

Picture taking with the

No. 1 *Autographic*
Kodak Junior

Rapid Rectilinear or
f.7.7 Anastigmat Lens



“Kodak”

TRADE MARK
1888

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Manufacturers of

Kodak Cameras,	Brownie Cameras,
Kodak Film,	Kodak Film Tanks,
Velox Paper,	Solio Paper,
Eastman Royal Bromide Paper,	
Eastman Standard Bromide Paper,	
Eastman Velvet Bromide Paper,	
Eastman Brilliant Velvet Bromide Paper,	
Eastman Matte-Enamel Bromide Paper,	
Eastman Enameled Bromide Paper,	
Kodak Dry Mounting Tissue,	
Eastman Tested Chemicals,	
Tripods and Other Specialties.	

Trade Marks Reg. U. S. Pat. Off.

October, 1921.

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Published by
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Order Film by Number

All Kodak Films may be distinguished by the numbers on the ends of the cartons:

A-120 is the number of film for the No. 1 Autographic Kodak *Junior*.

The number appears on the carton, on the cartridge, and on the Autographic door, which is located on the back of the Kodak.

Autographic film can be used in old style Kodaks, old style film can be used in Autographic Kodaks, but to get *Autographic results* Autographic film must be used in an Autographic Kodak.

IMPORTANT.

When Autographing film, bear down with the stylus as heavily as the paper will stand without tearing.

Before Loading

BEFORE taking any pictures with the No. 1 Autographic Kodak Junior, 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 threading up the film.

The first and most important thing for the amateur to bear in mind is that the light, which serves to impress the image upon the sensitive film in a small fraction of a second when it comes through the lens, can destroy the film as quickly as it makes the picture. Throughout all the operations of loading and unloading be extremely careful to keep the red paper wound tightly around the film to prevent the admission of light.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

CONTENTS

PART I.

Loading the Kodak, . . .	5
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PART II.

Making the Exposures, . . .	12
Operating the Shutter, . . .	12
Instantaneous Exposures, . . .	17
Focusing, . . .	17
Autographic Feature, . . .	29
Time Exposures, . . .	34
To Make a Portrait, . . .	38
Diaphragms, . . .	42
Flash-light Exposures, . . .	43

PART III.

Removing the Film, . . .	50
Finishing the Pictures, . . .	56

PART I

Loading the Kodak

THE film for the No. 1 Autographic Kodak Junior is furnished in light-proof cartridges and the camera can, therefore, be loaded in daylight. The Kodak should be loaded, however, in a subdued light, *not* in the glare of bright sunlight. It should also be borne in mind that after the seal is broken care must be taken to keep the red paper taut on the spool; otherwise it may slip and loosen sufficiently to fog the film.



The Film
A-120

1. To load the Kodak, take a position where the daylight is somewhat subdued, and grasping the camera with the left hand, remove the back by pressing in simultaneously with the thumb and second finger of the right hand, as indicated in Fig. I, page 6. Then lift the back outwards and upwards in order to remove it, as shown in Fig. II, page 6.



FIG. I.
Pressing in Catches.



FIG. II.
Removing the Back.



FIG. III.
Pulling Out a Spool Pin.

2. The Kodak having been opened, an empty spool having a slit in it will be found in the winding end of the camera. This forms the reel on which the film is wound after exposure. The full spool is to be placed in the recess at the opposite end of the Kodak. To accomplish this, pull out spool pins as shown in Fig. III.

3. Drop the film cartridge into this recess,



FIG. IV.
Inserting the Cartridge

as shown in Fig. IV, page 7.

Be careful to *get the top of the spool at the top of the camera*. The top is the winding side of the camera. Each cartridge is marked with the word "Top" on the red paper near the top of the spool.

NOTE—If the cartridge is inserted wrong end up, the red paper instead of the film will be brought next to the lens, resulting, of course, in the absolute loss of the pictures.

4. Push spool pins into place, making sure that the pins are in the holes at each end of the spool so that spool revolves upon them.

5. Remove the gummed slip that holds the end of the red paper; pass the paper over the two aluminum rollers and thread into the slit in reel, as shown in Fig. V. Be careful in so doing that the paper draws straight and true.



FIG. V.
Threading up the Red Paper.



FIG. VI.
Turning the Key to bind paper on Reel.

To secure a tight grip on the red paper, unfold the end and thread it into the longer opening in the slit in reel as far as it will go. By doing this the red paper will not be liable to slip.

6. Give the key one or two slight turns—just enough to bind the paper on the reel—and no more. See Fig. VI.

The paper should now be in position indicated in Fig. VII.



FIG. VII.
Showing position of paper.

7. Replace the back on the Kodak, reversing the operation as shown in Figs. I and II, page 6. Care should always be taken to handle the back of Kodak carefully, especially when it is detached from camera, as even a slight bend would make it fit badly, resulting very probably in a leakage of light, and consequent loss of film.

Throughout the foregoing operation, from the time the gummed slip is cut on the fresh roll of film until the back is once more in place, keep the red paper wound tightly on the roll. If it is allowed to loosen, light will be admitted and the film fogged.

8. The roll of film in the camera is covered with red paper, and this must be partly reeled off before a picture can be taken. Turn the key to the left and watch the little red window in the back of the camera. When about 15 to 18 turns have been given, a hand pointing toward the first number will appear; then turn



slowly until the figure 1 is exactly in the center of the red window.

The film is now in position for taking the first picture.

Press in the winding key slightly when turning it, so as to make sure that the web on the key stays within the slot in the top of spool.

**Load your Kodak with Kodak Film.
Look for this Trade Mark on the box:**

EASTMAN
Autographic

***"If it isn't Eastman,
it isn't Kodak Film."***

PART II

Making the Exposures

THE general instructions in this No. 1 Autographic Kodak Junior manual apply equally well to the camera, whether it is fitted with the *Rapid Rectilinear* or *f.7.7 Anastigmat Lens*.

Before making an exposure with the No. 1 Autographic Kodak Junior, either time or instantaneous, be sure of four things:

First—That the shutter is adjusted properly. (For instantaneous, time or "bulb" exposure).

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

Third—That the camera is focused.

Fourth—That an unexposed section of the film is turned into position.

NOTE—Exposures are made by pressing push-pin at end of cable release D or pushing down on exposure lever C. The shutter is self-setting.

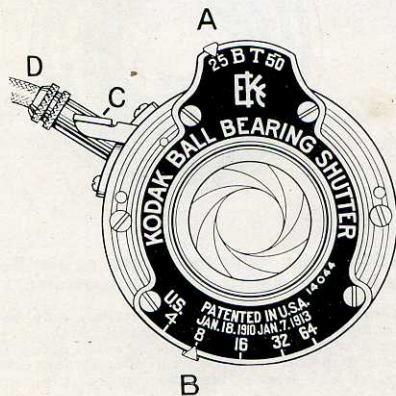
Avoid making too sharp a bend in the cable release, or it will be liable to kink.

Operating the Shutter

Perfect familiarity with the shutter is essential to successful picture-taking with any camera. The following directions should, there-

fore, be carefully read, and the shutter operated several times before threading the film up for use.

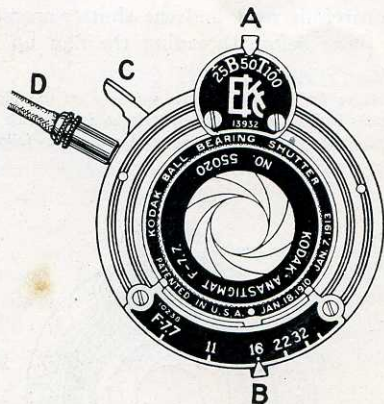
Instructions for the use of the shutters on the No. 1 Autographic Kodak Junior, when it is equipped with the *Rapid Rectilinear* or *f.7.7 Anastigmat Lens*, are as follows:



This illustration shows the shutter on the Kodak when it is equipped with the *Rapid Rectilinear Lens*.

Instantaneous Exposures

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



This illustration shows the shutter on the Kodak when it is equipped with the *f.7.7* Anastigmat Lens.

NOTE—The division of speed 100 appears only on the shutter equipped with the Kodak Anastigmat Lens, *f.7.7*. The lever A should be used at 100 only when taking moving objects in bright sunshine, and lever B must always be placed at *f.7.7* when taking this kind of a picture.

Second—Set the lever B at U. S. 8 or *f.11*. 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 No. 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.

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

NOTE—Press push-pin on cable release with a firm quick movement, at the same time be sure to hold the Kodak 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 or 64. If the Kodak is equipped with the *f.7.7* Anastigmat Lens, set the lever at *f.7.7*, 11, 16, 22 or 32. See instructions for the use of the stops for Interior Exposures, as given in table on page 37; also the table for Time Exposures in the Open Air, page 39.

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 pushing down on exposure lever 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 or 64. If the Kodak is equipped with the *f.7.7* Anastigmat Lens, set the lever at *f.7.7*, 11, 16, 22 or 32. See instructions for the use of the stops for Interior Exposures, as given in table on page 37; also the table for Time Exposures in the Open Air, page 39.

Third—Press push-pin or exposure lever 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 exposure lever 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 exposure lever C, as the cable release is less likely to jar the camera.

Instantaneous Exposures

"Snapshots"

When making ordinary instantaneous exposures or snapshots, the subject must 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.

Focus on the Subject

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

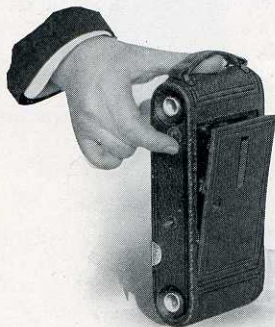


FIG. I.
Opening the Front.

On the camera bed will be found a focusing scale with slots marked 8, 25 and 100 feet. This is for focusing the camera.

NOTE—The focusing scale is marked both for feet and for meters and care should be taken not to confound them.

Grasp the springs at bottom of front board, and extend the bellows by pulling out the front. Pull out the front to the point nearest the estimated distance in feet, between the Kodak and the *principal object* to be photographed, where the front locks automatically—Fig. II.

Except when photographing subjects that are close to the Kodak, it is not necessary to

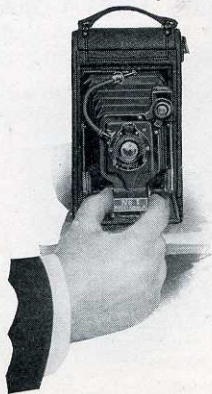


FIG. II.
Extending the Bellows.

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 70 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. For distant views set the focus at 100 feet. Everything beyond 100 feet is in the 100-foot focus. Nothing nearer than 8 feet can be focused without using a Kodak Portrait Attachment, see pages 38 and 39, or a small stop opening, see table on page 20.

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 eight feet. An object eight feet distant will be absolutely sharp, but objects six and eleven 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. 64 or $f.32$, and everything from about four and three-quarters feet to about thirty-six 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 following table will be a help in determining the range of critical definition or depth of focus with the No. 1 Autographic Kodak Junior (when fitted with the Rapid Rectilinear or *f*.7.7 Anastigmat Lens) when it is focused with different stops:

Rapid Rectilinear					
U. S. 4	U. S. 8	U. S. 16	U. S. 32	U. S. 64	
Anastigmat					
<i>f</i> .7.7	<i>f</i> .11	<i>f</i> .16	<i>f</i> .22	<i>f</i> .32	
Distance Focused Upon	RANGE OF SHARPNESS				
	Ft.	Ft.	Ft.	Ft.	Ft.
100 Ft.	29 to Inf.	22 to Inf.	17 to Inf.	13 to Inf.	9 to Inf.
25 Ft.	15½ to 66	14 to Inf.	11½ to Inf.	9½ to Inf.	7½ to Inf.
8 Ft.	6¾ to 10	6½ to 11	6 to 13	5¼ to 18	4¾ to 36

"Inf." is the abbreviation for Infinity—meaning an infinite distance from the lens.

How to use the No. 1 Autographic Kodak Junior as a Fixed Focus Camera

Set focus at 25 feet.

Use speed 25.

Set diaphragm at U. S. 8 or *f*.11.

By following the above suggestions this camera can be used as a fixed focus camera 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 this Kodak 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, 3¼ x 4¼ 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.

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

For all ordinary outdoor 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 a 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 at the seashore or 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, at speed 25.



FIG. III.

Locate the Image

Aim the camera at the object to be photographed and locate the image in the finder. For a vertical exposure hold the camera as shown in Fig. III.

For a horizontal picture the camera must be held as shown in Fig. IV, turning the finder as indicated.

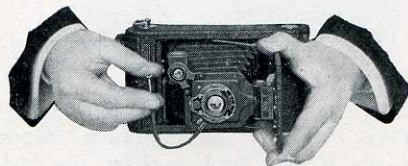


FIG. IV.



IMPORTANT

When making instantaneous exposures, hold the Kodak firmly against the body as

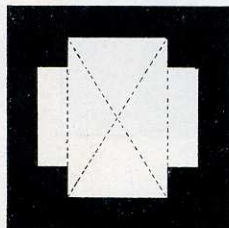


shown in illustrations, and when operating the cable release or pushing down on the exposure lever, hold the breath for the instant.

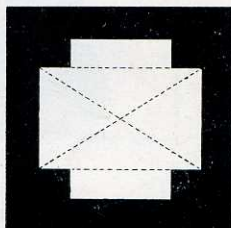
Always look into the finder from directly over it, *not at an angle*. The finder gives the scope of view and shows a facsimile of the picture as it will appear, but on a reduced scale. Any object that does not show in the finder will not show in the picture.

It will be noticed that the top of the finder is notched, as shown in Fig. V. This is done so that the one finder will correctly show the view included when the Kodak is held in either vertical or horizontal position. As the picture taken with the No. 1 Autographic Kodak Junior 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 the Kodak is held in either position.

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



VIEW INCLUDED WHEN
MAKING A VERTICAL
PICTURE.



VIEW INCLUDED WHEN
MAKING A HORIZONTAL
PICTURE.

FIG. V.

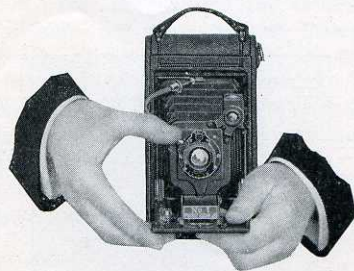


FIG. VI.

Fig. VI shows how to hold the camera when making an exposure without the use of the cable release. Grasp the bed of Kodak 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 Kodak Level

The Kodak must be held level.

If the operator attempts to photograph a tall building while standing near it by pointing the camera upwards (thinking thereby to center it), the result will be similar to Fig. VII, page 28.

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. VII.
Effect produced by tilting the Kodak.

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

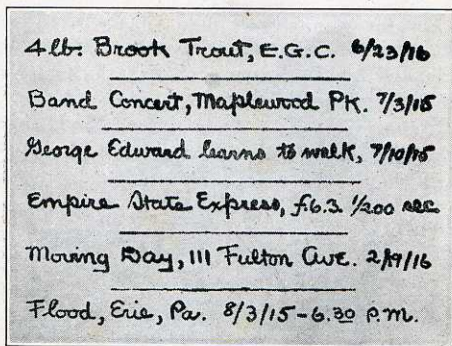
If the object is down low, like a small child or a dog, the Kodak should be held down level with the center of the object.

When making the exposure:

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

The Autographic Feature

The Autographic Kodak has a spring-door on the back, covering a narrow slot through which the writing is done upon the red paper. The slot is provided with an automatic safety spring-border which operates when the door is open to press the papers into contact with back of the film, thus securing the sharp printing of the image of the writing and preventing the diffusion of light around the edges of the slot. This slot is located so that normally the writing comes between the exposures.



An Autographic Negative.

The "Autographic Negative" printed on this page is merely to suggest a few of the thousand and one ways in which autographic records may be used to add value to your negatives.

The Autographic Record as a Guide

Many amateurs have distinctly improved the quality of their work by making notes, at the time of exposure, of the prevailing conditions. As: Bright light, 1/25 second, stop U. S. 8, which, by the way, can be easily abbreviated to—B, 1/25, 8. By keeping such records the amateur can quickly find the causes of failure, if any. By comparing negatives and records he will soon get a line on his errors and when he knows what his errors are he can easily rectify

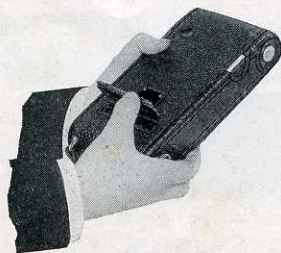


FIG. VIII.

them. It is obvious that the best way to make these records is autographically, *on the film, at the time.*

The Operation

After the picture is taken, lift up the spring-door on the back of Kodak with thumb (Fig. VIII). Use the stylus, held in as upright a position as is convenient, and write on the strip of exposed red paper any memorandum desired, such as the title of the picture, the date, or details in regard to the exposure, light, stops, etc., (Fig. IX, page 32).

To get a clear impression, press firmly on both up and down strokes. While writing or afterwards the sun should not be allowed to shine upon the paper. The action of the

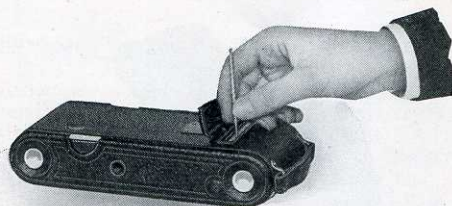


FIG. IX.

Position of stylus when writing record data on Autographic Film Cartridge used in Autographic Kodak.

stylus so affects the tissue as to permit the light to record the writing upon the film. After finishing the writing the door should be left open for the printing, in accordance with the following table:

(Expose to the sky, but not to the sun.)

	OUT OF DOORS	INDOORS CLOSE TO WINDOW
BRILLIANT LIGHT	2 to 5 Seconds	5 to 7 Seconds
DULL LIGHT	5 to 10 Seconds	10 to 15 Seconds

Incandescent Light, distance 2 inches, 30 to 60 seconds.

Welsbach Light, distance 6 inches, 30 to 60 seconds.

Close the door before winding the next section of film into place.

Caution. In order to locate the writing accurately in the space between the negatives it is important that the film should be turned so that the exposure number centers perfectly in the red window in the back of the Kodak.

Turn a new section of film into position:

Press in slightly on the winding key in top of camera and turn it slowly to the left, until the next number appears in the red window. Three or four turns will be sufficient to accomplish this. (See Fig. X). The warning hand appears only before No. 1.

Repeat the foregoing operations for each picture.



FIG. X.

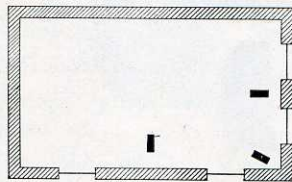
Turning a new section of film into position.

Important—When you have used the last exposure on your roll of film and have made the autographic record of it in accordance with the foregoing directions, turn the winding key of the Kodak until a letter (A) appears in the center of the window in the back of the Kodak. Raise the spring-door and write your name on the red paper, expose it to the sky the same as was done when making the exposure records, then close the spring-door and finish winding film and red paper for removal from the Kodak. The film is now ready to send to your finisher, and when developed will be readily identified by the autographic copy of your name which you wrote on the red paper.

Time Exposures—Interiors

Open the front of the Kodak and focus it, as when making Instantaneous Exposures, see page 17. Set camera in such a position that the finder will embrace the view desired.

The diagram shows the proper positions for the Kodak. 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 Kodak.



Diagram, Showing Positions of Kodak.

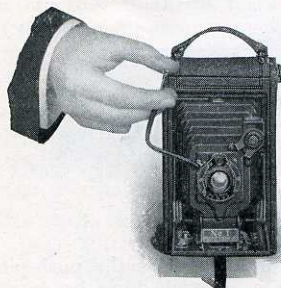


FIG. XI.

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

For a vertical exposure, lift up the support that is used as a name-plate on the bed of the Kodak, and place the Kodak in position as indicated in Fig. XI. The Kodak is also provided with tripod sockets and may be used on a tripod.

When it is desired to make a horizontal time exposure without the use of a tripod, pull down the lever on bed of Kodak, and place the Kodak in the position as shown in Fig. XII, page 36.

Adjust the shutter for a Time Exposure, as described on page 15.

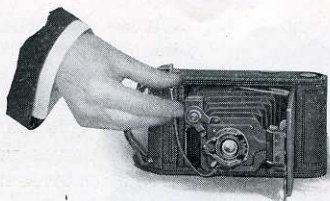


FIG. XII.

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

TURN THE KEY.

After making the autographic record, turn the next section of film into position, as described before. (See page 33).

THE KODAK IS NOW READY FOR THE NEXT INTERIOR EXPOSURE.

Follow the directions given heretofore for each successive exposure.

When the last Interior Exposure is made, adjust the shutter for Instantaneous Exposures as before directed.

Time Needed for Interior Exposures

The following table gives the approximate time of the exposure required under varying conditions of light for the Kodak equipped with either the *Rapid Rectilinear* or *f.7.7 Anastigmat Lens*. The time given in the table is

with the 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 and with stop U. S. 64 or *f.32* give four 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 Kodak (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 Kodak should be about 8 feet from the subject. The background should form a contrast with the subject.

The surrounding objects, when making portraits, are usually better if they are not clear and sharp, hence we advise the use of stop U. S. 4 or *f.7.7* ordinarily for such work.

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 Kodak 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 Kodak set:

At 8 feet focus, the subject should be placed exactly 2 feet 9 inches 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.

Use Kodak Portrait Attachment No. 8 with the No. 1 Autographic Kodak, Jr., when it is equipped with the *Rapid Rectilinear Lens*.

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

Time Exposures in the Open Air

When the smallest stop (U. S. 64 or *f.32*) 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 $\frac{1}{2}$ to 2 seconds will be sufficient.

With Heavy Clouds—From 3 seconds to 6 seconds will be required.

The foregoing 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 Kodak is held in the hands. Always place it upon some firm support, such as a tripod, table or chair.

For exceedingly short time exposures as above described use the "bulb exposure". See page 15.

"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 the 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.

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 = <i>f</i> .8	U. S. 32 = <i>f</i> .22
U. S. 8 = <i>f</i> .11	U. S. 64 = <i>f</i> .32
U. S. 16 = <i>f</i> .16	U. S. 128 = <i>f</i> .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 22, and for portraits indoors, see page 38.

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 37 and 38.

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

U. S. 64 = *f*.32—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 will range from $\frac{1}{4}$ second to 6 seconds, according to the light. The smaller the stop the sharper the picture, see pages 19 and 20.

Absolute failure will be the result if stops U. S. 64 or *f*.32 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.

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 flash light, would be quite beyond the range of the art.

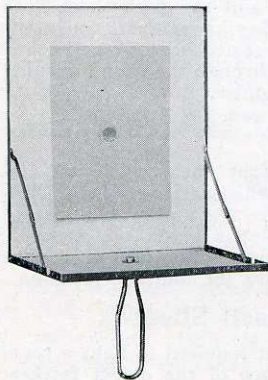
Preparation for the Flash—The camera should be prepared for Time Exposures, as di-

rected on page 15 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 Kodak, 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 Kodak. 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 in the center.

Taking the Picture

Having the Kodak 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, make the autographic record by following the table as given on page 32, and turn the next section of film into place with the winding key, 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.

For ten feet distance, and light walls and hangings, use one No. 1 sheet.

For ten feet distance, and dark walls and hangings, use one No. 2 sheet.

For fifteen feet distance, and light walls and hangings, use one No. 2 sheet.

For fifteen feet distance, and 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 Kodak (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 8 feet. The flash should be on the side of the Kodak 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 pages 38 and 39.

To Make a Group—Arrange the chairs in the form of an arc, facing the Kodak, 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 is sometimes seen in large pictures, because the perspective would be too violent.

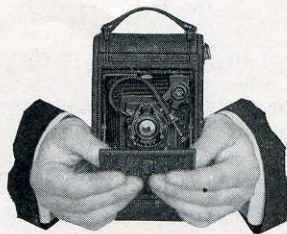
Backgrounds—In making single portraits or groups, care should be taken to have a suitable background against which the figures will show in relief; a light background is better than a dark one, and often a single figure or two will show up well against a lace curtain. For larger groups a medium light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



Closing the Bed of Kodak.

Closing the Kodak

When through using the Kodak, fold the bellows by reversing the operation shown in Fig. II, page 18, and press down on arm locks on each side of bed as shown above. The bed will now close readily.

Caution

Before closing the bed of the camera, make sure that the finder is in the position for making a vertical exposure, and that the front board has been pushed back to the limit of motion.

If the finder and front board 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.

PART III

Removing the Film

NO dark-room is required for changing the spools in the No. 1 Autographic Kodak Junior. The change should be made, however, in a subdued light, *not* in the direct sunlight.

1. When the last section of film has been exposed and the autographic record of your name has been made according to instructions on page 34, turn the key about eight half turns.

2. Provide an extra spool of film to fit the camera, and take a position where the daylight is somewhat subdued.

3. Remove the back from the Kodak as before described, pages 5 and 6.

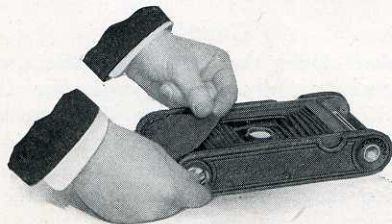


FIG. I.

Holding Red Paper Taut While Turning Key.

4. Holding the red paper taut, so as to wind tightly, turn the key until the paper is all on the reel. Fig. I.

5. Hold ends of red paper and sticker together to prevent paper from loosening on the reel. If the sticker folds under roll, pull it up with the point of a lead pencil.

6. Pull out spool pin and winding key, and lift out roll of film as shown in Fig. II.

7. Fold over half an inch at end of red paper (so as to make subsequent breaking of the seal easy), and then seal with the sticker.

8. Wrap up exposed film immediately to prevent the possibility of light being admitted. The roll of film is now ready for developing and printing.

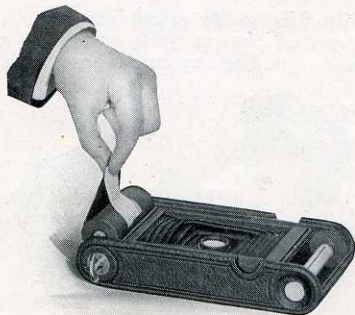


FIG. II.

Removing the Cartridge of Exposed Film.



FIG. III.

Pulling Out Center Pins to Remove Empty Spool.

9. Now take out the empty spool by drawing out the center pins which hold it in place. Fig. III.

10. Slip this empty spool into place at the winding end of camera (this will form a new reel), pulling out the key in so doing, as shown



FIG. IV.

Pulling Out Key to Admit New Reel.

in Fig. IV, and fit the web which is attached to key into the slot in the end of spool. Now push the axis pin into the hole in the opposite end of spool, until it is fixed in position by the embossed stop.

11. Load as described in Part I, page 5.

IMPORTANT

Film should be developed as promptly as possible after exposure.

The quality of the image on all sensitized products is retained by immediate development after exposure.

"Cinch Marks"

If the film and paper loosen up a trifle when taken from the camera, many amateurs are likely to take the cartridge in the hand and wind it as closely as possible, "cinching" it tightly with a twisting motion. There's nothing more likely to injure the negative than this tight drawing of the film, as it abrades the surface, making fine parallel scratches running lengthwise of the film, which, in some cases, will ruin the negative. *Do not "cinch" the cartridge.* It simply needs to be wound tightly enough so that the red paper keeps inside the flanges at the ends of the spool.

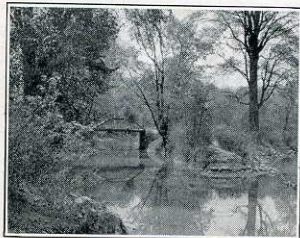
Keep Dust Out of the Camera

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.

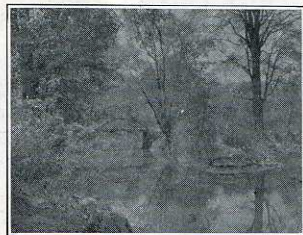
It is, therefore, well to wipe out the inside of camera and bellows occasionally, with a slightly damp cloth. In summer weather, or after the camera has remained idle for any length of time, this needs special attention.

Clean Lenses

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 LENS



LENS SLIGHTLY DIRTY

clean and in good order. To produce the effect shown in the picture above, 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 Kodak, extend the bellows and open the shutter, as when making a Time Exposure, the largest stop (U. S. 4 or $f.7.7$) should be in position. Hold the Kodak so that the front is towards the light, then look through the lens from the back of the Kodak, 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 Kodak Film Tanks (for developing in daylight) or our Outfits for dark-room use.

For use with the No. 1 Autographic Kodak Junior Film (No. A-120), provide a "Brownie" or a 2½-inch Kodak Film Tank. (This film may be developed in the larger tanks—but not so economically.) The Film (No. A-120) may also be developed in daylight in the No. 2 Brownie Developing Box.

If the dark-room method of development is preferred, an Eastman-A B C Developing and Printing Outfit should be provided.

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 Kodak Film 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 Kodak. 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 Kodak—and that is, Kodak service.

EASTMAN KODAK CO.,
ROCHESTER, N. Y.

PRICE LIST

Leather Carrying Case , with strap, for use with the No. 1 Autographic Kodak Junior.....	\$ 4.00
Leatherette Carrying Case , with strap.....	2.50
Kodak Portrait Attachment, No. 8 , for use with the No. 1 Autographic Kodak Junior, when it is equipped with the Rapid Rectilinear Lens.....	.75
Do., No. 3, for use with the Kodak when it is fitted with the f.7.7 Kodak Anastigmat Lens.....	.75
Kodak Color Filter and Kodak Sky Filter, No. 8 , for use with the No. 1 Autographic Kodak Junior, when it is equipped with the Rapid Rectilinear Lens.....	.75
Do., No. 3, for use with the Kodak when it is fitted with the f.7.7 Kodak Anastigmat Lens.....	1.15
Autographic Film Cartridge, A-120 , 6 exposures, $2\frac{1}{4} \times 3\frac{1}{4}$25
Kodak Film Tank, $2\frac{1}{2}$-inch	5.00
Duplicating Outfit for above Tank.....	2.50
Developer Powders for $2\frac{1}{2}$ -inch Kodak Film Tank, per pkg. $\frac{1}{2}$ doz.....	.25
Brownie Kodak Film Tank	4.00
Duplicating Outfit for above Tank.....	1.75
Brownie Developing Box No. 2	2.00
Developer Powders for Brownie Kodak Film Tank or Brownie Developing Box, per pkg. $\frac{1}{2}$ doz.....	.20

Eastman A B C Developing and Printing Outfit , for dark-room development, (for 4×5 or smaller negatives), complete.....	\$ 1.65
Kodak Acid Fixing Powder , per 1-lb. package.....	.35
Do., per $\frac{1}{2}$ -lb. package.....	.20
Do., per $\frac{1}{4}$ -lb. 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
Eastman Reducer , per pkg. of 5 tubes.....	.50
Royal Re-developer , per pkg. of 6 tubes.....	.75
Glass Stirring Rod Thermometer	1.25
Kodaloid Printing Masks No. 2 , for use with $2\frac{1}{4} \times 3\frac{1}{4}$ negatives, each.....	.10
Velox Paper , per doz., $2\frac{1}{4} \times 3\frac{1}{4}$12
Nepera Solution (for developing Velox), per 4-oz. bottle.....	.28

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. $2\frac{1}{4}$ x $3\frac{1}{4}$20
Combined Toning and Fixing Solution for Solio , per 8-oz. bottle.....	.50
Do., per 4-oz. bottle.....	.30
Eastman Flash Sheets, No. 1 , per pkg. $\frac{1}{2}$ doz.....	.35
Do., No. 2, per pkg. $\frac{1}{2}$ doz.....	.56
Do., No. 3, per pkg. $\frac{1}{2}$ doz.....	.84
Kodak Flash Sheet Holder	1.25
Kodak Dry Mounting Tissue , $2\frac{1}{4}$ x $3\frac{1}{4}$, 3 doz. sheets.....	.10
Eastman Film Developing Clips (nickel), $3\frac{1}{2}$ -inch, per pair.....	.30
Kodak Junior Film Clip, No. 1 , each.....	.12
Kodak Metal Tripod, No. 0	2.75
Do., No. 1.....	4.50
Do., No. 2.....	5.00
Leather Carrying Case , for Kodak Metal Tripod, Nos. 0, 1 or 2.....	3.00
Leatherette Carrying Case , for No. 0 or No. 1 Kodak Metal Tripod.....	1.00
Eastman Standard Tripod , automatic locking.....	3.50

Kodak Dark-room Lamp, No. 2 , $\frac{5}{8}$ -in. wick.....	\$ 1.25
Eastman Film Negative Album , to hold 100 $2\frac{1}{4}$ x $3\frac{1}{4}$ negatives.....	.75
Eastman Photo Blotter Book , for blotting and drying prints.....	.40
Kodak Trimming Board No. 2 , capacity 7 x 7 inches.....	.85
Baltic Mounts , for prints $2\frac{1}{4}$ x $3\frac{1}{4}$, per 100.....	2.60
Do., per 50.....	1.30
Agrippa Album , flexible leather cover, loose-leaf, 50 black linen finish leaves, size 5 x 8.....	2.50
Do., cloth cover, size 5 x 8.....	1.25
Do., leather cover, size 7 x 11.....	3.75
Do., cloth cover, size 7 x 11.....	1.75
Forum Album , 25 Black or Sepia leaves, size $5\frac{1}{2}$ x 7.....	.95
Do., size 7 x 10.....	1.25
Kodak Print Roller , Double, 6-in.....	1.00
Flexo Print Roller , Single, 4-in.....	.30
Optipod , for attaching Kodak to a table, chair, fence or any rigid edge.....	1.25
"How to Make Good Pictures," a book for the amateur that includes many helpful suggestions for making various kinds of exposures, developing, printing, enlarging, etc.....	.40

Developing Film only, per roll of 6 exposures, 2¼ x 3¼.....	\$.15
Printing and mounting only, on Velox, 2¼ x 3¼, each.....	.09
Do., prints unmounted, each.....	.07

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.

All prices subject to change without notice.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

SERVICE DEPARTMENT

ADDITIONAL ASSISTANCE FOR
MAKING BETTER PICTURES

ALTHOUGH we give in this manual all of the essential directions for using the camera it accompanies, there are amateurs who wish for further knowledge of photography.

The Service Department is at their service, *your* service.

Do not hesitate to call on us for information on any photographic subject.

*We are at your service, write to us—
there is no charge, no obligation.*

Address all Communications

SERVICE DEPARTMENT
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

10-21-KP-25

*"If it isn't an Eastman,
✱ it isn't a Kodak."*