

the first and second classes of the two larger schools desiring to attend. There is no compulsion whatever except that, while members of the industrial class, the pupils are required to be as attentive, industrious, and orderly as during any portion of their school work. There has been a training in the nature of the implements used, in the best methods of employing these implements, constant attention to those habits of method and system which are necessary to secure good work anywhere, and continued practice of the hand and eye in unison, requiring close application as well as clear perception and accurate manipulation. The result is tangible, and the proficiency is measured by no arbitrary standard of percentages, but is clearly defined, and may be estimated with much more precision than in any other line of school work. I do not know of any manner in which fifty to eighty hours can be employed in any form of education where the practical results can be more satisfactorily determined. If the pupil never sees saw, hammer or plane again the training he has received will be of value, whatever his vocation." The report from Boston is equally definite in its approval. It says: "From the beginning the school went on with unbroken and successful regularity. The order was good, the pupils interested. It is delightful to see the eager desire manifested everywhere to do the day's work well. There was no absence, no tardiness. Here and there a complaint was made by the teacher of some second-class boy, that he was not doing the work well in his own room; but the pupil in every case was so anxious to remain in the 'carpenter's' class that a word or two of warning was sufficient to bring his performance up to the standard again. I consider that the results go far to prove that manual training is so great a relief to the iteration of school work that it is a positive benefit rather than a detriment to the course in the other studies." This last sentence is a practical answer to the objection that has, no doubt, arisen in the minds of some who have been listening to my suggestions. There is a large class of teachers, who when urged to introduce calisthenics, or music, or drawing into their schools, answer languidly: "We have no time for them." Experience proves as clearly as anything can be proved, that where most attention is paid to these subjects there is most time left for real work at the other subjects. The teachers who are foolish enough to attempt to make their pupils work sixty minutes per hour for six hours per day, are bound to fail. It is physically impossible for human beings to do this, and at the same time work with the vigor and earnestness essential to success. The "fatigue point" is speedily reached in schools taught by such teachers, and mental work done after this point is comparatively profitless and fearfully exhaustive. Forty-five minutes per hour is the time for actual study in the best model school in Europe, that in Brussels. It is the weariness of school work that kills, and not the amount of work accomplished. The best relief from mental work is physical work, at calisthenics, or some industrial work. In addition to this I have tried to show that the use of the hand in making things is in accordance with nature's method of teaching and really the best method for developing (not storing) the mind. This view is sustained by a resolution adopted by the American Institute of Instruction in July, 1882, as follows: "We recommend the introduction into schools of instruction in the use of tools, not for application in any particular trade, but for developing skill of hand in the fundamental manipulations connected with the industrial arts and also as a means of mental development." The report concerning the shop schools, in connection with the public schools of Paris, where the pupils work a little more than they study, says: "The boys who work and study fall very little behind the boys of the same age who do nothing but study. The working boys are remarkably healthy, strong, good-natured and orderly." I wish these adjectives could be applied to all Canadian school boys. To make them do so, the first steps must be let to them, "learn by doing," and to give them plenty of calisthenic exercise every hour they are in the schoolroom. One hour per week spent in working with tools would aid in securing the more rapid advancement of the pupils in their studies, even if it was only to be regarded as a change of work, and a relief from the weariness of constant application to study. It would be of still more importance, however, by affording the mind an opportunity for development in the most natural manner by requiring concentrated action of the mental powers to guide the hand.

For the senior girls the most useful occupation is that connected

with a training in the various kinds of sewing, and in cutting out and fitting the most simple of their own garments. Cutting from patterns is an accomplishment that can be taught by the regular teachers in cities and towns. In rural districts so few pupils are old enough to receive this kind of instruction and so many of the teachers are men, it will generally be found best to confine the industrial work in them to the course recommended for the lower classes. Male teachers will usually be able to find some of the older girls who can illustrate the steps in knitting to the younger pupils. In cutting out, old newspapers should be used instead of cloth, until a sufficient degree of proficiency has been acquired. It may be objected that Canada is not a manufacturing nation, and therefore we do not need to give our children an industrial education. I answer, that the education for which I plead is not an education "in industries, but for industries," and such an education will be most beneficial to all who take part in agricultural and mechanical pursuits. There can be no doubt that in all the civilized nations of the world educators are giving more attention than formerly to this important subject. In addition to the large number of technical and poly-technic schools throughout Europe, schools for special trades are rapidly increasing. There are over fifty in Belgium, more than a hundred in Switzerland, nearly fifteen hundred in Germany, and nearly a thousand each in France and Austria. Nearly fifty institutions for training in agriculture and mechanical arts have been founded in the United States, and under the central government they are rapidly increasing. To use the words of President White, of Cornell University, "this movement is not to be scolded out of existence by solid review articles, or pool-pooshed out of existence by pleasant magazine articles." There are two respects in which educational efforts in industrial education appear to me to be defective: (1) Most of the attention paid to the subject has been given to the higher industrial institutions, the Scientific and Mechanical Universities, to the neglect of a broad primary course as a foundation for this superior training. (2) What little attention has been given in Public Schools to industrial training has been given to the girls, who need it least and who receive most of such training at home. I have tried to suggest a remedy for both these defects; a remedy such that it will also aid in securing a better education in the ordinary branches of the Public school course.

THE OHIO TEACHERS READING CIRCLE.

E. A. Jones, Secretary of the Board of Control, gave a brief history of the organization of the Reading Circle and its operations during the first year. There are more than two thousand members, the greater part of whom have completed the course prescribed for the first year. Certificates have been prepared for those who have completed the first year's course, and about five hundred of these have already been issued. The Reading Circle is proving a valuable part of our educational effort.

The course prescribed for the second year is as follows:

I. PEDAGOGY.

Currie's Common School Education, or Calderwood on Teaching.

II. ENGLISH LITERATURE.

Shakespeare's Julius Cæsar, and Irving's Sketch-book.

III. AMERICAN HISTORY.

The Revolution, and the Constitutional Period to the close of the War of 1812.

IV. NATURAL SCIENCE.

Brown's Physiology, or Natural Science Primer of Physiology and Hygiene.

Printed slips containing the course may be obtained by addressing the Secretary at Massillon, Ohio.—*Ohio Educational Monthly*.

The Agent in P. E. Island states that every teacher in that Province will subscribe for the Weekly Canada School Journal and secure Ayre's "Verballist" and "Orthocpist."