



*L'Appareil Photographique Williamson pour l'Hydrographie*  
*The Williamson Hydrographic Camera*

**WILLIAMSON HYDROGRAPHIC CAMERA**

HENRY HUGHES &amp; SON, LTD., LONDON.

This camera has been produced primarily for the survey of coastlines from ships where as wide a strip as is possible is covered with each photograph taken. Owing to the danger of ships approaching too near land the object to be photographed is usually at a considerable distance from the camera, and therefore a long-focus telephoto lens is essential. Further, the camera must have a readily adjustable mounting so that in spite of any movement of the ship the object to be photographed can easily be kept in the centre of the view finder. From the description of the camera which follows it will be seen how the above points have been met.

## DESCRIPTION.

The apparatus consists of two main parts (*a*) the camera itself and (*b*) the stand. The camera consists of (1) the body (2) the shutter unit (3) the lens.

1. *Camera Body.* — At the back of the body is fitted the film holder. This has been designed to use roll film of standard size viz. 6 or 12 exposures  $2\frac{1}{2}'' \times 4\frac{1}{4}''$  (N<sup>o</sup> 16). The picture size is, however,  $2\frac{1}{2}'' \times 8''$  and thus on a standard 12 exposure film 6 pictures can be taken. The normal winding handles are provided with a window showing the number of exposures made. After the film has been threaded up the winding knob should be turned until the number 2 appears on the window. The film is then ready for the first exposure and subsequent exposures should be made when the figures 4, 6, 8, etc. are seen in the window.

As it will probably be found desirable to use panchromatic film, suitable filters should be used to allow full advantage to be taken of the special properties of this type of emulsion.

2. *Shutter Unit.* — The shutter is an independent detachable unit which can be removed intact by undoing 6 screws. This is made possible by the use of the WILLIAMSON all metal Louvre type of shutter. The speed of the shutter is variable between  $1/60$  and  $1/120$  of a second, and to its great efficiency and durability together with its compact design may be attributed the successful design of the whole camera. A simple shutter release is provided and the shutter is wound by one revolution of the setting handle.

The shutter can be held open by turning the setting handle through  $\frac{1}{2}$  a revolution at the same time keeping the shutter release depressed. In order to close the shutter the remaining  $\frac{1}{2}$  of the revolution is completed and the shutter is then ready for setting.

A view finder fitted with a rubber eyepiece is fixed in a convenient position on top of the camera body.

3. *Lens.* — The lens is a fixed focus telephoto iris diaphragm giving a maximum aperture of F/8. The angular field covered by each picture is  $18\frac{1}{2}^{\circ}$ .

*Camera Stand.* — This is made of welded steel tube with a service grey cellulose finish. A robust pillar projects from the top giving vertical and horizontal adjustments to the camera.

To this pillar a universal mounting is fixed on to which the camera is secured. The universal mounting can be locked in any given position but it will usually be found more convenient to adjust it so that the camera is in a mobile state and thus allowing the object to be kept in view even when the ship is in motion.

**THE EKMAN CURRENT METER 1932 PATTERN.**

In the *Hydrographic Review*, Vol. IV, N<sup>o</sup> 2, November 1927, page 207 and Vol. VI, N<sup>o</sup> 1, May 1929, page 157, brief information is given on the current meter. This information is supplemented here by a few indications concerning the new pattern of this apparatus, as supplied the Bureau by Messrs. Henry HUGHES & Son, Ltd., 59, Fenchurch Street, London, E.C. 3.