

### THE TECHNICAL SCHOOL QUESTION.

The question of Technical School education is beginning to receive the attention it deserves in this country. The question was taken up by a committee of the Ottawa Board of Trade some months ago and a report presented last March. Since then the Toronto Board of Trade has taken action in the matter and is to arrange an open meeting at Toronto next month, at which the Minister of Education for Ontario will speak. All this is as it should be and this meeting ought to be an important occasion. The whole system of production in enlightened countries is based upon the use of mechanical power and it is no longer possible to make progress without spreading the knowledge of the principles which underly its application. The question is in what way and to what extent.

There is already a Technical School in Toronto which has had a chance of exhibiting in what lines technical education should be carried on; but after some years of existence it seems to have no other idea of its mission than to be a sort of night school with scientific leanings; which seems to be attempting either too little or too much. It cannot provide all the scientific instruction which those should possess who are responsible for the conduct of important industrial undertakings, and it does not frankly profess to confine itself to teaching artisans the limited application of science in their own trades. If all knowledge of theory is not possible to those who use science in trade there must be a choice between total ignorance and partial knowledge, and there is no need to be afraid of the bugbear of superficiality. The carpenter who is instructed in descriptive geometry, for example, is none the worse if he can get the knowledge he wants without any accompaniment of chemistry. He is not even the worse if he stops in his own subject short of the point where the practical merges into the "pure." And he is certainly the better by a skill which we would call technical, and which may therefore properly be the product of a technical school.

It is difficult to speak in this matter with authority as the authorities seem to be divided. But it is difficult to regard the Board of the Toronto Technical School as authorities on the question of education. As a matter of fact their attention seems to be chiefly taken up with the question of getting themselves a suitable building. This is not only a good thing itself, but has the incidental advantage that they will by this means draw upon themselves the searchlight of investigation, for it will not become the City Council to spend \$75,000 on a building for the School without satisfying itself that what is taught in the school justifies the expenditure.

It is a time for revision of the curriculum of the school by a competent inspector. It is a time also for revision of the constitution of the board. Its personnel is somewhat peculiar. There are two educationists, which is well; two architects and two stationary engineers, which is an incomplete contribution from scientific and mechanical callings; five aldermen, which is well, but also five members of the Trades and Labour Council. We are familiar with the Trades and Labour Council as legislators but in an irresponsible field; here in the character of educationists, they appear in overwhelming force, and from their constancy at meetings have the controlling power. The conduct of the school is virtually in their hands and, if report speaks truly, they appear to exercise the joy of management with very slight reference to the question of education.

There are rumors of degeneracy in the teaching of the school and the falling off in attendance this year, which is attributed by the principal to the cold weather last winter and the prevalence of gripe, is attributed by a

correspondent of the Mail and Empire, who signs himself "Old Student," to the belief on the part of students that the subjects they wish to learn are not properly taught; and this correspondent says further, what is at least a proof of sincerity on the part of these students, that they have, at their own expense started classes, in connection with the Massey-Harris works, where they can learn what they want. Without admitting the principle that the taught are to dictate to their teachers what to teach them, there is in this statement at least an indication that the Technical School needs inspection. It is not difficult to find an inspector capable of judging whether the curriculum of the school is well taught, but the problem is greater than this, and is the problem which ought to be taken up by the meeting about Technical Schools which is promised for next month. What should be taught in a technical school which is intended for the instruction of young men and women intended for, or already engaged in the work of artisans? Is it their mental development that is to be aimed at, trusting that there will be results in the future; or should the effort be to give them instruction bearing upon their daily work, so that they will acquire immediately intelligence and facility in their craft? In other words, are the classes to be arranged by grades or by trades? This is a question which means plenty of work and ought to mean a good deal of travelling for some one, and means therefore a liberal expenditure of money. But, it being granted that technical education is a necessity for the prosperity of the country, there is no wisdom in sparing expense either for the establishment of a sound system or for procuring a first rate staff of teachers. Trade returns are reckoned not by thousands but by millions and, as it is trade returns that are the ultimate aim, the soundest policy is to make sure of getting them—as sure as the outlay of thousands can make us.

Who is to provide the money is another question in debate. The Ottawa Board of Trade thinks it is a Dominion affair; the Toronto Board of Trade thinks the provinces should take the matter up for themselves. If the province of Ontario should adopt the Toronto Technical School it would have to be so remodelled that it would cease to be the same school. There is, however, no reason why the Toronto Technical School should not continue to exist as the positive degree of an arrangement of which the Provincial Technical School and the School of Practical Science will be the comparative and superlative degrees.

Toronto's night Technical School, without fee, intended for the working class, will then fill without question the much needed place of a school to teach science for artisans. Not, as was before said, to teach chemistry or electrical science to carpenters, but to give them such science as they need; a knowledge of graphical methods and better formulas than, "a two by ten is plenty for sixteen feet" etc. Every artisan wants some technical training, but it is the better for being limited to his needs. Free hand drawing is useful to most workmen, but not the study of light and shade. A tinsmith needs a knowledge of development that would puzzle a prime minister, but his science practically stops there. A painter should have some knowledge of chemistry but is blessed with freedom from mathematics. A plumber ought also to have some chemistry and should add hydraulics. It is more difficult, though we have made some exceptions, to set limits to a carpenter's scientific knowledge. He touches building at all points. If he would only know enough not to make original designs, a grateful country would exalt him high in its estimation.

Outside of architecture and the building trades—in all productive work, it is through the hands of artisans the work is done, and there is incalculable gain in the workmen being prepared to understand fully the reason for their operations. Deliberate neglect of necessary precautions must be rare, but ignorance is common and though less blameworthy is as effective for evil; for the law of nature like the law of the land makes no exception in favour of those who are ignorant of its provisions.