devices for determining the proper exposure are based upon the " f " system, we give the following table showing the " f " value for each of the Uniform System openings:

U. S. 4 = $f.8$	U. S. 32 = $f.22$
U. S. 8 = $f.11$	U. S. 64 = $f.32$
U. S. 16 = $f.16$	U. S. 128 = $f.45$

NOTE—U. S. 4 equals *f.8*, but the speeds of *f.8* and *f.7.7* are so nearly identical that the same exposure would be given in either case.

The diaphragms, sometimes called stops, should be used as follows:

U. S. 4 = *f.8*. *f.7.7*—For instantaneous exposures on *slightly* cloudy days, using speed 25; also for portraits out of doors, when the sun is shining, see page 13.

U. S. 8 = *f.11*—For *all ordinary instantaneous exposures* when the sun shines, and use speed 25.

U. S. 16 = *f.16*—For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows, such as in views at the seashore or on the water, using speed 50; for ordinary *landscapes*, in bright sunshine with clear sky overhead, using speed 25; also for Interior Time Exposures, the time for which is given in the table on pages 21 and 22.

U. S. 32 = *f.22*—For instantaneous exposures of extremely distant views, marine or snow scenes or clouds, in bright sunshine, using speed 25; also for time exposures.

U. S. 64 and 128 = *f.32* and 45—For Interiors. *Never for instantaneous exposures.* For time exposures outdoors in cloudy weather. The time required for time exposures on cloudy days with smallest stop, U. S. 128 or *f.45*, will range from 1 second to 8 seconds, according to the light. The smaller the stop the sharper the picture, see tables on page 11.

Absolute failure will be the result if stops U. S. 128 or *f.45* are used for instantaneous exposures.

NOTE—In all of the foregoing instructions in this manual, where the subject is out of doors, the exposures given are calculated for hours from 2½ hours after sunrise until 2½ hours before sunset. If earlier or later the time required will be longer. For objects in the shadow, under porches or under trees, no accurate directions can be given; experience only can teach the proper exposure to give.

“*f.*” and “U. S.” Systems

A lens is said to work at a certain “speed;” this means that the lens will cut sharp to the corners, with an opening a certain proportion of its focal length. It should be borne clearly in mind that this speed depends *not* upon the size of the opening but upon the size of the opening *in proportion to the focal length of the lens* (distance from the lens to film or plate when focused on infinity). The lens that will cut sharp with the largest opening is said to possess the greatest speed.

Such openings are termed stop or diaphragm openings, and for convenience in estimating exposures, are

arranged according to two systems, the "f." system and the Uniform System, or U. S. system, as commonly abbreviated.

In the "f." system, the proportional size or "value" of the stop opening is designated by "f.", and is the quotient obtained by dividing the focal length of the lens by the diameter of the stop.

Taking, for instance, a lens of 8-inch focus with a stop 1 inch in diameter, and we find that $8 \div 1 = 8$; hence, 8 is the "f." value of the stop and would be designated f.8. Suppose the stop is $\frac{1}{4}$ inch in diameter we would then have $8 \div \frac{1}{4} = f.32$.

For convenience, the Uniform System of marking stop openings has been adopted by nearly all manufacturers of Iris diaphragms. Such convenience is at once apparent when we understand that each higher number stands for an opening having *half* the *area* of the preceding opening, each smaller stop (or higher number) requiring double the time of the one next larger.

With the "f." system, each stop is a certain proportion of the focal length and not arranged with reference to the other openings.

Flash-light Exposures

By the introduction of Eastman Flash Sheets, picture taking at night has been wonderfully simplified. A package of flash sheets, a piece of cardboard, a pin and a match complete the list of essential extras, although a Kodak Flash Sheet Holder is a great convenience.

With flash sheets, no lamp is necessary; there is a minimum of smoke and they are far safer than any other self-burning flash medium, besides giving a softer light that is less trying to the eyes.

Many interiors can be taken with the flash sheets that are impracticable by daylight, either by reason of a lack of illumination or because there are windows in a direct line of view which cannot be darkened sufficiently to prevent the blurring of the picture.

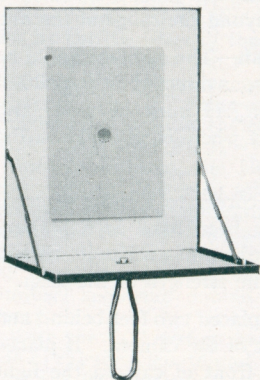
Evening parties, groups around a dinner or card table or single portraits may be readily made by the use of our flash sheets, thus enabling the amateur to obtain souvenirs of many occasions which, but for the flashlight, would be quite beyond the range of the art.

Preparation for the Flash—The camera should be prepared for Time Exposures, as directed on page 20 of this manual (stop U. S. 8 or $f.11$ must be used), and placed on some level support where it will take in the view desired.

Pin a flash sheet by one corner to a piece of cardboard which has previously been fixed in a perpendicular position. If the cardboard is white it will act as a reflector and increase the strength of the flash.

The flash sheet should be placed two feet behind and two or three feet to one side of the camera. If placed in front, or on a line with front of camera the light from the flash would strike the lens and blur the picture. It should be placed at one side as well as behind, so as to throw a shadow and give a little relief in the lighting. The flash should be a little higher than the camera. The support upon which the flash is to be made should not project far enough in front of it to cast a shadow in front of the camera. An extra piece of cardboard a foot square placed under the flash sheet will prevent any sparks from the flash doing damage. However, by using the Kodak Flash Sheet Holder, all these contingencies are taken care of, and we strongly advise its use.

The Kodak Flash Sheet Holder



This holder may be held in the hand, *always between you and the flash sheet*, or it may be used on any tripod, being provided with a socket for this purpose. The sheet is placed in position in the center of the larger pan over the round opening which has a raised saw-tooth edge extending half way around it. Press with the thumb on the sheet, so a slight break is made and a portion of the sheet projects partially through the opening. Then to insure the sheet being more securely fastened, press around the notched edge, forcing this portion of flash sheet firmly into position on the pan. To set off the flash, merely insert a lighted match, from behind, through the round opening.

Taking the Picture

Having the camera and the flash sheet both in position and all being in readiness, open the camera shutter, stand at arm's length and touch a match from behind through the round opening in the center of the holder.

NOTE—If you are not using the Kodak Flash Sheet Holder, place the match in a split stick at least two feet long.

There will be a bright flash which will impress the

picture on the sensitive film. Then close the shutter and pull out paper tab from film pack, ready for another picture.

The Flash Sheet

The size of the sheet required to light a room varies with the distance of the object farthest from the camera and the color of the walls and hangings:

TABLE

For ten feet distance light walls and hangings use one No. 1 sheet
For ten feet distance dark walls and hangings use one No. 2 sheet
For fifteen feet distance light walls and hangings use one No. 2 sheet
For fifteen feet distance dark walls and hangings use one No. 3 sheet

NOTE—Never use more than one sheet at a time in the Kodak Flash Sheet Holder.

To Make a Portrait—Place the subject in a chair partly facing the camera (which should be located a little higher than an ordinary table) and turn the face slightly towards the camera, having the eyes centered on an object at the same level with the lens. The proper distance from the camera to the subject can be ascertained by looking at the image in the finder. For a three-quarter figure this will be about 6 to 8 feet, and for a full figure about 8 to 10 feet.

The flash should be on the side of the camera away from the face, that is, the subject should not face it. The flash should be at about the same height or a little higher than the head of the subject.

For use of the Kodak Portrait Attachment, see page 23.

To Make a Group—Arrange the chairs in the form of an arc, facing the camera so that each chair will be exactly the same distance from the camera. Half the persons composing the group should be seated and the rest should stand behind the chairs. If the group is

large any number of chairs may be used, but none of the subjects should be seated on the floor, as sometimes seen in large pictures, because the perspective would be too violent.

Backgrounds—In making single portraits or groups, care should be taken to have a suitable background against which the figures will show in relief; a light background is better than a dark one, and often a single figure or two will show up well against a lace curtain. For larger groups a medium light wall will be suitable.

The finder on the camera will aid the operator in composing the groups so as to get the best effect. In order to make the image visible in the finder the room will have to be well lighted. The lights may be left on while the picture is being made, provided none of them show in the finder.

Eastman Flash Sheets burn more slowly than flash powders, producing a much softer light and are, therefore, far preferable for portrait work; the subject, however, should be warned not to move, as the picture is not taken *instantaneously*, about one second being required to burn one sheet.

Eastman Flash Cartridges

Eastman Flash Cartridges may be substituted for the sheets if desired. We recommend the sheets, however, as more convenient, cheaper and capable of producing the best results. The cartridges are superior only when absolutely *instantaneous* work is essential.

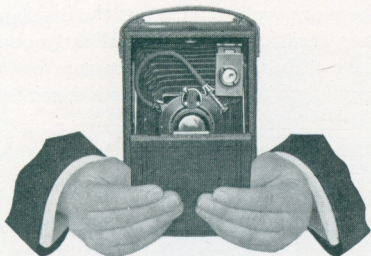


FIG. 9
Closing the Bed of Camera

Closing the Camera

When through using the camera fold the bellows by reversing the operation shown in Fig. 2, page 10, and press down on arm locks on each side of bed, as shown above. (Fig. 9.) The bed will now close readily.

Before closing the bed of the camera, make sure that the front board has been pushed in to the limit of motion and that the finder is in position for making a vertical exposure. If the front board and finder are in proper position they will not interfere with the bed in closing.

Avoid making too sharp a bend in the cable release when closing the camera, or it will be liable to kink.

Keep Dust Out of the Camera

Defective negatives are often caused by particles of dust which have collected on the inside of the camera and settle upon the film in particles that produce small, dark spots upon the prints.

It is, therefore, well to wipe out the inside of camera and bellows occasionally, with a slightly damp cloth. In summer weather, or after the camera has remained idle for any length of time, this needs special attention.

Dimmed Finders and How to Make Them Bright Again

For some cause which is not thoroughly understood, glass will sometimes "sweat" to such an extent as to cover it with a sort of film, which, of course, makes it very dull whether it is used as a lens or mirror.

Whatever the cause, the result is the occasional dimming of finders and lenses. With finders the trouble is sometimes in the mirror, which necessitates wiping it by means of a clean, soft cotton cloth. To clean the mirror in the finder on the Premoette Senior, wind the corner of a handkerchief around the end of a lead pencil and pass it between the lens and mirror.

Clean Lenses



CLEAN LENS

Dirty or dusty lenses are frequently the cause of photographic failures. These pictures illustrate this point clearly. The sharp, full-timed picture on this page was taken with the lens clean and in good order. To pro-

duce the effect shown in the picture below, the face of the lens was lightly touched with the thumb, which was slightly damp with perspiration.

Lenses should be frequently examined. Open the back of the camera (when there is no film in it) then open the front of the camera, extend the bellows and open the shutter, as when making a Time Exposure, the largest stop (U. S. 4 or *f.7.7*)



LENS SLIGHTLY DIRTY

should be in position. Hold the camera so that the front is toward the light, then look through the lens from the back of the camera, and if the lens is found to be dirty, it should be wiped, both front and back, with a clean, soft linen handkerchief. In summer weather this needs special attention. Large spots of dust or dirt on the lens will cause defects in the picture, while if the lens is evenly covered with a film of dust, dirt or moisture, the effect will be to cut off a great deal of light and make the picture undertimed.

Finishing the Pictures

THERE are two distinct steps in the making of photographs—the picture *taking* and the picture *finishing*. In order to free our instruction books from all unnecessary details, which might be confusing, we furnish with the camera the directions for *picture taking* only.

The instructions in this little book are ample for the manipulation of the camera under every condition that the amateur is likely to encounter. Similarly, those who wish to do their own developing and printing will find equally full instructions accompanying the Premo Film Pack Tanks (for developing in daylight

with the exception of loading the film in the tank), or our Outfits for tray or dark-room use.

For use with the Premoette Senior, No. 1A ($2\frac{1}{2} \times 4\frac{1}{4}$); No. 3 ($3\frac{1}{4} \times 4\frac{1}{4}$) or No. 3A ($3\frac{1}{4} \times 5\frac{1}{2}$) Film Pack, (Nos. 316, 318 or 322), provide a No. 2 Premo Film Pack Tank.

If the tray or dark-room method of development is preferred, an Eastman 3-A Developing and Printing Outfit should be provided. An Eastman A B C Developing and Printing Outfit can also be used for the $2\frac{1}{2} \times 4\frac{1}{4}$ or $3\frac{1}{4} \times 4\frac{1}{4}$ (Nos. 316 or 318) Film Packs, if desired.

In keeping with our plan and purpose to provide the users of our cameras with every help in the production of good pictures, we will be glad to furnish such developing and printing instructions at any time, whether a tank or outfit is purchased or not.

With the Premo Film Pack Tank and Velox paper many amateurs find as great pleasure in the finishing of the pictures as in the taking of them, and are able to produce, by the simple methods we have perfected, work of the highest order.

We never lose interest in the purchaser of a Premo. We are not only willing but are anxious at all times to help solve any problems that he may encounter, either by sending on the necessary printed instructions or by individual correspondence. Such customer, in availing himself of the knowledge of our experts, puts himself under no obligations to us. He is simply availing himself of one of the things that he is entitled to when he buys a Premo or a Kodak—and that is, Kodak service.

EASTMAN KODAK CO.

ROCHESTER, N. Y.

PRICE LIST

Sole Leather Carrying Case for Premoette	
Senior, No. 1A ($2\frac{1}{2} \times 4\frac{1}{4}$).....	\$ 3.50
Do., for No. 3 ($3\frac{1}{4} \times 4\frac{1}{4}$).....	3.50
Do., for No. 3A ($3\frac{1}{4} \times 5\frac{1}{2}$).....	4.75
Premo Film Pack , (12 exposures) for Premoette Senior, No. 1A, ($2\frac{1}{2} \times 4\frac{1}{4}$) No. 316....	.60
Do., for No. 3 ($3\frac{1}{4} \times 4\frac{1}{4}$) No. 318.....	.90
Do., for No. 3A ($3\frac{1}{4} \times 5\frac{1}{2}$) No. 322.....	1.10
Premo Film Pack Tank No. 2 , for developing 12, $2\frac{1}{2} \times 4\frac{1}{4}$, $3\frac{1}{4} \times 4\frac{1}{4}$ or $3\frac{1}{4} \times 5\frac{1}{2}$ films..	4.00
Premo Tank Developing Powders, No. 2 , per package of $\frac{1}{2}$ dozen.....	.35
Eastman 3A Developing and Printing Outfit , for dark-room development, (for $3\frac{1}{4} \times 5\frac{1}{2}$ or smaller negatives), complete.....	1.65
Eastman A B C Developing and Printing Outfit , for dark-room development, (for 4 x 5 or smaller negatives), complete.....	1.65
Kodak Acid Fixing Powder , 1 pound package	.35
Do., $\frac{1}{2}$ pound package.....	.20
Do., $\frac{1}{4}$ pound package.....	.15
Eastman Hydrochinon Developer Powders , (do not stain the fingers), per doz. pairs...	.60
Do., per $\frac{1}{2}$ doz. pairs.....	.30
Eastman Pyro Developer Powders , (for dark-room development), per doz. pairs.....	.50
Do., per $\frac{1}{2}$ doz. pairs.....	.25
Eastman Hydrochinon and Special Developer Powders , in sealed glass tubes, per box of 5 tubes.....	.30

Eastman Pyro Developer Powders , in sealed glass tubes, per box of 5 tubes.....	\$.25
Glass Stirring Rod Thermometer	1.25
Velox Paper , per doz., 2½ x 4¼.....	.15
Do., per doz. 3¼ x 4¼.....	.20
Do., per doz., 3¼ x 5½.....	.20
Nepera Solution , for developing Velox, 4-oz. bottle.....	.28
Eastman Printing Masks , No. 4, for use with 2½ x 4¼ Film Pack Negatives, each.....	.10
Do., No. 6, for use with 3¼ x 4¼ Film Pack Negatives, each.....	.10
Do., No. 11, for use with 3¼ x 5½ Film Pack Negatives, each.....	.15
Eastman Printing Frame , 4 x 5.....	.40
Do., 3¼ x 5½.....	.40
Do., 5 x 7.....	.55
Developing Trays , Bull's-Eye Composition, 4x5	.17
Do., 5 x 8.....	.40
Graduate , 8 ounce—R. O. C. Tumbler.....	.25
Velox Transparent Water Color Stamps , complete booklet of 12 colors.....	.45
Velox Transparent Water Color Stamp Outfit , consisting of Artist's Mixing Palette, three special Camel's Hair Brushes, and one book of Velox Transparent Water Color Stamps, 12 colors.....	1.00
Solio Paper , per pkg. 2 doz. 2½ x 4¼.....	.25
Do., 3¼ x 4¼.....	.25
Do., 3¼ x 5½.....	.30
Combined Toning and Fixing Solution for Solio , per 8 oz. bottle.....	.50
Do., per 4 oz. bottle.....	.30

Eastman Reducer , per box, 5 tubes.....	\$.50
Royal Re-developer , per package, 6 tubes....	.75
Eastman Flash Sheets , No. 1, per package of $\frac{1}{2}$ dozen.....	.35
Do., No. 2, per package of $\frac{1}{2}$ dozen.....	.56
Do., No. 3, per package of $\frac{1}{2}$ dozen.....	.84
Kodak Flash Sheet Holder	1.25
Kodak Dry Mounting Tissue , per package of 3 dozen sheets, $2\frac{1}{2} \times 4\frac{1}{4}$10
Do., $3\frac{1}{4} \times 4\frac{1}{4}$, per package of 3 dozen sheets.	.10
Do., $3\frac{1}{4} \times 5\frac{1}{2}$, per package of 2 dozen sheets.	.10
Eastman Photo Blotter Book , for blotting and drying prints.....	.40
Kodak Metal Tripod , No. 0.....	3.50
Do., No. 1.....	5.25
Do., No. 2.....	6.00
Leather Carrying Case , for Kodak Metal Tri- pod Nos. 0, 1 or 2.....	3.00
Leatherette Carrying Case , for No. 0 or No. 1 Kodak Metal Tripod.....	1.00
R. O. C. Tripod Truck , No. 1.....	1.50
Optipod , for attaching camera to chair, fence, etc.....	1.25
Kodak Dark-room Lamp No. 2 , $\frac{5}{8}$ -inch wick	1.25
Eastman Film Negative Album , to hold 100, $2\frac{1}{2} \times 4\frac{1}{4}$ film negatives.....	.75
Do., to hold 100, $3\frac{1}{4} \times 4\frac{1}{4}$, $3\frac{1}{4} \times 5\frac{1}{2}$ or smaller film negatives.....	1.00
Kodak Trimming Board No. 2 , capacity 7 x 7 inches.....	.85
Baltic Mounts , for prints $3\frac{1}{4} \times 5\frac{1}{2}$, per 100..	3.40
Do., per 50.....	1.70
Do., $3\frac{1}{4} \times 4\frac{1}{4}$, per 100.....	3.00
Do., per 50.....	1.50
Do., $2\frac{1}{2} \times 4\frac{1}{4}$, per 100.....	2.80
Do., per 50.....	1.40

Forum Album , 25 black or Sepia leaves, 7 x 10	\$ 1.25
Agrippa Album , flexible cloth cover, loose-leaf, 50 black linen finish leaves, size 7 x 11.....	1.75
Do., leather cover, size 7 x 11.....	3.75
Kodak Portrait Attachment , No. 3, for use with the No. 1A or No. 3 Premoette Senior, with R. R. lens, each.....	.75
Do., No. 5 for the No. 3A Premoette Senior, with R. R. lens, each.....	.75
Do., No. 13 for the No. 1A or No. 3 with <i>f.7.7</i> Anastigmat lens, each.....	.75
Do., No. 7 for the No. 3A with <i>f.7.7</i> Anastigmat lens, each.....	.75
Kodak Color Filter and Kodak Sky Filter , No. 3 for use with the No. 1A or No. 3 Premoette Senior, with R. R. lens, each...	1.15
Do., No. 5 for the No. 3A Premoette Senior, with R. R. lens, each.....	1.50
Do., No. 13 for the No. 1A or No. 3 Premoette Senior, with <i>f.7.7</i> Anastigmat lens, each...	1.15
Do., No. 7 for the No. 3A with <i>f.7.7</i> Anastig- mat lens, each.....	1.50
"How to Make Good Pictures," a book for the amateur that includes many helpful sug- gestions for making various kinds of expo- sures, developing, printing, enlarging, etc...	.40
Developing Film only, 12 exposures, 2½ x 4¼ or 3¼ x 4¼ Premo Film Pack.....	.35
Printing only, on Velox, mounted, 2½ x 4¼ or 3¼ x 4¼, each.....	.09
Do., prints unmounted, each.....	.07
Developing Film only, 12 exposures, 3¼ x 5½ Premo Film Pack,40

Printing only, on Velox, mounted, $3\frac{1}{4} \times 5\frac{1}{2}$,
each.....\$.12

Do., prints unmounted, each..... .09

All prints furnished unmounted unless otherwise
specified.

NOTE—If mailing us film for development do not fail to mark
the package plainly with your name and address, and write us a
letter of advice, with remittance.

8 x 10 Bromide Enlargements, mounted on
cards, each.....\$ 1.00

Do., 10 x 12..... 1.40

Do., 11 x 14..... 1.75

On enlargement orders, if in our opinion, the enlargement will
be improved by double mounting, we will do so at an additional
charge of 10 cents, or triple mounted at 15 cents.

For prices on all Premo Cameras and other acces-
sories, write for complete Premo Catalogue.

All prices subject to change without notice.

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ROCHESTER, N. Y.

*Color your own prints and
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Velox
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Color Stamp Outfit

No Experience Necessary

The Outfit consists of an Artist's Mixing Palette, three special Camel's Hair Brushes, and one book of **Velox Transparent Water Color Stamps** (12 Colors).

Price, \$1.00

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EASTMAN KODAK CO.,

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ROCHESTER, N. Y.

Kodak Metal Tripod

AN ideal hand camera tripod, combining rigidity with light weight and compactness. The Nos. 1 and 2 have revolving head with milled edges, making it easy to attach or tighten camera while the tripod is set up. The No. 6 has an improved folding head, permitting the legs to fold flat. Legs made of brass tubing, each section telescoping into the section above it. Lower sections nickelled; upper section black enameled. Any section may be removed for the replacing of the spring should one become inoperative through wear or accident.

No. 0, 3 Sections,	\$3.50
No. 1, 4 Sections,	5.25
No. 2, 5 Sections,	6.00
No. 6, 6 Sections,	7.50

Leather Carrying Case for Nos. 0, 1 or 2 \$3.00

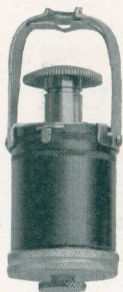
Do., for No. 6 3.50

Leatherette Carrying Case for Nos. 0 or 1 1.00

Prices subject to change without notice.

EASTMAN KODAK CO.

ROCHESTER, N. Y.



*Get in the group
yourself with a*

Kodak Self Timer

COMPOSE the view, focus the camera—then attach the Kodak Self Timer to the push-pin at the end of cable release.

The device is adjustable so that the time interval elapsing between the instant the Self Timer is set and the “click” of the shutter is long or short—as you like.

Plenty of time to pose for a self-portrait—three seconds or three minutes—within this range the interval is under your control—plenty of time to rejoin the group.

Kodak Self Timer, \$1.25

Price subject to change without notice.

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At your dealers'

ROCHESTER, N. Y.



Prints by Gaslight

The best print you
can get on

Velox

is the best print you
can get.

You will find many a valuable photographic help in the Velox Book. It's free and your dealer will be glad to give you one—or we will send it to you if you like.

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At your dealers'.

