

CANADA'S NEW TRANS-CONTINENTAL ROAD.

It is already operating over 1,000 miles of road, partly in Minnesota.

THE CANADIAN NORTHERN LINE, PARTLY UNFINISHED FROM WINNIPEG TO PORT ARTHUR.



From a Staff Correspondent.

Port Arthur, Ont., Aug. 24.—Frequent reference has been made in these letters to the plans and work of the Canadian Northern railway, but the railroad system it controls has grown to such proportions and means so much to western and eventually, perhaps, to the whole of Canada, that it requires special attention. In a general way, this company looks forward to the ultimate construction of a second Canadian transcontinental railway. As to the portions west of Manitoba and east of Port Arthur, the plans are as yet very vague, but in the portion where active work is now being prosecuted there are certain very definite lines in view which are being realized as rapidly as possible.

The Canadian Northern Railway company has certain officials who reside in Toronto, but there are new men at the head of the line. The real Canadian Northern organization at present is the contracting firm of McKenzie, Mann & Co. It is composed principally of William McKenzie, D. D. Mann and R. J. McKenzie, son of William; all of Toronto. This firm has been scheming for years to build and control a great railway system. Their plans have been balked for some time, and various obstacles have been encountered, but they are now on the highway to success. It is something like twelve years since there was first located an independent line of railway between Lake Superior and Winnipeg, but this year will see the rails connected through, all of the work having been done in the last three years. The new railway has received great governmental encouragement from the Dominion, Ontario and Manitoba governments. The two first-named have been interested chiefly because they wished to develop the country. The Manitoba government has had the additional motive of a desire for active competition with the Canadian Pacific railway, which, to hear some Manitobans talk, one might think the chief handicap to the proper development of the province.

Some Fat Subsidies.
The general government has testified to its interest in the project by giving it a subsidy of about \$4,000 a mile.

The Ontario government has given evidence of its interest by adding a subsidy of about \$3,200 a mile, both of these subsidies applying only to that portion of the road which lies within Ontario, some 280 of the 487 miles between Port Arthur and Winnipeg.

There is, of course, no subsidy covering that portion of the road which lies in Minnesota; neither is there any direct subsidy in Manitoba.

But the Manitoba government guarantees the company's bonds, which is enough in itself to assure the completion of the railroad, as it removed all difficulty in raising funds for construction.

There are some provisions in connection with the subsidies depending upon cost

per mile of construction, but it is a good guess that McKenzie, Mann & Co. will see to it that those provisions do not interfere with the getting of the line of the subsidies. In fact these subsidies are sufficient to pay for the building of the larger part of the road in Ontario, for while there are some parts of the line that it may cost as high as \$30,000 a mile to build, there are others which can be built for \$5,000, and taken as a whole the work is light.

Physical Features of the Line.
From Port Arthur west the new line climbs up to the height of land along the Kaministiquia river and its tributaries on the west. The height is attained seventy-eight miles west where the altitude is 1,267 feet above the sea and almost directly west to the headwaters of the Atikokan river to Rainy Lake, which it skirts to river and along the north shore of that river to Rainy Lake, which it skirts to the Rainy River to Beaver Mills, sixty-three miles long. The line follows down the Rainy River to Beaver Mills, sixty-two miles from the lake where it crosses into Minnesota at Beaudette over a massive steel bridge. It swings around the southern end of Lake of the Woods, running for about fifty miles in Minnesota and then northwest of War Cloud turns into Manitoba; thence it runs almost due northeast to Winnipeg.

Going east the maximum rising grade is only 1 per cent and there is very little of that. Going west the maximum is .5 per cent. Climbing to the summit from Lake Superior scarcely anything in height is lost once it is gained. Going east from Rainy Lake about sixty feet of a rise is lost along the Seine river. The maximum curvature is somewhat high, being eight degrees, but there is very little such curvature and it is all on level grades. The first part of the road west of Port Arthur is rather crooked, having been built before the company was well off as it is now and will doubtless stand some rebuilding later on.

The engineering on this line compares very favorably with that on the Canadian Pacific between Lake Superior and Winnipeg. By taking a general route which brings it to the south of Lake of the Woods, the new line has been able to follow the water courses and keep in the valleys. The Canadian Pacific, on the other hand, strikes across country with a fine scorn for natural routes, and is, consequently, a very much up-and-down route.

Most of the Work Done.
The track is now laid for 180 miles west from Port Arthur and for about the same distance east from Winnipeg, leaving something over a hundred miles to lay this season. As the grade is well up beyond the end of the track, it looks as if the line should be connected before snow falls. The difficulty in getting labor is, however, seriously impeding progress, and may put off the connection of the rails to

a date later than Oct. 15, now figured on. There are about 3,500 men now at work on the line and several hundreds more could be used to advantage.

Nature of the Country.
It is claimed for the new railroad that it opens up a country that is on the whole better than the corresponding part of the Canadian Pacific. Of the rich agricultural country it penetrates in southeastern Manitoba for some distance and of the rich timber and farming country it passes through on both sides of the Rainy river, much has been said before in this country's residence from Rainy River east the country is very rocky, and the railroad contractors are finding that their cuts are almost all in rock, but north of the Rainy Lake the new road runs through an extensive pine country, though the timber is apt to be very thin. It goes right through the most promising parts of the Rainy Lake gold country, and crosses the Atikokan iron range, which hardly seems possible that this region will not sooner or later have successful gold and iron mines. The Atikokan iron range is very promising, and is being prospected very carefully. The only trouble with the ore is the sulphur found in it, but it is said that that is not so much of an obstacle to the reduction of iron ores as it was a few years ago. The railway company is already talking of building big ore docks on the Kaministiquia river, just above Port William, to handle the ore from the mines it expects to see developed in the Atikokan range.

The road will afford good scenery to the tourist of the future, and will make accessible some of the most beautiful lakes and streams in the world. Summer resorts at points on Rainy Lake and other places are already talked of. The lakes will furnish the fishing companies with an opportunity to extend their sources of supply. Already one lake on the new line, Shebandowin, is being fished. There is yet no development of towns or even townships on the Port Arthur end of the line. There is no train service beyond that afforded by construction trains, which run eccentrically.

Other Lines.
But the road they are building between Port Arthur and Winnipeg is far from being all that the Canadian Northern has. Besides the line it is building north from Parry Sound on Georgian Bay, the company owns in Ontario the Port Arthur, Duluth & Southwestern, which it purchased about a year ago. This line is some eighty miles long and extends for a few miles into Minnesota. Sometime it will be extended to connect with the

Duluth & Iron Range at Ely, but nothing is promised in that direction at present. It should be said that instead of building the Winnipeg line out from Port Arthur or Ft. William the new line starts at Stanley station on the Port Arthur, Duluth & Western.

The Manitoba Lines.
In Manitoba the company now owns or operates all the railroads not controlled by the Canadian Pacific. The Northern Pacific lines recently sold to the Manitoba government have been leased by the Canadian Northern. It already owns the Lake Manitoba & Lake Selkirk line, which it has just extended to the northwestern corner of Manitoba and on into Northwest Territory. It is this line which will ultimately be extended to the Pacific coast. The company is putting in a connecting line between the eastern terminus of this line at Gladstone on the Canadian Pacific and Portage la Prairie, the terminus of one of the Northern Pacific lines. It is building another extension from Headingly south toward Carman, where the provincial government has been draining some extensive low lands.

The Officials.
The Canadian Northern company, though it is only an infant among railroads, now has 1,052 miles of railway under operation and is building 424. D. B. Hanna, general superintendent, has his office in Winnipeg. D. B. Corrie, superintendent of operation on the east end, is stationed at Port Arthur. M. H. McCleod is chief engineer on the west end and T. H. White on the east end.

To Compete With the C. P.
It will be seen that the new company has lines which ramify through Manitoba's wheat regions and that the line it is now building will give it a water outlet at Port Arthur. Of course it will be "sewed" at its eastern terminus during the period of closed navigation on Lake Superior, though it will make arrangements to store considerable grain. Some day the line will be extended east, north of the Canadian Pacific. An elevator with a capacity of 1,500,000 bushels is now being erected at Port Arthur.

The next step will be to get a line of boats to operate on the lakes in connection with the new road. The first arrangements will undoubtedly be made with some existing line, but McKenzie, Mann & Co. are known to be figuring on three large steamers of the line.

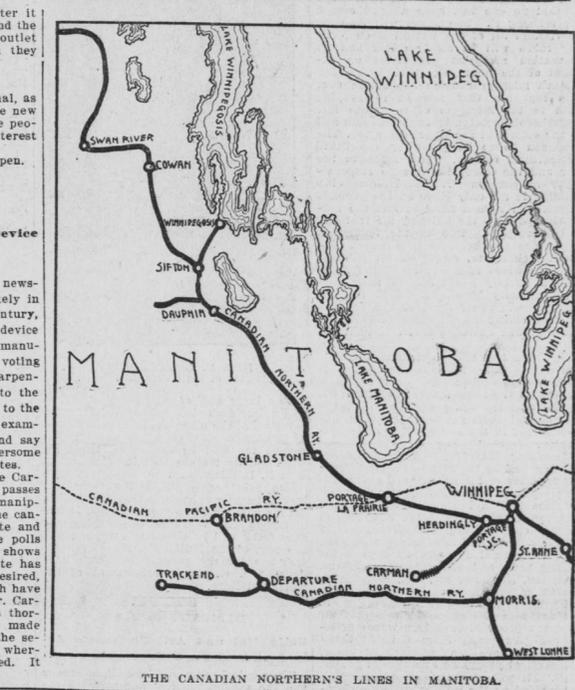
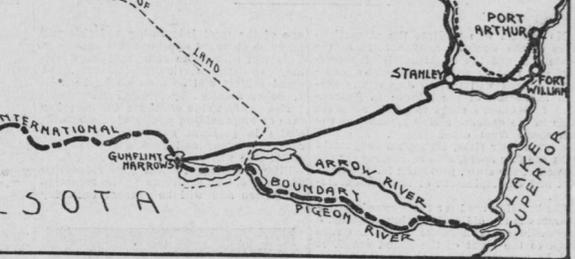
While it is doubtful whether the road will be completed in time to handle much through business before navigation closes

this year it is obvious that hereafter it will afford the people of Manitoba and the Canadian northwest that competing outlet within Canadian territory which they have long desired.

Minnesota's Interest.
Since the Minnesota & International, as heretofore pointed out, will meet the new Canadian system at Koochiching the people of Minnesota have a direct interest in the county the latter opens up.

A VOTING MACHINE
Veteran Newspaper Man Has Device to Simplify the Ballot.
Milwaukee Sentinel.
"Pump" Carpenter, the veteran newspaper man, who has lived alternately in Baraboo and Madison for half a century, claims to have invented a voting device which works perfectly and can be manufactured at half the cost of the voting machine now on the market. Mr. Carpenter declines to show his machine to the public or to give a description of it to the press, but several men who have examined it are favorably impressed, and say that it may solve the present cumbersome and tedious method of recording votes.

The ordinary ballot is used in the Carpenter device. As the paper passes through the mechanism, it indicates the candidates for whom he desires to vote and the choice is recorded. When the polls are closed the index of the machine shows just how many votes each candidate has received, and this record can, if desired, be corroborated by the ballots which have been preserved just as marked. Mr. Carpenter claims that his machine is thoroughly practicable, that it can be made at a small cost, that it preserves the secrecy of the ballot, and will be used wherever the Australian system is used. It has not yet been patented.



WHAT CLERGEUE IS DOING AT THE SOO

Modern Steel Works With Electrical Power Furnished by New Canals—Associate Industries of Wonderful Character.

Special to The Journal.
Sault Ste. Marie, Ont., Aug. 31.—In anticipation of the early completion of their great Michigan power canal, the Michigan Lake Superior Power company and its Canadian ally are constructing a canal across the foot of Lake Superior at this point. The concrete piers are finished for a fourth the distance across the river and the steel work is under way. Much of this dam will be done by the commencement of winter. The Michigan canal, that is expected to do draw from Lake Superior as to necessitating this retaining system, is nearly ready for operation. The vast excavation is practically finished, except for the upper and lower ends, and there remains the cleaning up and lining of the canal prism to secure the best results from the flow. At the lower end where the canal widens to more than a fourth mile and its water enters the power house, an enormous amount of earth has been excavated.

The power house is partly up, all its foundation are in, and at the southern end the work of placing the eighty 6000 p. Jolly-McCormick turbines is under way. There are to be three stories of steel construction in this great power house, which is to be 1,400 feet long and more than 100 feet high, and it is stated by the steel makers that it is the largest job of steel erection under way in America to-day with its more than 6,000 tons of slabs and plates. Half a dozen traveling cranes, etc., are installed on the structure, and the staccato monotone of hydraulic riveters is to be heard from the steel of the turbine chambers. It will be nearly a year before water is turned into this canal. On the Canadian side the river, the second canal is started and excavation is progressing fast.

Electricity for Power.
Eight large steam dredge boats are working day and night on the Canadian channel above the government lock, preliminary to the erection of an ore dock 1,800 feet long, for the handling of Michipicoten and other iron ores. This dock will be contiguous to the steel plant now nearing completion and a short distance from the larger plant contemplated for the future. The rail mill at this point will be ready for operation in two or three months, and its entire output for some years has already been sold to the Canadian government.

At this mill there will be an extensive application of electricity for power as possible, and the second Canadian canal is expected to furnish this as well as power for other works. Three eight foot cupolas are installed for melting pig iron, the necessary iron being expected for a time to come from the works of the Canada Iron Furnace company, at Midland. Later, when the blast furnace plant now under way is completed, the

are now going up in the calcium sulphite works, where a sulphite liquor is made from pyrite and iron sulphide. The ground pyrrhotite is passed down through a roasting furnace designed especially for the work, and drawn off at the bottom as an oxide of iron and nickel. The sulphuric acid gas roasted out is passed to the bottom of vats 100 feet high filled with limestone or dolomite quarried in the surrounding region. The gas is drawn upward and as it rises, reverses its direction, forming a calcium sulphite that is drawn to tanks, the strength of the liquor being regulated by the proportion of water passing into the vat. There are eight of these vats, each five feet in diameter and built of heavy timber.

For the utilization of this liquor, a sulphite pulp mill is provided, in which are what are usually called digesters, and where the end of the process is greatly from that employed in mills making a similar product, except as to size. The digester building is 125 feet high and contains the largest digesters ever built. They are tall steel cylinders lined with acid-proof brick, and each will hold thirty cords of chopped wood. The plant has a capacity for sixty-four tons of finished pulp every twenty-four hours.

Buildings for the treatment of the ferro-nickel ore on a commercial scale are complete. A sulphuric acid plant to utilize the new gas reverses the electrolytic process is under erection. There will be a large excess of sulphuric acid, and it was necessary to devise some method of treating it. Much sulphuric acid will be for sale, while the company will itself use some in various processes, among which will be the making of acetic acid.

Manufacture of Rails.
The rail mill consists of three stands, first and second roughing and finishing mills, and is driven by a 40x18-inch engine. Electrically driven transfer tables will manipulate the material here, and the rolls are under an electric overhead crane for handling rolls and spindles when changing sections. After passing the saws and a cambering machine, the rails are to be cooled and finished and handled by pneumatic hoists on cars for disposition, all the operation being from start to finish under one roof.

This plant is expected to make rails of 30 to 60-foot length and of any section to 85 pounds, as well as to roll structural shapes. Tracks of the Algoma Central & Hudson Bay railway run into the building at the finishing end and connect with the ore docks and furnaces at the other end. The structural work is all handed down to the handomery shops adopted for all the mechanical buildings of the company, and the roofs are corrugated iron on steel frames. The present main building is about 1,500 feet long and of various widths, and all foundations were of concrete. Aside from the Pueblo, Colo. works, this is the most westerly steel works in America.

The company is just completing and moving into a large and commodious office building of sandstone and steel located beside the No. 1 tailrace of the Canadian canal.

The Algoma Central & Hudson Bay railway is being pushed northward to a connection with the Helen mine branch projected northeast from that mine and the newer Josephine, and it is hoped that ore may be delivered all rail to the Sault hereafter. Shipments from the Helen mine are up to expectations, and are now going into Cleveland and Ashtabula in moderate volume, besides to Canada.

Several new buildings in connection with the varied metallurgical industries

A contract for the delivery of 300 cords daily of hard wood from the lands of the companies has been let and cutting is to commence at once. This wood is to be carbonized and Oscar Daube of New York has completed a portion of a plant for the work.

Lands to Be Settled.
One of the difficult problems undertaken by Mr. Clergue and association is that of settling the region to the north of the Sault along their line of railway. This settlement is one of the conditions under which they will earn the enormous valuable grants of land given by the Canadian government, and an earnest and well-considered effort is now about to be pushed looking to the locating upon these lands of the required number of families. Still the job is one that many a man with some genius for organization would hesitate to undertake. But Mr. Clergue is a man of more than ordinary genius, and his success in many undertakings fits him for others. The opportunities granted settlers along the line of the C. N. R. road in the way of making a start by woodchopping and of subsequent opportunities to be given under the liberal plans adopted by the company for working up the products of soil and forest should have effect in bringing in people and holding them till they are successful citizens.

Added to the above-mentioned metallurgical industries is the alkali works of the Canadian Electro-Chemical company, another Clergue enterprise. Here, by the Rhodin electrolytic process, using a mercury cathode, the alkali is produced and five tons of caustic soda are made daily.

AN OLD LETTER FROM C. K. DAVIS
In 1873 the Young Statesman Advocated Government Ownership of Railroads in a Limited Form.

The Marshall Minn. News-Messenger has been delving into the old files of twenty-eight years back and reprinting interesting news and editorial of the year 1873—when the crime was committed. The paper was then known as the Prairie Schooner, and Lyon county was just filling up with farmers and homesteaders.

In the third issue of the Prairie Schooner appears a letter from C. K. Davis, reprinted from the St. Paul Press. Senator Davis was then the republican nominee for governor, and the idol of the young republicans of the state. Three years before he had delivered his celebrated lecture on "Modern Feudalism."

The letter is decidedly interesting as showing the bent of the young statesman's mind at that stage of his career, when he advocated government ownership of railway trunk lines.

The extract from the Prairie Schooner is in full as follows:

The following letter from the man who will doubtless be the next governor of Minnesota we find in the columns of the St. Paul Press. It well repays a careful perusal:

Sometimes in May last, having determined upon a course of action, and now being nominated for governor, I addressed a letter of him stating that it would perhaps advance his interests if he would in some way state publicly his views as set forth in his

lecture on "Modern Feudalism" on questions depending in the public mind. In reply we received the letter published below, which it will be seen, we were not permitted to publish at the time. Mr. Davis having been nominated, we take the liberty of giving his letter to the public.

St. Paul, Minn., June 2, 1872.—W. W. Williams, Esq.—Dear Sir: I am in receipt of your esteemed favor of May 30.

My lecture on "Modern Feudalism" does not profess to touch the question of remedy. It was written three years ago, before the question had begun to receive any political attention, and was designed to call attention to the tendency of the modern corporation to subordinate the government itself to the function of the private monopoly.

Many predictions made in that letter seemed accurate when they were written, but events have moved so rapidly that within three years the things which to predict seemed venturesome have become the staid fact of history.

I am satisfied that the great political struggle of twenty years to come will be fought on the question of corporations. The Darwinism of the corporations. This decision, however, merely directed a private corporation. It does not profess to touch those bodies which, like railroads, are public in their nature, and to which certain rights of sovereignty—such as the right to condemn property—are delegated. Whether the courts will

draw this distinction is yet to be seen. My own idea is that the state cannot contract away a single attribute of sovereignty, and that when the public nature of these institutions is conceded, the right to control them follows logically.

I do not think that congress has any power that will effectually remedy the evils. The power to regulate commerce between the different states unquestionably gives that body the power to regulate through freights, but it has no expression in regard to freights say between Manitoba and Winona in regard to the power of the state, the converse of the above paragraph is true. That is, the state may possibly regulate from Manitoba to Winona, but it has no power to do so from Winona to La Crosse.

My own idea of practical solution of this question is almost as universal as the idea of emancipation. It is that the federal government should, under the power of eminent domain, condemn at least two through lines from the seaboard to the west, keep them in repair just as the state keeps its wagon roads up, and suffer every one who has a locomotive or a car to run over them under such regulations only as will insure safety.

Before this can be done, there will be a struggle to which that regarding slavery in the territories was more baby play. It may be that the railway men will be wiser than the slaveholders, and when they know what is coming, they will make satisfactory concessions.

I have no time to write more now. You must consider this as a private letter to you—I mean as far as publication is concerned. I will not, to secure any office, rush into print and air my views on this or any other question. I do not profess to be wiser than the republican party, and I intend to stand by it, believing that these evils can be more slowly, thoroughly, though it may be more slowly, remedied by the action of the great organization than by eccentric movements of individuals toward sudden reform. Yours,

Charlie Mitchell as Chaplain

Correspondence of The Journal.
Nome, Alaska, Sunday, July 21.—I have just returned from the cemetery. I feel somewhat tired, as it was a walk of about six miles. "The Arctic Brotherhood" was called upon to perform the last sad rites for an Arctic Brother, who died of heart failure on July 19. His name was C. J. Reilly. He was born in Hartford, Conn., about forty-five years ago. He was educated for a priest but drifted into the theatrical profession, was leading man for Fanny Davenport, and, report says, was married to her at one time; was also connected with Joe Jefferson in "Rip Van Winkle," and played with other prominent companies.

I was appointed to take the place of the chaplain, who is away at the present time, on a trip to San Francisco. The funeral ceremonies were quite impressive. My lines were not very lengthy. The Arctic chief asks:

"What is the record of our absent brother at your station?"

The answer was as follows:

"Justice, charity and truth ever guided our brother in his dealings. He believed in and practiced the principles of the fatherhood of God and the brotherhood of man."

Then the other stations were asked similar questions and gave their answers. Then the Arctic chief gave those raps that bring all members to their feet,



MEMBERS OF THE CLUB OF TWIN CITY COLORED WOMEN AND THEIR FRIENDS AT THE FIRST ANNUAL OUTING AT INDIAN MOUNDS PARK.