

Kodet —————

Instructions.

No. 4 Folding.

KODAK.
Trade Mark, 1888.

EASTMAN KODAK CO.
ROCHESTER, N. Y.

MANUFACTURERS OF

Kodaks,
Kodets,
Eastman's Solio Paper,
Western Collodion Paper,
Eastman's Dry Plates.
Eastman's Permanent Bromide Paper,
Eureka Bromide Paper,
Eastman's Platino-Bromide Paper,
Eastman's Enameled Bromide Paper,
Eastman's Transparent Film,
Eastman's Transparency Plates,
Eastman-Walker Roll Holders,
Tripods,
View Cameras and
Other Specialties.

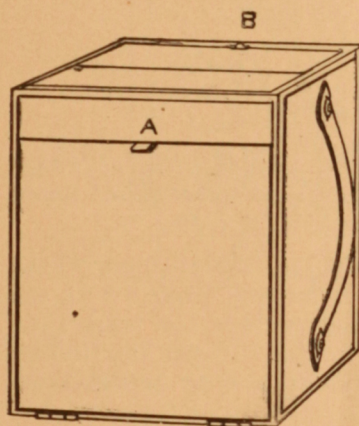
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PART I.

OPERATION OF THE KODET.

EVERY KODET is tested in actual use and carefully adjusted until it is in perfect working condition before shipment.

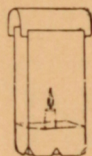


The operation of the Kodet is simple in the extreme. To open the front, pull out the leather thumb piece *A*. The front will then form the bed of the camera. The top is opened for receiving the plate (or roll) holder by releasing the catch *B*.

LOADING THE PLATE HOLDER.

The plate holders must, of course, be loaded in a dark room from which every particle of white light is excluded.

Having provided such a room or closet where, when the door is closed, no ray of light can be seen, set up on the table or shelf an Orange Candle lamp, and light it as directed in the circular which comes in the box in which the lamp is enclosed.



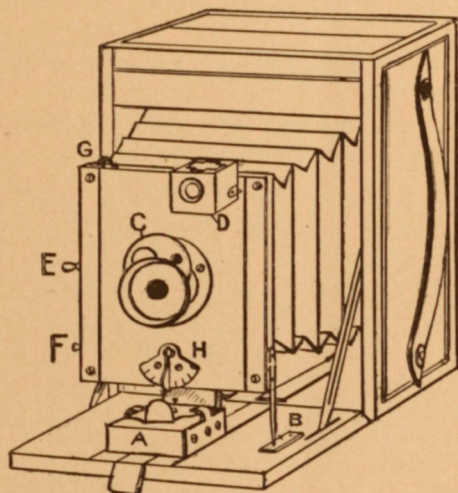
The lamp gives a subdued yellow or orange light which will not injure the plates unless they are held close to it.

To load the plate holder remove the dark slides ; put in one plate (with the film side out) and replace the dark slide on that side of holder. Turn the holder over and load the other side in the same manner.

In inserting the dark slides put the side on which the word " Exposed " is printed,

on the inside. On replacing slide after exposure put "Exposed" out. This will save many mistakes.

MAKING THE EXPOSURE.



Pull out the front by the catch *A*, until the pointer on the front board is above the focusing index *B*.

Then look to see that the proper diaphragm *C*, is in the front of the lens.

SNAP SHOTS.

For snap shots *use the largest opening*. The lever *H*, regulates the speed of the shutter and for ordinary snap shot work should be set in the middle as shown in the cut.

Look in the finder *D*, and you will see just what will show in the picture. The finder is reversible and can be used for horizontal or vertical pictures.

The focusing for snap shots is usually done by the index *B*. Judge the distance as accurately as possible and set the pointer on the front board opposite the figure on the index corresponding with the distance in feet that the object to be photographed is from the camera. The image may be focused on the ground glass by removing the plate holder, opening the door in the back of the camera and opening the lens as if to make a time exposure.

Having focused on the object to be photographed, make sure that the shutter is closed. Then set the shutter. Now remove the dark slide and you are ready to make the exposure.

To Set the Shutter Press down the lever *E*, as far as it will go.

To Make an Instantaneous Exposure hold the camera *level, hold it steady* and "press the button" *F*. This releases the shutter and makes the exposure.

TIME EXPOSURES.

To Make a Time Exposure—The camera must be on a tripod or some other steady support. Press the lever *G*, over to the point marked *T*, (Time) and set the speed regulator *H* of the shutter at *S* (Slow). Then press the lever *E*, down as far as it will go. The shutter is now set. All being ready press the button *F*, *this will open the lens*. If the exposure to be given is more than 2 or 3 seconds (see table of exposures, page 28), time it by the watch. Touch the button *F*, again. *This will close the lens*.

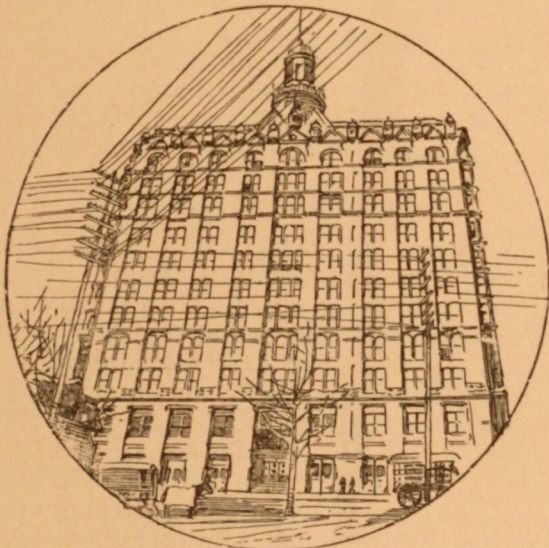
Some photographers prefer to make time exposures by the use of a lens cap, as there is then less liability of jarring the camera. To accomplish this set the shutter for time exposure as described above, and open the lens by touching the button

F. When all is ready remove the cap ; give the proper exposure ; replace the cap. If more time exposures are to be made the shutter need not be closed until you are through. Then touch the button *F*, again. This will close the shutter.

After an exposure is made the dark slide should be replaced in plate holder at once and the holder reversed, or another holder put into the camera as the case may be, otherwise the beginner is likely to forget whether he has made a change or not. Remember in replacing the dark slide after a picture has been taken, to always put in the slide so that the word " Exposed " will show.

THE SWING BACK.

The swing back, with which the special Kodets are supplied, is to be used in taking pictures of high buildings, etc. If it is found to be necessary to tilt the Kodet in order to take in the top of the object to be photographed the swing back must be used or the results will be as shown in



the accompanying cut. Insert the ground

glass and compose the picture thereon, adjusting it by means of the thumb-screws and sliding back at the top until the *ground glass is perpendicular* and the lines show true. When the picture is composed fasten the swing back securely and insert the roll holder (or plate holder). In order to make a sharp picture when using the swing back it will be better to use a small stop, 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 swing back may be used for composing artistic pictures.

RISING FRONT.

The No. 4 Special has a rising and falling front which is to be used in taking high buildings or objects that cannot be photographed successfully when the camera is in the ordinary position for use. It assists the swing back and circumstances will readily suggest its uses when the amateur has had a little experience.

In using either the rising or falling front, always focus on the ground glass, for neither the finder nor focusing scale will be true.

PART II.

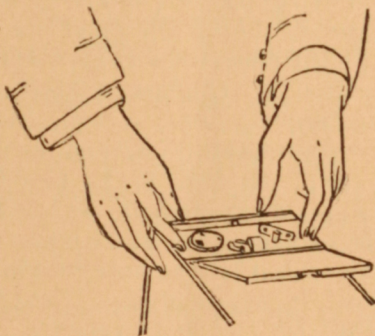
ROLL HOLDER DIRECTIONS.

THESE DIRECTIONS are written on the supposition that the roll holder has been purchased ready loaded. For instructions for reloading see page 18.

To insert the roll holder in the Kodet :

First. Remove the ground glass from the Kodet by pulling up on the leather thumb piece.

Second. Insert the roll-holder making sure that the tongue on the bottom enters the grooves in the bottom of camera. Press the catches into place thus :



Third. Remove the dark slide from the front of the roll holder first making certain that the shutter is closed. The ground glass and dark slide may be carried in the space back of the roll holder when not in use.

MAKING THE EXPOSURE.

Every roll-holder is carefully tested before leaving the factory and is known to be in perfect working condition. When ordered loaded, the key is tied with wire and sealed.

Read These Directions Before Cutting the Wire.

The exposure is made in precisely the same manner as for glass plates (see Part I.)—the operations simply differing in the method of “changing plates” after exposing the first film.

After making an exposure press the lever at the right of the key as indicated by arrow. This lever unlocks the reeling mechanism. *Turn the key* to the right (if you turn it to the left it will come out) until it again locks. The film is now ready for the next exposure.

Repeat the above operation after each exposure.

It will be wise to make this order of procedure a *Habit*, for then the Kodet will be ready for any view that may be presented. You will not need to try to remember whether you "Turned the Key," let the "Turn the Key" be the last act of the Exposure "gone before."

The automatic register on the right hand side of the roll-holder, counts each exposure as it is reeled off and you can thus always tell just how much film has been used and how much you have left.

When the exposures have all been made the key will refuse to turn.

The Kodet is then ready to return to the Eastman Kodak Company to be reloaded and have the negatives developed and the photographs (positives) printed.

NOTE.—It is taken for granted here that the reader is a novice and does not desire to pursue the art except just so far as is absolutely required to make the exposure. If, however, he desires, he can finish his own pictures by following the directions given in Parts V. and VI. The difficulties are no greater than those of the ordinary dry plate process, and the labor much less.

If it is not convenient to return the camera or roll holder the reel of Exposed Film can be taken out, and sent by mail to the factory. For directions see page 18.

PACKING THE KODET OR ROLL HOLDER.

Either the Kodet or Roll Holder alone may be returned to us if desired. To return the Roll Holder first insert the dark slide and then remove from the Kodet. Provide a box large enough to contain it with plenty of soft packing. Pack carefully ; put on the cover of box and finally wrap in one thickness of stout manilla paper and tie with a strong cord. The Kodet can be packed and sent in the same way but, of course, express charges can be lessened by sending only the Roll Holder.


Address as follows :

Eastman Kodak Company,

Rochester, N. Y.

From

(Put your own name and
address here.)

 **Always put your name on the wrapper.**

Prepay the charges and don't put any more or less writing on the wrapper.

Then write us a letter as follows :

*To Eastman Kodak Company, Rochester,
N. Y.*

GENTLEMEN :— I send you to-day
by express, *prepaid*, my No. 4 Kodet
Camera Roll Holder to be reloaded and the pictures
finished. Enclosed please find \$10.00* in

express order
postal “

bank draft

bills (if bills, letter must be registered,) to pay for same.

Yours truly,

..... Name.
..... Post Office.
..... County.
..... State

*This is the price for 48 exposures only.

The camera or roll holder will be
returned at once and the finished prints
in ten days or less.

TO RELOAD THE ROLL HOLDER.

Provide

- a. An extra spool of 5 inch Kodet Film.
- b. An extra Reel, (5 inch Kodet Reel).*
- c. An Eastman Orange Candle Lamp.
- d. A dark room having a shelf or table.

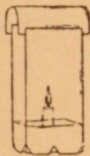
*NOTE: The extra reel does not accompany the spool, unless ordered. While not an actual necessity, it is a convenience and saves unwinding the exposed film from the old reel, and the consequent liability of fogging the film by exposure to white light. The exposures should be sent to the factory on the first reel. The reel will be returned with the prints and can be used repeatedly. Hence it is necessary to have only as many extra reels as it is desired to send spools at one time to the factory for development.

By a dark room is meant one that is wholly dark—not a ray of light in it. Such a room can easily be secured at night almost anywhere. The reason a dark room is required is that the film is extremely sensitive to white light, either daylight or lamplight, *and would be spoiled if exposed to it* even for a fraction of a second, while being removed from the Roll Holder.

Having provided such a room or closet where, when the door is closed, no ray of light can be seen, set up on the table or shelf the Orange Candle lamp, and light it as directed in the circular which comes in the box in which the lamp is enclosed.

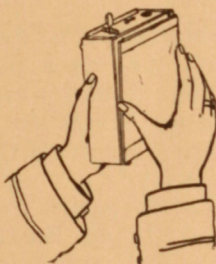
The lamp gives a subdued yellow or orange light which will not injure the film unless it is held close to it.

Set the lamp on the table at least eighteen inches from and with the *side* toward the operator.



THE LAMP.

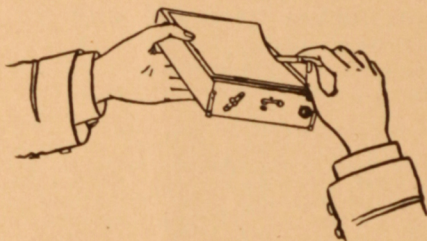
1. Remove the Roll Holder from the Kodet.
2. Release the back of the Roll Holder by springing up the catches at the top and remove the back thus :



3. Remove the dark slide.

NOTE : When the instrument is not in use it is well to keep the dark slide in position in front of the Roll Holder as a precaution against accidents.

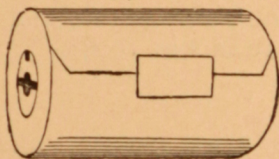
4. With a penknife sever the film as shown below.



5. Release the catch *A* and pull out center No. 1. This will release the roll upon which is wound the exposed film.
6. Take the free spool of film out of its box, unroll the black paper that is wound about it and wrap it around the reel of exposures and put the latter in a box and put on the cover.

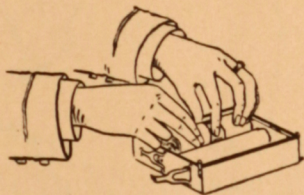
This box is then ready to be tied up and mailed to the Eastman Kodak Company. For shipping directions see page 16. If you wish to do the developing and printing yourself, see Parts V. and VI.

7. Release the catch *B* and pull out center No. 2. This will release the empty spool (which may be thrown away). The Roll Holder is then

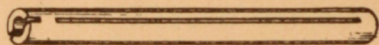


ready for the insertion of a fresh spool. This is the spool as taken from its wrapper.

8. Insert the spool by fitting the slotted end upon the tension head then push in the center No. 2, and fasten with catch *B*. It will go in easily when the spool is in proper position for the point to enter the hole in the center of the spool. The spool should be set into place as shown in cut.

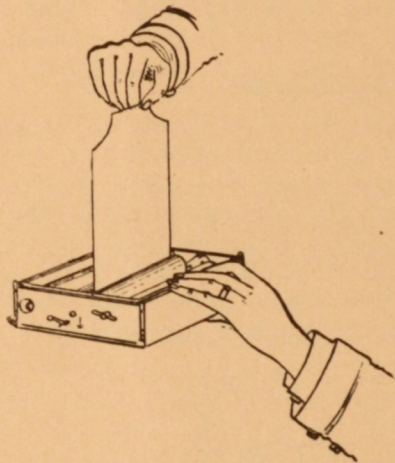


9. Put the new reel in its place in the same manner; push in center No. 1 and fasten with catch *A*.

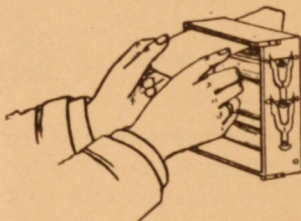


THE REEL.

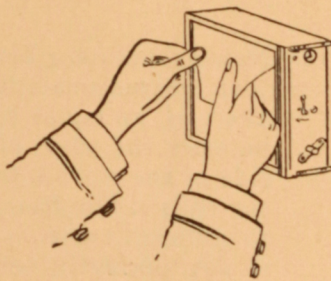
10. Remove the paper band which prevents the film from unwinding, and pull out the end 10 inches, thus:



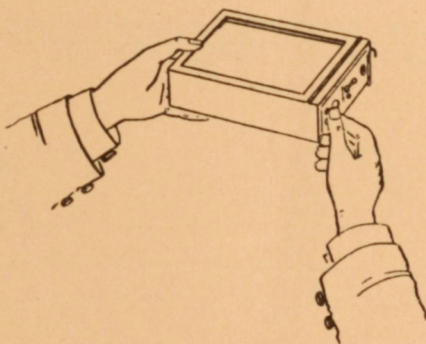
11. Thread the film through the opening over the first guide roll, as shown here.



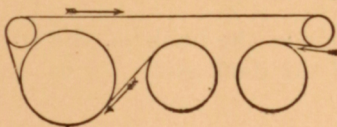
12. Pull the film through and thread it over the second guide roll.



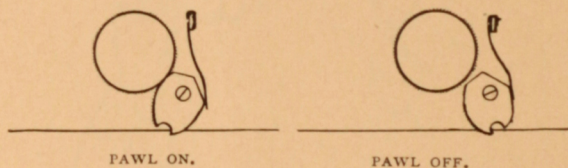
13. Thread the film through the slot in the reel, and turn the key until the film binds firmly on itself around the reel.



The film should then be in this position :

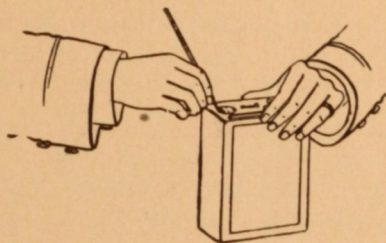


14. Now examine the band of film and see that it is true on all the rollers, *i. e.*, that there is an equal space at each side between the edge of the film and the side of the roll holder. Also see that the coils of film have not been allowed to slide edgewise on the spool. If it is not perfectly true, throw off the pawl which keeps the reel from turning back, and thus having loosened the film, slide it edgewise with the flat blade of the knife until it is perfectly true, then throw on the pawl and turn the key until the film is tight. *Do not forget to throw on the pawl.*



15. Turn the key until it locks.
16. Replace the back of the roll holder, and the dark slide.

17. Set the automatic register at 1 by turning dial with the point of a pencil, thus :



The Roll Holder is now ready for use.

HOW TO REMOVE THE EXPOSED FILM WHEN
ONLY A PORTION OF THE EXPOSURES
HAVE BEEN MADE.

It is not necessary to make the entire 48 pictures before taking out and developing the exposures that have been made.

When any number of exposures have been made they can be removed and the remainder of the film attached again for further exposures, as follows :

1. Cut the film as shown on page 20, then throw back the pawl as shown on page 24. Pull the exposed film off from the reel and wind it on the finger and wrap it up in black paper.
2. Take hold of the end of the unexposed film remaining on the spool and draw it out as shown on page 22, attaching it to the reel as if it were a fresh spool.

PART III.

HOW TO MAKE PICTURES INDOORS.

1. *Put the Kodet in position.* Use some firm support, like a Tripod, mantel or table. Set it in such a position that the finder or ground glass will embrace the view desired. The diagram shows the proper position for the Kodet. 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 the range of the Kodet.

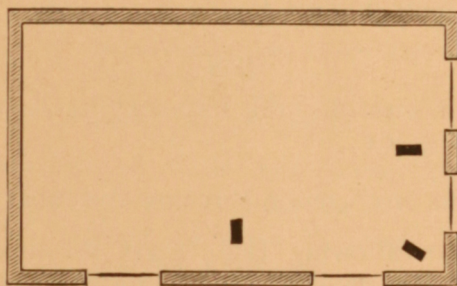
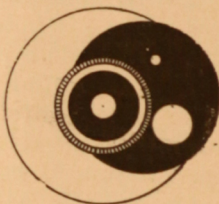


DIAGRAM SHOWING POSITION OF KODET.

2. *Open the front and turn the second largest stop into the lens if you have a single lens and the third largest if you have a double lens.*

NOTE.—The Kodets with single lenses have three stops, those with double lenses have four stops.



3. Focus with the index or on the ground glass.
4. Make a time exposure as described on page 9, Part I.

TIMING.

For interiors, the following table is a good guide:

TIME NEEDED FOR INTERIOR EXPOSURES.

The following table gives the time of exposure required under varying conditions of light. The figures given are for

the largest stop in the single lens or the second stop in the double lens :

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 is calculated for rooms whose windows get the direct light from the sky, and for hours from three hours after sunrise to three hours before sunset.

If earlier or later, the time required will be longer.

The Stops—Single Lens.—If the middle stop is used give twice the time of the table ; if the smallest stop is used give four times the time of the table.

The Stops—Double Lens.—If the third stop is used give twice the time of the table ; if the fourth stop is used give four times the time of the table. If the largest stop is used give one-half the time of the table.

TIME EXPOSURES IN THE OPEN AIR.

When the smallest stop 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.

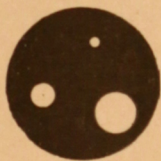
With Sunshine—The lens can hardly be opened and shut quick enough to avoid over-exposure.

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

With Heavy Clouds—From 2 to 3 seconds will be required.



The above is calculated for the same hours as mentioned on page 30 and for objects in the open air. For other hours and 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.

The Stops.—On opening the front of the camera a pivoted disk may be seen close behind the shutter, which in the single lens Kodets has three opening, and in the double lens four openings, of different sizes. This disk can be revolved so as to bring either opening in the center of the lens. These openings should be used as follows:



1. *The Largest*—For all ordinary instantaneous exposures when the sun shines.
2. *The Second*—For instantaneous exposures when the sun-light is unusually strong and there are no heavy shadows ; such as in views on the seashore or on the water or in tropical or semi-tropical climates : also for interiors, time exposures, (the time of exposure required is given in the table on pages 28 to 30).
3. *The Third*—The third opening may be used for interiors, (time exposures) *with the double lens.*
4. *The Smallest*—For cap exposures outdoors in cloudy weather. *Never for instantaneous exposures.* The time required for cap exposures on cloudy days with smallest stop will range from $\frac{1}{2}$ seconds to 3 seconds, according to the light. See page 31.

When setting the stop always see that the one to be used is *brought to the center of the lens* where it catches.

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

PART IV.

TAKING PICTURES AT NIGHT WITH THE FLASH LIGHT APPARATUS.

THE recent invention of the flash light apparatus makes easy the taking of photographs at night, with such a camera as the Kodet.

The requisites are :

The Kodet Camera,
The Flash Light Apparatus.

The flash light apparatus consists of a specially constructed alcohol lamp, having in front of it a little tray upon which is poured a teaspoonful of flash light powder (see table, page 36). A rubber tube attached to a blow-pipe in the flame of the lamp, conveys a blast of air from a bulb held in the hand and serves to project the flame of the lamp upon the powder, when it is desired to take a picture. As soon as the flame touches the powder it flashes up an intense white light, sufficiently strong to make a picture instantaneously.

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

Pictures are taken so quickly that groups of people around a dinner table or card table can be taken as clear and sharp as if they were in the open sunlight. This makes it easy to obtain souvenirs of many occasions which have hitherto been quite beyond the range of the art.

Photographing a Room.—The camera should be prepared for *cap exposure*, by placing it on some level support where it will take in the view of the room desired, as directed on pages 9 and 10 of this Manual.

Preparation of the Flash Light.—The light should *always* be placed two feet behind and two to three feet to one side of the Kodet. If placed in front or on a line with front of the camera, 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 lamp should be at the same height, or a little higher than the camera. The support

upon which the lamp is placed should not project far enough in front of it to cast a shadow in front of the camera. A piece of cardboard a foot square placed under the lamp will prevent any sparks from the flash doing damage. A piece of white cardboard set up behind the flash lamp will act as a reflector and increase the strength of the picture.

TAKING THE PICTURE.

Having the Kodet and lamp both in position, light the lamp and press the bulb to make sure that the flame can be driven to the center of the tray. Then lay the bulb down (to prevent accident) and pour upon the tray in front of the flame an even teaspoonful of the powder that accompanies the lamp; then uncap the camera, stand at arm's length and press the bulb. There will be a bright flash which will instantly impress the picture on the sensitive film. Then cap the camera and turn a fresh film into place or change plates.

NOTE: The amount of powder required to light a room varies with the distance of the object farthest from the camera, and the color of the walls and hangings. When more than one teaspoonful is to be used, all the powder should be poured in one pile on the tray.

TABLE.

For 10 *feet distance* and
light walls and hangings, use 1 even teaspoonful.

For 10 *feet distance* and
dark walls and hangings, use 2 even teaspoonfuls.

For 15 *feet distance* and
light walls and hangings, use 2 even teaspoonfuls.

For 15 *feet distance* and
dark walls and hangings, use 3 even teaspoonfuls.

For 25 *feet distance* and
light walls and hangings, use 3 even teaspoonfuls.

For 25 *feet distance* and
dark walls and hangings, use 4 even teaspoonfuls.

To make a Portrait.—Place the sitter in a chair partly facing the camera (which should be at the height of an ordinary table), and turn the face slightly toward the camera. The distance from the camera to the subject should be from 8 to 10 feet.

The lamp should be on the side of the camera away from the face, that is the sitter should not face the lamp. The lamp should be placed higher than the head of the sitter.

To make a Group.—Arrange the chairs in a semi-circle, facing the camera, so that each chair will be at exactly the same distance from the camera. Half of 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 large groups a medium light wall will be suitable.

The *finder* on top of the front board will aid the operator to compose 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 with ordinary lamp light, which may be left on while the picture is being made, provided none of the lights are placed so that they show in the finder.

For price of Eastman's Flash Light Apparatus, see price list, page 50.

PART V.

DEVELOPING.

Provide a dark room as described on page 18, and an *Eastman A,^a B, C, Developing and Printing outfit which contains :

- 1 Eastman's Candle Lamp,
- 4 Developing Trays,
- 1 Glass Beaker,
- 1 4 x 5 Printing Frame,
- 1 4 x 5 Glass for same,
- 1 Stirring Rod,
- $\frac{1}{2}$ Dozen Developing Powders,
- $\frac{1}{2}$ Pound Hyposulphite Soda,
- 2 Dozen Sheets 4 x 5 Solio Paper,
- 2 Oz. Bottle Solio Toning Solution,
- 1 Package of Bromide of Potassium,
- 1 Ounce Glycerine,

Provide a pair of shears, a pitcher of cold water (preferably, ice water), and a pail for slops, and set up the candle lamp as described in instructions.

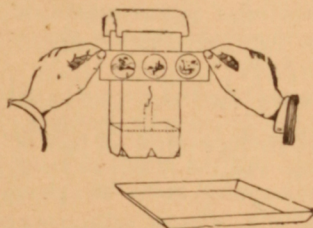
1. Unroll the film, and cut the exposures apart at each perforation.

*If a more elaborate outfit is desired Eastman's No. 4 outfit can be supplied for \$6.50.

2. Fill one of the trays nearly full of water, and put the exposures, into it one by one, face down; put them in edgewise, to avoid air bells, and immerse them fully.

Cover the tray with a bit of brown paper to keep out the light from the lamp.

3. Open one of the developer powders and put the contents (2 chemicals) into the beaker and fill it up to the ring with water. Stir until dissolved with the wooden stirring rod.



4. Take one of the exposures from the water and lay it, face up, in the second tray and pour upon it the developer. Rock it back and forth to prevent streaks and air bubbles; in about 1 minute the film will begin to darken

in spots, representing the lights of the picture, and in about 2 minutes the operator will be able to distinguish objects in the picture. The developer should be allowed to act 5 to 10 minutes. The progress of the development may be watched by holding the negative, from time to time, up to the lamp.

5. Transfer the developed film to the third tray and rinse two or three times with water, leaving it to soak while the next film is being developed.

Eight or ten negatives can be developed one after the other in one portion of developer, then it should be thrown away and a fresh portion mixed.

Only one negative should be developed at a time. until the operator becomes expert, then he can manage three or four in the tray at one time and the developer will answer for twenty-four films before being exhausted.

As each successive negative is developed it should be put, with the preceding negatives, in the washing tray and the water changed twice, to prevent the developer remaining in the films from staining them, and then placed in the fixing bath.

6. Put two tablespoonfuls of the Hypo-sulphite of Soda into the fourth tray,

fill two-thirds full of water, and stir until dissolved. This is called the fixing bath.

7. Immerse the negatives one by one in the fixing bath until they are entirely clear of white spots and are transparent instead of milky by transmitted light. This will require about 10 minutes.
8. The yellow shade can be removed from the lamp as soon as all the exposures have been developed and fixed.
9. Pour off the fixing solution into the slop bucket, and fill the tray with clear, cold water; repeat this at intervals of five minutes, five or six times, keeping the negatives in motion, or transferring them back and forth to tray No. 3, one by one, to ensure the water acting evenly upon them.

The fixing solution must only be used in tray No. 4. And the negatives, after fixing, must not be put in either No. 1 or No. 2 tray. Neither must any of the fixing solution be allowed to touch the films, through the agency of the fingers, or otherwise, until they

are ready to go into the fixing bath, otherwise they will be spotted or blackened, so as to be useless.

10. When the negatives are thoroughly washed, put one-half ounce of glycerine in one pint of water (four portions measured with the developer glass), stir well and soak the negatives in the solution for 5 minutes, then remove them and wipe off the surplus moisture with a soft, damp cloth, and pin them by the four corners, face up, to a flat surface to dry.

The glycerine solution may be used repeatedly.

The trays and beaker should now be rinsed out and set away to drain and dry.

When the negatives are dry, they are ready for printing, as described hereafter.

Defective Negatives. — By following closely the foregoing directions, the novice can make seventy-five per cent., or upwards, of good negatives. Sometimes, however, the directions are not followed, and failure results.

To forewarn is to forearm, and we therefore describe the common causes of failure.

Under-Exposure. — Caused by making snap shots indoors, or in the shade, or

when the light is weak, late in the day, by closing the lens too soon on time exposures, or the use of a small stop in the lens when making snap shots.

Under-exposure is evidenced by slowness in the appearance of the image in development, and the absence of detail in the shadows. In under-exposure the sky appears black, in development, and the rest of the negative remains white, with no detail.

Over-Exposure.—Caused by too much light.

Negative develops evenly, shadows almost as fast as high lights. No contrast, and no deep shadows. Over-exposure can be overcome in the development, by the addition of bromide of potassium to the developer. The printing and developing outfit contains a package of bromide, with directions for its use. The novice will soon learn to recognize over-exposure, and to apply the remedy.

After the bromide has been added to the developer, it should not be used for another negative, unless it is known to have been over-exposed.

Fog.—Caused by white light in the dark room, or holding the film too long in the lamp light. (Even the yellow light from the lamp will fog the film after a time.)

Fog causes the film to blacken all over soon after the developer is applied; and if the fog is considerable it obliterates the image entirely.

Over-Development.—Caused by leaving the negative too long in the developer.

In this case the negative is very strong and intense by transmitted light and requires a very long time to print. The remedy is obvious.

Under-Development.—Caused by removal from the developer too soon.

An under-developed negative differs from an under-exposed one, in that it is apt to be thin and full of detail, instead of harsh and lacking in detail. If the development is carried on as before directed, this defect is not liable to occur.

DEVELOPING GLASS PLATES.

These directions are written especially for developing and printing film negatives. When changes are necessary for glass plates they are so obvious as to hardly require explanation.

For instance, only one glass plate can be put in a tray at any one time for any of the operations, as they are liable to scratch one another. Again to dry a glass plate it requires no suggestion that it cannot be pinned up by the corners to dry, but should be stood up on edge.

The chemical operations are the same, but with plates the preliminary washing and the glycerine soaking solution may be omitted. The foregoing directions are therefore suitable for plates as well as films.

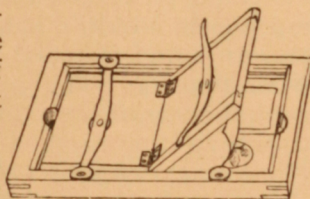
PART VI.

PRINTING ON EASTMAN'S SOLIO PAPER.

HAVING found that amateurs can easily handle our Solio Paper we have now substituted it for the Ferro-Prussiate Paper, which we formerly furnished with the A, B, C, outfits, as it makes far handsomer pictures than the blue prints.

Solio prints have a warm, brown tone and are usually mounted on card-board and highly burnished.

Method of Printing.—Open the printing frame of the A, B, C, outfit and lay the negative back down upon the glass (the back is the shiny side). Place upon this a piece of Solio Paper, face down. Replace the back of the frame and secure the springs. The back is hinged to permit of uncovering part of the print at a time to inspect it without destroying its



register with the negative. The operation of putting in the Sensitive Paper must be performed in a subdued light, that is to say in an ordinary room, as far as possible from any window. The paper not used must be kept covered in its envelope.

The printing frame, when filled as directed, is to be laid glass side up in the strongest light possible (sunlight preferred) until the light, passing through the negative into the Sensitive Paper, has impressed the image sufficiently upon it. The progress of the printing can be examined from time to time by removing the frame from the strong light, and opening one-half of the hinged back, keeping the other half fastened to hold the paper from shifting. The printing should be continued until the print is a little darker tint than the finished print should be. Place print without previous washing in the following combined toning and fixing bath:

2 oz. Eastman's Solio Toning Bath.

4 oz. *Cold* Water.

Pour the toning solution into one of the trays and immerse the prints one after

the other in the toning bath. Five or six prints can be toned together if they are kept in motion and not allowed to lie in contact. Turn the prints all face down and then face up and repeat this all the time they are toning. The prints will begin to change color almost immediately from reddish brown to reddish yellow, then brown to purple. The change will be gradual from one shade to another and the toning should be stopped when the print gets the shade desired.

Six ounces toning solution will tone two dozen prints ; after that a new solution should be made same as before.

When the proper shade has been attained in toning bath, the prints should be transferred for five minutes to the following salt solution to stop the toning:

Salt, 1 oz.

Water, 32 ozs.

Then transfer the prints to the washing tray and wash one hour in running water, or in 16 changes of water.

The prints are then ready for mounting or they can be laid out and dried between blotting paper.

DEVELOPING AND PRINTING.

The Eastman Kodak Company was the first to render commercially possible the separation of the developing and printing from the *picture taking*. The division of labor inaugurated by it has brought picture taking within the reach of thousands of persons throughout the world who could not otherwise practice the art.

Carrying the division of labor still further, in our own factory we employ trained operators in every branch of the work. Men who do nothing but develop, girls who do nothing but print, men who do nothing but tone, girls who do nothing but mount, girls who do nothing but "spot" prints, men who do nothing but burnish, etc., etc. As a consequence, each becomes skilled in his or her particular branch, and the result, under good superintendence, is good work—better work, in particular and in average, than can be done, except under these favorable conditions.

We use only the best materials—Solio Paper and *gold* bevel-edged mounts (no bronze), and our prices are as low as are consistent with the best work.

ENLARGING.

In this department we also excel. We are the largest manufacturers and users of Bromide Paper in the world, and our operators are skillful and experienced. Kodet negatives of all sizes lend themselves to enlargement with facility.

Any Kodet negative that will make a good contact print, will make a good enlargement of any size. A negative 4x5 inches can be enlarged perfectly by us, up to 30x40 inches; or, of course, to any smaller size. By judicious management a negative can often be made to give a better enlargement than contact print. This is owing to the opportunity enlarging affords for dodging and extra printing.

Kodet enlargements make attractive pictures for framing.

EASTMAN KODAK COMPANY,
Rochester, N. Y.

THE EASTMAN PHOTOGRAPHIC MATERIALS CO.,
Limited,
115 Oxford Street, London. 4 Place Vendome, Paris.

PRICE LIST.

DEVELOPING AND PRINTING.

Reloading Camera, developing and finishing negatives, and furnishing one silver print from each negative, mounted and burnished (48 finished photographs.) - \$10 00

NOTE.—Where there are any failures we finish enough duplicates from the good negatives to make up the full number.

Developing and reloading only, - - 6 00

Developing and printing without reloading, 7 00

PARTS OF SPOOLS.

Developing and printing only, each, - 15

Developing only, each, - - - 08

Printing only, each, - - - 10

On orders for less than one dozen, 25c. extra will be charged.

NOTE.—Any number of exposures made can be removed from the camera and the remaining film threaded up for future use.

APPARATUS.

No. 4 Kodet Roll Holder, (not loaded). - 10 00

No. 4 Kodet Plate Holders, each, - 1 00

Extra Reels, each, - - - 10

In ordering Roll Holders, Plate Holders or Reels always state Camera number and style, and whether regular or folding.

Cap for time exposures, - - - 25

Printing frames, special, 4 x 5, each. - 25

Glass for same, each, - - - 05

Flash light apparatus, - - - 1 50

" Kodak " Ruby lanterns for Dark Room
each, - - - 1 50

PRICE LIST, CONTINUED.

Eastman's Orange Candle Lamps, each, -	\$ 25
Staff Tripod, - - - - -	1 50
No. 1 Kodak Tripod, folding lugs, -	5 00
No. 2 Kodak Tripod, solid lugs, - -	4 00

KODET SUPPLIES, CHEMICALS, ETC.

Spools of Transparent Film, 48 exposures, -	3 00
Eastman Dry Plates, 4 x 5, per doz. -	65
Developing Outfit for 48 negatives, -	4 38
Printing Outfit for 48 prints, -	4 53
Combined Printing and Developing Outfits, A, B, C, Developing and Printing Outfits including Solio Paper and Toning Solution sufficient for 24 prints, 4 x 5, -	6 50 1 50
Eastman's Solio Paper, 4 x 5, per doz., -	25
" " " " gross, -	2 00
Solio Seconds, 4 x 5 (trimmed), per 100, -	1 00
Combined Toning and Fixing Solution for Solio Paper, per 8 oz. bottle, -	50
Eastman's Eikonogen Developer Powders, per doz., -	50
Mounts, maroon, gold bevel edge, per doz.,	15
Mounts, primrose, gold bevel edge, per doz.,	18
Hyposulphite soda pulverized, per lb., -	10
Bromide potassium, per oz. bottle, -	15

ENLARGEMENTS.

11 x 14 bromide enlargements from Kodak		
negative, mounted on card, - - -		1 25
14 x 17 bromide enlargements, from Kodak		
negative, mounted on card, - - -		1 50

The Improved Staff Tripod.



A very convenient Tripod for 4 x 5 cameras or smaller. It does not fold, but closes together, forming a staff or cane.

Strong,

Light, . .

Convenient . .

Made of best seasoned maple, with accurately milled brass fittings.

Length,

48 inches.

Weight,

17 ounces.

Price of Improved Staff Tripods, \$1.50.

Illustrated Tripod Catalogue free.

§ Folding Tripods
\$2.00 to \$5.00.
§ Ten styles and sizes. §

§ EASTMAN KODAK COMPANY,
Rochester, N. Y. §