

A National and Rational Policy.

The Budget Speech of Sir Charles Tupper and the welcome revision of the Tariff, with regard to the interests of the mining section of the community, are matters that must create an expression of pleasure among the readers of the CANADIAN MINING REVIEW. It is a fitting introduction to our appearance this month in a new dress, and is an event long to be remembered in the history of the mining industry of Canada. The law or action of the Government, that is productive of a national feeling of patriotism in preferring the product of the labor of our own country to the imported product of the labor of aliens or foreigners is a national policy. The law that encourages individual energy and the development of the manual and brain power of the community in the direction of producing the necessities of life from the natural products of our own country is a wise enactment. The law that converts our foreign trading importers into "home" manufacturers is the motive power of an incoming tide of national prosperity. The law that makes a foreign sympathising merchant an employer of Canadian labour, helps to build the hive of a national industry bound together by the strong bands of rightly directed capital and labour. The law that stimulates and encourages individual industry or effort in a right direction or cause, and restrains from a ruinous or wrong course is the law desired for the development of our Canadian mining industries. It cannot be expected that the home demand for iron can be supplied from local furnaces and mills until such time as sufficient of these have been constructed, but when that is done and the home industry is established, the iron trade will be supplied with a superior class of ores to work with than those of Great Britain. No business employs so much labour as does iron, for (it cannot be pumped like oil or elevated like grain), it has to be handled whether in the form of ores or metal, and every time that is done it means an expenditure of ten cents a ton on the millions of tons handled over and over again during its manufacture and transportation. In this way the wages earning community are benefitted. That Sir Charles has underestimated the value and results to be derived from this new lease of life to an almost extinguished industry would not be so apparent had not the wisdom (1) of Sir Richard Cartwright drawn attention to the idea of exporting Canadian iron. Sir Richard is evidently not aware that Canadian charcoal pig iron has been exported to the United States, and is in demand on account of its superior quality if enough was manufactured during the present time to supply the demand. To all sections of the country the wisdom of the new tariff will become apparent. Probably no other country is more richly endowed by nature with such stores of iron, and in offering these inducements to capitalists to develop our iron resources the Dominion will find it to pay well.

What we want now is the much needed enactment of proper timber and mining regulations by the local legislatures.

The Use of Crude Phosphate.

The value of raw phosphate as a fertilizer is a subject that has created much discussion, but without, as yet, obtaining decisive results. The prevailing impression is that the crude phosphate is valuable for "a long pull" and gives out its good effects slowly during two or three years after its application to the soil, whereas the superphosphate, which is phosphate reduced to a soluble condition by admixture with sulphuric acid, produces its full effect during a single season. The preparation of the acid is expensive and agriculturists are suspicious of manufactured fertilizers, for doubtless they are sometimes fraudulently prepared. If the value of the crude phosphate can be established, it would provide a cheap fertilizer in a form that would secure confidence, and the use of it would become greatly extended to the advantage of our miners and the benefit of the farmers.

Prof. N. S. Shaler, of Harvard University, has taken a great interest in the subject and is confident that simple methods may be found by which phosphates may be made available as manures without treatment with sulphuric acid. He proposes that thorough experiments should be made and will arrange for their trial at the Bussey Institution, an Agricultural Department of Harvard University under the care of Prof. Storer. The Bussey Institution would provide the land and the useful laboratory, and a skilled chemist would supervise the tests. The United States Geological Survey will probably contribute something towards the expense, and private firms have expressed a willingness to do likewise. If it was a product of the United States that was under consideration the whole expense could be at once provided for in that country, but as it is a matter of primary concern to Canada, it seems fitting that our Government or our miners should aid in the project.

Dr. A. R. C. Selwyn, Director of our Geological and Natural History Survey, has had his attention occupied by the subject for a considerable time and proposes in conjunction with Prof. Saunders, the Director of the recently established Experimental Farm, to commence and carry out the necessary experiments. It is much to be desired that this should be done as there are few subjects of greater importance to the country than the securing of cheap and effective agricultural fertilizers, and if the utilization of our mineral deposits can be promoted at the same time the matter assumes increased consequence.

Mr. Bowker, of the Bowker Fertilizer Company of Boston, in a recent lecture, while expressing an unfavourable opinion of the value of crude phosphate for quickly growing crops, admits its possible ser-

vico with grass and fruit trees. Prof. Shaler says the superior richness of the blue-grass of Kentucky is due to the phosphoric acid in the soil, and indicates the value of phosphates as a manure. Some recent experiments with flower seeds show a great superiority of growth where crude phosphate was applied, suggesting that it is immediately effective; but such experiments need to be multiplied and the methods and results carefully watched by scientific observers before reliance can be placed upon them.

Our Government cannot do a better service to the country than by promoting this investigation, and as many tests are needed to establish the facts and unusually good facilities are offered in the proposed experiments at Harvard University, it would be well to encourage that effort also. Should any of our miners or agriculturists desire to contribute towards the promotion of the investigation in the United States they should communicate at once with Capt. R. C. Adams, of the Anglo-Canadian Phosphate Company at Montreal.

The National or Geological and Natural History Survey Museum.

Looked at from a Business Standpoint.—Economic Minerals and Mining as a Part of the Wide-Field Covered.

[By a member of the Geological Survey staff.]

Recently it has fallen to my lot to glance over the fields of work occupied by the Geological Survey in the past. What led to this was the need of grouping the reports of the Survey by provinces, and the many different branches of work performed by specialists according to their general subject, in connection with the names of the specialists whose work it was desired to trace—felt as a means of inquiring into certain exhibits in the museum.

With the permission of the Director of the Survey, I have here extracted a small portion of my notes, thus incidentally made, appropriate to the field of the CANADIAN MINING REVIEW. The topic is timely on account of its suggestiveness in connection with the general subject of a national museum.

SCOPE.

I find the contents of the Geological Survey or "National Museum" building in its present state, to be classifiable,—including all that is therein presented by the older to the younger generation,—the reports of the Survey in the book room and library, along with the exhibits in the museum, as follows:—

I. *Physiographic Work*, representing all the provinces; embracing geological and geographical surveys, and field work in various departments more or less special. Reports, specimens, photographs, &c.

II. *Economic Minerals*, mining and mining geology. Analysis of minerals &c.

III. *Biological Work*, embracing—
(a) ancient and extinct life as a means of under-