OUR EYES AND OUR INDUSTRIES.

By Arthur H. Benson, M.A., F.R.C.S.I.

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First, concerning the seating of scholars—

Since the publication of Dr. Cohn's important work, in 1867, on "Examination of 10,060 Children's Eyes," a whole school desk industry has arisen. In the Paris Exhibition of 1867 only three different models were shown. At Vienna, in 1873, there were 47 different kinds of desks, and at Paris, in 1878, as many as 71 were exhibited, thus showing the growing importance attached to this subject.

The three main points to be attended to in seating scholars at home or in school are (following Cohn):

1. The seat must be of such a height that the vertical distance from the table equals the distance of the elbow from the seat bones, plus two inches.

2. The chair must be pushed so close up to the table that the upper edge of the table overhangs by two inches the fore-edges of the chair.

3. A footstool must, if necessary, be used, so placed that the foot rests flat upon it, while the knee is bent at a right angle.

Various mechanical contrivances have been invented to prevent the child assuming a faulty position while writing. Kallman's "Face Rest" can be screwed on to the edge of any table, and is said to be effective, and not uncomfortable.

And here let me enter a strong protest against the needless overwork of young eyes. Wholly indefensible is the practice of giving, as a punishment, passages to be copied out many times over.

Concerning Light—All investigations have shown and confirmed the facts that want of light and light not coming rightly are potent causes of eye troubles. Few schoolrooms have enough light. "There can never be too much light in a school."

Javal says the school must be flooded with light, so that the darkest place in the class may have light enough on a dark day." Cohn proposes as a guide that for every five square feet of floor in the room there should be at least one square foot of glass in the window, and this proportion to be increased if the situation of the school was such as to have bad light outside from high buildings situated too close, &c.

The ideal school-room, from an oculist's point of view, should have a glass roof, but if that could not be had, the light should fall from the left side of the writer. Cohn found that the narrower the street in which the school-room was situated, the higher the opposite houses, and
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the lower the story on which the lessons were given, the more numerous were the cases of short sight amongst the elementary scholars.

Artificial light should, as far as possible, resemble daylight, not, of course, direct sunlight—that is, it should be an abundant and diffuse light. The incandescent electric light probably best fulfils these requirements, being almost free from heat, and giving rise to no noxious gases by combustion. It is preferable to have a number of smaller lights rather than one bright light of corresponding power, as by this arrangement the light is more diffused and the shadows are less dense. The minimum of artificial light for reading or writing by should be the amount of light yielded by ten ordinary paraffin candles at one yard distance (= 10 metre candles).

Bad print—the type being too small and too crowded—is another important factor in the production of short sight. It is a shame the miserably printed books that are still permitted or even recommended by some school managers!

The Causes of Myopia are, then, for the most part avoidable, and the school managers who wilfully or through culpable ignorance permit any of these causes of short sight to exist in their schools are guilty of a grave offence against the community as well as against the individual; for not only do they increase the risk of blindness to their individual scholars, and thus throw the burden of their support upon others, but they sow the seeds of blindness in the generations yet unborn, and thus rear up for themselves a monument of misery more lasting than brass, and earn a nation's blame.

Concerning Glasses.—There is a widespread and ignorant prejudice against the use of glasses, especially prevalent amongst the employers of labour. Now all the conditions of the eye with which I have been dealing, except progressive short sight, are comparatively harmless if corrected by suitable glasses, but are productive of infinite mischief, both temporary and permanent, if not so corrected. The undue strain and effort required causes many of the most serious and destructive affections to which the eye is subject, and glasses can alone relieve the eye from this strain. Yet what do we see—thousands of those who should wear glasses—young and old, male and female—endeavouring to read, write, sew, and work with aching eyes who might with glasses perform all duties without discomfort or injury.

It should never be forgotten that the difficulty in reading, writing, &c., which comes on so commonly about middle life, is in no sense a disease, or an evidence of decay, but is the effect of a purely natural change, which takes place in all healthy eyes.

It is due to a change in the consistency of the crystalline lens, which, becoming more solid, yields less to the influence of the accommodation muscle. It is folly, therefore, to fight against or lament over the inevit-