

LAST GREAT ENGINEERING FEAT NOW BEING RUSHED TO ITS END

Building of the Canadian Northern Transcontinental Line
Will Bring Into Economic Value and Control Large
Areas of Valuable Land in the North.

The northland of Ontario is at present passing thru a transition period in its history by the building of the Canadian Northern Transcontinental railway, now under construction between the C.P.R. and Transcontinental. This will probably be the last great engineering feat from ocean to ocean on this continent, and is important in that it brings into economic value and control the large areas of timber and pulpwood lands now the prey to forest fires, also desolate wastes, which in the near future may be valuable in nickel and iron ores. There are also some sections along the line which have agricultural possibilities, especially in dairying, hog raising and poultry. The whole country is well watered. Frequently good meadow land is met with along the rivers, and excellent root crops, hay, oats and peas can be successfully grown. Vegetables such as potatoes, cabbage and cauliflower, also succeed, but whether they can be made commercially profitable or not is a question which the future of the country alone can decide, and will depend upon the quantity grown and the transportation charges to market the produce. As the country will in all probability develop on the lines of lumbering, pulpwood and agriculture, and mining in advance of agriculture, there will no doubt be a home market for all the produce that can be raised for many years. An unknown quantity will be the passing tourist. The three lines, C.P.R., C.N.R. and T.R., running from east to west, cross the rivers running north to Hudson Bay and south from the Height of Land, enabling the tourist to make relays at any of these crossings in his canoe trip north or south.

Beautiful Scenery.
There is now being opened up some of the most beautiful scenery of the north. Rivers with banks of hazel, ash, poplar and birch slope down to grassy edges of rushes or thickets of alder. Here the muskrat glides amidst the rushes. An occasional mink feeding on small fish or clams comes to the surface, and amongst the fagots caught by the brush in the spring ice flows the wild duck builds her nest. The heron and the bittern wade in its waters and the snipe and plover feed along the shore. The scenery changes to rugged cliffs and rocky shores with steep cliffs and plover feed along the shore. The scenery changes to rugged cliffs and rocky shores with steep cliffs and plover feed along the shore.

The Canadian Northern in Ontario is being built in three sections. One is from Port Arthur to Capreol, another is from Capreol, a new divisional point, and Mileage 320. Two hundred miles have been laid out of the steel is now past Goose River crossing. Mileage 172, where the track laying machine was held back two days by the construction of a bridge across the river. The track laying machine is now being pushed east one mile per day, with occasional delays for putting stringers on bridges until the sixty miles are spanned by the iron rails and the final tie-up of the sections is made. The tie-up is expected at the end of the year, but it is thought it will be about a month later before the Capreol-Ottawa connection is made, the hopes are entertained that the line from Port Arthur to Ottawa will be in operation at the same time as the Port Arthur-Sudbury line. The line will be about 550 miles which has hitherto separated the C.N.R. from the eastern Canada and the prairie and Pacific Coast lines. The line from Capreol Junction, via C.N.R. to Toronto is called the "Sudbury" line. A train runs from Toronto to Ruel and from Ruel to Toronto daily, 327 miles. The main line from Capreol to Ruel connects with the Toronto line at Capreol, is called the Canadian Northern Transcontinental. Of the lines west of Capreol, less than sixty miles is without steel. Most of the track-laying machine is used in completing the ties, so that the track-laying machine has proceeded with little delay. There are very few ties to be laid, and no serious delay is anticipated. The line is also being built from the Port Arthur side as well as from the Sudbury end.

Taking in Supplies.
Machinery and supplies were taken over the Algonia Central to a point named Oba, where the Algonia Central crosses the C. N. R. From Oba, construction work was carried on east towards Port Arthur, and east towards Sudbury. Port Arthur and Oba are now connected with the steel and track-laying is being continued. Six miles east of Oba, to connect with the line being constructed from Capreol, which is now beyond Goose River, two lines should tie up within two months and traffic be running over it early in the new year. The construction is being done by the large contracting firm of Foley Bros. and the 550 miles between Port Arthur and Capreol, under the direction of O. S. Swenson and will have been completed in two years, in all probability the fastest laid 500 miles in rock in the continent, and certainly the fastest laid track in this north Ontario. The country thru which it runs is not without difficulties, muskeg, rock cuts, lakes and rivers had to be overcome, but the line may be said to run thru a more even section with less engineering difficulties in its track than either the C. P. R. or G. T. P. Transcontinental. Muskeg is found in many places, but not abnormally deep. One of the worst features of muskeg is that it may rest on a thin layer of clay which will not support the track and the track goes down into more muskeg and perhaps more clay or gravel, and keeps sinking until it gets a support. Very bad muskegs are filled in with boulders and rock, and built up to grade. The pit from which the rock or gravel is taken is called a borrowing pit, a term used by engineers to denote by colors on their pro-

files the amount borrowed and where it was deposited. These borrowing pits all along the line are very interesting. Sometimes a row of huge boulders marks the pathway from which the gravel has been scooped. Others have rows of stumps, from which the sand has been taken. Others have boulders from which the rock was taken. Others again are cuts by the side of the track, and others again are cut with the precision of a building foundation or skating rink, they are so level. They are termed sand borrows, gravel borrows, earth borrows or rock borrows, as the case may be, the material from one part of the right of way having been borrowed to level up some other part.

Other Features.
Other interesting features in construction are the trestles, the steel bridges, the wayside camps, the forgers and their characteristics, the manner in which they are huddled together and carried to work by train loads, the steam shovels and the gangs of men dumping the little cars which are drawn by horses. Then there are the automobiles. These autos are used for taking the men to work and draw several flat cars after them, crowded with human beings. The autos are the same as those used on the thoroughfares of a city, with the rubber tires taken off and replaced by steel wheels. The axles are rigid, being made for travel on a road, and have been found to wobble soon if run at a high speed. The men on the runabouts are specially made for track work and carry the superintendents and officials to various parts of the work. They travel much faster than the train and run from 30 to 40 miles an hour. Then there are small gasoline carriers of the motor type, after the style of the motorcycle. The doctors use these to hurry to and fro; but there have been very few accidents and no loss of life. All these means of travel run on train orders from offices along the line, which are connected with headquarters at Mileage 92 by a telephone line, which runs from Ruel to the end of the steel, and is continued as the track proceeds. There is a tote road from Ruel to Port Arthur, on which supplies are carried ahead of the steel, and on which machinery, such as steam shovels, engines and derricks, are taken in the winter time, to assist in grading until the train arrives. Steel bridges are left until the train can put the girders in place; but the concrete abutments and necessary trestle work are largely in place before the train comes to lay the track and finish up. Capreol and Foley are to be connected by a line of about 150 miles apart. Shops and roundhouses are to be erected at both places, which will ensure the employment of about 200 men. Along the line are water tanks, tool houses and houses for the section superintendents and men on every section as far as the track has gone. Everything will be complete before the line is taken over by the contractors. Just now the line is only open to the company's "toy" train. After Ruel the contractors operate the line, running a train every second day. This is of great advantage to prospectors and others who wish to visit this new district. Moose are quite plentiful and are often seen along the tracks. Fish are found in most of the lakes and probably the best trout fishing in Ontario is to be got at Mileage 211, where the track crosses the Beaver River. Here are rapids 500 feet in length, which keep the 2500 ft. from getting further up stream. Below the rapids there are few, if any, trout. In the rapids and above twice are many 12 inches in length. Sturgeon are found in the rivers running to the north and pickers are abundant everywhere.

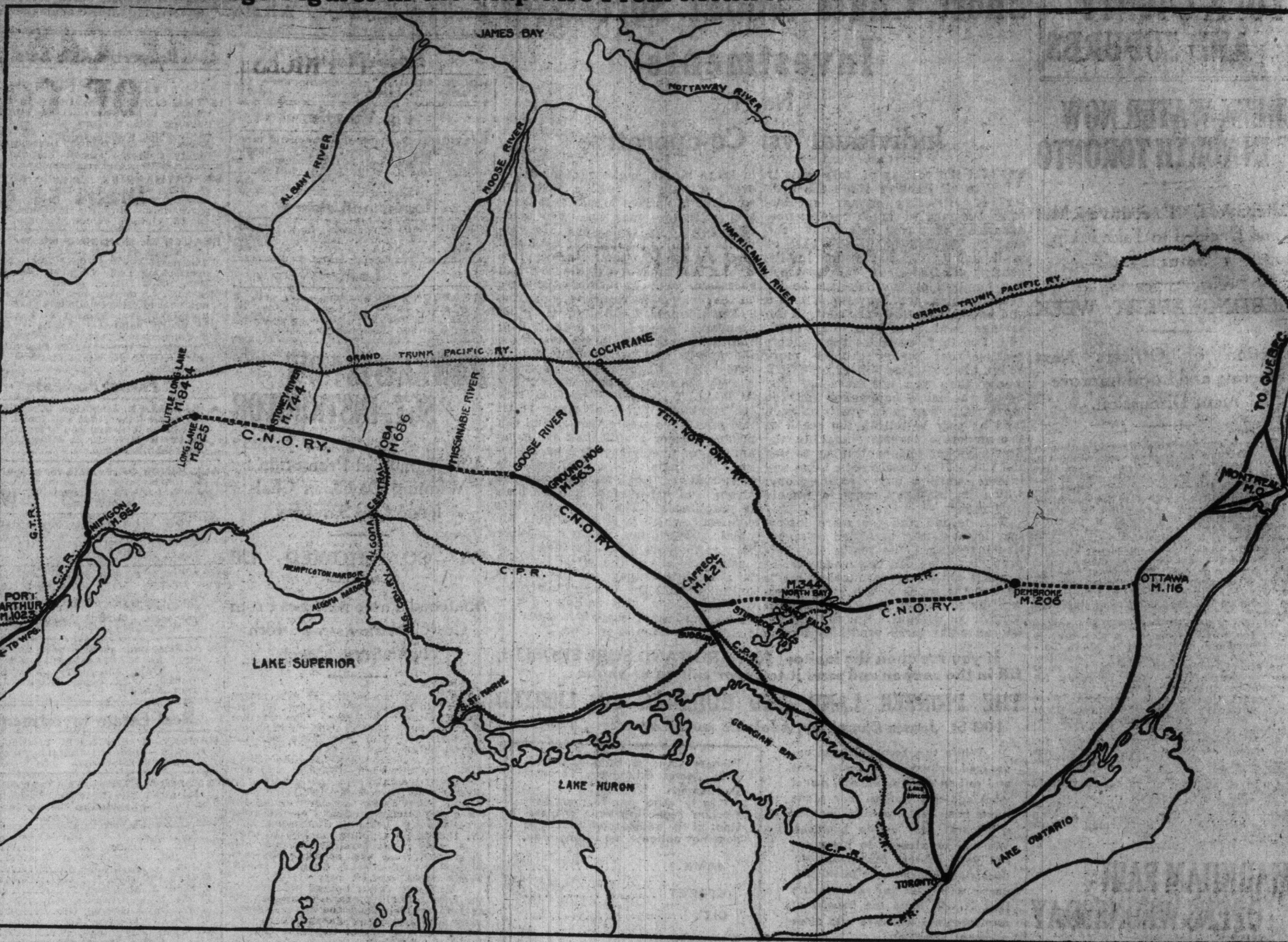
SEATTLE, Wash., Sept. 27.—(Can. Press).—A despatch from St. Michael, Alaska, announces the arrival there of A. N. Evans, commissioner of education for Alaska, Captain Charles Madden, and crew of three men of the power schooner Wasp, which was wrecked south of the mouth of the Kusokwim River, on a voyage from Good News Bay to Nome. The vessel is a total loss.

ASK EX-PRESIDENT TO RETURN HOME
MEXICO CITY, Sept. 27.—(Can. Press).—General Porfirio Diaz, ex-President of Mexico, has been summoned by the war department to return to Mexico for active army service.

A cablegram sent to General Diaz today brought a non-committal answer from the ex-president, asking the war minister to await the arrival of a letter which he would despatch immediately.

WOUNDED IN CAR ACCIDENT
Minola Ryhle, 127 Elm street, dodged in front of a motor car on Queen street, last night and was run down. He sustained severe scalp wounds and was taken to the Western Hospital.

The Mileage Figures in the Map Are From Montreal Westward to Port Arthur.



The above map shows the route of the Canadian Northern Transcontinental railway direct from Port Arthur to Montreal and on to Quebec, and also the alternative section from Capreol to Montreal by way of Toronto. A World reporter went over a great deal of the newer portion of

the line during the past fortnight and gathered from actual touch how rapidly the work is being pushed to completion, so as to give an all-rail line from Port Arthur to Montreal by way of Toronto by the first of the new year; and early in the spring from Port Arthur to Montreal by way

of North Bay, Ottawa and Montreal. Grading and track-laying are proceeding from eight live ends, and on the section between Sudbury and Port Arthur at least two miles of rails are being put down each day from four different points. The section between Toronto and Ottawa (and this means

Toronto and Montreal) is now all rail, with the exception of a small piece of bog near Sydenham, this side of Smith's Falls. Sir William Mackenzie left Toronto on Saturday morning to make the trip from Toronto to Ottawa over his own rails.

All of the line is graded between Port Arthur and North Bay, and about seventy-five per cent. of the line between North Bay and Ottawa. The most determined effort to complete the track is between Port Arthur and Sudbury, which will give the Canadian Northern an all-rail connection between Port Arthur and Montreal early in the new year. The Toronto-Ottawa and Sudbury-Port Arthur lines will be completed by the spring. A train runs daily from Toronto to Ruel, 327 miles. This train joins the Transcontinental main line at Capreol, 276 miles from Toronto. It leaves Toronto at 8:50 a.m., arriving at Ruel at 11:05 p.m. the same day.

From Port Arthur easterly the steel is laid 184 miles to Little Long Lake, from Oba (where the Algonia Central crosses the C. N. R.) it is laid 58 miles to Stony River, leaving about 100 miles between Stony River and

Little Long Lake, on which the steel is yet to be laid. From Oba easterly the steel has been laid 46 miles to the Mississinibi River. Construction trains are running westward from Ruel to about five miles beyond Goose River, which leaves a gap of about 50 miles on which the steel is to be laid, between Ruel and Oba. As track-laying is, from four points about two miles per day is being spliced down.

From Capreol (the junction of the Toronto line with the C.N.R. Transcontinental), the track has been laid east 35 miles to the first crossing of the Sturgeon River, and from North Bay westerly the steel is laid to Sudbury Falls, leaving 25 miles on which the track has yet to be built. East of North Bay about 75 per cent. of the line has not been touched. There is only about 15 miles which has not been touched. Work is now being pushed east, and west of Pembroke, but the greatest effort is being made to tie up Port Arthur with the Toronto line, so that connection can be made between Port Arthur and tidewater. The tie-up of the Port Arthur-Sudbury line is expected by Jan. 1, and the Capreol-Ottawa line will be completed early next year.

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By The Toronto World

SUPPLEMENTAL JUNIOR MATRICULATION EXAMINATIONS

The supplemental junior matriculation examination was conducted by the University Matriculation Board from Sept. 8 to Sept. 18 at various centres throughout the province, including the Western University, London; the University of Toronto and McMaster University, Toronto; and Queen's University, Kingston. The following students were successful in completing at this examination their junior matriculation standing. Certificates of complete junior matriculation have been mailed to them:

John J. Addy, Gladys M. Bartley, Charles L. Buck, C. Ernest Begg, Jas. N. Ricknell, Charles S. Booker, Winona Hannan, Arthur L. Crozier, Herman T. Elliott, Olive G. Fairies, Emily A. Ferguson, West Flannery, Fred Freese, William E. Griffin, Ralph J. Haffey, Isaac F. Hamm, Clifford Henderson, Franklin A. Herman, Russell W. Hoffman, Cella E. Houson, Muriel H. James, Raymond A. Jamieson, Fay E. Kilmer, Ben Luxemburg, James I. McBride, Henry W. McLeod, Mary F. Malcolm, Thos. R. Merritt, Elwood Oakes, Fred H. Roberts, Mabel E. Rumball, Morris Siegel, Victor Sifton, M. E. Smith, Wilfred W. Stratton, Joseph L. Valentine, F. E. Lawrence.

Washington, Harry D. Welsmiller, Arthur T. Whately, Bessie Wilson, J. L. Zol.

In addition to the above the following candidates obtained partial matriculation standing. The papers on which the candidates were successful in obtaining complete junior matriculation into the faculty of arts are indicated on the certificates that have been sent to them: Harold G. Gibson, Annie C. B. Millar.

In compiling the above results the June matriculation and Normal entrance examinations in 1913 have been considered. The results of previous years have not been considered. To the remaining candidates, whose names are given above, state-ments of the marks obtained have been mailed. The standing, if any, to which these statements may entitle them, will be ascertained by the universities or colleges concerned. The candidates whose marks entitle them to standing under the regulations relating to persons engaged in mercantile or industrial occupations should forward their statements, together with their certificates of employment, to the secretary of the University Matriculation Board, Department of Education, Toronto.

NEW ELEVATOR TO BE READY SHORTLY

Work of Dredging at Port Arthur Should Be Completed in Two Weeks. Madrid.

WINNIPEG, Man., Sept. 27.—(Can. Press).—That the new government elevator at Port Arthur, which is handling grain by October 16, was the statement made here by the grain commission.

The slip is being dredged to allow vessels to load there and this work is expected to be completed in two weeks.

The capacity of the new elevator is five million bushels. No data has been set for the formal opening at which the prime minister and Hon. Geo. E. Foster are expected to be present.

TAMMANY MUST NOT GET CONTROL

Col. Roosevelt Declares This Should Be the Dominant Concern of the People.

ROCHESTER, Sept. 27.—(Can. Press).—In an address before the state committee of the National Progressive party here today, Col. Roosevelt declared that in the election in New York State this fall the dominant concern of the people should be to prevent Tammany from obtaining complete control of the state, and to this lesser issue must give way.

He argued that the predicament in which the state finds its public affairs is the failure of the people to elect to govern a governor and a legislature pledged to the carrying out of progressive policies. In voting against Tammany candidates, however, Col. Roosevelt urged voters to support the Progressive party "defeat Tammany without enthroning the Barnes Republican machine in its place."

ACTIVE STOCK MARKET NOT MUCH

Reading and Strong, But Influenced

SEGREGATION

Germany's New Bidder for Berlin

NEW YORK, Sept. 27.—(Can. Press).—The stock market closed today with a slight decline, but with a better feeling than yesterday. The market was light, and the closing was a little better than yesterday's. The market was light, and the closing was a little better than yesterday's. The market was light, and the closing was a little better than yesterday's.

MACDONALD LEADING

Saturday's Bright Spots

MONTREAL, Sept. 27.—(Can. Press).—In this issue provisions for the change of important quarters, settlements, and the appearance of the market over the past few days, have been declined to accept bonds rated steady.

HEAVY SHIP HELD FOR

Imports Worth Awaited

NEW YORK, Sept. 27.—(Can. Press).—Made today another company's bonded warehouse was under the law on September 27. The company's bonded warehouse was under the law on September 27. The company's bonded warehouse was under the law on September 27.

While we wait for a holdup of the house man yesterday dreamed the stuff was it had. There were 600 worth of more the new law to would be impossible any more storage of affairs lasted.

STOCKS FELL
LONDON, Sept. 27.—(Can. Press).—The attendance at the stock exchange was small. The markets were continental political commitments, and a tendency to sell. Consols dropped. There was a narrow, and at higher 30 1/2 low New York final.