

FIFTY YEARS AGO ...

Depiction of coastline (as seen from the sea), especially when approaching a port, is still considered useful for mariners. A camera specially designed to photograph coastlines from ships is described in an article which appeared in the *Hydrographic Review*, Vol. XIII, No. 2, of November 1936.

WILLIAMSON HYDROGRAPHIC CAMERA

Henry HUGHES and 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 1/2" x 4 1/4" (No. 16). The picture size is, however, 2 1/2" x 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 1/2 a revolution at the same time keeping the shutter release depressed. In order to close the shutter the remaining 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 18.5°.

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.

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An interesting instrument for chart work is also described in the same issue of the *Hydrographic Review*.

THE MOUNTBATTEN RULER FOR CHART WORK, ETC.

The following information was communicated to the Bureau by Commander Lord Louis MOUNTBATTEN, KCVO, RN, at the time of the visit to Monaco of the British Destroyer *Wishart*. More complete details concerning this interesting instrument are given in a small pamphlet published by the makers, Messrs ELLIOT Brothers Ltd., Century Works, Lewisham, London, S.E. 13.

ADVANTAGES :

In the days when courses and bearings were laid off with regard to the varying magnetic north, the nearest magnetic compass rose on the chart was selected, in order to approximate as closely as possible to the variation at the place concerned. A parallel ruler was then necessary to transfer the course or bearing to the desired position.

Now that the unchanging true north is used as the datum for laying off courses and bearings, it is possible to simplify the process by transferring the true compass rose to the desired position, by means of a transparent protractor ruler, using the nearest parallel of latitude or meridian of longitude as a datum line.

It is on this principle that the Mountbatten ruler is constructed.

DESCRIPTION OF THE INSTRUMENT :

The construction of the Mountbatten ruler is such that a few minutes' practice by those familiar with parallel rulers and protractors will bring conviction of the ease and rapidity with which it can be operated.

It is primarily designed for use with charts on Mercator's projection.

Three roses are provided on the ruler, any one of which may be used as a protractor with any parallel of latitude or meridian of longitude as a datum line. It is, however, recommended that the nearest parallel or meridian should be used in order to minimise the effect of distortion of the chart paper.

Each of the three roses is graduated with two sets of figures.

- a) The inner set is designed for use with parallels of latitude or horizontal datum lines, and is so arranged that only the actual figures required appear horizontal at the parallel of latitude in use.
- b) The outer set is designed for use with meridians of longitude or vertical datum lines, and is so arranged that only the actual figures required appear horizontal at the meridian in use.

Each rose is divided by a diameter line through the centre, at right angles to the long edges of the ruler. Only figures between 000° and 179° appear to the right of this line, and only those between 180° and 359° appears to the left. When the direction of a course or bearing is towards the right on a chart (i.e., easterly) the figures to the right of the diameter line are used, and, conversely, when the direction is to the left (i.e., westerly) the figures to the left of the diameter line are used.

For greater accuracy it is desirable to make sure that the meridian or parallel in use passes through the correct reciprocal graduation.

