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A RETRO-TRANSILLUMINATOR

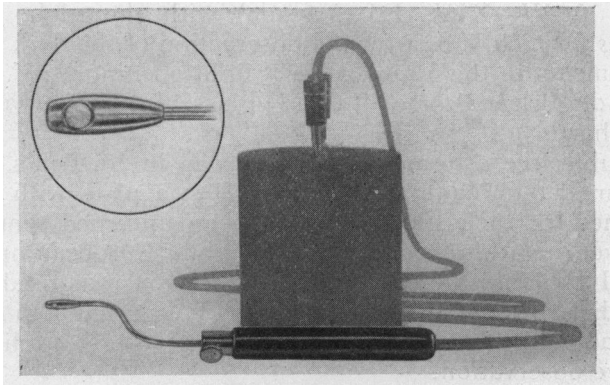
BY

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CASES occur not infrequently in the practice of a busy ophthalmologist where a dark mass is discerned in the fundus. The question then arises, is it, or is it not, malignant? Such a mass may be opaque to the passage of light. If the suspected growth is in the anterior third of the globe, transillumination through the conjunctiva and sclera in the ordinary way is a most satisfactory proceeding. If, however, the mass is more posterior, grave doubt may arise. Some time ago Lancaster, of Boston, U.S.A., suggested transillumination by means of a lamp passed, after a cut in the conjunctiva and Tenon's capsule, towards the back of the globe. This method was mentioned by Rönne, of Copenhagen, in a lecture given to the North of England Ophthalmological Society. I decided to have a special lamp constructed, which was carried in a narrow

metal tube curved with a radius of 13 mm. to correspond roughly with the normal curve of the sclera. The lamp itself is of a 3-volt. power, and is inserted into a slightly bulbous end of the tube, and sealed in position opposite a 2 mm. diameter aperture. To give a rough idea of the distance of the shadow from the corneal limbus the curved tube is marked at 25 mm. from the lamp and then at every 5 mm. The light given is quite sufficient to supply a good transillumination, and the exposed part of the lamp can be passed quite easily in any desired direction in order to have it exactly posterior to a mass in practically any position in the globe. The portion of the metal tube to be



brought in contact with the tissue can be readily sterilised in rectified spirit. It is not advisable to boil the tube. One or more spare tubes should be at hand, as, if the lamp gives out, it is not in practice worth replacing in the same tube. The heat given off is not great enough to cause damage to the tissues. Further, although there is a possibility of damage to the venae vorticosae, the posterior ciliary nerves and vessels, the instrument need only be used in serious cases, and in practice the risk of doing much damage is not great. The trauma produced by introduction is negligible. Practice has shown that it is not necessary to interfere with the extrinsic muscles, and that it is advisable for the surgeon viewing the interior of the eye to have the lamp-holder in his own hand, and if necessary move it about. When observing the light through the pupil no mirror is required; it is observed by the naked eye of the surgeon.

This method may be of considerable use in the localisation of holes in cases of detached retina.

The instrument has been made on my direction, and can be obtained from Messrs. Theodore Hamblin.