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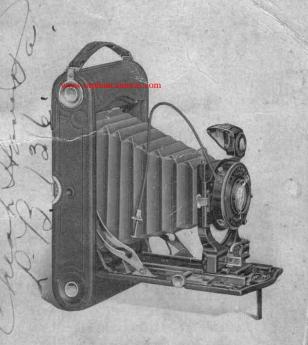
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Picture taking with the

No. 3A Autographic Kodak Special

"Kodak"

TRADE MARK 1888

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

Manufacturers of

Kodak Cameras, Kodak Film, Velox Paper,

Brownie Cameras, Kodak Film Tanks,

Solio Paper,

Kodak Dry Mounting Tissue,
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,
Eastman Tested Chemicals,
Tripods and Other Specialties.

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

Picture taking with the

No. 34 Autographic Kodak Special

n.[1

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-122 is the number of the film for this camera (No. 3A Autographic Kodak *Special*). 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. 3A Autographic Kodak *Special* 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 photographic 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.

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PART I.

Loading with Film.

THE film for the No. 3A Autographic Kodak Special is furnished in light-proof cartridges and the camera can, therefore, be loaded in daylight. This should be done, 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



Removing the Back.

Picture taking with the



FIG. II.
Pulling Out a Spool Pin.

- 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 the second finger of the right hand as indicated in Fig. I.
- 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. II.

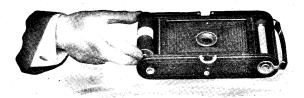


FIG. III.

Inserting the Cartridge.

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3. Drop the film cartridge into this recess, as shown in Fig. III. 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. IV. Be careful in so doing that the paper draws straight and true.

To secure a tight grip on the red paper, do not unfold the end, but thread it into the slit in reel with the paper creased. By doing this the red paper will not be liable to slip.

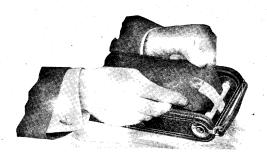


FIG. IV.
Threading up the Red Paper.

Picture taking with the

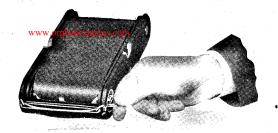


FIG. V.

Turning the Key to bind paper on reel.

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

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

7. Replace the back on Kodak, being careful to put it on right side up (the



 $\label{eq:FIG.VI.} FIG.\ VI.$ Showing position of paper.

wide catch at the top), and snapping the springs at the top and bottom fully into place. 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.

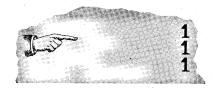
Throughout the foregoing operation, from the time the gummed slip is cut on the fresh roll of film until the back is once more in place, keep the red paper wound tightly on the roll. If it is allowed to loosen, light will be admitted and the film fogged.

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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 slowly to the left and watch the little red window at the back of the camera. When 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:



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

Picture taking with the

Loading with Plates.

- 1. If using glass plates the plate holders must be loaded in a dark-room—that is, a room from which all white light has been excluded. The only light permissible is a dark ruby light, such as can be obtained from a properly constructed dark-room lamp.
 - 2. Provide also

No. 3A Autographic Kodak Special Combination Back. No. 3A Autographic Kodak Special Plate Holders. 1 dozen Seed Dry Plates, 3½ x 5½. Kodak Dark-room Lamp. A shelf or table on which to work.

- 3. Light the lamp and place it upon the table.
- 4. 'Remove the dark-slides from the plate holders.
- 5. Open the box of plates by running a thin knife blade around the edge of the box.
- 6. Take out one of the plates and place it in the holder, face up. (The face is the dull side.) Brush gently over the face of the plate with a camel's hair brush to remove dust.
- 7. Replace the dark-slide in the holder, with the side of handle marked "Exposed", inside.
- 8. Repeat the operation until all the plate holders have been filled, then close up the remaining plates in the box, wrap up securely and put them away in a dark drawer.

The remaining operations may be performed in daylight.

9. Remove the back from the camera as before described. (See page 6.)

Note-There must, of course, be no film in the Kodak when opening it for use with plates.

10. Remove the back of the adapter by pressing down on the inside spring catch and slide the back out. Then insert ground glass panel for focusing, being sure that the side marked "This side facing lens" or the rough or ground side of the glass, faces the lens. Snap the Com-

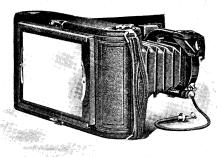
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bination Back into place, taking care that the springs at each side engage with the catches and that the back is right side up, i. e., the plate holder should draw from the end towards the Kodak handle.

11. Focus carefully with the largest stop (f.6.3) in the lens, and when the lines show sharp and true, close the shutter, remove the ground glass, pressing down on catch at the bottom to remove it, and insert one of the plate holders.

When using glass plates the Kodak Range Finder or the regular index plate may be used for focusing, by using the small metal attachment found on the Combination Back, and then follow closely the instructions included with the Combination Back.

12. Pull out the dark-slide. The plate is now in position for making the first picture, and the exposure should be made the same as for films. After making the exposure re-insert the dark-slide in plate holder, with the side of handle marked "Exposed", outside. In this way there will be no doubt in determining which are the exposed plates. Remove the plate holder from the camera by means of leather lug, pressing back slightly on the plate holder to start it.



Showing Combination Back in Place.

PART II.

Making the Exposures.

B^{EFORE} making an exposure with the No. 3A Autographic Kodak *Special*, either time or instantaneous, be sure of five 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 shutter is properly set, using lever E.

Fourth—That the camera is focused.

Fifth—That an unexposed section of the film is turned into position. (Or a fresh plate is ready for exposure.)

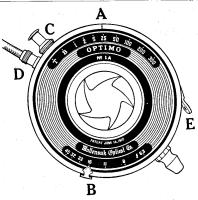
Note—Exposures are made by pressing push-pin at end of cable release "D" or pushing down on release "C".

Avoid making too sharp a bend in the cable release, as by doing so 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 threading the film up for use.

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Instantaneous and Retarded Exposures.

First—Revolve disc until the indicator A is over the figure representing the time of instantaneous or retarded exposure you desire to make.

Note—The shutter is graduated in fractional parts of a second, thus: 1, $\frac{1}{2}$, 1-5, 1-25, 1-50, 1-100, 1-200 and 1-300 parts of a second. For all ordinary instantaneous exposures, when the sun shines,

use stop f.11 and speed 25.

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 shutter speed 50 and stop f.16.

With light clouds or slightly smoky atmosphere, use f.8 or f.6.3

and speed 25.

As a general rule, the speeds of 200 or 300 should be used only when making snapshots of moving objects in bright sunlight and stop f.6.3 should be employed for all such pictures.

With heavy clouds, do not attempt instantaneous exposures. See

page 42.

Second—Push up lever E to its limit of motion and let go, this sets the shutter.

Third—Set lever B controlling diaphragm openings at proper point, according to the time of exposure and subject. See instructions for use of diaphragms, page 42.

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

Note—Press push-pin 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.

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Picture taking with the

Time Exposures.

- First—Revolve disc until the indicator A is over the point T.
- Second—Set lever B at f.6.3, 8, 11, 16, 22, 32 or 45, according to time of exposure and nature of the subject. See instructions for the use of the stops, page 42, also table for making Interior Time Exposures, page 40, and the table for Time Exposures in the Open Air, page 42.
- Third—Push up lever E to its limit of motion and let go, this sets the shutter.
- Fourth—Press push-pin at end of cable release D. 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 release C and closed by a second pressure, if desired, but great care should be taken not to jar the camera.

Bulb Exposures.

For short time exposures, the "bulb exposure" is often advantageous.

- First—Revolve disc until the indicator A is over the point B.
- Second—Set the lever B at f.6.3, 8, 11, 16, 22, 32 or 45, as desired. See instructions for the use of the stops, page 42, also table for making Interior Time Exposures, page 40, and the table for Time Exposures in the Open Air, page 42.
- Third—Push up lever E to its limit of motion and let go, this sets the shutter.
- Fourth—Press push-pin at end of cable release D, or press 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 release C, as the cable release is less liable to jar the camera.

The Lens.

The No. 3A Autographic Kodak Special is equipped with a Kodak Anastigmat Lens, the speed of which is indicated as f.6.3, meaning that it will cut sharp to the corners at 1/6.3 of its focal length.

Get Acquainted with your Lens.

The user of any lens should familiarize himself with its limitations as well as with its capabilities. This is particularly true in the case of the Anastigmats, and we therefore ask that those who are not entirely familiar with photographic optics read the following brief explanation, that they may get the full benefit of the power of their lens and that, on the other hand, they do not ask of it the impossible. It should be borne in mind, however, that what we have to say here is applicable only to lenses of from 5 to 8 1-4 inch focus, such as are supplied on our hand cameras. These directions make no pretension to covering the entire field of photographic optics.

In comparing the work of one lens with another, you must, first of all, remember that such comparisons must be made with a stop opening of the same relative size (f. value). In comparing the Anastigmat with the ordinary Rapid Rectilinear lens, do not expect as great depth of focus with your Anastigmat set at an opening of f.6.3 as your R. R. lens gives at its largest opening, f.8. The Anastigmat at f.8 will give as great depth of focus as will

Picture taking with the

an R. R. of the same focal length with the same opening, while on the other hand, the R. R. will not work at all at f.6.3.

Note—It should be borne in mind that the shorter the length of focus, the greater the depth of focus. This explains why very small cameras can have a "fixed focus" (immovable), while larger cameras are all made so that they can be focused.

What Depth of Focus Means.

Suppose now, that you are using your Anastigmat at the full opening f.6.3 and have set the focus at 15 feet. An object 15 feet distant will be absolutely sharp, but objects 12 and 18 feet distant will not be. Stop your Anastigmat down to f.11 and those objects each side of the exact point of focus will increase in sharpness. Go further and use stop f.45 and everything from about 8 feet to about 112 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 table on the following page will be a help in determining the range of critical definition or depth of focus, when the No. 3A Autographic Kodak *Special* is focused with different stops.

No. 3A Autographic Kodak Special

		Ft.	to Inf.	to Inf.	to Inf.	to 112	37	22	14	8.3%
f.45		l	to	t0	to		71/2 to 37	to	5¾ to	434 to
		Ft.	15	13	10	00	7.1	2	53%	
		Ft.	to Inf.	to Inf.	nf.	œ	٠. ده	. ~	6¼ to 11½	5 to 734
f.32		1 111	to I	to I	to Inf.	to 38	to 23	71/2 to 17	to 1	to
+		Ft.	20	17	13	6	œ	71/2	$6\frac{1}{4}$	2
		Ft.	nf.				,		_	~
f.22		124	to Inf.	to Inf.	to 93	to 26	to 18	to 14	to 1(2
f.		Ft.		50		. 01		00	6% to 10	5¼ to 7
	SS.		25		15	=				
	NE	Ft.	to Inf.	to Inf.	to 52	to 21	91	13	91/	634
f.16	RP		to		to	to	t 0	to	to	to
-	SHA	Ft.	32	24	17	11	934	81/2	7 to 91/2	$5\frac{1}{2}$
. S	RANGE OF SHARPNESS.	Ft.					10½ to 13½ 10¼ to 14½ 93¼ to 16	9½ to 11 9 to 11½ 8½ to 12	6	61/2 51/2 to 63/4
f.11	Ħ I	Ē	to Inf.	to 200	to 40	to 19	0.	0		
f.	NNG	Ή.	40	59		12 1	7.4	_	8½ 7½ to	5% to
	R/	ഥ		_	19	12	7		701	/4 m²
		Ft.	to Inf.	to 105	34	18	13	11		61/4
£.8			to	to	to.	to	to	to	71/2 to	534 to
		Ft.	49	33	30	13	101/2	$9\frac{1}{2}$	71/2	53%
		Ft.	nf.	83	_	~	~	9¼ to 10¾	37,8	9%
f.6.3	,	Ľη	to Inf.	to 82	to 31	to 1	to 1	20 1		0
£.		Ft.		35	21 1	13½ to 17	1034 to 13	7.4	734 to 81/8	5% to 6%
		Ή	55	ŝ	8	ï	1	٠.	į. -	113
	pa pa				•					
STOP	Distance Focused Upon		100 ft.	50 ft.	25 ft.	15 ft.	12 ft.	10 ft.	8 ft.	6 ft.
Š	EMP		10	ŭ	C)	-	Η	Ħ		-

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

Anastigmat Speed.

Using stop f.8 or smaller, the advantage of the Anastigmat over the really excellent Rapid Rectilinear lenses furnished with our cameras is not marked, but there is an improvement in definition and in the correctness of lines. But let us suppose that we desire to photograph a rapidly moving object, or to take a picture on a cloudy day. What do we find? The f. value of a lens denotes the relation of the opening in that lens to its focal length. Suppose, then, that we have a Single (Meniscus Achromatic) lens of 5-inch focus, speed f.14, a Rapid Rectilinear lens of 5-inch focus, speed f.8, and an Anastigmat lens, speed f.6.3, of the same length of focus, 5 inches. How do they compare in speed? To reduce this to its simplest terms we will divide the focal length (5 inches) in each case by the f. value:

$$5 \div 14 = .357$$

 $5 \div 8 = .625$
 $5 \div 6.3 = .793$

It will thus be seen that in using the Single (Meniscus Achromatic) lens the largest opening is $\frac{35.7}{1000}$ of an inch in diameter, with the R. R. lens $\frac{62.5}{1000}$ of an inch, and with the Anastigmat $\frac{70.03}{1000}$ of an inch. The amount of light admitted by a lens in a given time depends, of course, upon the area of the opening at that time being used in that lens. The amount of light admitted in a given time with these different lenses would, therefore, be in direct proportion to the square of their diameters. Here, then, omitting the fractions, is the result:

Single Lens
$$.357 \times .357 = .127$$
 R. R. Lens $.625 \times .625 = .390$ Anastigmat Lens $.793 \times .793 = .628$

We thus find that the speed of the R. R. lens is over three times that of the single lens, and the speed of the Anastig-

No. 3A Autographic Kodak Special

mat is 61% greater than the speed of the R. R. lens. Therein lies the greatest Anastigmat advantage. But simply because it has this speed, you don't always need to use it. The speed must be used with discretion, just as greater care is required in operating an automobile than in operating a bicycle.

Under conditions that would give you good results with an R. R. lens at f.11, use stop f.11 with your Anastigmat—don't use the largest opening for every occasion; use it only for emergency. Your greatest Anastigmat advantage lies in the fact that when the light is so poor that you cannot get a properly timed negative with your R. R. lens at its greatest opening, f.8, without resorting to a time exposure, you can open up your Anastigmat to its full opening and get a successful snapshot.

For the same reason, i. e., because the Anastigmat admits more light in a given time than does the R. R. lens, it is used in connection with high speed shutters for photographing rapidly moving objects. Even in bright sunlight the R. R. lens will not give sufficient illumination to make its use practical with the extremely high speed shutters when worked at their shortest exposures—but the Anastigmat, by reason of the large opening that can be used, enables you to take advantage of the high speed shutter.

Shutter Speed and Lens Speed.

Strange as it may seem, there are some amateurs who do not understand the difference between a fast lens and a fast shutter, thinking, apparently, that because they have a fast lens they should catch all moving objects sharply, or because they have a fast shutter that their pictures should be fully timed. The reverse of this proposition is the truth. The fast shutter, by reason of shortening the exposure,

Picture taking with the

cuts down the light and tends *coward undertiming.* Remember that these speeds are always relative. Your Anastigmat opened to f.6.3 will not give as fully timed a negative in $\frac{1}{200}$ of a second as your R. R. lens will at f.8 in $\frac{1}{100}$ of a second. Your f.6.3 Anastigmat is 61 per cent. faster, not 100 per cent. faster, than the R. R. lens.

*This refers in particular to between-the-lens shutters. With a focal plane shutter, such as is used in the Speed Kodaks and Graflex Cameras, other factors enter. Such shutters give more illumination of the plate in a given time than between-the-lens shutters—but, on the other hand, work many times faster when at full speed.

Unfair Comparisons.

We have had some complaints that the Anastigmats were not giving as fully timed negatives as they should in comparison with the R. R. lens, which our customer had previously used. In every case we have found that the fault was not in the Anastigmat, but in the old shutter with which the R. R. lens was used—such shutter having become dirty, or through the springs weakening or other cause, failing to work at its supposed speed. The result under such circumstances being that the old lens was getting the benefit of a much longer exposure than was intended, while the Optimo shutter fitted to the Anastigmat was chopping off the light with greater accuracy.

Two "Stop" Systems.

The user of an Anastigmat should bear in mind that there are two systems under which shutters are marked for stop openings, and this must be reckoned with in making comparisons. Most shutters for R. R. lenses are marked on the Uniform System (abbreviated to U. S.), while the shutters for Anastigmats are marked by the f. system. The f. value of a stop is the proportion that its opening bears to

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the focal length of the lens. For instance, f.8 means that the diameter of the stop opening is 1-8 of the focal length of the lens, etc. The Uniform System is based on the areas of the openings, each next higher number having half the area of the preceding number, and therefore requiring twice the exposure. For instance: If 1-100 of a second be correct for stop U. S. 4, then, with the same light conditions and stop U. S. 8, 1-50 of a second would be required. However, the two systems are easily compared:

Table.

U.	S.	4	-	-	- "	f. 8	
U.	S.	- 8	-	-	-	f.11	
U.	S.	16	_	_	-	f.16	
U.	S.	32	_	_	_	f.22	
		64		_	-	f.32	
		128			_	f.45	

There is no exact U. S. designation for f.6.3 but it is approximately U. S. 2.5.

A Law of Optics.

The larger the stop opening, the less depth of focus. This is not a rule covering any particular lens that we or any one else exploits. It's as fixed as the course of the planets. With a large opening, depth of focus must be sacrificed. In this matter of opening, then, the difference between the R. R. and the Anastigmat is this: The Anastigmat will cut perfectly sharp on objects at the focused distance, over the entire picture with a large opening, admiting a large amount of light, thus requiring a relatively short exposure; but when this large opening is used, there is no great depth of focus. The R. R. lens will not cut the entire picture sharp with this large opening, even if correctly focused. With the smaller openings as f.8, etc., the

Picture taking with the

Anastigmat has the same depth of focus as the R. R. lens and gives sharper definition over the entire picture.

Deductions.

It is perfectly evident then that it is best to use only a moderately large stop opening (say f.8 or f.11) even with an Anastigmat, and time accordingly when conditions will permit. However, when the light is dull and a snapshot is desired, the full opening may be used, or if it is desired to photograph rapidly moving objects in good light, the full opening may be used with a high speed of the shutter. It must not be expected, however, that with such full opening, objects in the foreground, in the middle distance and at long distance can all be sharp. Set the scale for the correct focus on the principal object and that object will be sharp. As a rule, your picture will be rather better for having the unimportant parts less sharply defined than the principal subject.

The Anastigmat will do everything better than the R. R. It will do some things that the R. R. lens cannot do at all—but no lens has yet been invented, or is likely to be, that can combine extreme speed with depth of focus, except in very small sizes, or, in other words, except in lenses of very short focus. Even in these, the error, though not noticeable, is there—but that's another story.

Instantaneous Exposures.

Important—Although with this camera exposures may be made at speed 300, all exposures slower than speed 25, must be considered time exposures so far as providing a tripod or other firm support is concerned. The camera cannot be held steadily enough in the hand for work at less speed than 25.

When making ordinary instantaneous or snapshot pictures 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.

Focus on the Subject.

The No. 3A Autographic Kodak Special is equipped with the Kodak Range Finder and the Kodak may be accurately focused on still objects by means of this



FIG. I. Opening the Front.

Finder, instead of using the Focusing Scale.

However, the quickest sure way to focus is by setting the focus by the Scale to the estimated distance and then correcting it by the Range Finder.

1. Press the concealed button (Fig. I) and push down the bed of camera to the limit of motion.

Picture taking with the

2. Grasp the handle at bottom of standard, and pull out the front to the limit of motion, then lock it by push-

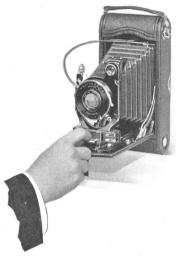


FIG. II. Extending the Bellows.

ing up on the handle (Fig. II). It will then be found that the indicator will come just behind the 100 foot mark over the index plate.

- 3. Draw out the milled head at right side of the bed. This is to be used for racking the front back and forth.
- 4. Hold the Kodak in the horizontal position and at such a distance from the eye that the image is seen clearly and sharply in the three mirrors of the Range Finder which is located at the bottom of the standard. This distance

is not necessarily the ordinary reading distance of the eye, as is the case when using the view finder, but it is modified by the lenses of the instrument. This distance will also vary if the operator is wearing eye-glasses.

The image is most easily seen by looking with one eye through (not at) the Range Finder, and the eye should be quite close to it.

Note—In some cases, where it is found more convenient, such as when taking high buildings where the vertical lines predominate, the Kodak may then be held in the vertical position, and look through the Range Finder from the side, rather than from the top.

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5. Select some horizontal line near the center of the subject, such as the collar, hat brim or belt if a portrait, or a window frame or roof if a building, and rack the lens back and forth by means of the milled head, until this line is continuous in the three mirrors of the finder. By



As image will appear when Range Finder is racked too far forward.



As image will appear when Range Finder is racked too far back.



As image will appear when the Kodak is correctly focused.

racking back and forth the continuity of the line can be broken and mended at will. When the line is continuous, the focus is correct. An easy method for determining the distance when taking a portrait, is to have the subject hold his hand in the horizontal position across the chest, then focus upon the line formed by the lower part of the hand. The illustrations above show the appearance of the image in the Range Finder when lens is not in focus and also how it appears when correctly focused. The image will appear *inverted* in the Range Finder, whereas it is right side up in the view finder. The images in the two outside mirrors will be yellow, whereas the center mirror will show the image in the natural colors, by using this

Picture taking with the

difference in color the three mirrors can be more easily distinguished and the focus more readily determined. The composition of the picture should be roughly determined by using the view finder in the usual manner, then the distance of subject should be found by means of the Range Finder, after which the view finder should again be used in order to make sure that the picture is properly composed. It is obvious, however, that any changes in distance from subject to camera would mean refocusing.

Before taking any pictures with this Kodak, it would be advisable to make yourself perfectly familiar with the operation of the Range Finder and practice with it by comparisons with the scale on known distances.

- 6. Of course the Range Finder can only be used on still objects, but by noting the focus distances on the scale, a novice can soon learn to estimate distances very accurately when snap-shotting.
- 7. In case of any accident to the Range Finder, the regular focusing scale may be used. In fact a comparison should be made occasionally on distances that are known in order to prevent loss of film through accident.
- 8. If plates are used in this Kodak, the focusing of the image may be done on the ground glass in the adapter, or by using the metal attachment as described in the instructions included with each Combination Back, the Range Finder or regular index plate may be used. As the focal plane for film and the focal plane for plates are not the same when the adapter is used, it is necessary that the difference be corrected, which is accomplished by using the metal attachment mentioned above.
- 9. The Range Finder must not be used for focusing the Kodak when the Kodak Portrait Attachment is in place, as this Attachment changes the focal length of the lens. The Kodak may be used with the Portrait Attachment by using the focusing scale and then use the distances as described on page 41.

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10. To clean the bottom mirror in the Range Finder, wind the corner of a clean handkerchief around the end of a match stick and pass it across the mirror. The two top mirrors are protected by pieces of glass and will probably not require cleaning.

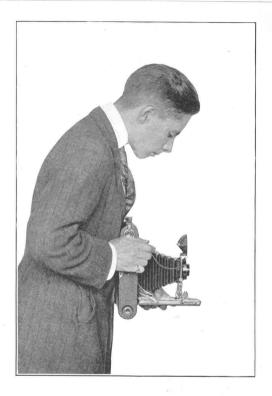
11. If the index plate is to be used for focusing, then pull out the front of Kodak as described before and rack it out until the pointer is over the figure on the index plate corresponding to the distance in feet, between the camera and the principal object to be photographed.

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 20 to 35 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. The index plate is divided for 6, 8, 10, 12, 15, 25, 50 and 100 feet. Everything beyond 100 feet is in the 100-foot focus. Nothing nearer than 6 feet can be focused without the use of the Kodak Portrait Attachment, see page 41, or use a small stop opening, see table on page 17.

Focusing with Plates.

When using plates with the Combination Back, the Kodak Range Finder or the regular index plate may be employed for focusing as well as the ground glass. Instructions for focusing Kodak with the Range Finder or the regular index plate will be found included with each Combination Back. When focusing the Kodak by means of the ground glass the following instructions should be used: Insert the ground glass in plate adapter. Open the shutter. Focus carefully with the largest stop in the lens and when the lines show sharp and true close the shutter. Remove the ground glass and insert the plate holder.

Picture taking with the



IMPORTANT.

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

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and when operating the cable release or pressing the exposure lever, hold the breath for the instant.

Picture taking with the

as when taking a horizontal picture, the indicator must be over the letter H. This is done so that one finder will correctly show the view included when the Kodak is held in either horizontal or vertical position.

As the picture taken with the No. 3A Autographic Kodak *Special* 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.

Fig. V 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 touch the finger release.

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 upward (thinking thereby to center it) the result will be similar to Fig. VI.



FIG. V.

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When making this picture the Kodak 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.

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

Note—The rising front may be used in helping to center high objects on the film or plate. See page 47.

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.



FIG. VI.
Effect produced by tilting the Kodak.

When making the exposure:

- -hold the camera 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,

Picture taking with the



FIG. VII.

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.

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 sec., stop f.11, which, by the way, can be easily abbreviated to: B, 1/25, 11. 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 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 back of Kodak, with thumb (Fig. VII). Use the stylus,

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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. VIII).

The "Autographic Negative" printed below 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.

4 lb: Brook Trout, E.G.C. 6/23/16

Band Concert, Maplewood PK. 7/3/16

Seorge Edward learns to week, 7/10/16

Empire State Express, f.6.3 1/200 sec

Moving Day, 111 Fulton Cure. 2/19/16

Flood, Eric, Par. 8/3/15-6.30 P.M.

An Autographic Negative.



FIG. VIII.

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

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

4.	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 sec. Welsbach Light, distance 6 inches, 30 to 60 sec.

Close the door before winding a new film into place.

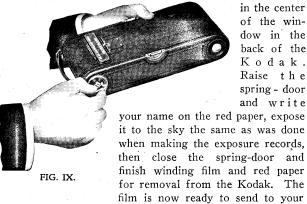
Caution. In order to locate the writing accurately in the space between the negatives it is important that the film should be turned so that the exposure number centers perfectly in the red window of the Kodak.

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 before the red window. Three or four turns will be sufficient to accomplish this. See Fig. IX. The warning hand appears only before No. 1.

Repeat the foregoing operations for each picture.

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

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finisher, and when developed will be readily identified by the autographic copy of your name which you wrote on the red paper.

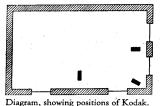
Time Exposures.

Use a Tripod for all Exposures Slower than Speed 25.

INTERIORS.

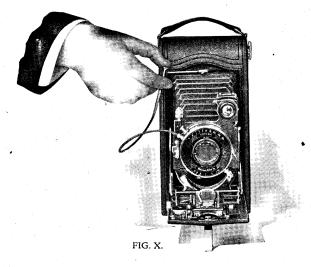
Set camera in such a position that the view-finder will embrace the view desired.

The diagram shows the proper positions for the Kodak. It should not be pointed directly at a window, as the glare of light w



dow, 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 the range of the Kodak.



To make a time exposure, place the Kodak on some firm support, like a tripod, chair or table, and focus as before described.

Be careful, however, if using a chair or table, to place the Kodak not more than two or three inches from the edge, so as to avoid including part of the chair or table in the picture.

Fig. X shows the Kodak in position for a vertical exposure. 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 lever at side of focusing scale and place Kodak in position, as shown in Fig. XI.

Adjust the shutter for a Time Exposure as described on page 14.

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

TURN THE KEY.

After making the autographic record, turn a new film into position as described before. (See page 36.)

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 with stop f.16 in the lens. If stop f.11 is used give only one-half the time, with f.8 give one-fourth the time, with stop f.6.3 give one-sixth the time; if stop f.22 is used give twice the

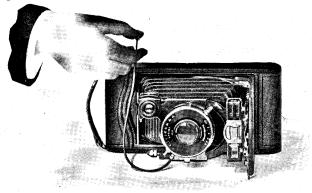


FIG. XI.

time, with f.32 give four times and with stop f.45 give eight times the time of the table. The smaller the stop the sharper the picture. Stop f.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 the 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. Place Kodak in the vertical position and center the image in the view-finder. For a three-quarter figure, the Kodak 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. The surrounding objects, when making portraits, should not be too sharp, hence we advise the use of stop f.6.3 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 6 feet focus, the subject should be placed exactly 2

feet 6 inches from the lens.

At 8 feet focus, place the subject 2 feet 9 inches from the lens.

At 15 feet focus, place the subject 3 feet 4 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 the Kodak Portrait Attachment No. 7 with the No. 3A Autographic Kodak Special. Be sure to specify this number when ordering.

Time Exposures in the Open Air.

When stop 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 exposure must be much shorter. See table on page 42.

With Sunshine—1/5 second.

With Light Clouds—From $\frac{1}{2}$ to 1 second will be sufficient.

With Heavy Clouds—From 2 to 5 seconds will be required.

The above table is calculated for the same hours as mentioned for Interior Exposures, page 40, but 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 hand. 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 14.

Diaphragms.

The stops should be used as follows:

f. 6.3—For quick exposures of moving objects in bright sunlight, with shutter speeds 200 or 300. Occasionally for slower speeds on cloudy days; also for portraiture, see pages 28 and 41.

 $_{\rm M}f.8$ —For instantaneous exposures, using speed 25, on slightly cloudy days, and use speed 50 or 100 in bright sunlight.

f.11—For all ordinary instantaneous exposures when the sun shines, using speed 25.

f.16—For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows, such as in views on 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 page 40.

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.

f.32 and 45—For interiors. For time or retarded exposures out of doors in deep shadow or on very cloudy days, see table above. Never for instantaneous exposures. The smaller the stop the sharper the picture, see pages 16 and 17.

Absolute failure will be the result if you use the smallest stop for instantaneous exposures.

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Flash-Light Pictures.

By the introduction of Eastman Flash Sheets, picturetaking 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.

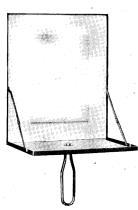
Evening parties, groups around a dinner or card table or single portraits may be readily made by the use of our flash sheets, thus enabling the amateur to obtain souvenirs of many occasions which, but for the flashlight, would be quite beyond the range of the art.

Preparation for the Flash—The camera should be prepared for Time Exposures, as directed on page 14 of this manual (stop 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 always 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 at the same height or 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.

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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.

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 36, and turn a fresh film into place with the 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.

Table.

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 6 to 8 feet, and for a full figure about 8 to 10 feet.

Picture taking with the

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 not be higher than the head of the subject.

For use of the Portait Attachment, see page 41.

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 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 in 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.

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FIG. XII.

Rising Front.

The No. 3A Autographic Kodak Special is provided with a rising front, which may be utilized in cutting out an undesirable foreground or to assist in taking in the top of a high building, etc.

Fig. XII shows how to raise and lower the front when making vertical exposures. The front may be raised or lowered by releasing or lifting up the catch from the pin on the side of standard and at the same time turning the milled head at top of post to right or left. When through using, center lens by moving the front up or down as the case may be, until the pin in standard locates itself in notch in the catch.

In order to make a sharp picture when using the rising

front it will be better to use a small stop (f.22 or 32) and as this in turn necessitates a time exposure, a tripod or other firm support must be provided. Experience alone can teach the many ways in which the rising front may be used for composing artistic pictures.

N. B.—Do not fail to center the front before closing camera, as otherwise there is danger of ruining bellows when folding.

Closing the Kodak.

When through using the Kodak, rack the carriage or track upon which the front runs, back to the limit of motion. Also be sure to unlock front by pushing down on handle at bottom of standard before attempting to push back the front. Fold the bellows by reversing the operation shown in Fig. II, page 24, and press down on arm locks on each side of bed, as shown below. The bed will now close readily.

Before closing the bed of the Kodak, make sure that the front board has been pushed back to the limit of motion. If it is in proper position it will not interfere with the bed in closing.

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



Closing the Bed of Kodak.

*

PART III.

Removing the Film.

No. 3A Autographic Kodak Special. The change should be made, however, in a subdued light.

- 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 36, 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, *not* in the direct sunlight.
- 3. Remove the back from the Kodak as before described, page 6.
- 4. Holding the red paper taut, so as to wind tightly, turn the key until the paper is all on the reel. Fig. I.

 $\ensuremath{\text{Note}}\xspace$ —If the sticker folds under roll, raise it up with the point of a lead pencil.

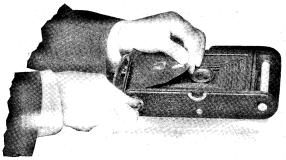


FIG. I.

Holding red paper taut while turning key.

Picture taking with the

- 5. Hold ends of red paper and sticker together to prevent paper from loosening on the reel.
- 6. Pull out spool pin and winding key, and lift out roll of film as shown in Fig. II.

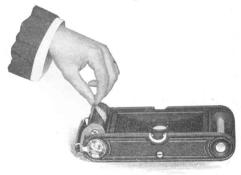


FIG. II. Removing the Cartridge of Exposed Film.

- 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 a n d printing.

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



FIG. III.

Pulling out Center Pins to Remove Empty Spool.

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



FIG. IV.
Pulling out Key to admit new Reel.

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.

Dimmed View 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 be 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 opening the finder and wiping the mirror by means of a soft cotton cloth.

To clean the mirror in the view finder on the No. 3A Autographic Kodak *Special*, wind the corner of a clean handkerchief around the end of a lead pencil and pass between lens and mirror; or, if found necessary, the finder may be opened and cleaned in the following manner: First collapse the finder, then push down on the upper edge and draw it back when the finder will then spring open, ar un easily be cleaned with a clean handkerchief.

Clean Lenses. -

Dirty or dusty lenses are frequently the cause of photographic failures. These pictures illustrate this point clearly. The sharp, full-timed picture at top (page 53) was taken with the lens clean and in good order. To produce the effect shown in the lower picture, the face of the lens was

No. 3A Autographic Kodak Special

lightly touched with the thumb, which was slightly damp with perspiration.

Lenses should be frequently examined by looking through them, and if found to be dirty, should be wiped, both front and back, with a clean,



Clean Lens.

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

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.



Slightly Dirty Lens.

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

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. 3A Autographic Kodak Special Film (No. A-122) provide a 3½-inch Kodak Film Tank. (This film can be developed in the larger tanks—but not so economically.)

If the dark-room method of development is preferred, an Eastman 3A 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.

No. 3A Autographic Kodak Special

PRICE LIST.

No. 3A Autographic Kodak Special, fitted with	
Kodak Anastigmat Lens f.6.3, Kodak Range	
Finder, and Optimo Shutter, for pictures	
$3\frac{7}{4} \times 5\frac{7}{2}$ (not loaded) + 75.94	ŀ
Do., with Bausch & Lomb Kodak Anastigmat	
Lens, f.6.3 103.14	ļ
Do., with Bausch & Lomb Tessar Series IIb	
Anastigmat Lens, $f.6.3$ 130.36	Ò
Black Grain Leather Carrying Case, velvet lined,	_
with strap 6.73	5
Combination Back (Special) for Film or Double	_
Plate Holders 5.00	
Double Glass Plate Holders, $3\frac{1}{4} \times 5\frac{1}{2}$, each - 1.50)
Kodak Portrait Attachment No. 7, for use with	_
No. 3A Autographic Kodak Special75)
Kodak Color Filter No. 7, for use with No. 3A	
Autographic Kodak Special 1.5	Э
Kodak Sky Filter No. 7, for use with No. 3A	
Autographic Kodak Special 1.5	U
Autographic Film Cartridge, No. A-122, 10 expo-	_
sures, $3\frac{1}{4} \times 5\frac{1}{2}$ 9	-
Do., 6 exposures5	-
Seed Dry Plates, single coated, 31/4 x 51/2, per doz9	
Kodak Film Tank, 3½-inch 6.0	0
Duplicating Outfit for above Tank 3.0	0
Kodak Tank Developer Powders, for 3½-inch	
Tank, per pkg. ½ dozen2	5
Flexible Rubber Tray, which is used for fixing	
and washing films; fits over the "3½-inch"	_
Kodak Film Tank Box 2.5	0
Eastman Plate Tank, 4 x 5, for $3\frac{1}{4}$ x $5\frac{1}{2}$ plates,	
including Solution Cup, Plate Cage and	_
Loading Fixture 4.0	U
Eastman Plate Tank Developer Powders, 4 x 5,	_
per package of ½ dozen2	5

Picture taking with the

Eastman 3A Developing and Printing Outfit, for
dark-room development, (for $3\frac{1}{4} \times 5\frac{1}{2}$ negatives or smaller), complete \$ 1.65
,
20, per 72 12.
20, Por 74
Eastman Hydrochinon Developer Powders (do not stain the fingers), per doz. pairs60
Do., per ½ dozen pairs30
Eastman Pyro Developer Powders (for dark-
room development), per dozen pairs50
Do., per ½ dozen pairs25
Eastman Hydrochinon and Special Developer
Powders in sealed glass tubes, per box of
5 tubes30
Eastman Pyro Developer Powders in sealed glass
tubes, per box of 5 tubes25
Glass Stirring Rod Thermometer 1.25
Eastman Printing Masks, No. 8 for use with No.
3A Autographic Kodak Negatives, each15
Velox Paper, per dozen sheets, $3\frac{1}{4} \times 5\frac{1}{2}$ 20
Nepera Solution (for developing Velox), 4 oz.
bottle28
Velox Transparent Water Color Stamps, com-
plete booklet of 12 colors45
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, 2 dozen sheets, 31/4 x 51/230
Combined Toning and Fixing Solution for Solio,
per 8-oz. bottle50
Do., per 4-oz. bottle30
Kodak Print Roller, double, 6-inch 1.00
Eastman Reducer, per box, 5 tubes50
Royal Re-developer, per package, 6 tubes75

No. 3A Autographic Kodak Special

Eastman Flash Sheets No. 1, per pkg. ½ doz \$.35
Do., No. 2, per pkg., ½ doz	.56
Do., No. 3, per pkg., ½ doz	.84
Kodak Flash Sheet Holder	1.25
Kodak Dry Mounting Tissue, 2 dozen sheets,	
$3\frac{1}{4} \times 5\frac{1}{2}$.10
Eastman Photo Blotter Book, for blotting and	
drying prints	.40
Eastman Film Developing Clips, nickeled, 3½-	
inch, per pair	.30
Kodak Junior Film Clip, No. 1, each	.12
Do., No. 2, 3 inches wide, each	.25
Kodak Metal Tripod, No. 0	3.50
Do., No. 1	5.25
Do., No. 2	6.00
Leather Carrying Case for No. 0, 1 or 2 Kodak	
Metal Tripod	3.75
Leatherette Carrying Case for No. 0 or No. 1	
Kodak Metal Tripod	1.35
Bull's-Eye Tripod , - ,	2.00
R. O. C. Tripod Truck No. 1	1.50
Do., No. 2	1.75
Kodak Dark-room Lamp, No. 2, 5%-inch wick	1.25
Eastman Film Negative Album, to hold 100 31/4 x	
5½ negatives	1.00
Kodak Trimming Board No. 2, capacity 7 x 7	
inches	.85
Baltic Mounts, for prints 3½ x 5½, per 100 -	3.40
Do., per 50	1.70
Othello Album, flexible black walrus leather cov-	
ers, loose-leaf, 50 black leaves, size 7 x 11	6.50
Agrippa Album, flexible leather cover, loose-leaf,	
50 black linen finish leaves, size 7 x 11	4.00
Do., cloth cover	1.90

Developing Film only, 3½ x 5½, per roll of 10	
exposures \$.40
Do., per roll of 6 exposures	.25
Printing and mounting only, on Velox, 31/4 x	
5½, 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 m	ark

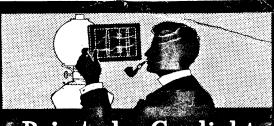
Note—If mailing us film for development do not fail to mark the package plainly with your name and address, and write us a letter of advice, with remittance.

11 x 14 Bromide Enlargement, mounted on card \$ 1.75 14 x 17 Bromide Enlargement, mounted on card 2.25

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

All prices subject to change without notice.

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ROCHESTER, N. Y.

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