

Canada's Railway Problem

What to do With the Grand Trunk and Canadian Northern — Canadian Northern and its Subsidiary Companies to be Taken Up by the Government.

The announced policy of the Dominion Government respecting the Canadian railways is thus summarized by the Montreal Gazette's Ottawa correspondent:

OTTAWA, August 1.

The whole of the Canadian Northern Railway system, including its branch lines, terminals, telegraph and express services, grain elevators, steamship lines on the Great Lakes and other subsidiary undertakings, will be acquired by the Government on behalf of the Canadian people.

Further, the Government will lend to the G. T. P. Railway Company \$7,500,000, repayable on demand with interest at 6 per cent, and secured by a mortgage on the corporation's assets.

The Government's proposals for meeting the serious financial situation which confronts the two companies and for maintaining them as going concerns in the interest of the public were announced by Sir Thomas White in the House of Commons to-day.

Ownership of the whole Canadian Northern system will be attained by the purchase of the \$60,000,000 of the company's stock which is still in the hands of private individuals or pledged as security for loans. The remaining \$40,000,000 of the company's capital came into the possession of the Government in 1914, when the latter guaranteed an issue of Canadian Northern bonds to the amount of \$45,000,000.

With the whole of the corporation's stock vested in the Crown, the Government will be in the position of proprietor of the system and will be able to appoint a board of directors, which will operate and administer the road.

The price at which the outstanding \$60,000,000 of stock will be acquired by the Government is to be fixed by arbitration. The board of arbitration is to consist of a member appointed by the Government, one named by the owners or holders of the stock and a third to be selected by the other two, or, in the event of their failing to agree, by the senior judge of the Exchequer Court. Should the three arbitra-

tors fail to reach a unanimous decision, the question will be referred to the Supreme Court of Canada.

As soon as five-sixths of the outstanding stock has been transferred to the Minister of Finance "in trust for His Majesty," the Government will take steps to meet the financial difficulties of the Canadian Northern by payment of indebtedness, by renewal of outstanding securities or by the issue of Government bonds.

In making the announcement, the Finance Minister told of the difficulties of the Canadian Northern and G.T.P. railways. He pointed out that the former road was able to show a surplus after paying operating expenses and fixed charges. Unfortunately, it was compelled by conditions in the money market to meet the cost of betterments from earnings and was thus unable to meet interest charges. It had a short term liability of \$100,000,000 maturing from month to month.

The Grand Trunk Pacific, on the other hand, was unable to show a surplus of earnings over operating expenses. The Finance Minister pointed out that the Smith-Drayton-Acworth Commission had been unanimously in favor of a constructive railway policy, which would save the roads from falling into the hands of receivers. Personally, Sir Thomas said, he would look forward to the acquisition of the Grand Trunk Pacific by the Government, if an arrangement could be made which would absolutely safeguard the public interest. That, however, he said, was a matter which the Government could not deal with at the present time. "We have," he concluded, "taken a signal and important step forward towards the operation of the railway systems of Canada in the interest of the people of Canada. I believe this policy which I have announced to-day will mark a new era in the history of transportation in Canada, affirming as it does the principle that the people, being called upon to finance the railways, shall receive the ultimate benefit."

made to yield larger quantities of wheat and other foodstuffs.

A movement for carrying into effect a project for obtaining nitrates from the atmosphere was started in Manchester ten or twelve years ago, the motive, being, of course, mainly a commercial one. The promoters were, for the most part, engaged in the bleaching industry, who desired to avoid, if it was possible, the expense of bringing nitrate, so largely used in their business, from South America. It was found, however, that an obstacle to the development of that scheme was the intense heat required to make the process successful. "We needed heat," one of the promoters of that time said recently, "of an intensity of 2,000 degrees, and the result was that the whole of the ovens and appliances necessary were destroyed before it could be attained. Another obstacle was placed in the way by the shipping trade, who feared the loss, if the experiments then made proved a success, of the nitrate shipping trade. Means were subsequently found of overcoming the difficulty created by the intense heat required, and further efforts were made in France which proved to be successful. There is a works in that country now which has for a number of years been producing nitrates from the air."

A chemist at a large house in the dyeing trade expressed the view that but for the fact that the Germans had for years obtained nitrates from the air the war would have been over long ago, considering the present difficulties in the way of their obtaining them from Chili or other South American sources.

Ever since the British blockade was enforced Germany has found it impossible to import Chilean nitrates for the manufacture of explosives and fertilizers. It reverted, therefore, to the expedient of "fixing" the nitrogen from the air, and has adopted it to a huge extent since almost the beginning of the war. It has been stated in German technical journals that the output of nitrogenous products by the Badische-Anilin Fabrik, with the aid chiefly of the Haber catalytic process, amounts now to about 500,000 tons a year. By these means the Germans get all the nitrogenous ingredients for their high explosives.

Attempts have been made to work the Haber process in this country, but all have failed, and the general consensus of opinion now is that this is not a commercial process, as the expenses and risk appear to be enormous. With the Germans, however, it is a case of needs must.

The only other way by which nitrogen can be fixed from the air is by the electric processes, of which up to now the principal have been the Barkeland and Eyde, the Schoenherr, and the Pauling. All of these are single-phase and electrical processes, and are considered workable commercially only in places like Norway, where electricity can be generated cheaply by water power. None of them has been worked in England because of the high cost of electricity here, which makes them uneconomic under ordinary conditions.

The consequence is that the fixation of atmospheric nitrogen has not been adopted in this country, which relies for its supplies of this valuable ingredient of high explosives and an indispensable part of all the principal fertilizers on the utilization of Chilean nitrates, the price of which has increased enormously since the beginning of the war.

Britain Succeeds in "Fixing" Nitrogen

According to a report from Manchester, Eng., after efforts begun ten or twelve years ago Manchester is now to have a plant for the fixation of atmospheric nitrogen. National considerations preclude details being given at present, but it is believed that with this process nitrogen can be "fixed" anywhere in England at a very low cost, even where electricity is fairly expensive, because it apparently achieves the highest efficiency of nitrogen fixation per kilowatt hour of energy used that has ever been achieved or even dreamed of by any of the other processes mentioned. Its inventor is a British subject.

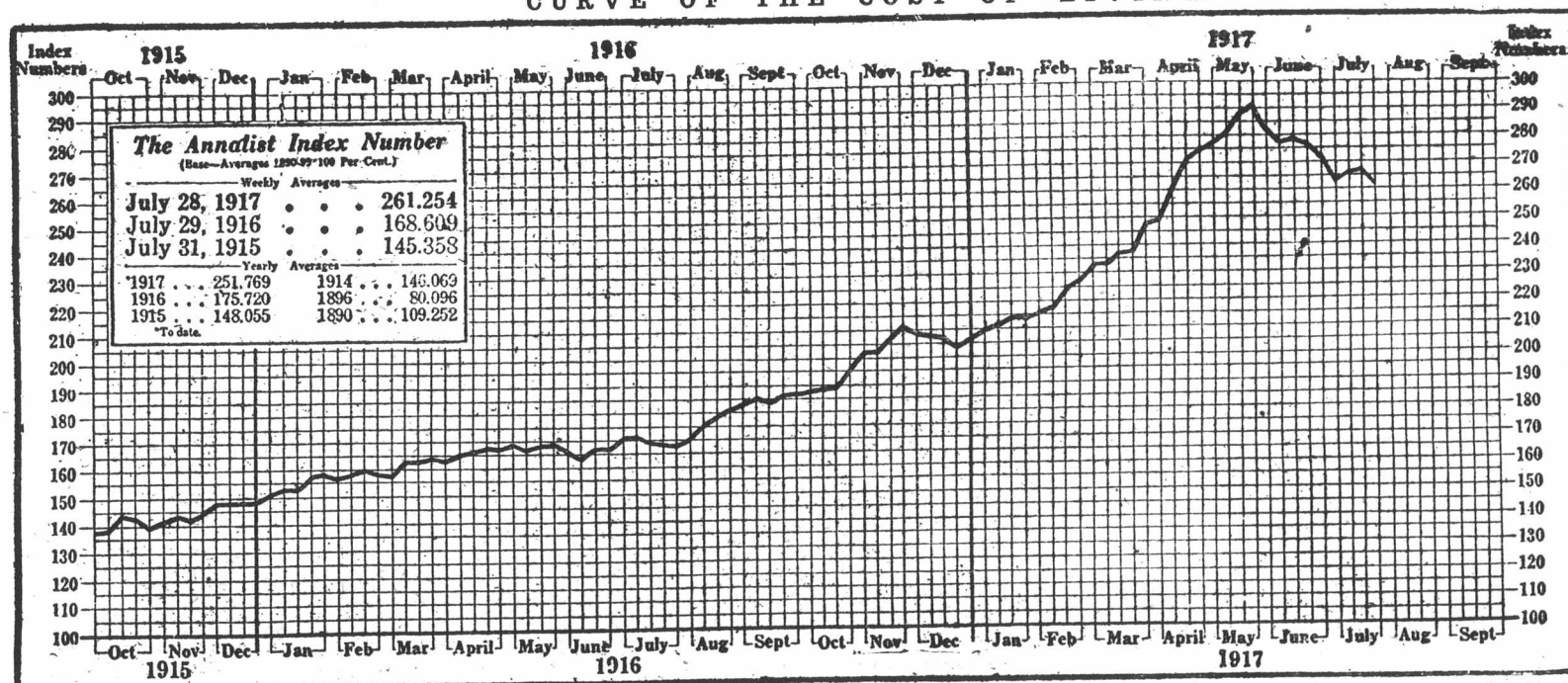
The Manchester Corporation succeeded in being the first to get the industry started, because it went out of its way to help the promoters, the International Nitrogen and Power Company, London, who hold the exclusive rights to work the process in Great Britain.

The new industry is believed to have great possibilities, not only for war purposes but after the war. Possibly when the method comes to be worked throughout the United Kingdom it will make this country independent of overseas supplies of fixed organic nitrogen and provide a new security against the danger of interruption of overseas supplies of essential ingredients of explosives in time of war. If it can be done, the whole of our nitric acid supplies could be obtained in this way, and also picric acid, an essential ingredient in synthetic dyes.

CROOKES' PREDICTION.

Above all, it would bring to realization Sir William Crookes' prediction to the British Association at Bristol over thirty years ago that the future of the white race would largely depend on the economic fixation of atmospheric nitrogen, by which the world might be

CURVE OF THE COST OF LIVING.



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