RECORDING PUPILLOGRAPH OF SIMPLE DESIGN* PRELIMINARY REPORT

BY

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SINCE interest is being increasingly extended to pupillography, a means has been devised to overcome the great loss of time involved in the conventional method. Instead of demanding a laborious measuring of each separate picture, this method allows a comprehensive view of the pupil reaction. The eye is focused on a film which moves slowly in a vertical direction. Very near to the film is fixed a horizontal slit of 0.1 mm., just in the place where the middle of the pupil is projected.

As the film moves at 3 mm./sec., a resolving power of $\frac{1}{30}$ sec. is reached. Difficulties of eye movement are overcome by the patient's looking with the other eye at a small lightspot.

With a preliminary apparatus a number of normal and abnormal pupillograms have been made, some of which are reproduced in Figs 1 (a) and (b). Dark blue or red light was used as "dark", a

FIG. 1 (a).—Pupillogram of the normal eye. The dark band represents size of pupil. With the starting of the blue light a slight contraction of the pupil occurs which soon disappears. After a short latent period the white light causes a pupillary reaction.

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FIG. 1 (b).—Pupillogram of the eye of a woman with quinine poisoning. The pupil reacts only slightly in strong light, and recovers its original size after a short period while the light is still on.

procedure which was justified by the small reaction at the switching on. Blue-sensitive film was used for blue and grey eyes, and red-sensitive film for dark brown eyes. The photographic lens employed was a Hugo Meyer Plasmal 9 cm. f2 with an enlargement of 1. The general arrangement of the apparatus is shown diagrammatically in Fig. 2.

FIG. 2.—Experimental set-up of pupillograph.

The experience gained in this series of investigations is now being used in constructing another instrument, which will embody certain new ideas as well as having greater stability.

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