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INSTRUCTIONS
FOR OPERATING THE
PREMOETTE JUNIOR



EASTMAN KODAK CO.,
SUCCESSOR TO
ROCHESTER OPTICAL CO.,
ROCHESTER, N. Y.

KODAK METAL TRIPOD

An ideal hand camera tripod, combining rigidity with light weight and compactness. Has revolving head with milled edges, making it easy to attach or tighten camera while the tripod is set up. Legs made of brass tubing, each section telescoping into the section above it. Lower sections nickered; upper section black enameled. Any section may be removed for the replacing of a spring should one become inoperative through wear or accident. Weight, 24½ ounces.

No. 0, 3 Sections, \$1.60

No. 1, 4 Sections, \$2.50

No. 2, 5 Sections, \$3.25

EASTMAN KODAK CO.

Successor to Rochester Optical Co.

ROCHESTER, N. Y.

INSTRUCTIONS FOR OPERATING THE PREMOETTE JUNIOR

PRICE 10 CENTS

Published by the
EASTMAN KODAK CO.
SUCCESSOR TO ROCHESTER OPTICAL CO.
ROCHESTER, N. Y.

BEFORE LOADING.

Before taking any pictures with the Premoette Jr. read the following instructions carefully and make yourself perfectly familiar with the instrument, taking especial care to learn how to operate the shutter. Work it for bot' time and instantaneous exposures several times before loading the camera.

The first and most important thing for the amateur to bear in mind is that the light which serves to impress the photographic image upon the sensitive film in a small fraction of a second when it comes through the lens, can destroy the film as quickly as it makes the picture. After the films have been developed and all *developer* thoroughly washed out, they may be quickly transferred in subdued white light to the fixing bath without injury.

EASTMAN KODAK COMPANY,
Successor to
ROCHESTER OPTICAL CO.,
Rochester, N. Y.

October, 1912

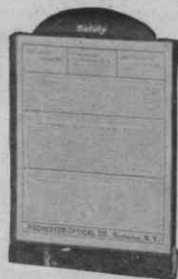
PART I

SECTION 1

The Premoette Jr. is adapted to the use of the Film Pack only, the construction of the Camera being such that a Film Pack Adapter is not necessary.

To Load the Camera

Procure a Film Pack of the proper size, $2\frac{1}{4} \times 3\frac{1}{4}$. Press up on the two metal catches at the top of the camera and open hinged back. Break or cut the small white slip on face of the



The Premo Film Pack

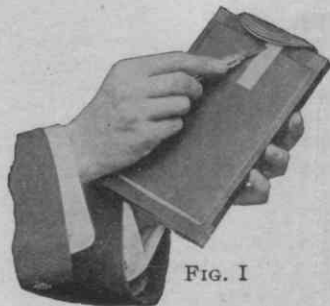


FIG. I

Film Pack, Fig. I, being careful that no part of it is overhanging or it will show in the picture, and place Pack in camera so that the black paper tabs protrude from the top and the large

direction label on the Film Pack is toward the back of the instrument, Fig. II.

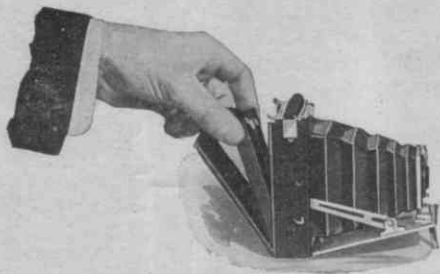


FIG. II

Close the back and the catches will engage automatically.

The camera now being loaded, proceed as follows:

Operation of the Premo Film Pack

For the first exposure gently pull out tab marked "Safety Cover" holding the remaining tabs under the finger and thumb of the other hand to prevent the possibility of pulling out more than one tab at a time, Fig. III.

When the red cross line appears tear off from left to right by bending tab backward over the metal straight edge. The first film is now presented for exposure.

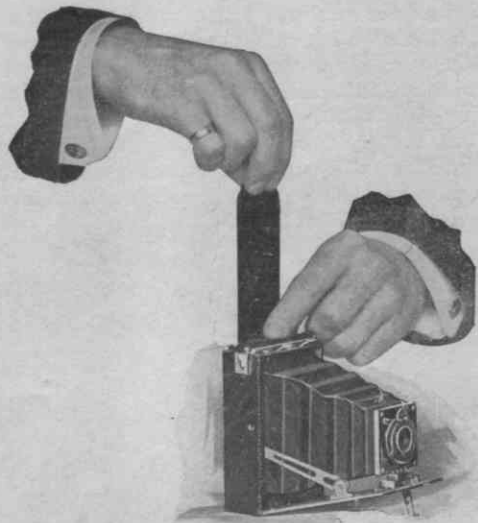


FIG. III

Having made the exposure pull out in a similar manner the black paper tab marked No. 1 and tear off.

Film No. 2 is now presented for exposure. Repeat the operation of pulling out and tearing off the black paper tabs one at a time as often as additional exposures are to be made.

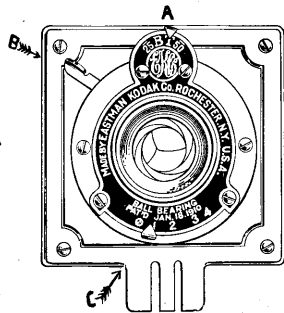
Upon pulling out and tearing off tab No. 12 the Pack is rendered light tight, and may be removed from the camera, reversing the operation as shown in Fig. II, and a fresh one substituted.

NOTE—It is well to make a rule of always pulling out the tab immediately after each exposure so that there will be no uncertainty, when making the next exposure, as to whether you have or have not pulled out the tab.

PART II

Making the Exposures

Before making an exposure with the Premoette Jr., either time or instantaneous, be sure of four things:



FIRST—That the shutter is adjusted properly.
(For time, instantaneous or bulb exposures as desired.)

SECOND—That the diaphragm stop is set at the proper opening.

THIRD—That the camera is focused.

FOURTH—That an unexposed film is ready for exposure.

SECTION 1

Operating the Shutter

Perfect familiarity with the shutter is essential to successful picture taking with any camera. The following directions should, therefore, be carefully read and the shutter operated several times before attempting exposures.

"Snap Shots"

For all Ordinary Instantaneous Exposures

FIRST—Set the lever A at 50 or 25 (representing $\frac{1}{50}$ and $\frac{1}{25}$ of a second) according to the strength of light. This adjusts the shutter for instantaneous exposures.

SECOND—Set the lever C at No. 1. Lever C controls the Iris diaphragm and No. 1 is the proper opening for ordinary instantaneous exposures.

THIRD—Press down the release B. This makes the exposure.

Time Exposures

FIRST—Set the lever A at the point T (time). This adjusts the shutter for time exposures.

SECOND—Set the lever C at No. 1, 2, 3 or 4. See instructions for use of stops, page 20.

THIRD—Press the release B. This opens the shutter. Time exposure by a watch. Again press the release. This closes the shutter.

Bulb Exposure

When it is desirable to make a very short time exposure this is best accomplished by making a "bulb exposure."

FIRST—Set the lever A at the point "B" (bulb). This adjusts the shutter for bulb exposures.

SECOND—Set the lever C controlling the stops, at No. 1, 2, 3 or 4, as desired.

THIRD—Press release to open the shutter, and release it to close the shutter. This makes the exposure. The shutter will remain open as long as the release is under pressure.

Do not oil any part of the shutter.

In case of accident return shutter to your dealer or to us for repairs.

SECTION 2

Instantaneous Exposures

("Snap Shots")

In taking instantaneous exposures 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. If it shines directly into the lens it will blur and fog the picture.

Focus on the Subject



Fig I
Opening the Front

1. Push up the metal catch as shown in Fig 1, and drop down bed of camera to the limit of motion.
2. Grasp the front of camera with thumb and forefinger of right hand to extend bellows.
3. At the front of camera bed will be found two slot openings. These are to be used for focusing the instrument.

The front slot, or the one nearest the end of the bed, is to be used when the subject to be photographed is between 6 and 20 feet from the instrument.

The back slot, or the one nearest the camera proper, is to be used for objects further than 20 feet away,

For general street work the back slot should be used, but when the principal object is nearer than 20 feet the front slot can be used to the best advantage.



Extending the Front

Now extend the front of Camera and insert lugs (at lower part of front,) into the slot which represents the distance nearest to the object to be photographed.

See Fig. II.

FIG. II

Locate the Image

Aim the Camera at the object to be photographed and locate the image in the finder, which is on the left hand side of the instrument.

The finder springs up automatically for use by a slight pressure on lever at right hand side.

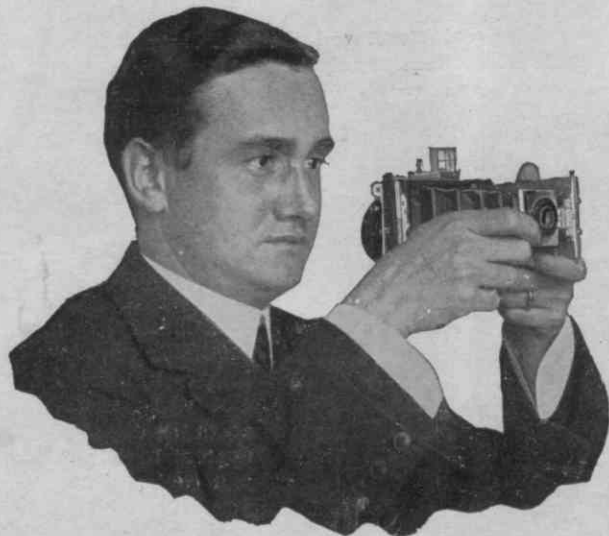


FIG. III
For a horizontal picture

It is intended to use with Camera on a level with the eyes or sight line, showing the scope of view and giving a fac-simile of what the picture will be, but on a reduced scale.

Hold Camera on a level with the eyes and locate image by centering red cross lines on finder lens in

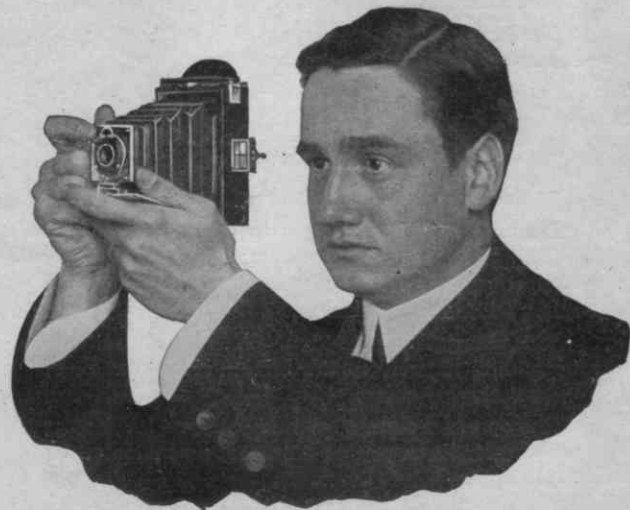


FIG. IV.
For a perpendicular picture.

hole in peep sight. (Figs. III and IV.) Level Kodak by aligning horizontal or perpendicular lines of image with corresponding lines in finder. Hold finder about ten inches away from the eyes. This distance will vary slightly, according to the reading distance of the eyes. (To avoid injury, keep the finder closed when not in use.)

Hold the camera steady—hold it level and push the lever. This makes the exposure.

Hold it Level.

The camera must be held level.

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

This was pointed too high. This building should have been taken from the middle story window of the building opposite.

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

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



FIG. V.

SECTION 3

Time Exposure—Interiors

Place the camera in position on some firm support. The camera is provided with one tripod socket, and may be used with same, when desired, in a horizontal position only. When making a perpendicular picture a standard is provided at end of bed, which may be dropped down to hold camera steady and level. See Fig. VI.

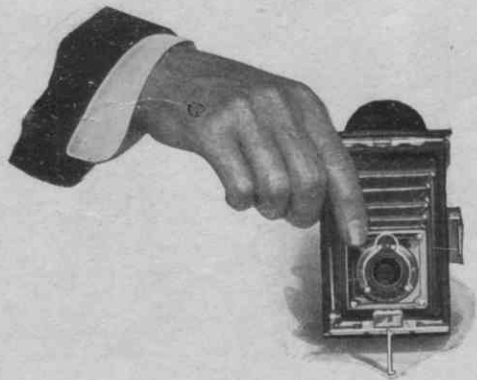


Fig. VI
Making a Time Exposure.

Set in such a position that the finder will embrace the view desired. The diagram shows the proper position 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 the range of the camera.

Make the exposure with the shutter as described on page 8.

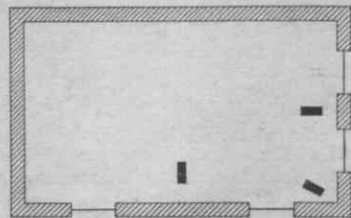


Diagram showing position of camera.

Time Needed for Interior Exposures.

This table is for the largest stop. When the second stop is used double the time; when the third stop is used give four times, and with the smallest stop give eight times the time of the 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 and 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 and 40 seconds.

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

If earlier or later the time required will be longer.

To Make a Portrait

Place the 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 three-quarter figure the camera should be from six to eight feet from the figure; for a full length figure from eight to ten feet. The background should form a contrast with the sitter.

Premo Portrait Attachment

By means of a Premo Portrait Attachment used with the Premoette Jr., head and shoulder pictures of increased size may be obtained.

To work with attachment at a distance of 3½ feet, focus Camera by inserting lugs on front, in back slot at end of bed, the one nearest the camera proper. To work at 2 feet 8 inches, insert lugs in front slot.

The attachment is simply an extra lens to be slipped in lens opening in front of 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 stop No. 3 or 4 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 one-half to one second will be sufficient.

WITH HEAVY CLOUDS—From two to five seconds will be required.

The above is calculated for hours from three hours after sunrise until three 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 as the least jarring will cause a blurred negative. Always place it upon some firm support. For exceedingly short time exposures use the "bulb exposure."

Stops

The stops should be used as follows:

No. 1. THE LARGEST—For all ordinary instantaneous exposures.

No. 2. For instantaneous exposures when the sunlight is unusually strong and there are no heavy shadows; such as in views on the seashore, in extremely high, dry climates or on the water or in tropical or semi-tropical climates; also for interior time exposures.

Nos. 3 and 4. 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 one-half second to five seconds according to the light. The smaller the stop the sharper the picture.

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

SECTION 3

Flash Light Pictures

By the introduction of Eastman Flash Sheets, picture taking at night has been wonderfully simplified. A package of flash sheets, a piece of cardboard, a pin and a match complete the list of essential extras, although an Eastman Flash Sheet Holder is a great convenience.

With flash sheets, no lamp is necessary, there is a minimum of smoke and they are far safer than any other self-burning flash medium, besides giving a softer light that is less trying to the eyes.

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

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

PREPARATION FOR THE FLASH.—The camera should be prepared for time exposure, as directed on page 8, 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.

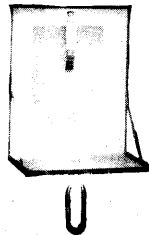
Pin a flash sheet by one corner to a piece of cardboard which has previously been fixed in a perpendicular position. If the cardboard is white it will act as a reflector and increase the strength of the flash.

The flash sheet should *always* be placed two feet behind and two or three feet to one side of the camera. If placed in front, or on a line with front of 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 flash should be at the same height or a little higher than the camera. The support upon which the flash is to be made should not project far enough in front of it to cast a shadow in front of the camera. An extra piece of cardboard a foot square placed under the flash sheet will

prevent any sparks from the flash doing damage. However, by using the Eastman Flash Sheet Holder, all these contingencies are taken care of, and we strongly advise its use.

The Eastman Flash Sheet Holder

This holder may be safely held in the hand *always* between you and the flash sheet.



Or, it may be used on any Premo tripod, being provided with a socket for this purpose. The sheet is held by a spring finger, in such position that its lower corner projects part way across the circular opening in the holder, as shown in illustration.

Then to set off the flash merely touch a match from behind to the corner of the sheet through this opening.

Taking the Picture

Having the camera and the flash sheets both in position and all being in readiness, open the camera shutter, stand at arm's length and touch a match from behind to the lower corner of the flash sheet.

NOTE—If you are not using the Eastman Flash Sheet Holder, place the match in a split stick at least two feet long.

There will be a bright flash which will impress the picture on the sensitive film. Then close the shutter and pull up tab ready for another picture.

The Flash Sheet

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 cardboard, one above the other, the corners only very slightly over-lapping.

TABLE

For 10 feet distance light walls and hangings use
1 No. 1 sheet.

For 10 feet distance dark walls and hangings use
1 No. 2 sheet.

For 15 feet distance light walls and hangings use
1 No. 2 sheet.

For 15 feet distance dark walls and hangings use
1 No. 3 sheet.

NOTE—Never use more than one sheet at a time in the Eastman Flash Sheet Holder.

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 towards the instrument. The proper distance from the camera to the subject can be

ascertained by looking at the image in the finder. For a three-quarter picture this will be from 6 to 8 feet, and for a full figure from 8 to 10 feet.

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.

For using Premo Portrait Attachment, see page 19.

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 instrument. 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.

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

The *finder* on the camera will aid the operator in composing the groups so as to get the best effect.

In order to make the image visible in the finder the room will have to be well lighted 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 Flash Sheets burn more slowly than flash powders, producing a much softer light and are, therefore, far preferable in portrait work; the subject, however, should be warned not to move, as the picture is not taken *instantaneously*, about one second being required to burn one sheet.

Eastman Flash Cartridges

Eastman Flash Cartridges may be substituted for the sheets if desired. We recommend the sheets, however, as more convenient, safer, cheaper and capable of producing the best results. The cartridges are only superior when absolutely instantaneous work is essential.

Keep Dust Out of the Camera

Defective negatives are often caused by particles of dust which have collected on the inside of the camera and settle upon the film in particles that produce small white spots upon the prints.

It is therefore well to wipe out the inside of camera and bellows occasionally, with a slightly damp cloth. In summer weather or after the camera

has remained idle for any length of time, this needs special attention.

Closing the Camera

When through using camera, remove lugs of front from slot, reversing operation shown in Fig. II, page 11. Fold bellows and push down on arm lock at right hand side, when the bed will close readily.

Clean Lenses

Dirty or dusty lenses are frequently the cause for photographic failures. These pictures illustrate



CLEAN LENS

this point clearly. The sharp, full timed picture on this page was taken with the lens clean and in good order.

To produce the effect shown in the picture on this page, the operator lightly touched the face of the lens with his thumb, which was slightly damp with perspiration.



DIRTY LENS

Lenses should be frequently examined by looking *through* them, and if found to be dirty, should be wiped both front and back, with a clean, soft linen handkerchief. In summer weather this needs special attention. Large spots of dust or dirt on the lens will cause defects in the picture, while if the lens is evenly covered with a film of dust, dirt or moisture, the effect will be to cut off a great deal of light and make the picture underexposed.

PART III

SECTION 1

Developing Premo Film Pack Films in Premo Film Pack Tank

When using the Premoette Jr. provide a No. 1 Premo Film Pack Tank, a box of Premo Tank Powders No. 1 and a half pound package of Kodak Acid Fixing Powder.

To Prepare the Developer

Remove the cover of the tank by turning it to the left. The cage or holder for the separate films can then be removed from the tank.

Empty a pair of powders into eight ounces of lukewarm water, stir well, and when thoroughly dissolved, pour into tank; then fill tank with a sufficient amount of water to bring it even with the embossed ring at the top which shows the proper level for the developing fluid. *If the tanks are not filled to this point, any portion of the film which projects will remain undeveloped.*

The temperature of the developer when ready for use should be about 65 degrees Fahrenheit.

To Prepare the Fixing Solution

Dissolve a half-pound package of Kodak Acid Fixing Powder as per directions on the package. (This solution may be used over and over until it loses strength.)

At this point all white light should be excluded from the dark-room. See page 38. If no dark-room is available, this work can be done at night in any room in which there is a tap of running water, care being taken that there is no white light in the room during the few minutes when the films are being transferred from the pack to the cage.

How to Remove Films from Pack for Development

When all exposures in the film pack have been made it is light tight, and may be taken from the camera in daylight. If any exposures have been removed, as described on page 31, the Film Pack should be resealed immediately after removing it in daylight from the Camera, after the twelfth exposure has been made, by moistening the inside of the corner flaps, when they may be stuck firmly to the sides.

When ready to develop break the red seal at the sides and pull down bottom flap. (See Fig. 1.)

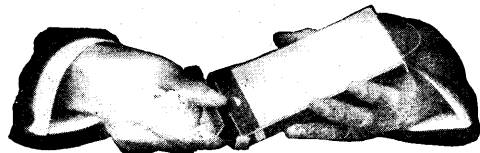


FIG. I.

This gives access to exposed film which may be removed as shown in Fig. II.

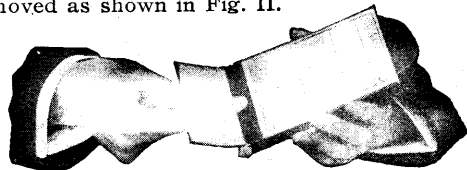


FIG. II.

To remove one or more films for development before the entire package is exposed:

Take the camera to the dark-room, remove the pack and break the red seal as above. After removing the exposed film, the pack can be replaced without sealing in the camera before leaving the dark-room and everything is ready for additional exposures.

Important—When removing any films for development before all are exposed, do not remove papers of safety cover but leave same to protect top film after all have been exposed and the pack removed in daylight.

To Load the Films Into Cage

When all is ready load each film into its respective compartment of the cage *without detaching the black paper*. This is readily done by holding the film between the thumb and fingers with the black paper toward the hand, and doubling the edges together as shown in Fig. III. Slide them carefully down to the bottom of each compartment, with torn edge up, and see that the center piece protrudes between

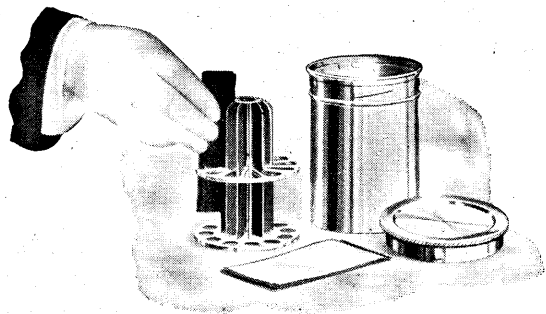


FIG. III

the edges of the film, preventing them from coming together during the process of development.

When all the films are loaded, place cage into developing tank (Fig. IV) and raise and lower it slightly below the surface of the developer, two or three times, to expel air bubbles. Replace the cover of the tank by dropping it on and turning it to the right as far as possible.

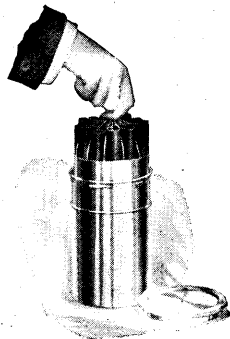


FIG. IV

The white light may now be turned on and the time noted. The time may be marked on the dial which appears on the face of the container that comes with the developing powders.

During the process of development the tank should be turned end for end four or five times to procure uniform and even development. At the expiration of twenty minutes the top may be removed in dark room or very subdued light and the developer poured off. The tank should now be held under a tap of running water or immersed for a few seconds in a vessel of clear water. The films are then ready for fixing. Page 42.

The fixing bath may be prepared in a tray or other vessel, the receiver taken from tank—the metal hook being intended for this purpose—and the films removed from the cage, the black papers pulled off and films placed in the bath, leaving the tank and cage available for the next pack. The films should be changed about two or three times, to insure evenness of fixing.

After the films have been fixed a sufficient length of time so that all the shadows are perfectly transparent and no yellowish spots appear, they should be placed in a tray under running water and washed for half an hour. Before washing be sure black papers are all detached. If running water is not

available they should be left in the water about three-quarters of an hour and the water changed six or eight times to remove all traces of hypo.

After this process is completed, the films are taken from the tray and pinned up by the corner, preferably to the edge of a shelf or some projecting surface which will not permit either side of the film to come in contact with any object, as otherwise the film will stick and ruin the negative. Or you may hang the negatives on a stretched string by means of a bent pin, running the pin through the corner of film to the head, then hooking it over the string.

The above instructions, if carefully followed, will produce the most satisfactory results, provided anything like proper exposures have been given. We recommend the use of the regular Premo Developing Powders in these tanks, as they have been compounded from the purest chemicals for this purpose.

For those who wish to mix their own solutions, we give the following formulæ:

Stock Developing Solution Pyro Formula

Pyrogallic Acid Solution

Pyrogallic Acid	½ Oz.
*Sulphuric Acid	10 Minims
Water	14 Ozs.

*If Eastman permanent Crystal Pyro is used, the acid should be omitted.

Soda Solution

*Sulphite Soda (desiccated)...	1½ Ozs.
*Carbonate Soda (desiccated)	1½ Ozs.
Water	15 Ozs.

*This solution is based on the strength of E. K. Co. Carbonate and Sulphite of soda. If possible these chemicals should be used.

For No. 1 Film Pack Tank—28 Ozs., take:

Pyro Solution	1½ Oz.
Soda Solution	1½ Oz.
Water	25 Ozs.

Develop 20 Minutes.

Fixing Solution

Water	16 Ozs.
Hyposulphite of Soda	4 Ozs.
Sulphite of Soda (desiccated)*	¼ Oz.

*If crystals are used double the quantity.

When fully dissolved add the following hardener:

Powdered Alum	¼ Oz.
Citric Acid	⅛ Oz.

NOTE. Avoirdupois weight is the standard used in compounding photographic formulæ.

This bath may be made up at any time in advance and be used so long as it retains its strength, or is not sufficiently discolored by developer carried into it as to stain the negatives.

Time and Temperature

It sometimes happens that the amateur is not able to obtain or maintain the standard or normal temperature of 65 degrees Fahr. when using the Premo

Tank and Premo Tank Powders. In such cases the following table will be found of value.

Temperature	Time—One Powder	Time—Two Powders
70 Degrees	15 Minutes	8 Minutes
69 " "	16 " "	" "
68 " "	17 " "	9 " "
67 " "	18 " "	" "
66 " "	19 " "	" "
85 " NORMAL	20 " NORMAL	10 " NORMAL
64 " "	21 " "	" "
63 " "	22 " "	" "
62 " "	23 " "	11 " "
61 " "	24 " "	" "
60 " "	25 " "	" "
59 " "	26 " "	12 " "
58 " "	27 " "	" "
57 " "	28 " "	" "
56 " "	29 " "	13 " "
55 " "	30 " "	" "
54 " "	31 " "	" "
53 " "	32 " "	14 " "
52 " "	33 " "	" "
51 " "	34 " "	" "
50 " "	35 " "	15 " "
49 " "	36 " "	" "
48 " "	37 " "	" "
47 " "	38 " "	16 " "
46 " "	39 " "	" "
45 " "	40 " "	17 " "

Temperature of Developer must not exceed 70 degrees Fahr., as above that point there is danger of the film frilling. 45 degrees Fahr. is the lowest temperature at which the developing powders can be dissolved and even at this temperature the pow-

der must be finely crushed and added slowly to the water.

It is best to use the normal temperature (65°) when possible as the use of a developer that is colder than normal has a slight tendency to increase the contrast in a negative, while the use of a developer warmer than normal slightly flattens the resulting negatives.

SECTION 2

Developing Premo Film Pack Film by the Dark-Room Method

If you are to develop the contents of a 2¼ x 3¼ Film Pack an Eastman A B C Developing and Printing Outfit will be found most economical:



A B C Developing Outfit.

The Outfit Contains:

1 Kodak Candle Lamp.....	\$.25
4 Developing Trays.....	.40
1 4-oz. Graduate.....	.15
1 4 x 5 Printing Frame.....	.25
1 4 x 5 Glass for same05
1 Stirring Rod.....	.05
1 Box (5 tubes) Eastman Special Developing Powders.....	.25
½ Pound Kodak Acid Fixing Powder15
2 Dozen Sheets 4 x 5 Velox Paper50
1 2-oz. Bottle Nepera Solution.....	.10
1 Package Bromide Potassium.....	.05
1 Instruction Book.....	.10

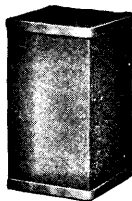
\$2.30

Price, complete, neatly packed, \$1.50.

This outfit cannot be shipped by mail.

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

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 very rapid, and therefore, extremely sensitive to white light, either daylight or lamplight, and *would be spoiled if exposed to it*, even for a fraction of a second.



The Lamp

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 Kodak Candle Lamp.

The lamp gives a subdued red light which will not injure the film unless it is held too close to it. Set the lamp on the table at least eighteen inches from the operator. Never use a yellow light or fog will be the result.

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 the 4 ounce mark with water. Stir until dissolved with the wooden stirring rod and pour into second tray.

For removing Film from Film Pack, see page 30.

After removing the exposed Films from the Pack, the black paper to which they will be found attached should be removed and each film placed, emulsion side down, in the tray of water. (The emulsion side, or face, is the dull side.) They should be allowed to stand two or three minutes and then each film should be placed separately in the developing tray, still face down. The tray should be rocked gently

from time to time, the films never being allowed to mat together, and the progress of development ascertained by holding the film up to the light of the lamp.

NOTE.—When making an examination of the film do not hold it close to the lamp for any length of time, as it would be liable to fog.

Complete development giving sufficient length of time to bring out what detail you can in the thinnest negatives. Do not check the development too soon, or the detail will be lost and the negative will be void of contrast, weak and flat; neither continue it too long, as fog and flatness will result.

It usually requires a longer time to develop instantaneous exposures, as they are rarely fully timed, and a film or plate which has not had full exposure requires longer time for development.

There is no harm in having your negatives of different density. This can be set right in the printing. The difference in density does not affect the difference in contrast.

After completing development transfer to the third tray and rinse two or three times with clear, cold water, and transfer to fixing bath, see page 42.

Developing Formulas for Dark-Room Development

We recommend using Eastman Special Developer Powders, which are furnished in packages and are

compounded by simply adding the amount of water marked on each tube. The following formulæ will also be found satisfactory:

Elon-Hydrochinon or Metol-Hydrochinon

SOLUTION A

Elon or Metol.....	60 Grains.
Hydrochinon.....	30 "
Sulphite of Soda (desiccated)*.....	¾ Oz.
Water.....	20 Ozs.

SOLUTION B

Carbonate of Soda (desiccated)* ½ Oz.	
Water.....	20 Ozs.

To Develop

Take Solution A 1 oz., Solution B 1 oz., Water 2 Ozs. Add one or two drops of a 10 per cent. solution Potassium Bromide to each ounce of developer.

Pyro Formula

SOLUTION A

Pyrogallic Acid.....	½ Oz.
Sulphuric Acid.....	10 Minims.
Water.....	14 Ozs.

SOLUTION B

Sulphite of Soda (desiccated)*.....	1½ Ozs.
Carbonate of Soda (desiccated)*	1 "
Water.....	14 "

To Develop

Take Solution A 1 oz., Solution B 1 oz., Water 8 ozs.

*If crystals are used double the quantity.

NOTE.—Temperature of all developing solutions should be 65° Fahr.

Fixing

We recommend the use of Kodak Acid Fixing Powder, or the following formula:

Water.....	16 Ozs.
Hyposulphite of Soda.....	4 "
Sulphite of Soda (desiccated).....	$\frac{1}{4}$ Oz.

When fully dissolved add the following hardener:

Powdered Alum.....	$\frac{1}{8}$ Oz.
Citric Acid.....	$\frac{1}{8}$ "

This bath may be made up for future use and may be used as long as it retains its strength.

Fixing

The Kodak Acid Fixing Bath may be prepared as per instructions on the package. Put this into a tray or wash bowl. When the powder has thoroughly dissolved add to the solution as much of the Acidifier, which you will find in a small box inside the large one, as directions call for. As soon as this has dissolved the Fixing Bath is ready for use. Any quantity of the bath may be prepared in the above proportions.

After the negatives have been placed in the Fixing Solution, keep them separated a part of the time. This insures the solution reaching every part of the Film. Allow the negatives to remain in the solution two or three minutes after they have cleared or the milky appearance has disappeared, then remove for washing.

Washing and Drying.

All negatives must be thoroughly washed so as to remove every trace of hypo and other foreign substance. Where running water is accessible the films may be placed in a tray or washing box and left under a tap from which runs a gentle stream, for about an hour. Films should be moved about from time to time, so that a complete and thorough washing may be had. Do not crowd too many films in too small a tray during this process. When running water is not accessible, the negatives may be placed in a tray or bowl of cold water, and left to soak for five minutes, when the water should be changed and the process repeated five or six times. After carefully washing the films can be pinned up by one corner to an overhanging ledge or frame, as it is imperative that the surfaces touch nothing until perfectly dry; otherwise they would stick and the negatives would be ruined. After negatives are thoroughly dry they are ready for printing.

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:

Over-Development

Over-development may be caused by a mistake in leaving films in the developer too long, by using solution too warm or by those who mix their own developer in getting the developing agent too strong.

In this case the negative is very strong and intense by transmitted light and requires a very long time to print. The remedy is to reduce by the use of Eastman Reducer or the following method:

Reducer

First, soak negatives 20 minutes in water, then immerse in:

Water..... 6 Ozs.
Hyposulphite of Soda..... ½ Oz.
Ferri-Cyanide Potassium (saturated sol.)... 20 Drops

Rock tray gently back and forth until negative has been reduced to the desired density, then wash ten minutes in running water or in four changes of water.

Negatives may be reduced locally by applying the above solution to the dense parts with a camel's hair brush, rinsing off the reducer with clear water occasionally to prevent its running onto the parts of the negative that do not require reducing.

Under-Development

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.

This defect would be caused by a mistake in removing film from the developer too soon, by using solution too cold or by an error in compounding chemicals. It is obvious that neither of these defects will occur in Tank Development if instructions are properly followed.

Intensification by Re-Development

There are a number of different processes for intensifying under-developed negatives, the most common being by means of Bichloride of Mercury, and Sodium Sulphite or Ammonia.

This method, though simple to use, has its disadvantages, as it builds up the highlights out of proportion to the weaker portions of the negative, and also, unless carefully handled is apt to produce iridescent stains, or granular markings that are impossible to remove.

While the method of intensification by re-development is only comparatively new, the now common use of Velox and Royal Re-Developer for Sepia tones on Velox and Bromide prints will make this the most effective means of intensification.

Velox or Royal Re-Developer may be used in exactly the same manner as for producing Sepia tones on developing paper.

Negatives intensified by re-developing are built up evenly, without undue contrast and without the chance of staining.

The advantage of being able to use the chemicals for two different purposes (Sepia toning prints or intensifying negatives) is obvious, the result in either case being all that could be desired.

Be Sure to Use Pure Chemicals

To get the best negatives from your films—to get the best prints from your negatives—it is imperative that the chemicals which you use be absolutely pure.

For all our film, plates and papers we furnish powders and solutions mixed in just the proper proportions and compounded from the purest chemicals, rigidly tested in our own laboratories.

But we go even further than this. For those who prefer to mix their own solutions by formulæ, we have prepared a line of carefully tested standard photographic chemicals.

Don't mar good films and plates and good paper with inferior chemicals.

This seal stands for the highest purity. Be sure it's on the package before purchasing.



PART IV

Printing on Velox Paper

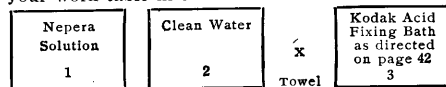
Manipulation

Velox prints may be successfully made, using daylight for exposure. Select a north window, if possible, as the light from this direction will be more uniform. *Owing to its sensitiveness the paper should be handled in subdued light, otherwise it will be liable to fog.* Proper precautions should be taken to pull down the window shades and darken the room sufficiently during manipulation. If the light is too strong for printing it should be subdued or diffused by the use of several thicknesses of white tissue paper. Owing to the varying intensity of daylight uniform results are not as certain as when using artificial light. In the following instructions for manipulating Velox, it must be understood that artificial light, preferably gas with a Welsbach burner, will be the light used. A kerosene lamp, fitted with a round burner (known as Rochester burner), may be used, but owing to the decidedly yellow light this affords, a considerably longer exposure will be necessary than when using a Welsbach light.

The comparative exposures with Velox using various sources of light is as follows:

Size of Negative	Distance from Light	Welsbach Burner	32 C. P. Elec. or 6 ft. gas Burner	16 C. P. Elec. or 4 ft. gas Burner	Average Oil Lamp
4 x 5 or Smaller	7 in.	10 Sec.	20 Sec.	30 Sec.	40 Sec.

Having provided a suitable light and a convenient place to work, arrange three trays before you on your work table in this order:



Proper temperature is important and for best results the developer should be 70 degrees Fahr. and the fixing bath and wash water 50 degrees Fahr. If the developer exceeds 70 degrees the prints are liable to fog and the emulsion soften. If too cold, chemical action is retarded, resulting in flat, weak prints.

Printing

Velox may be safely manipulated ten feet from the ordinary gas flame.

Having everything in readiness, 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 the negative a sheet of the Velox paper, face down.

The paper curls slightly, the face or sensitive side being concave; an absolute test is to bite the corner of the sheet; the sensitive side will adhere to the teeth.

The paper not used must be kept covered in its envelope.

Place the printing frame the correct distance from the artificial light used, holding the frame away from the burner a distance equal to the diagonal of the negative. See exposure table, page 48.

We suggest before making the first exposure the cutting of a piece of Velox paper into strips about an inch wide and placing one of them over an important part of the negative, make the exposure, using your best judgment as to the distance from the light and the time of printing. Develop it, and if not satisfactory try another strip, varying the time as indicated by the first result. When the desired effect is secured you can make any number of prints from the same negative, and if the time of exposure, distance from light as well as the time of developing are identical, all the prints should be equally good. By comparing your other negatives with the one you have tested you will be able to make a fairly accurate estimate of the exposure required by any negative.

After taking the exposed piece of paper from the printing frame, in a safe place previously selected, it is ready for development. The dry print should be immersed face up in the developer (Tray No. 1) and quickly and evenly covered with the solution. Regular Velox should be developed not to exceed

fifteen seconds, Special Velox about twice as long; no exact time can be given, as the strength of developer used would make a difference in the time.

As soon as the image has reached the desired depth remove from the developer to the second tray and rinse for a moment, turning the print several times, then place it in the acid fixing bath (Tray No. 3) keeping the print moving for a few seconds, the same as was done when rinsing, so as to give even and thorough fixing, preventing stains and other troubles. Leave the print in this solution until thoroughly fixed; this will take about fifteen minutes. When fixed remove from the fixing bath and wash thoroughly for about an hour in running water, then dry. After drying, prints may be trimmed and mounted.

Do not use a fixing bath that has been used for fixing film.

You should be systematic in working, remembering that cleanliness is essential in photography. Care must be taken to prevent the Hypo fixing bath in any way getting into the tray containing the developer. Have a clean towel when beginning the work and wipe your hands each time after you have handled prints in fixing bath.

Details

CLEAN DISHES: CLEAN HANDS: The faintest trace of Hypo-Sulphite of Soda will spoil the prints

if it gets into contact with them before the proper time. Great care should therefore be used to have both hands and trays clean.

DEVELOPER once used should not be carried over and used the next day or subsequently.

Don't

Don't use a tray for developing which has previously been used for hypo solution, pyro developer or final washing.

Don't use an old fixing solution, it is liable to cause trouble.

Difficulties, their Cause and Remedy

VEILED WHITES: Caused by forcing development, fogged paper.

REMEDY: Give more time, screen light. Also, caused when image flashes up in developer by too much exposure, in which case give less time.

MUDDY SHADOWS: Caused by developer being used for too many prints. Remedy, use fresh developer.

CONTRASTY PRINTS. Caused by insufficient time or negative too harsh. Remedy, give more time; make softer negatives.

FLAT PRINTS: Caused by overtiming or negatives flat. Remedy, give less time in first instance, and if trouble is with negatives, give negative less time; develop further.

STAINS: Caused by forcing development, or chemically dirty dishes or hands, insufficient fixing, foreign chemicals. Remedy, do not allow chemicals other than those given in formulas to come in contact with paper; use fresh fixing bath: keep prints in constant motion the entire fifteen minutes they remain in fixing, and if due to forcing development give more time in printing.

ROUND, WHITE SPOTS: Caused by air bells which form on face of prints when developer is first flowed on. Remedy, use more developer, break air bells with finger.

Ask your dealer, or us, for a copy of the Velox Book.

Coloring Velox Prints

The various surfaces of Velox are particularly well adapted for coloring, and prints may be made extremely interesting through the many beautiful effects obtained by the use of Velox Transparent Water Color Stamps. No experience is necessary when using these colors and any amateur can secure excellent results as full directions accompany each set of stamps.

Put up in book form, they will be found most convenient. Each book contains twelve colors, arranged in perforated leaflets, making twenty-four stamps of each color.

The stamps will also be found most desirable for the coloring of Bromide enlargements, lantern

slides, etc., and in fact for all work where perfect blending and transparency of color is required.

See price list.

EASTMAN KODAK CO.,
Rochester, N. Y.

PART V

Mounting

The most satisfactory method for mounting prints is by the use of Kodak Dry Mounting Tissue, as by the use of this tissue the print lies perfectly flat in absolute contact even on the thinnest mount and absolutely without curl.

The tissue comes in flat sheets, dry, not sticky, and easy to handle and being water proof protects the print from any impurities in the mount stock. The process of mounting is as follows: Lay the print on its face and tack to the back a piece of the tissue of the same size as the print by applying the point of a hot flatiron to small spots at opposite ends. Turn the print face up and trim to size desired, place in position on mount and cover the print with a piece of smooth paper and press the whole surface with a hot flatiron. *Press, don't rub.* The iron should be just hot enough to siss when

touched with the wet finger. If the iron is too hot the tissue will stick to the mount and not to the print. If too cold the tissue will stick to the print and not to the mount.

Remedy: Lower or raise the temperature of the iron and apply again.

When mounting with the ordinary paste, prints should be mounted wet. After the prints have been trimmed to correct size, immerse in clean water for a few moments, then place in a pile face down on a sheet of clean glass and squeegee off all surplus moisture, apply the paste with a bristle brush, working in the paste thoroughly, then lift the print by the opposite corners, turn it over and place it in proper position on the mount.

Cover with a sheet of clean blotting paper and press into contact with squeegee or rubber print roller.

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SUCCESSOR TO ROCHESTER OPTICAL COMPANY,
Rochester, N. Y.

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**A Course Which is Open to All
Users of Premo Cameras and Which
Will Increase Your Photographic Pleas-
ure by Helping You to make Better
Pictures.**

Tuition two dollars which includes a
handsome cloth bound copy, library edition,
of the School Text Book.

**"HOW TO MAKE
GOOD PICTURES"**

Application for Membership in the Kodak Correspondence College.

Eastman Kodak Co.,
Rochester, N. Y.
K. C. C. Dept.

Gentlemen:—I am the owner of a (name camera and size)

.....
and wish to be enrolled as a member of "The Kodak Correspondence College."

I therefore enclose herewith $\left\{ \begin{array}{l} \text{Draft} \\ \text{P. O. Money Order} \\ \text{Express Money Order} \end{array} \right\}$ for two dollars, for which please send me a volume of "How to Make Good Pictures," library edition, and a certificate of membership entitling me to a full course in "The Kodak Correspondence College."

56

(Name)

(Street and No.)

(City)

(State)

Tear Off Here.

PRICE LIST

Premoette Jr., 2¼ x 3¼ Equipped with Single Lens and Kodak Ball Bearing Shutter.....	\$ 5 00
Do., Equipped with Planatograph Lens and Kodak Ball Bearing Shutter.....	7 50
Premoette Jr., Special 2¼ x 3¼ Equipped with Zeiss Kodak Anastigmat Lens and Kodak Ball Bearing Shutter.....	28 00
Premo Film Pack, 2¼ x 3¼ 12 Exposures, for use with Premoette Jr.....	40
Carrying Case.....	75
Premo Film Pack Tank, No. 1, for developing 12 2¼ x 3¼ films.....	1 25
Premo Developing Powders, No. 1 per package, ½ doz. pairs.....	20
Eastman Eikonogen Developer Powders (for dark room development), per doz. pairs	50
Do., per ½ doz. pairs.....	25
Eastman Hydrochinon Developer Powders (do not stain the fingers), per doz. pairs	50
Do., per ½ doz. pairs.....	25
Eastman Pyro Developer Powders (for dark room development), per doz. pairs.....	50
Do., per ½ doz. pairs.....	25
Eastman Hydrochinon, Eikonogen, Pyro and Special Developer Powders, in sealed tubes, per box of 5 tubes.....	25
Glass Stirring Rod Thermometer.....	60
Kodak Acid Fixing Powder, pound packages	25

Do., ½ pound package	\$ 15
Do., ¼ pound package	10
Eastman Reducer, per package, 5 tubes	25
Royal Re-developer, per package, 6 tubes.....	75
Bromide of Potassium, per ounce bottle	10
Solio Paper, per package 2 doz. sheets, 2¼x3¼	20
Combined Toning and Fixing Solution, for Solio, per 8 oz. bottle.....	50
Do., per 4 oz. bottle, (in mailing case, includ- ing postage, \$.50)	30
Velox Paper, per pkg., 1 doz. sheets, 2¼x3¼ ...	15
Velox Transparent Water Color Stamps.....	25
Nepera Solution, for developing Velox, 4 oz. bottle	20
Eastman Printing Masks, No. 3, for use with 2¼x3¼ negatives, each.....	06
Eastman Flash sheets, No. 1, per package of ½ dozen.....	25
Do., No. 2, per package of ½ dozen.....	40
Do., No. 3, per package of ½ dozen.....	60
Eastman Flash Sheet Holder.....	1 00
Kodak Dry Mounting Tissue, per package, 3 dozen sheets, 2¼ x 3¼.....	10
R. O. C. Combination Tripod, for cameras 5 x 7 and smaller.....	1 70
R. O. C. Tripod Truck, No. 1.....	1 00
Universal Clamp, for attaching camera to chair, fence, etc.....	75

Amateur Printing Frame, 4 x 5.....	\$ 25
Developing Trays, 4 x 5, each.....	15
Kodak Dark Room Lamp, No. 2, ⅝ inch wick..	1 00
Kodak Candle Lamp.....	25
Eastman Indexed Negative Albums, to hold 100, 4 x 5 or smaller film negatives.....	1 00
The Arena Album, 50 black or sepia leaves, 5½ x 7.....	1 00
The Forum Album, 25 black or sepia leaves, 5½ x 7.....	35
Do., 25 black or sepia leaves, 7 x 10.....	50
Bevplane Mounts, for 2¼ x 3¼ pictures, per 100	60
Do., per 50	30
Kodak Trimming Board, No. 1, 5 inch.....	40
Premo Portrait Attachment, for use on the Premoette Jr.....	50
Paste, 3 ounce tube.....	15
Graduate, 8 ounce.....	20
Developing, Printing and Mounting (on velox) 12 exposures, 2¼ x 3¼ Premo Film Pack	1 40
Do prints unmounted	1 28
Developing only.....	50
Printing only, mounted, each	08
Do., unmounted, each.....	07

No orders executed for less than 25 cents.

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sories, write for complete Premo Catalogue.

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Prints do not curl
when mounted with

KODAK *Dry* *Mounting Tissue*



No bother

No muss

No sticky
fingers

Just the Tissue and Flatiron

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*Make Enlargements
from Your Best Negatives*

Anyone who can print on Velox
can make good enlargements
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makes 5x7 enlargements from \$2.00
2¼ x 3¼ negatives

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