



PHOTOGRAPHY
with a
WATCH POCKET
CARBINE
Roll Film Camera

MODELS 6, 7 & 8



"Butcher's British Cameras"



M I D G . . .

C A M E O . . .

K L I M A X

C A R B I N E

M A X I M . . .

P R E S S M A N

S U N D R I E S

C H E M I C A L S

W. BUTCHER & SONS, LTD.

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FARRINGTON AVENUE,
LONDON, E.C.4

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Photography with a Watch Pocket Carbine Camera

Nos. 6, 7 & 8.

CHAPTER I

THE WATCH POCKET CARBINE CAMERA.

IT is a true saying that there is a Carbine for every taste and pocket, and the Watch Pocket Carbine will appeal to a larger community than perhaps any other camera. There are expensive, and there are cheaper models, but the workmanship and care of detail is the same throughout, and a more fascinating and at the same time practical little photographic instrument is not to be found the world over. Its completeness and its size are a visible challenge to the old saying: "You can't do two things at once," for here is the smallest of cameras with as complete a range of movements as one expects to find in the most complicated outfit. The small camera has at last come into its own, for fitted with a good lens, any picture will be worth enlarging, and thus beautiful pictorial results are obtained which otherwise would never have been attempted. Its very portability opens up a field of opportunity which would be impossible with a bulky camera to the average person. The finish and quality of the Watch Pocket Carbine will commend itself to all who love a beautiful piece of mechanism.

The camera is fitted with three types of shutters: Model 6 with Lukos II. speeds 1/25. 1/50 1/100.

Model 7 with Lukos III., speeds one second to 1/100th.;
and Model 8 with Acme shutter, speeds one second to
1/300th.

CHAPTER II.

THE CAMERA DESCRIBED.

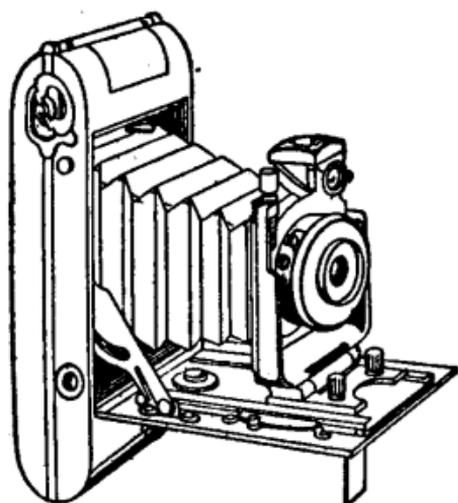


Fig 1.

The camera consists of a metal body rounded at the ends. This body contains two chambers for the film, and a winding key is fitted at one end which engages in the film spool. The bellows of the camera connecting the lens plate and body are made of leather. The front of the camera is closed by a base board which, when open, is held in position by two struts.

When closed, the baseboard is secured by a catch. Two runners are fitted to the baseboard, on which the cast U-shaped front travels. The lens plate, which carries the lens and shutter, is fitted to the front. This plate carries the view finder, which folds up when the camera is closed, and may be turned sideways for horizontal pictures. The front can be moved up or down by the screw at the top. The carriage is fitted with two finger grips, one of which also acts as a catch, both when the front is closed or when it is pulled out to infinity. A radial focussing attachment is fitted to one side and a release holder to the other.

CHAPTER III.

LOADING THE CAMERA.

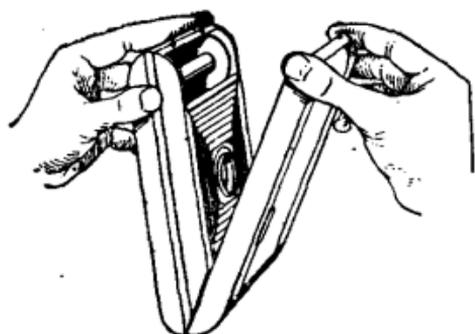


Fig. 2.

sure you understand the various movements.

Loading.—Remove the back of the camera, holding it in the left hand and pressing the two catches at the top of the body with the right hand,

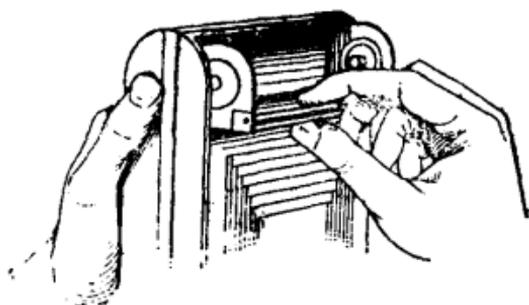


Fig. 3.

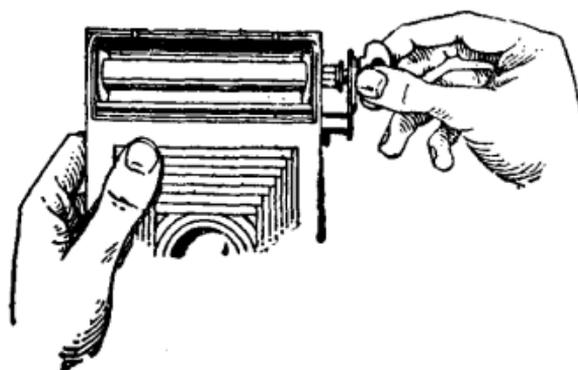


Fig. 4.

at the same time pulling away (fig. 2). This will disclose the two film chambers, with their film holders. Remove the holder in the bottom chamber (fig. 3). It will be found that one

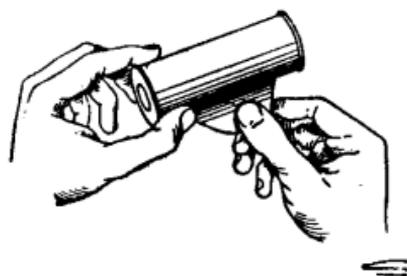


Fig. 5.

the paper used for sealing, then with the holder between the forefinger and thumb, insert it into the camera gently (take care that the film does not loosen itself), with the roller to the top (figs. 5, 6, 7). Take hold of the loose paper end of the film and draw it across the roller towards the other chamber, where there is an empty film spool. In this spool there is a slot larger on one side than the other. If there is no empty spool, remove spool holder by pulling out winder (fig. 4), and insert one.

By means of the winder, turn the large slot up and insert the paper in it (fig. 8). Give the winder two or three turns, and replace the back. This should be done by putting it on slightly lower than its proper position and pushing it up until the catches indicate that it is securely

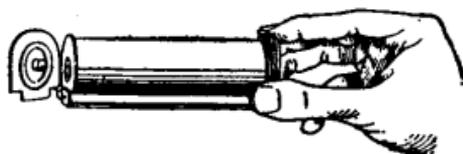


Fig. 6.

fastened (fig. 9). At this point press the concealed catch just under the winding key, open the base-board and turn the winding key slowly (fig. 10). The film will be observed through the little red window in the back

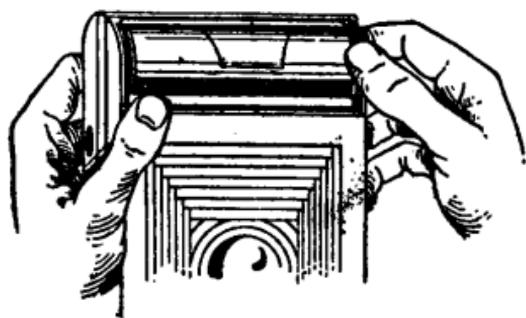


Fig. 7.

slowly moving. After about a dozen turns, a hand, or other similar mark will appear; this is a warning of the approach of No. 1, which will appear after a few more turns. Do not turn quickly or the number will pass the window unnoticed, and once past, there is no bringing it back. If

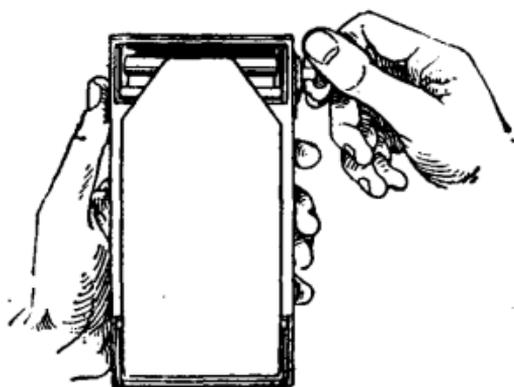


Fig. 8.

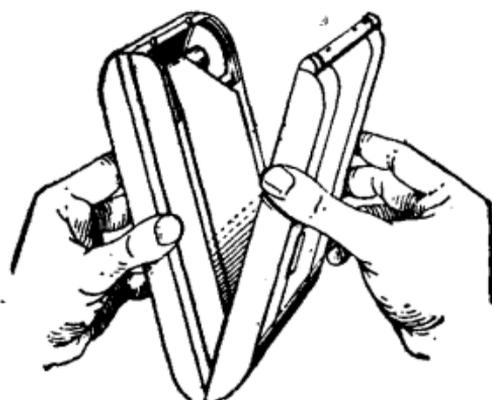


Fig. 9.

the camera is not required for use at once it is advisable to leave the film at safety, that is to say, with the hand showing at the window, then should the shutter be inadvertently released no harm will result. *Never turn the film with the camera closed.*

CHAPTER IV.

THE CAMERA IN USE.

Open the camera by pressing the concealed catch under the winding key, take hold of the base-board and press it down until the side struts clip into position (fig. 10). Be careful to see that this is

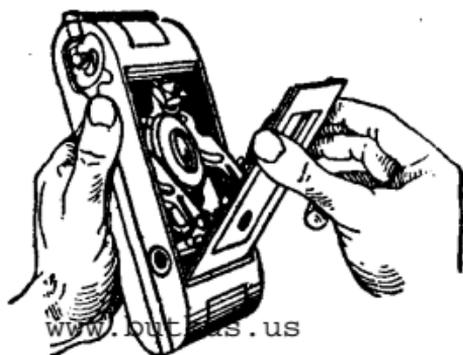


Fig. 10.

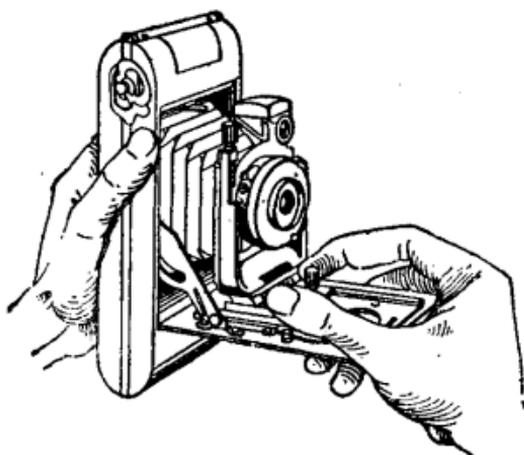


Fig 11.

accomplished satisfactorily. Take hold of the finger grips on the carriage and draw out. The left-hand grip will move inwards releasing the catch which holds back the carriage. Draw the front along the runners as far as it will go and release the finger grips (fig. 11). The front is now fixed at infinity, *i.e.*, for pictures over 30 ft. away.

Focussing.—A scale (fig. 12) will be seen on the right indicating various distances, from twenty-five to five feet. This is for focussing on near objects and when the subject is nearer than twenty-five feet. There is a small stud on the right of the scale, and this is for moving the front

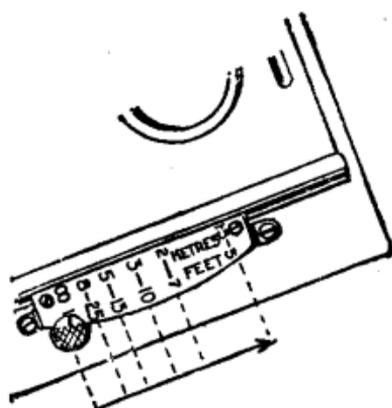


Fig 12

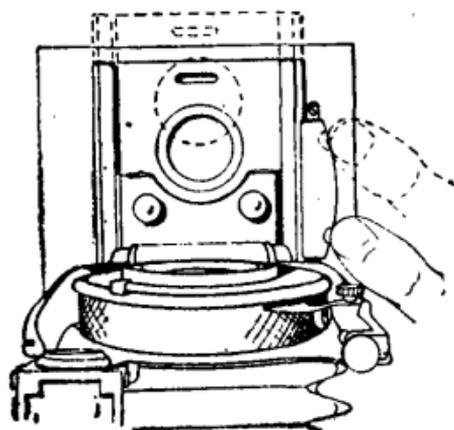


Fig 13

forwards for the nearer objects. To operate this, press down the stud and push forward until opposite the distance required (fig. 13). After use, this stud must always be returned to its original position at infinity. When focussing on any particular distance, make sure that the stud has

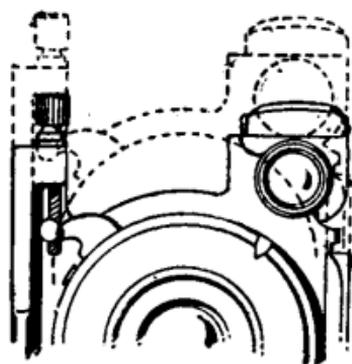


Fig 14

fallen into the proper position. This will be noticeable by a definite click.

The Rising Front (fig. 14).—A small screw will be seen at the top of the U-shaped standard. This operates the lens board, moving it up or down at will. It should be remembered that the camera must always be square with the object to be photo-

graphed, especially when the latter is a building. If the camera is pointed upwards, the top of the building will appear to be falling inwards, and *vice versa* if the camera is pointed down. To overcome this the rising front attachment is fitted, which allows high buildings to be photographed without distortion. To thoroughly understand this, take a piece of frosted or ground glass and, with the back off, place it over the square hole revealed, then focus upon some building. Having done this, operate the knob of the rising front and note the change of position of the building on the ground glass. Once this movement is well understood it will be found most useful in all kinds of work. Always see that the two white dots are opposite each other before closing the camera.

The View Finder (fig. 15) is collapsible and may be turned to the left for horizontal pictures.

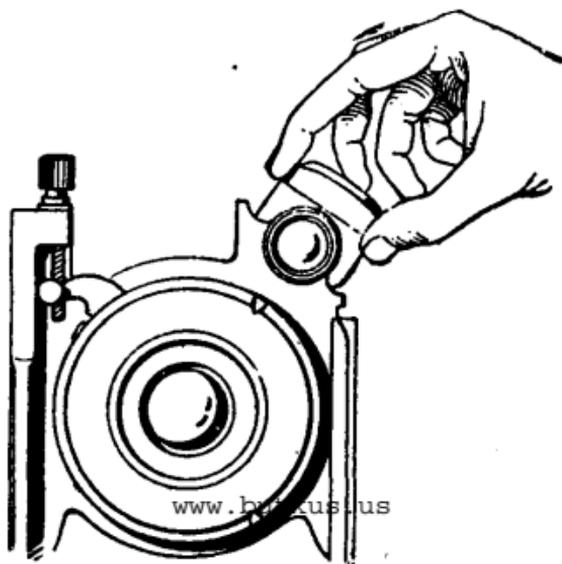
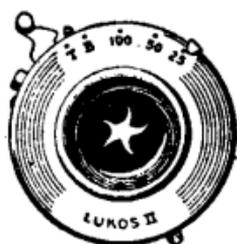


Fig. 15.

The Shutter.—This is the “exposer,” or method by which an exposure is made. It carries the lens and is fitted to the front of the camera. Model VI is fitted with the Lukos II., Model VII. with Lukos III. and Model VIII with Acme.



Lukos II



Lukos III

Lukos II.—This is a shutter fitted with three speeds and time and bulb movements. The three speeds are $1/25$ th, $1/50$ th and $1/100$ th of a second, and are used according to the light and type of subject. Time is used for long exposures and interiors, and bulb for instantaneous exposures over $1/25$ th sec.

Lukos III.—This shutter is similar in every respect to the Lukos II., but in addition has three more speeds, namely, $1/5$ th, $1/2$ and 1 sec., which will assist in making accurate slow exposures.



Acme.

Acme Shutter—This is a thoroughly sound shutter, giving speeds from 1 to 1/300th sec., working on a system of gear wheels. It is suitable for all types of work.

The Iris Diaphragm is used to control the light for various subjects, and the following should serve as a guide.—*f*8 and anything larger, for portraits and near views; *f*11, for average views; *f*16, for distant views; *f*22 and *f*32, sea and cloud pictures and interiors where long exposures can be given. It must always be remembered that each smaller stop doubles the exposure. For instance, taking a view at *f*11 requires an exposure of 1/50th sec. The same view at *f*16 would require 1/25th.

The Flexo Release is supplied with all these cameras. When in use it is screwed into the hole on the side of the shutter. It should generally be used for time and bulb exposures when the camera is resting on a table or stand, and it is a good practice to use it for any exposure. Always replace it in the holder after use (fig. 17).

Making an Exposure.—The camera being loaded and No. 1 in position, examine the subject carefully and having referred to the exposure table, decide what exposure to give. (First attempts should be made in the open air in a good light, with the shutter set at 1/50, and the diaphragm scale at the largest aperture. Make two exposures under these conditions, then close the diaphragm to *f*11 and make two more.

Again close it to *f*16 and expose the last two sections of the spool.

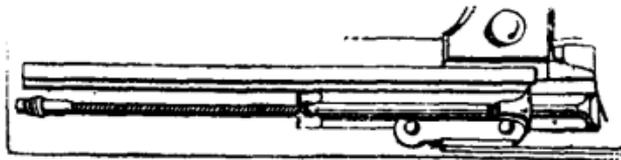


Fig 17.

The development of this film will serve as an example of the difference made by using different sizes of the diaphragm). Then decide what stop to use and adjust that. Attach the Flexo release, and having done this, judge, or in close pictures actually pace out, the distance of your

subject from the camera, and set the focussing lever accordingly. Then having assured yourself that all you wish to include is shown in the finder, look at your subject and press the release with a steady pressure. Do not jerk or the picture will be blurred. The exposure being made,

immediately wind another film into position: make a habit of doing this immediately after exposure. It is very annoying to find that two pictures have been made on one film.

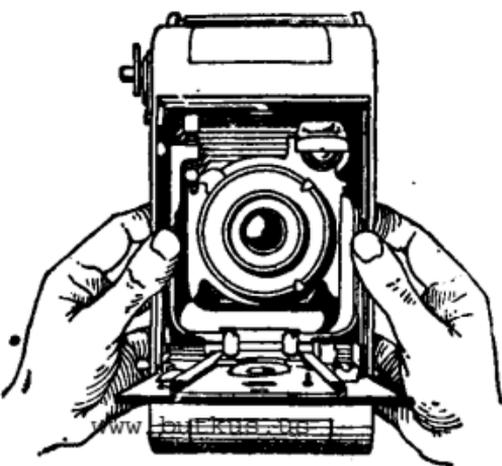


Fig. 18.

and push the front along the runners towards the body of the camera until it finally stops. A definite click should be heard when the front is right home. Place both thumbs on the side struts near the body, the fingers behind the body and press down the struts. The baseboard may then be folded up and finally closed.

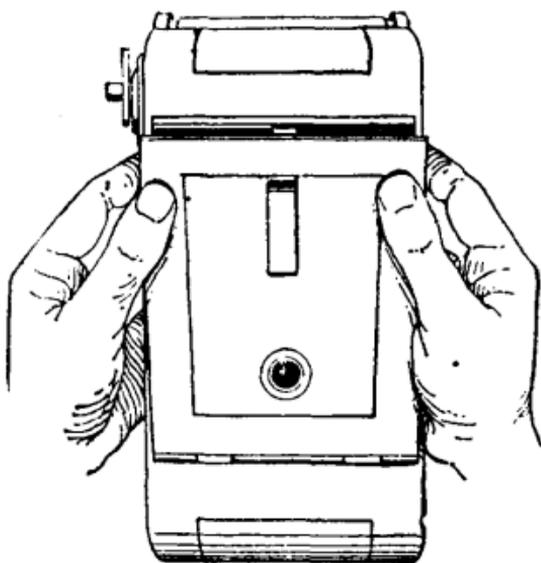
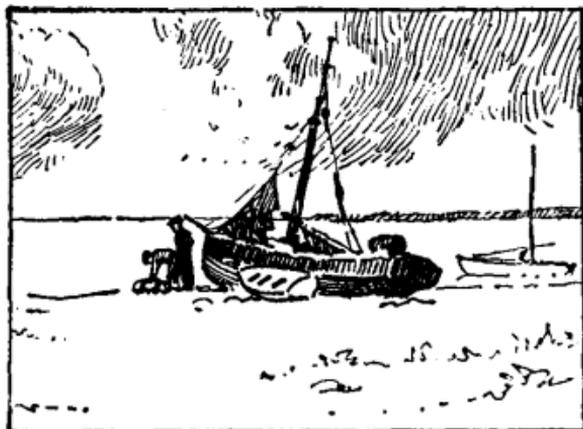


Fig. 19.

To unload Spool.—The sixth film having been exposed, turn the winder about a dozen times and remove the back. Pull the winder outwards and remove spool holder. Transfer empty spool from the other holder and replace in winder end. Re-load as described in "Loading."

CHAPTER V.

PICTURE COMPOSITION.



Anybody with ordinary common sense can take a photograph, but it is not everyone who without a thought can "make a picture." We have only to

look at pictures produced by serious workers to know that photography as a means of producing pictures is anything but automatic and mechanical. We often hear our friends, the budding and would-be artists, denouncing with all the vigour of their ignorance the lack of real art in photography, and that a camera is a thing without a soul. So is the palette and brush before the soul gets behind it. It is the same with a camera: it gets its soul from the photographer. As we see the painter's masterpiece and the wooden, stiff photograph, so also do we see the beautiful photograph and the wooden, soulless painting. In other words, the brush or the camera is only the outlet for the artist's inspiration, be he painter or humble photographer. The composition of a picture requires more care than any-



thing else. The photograph is either made or marred by composition, and a little extra patience and thought beforehand will often turn a dull subject into a pictorial success.

The particular points to be studied in landscapes are:—1. Foreground.

2. Background.

3. Lighting.

4. Position of objects.

5. Position of photographer.

The general fault with No. 1 is that too much foreground is given, making objects unnecessarily flat and indistinct. In No. 2 the background and distance can very often be improved by a slight alteration in the position of the camera. As regards lighting effect, this is most important and has a great effect on the photograph. Heavy shadows should be avoided as far as possible.



Portraits and Groups. - As everyone knows snapshot



portraits are nearly always more pleasing and truer to life than the studio type, and much can be done by the enterprising amateur in obtaining striking likenesses. Any attempt at posing is to be avoided: a little patience, discrimination as regards the best moment, and study of the lighting conditions prevailing, will generally repay the photographer with the admiration the resulting portrait receives.

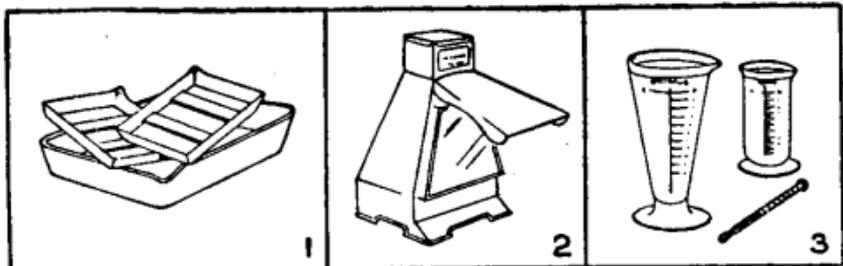
DEVELOPING *and* PRINTING

by
ALEC J. JONES

REQUIREMENTS.

FIRST of all you must arrange a room that can be made quite dark. It does not in the least matter what room it is, but absolute darkness is essential. Naturally a Bath Room is convenient because there is a water supply, and also a little splashing on the floor will not do any damage. Still, if this is not convenient you may quite easily use a Sitting Room in the evening, taking the natural precaution to spread two or three newspapers on the table. I suggest this is natural because I hope you realise that any success with Photography must start with cleanliness and end with cleanliness, and cleanliness must environ you all through. There is another important factor to be observed in all your operations—do not hurry.

The next requisite is a Ruby Lamp; you can buy one from 2/- upwards. You must, however, be rather careful, as all Ruby Lamps are not what they seem. The best plan is to pay a fair price to begin with and obtain a good one—it is cheaper in the long run. It is important that it is light-tight, or rather "white" light-tight: you will easily see the first time you try it if any white light leaks out, and if so, you must stop the leaks or discard the lamp. The remaining requirements are two or three developing dishes, a glass measure and a washing tank. The size of the dishes should conform to the size of the plates in use, those intended for the developer are preferably of xylonite, but a large one of porcelain is the most convenient for the Fixing Solution. If you are using small plates this dish may very well be large enough to take four of them.



- 1.—Procure two xylonite dishes and one porcelain dish
- 2.—Always choose a lamp with an adjustable shade.
- 3.—Primus "Everseen" measures are visible in the dimmest light.

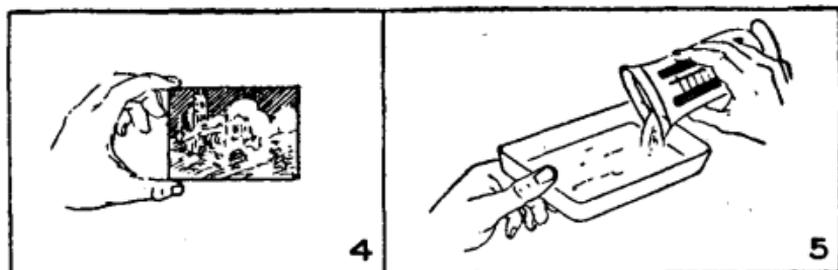
A Thermometer will be found of great service to test the temperature of the solution.

A Dish Cover of some kind should also be provided. This may consist of the lid of a card-board box, a little larger than the Developing Dish. It is really important to have a Dish Cover so as to prevent the plate being exposed to the full rays of the Ruby Lamp all the time the development is taking place.

DEVELOPERS.

There is a bewildering variety of developers. The action of all is similar and the results pretty much the same. The most popular are Pyro Soda (P.S.), Metol Quinol (M.Q.) and Azol. It is best to commence with Pyro Soda and later on you may try the others. These developers may all be purchased ready mixed, requiring only the addition of water. The "Primus" Pyro Soda is supplied in two bottles, and full directions for the mixing is printed on them. Metol Quinol is supplied in the same form, whereas Azol is in a single solution, and all will keep almost indefinitely.

The two former developers are also supplied in powder form in packets, but beginners are advised to commence with the liquids - they are very economical and save a lot of trouble.



4.—Always handle plates, wet or dry, by the edges.

5.—Always pour on the developer with one sweep

FIXING SOLUTION.

Is made with Hypo and water. There are two varieties of Hypo, Ordinary Hypo and Acid Hypo—the latter is the best for all purposes (except for Self-Toning papers). The Solution is made by mixing 4 ozs. of Acid Hypo with 20 ozs. water. It dissolves readily in warm water but the solution must not be used warm. You must allow it to cool down. In very cold weather it may be slightly warmed above the tap-water temperature but do not use it above 60° or 70° Fahr.

PROCEDURE.

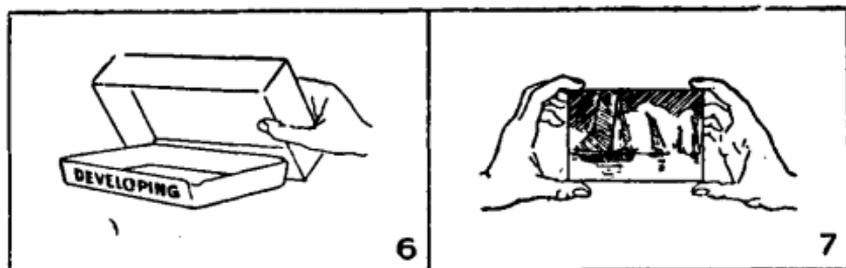
You will already know that the side of the plate that the picture will be on is the one with the creamy film on it which is called the "Emulsion" side.

The plate must be placed in the dish with this side uppermost.

First of all prepare the developer and have it ready in the measure. Mix up sufficient, don't be mean with it, about 1½ or 2 ozs. are necessary for a ¼ plate.

Then pour the Fixing Solution into the china dish and have it ready at the side.

Place the exposed plate in the developing dish, taking care all the time to keep it *as far* from the light as you possibly can, only just near enough to enable you to see what you are doing.



6.—Pour on developer and cover up, then wait the estimated time.
 7.—The result will be a sparkling negative, correctly developed.

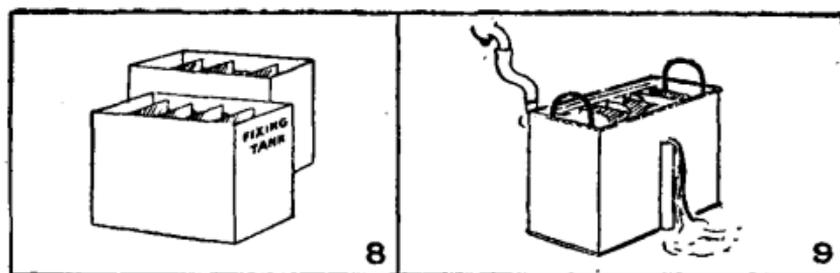
Then pour the developer on carefully but quickly, and be sure that it covers the whole surface of the plate *at once*, or irregular markings may result.

Place the cover over the dish and rock it gently underneath. If the cover is large enough you will find this quite easy—don't rock violently or you will upset the developer, just gently so as to keep the liquid in motion. After about one minute look at it and see if there is any sign of darkening. The image soon appears, and if you are satisfied that something really is coming on, replace the dish cover and continue the gentle rocking.

The time occupied to develop a negative greatly varies. It depends on—

1. The speed of the plates (rapid plates take longer than slow ones).
2. The temperature of the solution. In warm weather it acts more rapidly than in cold.
3. There is also a variation in the time occupied by different developers.

On again examining the plate, watch carefully to see if the image is coming out fairly clear and then turn the plate so that you can look at the back, and when the image shows *clearly* through, take the plate out and put it in the Fixing Solution.



8.—Fix your plates in a lead-lined tank for preference.

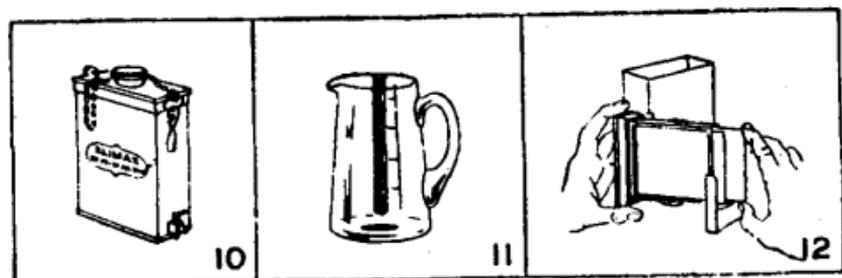
9.—Wash under the tap until all traces of hypo disappear.

DENSITY.

One of the little difficulties that beginners experience is to judge when a negative is sufficiently dense. The different makes of plates vary very much in respect to showing the image through the emulsion, and the only sure guide is "Experience." After you have developed a few plates you will soon see how long you should give them, and do not be misled if you see the whole surface covered. In most subjects it should be covered all over. Incline to rather over than under develop. Most beginners are in too much hurry and think the density is sufficient before it really is so, and then when they take it out of the fixing are horribly disappointed to find their negative very thin and miserable.

FIXING.

When the developed plate is placed in the fixing solution any remains of the creamy film will rapidly disappear. It is dissolved out. But again, do not be in a hurry—let the plate remain in the solution not less than 15 minutes to make quite sure—longer will not matter, and may be an advantage particularly in cold weather, because although you may not be able to see any of the unexposed emulsion, a little will still be there. If you remove the plate too quickly you will be sorry afterwards, so again err on the side of caution and leave the plate in for at least 15 minutes or more.



- 10.—The "Klimax" is the ideal daylight developing tank.
 11.—A measure jug is a most desirable accessory.
 12.—Load the plates into the rack in the dark room

WASHING.

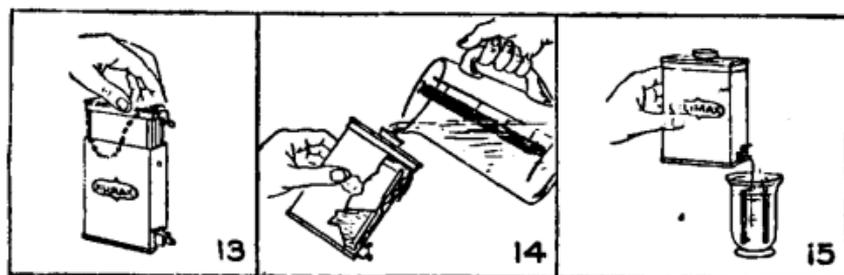
The negative must be carefully washed either in several changes of water or in one of the "Useful" washers. About half an hour will suffice in summer but in cold weather efficient washing will take longer. The object is to remove all traces of the Hypo and this is less soluble in cold water.

DRYING.

The negative must then be carefully dried—you can accelerate this by wiping the glass side quite dry and standing it upon edge on a piece of blotting paper and then place it in a rack in a current of air. Do not try and dry it in front of the fire or you will melt the emulsion.

DEVELOPING FILMS.

The procedure for dealing with films varies slightly from plates, the theory is the same, but as the whole strip has to be dealt with it is obvious an ordinary dish is not suitable. Resource must therefore be made to a special appliance, such as a Trident Weight. This consists of a rather heavy Trident made of china, which must be placed in the developing dish before the developer is poured in. The film should have a clip fixed on each



- 13.—*Still in the dark room, lock the plates into the tank.*
 14.—*The developer can be poured in in daylight. Note.—During development, reverse tank occasionally*
 15.—*Remove the developer, and then replace with fixing solution.*

end to make it easier to hold and should be introduced into the developer underneath the centre prong of the trident, it can then be drawn back and forward through its whole length until development is complete. You must remember that as only part of the film is in the developer it will take much longer than a plate, as you will be developing say six exposures at once, and so you must allow for this. In dealing with films the side with the emulsion on must be placed downwards, so that there is no chance of abrading it by contact with the surface of the trident weight.

The fixing is conducted in the same manner as plates, except that you require either a larger dish or you must cut the negatives off at their margins with a pair of scissors.

Films are dried by pinning them along the edge of a shelf with glass push pins.

PRINTING WITH SELF-TONING PAPER.

A printing frame is required and if you are using films it must have a piece of glass in it to support the film. Self-toning paper "prints out," that is, the image can be clearly seen. It must be printed rather deeper than you might think necessary, as it will lose considerably in the fixing. In all printing operations great cleanliness is



16.—Separate film from the paper backing.

17.—Develop roll films in the length by using a Trident weight.

18.—Or a Carbine Film Dish.

again a *desideratum*, dirty or greasy fingers will mark the prints and ruin the results. The prints should be washed in a few changes of water and then transferred to a Hypo bath, which should always be quite fresh. Make up a new dose of solution for each batch of prints. For Self-toning paper do not use Acid Hypo. The bath should be composed of :

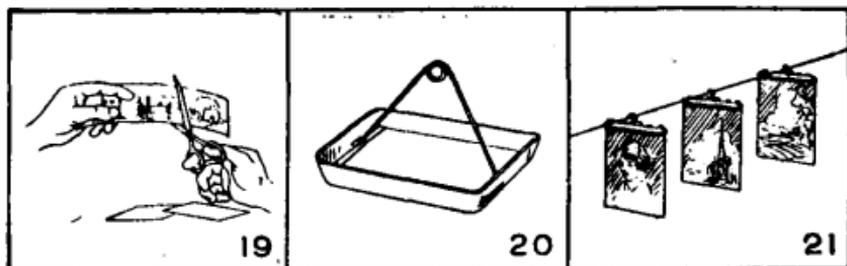
Hypo ordinary, 4 ozs.

Plain water, 20 ozs.

About 15 minutes will suffice for fixing, but do not allow the prints to stick together. Keep them moving and wash well in a few changes of water. It is even more necessary to well wash the prints than the negatives, as if any traces of Hypo is left in them they will soon fade. At least a half-dozen changes of water are necessary and the time consumed should be about half an hour. They may be dried on special blotting paper which is sold for the purpose, or they may be squeezed down on to a Primus Glazer or Ferrottype plate, and left till they are bone dry, when they will easily come off.

GASLIGHT PRINTING.

The next important process is called Gaslight, and it is one of the most satisfactory as the prints can be rapidly made and, more important, the work can be done in the evening, as the exposures are made by artificial light.



19.—If one exposure required special treatment.

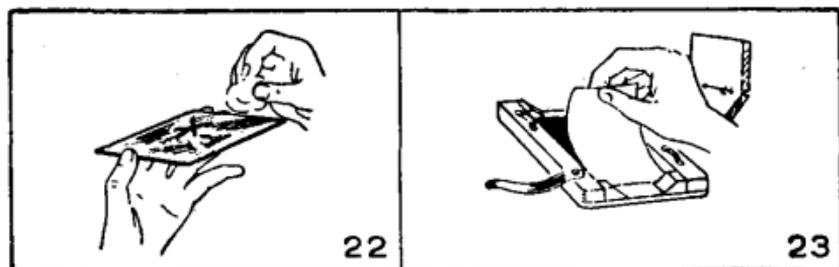
20.—The Primus developing clips prevent curling.

21.—To dry, hang films up by clips on a line.

The Gaslight papers are coated with an emulsion similar in constitution to that on the plates, but it is *very much* slower and may be exposed to gaslight or very weak daylight without any risk of fogging. They yield very pleasing black and white prints, and if brown tones are desired they can be easily toned with one of the many Toners which are sold ready made. Gaslight papers do not print out, the image is invisible and it must be developed in a similar manner to a plate. The most suitable developer is the M.Q. and the solution is stronger than that used for plates. Remember that Pyro Soda will not do, as it will stain the paper brown, but there are many other developers, such as Serchol, Amidol, etc. Still the beginner is advised to commence with M.Q. You will also require some Bromide of Potassium. This is an absolute necessity and without its use you will never obtain clear whites. Either buy some from your dealer ready made or make up a little into what is called a 10% solution. This consists of $\frac{1}{4}$ oz. of Potassium Bromide to $2\frac{1}{2}$ ozs. water. It lasts a long time as only about 8 or 10 drops are necessary for 2 oz. developer.

FIXING.

Use *Acid Hypo* for fixing. always fresh—throw away any old bath after using it.



22.—*Before printing, clean glass side of negative.*

23.—*Lay in printing frame film up, and place a sheet of paper, sensitised surface down, in contact.*

EXPOSING

At first this presents a little difficulty, but if the directions are carefully followed and a little intelligence employed you will very soon find out how to go to work and not waste many prints. The paper must be placed in a printing frame with the smooth side towards the emulsion side of the negative. It must then be exposed to the light. The light employed is usually either candle, gas or electric, which ever you have available. The length of the exposure depends on three things:—

1. The density of the negative.
2. The power of the light.
3. The distance the frame is held from the light.

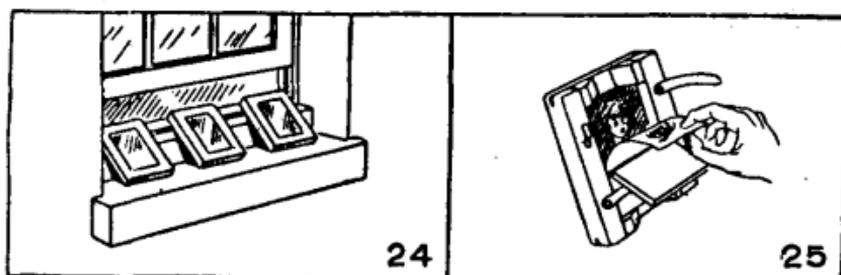
It is obvious that a candle will be the slowest, and that the electric will be the quickest.

DENSITY.

Pick out a few negatives, look through them and sort into two or three batches according to what you think are about the same density, so that similar exposures may be given to those that are alike.

DISTANCE.

The distance the frame is to be placed from the light is easily dealt with by making a mark on the table, say at



24.—Place frames in the SHADE to print.

25.—Occasionally examine, until fully printed out.

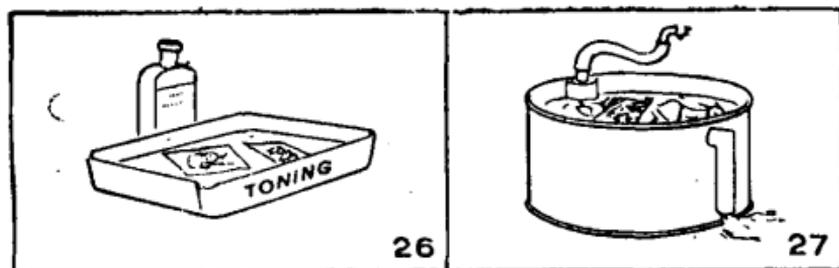
6, 9 or 12 inches—6 inches is a good distance, and keep to it exactly if you want to find a gauge.

TIME.

The way to ascertain exactly the correct time to expose is to make three test exposures on one piece of the paper under the negative selected. Take a piece of cardboard that will cover the front of the frame, hold the frame on the mark on the table and remove the card cover about $\frac{1}{3}$ of the surface, expose for three seconds; then remove it for another $\frac{1}{3}$ and expose the two-thirds for another three seconds; lastly, remove it altogether and expose the whole for a further three seconds, by this means one portion will be exposed for three seconds, one for six, and one for nine seconds.

On developing the print you will see which is the right one. If neither seems accurate, try again and further vary the exposures.

The only guide one can give is:—with a 16 c.p. electric light at 6 inches and a normal negative, the exposure will be about 9 or 10 seconds; but as the different makes of papers vary you can really only gain your experience by first making a test exposure.



26.—Then tone until the desired tone is arrived at.

27.—Then fix and wash until all traces of hypo are removed.

Gaslight papers develop up very rapidly. They come up almost at once and you have to be quick or they soon over develop. A little before they appear dark enough, pour off the developer, take them out instantly and immerse in the fixing. Let them remain for about 15 minutes: keep them moving, then wash and dry in the same manner as described for "Self-toning."

If these simple instructions are followed, with reasonable care and a little intelligence you will have very few failures and making photographs will become a real pleasure.

As you progress you will want to know how to "intensify" thin negatives, "reduce" over-dense ones and to retouch them, then you must consult one of the many complete Manuals.

EXPOSURE TABLE.

<i>Subject.</i>	<i>Ordinary Plate</i>	<i>Medium Plate.</i>	<i>Rapid Plate or Film.</i>	<i>Extra Rapid Plate.</i>	<i>Ultra Rapid.</i>
	<i>sec.</i>	<i>sec.</i>	<i>sec.</i>	<i>sec.</i>	<i>sec</i>
Open seascapes and cloud studies - -	1/30	1/45	1/90	1/120	1/150
Open landscapes with no very heavy shadows in foreground. Shipping studies or seascapes with rocks, beach scenes - -	1/18	1/30	1/50	1/70	1/90
Ordinary landscapes with not too much foliage, open river scenery, figure studies in the open, light buildings, wet street scenes, etc. - - -	1/10	1/15	1/30	1/40	1/50
Landscapes in fog or mist, or with strong foreground Well-lighted street scenes - - - -	1/8	1/12	1/25	1/30	1/40
Buildings or trees occupying greater portion of picture. River scenes with heavy foliage - -	1/4	1/6	1/10	1/15	1/20
Portraits or groups taken out of doors, not too much shut in by buildings -	1	2/3	1/3	1/4	1/5
Portraits in well-lighted room, light surroundings, big window and white reflector - - - -	4	3	1½	1	¾

Exposures calculated for aperture *f*8 mid-day summer.

For aperture <i>f</i> 4.5 - - - -	divide by	4
.. <i>f</i> 5.6 - - - -	..	2
.. <i>f</i> 11 - - - -	multiply by	2
.. <i>f</i> 16 - - - -	..	4
.. <i>f</i> 22 - - - -	..	8
After 4 p.m. and before 11 a.m. - -	..	2
Between September and March - -	..	2

