THE KODAK CAMERA.

THIS wonderful little Camera has conquered the world. Those who are at all interested in Photography who have not made themselves the owner of one of these remarkable instruments, have missed more real pleasure than they could ever imagine possible to get out of photography. It is the only Camera that is always ready and never a burden. It is exactly what we claim for it, “a photographic note book,” and no larger Camera can ever take its place in its especial field.

“You Press the Button, We do the Rest.”

It affords the simplest and easiest means for making Photographic, and can be used by novices as well as experts.

Send for a Kodak Primer.

THE EASTMAN DRY PLATE FILM CO.
No. 115 Oxford St., London.
Rochester, New York.
KODAK
Trade Mark, 1888.

EASTMAN KODAK COMPANY,
Rochester, N. Y.

Manufacturers of
Kodaks,
Brownie Cameras,
Cartridge Roll Holders,
Eastman’s Plate Cameras,
Eastman’s Solio Paper,
Eastman’s Dekko Paper,
Eastman’s Sepia Paper,
Eastman’s Ferro-Prussiate Paper,
Eastman’s Royal Bromide Paper,
Eastman’s Standard Bromide Paper,
Eastman’s Enameled Bromide Paper,
Eastman’s Matte-Enamel Bromide Paper,
Eastman’s Platino Bromide Paper,
Eastman’s Platinum,
Eastman’s W. D. Platinum,
Eastman’s Transparent Film,
Eastman’s Dry Plates,
Eastman’s Transparency Plates,
Tripods and
Other Specialties.

Sept., 1902.
PICTURE TAKING
WITH THE
BROWNIE CAMERA
No. 2.

Price Ten Cents.

EASTMAN KODAK CO.
ROCHESTER, N. Y.
BEFORE LOADING.

Before taking any pictures with the No. 2 Brownie Camera read the following instructions carefully, and make yourself perfectly familiar with the instrument, taking especial care to learn the construction of the shutter. Work it for both time and instantaneous exposures several times before threading up the film.

The first 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 fraction of a second when it comes through the lens can destroy the film as quickly as it makes the picture. Until it has been developed and fixed, the film must never be exposed to white light (this includes gas light, lamp light, etc.), or it will be ruined. Throughout all the operations of loading and unloading, therefore, be extremely careful to keep the black paper wound tightly around the film to prevent the admission of light.
CONTENTS.

PART I.—Loading.
PART II.—Making the Exposures.
PART III.—Removing the Film.
PART IV.—Developing.
PART V.—Printing on Solio Paper.
PART I.

Loading the Brownie Camera.

The film for the Brownie Camera is put up in light-tight cartridges, and the camera can, therefore, be loaded in daylight. This operation should, however, be performed in a subdued light, not in the glare of bright sunlight.

To load:
1. Take a position at a table as far as possible from any window, place the camera on the table before you and pull out on the winding key as in Fig. I.
2. Now open back of camera by pushing to left on metal slide lock as shown in Fig. II,
then lift up projecting end of slide-lock and open door as in Fig. III.

**Fig. II.**

**Fig. III.**

Eastman Kodak Company: Picture Taking with the Brownie #2
3. Grasp bottom of camera and hold as in Fig. IV and the Roll Holder will slide out freely.

FIG. IV.

4. Examine this roll holder carefully and it will be seen that at each forward corner there is a recess which will just hold a spool of film. In the recess on the right side will be seen an empty spool which is to be used as the reel. In each recess will be found a hinged brass clip, for making the films run true and to prevent the black paper from unwinding. At the back end of the roll holder is a hinged pasteboard flap with a hole in the lower right hand corner. Care must be taken in loading to see that this flap comes behind the film.

5. Now insert spool in the end opposite the winding end. (The winding end may always be distinguished by the small hole in the side of roll
holder.) Snap it into brass tension clip and swing back into place.

Important.

Be sure and get the top of spool at top of roll holder (each spool is marked on the end) when inserting, otherwise your film will come on the wrong side of black paper when reeled off and total failure will result. You can readily tell the top side of roll holder, as it contains the opening in the winding end through which the key is inserted in the reel.

FIG. V.

6. Now break the gummed slip that holds down the end of black paper and pass the black paper across opening in the back of the roll holder (Fig. V) and under the pasteboard flap; take the empty reel from its recess and thread the black paper
through the slit in this reel as shown in Fig. VI, being extremely careful to have the paper draw straight and true, and give the spool two or three forward turns (to the left from the key end) and re-insert in the hinged clip and swing back into place.

**Fig. VI.**

**Caution.**

If you turn off too much of the black paper, before the camera is closed, the film will be uncovered and ruined.

7. The camera is now to be closed, reversing the operations shown in Figs. III and IV, pages 6 and 7. In re-inserting the roll holder in the outside box remember that the slotted end of winding reel which shows through round hole in side of roll
holder, must be inserted so as to come opposite keyhole in outside box.

**Fig. VII.**

8. Press down on, and at the same time turn the winding key until it fits into position, the web at lower end of key fitting into slot in spool end. This is a reversal of operation shown in Fig. I, page 5.

9. Turn the key to the left (Fig. VII), until the number 1 appears before the little red window in back of camera. **Fig. VIII.**

**Fig. VIII.**

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

Making the Exposures.

SECTION 1.—INSTANTANEOUS EXPOSURES.

("SNAP SHOTS.")

The shutter of the Brownie Camera is always set and is operated by pushing the lever alternately to right or left with the thumb.

If the lever stands at the right hand side of slot simply push it to the left and vice-versa.

If the spring should be pushed the wrong way, the shutter would simply remain unmoved, and no "click" would be heard, thus indicating that it should be pushed in the opposite direction.

To take instantaneous pictures the object 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.

![Diagram of Brownie Camera]

**Fig. I.**

11
Use the Largest Stop.

Snap shots should only be made when the largest stop is before the lens. If a smaller stop be used, the light will be so much reduced that it will not sufficiently impress the image on the film and failure will result. In making snap shots both of the slides shown in Fig. II, page 16, should be pushed down to the limit of motion.

Fig. II.

Slide A controls the time and instantaneous exposures. For snap shots this slide must be down. Slide B controls the stops, of which there are three. When it is clear down the largest stop is in place. This is the one to use for all snap shots except where the sunlight is unusually strong, and there are no heavy shadows, such as views on the water or in tropical or semi-tropical climates,
when the middle stop may be used. The smallest stop must never be used for snap shots.

Aim the camera at the object to be photographed and locate the image in the finder. There are two finders, one for vertical and the other for horizontal exposures.

**FIG. III.**

EFFECT PRODUCED BY TILTING THE CAMERA.
For a vertical exposure the camera should be held as shown in Fig. I, page 11.

For a horizontal exposure the camera should be held as shown in Fig. II, page 12.

Any object that does not show in the finder will not show in the picture.

All being in readiness

**Hold the camera steady and level**

as shown in Fig. I or II and press the shutter lever to one side with the thumb of the right hand.

*This makes the exposure.*

**Turn a new film into position.** Turn the key slowly to the left until the next number appears before the window.

Repeat the foregoing operations for each picture.

If the operator attempts to photograph a tall building, while standing near it, by pointing the camera upward (thinking thereby to centre it) the result will be similar to Fig. III.
SECTION 2.
Time Exposures Indoors.

PUT THE CAMERA IN POSITION.

Fig. I. Diagram showing position for camera.

Use some firm support, like a chair or table. Set in such position that the finder will embrace the view desired.

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

Pull out the time slide (A) on left hand side of camera front as shown in Fig. II. When this slide is pulled out the shutter strikes it as it passes the lens, stopping half way across with the opening opposite the lens,
All being in readiness steady the camera with one hand and push the lever to open the shutter; give the proper time (using a watch if more than two seconds) and press the lever in the opposite direction to close the shutter.

Turn a new film into position as described before. (See page 14.)

For interiors the following table is a good guide:

**Time Needed for Interior Exposures.**

This table is for the largest stop. When the second stop is used add one-half more time; when the smallest stop is used give four times the time of table.

White walls and more than one window:

- bright sun outside, 2 seconds;
- hazy sun, 5 seconds;
- cloudy bright, 10 seconds;
- cloudy dull, 20 seconds.
White walls and only one window:
  bright sun outside, 3 seconds;
hazy sun, 8 seconds;
cloudy bright, 15 seconds;
cloudy dull, 30 seconds.

Medium colored walls and hangings, and more than one window:
  bright sun outside, 4 seconds;
hazy sun, 10 seconds;
cloudy bright, 20 seconds;
cloudy dull, 40 seconds.

Medium colored walls and hangings and only one window:
  bright sun outside, 6 seconds;
hazy sun, 15 seconds;
cloudy bright, 30 seconds;
cloudy dull, 60 seconds.

Dark colored walls and hangings, and more than one window:
  bright sun outside, 10 seconds;
hazy sun, 20 seconds;
cloudy bright, 40 seconds;
cloudy dull, 1 minute, 20 seconds.

Dark colored walls and hangings, and only one window:
  bright sun outside, 20 seconds;
hazy sun, 40 seconds;
cloudy bright, 1 minute, 20 seconds;
cloudy dull, 2 minutes, 40 seconds.

The foregoing is calculated for rooms whose windows get the direct light from the sky and for hours from 3 hours after sunrise until 3 hours before sunset.
If earlier or later the time required will be longer.

**To Make a Portrait.**

Place the sitter in a chair partly facing the light, and turn the face slightly toward the camera (which should be at the height of an ordinary table). For a bust picture the camera should be 5 feet from the figure; for a three-quarter figure 7 feet, and for a full figure 10 feet. The background should form a contrast with the sitter.

In making portraits where the subject is less than 8 feet from the camera, use the smallest stop and time accordingly. (See page 16.) As a general rule use the middle stop for portraits.

**Kodak Portrait Attachment.**

By the use of a Kodak Portrait Attachment this instrument may be used with a focus of only 3½ feet, thus enabling the amateur to obtain large head and shoulder pictures equaling in size those of an ordinary mantello photograph.

The attachment is simply an extra lens slipped on over the regular lens and in no way affects the operation of the camera except to change the focus. Price, 50 cents. Be sure and specify what camera the attachment is to be used with when ordering.
Time Exposures in the Open Air.

When the smallest stop is before 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 shutter can hardly be opened and closed quickly enough to avoid over exposure.

With light clouds—From ½ to 1 second will be sufficient.

With heavy clouds—From 2 to 5 seconds will be required.

The above is calculated for hours from 3 hours after sunrise until 3 hours before sunset and for objects in the open air. For other hours, or for objects in the shadow, under porches or under trees, no accurate directions can be given; experience only can teach the proper exposure to give.

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

The stops should be used as follows:

1. THE LARGEST—For all ordinary instantaneous exposures.

2. THE MIDDLE—For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows; such as in views on the sea shore, in extremely high, dry climates or on the water or in tropical or semi-tropical climates; also for interior time exposures, the time for which is given in the table on pages 16 and 17.

3. THE SMALLEST—For time exposures out doors in cloudy weather. Not for instantaneous exposures. The time required for time exposures on cloudy days with smallest stop will range from ½ second to 5 seconds according to the light. The smaller the stop the sharper the picture.

When setting the stops always see that the one to be used is brought to the centre of the lens where it catches.

If you use the smallest stop for instantaneous exposures absolute failure will result.
SECTION 3.

Flash Light Pictures.

By the introduction of Eastman’s Flash Sheets, picture taking at night has been wonderfully simplified. A package of flash sheets, a piece of card-board, a pin and a match complete the list of essential extras.

The cost then is:

One package Eastman’s Flash Sheets, 25c.

With flash sheets no lamp is necessary, there is a minimum of smoke and they are far safer than any of the self-burning flash powders, 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 the direct line of view which cannot be darkened sufficiently to prevent the blurring of the picture.

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

Preparation for the Flash.

The camera should be prepared for time exposure, as directed on page 15 of this Manual, (except...
that the largest stop 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 picture.

The Flash Sheet should always be placed two feet behind and two to three feet to one side of the camera. If placed in front or on a line with front of 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 light 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 camera. An extra piece of cardboard a foot square placed under the Flash Sheet will prevent any sparks from the flash doing damage.

**Taking the Picture.**

Having the camera and the Flash Sheet both in position and all being in readiness, open the camera shutter, stand at arm's length and touch a match to the lower corner of the Flash Sheets. There will be a bright flash which will impress
the picture on the sensitive film. Then push the lever to close the shutter and turn a fresh film into place with the key, ready for another picture.

The Flash Sheets.

The number of sheets 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 two or more sheets are to be used they should be pinned to the card-board, one above the other, the corners slightly overlapping.

Table.

For 10 feet distance and light walls and hangings use 1 sheet.
For 10 feet distance and dark walls and hangings use 2 sheets.
For 15 feet distance and light walls and hangings use 2 sheets.
For 15 feet distance and dark walls and hangings use 3 sheets.
For 25 feet distance and light walls and hangings use 3 sheets.
For 25 feet distance and dark walls and hangings use 4 sheets.

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. For a three quarter picture this will be 7 feet, and for a full figure, 10 feet.
When using the portrait attachment for flash lights the subject should be only 3½ feet from the camera.

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

**To Make a Group.**—Arrange the chairs in the form of an arc, facing the camera, so that each chair will be exactly the same distance from the camera. Half the persons composing the group should be seated and the rest should stand behind the chairs. If the group is large any number of chairs may be used, but none of the subjects should be seated on the floor, as sometimes seen in large pictures, because the perspective would be too violent.

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

The *finder* on the camera will aid the operator in composing the groups so as to get the best effects. In order to make the image visible in the finder the room will have to be well lighted.
with ordinary lamplight 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.

Eastman's 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's Flash Cartridges, Flash Lamps and Flash Powder.**

Eastman's Flash Cartridges or Eastman's Flash Lamp and Powder may be substituted for the sheets if desired. We recommend the sheets, however, as more convenient, safer, cheaper and capable of producing the best results. The powder or cartridges are only superior where absolutely *instantaneous* work is essential.
PART III.

Removing the Film.

No dark room is required in changing the spools in the Brownie Camera.

The operation can be performed in the open air, but to avoid all liability of fogging the edges of the film it had best be performed in a subdued light.

1. When the last film has been exposed give the key about a dozen extra turns. This covers the film with black paper again.

2. Provide an extra spool of film to fit this camera and taking a position at a table as far as possible from any window.

FIG. I.

26
3. Remove the back and the roll holder as shown on pages 5 to 7.
4. Swing out the brass clip containing reel of exposed film (Fig. I.) and immediately stick down the loose end of black paper with the gummed slip which will be found on empty spool. Now remove exposed cartridge from clip and wrap up in paper to prevent all possibility of injury by light.
5. Now take the empty spool from the recess on the left side of camera and transfer to the winding side, bringing the slotted end, into which key is to fit, opposite the keyhole.

The roll of exposures can now be mailed to us for finishing, or you can do the developing and printing yourself.

**IN GENERAL.**

We recommend everyone to do their own developing. With our A B C Outfit it is very simple and inexpensive, no regular dark room is required, and the operator can obtain proofs from the negatives as soon as they are dry.

If, however, the camerist prefers to have us “do the rest,” he can send his exposures to us by mail.

We have larger and better facilities for developing and printing and more skilled operators than anyone else, and it is to our interest to get the best results from every negative.
PART IV.

Developing.

Provide an Eastman's A B C Developing and Printing Outfit.

THE OUTFIT CONTAINS:

1 Eastman Improved Candle Lamp, - $ .25
4 Developing Trays, - - - - .40
1 4-oz. Graduate, - - - - .10
1 4 x 5 Printing Frame, - - - - .25
1 4 x 5 Glass for same, - - - - .05
1 Stirring Rod, - - - - .05
½ doz. Developer Powders, - - - - .25
½ lb. Hyposulphite Soda, - - - - .07
2 doz. Sheets 4 x 5 Solio Paper, - - - .25
1 2-oz. Bottle Solio Toning Solution, - - .15
1 Pkg. Bromide Potassium, - - - - .10
1 Ounce Glycerine, - - - - .05
Instruction Book, - - - - .10

$2.07

*Price, complete, neatly packed, $1.50.

*This outfit cannot be shipped by mail.

Also provide a pair of shears, a pitcher of cold water (preferably ice water), a pail for slops, and a dark room having a shelf or table.

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.

Having provided such a room or closet, where, when the door is closed, no ray of light can be seen:
1. 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.
   1. Fill one of the trays nearly full of water (first tray).
   2. Open one of the developer powders, then put the contents (two chemicals) into graduate and fill it up to top ring with cold water. Stir until dissolved with the wooden stirring rod and pour into second tray.
   3. To develop film unroll the film and detach the entire strip from the black paper.
   4. Pass the film through the tray of clean, cold water as shown in the cut, holding one end in

20
each hand. Pass through the water several times, that there may be no bubbles remaining on the film. When it is thoroughly wet, with no air bubbles, it is ready for development.

5. Now pass the film through the developer in the same manner as described for wetting it and shown in cut. Keep it constantly in motion, and in about one minute the highlights will begin to darken and you will readily be able to distinguish the unexposed sections between the negatives and in about two minutes will be able to distinguish objects in the picture. If the negatives have all had the same exposure, development can be completed before cutting the negatives apart; if, however, one or more negatives flash up more quickly than the others they should be cut out of the strip with a pair of shears and transferred back to the tray of clear water, where they may remain until the balance of strip has been developed and can then be developed one at a time. Be sure that any nega-
atives put back in the tray of clear water are kept fully immersed.

Keep the strip which is being developed constantly in motion, allowing the developer to act 5 to 10 minutes. The progress of development may be watched by holding the negatives up to the lamp from time to time.

6. After completing development cut the negatives apart with a pair of shears, transfer to the third tray and rinse two or three times with clear, cold water.

Another Way.

We advise the foregoing method of development. If desired, however, the negatives may be cut apart before development is commenced, by the following method.

a. Unroll the film and cut the exposures apart, as shown in Fig. I.

In unrolling the film preparatory to development, care must be taken that the end be not allowed to roll up over the paper. The exposures
should be cut apart with the *paper on top*. Do not let the fingers touch the face of the film. (The face is the dull side.)

Fig. II shows a cartridge unrolled with the film on top. To correct this, simply turn back the film as indicated by the dotted lines, thus bringing the film under the paper.

b. Put the exposures into the first tray 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.

c. Take one of the exposures from the water and immerse it, face *down*, in the tray of developer (second tray). Rock it back and forth to prevent streaks and air bubbles; in about one minute the film will begin to darken in spots, representing the lights of the picture and in about two minutes the operator will be able to distinguish objects in the picture.

d. 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.

Note—A dozen negatives can be developed one after the other in one portion of the 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.

*From this stage the treatment of negatives is the same whether they have been developed singly or in the strip.*

7. Put two tablespoonfuls of Hyposulphite of Soda into the fourth tray, fill two-thirds full of cold water, and stir until dissolved. This is called the fixing bath.

8. Immerse the negatives one by one in the fixing bath and leave until they are entirely clear of white spots and are transparent instead of milky by transmitted light, moving them about occasionally to insure even fixing. This will require about ten minutes.
9. The yellow shade can be removed from the lamp as soon as all the exposures have been fixed. 
10. 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 insure 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 trays. 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.

11. When the negatives are thoroughly washed, put one-half ounce of glycerine into one pint of water (four portions measured with the graduate), 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 in Part V.
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 failures result.

To forewarn the Camerist is to forearm him 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, or by closing the lens too soon on time exposure.

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, while 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 includes 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 lamplight. (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 underexposed 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.

**Spots, Streaks, Etc.**

Air bells on the film in the developer or fixing bath are liable to cause spots; and streaks are caused by allowing the film to remain uncovered in part by the various solutions while in them.

White, milky spots on Transparent Film are evidence that the negative has not been properly fixed and the negative should be put back into fixing bath and then rewashed.

**Always Develop Film Face Down.**
PART V.

Printing on Eastman’s Solio Paper.

Solio Paper which we furnish with our outfits gives prints having beautiful warm, brown tones which 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

*The paper furnished with the outfit is 4 x 5 inches. For economy’s sake this should be cut into two pieces 2½ x 4 inches, before printing.
progress of the printing can be examined from time to time by removing the frame from the strong light, and opening one part of the hinged back, keeping the other part 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.

If desired, two prints can be made at one time by fastening the corners of two negatives to the glass of the printing frame, by means of the gum stickers furnished with the outfit. The Solio paper is then put into the frame as before described but without cutting. The negatives being secured in position the prints may be examined one at a time without destroying their register with the negatives. For printing in this manner the negatives should be of equal density but if one prints faster than the other it can be stopped by inserting a piece of black or yellow paper between the print and negative. When prints are made in this way they are of course not cut apart until after they have been toned.

Place prints without previous washing in the following combined toning and fixing bath.

2 oz. Eastman’s Solio Toning Solution,
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 reaches the shade desired.

Six ounces of the diluted toning solution will tone four dozen prints, $3\frac{1}{4} \times 3\frac{1}{4}$; after that a new solution should be made the same as before.

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

Salt, 1 oz. Water, 32 oz.

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 papers.

EASTMAN KODAK CO.,
Rochester, N. Y.
DON'T.

Don't develop film face up.

Don't forget that the film must not be exposed to white light (daylight, lamplight, etc.,) for an instant until after it has been developed and fixed.

Don't try to make snap shots indoors, on shady verandas or on dark days. You will only waste your film.

Don't fail to read this Manual from cover to cover carefully. It will save you many mistakes.

Don't make snap shots with the small stop before the lens.

Don't leave the camera lying in the sun.

Don't lay the trouble to your chemicals or outfit if you do not get six perfect pictures from the first cartridge. Follow instructions carefully and you are bound to succeed.

Don't try every new developer your friends recommend. Master one before experimenting with others.

Don't put away your trays without washing.

Don't let hypo get out of its place—the fixing tray.
PRICE LIST.

No. 2 Brownie Camera, capacity, 6 exposures, 2½ x 3¾, not loaded, $2.00
Light-Proof Film Cartridge, 6 exposures, 2¼ x 3¾, 20
Box 4 Light-Proof Film Cartridges, 6 exposures, 80
A B C Developing and Printing Outfit, including Solio Paper and Toning Solution for 48 prints, 2¼ x 3¾ (see page 28), 1.50
Solio Paper, 2¼ x 3¾, per package, 2 dozen, 20
Eastman's W. D. Platinum, 2¼ x 3¾, per doz., 15
Eastman's Sepia Paper, 2 doz., 15
Combined Toning and Fixing Solution for Solio, per 8 oz. bottle, 50
Toning and Fixing Solution can be shipped by mail in 4 ounce bottles as follows: 4 ounces Toning Solution, (20c. extra postpaid,) 30
Eastman's Dekko Paper, per dozen, 2¼ x 3¾, 15
Eastman's Dekko Developer Powders, per dozen, 50
Do., per ½ dozen, 25
Eastman's Hydrochinon Developer Powders, per dozen, 50
Do., per ½ dozen, 25

41
Eastman’s Pyro Developer Powders, per dozen, $50
Do., per ½ dozen, 25
Hyposulphite Soda, pulverized, per lb., 10
Bromide Potassium, per ounce bottle, 15
Eastman’s Flash Powder, per bottle, 60
Flash Lamp, for using above, 1.25
Eastman’s Flash Sheets, per package ½ dozen, 25
Eastman’s No. 1 Flash Cartridges, per package, ½ dozen, 60
Eastman’s No. 2 Flash Cartridges, per package, ½ dozen, 40
Eastman’s No. 3 Flash Cartridges, per package, ½ dozen, 25
Eastman’s Indexed Negative Album, to hold 100 2⅞ x 3⅞ film negatives, 75
Mounts, Queen’s gray or white, embossed, per dozen, 10
Do., per 100, 75
Mounts, white enameled center with a Queen’s gray embossed border, per dozen, 15
Do., per 100, 1.05
Mounts, Scotch Gray, Ivy Green, Carbon Black or Royal Brown, beveled edges, per dozen, 10
Do., per 100, 60
Kodak Album 102, to hold 80 pictures, 2¾ x 3¾, Gray cover and leaves, 1.00
Kodak Fush Pins (for pinning up film negatives while drying), per box of 12, $25
No 2 Brownie Camera Carrying Case, 75
Eastman's Improved Orange Candle Lamp. Can be carried in the pocket, gives a non-actinic light of great volume. Safe and convenient, 25
Eastman's Kodak Dark Room Lamp, No. 1, one inch wick, 1.50
Eastman’s Kodak Dark Room Lamp, No. 2, 5/8 inch wick, 1.00
Developing, printing and mounting, per roll, 21/4 x 31/4, 0.50
Developing, printing and mounting, each, 0.09
Developing only, each, 0.04
Printing and mounting only, each, 0.05
On orders for developing and printing less than one-half dozen, 25 cents extra will be charged.
“Picture Taking and Picture Making,” a practical book for the amateur. So simple as to be clear to the beginner, yet full of information to the advanced amateur, 120 pages, cardboard covers, 0.50
Do,, cloth bound, 1.00
11 x 14 Bromide Enlargements, mounted on card, 1.25
14 x 17 Bromide Enlargements, mounted on card, 1.50
Kodak Portrait Attachment for use with No. 2 Brownie Camera, $50
Eastman’s Film Developing Clips, for handling film in strip development, 3¼ inch, per pair, 25
Eastman’s Photo Paste, per 3 oz. tube, 15
Do., per 5 oz. tube, 25

TERMS.

The prices in this Manual are strictly net, except to regular dealers who carry our goods in stock.

For the convenience of our customers we recommend that they make their purchases from a dealer in photographic goods as by so doing they can save both time and express charges.

EASTMAN KODAK CO.
Rochester, N. Y.
A Complete Course in Amateur Photography Taught by Mail.

The cost of the entire course, including cloth-bound copy of "Picture Taking and Picture Making," is one dollar—the exact price of the book.

Ask your dealer for information or write us for application blank.

EASTMAN KODAK CO.,
Rochester, N. Y.