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BY

TOM A. WILLIAMS, M.B., C.M. (EDIN.)

WASHINGTON D. C.

Corresponding Member Paris Neurological Society, Etc.

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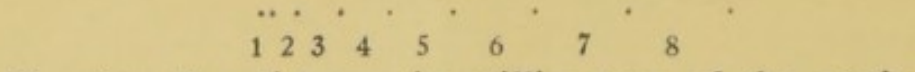
THE method utilizes that generally used, which was first employed by A. Fick.[1] It depends upon the principle that a small aperture in a card placed a short distance from the eye appears as a circle, the diameter of which equals that of the pupil. If two holes are used it is evident that if the circumferences of the two circles appear exactly to touch the distance between the apparent centers will equal the diameter of either, as it consists of half the diameter of each. That is to say, it will equal the diameter of the pupil. Now, it is found experimentally that when the two holes are separated by a distance equal to the diameter of the pupil then the apparent images just touch. So that it is very easy to measure the pupil by placing before the eye a series of holes at varying distances from one another.

Accordingly a scale is constructed consisting of perforations in a card placed apart respectively one, two, three, four, five, six, seven, and eight millimeters. The diameter of the patient's pupil is then easily ascertained by the distance between the two holes of which the apparent images most nearly touch when he looks through them at a distant object.



Showing the distance in millimeters of the perforations in the test card. The pupil is normally not larger than the distance between the dots in the space marked 4. Inequality between the two pupils may be ascertained by making two holes at a distance exactly corresponding to the diameter of one pupil and then ascertaining whether the circles exactly touch when the holes are placed before the other pupil.

But this well-known method gives only the temporary pupil diameter, which is very variable in different persons. For purposes of absolute comparison, it is necessary to combine it with a standard state of pupillary adaptation. Now, it is known that although it requires two hours in the dark for maximal dilatation to occur, yet a convenient, practical, very extensive adaptation to dark occurs at the end of two minutes and is almost maximal in twenty. Upon reexposure to light the pupil contracts in proportion to the logarithm of intensity of the light to which it is exposed.

But Schirmer[2] has found that there is practically no variation in the amount of contraction within the very wide range of one hundred and eleven hundred millimeter-candles, and that in normal individuals the pupil measures between three and four millimeters after maximal adaptation to dark. Charpentier[3] found increased sensitiveness even greater than did Aubert after pupillary adaptation to darkness; but the clinical importance of the facts does not warrant their discussion in this place.

Hence if the patient to be examined is placed in the dark room for two minutes, and then placed so that his eye is exposed to a light between one hundred and eleven hundred candle-power, a standard stimulus is attained uniform enough for the prac-

tical purposes of the clinic, and accurate enough for statistical comparison.

REFERENCES.

1. "Arch. für Ophth.," 1856, vol. ii, part ii, p. 70.
2. "Arch. für Ophth.," 1894, vol. xl, part v, p. 8.
3. "La lumière et les couleurs," Paris, 1888, p. 150.

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