

tial to the comfort and happiness of life. Churches, schools, farmers, gardeners—all share in the prosperity of the educated, thrifty artisan. If the city of Worcester, Massachusetts, full as it is of skilled workmen of all kinds, is compared with a city where manufactured articles are crude, the difference will be found to be most striking.

8. *It will enable American manufacturers and persons engaged in other industrial pursuits not only to hold the home market, but to compete successfully for superiority in foreign markets.*—Good material and cheapness have characterized American products for many years. Add to these features beauty of form and decoration, and America will not only hold the home market, but will be enabled to compete successfully in foreign markets for industrial supremacy.

4. *It will place a premium on skill and taste.*—In all our manufacturing establishments and workshops, the educated artisan not only receives the highest salary, but occupies the most responsible positions. Artistic workmen command the best positions; hence their skill and taste are at a premium.

5. *It will add to the wealth of the individual, the nation, and the world.*—The educated workman receives higher wages than the uneducated; the former, then, is in a position to save money, while the latter is not. Whenever a nation is able to make art products so beautiful that the exports of manufactured goods exceed in value the imports, it enriches itself.

This value does not depend alone on the quantity of goods, but on the amount of labor, skill, invention and artistic thought and taste expended on their production. One cause of the rich returns which Switzerland and France have gathered from the wealth of other people is, that they export a minimum of bulk and material with a maximum of skilled labor, artistic invention and cultured taste.

III.—PRACTICAL.

Instruction and practice in Industrial drawing will be of practical benefit to those engaged in professions, in arts, and in handicrafts.—*Pennsylvania School Journal.*

EFFECTS OF SCHOOL-LIFE UPON THE SIGHT.

The principles to be observed for the preservation of the sight are, of course, the same in the case of children as of adults, and in school-work as in other occupations; but the greater necessity for carefully observing these principles at the time when the body, as well as the mind, is rapidly developing, and their very general neglect at this critical period, may justify a more detailed reference to them, even at the expense of some repetition. The increased demand that the exigencies or the fashion of the times make upon the eyes as well as upon the brains of children, and the increased numbers that are yearly brought within the influence of school-life by the compulsory laws of governments or of public opinion, should be accompanied by a corresponding increase in the use of all the alleviations and precautions that science and humanity can suggest. School-life is essentially an unnatural one; school-training is necessarily an artificial process, and unless it is conducted under rational and favorable conditions, universal education can never be an unmixed universal blessing. M. Javal, of Paris, in a recent essay on the Physiology of Reading, says, "The necessity of reading with an increased assiduity, and at a more and more tender age, print whose fineness has been increasing from generation, has resulted in generalizing myopia to such a degree, that if means of precaution are not taken this defect will end by affecting the whole human species."

The cramming for "exhibitions," and what Professor Huxley calls the "abomination of desolation" of competitive examina-

tions, prizes, etc., that goad on children of various strength and capacity to tasks that the brightest and strongest are hardly equal to, are responsible for much injury of mind and body as well as of sight; and the "higher education" that is now so earnestly demanded for the gentler sex, is too often dearly bought at the expense of shattered constitutions and unstrung nerves. But if these things must be, in the name of humanity and justice let them be surrounded by all the checks that can lessen their power for evil.

A matter of much importance, and one that is very generally neglected, is the air that children breathe in school. The carelessness or ignorance of public officials, or the narrowest possible considerations of economy, very often huddle an excessive number of children of the poorer class into small and ill-ventilated public schools; but this class are by no means the only sufferers, as the greater proportion of private schools are held in houses not intended for the purpose, and parents who give every care to the surroundings of their children at home, often seem strangely indifferent to the fact that they may spend many hours of the day, with twenty or thirty others, in a close and superheated little room that was built, perhaps, for five or six people to dine in. This is a fruitful source of income to the family physician, and now and then brings a case of weak sight, from debility and nervous exhaustion, to the office of the ophthalmic surgeon.

As the sense of sight is the chief medium of education, it is hardly possible to over-estimate the importance of feeling assured that its organ is in proper working order, and that whatever defects nature may have left in it have been, so far as possible, remedied by art. Though great advance has of late years been made in this direction, much still remains to be done, and many children, in the critical period of school life, labor under disadvantages that a little care and attention might easily remove.

The case of children with long-sight is particularly liable to be misunderstood, because their stronger power of accommodation,—their greater ability to change the focus of the eye by increasing the convexity of the lens,—enables them to mask a degree of this defect that would manifest itself in after-life by an absolute inability to read, or even by dimness of distant vision. It will be remembered that the axis of the long-sighted eye is too short and it has been explained how the optical defect of this malformation may be neutralized by a corresponding shortening of the focal distance—bringing the focus forward by increasing the convexity of the lens. What we are concerned with here is the fact that in childhood the soft lens admits of a much higher degree of this change of form, and makes it possible to see, and to see distinctly, in spite of the defect. This, however, is accomplished by muscular strain, and demands a certain amount—sometimes a very considerable amount, depending upon the degree of the defect—of physical and mental effort. Such a child may be said to be "weighted" in the race with his classmates; he may be able, by virtue of superior strength or greater pluck, to keep up with the rest, or even to take the lead; or he may break down before the end of the race is reached. He seeks a bright light to get the sharpest possible image of the print, and may get on well enough in the morning, when he is fresh and vigorous, and light is abundant, but suffers most in the latter part of the day, when the light grows dim, and he is more or less fatigued. A bright light assists him, too, by contracting the pupil, and thus excluding the outer rays of the cone of light which make the most confusion in the retinal image. He sometimes learns to increase this effect at night by holding the light between his eyes and the book.

A dislike of books sometimes originates in the extra effort required to read them, and an appearance of stupidity or inattention