

# THE SCHOOL MAGAZINE.

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## HEALTH DEPARTMENT.

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### THE SCHOLAR'S EYE.

#### IX.

#### THE EYE IN ITS RELATIONS TO TYPE, INK, PAPER, PROLONGED TENSION.

IF the reader refer to the first of these nine articles on *The Scholar's Eye*, he will find the statement that the smallest printed matter which can be recognized by the average normal eye must subtend an angle of five minutes at the eye. This has been established and is now accepted by oculists the world over. Many of their calculations, which partake of the nature of scientific exactness, is based upon this assumption. It is then to be accepted. Now, the smaller an object, the nearer it must be brought to the organ of vision to be perceived. Accordingly, that extremely fine type known to printers as "Brilliant," and which is about  $\frac{1}{30}$  of an inch in height, must be brought to a distance of one foot before it can be recognized by even a healthy eye. Now most adults hold a book beyond this distance and at about eighteen inches, so that type of the height of about  $\frac{1}{10}$  of an inch is requisite for that distance. The reader

should verify these fractions by actual calculation. However, even the normal eye should never be subjected for any considerable length of time to type so small as that. Type of  $\frac{1}{30}$  of an inch is quite small enough and rather too small even after we pass the prime of life. However, the use of spectacles largely removes the necessity for increasing the size of type with advancing years. Now, the finer the type, so much the closer must the book be brought to the eye, and this puts the eye to a higher degree of tension, so as to focus or bring the axes of both eyes to converge to an absolutely near point. The powers of accommodation are taxed and that without any sufficient or unavoidable reason therefor. It can be avoided by using larger type. Long continued use of eyes upon objects which are brought close to them is maintained by all authorities to be one of the most, if not the most, fertile causes of progressive nearsightedness. This muscular tension necessary to obtain clear vision of a near object induces redness in the deeper parts of the eye more than in the external.