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KODAK,
Trade Mark, 1888.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

MANUFACTURERS OF

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

July, 1901.

THE

PANORAM-KODAK No. 4

INSTRUCTION BOOK.

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

CONTENTS.

PART I.

LOADING THE CAMERA.

The Film

The film for the Panoram-Kodak is furnished in light-proof rolls and the instrument can, therefore, be loaded in daylight. The operation should, however, be performed in a subdued light, not in the glare of bright sunlight.

NOTE: The No. 4 Panoram-Kodak uses the regular No. 4 Bulls-Ey cartridges.

TO LOAD.

I. Take a position at a table as far as possible from any window, place the Kodak on the table and pull up the pins at either end of top, as in Fig. I. This unlocks the Kodak so that it can be opened for loading.

Fig. I.

Fig. II.

II. Open the Kodak by pulling apart, as shown in Fig. II. If the lock pins are pulled out to the limit of motion the Kodak will open easily and will require no forcing.

III. At each end of the camera will be seen a recess for holding the film spools. As sent out from the factory there is an empty spool at the winding end of the camera, and the fresh cartridge is to be inserted at the opposite end. To accomplish this push catch with thumb and raise up on the flat tension plate, as shown in Fig. III.

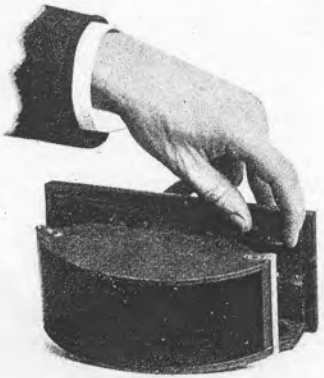


Fig. III.

IV. Now insert the cartridge as shown in Fig. IV., *being sure that the top of spool comes at top of camera*, (each spool is marked on the end) and snap tension plate down into place, centering the pins in axis at ends of spool in so doing.

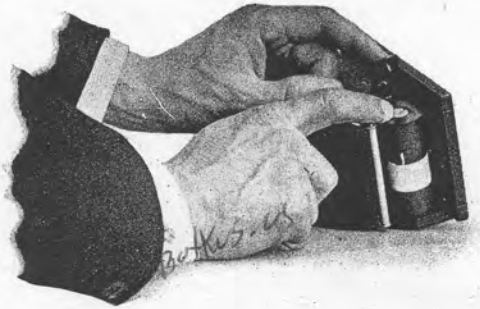


Fig. IV.

V. Now break the gummed slip that holds down the
of black paper ; carry the end of paper across the first alumi
roller and following the curve of back of film holder (this is
focal plane) carry the paper over the second aluminum ro
snap back the tension plate which is parallel to reel and th
film into slit in reel, (See Fig. V.) and give one or two s

Fig. V.

turns to the left on key to bind the paper firmly onto reel. (Fig. VI.) Push tension plate into position again. It is important that the reel be turned far enough to make sure that the paper will not become detached *but no farther.* If the key is turned too far before the Kodak is closed, the black paper will be wound off and the film exposed.

Fig. VI.

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

Fig. VII.

VI. Replace the back on camera (reversing operation shown in Figs. I. and II.)

From the time the gummed slip is cut on cartridge until the paper has been threaded up ready for use care must be taken not to let the black paper loosen on the spool, otherwise light will be admitted and the film ruined.

VII. Having replaced the back on Kodak turn to the left on key until the letter "A" appears before the window in back of Kodak. Fig. VIII.

Fig. VIII.

The film is now in position for making the first exposure.

PART II.

MAKING THE EXPOSURES.

The Panoram-Kodak being suitable for general views ou doors is equipped only for instantaneous work, the very na of the instrument making timed exposures out of the quest

The sun should always be behind the back or over shoulder of the operator. This is of even more importa than with the ordinary camera, because as the lens mo through such a large field it is next to impossible to shade taking pictures toward the light. Do not expect to take pictu of nearby objects in which there are straight lines, with Panoram-Kodak.

I. Set the shutter by turning lever which lies between finder and the level so that it points in the opposite directio that in which the lens points. Unless the shutter has already been set this will simply mean that the lever is to be swung to the opposite side of semi-circle (Fig. I.) and the flap which covers lens may be left closed until shutter is set. It will be noted that in the plates at each end of the semi-circle through which the shutter lever swings are two catches. The first of these catches (*i. e.*, the ones nearest the

Fig. I.

spirit level) are for the slow speed of shutter and are to be used for all ordinary exposures. For views on the seashore or in tropical or semi-tropical countries when the light is extremely bright use the high speed by turning lever to the second catch and thus increasing the tension on shutter.

II. Lift up the nickel shield on finder and drop the flap in front of lens so that they will be in position shown in Fig. II. Be sure and drop flap far enough so that it will not cut off light from lens.

Fig. II.

III. The Kodak may be placed on some level support as in Fig. II. or held on the arm as shown in Fig. III. but in either event care must be taken to see that it is *held level* and steady. Try operating the shutter in this way a few times *without any film in the camera*, before making your first exposure.

The V shape lines diverging from the base of camera show the scope of view that will be included.

The finder shows the amount of foreground and sky line, but does not, of course, show the full length of the picture that is to

be, as no stationary lens could accomplish this. It will prove of material assistance, however, in giving a general idea of the picture to be taken.

The Kodak should be leveled as indicated by the circular spirit level, bringing the bubble to the center.

All being in readiness

HOLD THE KODAK STEADY,
HOLD IT LEVEL

and press the button at right of finder as shown in Fig. II. or as in Fig. III.

This makes the exposure.

IV. Wind a new film into position by turning to the left on key until the letter B appears before the window in back of Kodak. Repeat the foregoing operations for each exposure.

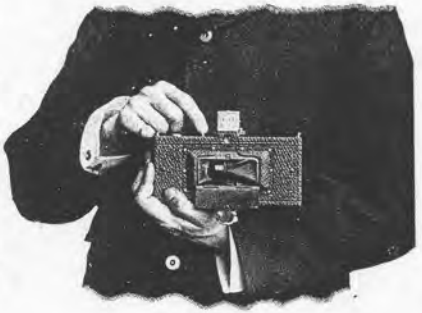


Fig. III.

VERTICAL PANORAM-PICTURES.

Not often, but nevertheless occasionally it is desirable to make a vertical picture with the Panoram-Kodak. A high waterfall, a narrow ravine or a mountain peak will now and then offer a subject for this unique treatment. The field for artistic work in this direction is a new one, and well worth cultivating. A little practice and experiment will lead to the most charming results.

FOR TAKING GROUPS.

The Panoram-Kodak has no equal for taking outdoor groups. The scope of view is so wide that a great number of people can be included with all in the "front row." The subjects should stand in a semi-circle with each the same distance from the camera (not less than twenty feet) and care should be taken not to have any horizontal straight lines in either the fore or background. There is nothing less artistic than a straight board fence or the clapboarded side of a house. Such backgrounds are undesirable with any camera but are to be especially avoided with the Panoram. An easy way to arrange the group is for the operator to hold the end of a string of proper length while an assistant describes the arc of a circle with the other end, placing the subjects on the imaginary curved line. This arrangement, it will be seen, brings each individual at the same distance from the Kodak and thus insures their being of the proper relative size in the photograph. Of course there is no objection to having the "sitters" banked one above the other where an exceedingly large group makes this necessary, but for the best results the semi-circular arrangement should always be followed.

PART III.

REMOVING THE FILM.

No dark room is required in changing the spools in the Panoram-Kodak. The operation should, however, be performed in a subdued light.

I. Having made the last exposure (No. "B" or "E," according to whether the cartridge is for two or for five exposures), give the key about 20 half turns.

II. Remove the back as before described, page 5.

III. Holding the paper taut, so as to wind tightly, turn the key until the paper is all on the reel.

IV. Moisten the gummed slip which will be found at end of roll and fasten down the black paper.

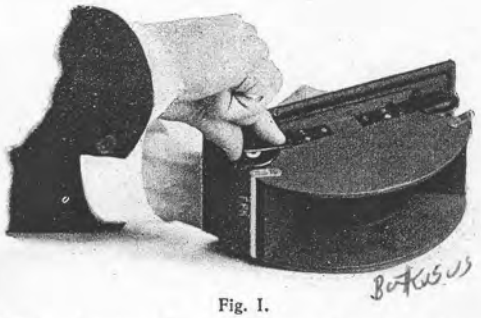


Fig. I.

V. Lift up tension plate as shown in Fig. I. and remove the cartridge of exposed film from it and wrap up immediately to prevent the possibility of light being admitted.

VI. Now throw back the tension plate from empty spool at opposite end of Kodak and remove spool to winding side, fitting the key web into slotted end of spool and then snapping tension plate down on opposite end of spool, centering pin in same in hole in axis of spool.

The Kodak may now be reloaded as before described.

IN GENERAL.

We recommend everyone to do their own developing and printing. By adding our special trays, printing frames and paper to the usual amateur 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 Kodaker 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.

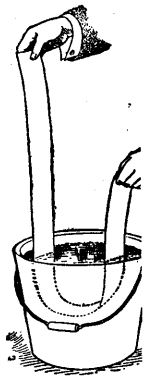
DEVELOPING.

For developing and printing No. 4 Panoram-Kodak pictu the ordinary outfit at the command of every amateur who dc this branch of the work himself will answer every purpose the addition of

3 No. 4 Panoram-Kodak Developing Trays, 4½ x 13½ inches,	$1.20
1 No. 4 Panoram-Kodak Printing Frame,	.75
1 No. 4 Glass for Panoram-Kodak Printing Frame,	.10
1 No. 4 Mat for Panoram-Kodak Printing Frame,	.15
1 Doz. Sheets 3½ x 12 Solio Paper,	.35
	$2.55

To Avoid Curling, Always Develop Tran parent Film Face Down.

In addition to the usual dark room equipment, provide pair of shears and a wooden pail or a large earthen bowl which to soak the film.



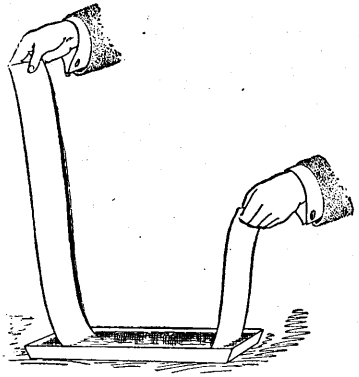
I. Place the bowl or pail of water on a chair (or box about 18 inches high). Detach the film from the black paper, being careful in so doing not to touch the face of the film with the fingers.

II. Grasp each end of the film, one in each hand, and pass the film, face down, through the water several times, as shown in cut. Continue this operation until the film is thoroughly wet, that there may be no air bubbles remaining on it. Now place the film in the bowl or pail of water, immersing it fully but not folding it tightly so as to crack.

III. Cover up the bowl or pail with a piece of brown pap to keep out the light from the lamp. (Even the colored light a dark room lamp will fog the film if it is exposed too long to it

IV. Prepare 8 ounces of developer and pour into one of the trays.

V. 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 high lights will begin to darken and you will readily be able to distinguish the unexposed sections between the negatives. In case the negatives do not develop with uniform rapidity they may be cut apart, replaced in the pail of cold water and then developed one at a time.



We recommend starting the development of Transparent Film in the strip as per the foregoing instructions, but if desired, the film may be cut up before developing is commenced. In cutting up film for development, however, 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.

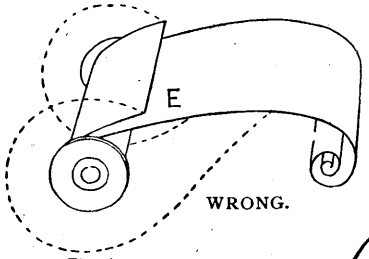


Fig. 1.

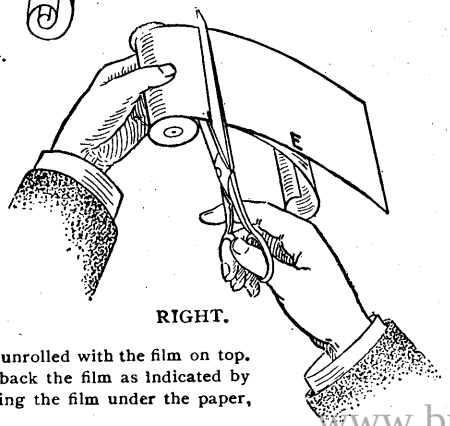


Fig. 2.

Fig. 1 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, as in Fig. 2.

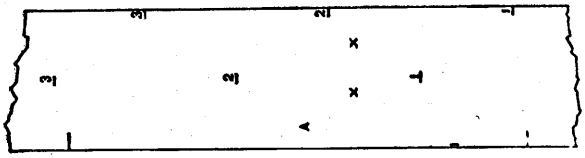


Fig. 3.

Cut the black paper through the lines (lower row in Fig. 3) which midway between the letters A, B, C, etc., and place the sections *face dow* a dish of cold water. The sections may now be transferred one at a tim the developing tray and immersed face down.

VI. The developer should be allowed to act five to minutes. The progress of the development may be watched holding the negatives from time to time up to the lamp.

VII. Cut the negatives apart and transfer to the secc tray and rinse two or three times with water, leaving them soak while the next film is being developed.

If cut apart only one negative should be developed at a time until operator becomes expert, then he can manage three or four in the tra one time, and the developer will answer for three rolls of film before b exhausted.

As each successive negative is developed it should be put, with the ceding negatives, in the washing tray and the water changed twic prevent the developer remaining in the films from staining them.

VIII. Put five tablespoonfuls of Hypo-sulphite of S into the third tray, fill two-thirds full of water, and stir u dissolved.

IX. Immerse the negatives one by one in this fixing b and leave until they are entirely clear of white spots and transparent instead of milky by transmitted light. This require about ten minutes.

X. The yellow shade can, of course, be removed from lamp as soon as all the exposures have been fixed.

XI. Pour off the fixing solution into the slop bucket, and the tray with clear, cold water; repeat this at intervals of minutes, five or six times, keeping the negatives in motion transferring them back and forth to tray No. 2, one by one ensure the water acting evenly upon them.

The fixing solution must only be used in tray No. 3, and the negatives, after fixing, must not be put in No. 1 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.

XII. When the negatives are thoroughly washed, put one-half ounce of glycerine into one pint of water, stir well and soak the negatives in the solution for five 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 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 exposures when the light is weak.

Under-exposure is evidenced by slowness in the appearance of the image in development, and the absence of detail in the shadows. In under-exposures 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 a few drops of a 10 per cent. solution bromide

of potassium to the developer. The novice will soon learn to recognize ov exposure, and to apply the remedy.

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

Fog.

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

Fog causes the film to blacken all over soon after the developer is appli 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 lig 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 tl it is apt to be thin and full of detail, instead of harsh and lacking in detail. the development is carried on as before directed, this defect is not liable occur.

Spots, Streaks, Etc.

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

White, milky spots are evidence that the negative has r been properly fixed, and it should be put back into the fixi bath, and then rewashed.

Always Develop Film Face Down.

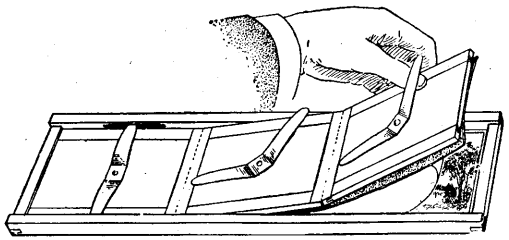
PART V.

PRINTING ON EASTMAN'S SOLIO PAPER.

Solio prints give either a warm brown or a rich purple tone as desired and are usually mounted and highly burnished.

METHOD OF PRINTING.—Open the printing frame 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 and upon the paper place the blanket. 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 or two sections of the hinged back, keeping one section

fastened to hold the paper from shifting. The printing sho be continued until the print is a little darker tint than finished photograph should be. Place prints without previ washing in the following combined toning and fixing bath:

3 oz. Eastman's Solio Toning Solution.
6 oz. *Cold* Water.

Pour the toning solution into one of the trays and imme the prints one after the other in the toning bath. Five or prints can be toned together if they are kept in motion a not allowed to lie in contact. Turn the prints all face down a then face up and repeat this all the time they are toning. T prints will begin to change color almost immediately fr reddish brown to reddish yellow, then brown to purple. T change will be gradual from one shade to another and toning should be stopped when the print gets the shade desir

Nine ounces of the diluted toning solution will tone 15 prin after that a new solution should be made same as before.

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

Salt, 1 oz. Water, 32 oz.

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

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

EASTMAN KODAK COMPANY,

Rochester, N.