AN OPTICAL ILLUSION

BY

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THE phenomenon to which this paper refers, requires some closeness of observation to appreciate, and so far as I am aware, has not yet been published.

It was first noticed about eight years ago and has been experienced repeatedly since then, and corroborated by others.

When the observer is walking, preferably at about the pace of a slow stroll, across a series of dark lines such as the intervals between the boards of a landing stage, or the intersections of concrete footpath, with the eyes directed forwards and at rest; then those lines between the point to which the eyes are directed and the feet appear to vibrate, to flicker, or alternately to appear and to vanish. It is best seen perhaps if the eyes are allowed to be directed to the ground about 50 yards a-head, without looking *at* anything in particular. Then the lines travelling towards the feet will be seen to flicker, this flickering apparently increasing to a maximum a short distance in front of the observer's feet and then disappearing.

Further, it is only possible to say that there is a definite optimum rate of progression at which the observation becomes possible and secondly, that the lines will not vibrate if the observer looks *at* them.

At first I was tempted to suggest that this observation might depend upon a concentric arrangement in rings in the retina of the visual units, in travelling over which the images of the lines would pass across rings of relatively insensitive material and consequently would appear to flicker. But I am indebted to Dr. H. Hartridge for what appears to be the real solution. He says: "The eye when performing 'fixation' actually performs a very fine rapid nystagmus. The images of lines moving slowly over the periphery of the retina will, therefore, move in jerks. If the lines move at the right speed the images will first stand nearly still on the retina and will then jerk to a new place where they will once more stand still approximately. Thus the apparent optimum rate of progression 'a slow stroll.' Thus the absence of the effect if you look *at* them."

If this is so, then by shutting one eye, all the lines should vibrate simultaneously, but I am so circumstanced at present as to be unable to carry out this corroboration.