

quired to pay more than necessary for their goods wherever the Protective Policy is operative; and second in being taxed to directly support industries which are already benefited by the increased price of commodities. We are sorry to observe that instead of our citizens being able to detect the evils of so called Protective Tariffs and Bonuses they are being carried away in greater numbers than ever by the mere *prima facie* aspect of the matter, until now both political parties are in favor of protection and scarce a new industry is started without a bonus. And yet the national resources of our country are not being developed as they should, and might be, nor are our leading manufactures of a very high order. The reason is undoubtedly the same in both cases, the lack of skilled workmen and directors. From this cause many attempts to develop the natural resources of our own Province have failed, and many industries are in a languishing condition. To give an example we will quote from Mr. A. C. Lawson's official "Report on the Geology of the Lake of the Woods Region," in which, speaking of the opening of a gold mine, operations on which were suspended for lack of any one having the requisite skill to carry on the work, he says: "The position taken by the proprietors of the Pine Portage mine is a sound one, but one that brings into prominence the fact that in Canada or the adjoining States there are extremely few practically trained mining men who, in addition to their knowledge of the economic management of the works and mine, possess also a scientific comprehension of the problems concerned in the extraction of the gold, which will enable them to study to advantage the milling of new ores such as these, and devise methods of treatment for particular cases which will preclude serious loss in the 'tailing,' such as has been the aggravating experience at the Pine Portage mine." The

same might be said of most of our other mineral resources which require for their development skilled labour, or at the very least mining engineers, who have received a scientific training, to direct the work. Our lumbering industry is a most extensive one and yet the saw-dust of our large mills remains an unmitigated nuisance, whereas to mill owners elsewhere under the direction of practical chemists assisted by skilled labour it has become a source of greater revenue than that derived from lumber itself. Indeed there is scarcely an industry of importance where the employment of scientifically trained men, as overseers at least, would not lead to an improvement in method, a curtailment of waste, and an increased production, thus supplying an improved article at reduced cost. In support of this let me quote from Mercer, whose discoveries revolutionized calico-printing. "I entirely concur with you," he wrote to a friend, "that for the preservation and benefit of the British arts and manufactures, the masters, managers, and skilled artisans ought to be better instructed in the *rationale* and scientific principles involved in their operations. Captal remarked that 'practice is better than science' (*i.e.*, abstract principles,) 'but when it is necessary to solve a problem, to explain some phenomenon, or to discover some error in the complicated details of an operation, the mere artisan is at the end of his knowledge, and would derive the greatest assistance from men of science.'" As an example, too, of the unexpected results which may follow from a single improvement in an industry, take the following "His" (Mercer's) "application of chromium compounds practically created the manufacture of bichrome; when Mercer first began experimenting with this substance, its cost was half-a-guinea an ounce; it is now produced by the hundreds of tons, and may be bought retail at less than six pence per pound." Now in a com-