

cellency of workmanship have all much to do with the success of manufactures and their ability to hold their own at home and make their way into foreign countries? Have we taken any means to secure these qualifications with success? In this restless age, in this hustling, bustling western world, apprenticeships to trades, except the trade of the lawyer and surveyor, are almost things of the past. It may be too radical a change to apply manual training to the Public Schools, the pupils of which are already overburdened with subjects, so much so that it is a great question whether it is possible that any benefit may be derived in the attempt to teach the elements of agriculture there, but surely a system so well recommended should be tested somewhere in this province. Huxley has said, "We cannot continue in this age of full modern artillery to turn out our boys to do battle in it, equipped only with the sword and shield of the ancient gladiators." Where can the system be tested with greater prospect of success than in the High School, where the pupils have all attained sufficient education to appreciate scientific and practical instruction.

The school as proposed would give to the pupils all the advantages which High Schools now give, with the exception of instruction in classics, French and German. The English and Commercial masters would be retained. The Mathematical master would probably need a special course in a school of practical science to qualify him to give instruction in Statics and Dynamics, the uses of the mechanical powers, the amount of power or speed obtained by their use when combined with machines, and in general the subjects and machinery treated of in the branch formerly called Natural Philosophy. He should give practical instruction in measuring and estimating the capacity and strength of buildings, the quantities of earth to be removed from any place and the quantities required to be placed in any position for a particular purpose, the measurements of solids and superficies, the elements of surveying and levelling, the strength of metals and woods, the means of calculating the power of steam engines. The Science master would give instruction in Chemistry and Botany, and in connection with this department would explain the blights and the insects which attack the grains and roots grown by the farmer, and the means of preventing injury from these as far as known, the value of different kinds of manures and the relation of chemistry to agriculture; he would also give instructions in mineralogy and geology, particularly as to exploring for and testing minerals, the causes of accidents in mines, and the safe guards which should be adopted to prevent them by proper ventilation use of safety lamps, etc., the general principles as to faults in mines, the liabilities of mines to be damaged by water. He should give instruction in Chemistry in all its applications to the arts in which his pupils are likely to be engaged.

But questions may be raised as to the expense of instruction in Manual training and of purchasing tools and machinery for equipping the schools. In view of the important benefits to be derived from the system and the large amount of taxation paid by the large number of