WATCH POCKET "CARBINE"

W. BUTCHER & SONS LTD. LONDON

PRINTING FRAME

of white pine, with perfect fitting backs, complete with glass front.

Price - 4d.

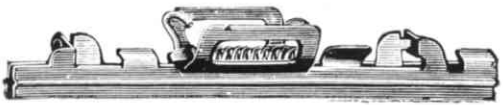
THE "TRIDENT" FILM WEIGHT.

Made of porcelain and shaped in the form of a trident, under the central bar of which the film is drawn through the developer. It is made heavy so that it cannot be easily displaced.

Economises developer and prevents staining the fingers.

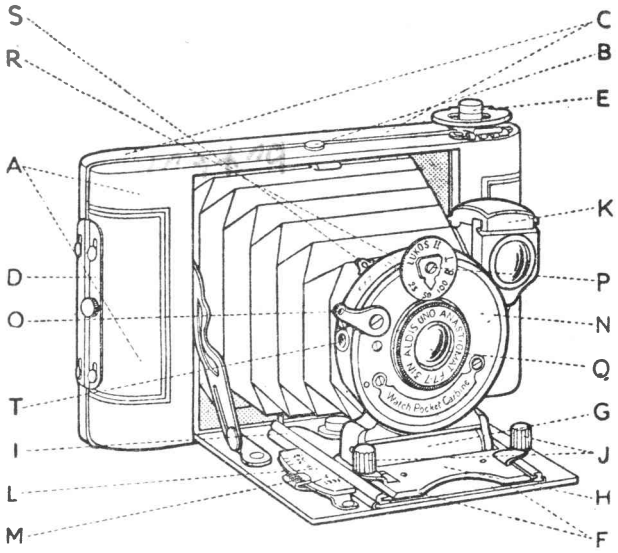
PRICE :—No. 1, for Watch Pocket Carbine, **1/0.**

THE PRIMUS FILM CLIP.

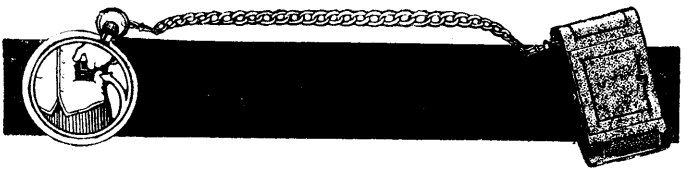


Avoids the necessity of handling the film and prevents soiling the fingers. By means of the small folding hook, the films can be hung in a trough for time development, or in a receptacle for washing, and finally on a line to dry.

Strongly made in White Incorrodible Metal, 6d. each.



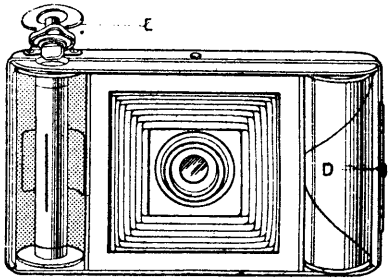
On receiving the WATCH POCKET CARBINE it should be opened by pressing the catch B, and then carefully compared with the illustration, so that by means of the letters the names of the various parts may be identified to assist in understanding the directions for working.



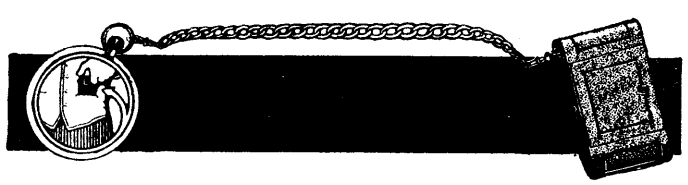
Will make a picture $2\frac{1}{4} \times 2\frac{1}{4}$ inches, it takes any make of roll films, and the size is standard, *viz.*, $2\frac{1}{4}$A. These films can be obtained in any country in the world.

To Load

The Camera is daylight loading, and the film must be inserted in the camera in the following manner :—



Take off the *back* by sliding the lock D. Raise up the spool key E which is hinged, and insert an empty spool in the receiving chamber, then close down the key, seeing that it engages in the slot cut in the top of the spool. Place a spool of film in the charging chamber in such a manner that the black paper may unroll *outwards* towards the receiving spool ; carefully undo the paper and draw it across the camera until the end can be inserted in the slot of the receiving spool, give the key three turns,

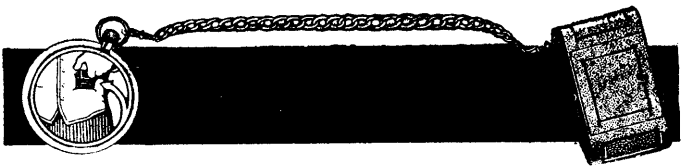


replace the back of camera and secure the lock. In the middle of the camera back is a small red window, through which the various numbers 1 to 6 marked on the black paper can be seen ; turn the key very slowly until No. 1 comes in view—this indicates that the first section of the film is in position for exposure.

To Open Camera. Press down the catch B and pull down the baseboard till it is at right angles with body, when the side struts will slip into catches. The lens front can then be pulled out by means of the thumb-pieces J, one of which will spring into a notch when it is in right position.

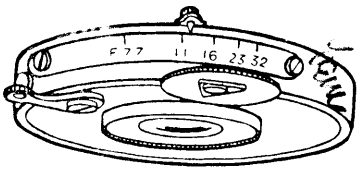
The Lens is an Aldis Uno Anastigmat of superb quality. It consists of three different lenses, which in combination are perfectly corrected, and all the defects incidental to Single and Rectilinear Lenses are absent. Not only will it work much quicker, but the pictures are sharper and exquisitely defined.

The Diaphragms or Stops. On examining the lens a series of metal plates will be seen inside, which are called "an iris diaphragm," because by means of pins working in a ring



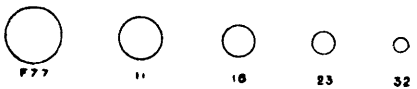
they are made to open or close, so as to increase or diminish the aperture through which the light passes to the film.

On top of the shutter will be found an



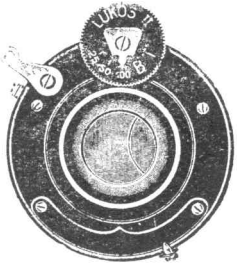
engraved plate as illustrated, and the figures indicate a definite size of opening in relation to the focus of the lens to enable accurate exposures to be estimated.

At these figures the openings will relatively resemble these sizes :—

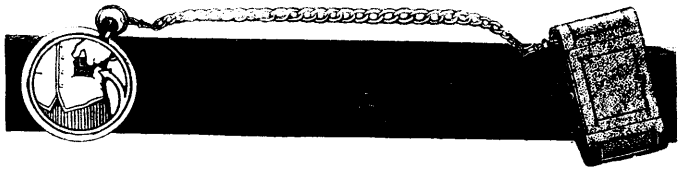


The use of the various apertures is referred to on page 11 but it will be apparent that as the light reflected from the objects must pass through the diaphragm, the smaller the aperture, the less the amount of light that can pass and *vice versa*.

The Shutter with varying speeds. The Shutter has a movable disc, on which are marked the letters T.B. and the figures 25, 50, 100. The speeds at which it will open and shut is regulated by moving the disc round to either of the figures, which are approximately fractions of a second. If the disc is set at T and the lever pressed, the shutter will remain open until the lever is again pressed to close it. If set at B, pressure on the lever will open the shutter and it will close automatically when the lever is released, so that an exposure of a $\frac{1}{4}$ or $\frac{1}{2}$ a second can be given when necessary.



The different speeds enable one to make use of the largest aperture of the lens under various conditions of light. For objects moving rapidly across the lens, the quickest speed is necessary, otherwise they will be blurred. This particularly applies to children and animals who never remain still for a second at a time, unless they are asleep, and not always then ; for still or lifeless subjects slower speeds may be used



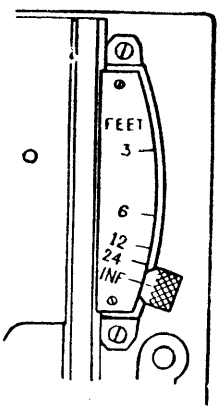
and the lens aperture reduced to ensure a sharp picture, or in bad light the shutter speed must be slower with full aperture.

For Snap-Shot Work. In the summer it is usually essential to use a high speed during the bright light of mid-day, but towards the evening as the light wanes, slow the shutter down.

The varying speeds of the W.P. Carbine place an enormous power in the hands of the Amateur that other small cameras do not possess.

Focussing with the Distance Plate.

On the side of baseboard is an ivory plate engraved thus—with a small lever which can be pressed down and moved along the plate; this is attached to the travelling chair H and lens which move with it. After opening the camera the travelling chair must be pulled out by the thumb-pieces J as far as possible, when one of the thumb-pieces will catch in the slot provided. The lens can then be focussed by moving



the lever to the figure indicating the distance the camera is from the object. After very little experience quite accurate distances can be estimated. It is not necessary to waste film on trial exposures—the best way is to lay a measure or marked tape on the ground and learn to judge by comparison, and one will soon become familiar. Extreme accuracy is unnecessary for the longer distances, but for very near objects focussing must be as carefully effected as possible. I N F means Infinity, and for objects beyond 24 feet the lens will be always in focus if the lever is placed at this mark.

The Finder. The objects can be clearly seen in the Finder, and the picture approximately composed, but it must be distinctly understood that the finder has no effect on focussing; its purpose is to make sure that a particular object is included in the picture.

Size of Picture. The picture made with the W. P. CARBINE is $2\frac{1}{4} \times 2\frac{1}{4}$ inches, and being square, the camera can always be used in one position; this will be found an enormous advantage for making enlargements, as it is easier to trim the pictures to an artistic shape.

General Instructions for Exposing. The first attempts should be made out of doors in good light with the shutter set at 50 and the lens at *f*/7·7. Make two exposures under these conditions, then close the diaphragm to *f*/11 and make another two; again close it to *f*/16 and expose the last two sections of the spool. After development the film will serve as an example of the difference made in exposures by using different sizes of diaphragms, and will save wasting many films.

There is a great deal of latitude with films, and for snap-shots in good light the diaphragm pointer can generally be placed at *f*/11 and the shutter speed at 50. In weak light and in the winter months, *f*/7·7 will usually be necessary with the shutter set at 25.

Interiors. Quite a different set of conditions arise, and a few experiments may be necessary before certain success is achieved. The exposures vary from one second up to many minutes. The shutter should be set at T and the lens at *f*/16, and then for a well-lighted room in summer at mid-day the exposure will approximately be 10 seconds. Seconds of time calculated by saying rapidly "1.2-1.2," which is one second, or long exposures may be made by means of a watch with seconds dial.

To Unload Camera. After last exposure, wind the film on to the receiving roll as far as possible, and until by the free manner in which the key turns one is certain all the black covering paper is rolled over it. Open the back as before and a strip of gummed paper will be found with which to secure the exposed film. The spool key E can then be raised up and the exposed film taken out.

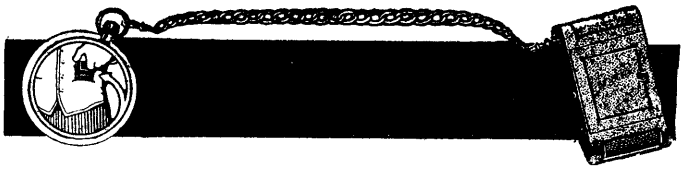
Developing the Film. Requirements :—Two ¼-plate Deep China Dishes (one for developing, one for fixing), 8-oz. Everseen Measure, Trident Film Weight, Simple Ruby Lamp, Box of Pyro-Soda Cartridges, Box of Primus Acid Hypo.

The Developer and Hypo must be dissolved in accordance with the printed instructions. An organized Dark-Room is unnecessary; development may be conducted in any room that can be made dark. The only permissible light must be from a Ruby or Dark Orange lamp. Special globes are supplied to fit over Electric Bulbs.

Put Trident in the dish flat side up, and use plenty of developer to cover it. Carefully unroll the spool and take away black paper; hold one end of film in each hand, film side down and as rapidly as possible immerse in the dish of developer, pushing it under the centre finger of the Trident, beginning at one end and drawing the film through until it is quite covered. *It is important to see the developer flows evenly over the film, or marks will result and spoil the negative.* Continue to move it backwards and forwards in the developer until the image begins to appear. Up to this stage it should be kept well away from the direct light of the lamp. Continue the development until the image appears well through on the back of the film. This should take from 4 to 10 minutes, according to the temperature; it takes longer if the room is cold. The film must then be placed in the "fixing," and the bath allowed to act until all traces of the creamy emulsion have disappeared and it is quite clean in the shadows. It should then be washed in running water or frequent changes for not less than half an hour. To dry pin it up to side of a shelf or other convenient place where their is no dust flying about, and afterwards cut apart into separate pictures.

How to make a Print. For this purpose, a printing frame, a packet of self-toning paper, and some Hypo for fixing will be required. Place the negative in the printing frame which must be provided with a sheet of glass, film side upwards, and lay on it a sheet of the printing paper, replace the back of the frame. As the paper is not so sensitive as a film, printing and fixing may be carried out in ordinary daylight, but not in strong sunlight. After loading, place the printing frame in a strong diffused light, and watch the print carefully from time to time by opening one-half of the printing frame. Print until the image is a LITTLE DARKER than is desired.

Having made the prints, they must now be fixed, otherwise they will fade. Take all the prints that are ready and wash them for a few minutes in several changes of water, and then place one by one in the fixing bath. This must



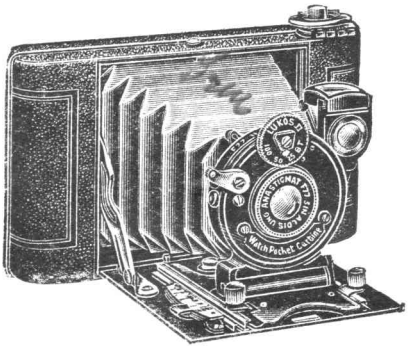
not be the same bath that was used for the films, but must be a quite fresh one, not so strong, only 2 oz. to the pint of water.

Leave them in the "fixing" for about 10 to 15 minutes, when they should be again carefully taken out separately and washed in either running water or many changes of clear water so as to wash out all the Hypo. They may then be laid aside on blotting paper or pinned up to dry.

Enlarging. The size of the picture taken in the "Watch Pocket Carbine," is $2\frac{1}{4} \times 2\frac{1}{4}$ in. but by the aid of the enlarger shown on the back page, $\frac{1}{2}$-plate prints can be made. This is quite a simple process. The negative is placed in one end, and a piece of $\frac{1}{2}$-plate Bromide paper in the larger end; and then exposed to daylight for a few moments. The Bromide paper is then developed and fixed according to the instructions which accompany each packet of paper.

Watch Pocket Carbine

ALL metal body, leatherette-covered, with folding baseboard to protect lens and shutter when in the pocket; heavy design front and travelling carriage; focussing device for objects up to three feet; Aldis Uno Anastigmat *f*/7·7, and large brilliant view finder.



Prices.

	£	s.	d.
No. 1. With Lukos II. Shutter, speeds, $\frac{1}{25}$, $\frac{1}{50}$ and $\frac{1}{100}$ sec., and Aldis Uno Anastigmat *f*/7·7	**2**	**5**	**0**
No. 2. With Compound Sector Shutter, giving exposures from 1 to $\frac{1}{250}$ sec., and Aldis Uno Anastigmat *f*/7·7, covered in fine grain leather	**3**	**7**	**6**

Watch Pocket Carbine

Developing Outfit.

For the Watch Pocket Carbine.

Contains all the necessary apparatus and solutions for developing roll films.

- 2 ¼-pl. deep Porcelain Dishes.
- 1 8-oz. Everseen Measure.
- 1 Glass Stirring Rod.
- 1 Trident Film Weight.
- 1 Dark-Room Lamp.
- 1 pkt. Acid Hypo. Fixing.
- 2 Pyro-Soda Developing Cartridges.

Price = 5/6.

Carrying Case.

Solid brown leather, with snap fastening, and wrist strap with long shoulder extension.

Price - 3/-

Enlarger

For Enlarging Watch Pocket Negatives to Half-plate ($6\frac{1}{2} \times 4\frac{3}{4}$).

Fixed Focus.

The negative carrier is provided with the means of selecting the best portion of the picture, and the bromide carrier is arranged to print a white margin on the edge of the enlargement.

Price - 6/6