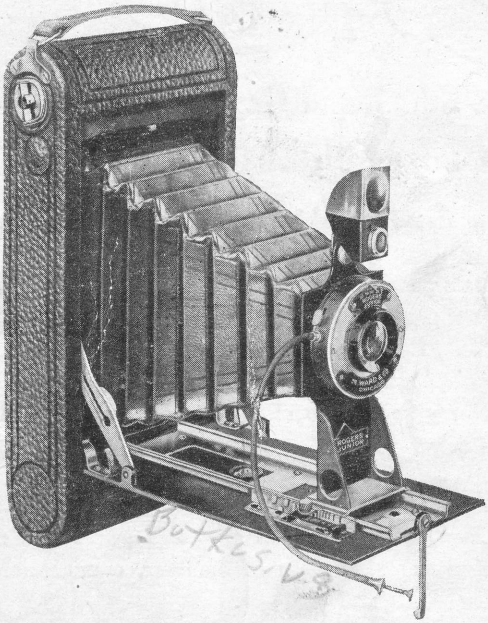
How To Take Pictures With



Rogers Junior Cameras

Nos. 1, 1=A, 3 and 3=A

Montgomery Ward & Co.

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Instructions for Operating The Rogers Junior Cameras

Do not attempt to load or take any pictures with the Rogers Junior until you have become thoroughly familiar with every part of the instrument. Take especial care to learn the construction of the shutter; work it for time, bulb and instantaneous exposures. Read carefully the following instructions. The most important thing to be remembered in picture taking is that no white light (including gas, electric or lamp light) should be allowed to strike the film, even for a fractional part of a second, until it has been developed and fixed. It is therefore best that the loading and unloading be done in a subdued light, for after the seal on the film is broken there is a possibility of the edges becoming fogged if care is not taken to keep the black paper drawn tightly.

Before loading the camera try the shutter to see that it is working properly. Remove all the dust from the lens with a soft cloth.

Films adapted to the Rogers Junior Cameras

The Rogers Juniors accommodate all standard makes of roll films of corresponding sizes as shown in the following table:

No.	Camera	Size	Exp's	Rexo	Vulcan	Ansco	Eastman
1	Rogers Jr.	2¼ x 3¼	6	415	240	4A	120 (No. 2, Brownie)
1A	Rogers Jr.	2½ x 4¼	6	425	232	6A	116 (No. 1A, FPK)
1A	Rogers Jr.	2½ x 4¼	12	426	232	6B	116 (No. 1A, FPK)
3	Rogers Jr.	3¼ x 4¼	6	430	236	7A	118 (No. 3, FPK)
3	Rogers Jr.	3¼ x 4¼	12	431	236	7B	118 (No. 3, FPK)
3A	Rogers Jr.	3¼ x 5½	6	445	244	18A	122 (No. 3A, FPK)
3A	Rogers Jr.	3¼ x 5½	10	446	244	18B	122 (No. 3A, FPK)

To Load

To prepare for loading, back of the camera must be removed. This is best accomplished by holding the instrument in both hands as illustrated in figure 1. Push the knob located under the strap handle, to the right, i. e., in the opposite direction from the winding key. This will release the cover catch so that the cover can be easily removed. An empty spool will be found in position in the winding key chamber.

Next, break the seal on the film cartridge and place the spool in the empty chamber as shown in figure 2, taking care that the flanges of the film spool are on the inside of the film chamber and that the black paper leads off the top of the spool. With the roll resting against the end of the retaining spring press the roll into the film chamber. The film is now in position to continue loading; the retaining spring preventing any loosening of the black paper. Next draw the black

paper across the back of the camera and about two inches beyond the end of the camera. Then thread the end of the black paper into the wide slot in the empty spool, as shown in figure 3. Now turn the winding key slowly until the paper is secured, two or three turns should be sufficient.

After the film is secured replace the back cover by hooking it into the end of the camera opposite the strap handle, see figure 4, using care that the hooked end of the back cover engages in the U-shaped groove on the lower end of the camera, however, note that the back cover will not fully engage until the lock under the handle is pushed to the right, at the same time pressing on the back cover until it engages in the lock.

Figure 1.

With the back in place turn the winding key slowly until the figure 1 appears opposite the ruby window which signifies that the film is in proper position for the first exposure. To open the front of the camera press the hidden button located on the top of the camera (see figure 5) pull down bed until the side braces spring into position so that bed of camera is held rigidly.

When fitted with a Rapid Rectilinear Lens, the automatic

focusing lock should be set at the desired distance before drawing out the standard. To set the focusing lock, grasp the knob with the thumb and forefinger and pull out to release the spring, the lock can then be set for any distance by sliding the spring until it engages in the slot opposite to the desired distance as engraved on the focusing scale.

Next, draw out the lens standard until it engages in the focusing lock. When fitted with a Single Achromatic Meniscus Lens (except No. 3A Rogers Junior), the camera is now ready for photographing all objects at a distance of eight feet

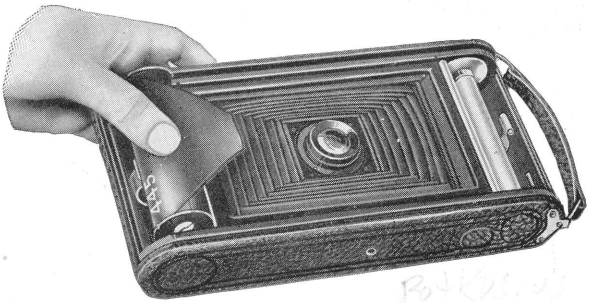


Figure 2.

or more. Note that the 3A Rogers Junior (single achromatic lens) is equipped with a focusing scale locking at 6, 8, 10, 15,

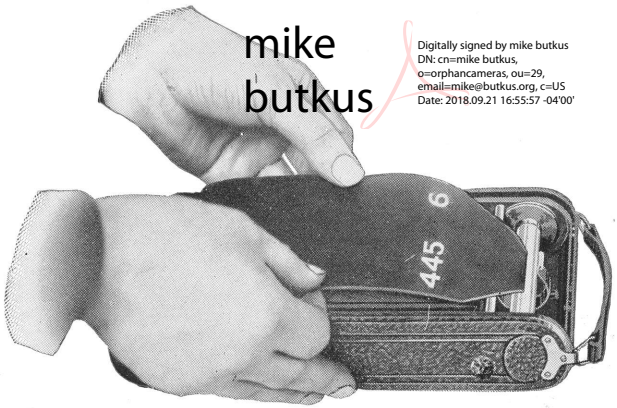


Figure 3.

20 and 100; for all distances greater than 20 feet, set the pointer on 100-foot mark.

When it is desired to change the focus, after the camera has been set, reset the focusing lock for the desired distance and move the standard backward or forward until the notch again engages in the spring on the focusing lock, as described above.

In order to insure sharp pictures, the distance of the object from the camera should be carefully estimated. If this is found difficult it will be well to step off the distance. With the pointer set at the proper distance the picture will then be in focus.

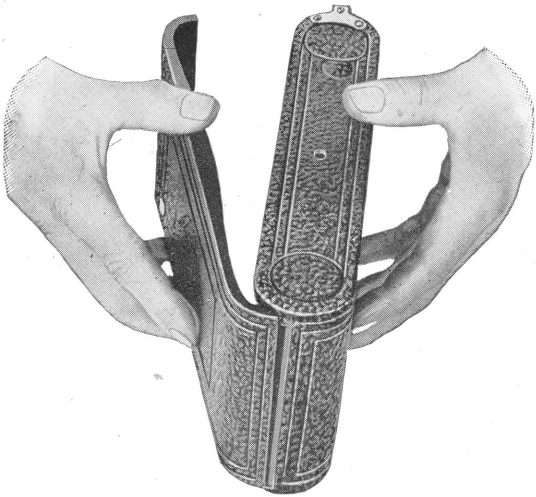


Figure 4.

To close the camera release the focusing lock, at the same time pushing the standard back into the body of the camera. Be sure that the standard is pushed back as far as it will go in order to eliminate any possibility of injuring the shutter when the bed plate is closed. To close bed plate press downward on the bed braces and close the bed until the catch engages.

The Shutter

The No. 1A, 3 and 3A Rogers Juniors are fitted with an Automatic Shutter (Ilex Model) working for time, bulb, 1/25th, 1/50th and 1/100th of a second. The No. 1 Rogers Junior Shutter works for time, bulb, 1/25th and 1/50th of a second. All shutters are operated by either the flexible wire release or the finger lever.

The pointer on the graduated scale at the bottom of the shutter indicates the aperture at which the lens is working, the graduated scale at the top of the shutter indicates the different methods of making exposures. When the pointer is set opposite "T" time exposures of any duration are obtained by pressing the lever or release to open the shutter and pressing it again to close it. When the pointer is placed opposite

Figure 5.

"B" bulb exposures are obtained by a single pressure of the lever, the lens remaining open so long as the lever is held down and closing instantly upon the release of the lever. Bulb exposures are especially valuable for making short time exposures. When the pointer is placed opposite 1/100, 1/50 or 1/25, an instantaneous exposure of this duration is obtained by giving the lever or release a single pressure, the

shutter opening and closing in the fractional part of a second, as indicated.

This shutter works automatically and is always set, ready for making either time, bulb or instantaneous exposures. Before attempting to take pictures one should become thoroughly familiar with the working of the shutter, noting its action under the various conditions described above.

Stop or Diaphragm

The stop or diaphragm is the opening which regulates the amount of light that is allowed to pass through the lens. The diaphragm is to be reduced or enlarged according to the strength of the light. When making exposures under ordinary conditions the pointer should be set on "1."

If the light is very strong set pointer on stop 2. The 3, 4 and 5 stops are to be used for making time exposures only, where unusual depth is required.

If the camera is fitted with a single lens set the pointer on stop 1 for all ordinary exposures. See the following pages for instructions on the proper stops and exposures for the various conditions of light.

Instantaneous or Snap Shot Exposures

In making instantaneous or snap shot exposures never use a diaphragm stop smaller than 2. Usually 1 is preferable, especially for short range pictures. Snap shots are usually made while holding the camera in the hand, the light should therefore be bright sunshine. On bright days snap shots can be made at any time during the day from three hours after sunrise to three hours before sunset. Earlier or later than this short time exposures should be given. It is a good rule never to photograph directly toward the sun, the best position being to have the light shining from behind the operator or over either shoulder and directly on the object to be photographed. If the direct rays of the sun strike the lens during the exposure the picture will be blurred. Do not try to photograph moving objects at a shorter distance than 25 feet distant from the camera. It is advisable to endeavor to catch them at an angle either coming toward or going from the camera, as good results will not be obtained if taken when the object is directly opposite. In photographing tall buildings at close range it is necessary to secure a position as near as possible opposite the center of the building, for if the camera is tilted upwards, the lines in the picture will be found to converge because of the fact that the top of the building is of a much greater distance from the camera than the bottom. This same rule applies when photographing small objects such as a dog; in this case the camera should be lowered to the center of the object to be taken, thus avoiding any distortion. When ready to make the exposure observe the following rules:

First, see that the pointer on the shutter is set opposite the correct opening and shutter speed.

Second, see that the focusing pointer is set opposite the proper distance of the object from the camera.

Third, be sure that an unexposed portion of the film is turned into position.

When ready for making the exposure hold the camera in both hands and as near level as possible so that the picture will be in true perspective. Locate the object in the finder by looking squarely into it, making sure that all of the object which you desire to photograph falls within the limits of the finder. When all is in readiness release the shutter, taking care not to jerk or move the camera during the exposure. A pressure of the lever will open the shutter for a fractional part of a second, thereby permitting the light to pass through the lens and forming an image on the sensitive surface of the film. After making the exposure turn the winding key to the left, watching the ruby window in the back of the camera until the next number appears. This is a very important point and one should early acquire the habit of turning the winding key after each exposure, thus avoiding the possibility of making two exposures on the same surface of the film.

Time Exposures

When making time exposures it is absolutely necessary that the camera be placed upon a tripod, table or firm support where there will be no danger of its being moved during the exposure. Center the object properly in the finder, set the shutter on "T" if a long exposure is to be made; where an exposure of a few seconds is to be made it will be found more convenient to set the pointer on "B." When the pointer is set on "T" give a single pressure of the lever to open and when sufficient time has elapsed an additional pressure to close, using care not to jar the shutter in either opening or closing.

In making time exposures it is necessary to use some judgment in regard to the length of time the lens should remain open. This is governed by the amount of light which falls upon the object to be photographed at the time of the exposure.

Time Exposures Out-of-doors

In making time exposures out of doors the pointer should be set on "B" and the shutter worked as quickly as possible.

WITH SUNSHINE use stop 3, opening and closing the shutter as quickly as possible.

WITH LIGHT CLOUDS use stop 3, giving from one-half to one second exposure.

WITH HEAVY CLOUDS use stop 3 and give from two to five seconds.

The foregoing calculations are for open air exposures. When photographing objects in shadows or on porches, no accurate directions can be given as too much depends upon the density of the shadows. Proper exposure can only be learned through experience or by using a scientific exposure meter such as the Watkins Bee.

CAUTION. Never attempt to make a time exposure while holding the camera in the hand, as a blurred picture is sure to result.

TIME EXPOSURES INDOORS

In using the following table the pointer should be set upon 1. In case the 2 stop is used twice as much time must be given. With a 3 stop, four times as much; and with the 4 stop, eight times the time shown in the table.

WHITE WALLS AND ONE WINDOW

Bright sun outside, three seconds.
Hazy sun, eight seconds.
Cloudy-bright, fifteen seconds.
Cloudy-dull, thirty seconds.

WHITE WALLS AND MORE THAN ONE WINDOW

Bright sun outside, two seconds.
Hazy sun, five seconds.
Cloudy-bright, ten seconds.
Cloudy-dull, twenty seconds.

MEDIUM COLORED WALLS AND ONE WINDOW

Bright sun outside, six seconds.
Hazy sun, fifteen seconds.
Cloudy-bright, thirty seconds.
Cloudy-dull, sixty seconds.

MEDIUM COLORED WALLS AND MORE THAN ONE WINDOW

Bright sun outside, four seconds.
Hazy sun, ten seconds.
Cloudy-bright, twenty seconds.
Cloudy-dull, forty seconds.

DARK COLORED WALLS AND ONE WINDOW

Bright sun outside, twenty seconds.
Hazy sun, forty seconds.
Cloudy-bright, eighty seconds.
Cloudy-dull, two minutes, forty seconds.

DARK COLORED WALLS AND MORE THAN ONE WINDOW

Bright sun outside, ten seconds.
Hazy sun, twenty seconds.
Cloudy-bright, forty seconds.
Cloudy-dull, one minute, twenty seconds.

The foregoing figures are for rooms whose windows get light direct from the sky and for any time during the day from three hours after sunrise to three hours before sunset.

NOTE—It is advisable when circumstances permit to use stop 2, doubling the time of exposure given in the above tables.

Home Portraits

In order to make portraits (large busts and heads) it is necessary to use a portrait attachment. For this purpose we strongly recommend the Supplementary Portrait Lens, which will enable you to make portraits of the same softness that marks professional work. The Supplementary Portrait Lens is mounted in a neat brass cell with adjustable springs and fits over the hood of the lens like a cap. Special directions for its use accompany each lens.

Removing the Film

No dark room is required for removing the film from the camera. However, it is best to perform this operation in subdued light, observing the following rules:

First: When the last section of the film has been exposed turn the winding key until all of the paper has been wound on the spool in the key-winding chamber. This can be told by the ease with which the spool turns.

Second: Remove the back of the camera as directed on the preceding pages.

Third: Draw the loose end of the black paper tightly around the spool and fasten it with the gummed sticker which will be found in the empty reel.

Fourth: To remove the cartridge from the camera, turn the camera face up and pull out the winding key to its full extent, then, with the forefinger of the other hand, pull back the retaining spring, located in the center of the film chamber, as far as it will go, which will allow the film cartridge to drop into the hand.

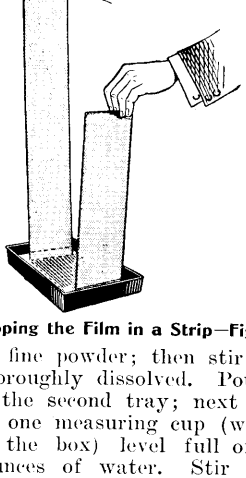
Dark Room Development

Films may be sent to us for development. However, in order to secure the greatest pleasure and profits from your camera we advise that the amateur develop his own films, for the process is both interesting and simple. The easiest and least expensive way to develop roll films is by using trays in a darkened room which is lighted only with the ruby lamp, care being taken that all white light is excluded. The following articles are recommended for the purpose:

A Ruby Lamp.
3 Composition Trays, 4x5 or 4x6 (postcard).
1 8-oz. Graduate.
1 Glass Stirring Rod.
1 Amateur Printing Frame and plain glass.
1 package of Ingento M. Q. Tablets or Tubes.
1 box of Acid Hypo.

Select a room or closet where all white light can be easily excluded. When development is done at night this offers no difficulty whatever. The reason that a darkened room is required is that the film is extremely sensitive to white light and would be spoiled if exposed either to daylight or lamp light for the fractional part of a second. Having provided the articles mentioned above, secure a pair of scissors, a pitcher of water and a pail for waste.

Set the ruby lamp on a table or shelf and light it. The subdued red light which it emits will not injure the sensitive film unless held too close to it. It is therefore advisable to place the lamp at least 18 inches away from the tray in which the developing is to be done; fill one of the trays with water, open the box of tablets and take two tablets from the large bottle and two tablets from one of the small vials; fill the graduate to the six-ounce mark and drop all four tablets into the water, immediately crushing them with a stirring rod



Developing the Film in a Strip—Figure 6

until reduced to a fine powder; then stir the solution until the tablets are thoroughly dissolved. Pour the contents of the graduate into the second tray; next prepare the fixing bath by dissolving one measuring cup (which will be found on the inside of the box) level full of the fixing compound in eight ounces of water. Stir until the solution is complete; then pour the contents of the graduate into the third tray. (Note—It is not necessary to mix the solutions in the darkroom, as they are unaffected by light). It is advisable to reserve one tray for the fixing bath only.

To develop the film break the seal with which the black paper is held and unroll until the point where the film is

attached to the black paper, then detach the entire strip of film from the black paper and allow the film to roll up loosely. Hold one end of the roll with the thumb and finger of the left hand and take hold of the free end with the right. Pass the film through the tray of clean cold water, holding one end in each hand as shown in the cut. Pass it in this manner through the water several times so that there will be no bubbles remaining on the surface of the film. When it is thoroughly wet the development may be commenced. Holding the film in the same manner, pass the film through the developing solution as described for wetting it, keeping it constantly in motion. In about one minute dark spots will begin to appear. These are termed high lights, and very soon after their appearance an image of the object will be discernible. Complete development in the strip by passing the film through the developing solution until all the detail has been brought out in the thinest negatives.

It will be noted that the negatives are of different density. This, however, is not an objection as this can be overcome in printing. The difference in density does not affect the difference in contrast. Keep the strip which is being developed in constant motion, allowing the developer to act from five to eight minutes, depending upon the rapidity with which the negative gathers density. The progress of development may be watched by holding the strip up to the lamp from time to time. It is advisable, however, to make the examination as short as possible.

Note: To avoid transparent spots after having passed the film through the developer the first time face down, reverse it and pass it through face up, holding the film down in the tray and drawing it lightly through the developer under the hand. This will break all the air bubbles. Transparent spots are caused by air bubbles adhering to the film during development.

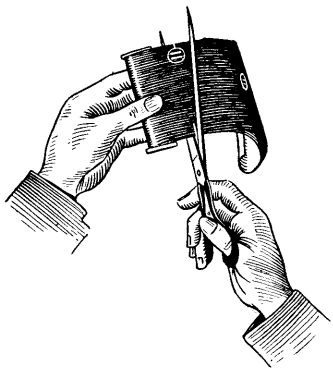
After the development has been completed, pass the film a few times through the clear water, then transferring it to the tray containing the fixing bath. When all of the creamy surface has disappeared from the unsensitized surface of the film fixation is practically complete. It is, however, advisable to continue to pass the film through the solution two or three minutes after the disappearance of the creamy color.

After the films are thoroughly fixed they should be washed in cold running water from forty to sixty minutes. If running water is not convenient, ten changes of fresh water should be used, keeping the films constantly in motion all the while. The thorough washing of the films is very important in order to remove all traces of the Hypo or else stains will appear after drying and the negatives will be ruined.

After washing, the films should be hung up to dry in such a manner that it does not touch the surrounding objects. The

place selected for drying should be free from dust. If a mild current of air is present the process of drying will be greatly quickened.

The temperature of the developing solution should be as near as possible to 65 degrees Fahrenheit. The fixing bath and water used for washing should be kept cold, ice being employed in extremely hot weather.



Cutting the Film for Separate Development—Figure 7

Separate Development of Each Exposure

The above directions apply to the development of the film in the strip. It is sometimes advisable to develop each section separately, especially where there has been a great variation in the exposures given. In this case the following directions apply:

In unrolling the film preparatory to developing in this manner, care must be taken that the end should not be allowed to roll up over the paper. The exposures should be cut apart with the black paper on top so that the divisions between each film can be readily recognized by the numbers which

appear on the edge of the black paper. Do not let the fingers touch the face of the film. The face is the dull side. The proper manner of holding the film is illustrated by figure 7.

After the film has been cut into sections as indicated above, place the sections in the tray containing the clear water, to remove air bubbles, covering the tray with a piece of brown paper or cardboard to exclude the light of the lamp. Take one of the sections from the water and immerse it face down in the tray containing the developer; rock the tray gently to prevent streaks and air bubbles. In about one minute the film will begin to darken, representing the high lights of the picture, and in about two minutes the image will be discernible. The common way of determining when the film has been fully developed is to look on the back to ascertain whether the objects in the picture have begun to show through. When developing films singly, from five to six minutes is usually required, the time varying according to the temperature of the solution.

When development is complete transfer the film to the tray containing clear water and rinse it two or three times, after which it should be placed in the tray containing the fixing bath. At this juncture the second section of the film should be put through the same process, care having been taken that none of the Hypo has adhered to the fingers, thus allowing it to come in contact with the undeveloped section of the film or with the developer.

Three or more negatives may be developed at one time by placing the films in the developer face down and alternating each section so as to prevent air bubbles; however, we recommend that the beginner develop only one section at a time until the necessary experience has been gained. As each successive section is developed and fixed it should be placed in the washing water. After the films have been thoroughly washed they should be pinned up separately to dry, care being taken that their surface is not allowed to come in contact with the surrounding objects.

While Ingento M. Q. Developing Tablets are recommended, the Rogers Developers in tubes will also be found highly satisfactory. Complete directions for making up the solution are printed on each tube. For those who desire to prepare their own developer we recommend the following formula:

Hydro Metol Developer.

Water	64	oz.
Metol	45	gr.
Sodium Sulphite (anhydrous)	1½	oz.
Sodium Carbonate (anhydrous)	1	oz.
Hydrochinon	90	gr.
Bromide of Potassium	12	gr.

Making Prints

There are in general use, three classes of paper used for making pictures; namely, blue print or ferro-prussiate paper, printing-out paper such as Solio, Disco, etc., and developing or gaslight paper, such as Rexo, Velox, Argo, etc. The first two classes are for daylight printing only, while the last class may be printed either in daylight or by artificial light.

Printing-Out Papers

Open the printing frame and place the negative face down upon the glass, then place upon this a sheet of blue print paper. Replace the back of the printing frame and secure it with the springs. It will be noted that the back of the printing frame is hinged so that a part of the print may be uncovered for inspection during printing, without disturbing its register with the negative. The loading of the paper into the frame should be done in a subdued light, that is, in an ordinary room, but as far as possible from the window. The unused paper should be returned to its package for protection from the light.

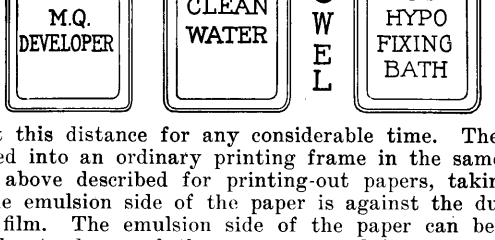
The loaded printing frame should be placed glass side up in the strongest possible light, direct sunlight being preferred. It is allowed to remain until the image from the negative has been sufficiently impressed on the sensitive paper. This can only be determined by an occasional examination of the paper. Print until the shadows become a gray bronze color, or until the high lights are slightly tinged with blue. When this stage has been reached remove the print from the printing frame, wash thoroughly in running water for 15 minutes or in several changes of cold water, allowing the print to remain in each bath a few minutes. After having thoroughly washed the print as above indicated, it should be hung up for drying. The Ingento Blue Print Paper is especially recommended as it is prepared especially for photographic purposes.

When using a printing-out paper such as Disco, Solio, etc., the frame should be loaded as directed above for blue print paper. The printing should be allowed to continue until the tone of the print is somewhat darker than is desirable in the finished picture. Our Toning and Fixing Solution is highly recommended for toning this class of paper. Mix the toning solution as directed on the package and pour it into a tray. The prints should be immersed in this solution face down so as to insure the even action of the solution over the whole surface of the print. After a moment or so, the print may be reversed so that the toning can be watched. Repeat this process from time to time during toning. The prints will begin to change color immediately upon immersion in the toning bath. At first they are of a reddish brown, changing gradually to reddish yellow, then to brown and then to purple.

Toning should be stopped when the desired shade has been obtained. At this point the prints should be transferred to a salt solution made by dissolving one tablespoonful of common table salt in 16 ounces of water. The prints should be allowed to remain in this solution about 5 minutes, after which they should be washed for one hour in running water or in twelve changes of water. They are then ready for drying, which can be best accomplished by using a blotter book. Several prints can be toned simultaneously.

Developing on Gaslight Papers

Developing Papers, such as Rexo, Velox, Argo, etc., are very popular with amateurs because of the simplicity in their operation, the excellent results obtained and the added advantage of being able to print them by artificial light. These papers can be handled with safety eight or ten feet away from an ordinary gaslight. They should not, however, be allowed to remain uncovered in the direct rays of the light



even at this distance for any considerable time. The paper is loaded into an ordinary printing frame in the same manner as above described for printing-out papers, taking care that the emulsion side of the paper is against the dull side of the film. The emulsion side of the paper can be determined by tendency of the paper to curl in that direction, or by biting a corner of the paper, the emulsion side tending to stick to the teeth. With the back of the frame clamped in position, it is exposed by holding it near a gas jet, lamp or incandescent light. The length of the exposure depends upon the distance at which the frame is held from the light, and the density of the negative. Exposure can also be made in subdued daylight; however, artificial light is preferred, as it does not vary in intensity as is the case with daylight and it is therefore much easier to judge the length of the exposure required.

With this class of paper no image is seen on the surface, until the print has been placed in the developer.

The larger the negative, the greater the distance it should be held from the light, the usual rule being that the proper distance is equal to the diagonal of the negative. The time of exposure varies with the distance the printing frame is held

from the light. If, however, daylight is used, it will be found advantageous to cover all the windows with postoffice paper, with the exception of an opening about one foot square. Over this opening two or three sheets of tissue paper should be pasted to diffuse the light, then use a piece of black cloth or any other opaque medium to cover this opening when the white light is not desired for printing purposes. In this case the frame should be held from one to two feet away from the opening during exposure. It is impossible to give exact directions as to the length of exposure on account of the great difference in the intensity of daylight at various times, the best method being to make test exposures with small strips of the paper used.

Place three trays on the work table as indicated in the accompanying diagram. Use enough solution to thoroughly submerge the prints, the temperature of the developing solution should be about 70 degrees Fahrenheit, keeping the fixing solution as near as possible to the temperature of 50 degrees. In making up these solutions always follow closely the directions accompanying the developer used. We cannot too highly recommend the Ingento M. Q. Developing Tablets for use with all developing papers. Having prepared the developer and fixing bath, the prints should be immersed in the developer, using care that the solution flows evenly over the surface, leaving no air bubbles. The image should appear in from eight to ten seconds. It will rapidly gather detail and density. When the desired tone has been obtained, it should be quickly removed from the developer and placed in the tray containing water, after which it is transferred to the fixing bath. For best results, we recommend the use of Rogers Acid Hypo. Directions for making the bath accompany each package. The prints should be kept in motion while in the fixing bath. From eight to ten minutes is required for thorough fixation, after which they should be removed and washed for an hour in running water or in twelve changes of clear water. Prints can be best dried in blotter books and for this purpose we recommend our Blotter Books. More explicit directions for printing will be found in each package of paper.

For those who desire to prepare their own developer, we recommend the following formula:

Water, soft or distilled	40 ounces
Metol	15 grains
Sodium Sulphite (anhydrous)	1 oz.
Hydrochinon	60 grains
Sodium Carbonate (anhydrous)	1 oz.
Potassium Bromide	6 gr.

Dissolve the chemicals in the order named. The temperature of the solution should be about 70 degrees Fahr.