

# SCIENTIFIC CANADIAN

## MECHANICS' MAGAZINE

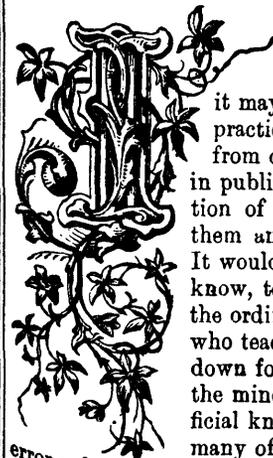
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### ON THE NECESSITY OF PRACTICAL TEACHING AND PRACTICAL TRAINING IN PUBLIC SCHOOLS.



N entering upon this subject, which is one of vital importance to the future of Canada, it may be well to inquire what good practical results, so far, have followed from our present system of education in public schools—i. e. of the education of the masses who are taught in them and float out into life's arena? It would be a very difficult task, we know, to convince the mere scholar, or the ordinary class of school instructors, who teach according to fixed rules laid down for their guidance, that to cram the mind with a mass of mere superficial knowledge of no practical use to many of them in after-life, is a grave

error; for the boy who learns by heart the rules and methods of solving certain questions and problems, without, at the same time, being instructed in their practical application, is merely acquiring by memory to-day what will be forgotten to-morrow. That the present system of education for the masses of the people must naturally be imperfect without conveying, at the same time, some practical application of the subject taught, or giving to our youth an opportunity of completing their education in proper training schools, there cannot be a doubt in the mind of any person who has been connected with machine shops and the manufacturing establishments of the country. Any one who has visited the United States, and is competent to form an opinion on this subject, must have felt convinced how far behind the mass of the mechanic are in Canada to those across the border; not only in practical knowledge of the trades they follow, but in any desire to improve their minds by self study, or to raise their social status. That there are many worthy exceptions to this statement we allow, but after having visited nearly two thirds of the manufactories of Canada, and heard the declaration that such was actually the case, what other conclusion can be

drawn than that our young mechanics have but little benefitted by their school education, when unaccompanied by practical teaching. In a large manufactory we lately visited, we were assured by the foreman that one half of the employees therein were incapable of setting up a piece of work in the lathe, and were mere living automaton, without a wish to learn, or to do more than earn a day's pay and spend it. But are we to consider that our young men are deficient in intellect to those born in other countries? Certainly not. There is a certain amount of innate talent in every individual, and although only one genius may be found among ten thousand boys, who in the face of every adverse circumstances will rise above the head of his fellows, yet, as a rule, the average talent of every civilized nation is nearly equal, and no matter what ability a boy may be gifted with by nature, it will remain inert until education, accompanied often by accidental circumstances, develop it.

But to come to the bearing of practical teaching and practical training upon the masses. Let us first consider its effect upon the students of the higher professions, who are afforded the means and opportunity of obtaining it in conjunction with their studies.

We will take first the case of a student for the Church. A student, after leaving a high-school for college, generally, before leaving, selects the profession, or it is selected for him, he is to follow, and directs his attention to a course of study and lectures bearing on it. If for the church, his mind is stored with biblical lore and trained in theology for his guidance, and that of others, in the path he is to walk, so that when he enters the ministry, he has had, to a certain extent, practical teaching to be followed by practical training, and be able at once to teach the doctrine he professes to believe in, and combat sophisms in his flock. Should a student be designed for the law, after passing a preliminary examination he must pass a certain number of years in a lawyer's office, and in attendance at the Courts, which is practical training, but unless he is erudite also in all that appertains to the legal profession, he never will attain eminence. Should the medical profession be selected, the student must have a practical knowledge of chemistry, be well versed in pharmacopœia, botany and anatomy; he is taught to