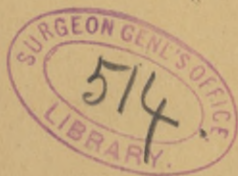



WEILAND (CARL)

A simple and efficient
test for binocular reading.



4XV

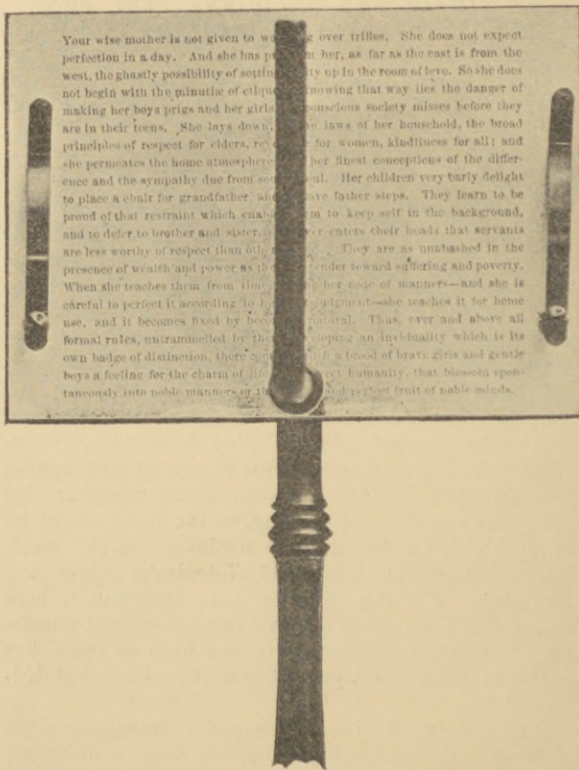
**A SIMPLE AND EFFICIENT TEST FOR
BINOCULAR READING.**

BY CARL WEILAND, M.D.,
CLINICAL ASSISTANT, EYE DEPARTMENT, JEFFERSON MEDICAL COLLEGE
HOSPITAL, PHILADELPHIA.

It is frequently of importance to know whether both eyes assist each other properly in the act of reading, or whether one eye only is used, while the other deviates or otherwise neglects its duties. The usual test of holding a prism, base up or down, in front of one eye and observing whether or not a point looked at is seen double, is not quite decisive; because such a high prism always throws the image of its eye outside of the macula lutea, and thus gives rise to an entirely abnormal and unphysiologic condition. We are not allowed to assume from this test that the eye which receives the retinal image thrown outside of the fovea will therefore also take part in the act of reading, as the fovea might be affected with a scotoma, or the whole eye be in a position of heterotropia, and avoid diplopia by suppressing its image. For this reason a little apparatus is here brought forward which allows a test under strict physiologic conditions, and which, in one form or other, has probably been employed already by some ophthalmologists.

It consists, as the figure shows, of a rectangular piece of wood, into which a brass rod, five mm. in diameter, is screwed. This rod is bent at a right angle, so that the free part extends parallel to the surface of the wood at a height of about fifty mm. Upon this wooden base some print is fastened of a size that corresponds to about

fifty cm.; but any finer or coarser print may be used, if the case requires it, for which purpose two springs have been added.



This little contrivance is now held by the patient at the usual reading-distance, while the head and hand are kept in the same position. It is evident that in this

situation there are *two* places on each line of the print from which the rays can enter only *one* eye, being intercepted for the other by the rod. But as one eye always can see what on account of the rod is not perceived by the other, there can be no gap in the line if both eyes are used at the same time. As soon, however, as one eye does not perform its function there is a black line across the printing matter, so that the words covered by it cannot be seen at all.

This little test may now be used for the following purposes:

To determine whether the patient employs both his eyes in the act of reading, or whether one deviates. If he uses only *one* eye the black line will appear; and if the other eye only deviates it will, on covering the first, read the print also distinctly, but the black line will appear in quite a different position as with the first eye.

To see whether both eyes, after having been made emmetropic for distance, have the same accommodation. For if this is not so, if there is a complete or partial cycloplegia in one eye, there will be certain words on each line that appear indistinct and blurred, though not entirely absent, as before, when one eye was not employed at all.

To detect a malingerer who claims to be blind in one eye. Of course, if he can read a whole line he is convicted.

To make physiologic experiments as to the question of simultaneous unequal accommodation of both eyes, and to study the difference in the retinal images of both eyes, and the heterophoriæ necessarily connected with anisometropia, especially in certain positions of the print.¹

¹ This test is manufactured by Queen & Co., 1010 Chestnut Street, Philadelphia.

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

Second block of faint, illegible text, appearing as several lines of a letter or document.

Third block of faint, illegible text, continuing the main body of the document.

Fourth block of faint, illegible text, possibly a concluding paragraph or signature area.

Fifth block of faint, illegible text, located near the bottom of the page.

