

ONTARIO
NORTHLAND
DIARY

CANADIAN
TRANSPORTATION
1936-1960

C. H. RIFF

OUR LAST FRONTIER IN THE NORTH LANDS OF ONTARIO

BY W. M. SCANLAN

Four hundred miles north of Toronto, the Temiskaming & Northern Ontario Railway is rapidly pushing its way through the wilderness to a junction with the National Transcontinental. One hundred and fifty miles north of James Bay, or thereabouts, that road is being graded, the rivers are being bridged, and great gangs of men are travelling north by way of Abitibi River and Abitibi Lake to Fauquier's contract, and Reynolds' contract, comprising respectively 100 miles west and 160 miles east of the proposed junction of the two roads. The latter work has begun after almost a year of preparation, portage building, cutting of lots roads, and laying corduroy, made necessary by the impenetrable nature of the forest and swamp of which the country is composed. Supplies and men are taken in over the rivers, through the muskeg, and dropped here, there, yonder along the contract right of way, station men, teamsters, axemen, Bulgarians, Swedes, Italians, Turks, Englishmen, Irishmen, Scotchmen—all sorts and conditions of men. Truly it is a combination that arouses at once romantic interest and awe. Here we have a frontier with all the accompanying evils and inter-line phases of frontier life; and the men who find their way hither are the men who have come from the ends of the earth, many of them, to

for lost time. McDougall's Chutes has the appearance of being built in a huge clearing, which, in a sense, is actually the case. It is in two parts, the new town surrounding the station on the hill, and the old town lying in the valley by the river. Log houses, tents and raunt lack-lustred, tarpaper-covered frame buildings are scattered among the stumps and occasional dead trees with picturesque irregularity. There are several so-called hotels, but the accommodation is still of the very rough and ready variety common to the frontier towns. One is given a candle to go to bed by and the wash-basin stands on the floor. Trading companies' stores, hotels and poolrooms are the most conspicuous features of the landscape. Men in brown duck suits, black-laced boots of tan-colored leather and nondescript hats are everywhere to be seen, most of them carrying a "turkey" or park; while here and all over are groups of foreigners of all descriptions, looking very fierce and big game in their conglomeration of costume. Turks wearing the typical "fez"; Bulgarians with great red sashes tied around their waists—all add a vivid touch of color to the scene.

These men, gathered together from many lands, are the working parts of the great organization that hews a pathway through forest, rock and muskeg; fills great valleys and bridges yawning chasms, and wins the continent with highways of steel. Few realize what hardships and privations

one of the largest on the line, and it is notable for the reason—it was built in 28 days 2 hours. An average of 12 men per day erected 500 tons of iron into a bridge 1,100 feet long and twenty-six feet high and eighty-five feet high. This constitutes a record, it is said, for bridge-building.

Just beyond the bridge is the end of steel, which, however, is rapidly moving northward as the levelling of the grade progresses. The grade is prepared in this way: Long level stretches are brought up to the required height by the slow process of wheelbarrow work. This is where the station man's usefulness manifests itself. The contractors put their own gangs into the cut, and here the dump cars, drawn by horses, singly or in teams, are brought into play. They are run along small tracks, and the material taken out of the cut grades the right of way either side. As soon as the grade has reached the engineer's approval, the tin-layers get to work. Handcars laden with the required timbers are run over the completed track and the timbers are laid side by side ahead of the end of steel. Then comes the work of leveling the steel rails. The great arm drops them into place, they are temporarily spiked down, and when sufficient are laid the ballast train is run onto the new sections of track, and by means of a great plough drawn the length of the train by a steel cable, the gravel is dropped on either side of the track. Where mud ballast is used the heavy stuff has to be shoveled off; then the mud train is followed by an engine with a "leveler," which throws the mud aside, and simplifies the work of the track shoveler. Where the ballast is gravel the train is followed at once by the tamping gang, who "jack" the ties and make the road-bed complete.

Just across Driftwood bridge to the left, is an immense "slashing." A hundred-acre clearing, cut out of the solid forest. This is the Government Experimental Farm, which is to ascertain what branches of agriculture can be most successfully carried on in the north land. At present it looks like a farm, bristling as it does with stumps and piles of brushwood. North of this, at intervals of three or four miles, are the subsidiary camps, the headquarters for the resident engineers, survey men and laborers employed directly by the contractors. All along the line between these camps are the small gangs of "station men" engaged on sub-contracts, which are taken at so much per cubic yard. This station work, as it is called, is set in small charges and is done by the men who work to those foremen who wish to work "on their own hook"—and, as the amount of money they make per day depends entirely on the amount of work they do, the efforts they put forth to earn a big day's pay are sometimes astounding. Gangs of station men, the interpreter informed, must have been known to work 36 hours at a stretch to make up for time lost in rainy weather. These men usually have their own individual camps. At Meadow Creek we found on the bank of the river a unique collection of huts, elevated on stilts, and thatched with grass, which the Bulgarians had built. They looked more like beaver domes than human habitations.

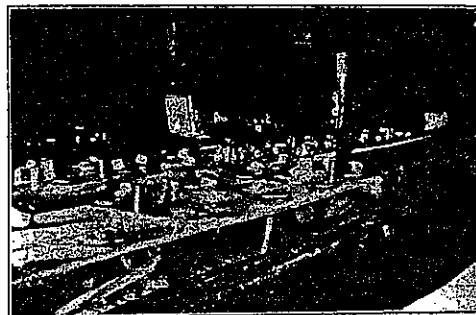
The methods employed in these camps are very primitive. One sees little groups in the evening, scuttling over the small trees, cooking their supper on stoves; and a frequent sight is a man doing his washing in a steel wheelbarrow. In the main camp conditions are more civilized. These being under the direct supervision of the contractors, considerable trouble is taken to see that the men are properly fed and well cared for. To a "tenderfoot," a dinner in one of the camps is an interesting experience. There are certain staples which are always found—potatoes, beans, molasses and condensed milk. The extent to which the fare is varied depends on the ability and ingenuity of the cook. Good bread is almost a certainty, no cook being considered worth the name who does not excel in that regard. There is sure to be a ration pie, which usually proves to be the most tasty of the desserts.

Macaroni and cheese is a strong point with some of the cooks; other specialties on hot biscuits; the majority of them turn out an appetizing meal, if need be, from material that would give a high-class hotel chef nightmares. Tea is drunk from granite cups of tin basins. In fact all the dishes are of metal. Every week a herd of cattle is driven north from Driftwood over the right of way. At each camp one or two are dropped off, to be killed as needed. Thus the problem of transporting the food is solved by making it transport itself!

Most of the camps have some noteworthy feature of tradition. One is known as "Starvation Point"; the reason being that shortly after it was located a stray tramp came wandering in one night over the right of way, hun-

gratious hardship of their tollsome life—a hardship uncomplainingly borne by these humble workers for the sake of the wealth with which they hope some day to return to their native shores, where by a life of ease and luxury "neath their own sunny skies" they can recompense themselves for the sufferings they have endured.

There in the far north, plagued by the heat and the flies in the summer; suffering from the frigid cruelty of an atmosphere far below zero in the winter, they work away, and in the stories of their coming and going, their hope and disappointments, their long hours of toil, and the tragedies that too often mark their lives, is material for a book of intense interest. Who sympathizing with them, it is well to



INTERIOR OF CONSTRUCTION COOK HOUSE.



WHEELBARROW USED AS A WASHBURN.

be in at the finish of that great characteristic feature of our continent's growth—the rough, hard life of the borderlands. This, they say, is our last "frontier."

The Temiskaming & Northern Ontario Railway has now been for about a year operating trains as far north as McDougall's Chutes. Steel is laid north of that to Driftwood City, fourteen miles. From there it is being pushed rapidly forward to the proposed junction with the National Transcontinental, a distance of thirty-five miles. It is expected to have this completed by October. Since the advent of the railway the name of McDougall's Chutes has been changed to Matheson, but the inhabitants cling to the old name; and the Government still designates the postoffice after the old Scotch factor and landowner, bearing his name, still lives on the banks of the river overlooking the Chutes. It is the dumping off place of supplies, not only for the T. & N. O. construction work, but for two hundred and fifty miles of the Transcontinental as well. The result is that a restless activity continually pervades the town, which is at once felt and communicated to the newcomers. It is as if everyone was trying to "catch up," to make up

they endure, commanded by, to them, strange people, speaking an unknown tongue, and driven by grim necessity to be the pioneers of civilization which will follow in their footsteps. A fight is in progress, a fight against the great wild which so long kept its treasures hidden. These are the men who are bearing the brunt of the battle.

The contract for the building of the T. & N. O. from Matheson to the Transcontinental is under the supervision of Mr. T. H. Scott and his brother, Albert Scott. The contract was originally held by the firm of McLean, Chandler & McNeil, but some trouble arose which led to the T. & N. O. Commission taking over the work, and putting Mr. Scott in charge. Driftwood City, where his headquarters are, is the head camp of the "contractors." It is, as before stated, fourteen miles north of McDougall's Chutes. It is a busy place. Here are located the stores, the contractors' head offices, the head blacksmith shop, the hospital, and chief engineers' foundry. In addition, the Canada Foundry Company have a gang of men who are working on the bridge over the Driftwood River, which is now almost completed. This bridge will be

city and tired, and found, to his disgust, that the camp was short of supplies, and there was nothing to eat but beans! In the morning he obtained a pencil, and in beautiful lettering (he was an artist of no mean ability) printed above the door the words: "Starvation Point," and there it remains to this day. The tramp hasn't been seen or heard of since; but his work survives, and is known from one end of the "contract" to the other. Another camp contains the record "strong man." He is an immense Turk, stands six feet four inches in his stockings, and when the writer photographed him the Turk obligingly lifted the side of a two-ton dump car, as an exhibition of his strength. This, in fact, is his favorite trick; and if the car runs off the track, and he is not allowed to try his hand at putting it on unassisted, he becomes very angry.

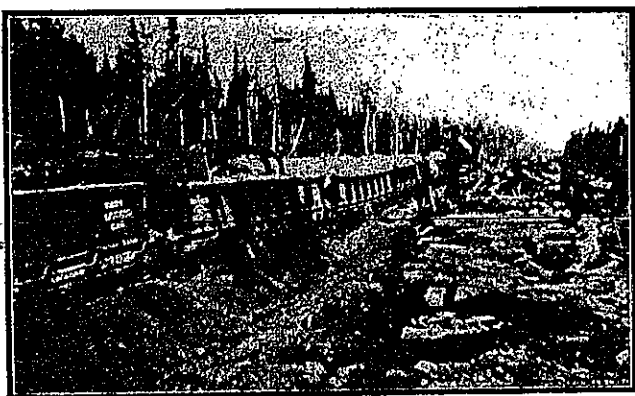
The hospital of Driftwood City is the headquarters of the contract physician, Dr. Thomas. Once a week or so he makes a trip afoot over the right of way. From camp to camp, and from camp to camp, accompanied by an interpreter, he travels over the rough stump-covered road, over corduroy, through muskeg—examining lunks and sanitary conditions; ordering the seriously ill down to the hospital—and welcomed everywhere by the laborers, who watch for his coming as an event to be looked forward to. Blinding up injured heads, dressing bilious hands—all come under the doctor's personal supervision. Often the men, believing themselves to be sick, come with tales of mysterious symptoms. These the doctor examines gravely. Then with a twinkle in his eye he gives the interpreter a handful of calomel pills or some capsules of quinine. The interpreter hands them to the sick one with the necessary instructions: "One every three hours," etc.—and the sick man goes away perfectly satisfied, and in half an hour is quite well again!

The interpreter has his own duties to perform. He distributes mail and cigarette papers. The delight of the men at the coming of both is almost pathetic; it gives an idea of what a very small thing it takes to relieve the

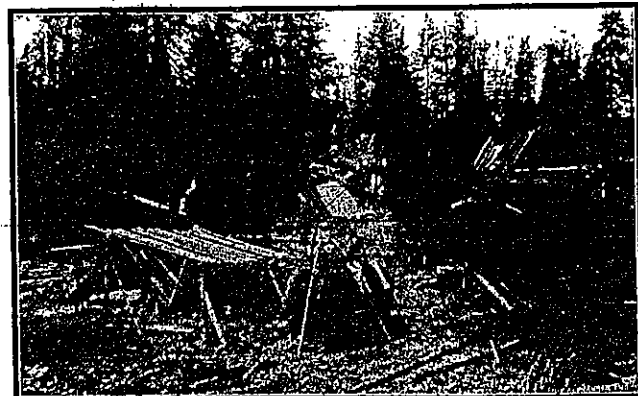
re-member certain lessons that the presence of these hot-blooded foreigners has taught us. Last summer a gang of these men went on strike, and besieged the offices at Driftwood City with shotguns and knives. Even this element, however, adds a romantic touch which gives to a trip through these camps all the interest of a drama; and if one is looking for new experiences, and strange and unusual sights, there is no better place to find them than in the railroad construction camps of the far north—our last "frontier."

"MY LOST CARES."

The little car that fretted me
I lost the other day,
And the sorrow I live in
Where I run red, and play
I lost them on the forest trail,
On woody paths of peace,
Where rush of life cannot reach,
Where solace and virtue reign.
I lost them where the wild birds sing,
And forest streamlets flow,
Where nature lulls to rest, and brings
The calm I want to know.
The needless fears of what may pass,
I throw them all away,
Among the wild, awe-scaped grass,
Where sun and shadow lay,
Where flowers and ferns the banks adorn,
Where blooms the golden rod,
Where sad thoughts die, and bright are born,
Out in the woods with that
I hear the calling of the wild,
I feel its charm and lure,
For me, a tired and fretted child,
Its breaths are strong and pure.
Then let me go where I may find
God's breath upon my face,
Where burdened care shall stay behind,
And trust shall take its place,
Whomsoever I will.
"But," protested the wayward son,
"you should make allowance for the
folly of youth."
"Hush!" growled the old man. "If it
wasn't for the silliness you got there
would be less folly."—Chicago News.
She—I suppose you will commit suicide
if I refuse you?
Ho—Ah, that has been my custom
The Sketch.



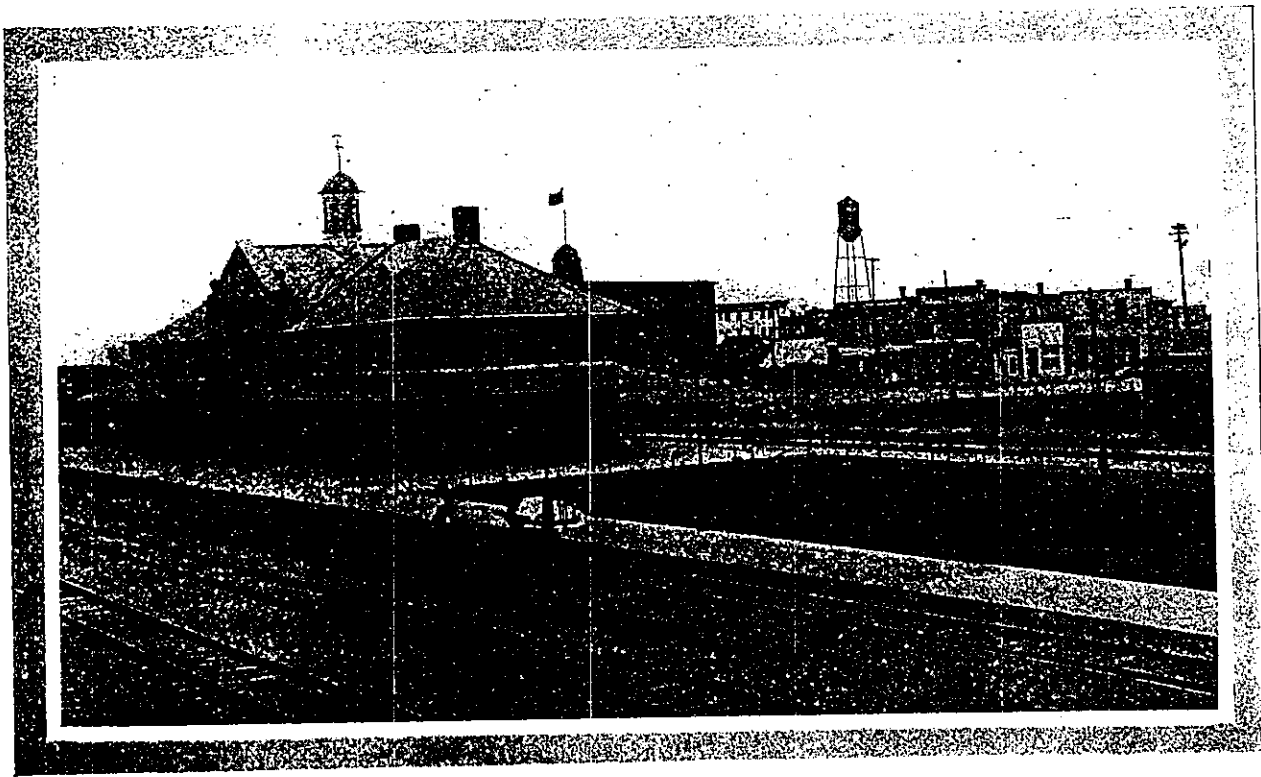
UNLOADING GRAVEL BY STEAM PLOUGH.



BULGARIANS' HUTS, THATCHED WITH GRASS.



First "National" Train Leaving Cochrane Station for Winnipeg, July 14th, 1915.



Union Station, Cochrane, July, 1915.

Timiskaming and Northern Ontario Railway's 25th Anniversary.

The 25th year of the Timiskaming and Northern Ontario Railway Commission work was celebrated at North Bay, Ont., Sept. 12. The principal guest of the day was Hon. G. Howard Ferguson, Premier of Ontario, who arrived early in the morning from Toronto, accompanied by Mrs. Ferguson, who was the guest of honor at a ladies' luncheon, the Premier being entertained at a Rotary Club luncheon, at which he gave an address. In the afternoon there was a free exhibition of pictures of the north country at the two picture theatres. Then there was a short ceremony at which the Premier handed the Mayor the deed of a 30-acre site at the eastern end of the city, to be used as a town park. In the evening there was a dinner at which the Premier made a short reference to the inception and development of the railway, remarking that on more than one occasion the Canadian National Ry. and the Canadian Pacific Ry. had tried to buy it, but the line was not for sale. It was not aimed to make a profit out of the railway or to pay dividends, but rather, through its operation, to develop and expand the north country. The day's celebrations wound up with a dance.

The first T. and N.O. Ry. Commission was appointed July 2, 1902, under the act authorizing the building of a railway from North Bay northward. Preliminary surveys for the line from North Bay to New Liskeard were made under the charge of W. B. Russell, Chief Engineer, in 1901, and with the approval of G. A. Mountain, then Chief Engineer, Canada Atlantic Ry., the eastern route, about 5 miles east of the route graded partially by the Nipissing and James Bay Ry., was chosen, and the first sod was turned May 10, 1902, by the Ontario Minister of Public Works, now Mr. Justice Latchford. A contract for grading of the line was let in Nov. 1902, and the line was opened Jan. 16, 1905. In subsequent years the greater part of the original mileage has been practically rebuilt, the main line carried to a junction with the National Transcontinental Ry. at Cochrane, an extension completed to near the Abitibi River, and a number of branch lines built, making the total mileage operated 415.6. In addition the Nipissing Central which is also owned by the Province and operated by the Commission, has 15.37 miles operated electrically, and 32 miles by steam. This line is being extended to Rouyn, Que., and the T. and N.O. Ry. main line is under construction from the end of the track, 296.6 miles from North Bay, for 30 miles to Coral Falls on the Abitibi River. The T. & N.O.R. operation has always shown a surplus of revenues over expenditures, and in the first year \$100,000 was paid to the Treasurer of Ontario towards meeting the interest on the cost of the line, and varying amounts, \$1,000,000, in one year, have been paid each year since, the total to Oct. 31, 1926,

coal from Drumheller to Toronto by the Canadian National Ry. is estimated by the expert for the provinces of Ontario and Alberta as \$6.08. Commissioner Oliver then analyses at length the detail of the figures submitted. In the case of 12 out of 18 items of cost, the two railways and the provincial expert were not far apart. These 12 items had to do with train movement costs. Those of the Canadian Pacific totalled \$4.014, the Canadian National \$3.908, and the Ontario and Alberta experts \$4.204. He held that the calculation of wage increases should be accepted as part of the cost and discussed at length the other 6 items, reaching the conclusion that the estimates submitted by the railways could not be accepted in full as to cost of miscellaneous transport, superintendence, non-revenue service, maintenance of freight cars and maintenance of ways and structures. The aggregate of these set up by the Canadian Pacific was \$3.973, by the Canadian National \$3.603, and for the provinces \$1.883. He suggested amendments which would make these figures \$2.356, \$2.125, and \$1.883, respectively, to which if the previously accepted train movement costs were added would bring the total out-of-pocket cost to the following figures—Canadian Pacific, \$6.37; Canadian National, \$6.03.2; Ontario and Alberta, \$6.08.7.

In dealing with the unacceptable items, Commissioner Oliver says it was not made clear by what process of reasoning the railways arrived at the conclusion that the displacement of United States anthracite in Ontario by Alberta domestic coal became part of the out-of-pocket costs of transporting Alberta coal to Ontario. The interested provinces would seem to be as fully entitled to set up the increased disbursements to Canadian railway employees that would follow the movement of Alberta coal; the general benefit to Canada in improvement of her balance of trade; the employment of additional miners in Canada, with greater wage disbursements, and consequently increased purchasing power tending to improve the traffic of the railways themselves in its most desirable features. He followed the majority commissioners in disallowing interest and depreciation, provision of profit for all income charges and reserves. Commissioner Oliver's "out-of-pocket" finding of \$6.50 a ton is a blanket rate designed to cover all Ontario points and points in Quebec within 100 rail-miles from Ottawa, and points on the National Transcontinental and branches in Northern Quebec eastward to and including La Tuque. A rate of \$6.75 is recommended for those parts of Quebec not covered by the \$6.50 blanket rate, the \$6.75 rate to extend as far eastward as and including Levis and Diamond Junction.

Mr. Dunning stated that the Government was only just in receipt of the report, which was extensive and quite voluminous, and had then had no time to give it consideration.

Timiskaming and Northern Ontario Railway Annual Report.

The Timiskaming and Northern Ontario Railway Commission's annual report for the year ended Oct. 31, 1929, has been submitted to the Prime Minister of Ontario, Mr. Ferguson, over the signature of the Chairman, Geo. W. Lee, as follows:—Due to the gradual changing conditions of general business throughout the country, the operation of the road for the past fiscal year has resulted in restricted opportunity and this is reflected in reduced traffic earnings for the period. This condition has been met by increased economy in service and operation, minimizing to the fullest extent the reduction in traffic et al. The very comprehensive measure of relief to farmers and settlers generally inaugurated by the Ontario Government in 1928 has been maintained by this Commission during the current year, resulting in the purchase of railway ties, etc., for present and immediate future requirements.

The year just ended has witnessed a highly satisfactory growth in the mining industry of northern Ontario, and while in many cases individual mines have proved somewhat disappointing and some retrogression is noted, on the whole the progress has been highly gratifying and new properties are approaching the producing stage. Looking forward, the mining industry appears to be assured of increasing production and expansion, and the intensive campaign of exploration of recent years has opened up new fields for the industry, which promises in time to record further advances along the line. How long this yearly expansion will continue is impossible of prediction, but as the vast unexplored pre-Cambrian territory is opened up, there is every reason to anticipate steady progression and new wealth in this line of endeavor.

The extension of the main line north of Cochrane has been completed to approximately 95 miles beyond that point, and the recent exploration and drilling activities in the coal deposits near Blacksmith Rapids, on the Abitibi River, undertaken by the Ontario Government under the supervision of W. S. Dyer, have disclosed a field of commercial lignite in a proved area of two to three miles. The average thickness of the several seams explored is 20 ft. in depth, indicating about 20,000,000 tons of lignite per mile, definitely locating at present date between 50,000,000 and 60,000,000 tons. Indications are that this coal underlies much of the Blacksmith Rapids basin, which is about 625 square miles in extent, and is found in what are called cretaceous basins, which roughly correspond to the wet muskegs of the coastal plains in size and extent, and the combined area of these cretaceous basins already located is estimated as 2,000 square miles. Needless perhaps to say that the potential wealth thus disclosed will have far reaching effects in the near future. In addition there have been found in the basin of the Moose River high grade clay deposits in the vicinity of the Mattagami and Missinabi Rivers. This clay is suitable for high grade china, floor tiling and vitrified products generally. Certain geological formations in the Moose River district are noted by Mr. Dyer as being very similar to the oil-bearing section of southwestern Ontario, and in the States of New York, Ohio and Indiana, so that oil and gas discovery is probable in this Moose River district. The possibilities are such that Ontario may have an industrial North in the future. The economic position of the country is fundamentally stronger than some recent events would

indicate. Unfavorable weather in the northern agricultural districts during the greater part of the spring months mitigated to a large extent the possibility of average crops, and industrial operations slackened in most cases due to these conditions. The newspaper industry experienced slightly better conditions than anticipated in the early part of the year, but the business as a whole is still undergoing adjustment in price and output due to over expansion and over production. Construction and mining continue among the strongest supports of the business structure. It is conceded to a certain extent that the great rise in security prices during the past five years, and which ended in Oct. 1929 so abruptly, contributed largely to the great prosperity of the country. This influence has now been largely withdrawn, and to this extent the stock market will be responsible for slowing down the wheels of industry. The slackening of the pace is not serious, but nevertheless it has occurred, and despite the fact that a minor recession of business is undoubtedly visible, we are not warranted in supposing that a serious industrial depression must ensue. This is but a pause in our economic progress, and its duration should be comparatively short, due to the strong economic position of the country and its legitimate expansion. Nothing that has occurred in this regard need undermine our confidence in our continued and increased prosperity.

The continued policy of branch line construction and main line extension have resulted in bringing the mining, farming, lumber and general industries, served by the Commission, into close proximity with the financial and business centers of the province and the United States, while the operation of most modern steel trains serves the requirements of the travelling public to the fullest extent. The T. and N. O. R. is prepared to continue its policy of extension and expansion to meet the growing requirements of the territory served.

During the year the Commission paid \$240,000 to provide for matured interest on its debenture bond issue of \$6,000,000. Insurance against loss by fire has been carried for \$3,400,000. The railway is in excellent physical and financial condition.

	1929	1928
Revenue, transportation	\$4,642,799.24	\$4,993,274.01
Revenue, incidental	327,482.89	345,984.07
	\$4,970,282.13	\$5,339,258.08
Decrease 1929, 6.91%	368,975.95	
Expenditures, operating	\$3,627,828.89	\$3,822,252.91
Other expenditures	314,673.07	313,875.71
	\$3,942,501.96	\$4,136,128.62
Decrease 1929, 4.68%	193,726.66	
Net earnings	\$1,027,880.17	\$1,203,129.46
Decrease 1929, 14.6%	175,249.29	

The gross revenue from all sources in 1929 decreased \$368,975.95 or 6.91%, compared with 1928, and gross expenditure decreased \$193,726.66 or 4.68%, resulting in a decreased net revenue of \$175,249.29, or 14.6%, compared with the preceding fiscal year. This decrease during 1929 was directly attributable to the gradual but general slackening of business conditions throughout the country, which, in common with other railways, was necessarily reflected in the T. & N.O.R. earnings. The consequent reduced freight and passenger traffic is, in our opinion, not an indication of permanent retrogression of the affairs of the northern country served by the T. & N.O.R. but shows an adjustment of business conditions preceding a general advancement in all lines of en-

deavor in the near future, as the conditions of the territory as a whole enlarge and expand.

Editor's note.—Tables appended to the report show in the balance sheet under assets the cost of the road as \$27,791,303.83; cost of equipment, \$5,101,233.98; Nipissing Central Ry., \$4,679,953.46; total, \$37,572,491.27; miscellaneous items bringing the total invested up to \$39,574,890.06. Under liabilities the provincial loan account is shown as \$30,207,934.92; funded debt matured, \$6,000,000; these amounts being the same as at the end of the previous fiscal year; other items bringing the liabilities up to \$39,353,425.92. The profit and loss credit balance was \$221,464.14, compared with \$298,476.42 at Oct. 31, 1928. The Commission paid the Ontario Government \$1,100,000 in connection with the operating surplus for the year ended Oct. 31, 1929, against \$1,300,000 for the year ended Oct. 31, 1928.

The Nipissing Central Ry., managed for the Ontario Government by the T. & N.O.R. Commission, operated 6.70 miles of electric railway owned by that road, and 6.94 miles of electric railway leased from the T. & N.O.R. Commission, also 71.08 miles of steam railway, a total of 84.72 miles, all these figures including sidings. The N.C.R.'s separate accounts show the cost of the road and equipment as \$2,388,871.76. The deficit on the N.C.R. steam lines for the 12 months was \$31,101.41, against \$49,121.06 for the previous 12 months. The deficit on its electric lines for the 12 months was \$8,133.91, against \$31,333.03 for the previous 12 months.

Level Crossing Elimination in Quebec.

The Quebec Government, which carried out works for the elimination of 16 level crossings of railways in the province during 1929, plans to eliminate the following 26 level crossings during this year:—

CANADIAN NATIONAL RYS.—Overhead crossing at Trois Pistoles, St. Simon; tunnel at Rimouski; 2 crossings in St. Jean and Notre Dame du Mont Carmel parishes; a bridge across the railway in Tache Tp.; at Melbourne; 2 crossings in Figueray Tp., Abitibi County; at Amqui; at Val Brulant; at Matapedia.

CANADIAN PACIFIC RY.—Two crossings in the neighborhood of Pointe du Lac; in Pointe aux Trembles district; at Yamachiche; at Charlemagne; widening of existing tunnel at Caughnawaga; 2 crossings at Montebello; overhead crossing at Cookshire.

NAPIERVILLE JCT. RY.—Tunnels under railway at Napierville and La Basse.

QUEBEC CENTRAL RY.—At Thetford Mines; at St. Francois; and a bridge across railway at Notre Dame des Pins.

The Timiskaming and Northern Ontario Railway Commission took over on Jan. 1 the operation of the restaurants, news stands and train news services along its lines, which had been relinquished by Arthur Stevens, who opened up the business at Timagami station in 1905. It is stated that the principal reason why he gave up the business is that Cochrane Municipality placed an assessment of \$10,000, afterwards reduced to \$5,000, on the section of the station building in which he did business, over and above the business assessment of \$2,500 previously made. The matter of the assessment is before the courts. (Press report.)

South African Government Railways' gross earnings from April 1 to Sept. 30, 1929, increased £486,929.

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the Coppermine River; and Luke Foxe and Thomas James, who in 1631 explored the Foxe channel and Hudson and Kelsey was a Hudson's Bay officer; Franklin, the heroic explorer who met a tragic fate on the Arctic Sea; Selkirk, founder of the River Colony; Thompson, surveyor and map maker; Dane who discovered Churchill; Hudson, the English sea captain who discovered the great bay bearing his name. The Manitoba Minister stated that the project has had some really difficult problems to solve in the development of the site, foremost among them water supply and sewage disposal. A great deal of study has been given to these matters by the Minister, the Minister and the Director

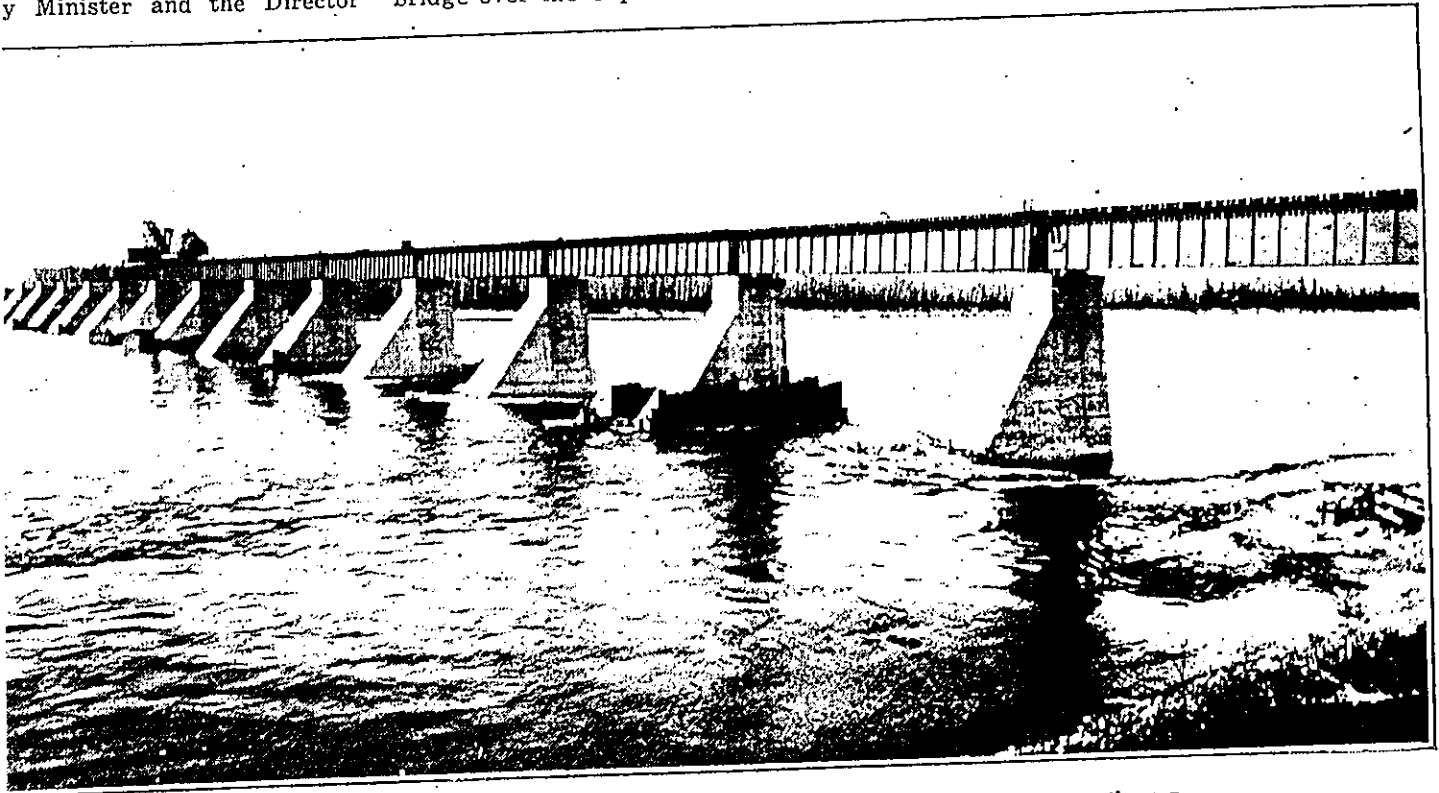
of gratings, and the sewers vented through the house stacks. The Minister is reported as saying that fireproof construction of all public buildings will be insisted upon, and that all residential buildings are to be of semi-fireproof construction, these precautions being necessary on account of the danger of water shortage in winter. Heating of the town by a central heating system is planned, although it may not be introduced at first.

The Minister is reported as stating that precaution will be taken to prevent anything in the nature of a boom at Churchill and that efforts will be made to make growth gradual and orderly. He is reported as not looking for a large population, and is recognizing that the town will be seasonal in its activity.

Pacific Great Eastern Ry.—A contract has been awarded James Wiley, Vancouver, for dismantling the P.G.E.R. bridge over the Capilano River. A Van-

project will depend largely on the outcome of the Peace River railway conferences to be held between the Dominion Government and the transcontinental railways in Ottawa.

Timiskaming and Northern Ontario Ry.—We were advised officially, June 23, with regard to the progress with construction on the extension to Moose Harbor, on James Bay, as follows:—"Coral Rapids is approximately at mile 97 north of Cochrane, and track has been laid 46 miles north of that point, or to mile 143, where the railway crosses the Moose River. South of Coral Rapids the track has been well ballasted, and is in good operating condition. Between Coral Rapids and Moose River, sufficient ballasting has been done to permit the operation of trains, but this track still requires a final lift which will, in all probability, be given during this season. The bridge over the Moose River having been completed, work between the



Moose River Bridge, Timiskaming and Northern Ontario Railway, showing the setting of the tenth span.

s. They believe that they have reached the doubtful stages and will soon bring their work to a successful conclusion. While for the present the water will be derived from the Dominion, piped from a series of canals inland, the Minister considers this source inadequate, and the Dominion will later bring its supply from the Moose River, about 8 miles upstream beyond the reach of the tide. The plan is to lay the pipe along the bottom of the river, where the runnel below the ice will keep it from being affected by the extremely low temperature. Experiments to learn the effects of subsurface temperatures are being conducted; it has been learned in spite of the fact of the subsoil being eternally frozen, it is much

couver press report states that the contractor is to retain the material in the bridge, which was to be removed by July 31. The report said:—"The railway management decided to remove the bridge, fearing that the next high water would wash out the weakened pier and sweep the entire structure away".

The British Columbia Government decided late in June on a province-wide programme of unemployment relief, Premier Tolmie having announced that the government is prepared to go ahead with the contemplated works just as soon as the Dominion Government signified its intention of contributing a share of the cost. The programme is said to involve work on 4 trunk highways on the mainland, and improvements to highways on Vancouver Island, and a report said:—"At the same time, it was made known

river and the proposed terminus at Moose Harbor is well under way, grading having been completed to mile 165 and clearing having been completed to the end of the line at Moose Harbor, at mile 188. Between mile 165 and the end of the line, the work has been covered by stationmen, and grading will be rushed to completion. It is expected that tracklaying on the north side of the river will be started about Aug. 1, and it will be proceeded with continuously until the terminus is reached.

"The bridge over the Moose River is 1,836 ft. long, and the superstructure is carried on 16 piers and 2 abutments. The average height of the piers is about 50 ft., the highest being 56 ft. The base of each pier is 20 x 58 ft., the bridge seat on each being 9 x 16 ft. Concrete used in the piers and abutments totalled

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onto University.—W. T. Jackman, pre-
viously Professor of Rural Economics,
University of Toronto, has been appoint-
ed Professor of Transportation. This
professorship, the first of its kind, will
be connected with the political science
department when the University re-opens
in September. Prof. Jackman's lectures
will cover a wide field and will deal with
transportation in numerous aspects,
including economics, rates, competition
among various forms of transportation,
etc. He is reported as stating that the
formation of a transportation depart-
ment at the University is a matter
for the future, but that during the past
few years he has been giving lectures
on transportation subjects when teach-
ing political economy, and that from 25
to 40 students have attended the lec-
tures.

Aluminum Paint for Refrigerator
Cars.—Canadian National Rys. is experi-
menting with aluminum paint for re-
frigerator car exteriors, to determine its
value in increasing refrigeration effi-
ciency. Two cars have been so painted
at Winnipeg shops. Special thermom-
eters are fitted to enable the recording
of interior temperatures without open-
ing the doors, and accurate records of
the ice consumption are to be kept, to
compare them with that in refrigerator
cars painted the standard red. Experi-
ments have shown that aluminum paint
is a very efficient heat reflector, and
that car roofs painted with it have an
exterior temperature 10° lower than
roofs painted in red. (Press report).
The Canadian Pacific Ry. has five freight
refrigerator cars with exteriors finished
with aluminum paint.

Morrissey, Fernie and Michel Ry.—
At the annual meeting of shareholders
of the Crownsnest Pass Coal Co., of which
Morrissey, Fernie and Michel Ry. is
a subsidiary, held June 14, it was report-
ed that the company's net profits for the
past year were \$166,881, and, including
balance brought forward from 1929, the
amount available for dividends was
\$282,513, from which dividends of \$279,-
529 were paid, leaving \$2,984 at the
credit of profit and loss. During the
year \$118,917 was spent on improve-
ments and betterments, of which \$847
was spent on the railway. The direc-
tors are:—W. R. Wilson, President; A.
H. MacNeill and L. C. Gilman, Vice
Presidents; A. Haydon, James T. Maher,
Charles Bocking, G. W. Howland, Alfred
Rogers and Erasmus C. Lindley.

Newcastle Island Development.—The
creation of a summer resort at Newcastle
Island, near Nanaimo, B.C., by Cana-
dian Pacific Ry., as described in Cana-
dian Railway and Marine World for May,
pg. 280, and June, pg. 381, having been
completed, it has been in full operation
since June 20, when it was opened offi-
cially by Capt. C. D. Neroutsos, Man-
ager, C.P.R. British Columbia Coast
Steamship Service. Many large excu-
sions have already been made to it from
Vancouver and Victoria, including one
of nearly 1,000 persons under the aus-
pices of the Vancouver Daily Province,
one of about 1,800 under the Oddfellows,
and one of about 2,200 under Vancouver
Civic Federation. Frequent steamship
service is provided between Vancouver
and Victoria and the island.

changed to three trips, the
bound, now being operated Mondays,
Wednesdays and Fridays, and no. 18,
southbound, Tuesdays, Thursdays and
Saturdays. No. 17 leaves North Bay
10.45 a.m. and arrives Cochrane 9.30
p.m.; no. 18 leaves Cochrane 7.40 a.m.
and arrives North Bay 5.50 p.m. G. W.
Lee, Chairman, T. and N.O.R. Commis-
sion, is reported as having stated that
the change in train service was made
on account of the reductions in passen-
ger traffic revenue caused by motor ve-
hicle competition.

Lachine-Cauchonawaga Bridge.—It was
reported from Montreal, recently, that
preliminary work on the construction of
a vehicular and pedestrian bridge over
the St. Lawrence River between Lachine
and Caughnawaga, Que., had started, in-
cluding sounding and testing of the soil
and rock at the bridge pier sites. The
bridge will be approximately 1,000 ft.
east of the Canadian Pacific Ry. bridge
and parallel to it; the north approach
will be at the foot of Lafleur Ave., Ville
Lasalle, and the south approach 1,000
ft. from the present railway bridge in
the Caughnawaga Indian Reserve.—Re-
cent Dominion legislation to provide for
construction of the bridge, in addition
to previous Quebec legislation, was dealt
with in our July issue, pg. 449.

A Toronto Passenger Club party of
over 100 local, and out of town members
from Buffalo, Cleveland, Detroit and New
York, with ladies and a party from The
Travellers, a women's passenger club,
left Toronto June 27 at 1.30 p.m. by a
Canadian National Rys. special train for
Muskoka, where they were the guests of
Muskoka Hotel and Navigation Company
at the Royal Muskoka Hotel for the week-
end, a dance, golf and other sports being
indulged in. After touring the Muskoka
Lakes the party returned to Toronto on
the evening of June 28.

Freight Car Condition and Supply.—
Canadian railways.—cars on lines, July
15, 197,680, compared with 196,667 on
June 1; cars in bad order, July 15, 15,359,
or 7.8% of total, compared with 13,950,
or 7.1% of total, on June 1; surplus cars
on hand, 42,923, compared with 36,591
on June 1. United States Class 1 rail-
ways.—cars on lines, June 15, 2,207,868;
cars in bad order, 172,805, or 7.8% of
total, compared with 7.7% on June 1.
Surplus cars, June 30, 599,282, compared
with 628,554 on June 23, 1931, and 465,-
464 on June 30, 1930.

Weekend Passenger Fare Reductions.—
Canadian Passenger Association has an-
nounced that the reduced weekend pas-
senger fares, good between all stations
in Canada on trains between Friday noon
and midnight of the Monday following,
which were placed in effect on May 1
to continue to July 31, are to be con-
tinued until Oct. 31. Full particulars
of the reductions were given in our May
issue, pg. 291. The reduced round trip
fare is one and a quarter times the single
fare.

Transportation Club of Toronto.—
Members and their wives were guests
of Toronto Harbor Commission on an
inspection trip of the waterfront im-
provements July 29, being taken round
the harbor on the Canadian National
Rys. s.s. Dalhousie City.

Canadian Pacific Express Co. has
opened regular agencies at Wirral, N.B.,
Christie Lake, French River, Grassett,

Stuart, of London, H. Bruce Stuart, and E. Stuart, of Montreal.

James Algernon Temple, M.D., C.M., M.R.C.S., England, and LL.D., father of R. H. M. Temple, K.C., General Counsel, Canadian National Rys., Montreal, died at Toronto recently, aged 89.

Thomas Turnbull, who has retired from the position of Engineer, Maintenance of Way, Western Region, Canadian National Rys., Winnipeg, was, from 1881 to 1889, transitman on location and resident engineer on construction on various parts of the Canadian Pacific Ry.; 1889 to 1891, with Newfoundland Government, in charge of location party and construction work on Halls Bay Railway; 1891 to 1897, Assistant Engineer, Maintenance and Construction, Western Division, C.P.R.; 1897 to 1900, Chief Engineer, west of Winnipeg, Canadian Northern Ry.; 1900 to 1901, on contract work bridging on Canadian Northern Ry.; 1901 to 1902, reconnaissance work for Dominion Government; 1902 to 1904, inspecting surveys for Dominion Government; 1904 to 1910, Assistant Chief Engineer, C.N.R.; 1910 to 1912, Assistant Chief Engineer, Hudson Bay Railway; 1912 to 1913, Chief Engineer, Hudson Bay Railway; 1912 to 1913, Chief Engineer, Edmonton, Dunvegan & British Columbia Ry.; 1913 to Jan. 6, 1919, Assistant Chief Engineer, Canadian Northern Ry., Winnipeg; Jan. 7, 1919, to Dec., 1931, Engineer of Maintenance of Way, Western Lines and Western Region, successively, Canadian National Rys., Winnipeg. Following his retirement he was presented with a grandfather clock, and a smoking cabinet for himself, and an engraved silver tray for his wife, the presentation being made by H. A. Dixon, Chief Engineer, Western Region, C.N.R., on behalf of the Engineering Department staff.

Thomas James Wrennick, previously Assistant Superintendent, part of Stratford Division, Southern Ontario District, Stratford, who was transferred to the position of Assistant Superintendent, Durham, Fergus, Kincardine, Newton, Owen Sound, and Southampton Subdivisions, Stratford Division, at Palmerston, Dec. 1, 1931, was born at Shannonville, Ont., Oct. 7, 1878, and entered transportation service Sept. 25, 1895, since when he has been, to March, 1896, messenger, Grand Trunk Ry., Belleville, Ont.; March, 1896, to March, 1897, call boy, G.T.R., Belleville; March, 1897, to Sept., 1898, switch tender, G.T.R., Belleville; Sept., 1898, to March, 1899, yard helper, G.T.R., Belleville; March, 1899, to Sept., 1901, Yard Foreman, G.T.R., Belleville; Sept., 1901, to Sept., 1906, Night Yardmaster, G.T.R., Belleville; Sept., 1906, to April, 1907, General Yardmaster, G.T.R., North Bay, Ont.; April, 1907, to Aug., 1918, Yardmaster, G.T.R., Hamilton, Ont.; Aug., 1918, to Nov. 24, 1925, Terminal Superintendent, G.T.R. and Canadian National Rys., successively, Black Rock, N.Y.; Nov. 25, 1925, to Nov. 30, 1931, Assistant Superintendent, part of Stratford Division, Southern Ontario District, C.N.R., Stratford.

Hamilton and Barton Incline Railway.

In the municipal voting in Hamilton, Ont., Dec. 7, 1931, a bylaw to provide for purchase by the city for \$50,000 of the incline railway which has been operated since 1890 by Hamilton and Barton Incline Ry. Co., from the head of James St. to the top of the escarpment, was defeated by a large majority. On Dec. 9, Mayor Peebles announced that the city would make efforts to have the incline railway remain in operation. The company had announced a few weeks previously that operation would be stopped, owing to mounting deficits. Subsequently, the mayor proposed that Hamilton Street Ry. cease operating buses from downtown to the top of the escarpment, that a new bus service, to serve the top of the escarpment only, be started, and that there be a system of transfers or 3-part tickets by which a passenger could transfer from the escarpment bus line to the incline railway and from the latter to Hamilton Street Ry. cars, or vice versa. This scheme was discussed by the city board of control and the incline railway directors Dec. 14. Following the discussion, the Mayor stated that all present had considered it practicable, but that the Hydro-Electric Power Commission of Ontario, as operator of Hamilton St. Ry. and of the bus line between downtown and the top of the escarpment, would have to agree to the scheme before it could be made operative.

The Mayor of Hamilton announced Dec. 18, 1931, that he had taken up his plan with G. E. Waller, Manager, Hamilton Division, Ontario Hydro-Electric Rys., and that they had gone to Toronto to confer with Hydro-Electric Power Commission officers regarding the proposed arrangement, the latter apparently being

favorable to giving the plan a trial. All efforts to have incline railway service continued have, however, failed, a Hamilton dispatch of Dec. 23, 1931, having stated that it would close at midnight Dec. 26, 1931. The Mayor was quoted as saying that as the majority of the escarpment residents appear to prefer the bus service to and from the city no further efforts, to keep the incline railway in operation, would be made.

United States Railways' Financial Results.—U.S.A. class 1 railways' operating revenues in Oct., 1931, were \$363,205,648, or 24.9% less than in Oct., 1930; operating expenses were \$261,246,920, a decrease of 19.9% from Oct., 1930, and the Oct., 1931, net railway operating income was \$64,020,077, equivalent to annual return of 1.87% on property investment, compared with \$112,386,243 in Oct., 1930, equivalent to annual return of 3.35%. In the first 10 months of 1931, the net railway operating income, \$472,306,294, was equivalent to annual return of 2.05%; the net railway operating income for the same part of 1930, \$773,287,277, was equivalent to annual return of 3.43%. Eastern U.S.A. railways, in the first 10 months of 1931, earned at the annual rate of 2.3% on property investment, compared with 3.83% in the same part of 1930; the southern railways earned at the annual rate of 1.34%, compared with 2.63%, and the western railways at the annual rate of 1.99%, compared with 3.21%.

Timiskaming and Northern Ontario Ry. Service Extended.—A mixed train made a trip Dec. 22, 1931, from the terminus of the James Bay extension at Moose Harbor, south, to accommodate residents and construction employees who wished to go out for Christmas.

Grain Carried to Head of Great Lakes and Pacific Coast.

Dominion Bureau of Statistics, Agricultural Branch, reports the number of cars of grain unloaded at Fort William and Port Arthur, Ont., in Nov., 1931, and in the four months ended Nov. 30, 1931, the first four months of the 1931-1932 crop year, as follows:—

	Nov., 1931		4 months to Nov. 30, 1931	
	C.P.R.	C.N.R.	C.P.R.	C.N.R.
Wheat	8,231	13,221	21,452	36,881½
Oats	698½	1,155½	1,854	2,503½
Barley	142	174	316	1,030½
Flax	133½	167	290½	320½
Rye	55	119	174	410½
Total	9,260	14,826½	24,086½	41,146½

The number of cars of grain unloaded at Vancouver, B.C., in Oct., 1931, was as follows:—

	C.P.R.	C.N.R.	B.C.E.R.	G.N.R.	Total
Wheat	3,174	2,015	.....	.....	5,189
Oats	40	73	.....	.....	113
Barley	2	5	.....	.....	7
Rye	1	.....	.....	.....	1
Mixed grain	1	.....	.....	.....	1
Total	3,218	2,093	.....	.....	5,311

† British Columbia Electric Ry. † Great Northern Ry.

The number of cars of grain unloaded at Vancouver during the three months ended Oct. 31, 1931, the first three months of the 1931-1932 crop year, was as follows:—

	C.P.R.	C.N.R.	B.C.E.R.	G.N.R.	Total
Wheat	5,284	3,244	.....	* 12	8,540
Oats	87	177	2	.....	266
Barley	4	12	.....	.....	16
Rye	9	11	.....	.....	20
Mixed grain	2	1	.....	.....	3
Total	5,386	3,445	2	12	8,845

* U.S.A. wheat.

Big Valley Terminal.—The Board of Railway Commissioners has refused an application by the Brotherhood of Railroad Trainmen et al for compensation in

Receipts of grain at Prince Rupert, B.C., served by Canadian National Rys. only, from Aug. 1, 1931, the beginning of the 1931-1932 crop year, to Dec. 11, 1931, were 852,802 bush., an increase of 694,131 compared with the same part of the 1930-1931 crop year. Receipts of grain at Victoria, B.C., from Aug. 1, 1931, to Dec. 11, 1931,

Official Opening of Temiskaming and Northern Ontario Railway Extension to James Bay.

The recently completed extension of the T. & N.O. Ry. to Moosonee, near James Bay, which is described on the first two pages of this issue, was opened officially by the Prime Minister of Ontario, Mr. Henry, July 15, in the presence of some 150 invited guests, augmented by a number of local people. The main body of the party left Toronto, July 13, at 10.45 p.m., by a special Canadian National train of 12 cars, including a number of business cars of the T. & N.O.R., Canadian National, Canadian Pacific, and Toronto, Hamilton and Buffalo Rys., several C.N.R. compartment, composite, club, and sleeping cars, a C.N.R. dining car and a baggage car.

North Bay was reached early on the morning of July 14, where the party was augmented by a number of railway officers and officials and others from that place, and from Montreal and Ottawa, with several business cars, and from there the train was run in two sec-

in Appeal, Supreme Court of Ontario, who was Ontario Commissioner of Public Works when the railway was started, and who turned the first sod at Trout Lake, near North Bay, Sept. 2, 1902; by E. C. Drury, who as the then Prime Minister of Ontario, turned the first sod at Cochrane, for the James Bay extension, in Oct., 1921, and by the Prime Minister of Ontario, Mr. Henry. Each of them was presented by Mr. Lee with a precious metal replica of the spike. This was followed by speeches by Mr. Henry, and the following other members of the Ontario Government, the Attorney General, Lt. Col. Price; the Minister of Highways, Mr. Macaulay; the Minister of Public Welfare, Dr. Ross, and a minister without portfolio, Mr. Poisson, also by J. A. Bradette, M.P. for Timiskaming North; J. E. Lawson, M.P. for York West; Sir William Hearst, ex-Prime Minister of Ontario, and Johnnie Fletcher, an Indian chief, who spoke in

Col. J. I. McLaren, Commissioner; W. H. Maund, Secretary-Treasurer; R. H. Parmenter, Solicitor; S. B. Clement, Chief Engineer; W. A. Griffin, Superintendent; A. J. Parr, General Freight and Passenger Agent; S. H. Ryan, Assistant Superintendent, Canadian National Rys., W. A. Kingsland, General Manager, Central Region; W. T. Moodie, General Superintendent, Northern Ontario District; H. C. Bourlier, General Passenger Agent; R. E. Perry, Assistant Freight Traffic Manager; A. C. O'Neill, Division Freight and District Passenger Agent, Canadian Pacific Ry., Major General Hon. S. C. Mewburn, C.M.G., one of the directors; H. J. Humphrey, Assistant to the Vice President; H. C. Grout, General Superintendent, Ontario District; T. Hambley, General Superintendent, Algoma District. Others in the party included F. Albert Labelle, Deputy Chief Commissioner, Board of Railway Commissioners; J. W. Fugsley, Secretary, Dominion Rail-



At the official opening of Temiskaming and Northern Ontario Railway Extension to James Bay. The left hand illustration shows, from left to right, the members of the T. & N.O.R. Commission, Col. J. I. McLaren, G. W. Lee, Chairman, and Lt. Col. L. T. Martin, Vice Chairman, also Hon. F. R. Latchford, Chief Justice in Appeal, Supreme Court of Ontario. The right hand illustration shows members of the party assembled in front of Moosonee station waiting for the opening ceremonies.

tions, leaving at 7.30 and 7.50 a.m. respectively. On arriving at Fraserdale, 323.2 miles from North Bay, and 69.6 miles beyond Cochrane, at about 7 p.m., the party left the special trains and were taken on T. & N.O.R. passenger cars over a spur line for about three miles, to the Abitibi River canyon, where they viewed the construction work on the 275,000 h.p. development which had been done by Ontario Power Service Corporation, but which had been suspended pending the securing of funds to complete the work. The journey north was resumed about 9 p.m., and Moosonee, the T. & N.O.R. terminus near James Bay, 433.8 miles from North Bay, and 664.4 miles from Toronto, was reached early on the morning of July 15.

At 10 a.m. the party and a number of local people gathered at Moosonee station for the official opening ceremonies, which were presided over by Geo. W. Lee, Chairman, T. & N.O.R. Commission, who spoke of his 29 years' service with the railway, and of the possibilities opened up by the extension. Three spikes were then driven to secure one of the rails in front of the station, by Hon. F. R. Latchford, Chief Justice

Cree. The speeches were broadcast by CFCH North Bay over T. & N.O., Canadian National and Canadian Pacific Ry. lines throughout Ontario. Most of the rest of July 15 was spent by the party in visiting the historic Hudson's Bay Co.'s Moose Factory post, on an island in the Abitibi River a short distance east of Moosonee, and in watching canoe and outboard motor races by James Bay and Moose River Indians.

The two special trains left Moosonee at 6 and 6.10 p.m., arriving at Timagami early on the morning of July 16. The party were then taken on a trip, which lasted most of the day, on the Perron and Marsh steamboat Belle of Timagami on a delightful tour of Lake Timagami, the scenery of which was much admired. The two special trains left Timagami shortly after 7 p.m., arriving between 9 and 10 p.m. at North Bay, where a number of the party left for their respective headquarters, the majority continuing on to Toronto, which was reached early on July 17.

Railway officers and officials in the party were:—Temiskaming and Northern Ontario Ry., G. W. Lee, Chairman; Lt. Col. L. T. Martin, Vice Chairman;

ways and Canals Department; H. T. Malcolmson, Vice President and General Manager, Toronto, Hamilton and Buffalo Ry.; W. J. Grant, ex District Freight Agent, Canadian Pacific Ry.; J. O. McKerrow, General Traffic Manager, Abitibi Power and Paper Corporation; Acton Burrows, Canadian Railway and Marine World. S. F. Baker, Travelling Passenger Agent, Canadian National Rys., North Bay, Ont., accompanied the party throughout the trip from Toronto to Moosonee, and return, and rendered valuable assistance in many ways.

Freight Car Condition and Supply.—Canadian railways:—Total cars on lines, June 15, 200,848, compared with 201,068 on June 1; cars in bad order, June 15, 15,942, or 8.4% of total, compared with 15,942 on June 1, or 8% of total of cars on lines on that date; surplus cars on hand, June 15, 43,730, compared with 45,767 on June 1. U.S.A. class 1 railways:—total cars on lines, June 1, 2,141,231; cars awaiting or undergoing repairs, 230,820, or 9.9% of total, compared with 9.2% on May 1; surplus cars on hand, June 14, 1932, 767,419, compared with 750,574 on May 31, 1932, and with 626,050 on June 14, 1931.

partment, Calgary; April 11, 1919, Solicitor for Alberta, Calgary; Nov. 1, 1934, Assistant General Solicitor, Montreal.

Wm. Walsh, who was transferred from the position of General Car Foreman, Canadian National Rys., at Toronto, Nov. 1, to that of District Car Foreman, Northern Ontario District, at North Bay, died suddenly on a street in North Bay, Nov. 7, while on his way to his new office. He was born in Manchester, England, May 25, 1885, his appointments in C.N.R. service having been:—May 22, 1916, Car Foreman, Trenton, Ont.; May 1, 1918, Car Foreman, Capreol, Ont.; May 16, 1923, General Car Foreman, Toronto; Nov. 1, 1934, District Car Foreman, North Bay. He was a Protestant.

Frank J. Watson, who retired from the position of Commission Traffic Representative, Canadian National Rys., Montreal, Dec. 31, 1931, visited England recently with his wife.

E. J. Wearing, who retired from the position of European Express Agent, Canadian National Rys., on pension, Sept. 30, was entertained at luncheon at the British Empire Club in London, Oct. 23, by a large party of his former associates in the service and was presented with a silver salver by P. A. Clews, European Manager, C.N.R.

James Miller Woodman, who retired from the position of General Superintendent, New Brunswick District, Canadian Pacific Ry., at Saint John, Oct. 31, was born at St. Marys, Ont., May 16, 1866, and served as a brakeman, yardmaster, conductor and trainmaster until 1910, when he went into insurance business in Indiana. He entered C.P.R. service, Jan. 6, 1912, as Superintendent of Terminals, Winnipeg, his subsequent appointments having been:—Feb. 9, 1917, Superintendent, Montreal Terminals; Oct., 1918, General Superintendent, Quebec District, Montreal; April 19, 1920, General Superintendent, New Brunswick District, Saint John. Mr. Woodman will continue to live in Saint John.

Frank A. Young, who was appointed General Manager, National Terminals of Canada, Ltd., Montreal, Nov. 1, was born at Winnipeg, April 10, 1883, and entered transportation service in 1901, as junior in Traffic Department, Canadian Northern Ry., Winnipeg, his subsequent appointments having been:—1909, Traveling Passenger Agent, C.N.R., Toronto; 1910, Commercial Agent, C.N.R., Chicago, Ill.; 1912, Division Freight Agent, C.N.R., Toronto. He was out of transportation service, 1913-1916, returning in 1916, since when he has been:—Feb. 1, 1916, General Agent, Canadian Northern Ry. and Canadian National Rys., successively, New York, N.Y.; Aug. 1, 1920, Travelling Special Representative, Canadian Government Merchant Marine, New York; April 1, 1922, General Passenger Agent, C.N.R., London, England; Sept. 1, 1925, General Eastern Passenger Agent, C.N.R., New York; Nov. 1, 1934, General Manager, National Terminals of Canada, Ltd., Montreal.

Steel Rails Ordered.—A Springhill, N.S., press dispatch of Nov. 11 credited the President of Dominion Steel and Coal Corporation with having announced that an order for 8,000 tons of rails for the South African Government Railways had been received. This order is in addition to the one for 2,500 tons mentioned on page 512 of this issue, and makes a total of 36,341 tons ordered by the South African Government from Dominion Steel and Coal Corporation, beginning with 1931.

Reduced Train Service, Temiskaming and Northern Ontario Railway.

Under Temiskaming and Northern Ontario Ry. timetable effective June 24, mixed trains were operated three times a week in each direction between Cochrane, where the line crosses the Canadian National Rys. (National Transcontinental) line, 253.6 miles north of North Bay, and Moosonee, the terminus on the Moose River, near its entry into James Bay, 186.2 miles north of Cochrane. Train 101 left Cochrane, Mondays, Wednesdays and Fridays, at 10 p.m., arriving Moosonee on following days at 7.10 a.m., and train 102 left Moosonee, Mondays, Wednesdays and Fridays, at 6 a.m., arriving Cochrane 1.15 p.m.

Supplement 2 to timetable 74 effective Nov. 11 has reduced train service to Moosonee materially. Now, there is only one through train a week between Cochrane and Moosonee, viz., northbound, mixed train 101, leaving Cochrane Wednesday 9 a.m., leaving Island Falls Jct., 43.1 miles north of Cochrane, 12.20 p.m., leaving Fraserdale, 69.2 miles north of Cochrane, 1.33 p.m., and arriving Moosonee 6 p.m., and southbound, mixed train 102, leaving Moosonee Friday, 8 a.m., leaving Fraserdale 12.27 p.m., leaving Island Falls Jct. 1.40, and arriving Cochrane 5 p.m.

One mixed train a week is operated in each direction between Cochrane and Fraserdale, no. 105, leaving Cochrane Saturday 9 a.m., leaving Island Falls Jct. 12.20 p.m. and arriving Fraserdale 1.33 p.m., and no. 106, leaving Fraserdale, Saturday 2 p.m., leaving Island Falls Jct. 3.10 p.m. and arriving Cochrane 6.20 p.m.

One mixed train a week is operated in each direction between Cochrane and Island Falls Jct., no. 103, leaving Cochrane, Tuesday 9 a.m., and arriving Island Falls Jct. 12.20 p.m., and no. 104, leaving Island Falls Jct., Tuesday 1 p.m., and arriving Cochrane 4 p.m.

Calculation shows that the mixed train mileage per week between Cochrane and Moosonee prior to Nov. 11 was 6 x 186.2, or 1,117.2 miles. Now, it is 2 x 186.2, plus 2 x 69.2 plus 2 x 43.1, or 597 miles, the saving by the service reduction being 520.2 mixed train miles a week.

Timetable 74, effective May 13, provided for only one mixed train a week in each direction between Cochrane and Moosonee, an additional one a week between Cochrane and Fraserdale, and an additional one a week between Cochrane and Island Falls Jct. The three round trips a week between Cochrane and Moosonee did not become effective until June 24. Therefore, the effect of supplement 2 to timetable 74 is to restore the Cochrane-Moosonee service to what it was prior to June 24.

Saint John Wants More Through Freight.

When the Canadian National Rys. Chairman of the Board of Trustees, Mr. Fullerton, another Trustee, Mr. Labelle, and the President, Mr. Hungerford, were in Saint John, N.B., recently, an informal memorandum, embodying reasons as to why the port should receive more import and export freight traffic, and prepared by Mayor Brittain and a committee of the Saint John Board of Trade, was presented to them, the Mayor hav-

ing stated at the time that he would be glad to send a small delegation to appear before the C.N.R. officers at either Montreal or Ottawa, with a carefully prepared brief. Mr. Fullerton was reported to have replied that the best course would be for the city to forward its brief, which could be taken up by the trustees and the President with C.N.R. operating and other officials, and to send a delegation later. It was reported from Saint John, Nov. 3, that a formal brief had been forwarded, copies having been sent to Messrs. Fullerton and Hungerford, to the Dominion Minister of Railways and Canals, Dr. Macdonald, and to the Minister of Pension and National Health, Dr. Murray MacLaren.

Temiskaming and Northern Ontario Railway Commission Chairmanship, Etc.

The Prime Minister of Ontario, Mr. Hepburn, announced, Nov. 29, that Malcolm Lang, of Haileybury, formerly M.L.A. for Temiskaming, who, as stated in Canadian Railway and Marine World for November, pg. 482, had been appointed a member of the Temiskaming and Northern Ontario Railway Commission, had been appointed Chairman, succeeding the Prime Minister, who had acted in that capacity temporarily since the cancellation of the appointment of G. W. Lee, and that Mr. Lang's salary would be \$10,000 a year, as provided by statute, pending further legislation.

The Prime Minister also announced that the T. & N. O. R. Commission will remain under his department, that in addition to his withdrawal from it, A. G. Slaght, K.C., of Toronto, who was appointed to it in August, will withdraw; that Armand Racine, a Windsor lawyer who investigated T. & N. O. Ry. affairs, will remain on the Commission for a time; that Charles Gallagher, Mayor of Schumacher, who was appointed Vice Chairman in October, will continue in that position, and that the Commission is ultimately to be composed of three members.

Canadian National Rys. Winnipeg Building.—Ottawa press dispatch Nov. 20.—The Dominion Government has purchased from the Canadian National Rys. the old industrial building in Winnipeg adjacent to the railway terminal there, on the corner of Main and Water Streets. The purchase price was \$175,000. The industrial building will be razed and a seven story building will be erected in its place. It will be an office building, one floor of which will be rented to the railway to house its officials occupying the present structure.

United States Railway Car Loadings.—The Association of American Railroads advises that there were 584,525 cars loaded with revenue freight on U.S.A. railways in the week ended Nov. 17, a decrease of 18,183 from the corresponding week in 1933 but an increase of 11,902 over the corresponding week in 1932. Loadings in 1934 to Nov. 17 were 27,632,202 cars, compared with 26,047,078 in the corresponding part of 1933 and with 25,203,352 in the corresponding part of 1932.

Quebec Taxes, Canadian Pacific Ry.—The City Treasurer of Quebec received a cheque, Nov. 6, from the C.P.R., for \$282,000, for the company's taxes. The C.P.R. is the largest taxpayer in the city.

	Gross Earnings		Working Expenses		Net Earnings		
	1936	1935	1936	1935	1936	1935	Increase
January	\$9,323,822	\$8,266,644	\$3,711,250	\$3,062,330	\$612,572	\$204,314	\$408,258
February	9,280,594	8,656,020	8,413,197	7,805,875	867,397	850,145	300,493
March	10,679,577	9,515,608	9,331,843	8,468,372	1,347,734	1,147,236	17,252
April	10,580,236	9,986,543	9,242,778	8,573,945	1,337,458	1,412,598	475,140
May	11,222,507	9,913,933	9,772,218	8,770,024	1,450,289	1,143,914	306,375
	\$51,086,736	\$46,338,753	\$45,471,286	\$41,680,545	\$5,615,450	\$4,658,206	\$957,244

d Decrease.

C.P.R. approximate gross earnings in June were \$10,058,000, an increase of \$769,000 over those of June, 1935.

Minneapolis, St. Paul and Sault Ste. Marie Ry., a C.P.R. subsidiary, had, in May, a net income deficit, after all charges, of \$393,767.42, compared with one of \$396,154.67 in May, 1935. In the first five months of 1936, there was a net income deficit, after all charges, of \$2,337,812.61, compared with one of \$3,006,660.37 in the same period in 1935.

Wisconsin Central Ry., which is in receivership,

with E. A. Whitman, acting General Manager, M., St. P. and S.S.M.R. as receiver, and which is operated by the M., St. P. and S.S.M.R. as agent for the receiver, had, in May, a net income, after all charges, of \$11,492.35, compared with one of \$35,414.93 in May, 1935. In the first five months of 1936, there was a net income deficit, after all charges, of \$765,410.56, compared with one of \$1,035,762.56 in the same period in 1935.

New Locomotives, Canadian Pacific Ry.
—The first of the five lightweight, semi-streamlined locomotives ordered by Canadian Pacific Ry. from Montreal Locomotive Works was taken over by the purchaser at the M. L. W. shops on July 27, with appropriate ceremony, including a luncheon and addresses by Sir Edward Beatty, G.B.E., K.C., LL.D., President, Canadian Pacific Ry. Co.; W. G. Dickerman, President of the building company; J. N. Burke, a Canadian Pacific veteran, and Mayor Houde of Montreal. The addresses were broadcast over a country-wide network, as were also a description of the locomotive and orchestral music.

Northern Type Passenger Locomotives, Temiskaming and Northern Ontario Railway

Two units, with 4-8-4 wheel arrangement, built by Canadian Locomotive Co., Kingston, Ont., were delivered recently, for assignment to service on trains 46 and 47, on the North Bay-Timmins run.

The preference for the Northern (4-8-4) type locomotive for passenger service on Canadian railways was exemplified by Canadian National Rys. in the securing of the 6100 class locomotives now operating on that property, and in the adoption of a similar wheel arrangement on the same property in

Tube length	21 ft. 0 in.
Driving wheelbase	18 ft. 6 in.
Loco. wheelbase	42 ft. 10 in.
Loco. and tender wheelbase	82 ft. 3 in.
Height, rail to top of stack	15 ft. 2 in.
Tube heating surface	3,407 sq. ft.
Arch tube and syphon heating surface	91 sq. ft.
Firebox heating surface	279 sq. ft.
Superheating surface	1,665 sq. ft.
Grate area	70.3 sq. ft.
Weight in working order, leading truck	62,650 lb.

inspirator. Other equipment includes a Westinghouse air horn, Pyle National type M-06 P turbo-generator, Wakefield mechanical lubricator, World Huron arch tube and washout plugs, cut-off control gauge, McAvity flange lubricator, Nicholson thermic syphons, Dunlopillo cushioning material for cab seats and

439.8 miles, when it ordered two locomotives for passenger service from Canadian Locomotive Co., Kingston, Ont. These two units have now been delivered, and advice from A. H. Cavanagh, General Manager, T. and N.O.R., under date of July 7, was that they were being assigned to trains 46 and 47, operating between North Bay and Timmins. This run is 258.8 miles, made up of the 225.7 miles from North Bay to Porquis Jct., and the 33.1 miles from Porquis Jct. to Timmins.

The two locomotives have been numbered 1100 and 1101. They have chief dimensions, etc., as follows:—

Gauge	4 ft. 8½ in.
Boiler pressure	275 lb.
Boiler diam., first course	76¼ in.
Boiler diam., largest course	86 in.
Diam. leading truck wheels	33 in.
Diam. driving wheels	69 in.
Diam. trailing truck front wheels	36 in.
Diam. trailing truck rear wheels	48 in.
Cylinders, diam. and stroke	22½ x 30 in.
Firebox length and width	120½ x 84¼ in.
Tubes and flues:	
2¼ in. diam.	45
3½ in. diam.	149

As the tractive effort and adhesion factor figures stated above indicate, these locomotives are equipped with booster; the T. and N.O.R., it will be recalled, was among the earliest users of the Franklin Railway Supply Co. locomotive booster in Canada, and that it regards the device favorably is evidenced by the fact that it has utilized them in its latest power.

Another feature of these locomotives is their utilization of roller bearings in all truck boxes; these are of SKF manufacture. Inspection of the list of specialties discloses that these two units represent the last word in modern equipment. As the weight and tractive effort figures would indicate, they are stoker fired, being equipped with the Standard Stoker Co.'s type BK stoker. The air brakes represent the latest development, being the Westinghouse no. 8 E.T. schedule. The superheater is the Superheater Co.'s type E. Boiler feed is by the Superheater Co.'s C-F feedwater pump, located on the trailing truck, and by a World Hancock L.N.L. 6,500 gall.

The tender, with cast steel water bottom frame, is carried on General Steel Castings Corp., Ltd., 6-wheel cast steel trucks, with 36 in. diam. wheels. Water capacity is 11,000 Imp. gall. and coal capacity is 20 tons. A track sprinkler is included in the equipment.

Service Resumed in Northern B.C.
Following floods in the territory drained by the Skeena and other rivers, in the north-central B.C. interior, which washed out much Canadian National Rys. track on the line to Prince Rupert, the through freight and passenger services had to be suspended. However, rehabilitation of the flooded section was completed earlier than had at first seemed possible, and advice from the Canadian National Rys. Publicity Department, July 17, was that, following the rebuilding, practically, of some 100 miles of track, through freight and passenger service had been resumed. East of the flooded area, local railway service had been maintained throughout.

STATEMENT OF ACCIDENTS AND PERSONAL INJURIES DURING 1907.

March 30th, Ronald McDonald struck by train No. 11, mileage 100, cutting one leg off and breaking the other in several places. Man died April 1st.

April 25th, F. J. Neff, while attempting to board down freight extra 102 at Cobalt, missed footing, fell between cars and was killed instantly.

May 27th, Patric Lecleir, killed at Cobalt by Temiscaming coal derrick falling on him, while train No. 11 was switching in yard. Cause supposed to have been by vibration of engine.

May 31st, six cars on train No. 12 were derailed, mileage 43, doing considerable damage to track and cars.

June 28th, Chas. Barrager of Tweed, Ont., passenger on passenger extra 114, south, had finger caught between vestibule of two coaches, crushing same.

July 9th, extra 106 derailed, mileage 134, causing death of engineer Thos. Gold, and doing considerable damage to engine.

July 11th, ballast extra 101 pitched into freight extra 103 at mileage 5, causing \$2,444 damage to rolling stock and track.

August 7th, train No. 4, engine 105, derailed M.P. 98, causing damage to engine and \$222 damage to track.

Nov. 13th, engine 114 left train mileage 51 to go to Redwater for water, and on return ran into train damaging one of our steel flat cars and tender of engine.

Nov. 21st, brakeman T. D. Charlebois, while jumping off light engine 102 at Moose Lake 1.55 a.m., missed his footing and had leg jammed between platform and step of engine, breaking leg in two places, necessitating amputation above the knee.

Nov. 29th, Paul Degan, while attempting to board train No. 1 at Cobalt after train had started, fell under wheels, cutting off both legs and smashing right arm above the elbow. Man died the same day.

December 9th, train No. 46 ran into A. R. Macdonell's engine which was standing foul without protection at south leg of the Wye, New Liskeam, damaging contractor's engine considerably, also damaging our engine and track to some extent.

REPORT OF WILLIAM YOUNG, GENERAL ROADMASTER

Commencing January 1st, 1907, the road or maintenance of way department was transferred from construction to transportation or operation, and by placing under my supervision the general roadmaster, William Young, Report of work is as follows:

MAINTENANCE OF TRACK, 1ST DIVISION.

The track has been maintained in better surface and line during the present year than in 1906, largely on account of the new roadbed gradually becoming more consolidated. In order to maintain better gauge on cross track, it was found necessary to increase the number of tie plates, and slightly increase the elevation of the outer rail to meet the required standard of trains. A number of curves remain to be treated in like manner.

Canadian Transportation

JANUARY 1937

New Passenger Train Cars for Temiskaming and Northern Ontario Railway

Six first-class cars, each seating 58 passengers, and four combination baggage-passenger cars, each having generous baggage space and seating accommodation for 38 passengers, delivered to the T. & N.O. Ry. recently by the builder, National Steel Car Corporation, Hamilton, Ont., are representative of latest developments in steel passenger car construction, incorporate all the modern improvements designed to promote passenger safety and comfort, and provide large savings in gross weight, compared with many preceding designs.

The ordering by the T. & N.O. Ry. from National Steel Car Corporation, Hamilton, Ont., of passenger train cars, is mentioned in the July, 1936, issue; the time of writing, Dec. 10, some of the cars ordered have been delivered, and the expectation is that the order will be completed by Dec. 17. The order consisted of six first-class passenger cars, and four cars arranged for baggage and passengers, the baggage space in the latter taking up a little more than half the car interior, with seats for 38 passengers in the passenger compartment. The writer was privileged to inspect a car of each type in Hamilton, company with the National Steel Car Corporation Chief Engineer, O. H. Anderson, and the high standards adhered throughout as regards detail of design, materials of construction, workmanship, interior finish and equipment, and accessories, make the cars a very notable addition to the passenger rolling stock on Canadian railways. The first-class cars are air-conditioned, fitted with curious seats of the revolving and reclining type, have a comfortable room served for occupancy by women, and have a men's smoking room, providing accommodation much greater and more comfortable than has been the rule heretofore in first-class car design. The combination baggage-passenger cars have passenger accommodation of a high standard and the baggage space is fitted with all safety features. Both classes of cars are of the turtle back roof type; some 3,000 lb. of the total weight reduction was effected in the roof design alone. Both classes of cars are carried on 4-wheel trucks fitted with Timken roller bearings.

The First-Class Cars

The specifications for the six first class cars cover a steel frame, steel sheathed car with steel interior partitions and end finish. The leading dimensions are as follows:—

Length over diaphragm face plates.....	79 ft. 10 1/4 in.
Length over vestibule I beams.....	77 ft. 11 in.
Length over body and posts.....	71 ft.
Truck centers.....	55 ft. 2 in.
Width over girder plates.....	9 ft. 10-1/16 in.
Width inside at wainscote.....	9 ft. 0 3/8 in.
Height, rail to platform.....	4 ft. 3 in.
Height, rail to top of roof.....	13 ft. 1 1/2 in.

The underframe is of the fish belly type with built-up bolsters with cast steel center filler arranged for Security locking device and cast steel buffer and platform. The center sills are built up of two web plates 25 1/2 x 5/16 in.; two top angles, 6 x 3 1/2 x 3/8 in.; four bottom angles, 3 x 3 x 5/16 in., and a 30 x 5/16 in. top cover plate.

The side sills are 5 in. 11.6 lb. structural Z bar, continuous between the end sills and riveted to the cross members. The end sills are built up with 1/4 in. pressed steel diaphragm and 18 x 1/4 in. bottom and 22 x 1/4 in. top cover plates. The single body bolsters are built up with 5/16 in. pressed steel diaphragms, with 21 x 7/16 in. top and 21 x 9/16 in. bottom cover plates and with center plate and center filler of cast steel, all being securely riveted together and to the center and end sills. Four cast steel jacking plates are provided, one on each bottom cover, at the side sill. The cross-bearers, of which there are two per car, are built up of 1/4 in. pressed steel diaphragms, with 1/4 in. center sill separators, 10 1/4 x 1/4 in. top and 6 x 1/2 in. bottom cover plates. Diaphragm stiffeners of 3 x 2 1/2 x 1/4 in. structural

angles and 1/4 in. plate gussets connect the diaphragms to the side sill bottom flanges. The floor supports are 1/2 in. pressed steel diaphragms, riveted to the center and side sills, and the floor stiffeners are 2 x 2 x 3/16 in. structural angles running from the center to side sills and riveted to the steel floor plates.

In the floor construction, 18 U.S. gauge copper-bearing steel sheets were placed immediately on top of the underframe and riveted thereto, with the upper surfaces painted and tar paper applied while the paint was wet. B.C. fir floor stringers for the double wooden floor were placed on top of the tar paper and bolted to the underframe members and floor sheets. The lower floor, of 13/16 in. B.C. fir, was laid diagonally, and the top floor, of the same material, was laid longitudinally. Both courses of the floor were laid in wet paint, with a layer of tar paper between.

In the side and end construction, the side plates consist of two 4 in. 5.4 lb. structural channels, back to back, continuous between face plate angles, and the belt rail, Carnegie belt rail section M-1038, extends the full length of the body, being riveted to the posts and side sheets with double rows of rivets. The bottom chords, of 3 x 2 1/2 x 3/16 in. angle, full length of the body, rest on and are riveted to the lower flanges of the side sill Z bars. The side posts (72 per car) are 1/2 in. O.H.S. pressings, U shape, riveted to side plate, belt rail and bottom chord. The body corner posts are 4 in. 8.2 lb. Z bar and 4 x 3 x 1/4 in. angle riveted together, and covered with no. 11 Ga. O.H.S. pressed steel, with recess for vestibule side door. All out-

(Continued on page 4)



One of the Six First-class Cars Built Recently for Temiskaming and Northern Ontario Railway by National Steel Car Corporation.

JAN 1937

New Passenger Train Cars for T. and N. O. Railway

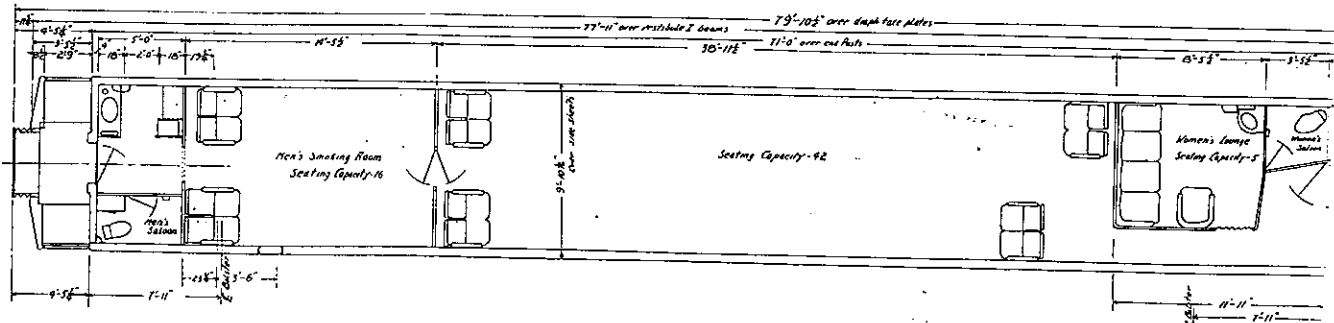
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side sheathing is of copper-bearing, roller-levelled steel, the girder plates below the belt rail being 9 U.S. gauge and the pier plates and letter plates being 11 U.S. gauge. Joints between sheets and splice plates have tar paper applied. The drip mouldings over the

The roof is of the turtle back type, with the carlines (39 per car) of $\frac{1}{8}$ in. O.H.S. pressed U shape, riveted to the side plates. The roof covering is copper-bearing steel sheet, 11 gauge at the sides and 14 gauge at the center.

Insulation—In the floor insulation, the space between the steel floor sheets and

extruded aluminum frame and drained by the Mitchell process. A guard rail is fitted at the passageway windows, adjacent to the women's. Curtains are silk faced and mounted on Rex 1 in. diam. metal and all exposed metal parts statuary bronze finish.



Floor Plan, First Class Car

windows are of copper-bearing steel. The body end posts are 4 in. 8.2 lb. Z bars; the body end door posts are 6 in. 23.9 lb. I beams, and the body end sheets are of 9 gauge copper-bearing steel, riveted to the end and door posts. The vestibules are of the wide type, without windows. The end platform and buffer casting is of cast steel, securely riveted to the center sills and recessed for the buffing and draft gear. The 7 in. 9.8 lb. platform channels extend from the body end sills to the buffer wings, and form the support for the platform floor and vestibule steps. The platform floor is of $\frac{1}{8}$ in. steel plate, covered with pebble dot rubber, cemented down. The platform steps are of the 4-tread type, the step treads being of steel, covered with rubber. The diaphragm posts are 6 in. 23.9 lb. I beams, secured to the platform casting by gibbed key connections. The vestibule corner posts are 11 gauge copper-bearing steel, pressed to shape and forming a recess for the vestibule door. The vestibule end sheets and ceiling are of 11 gauge copper-bearing steel.

the lower course of the wooden floor is filled with 3-ply Salamander, cut to fit between the floor stringers. In the side and end insulation, one layer of 3-ply Salamander and one of $\frac{1}{2}$ in. Hairinsul is used at the ends, side pier plates, letter plates and below the side windows, extending to the side sill and folded up to a height level with the top of floor. The insulating material is held in place by galvanized clips. In the roof, one course of 3-ply Salamander and one of $\frac{1}{2}$ in. Hairinsul are placed against the inside of the center roof sheets, and one course of 3-ply Salamander against the inside of the side roof sheets, all held in place by galvanized clips. Between the 14 gauge roof sheets and the Salamander insulation is a course of J.-M. no. 65 deadening felt.

Windows—There are 17 windows at one side of the car and 15 at the other, the main windows being 33½ in. wide and those in lavatory and saloon 24 in. wide. The window sash is the Robert Mitchell Co. Thermosash, with two panels of 3/16 in. plate glass enclosed in an

The interior arrangement of is as shown in the accompanying plan drawing, with the women's and saloon at the A end, followed by main room, with seating capacity the men's smoking room, with capacity of 16, and the men's sal lavatory at the B end.

In the interior finish, there is Masonite from window sills to guards, with 16 gauge copper steel sheets back of the heater frieze panel and ceiling are in Masonite de luxe, except that the portions of the ceiling, at the side of $\frac{1}{4}$ in. Sundeala. Three color fawn shades make up the color giving the interior a very high appearance, heightened by the boleum floor covering, with light stripes in the aisles, and by mohair seat upholstery. The piping throughout are of steel, securely and machine screwed to the car.

The seats in the main room Heywood-Wakefield model 170 two-passenger, rotating, reclining with aluminum base and black arm rests, mohair covered. They are locked in position when forward, but are free to revolve in any other position. The cushion backs are in Dunlopillo cushion material. In the men's smoking room seats are upholstered in blue. The chair and 4-place sofa in the lounge are finished in red leather. A seat is provided in the men's and is upholstered in blue leather. The car heating is by the V Heating Co. steam heat equipment, fin tubing, the 2 in. extra heat line being covered with J.-M. pipe covering. There are preheater guards over the pipes seats and in the saloons, lavatory and women's lounge.

Electrical Equipment—The equipment for these cars, supplied by Stone Franklin of Canada, Ltd., includes Stone's patented Tonum generator, type XR.29/27; Stone's patented regulating panels, type XRD. V. amperes; Stone's patented regulating panels, type CLP. 3/25 amperes, and 4 circuit main light. The cars are equipped also with patented Cush Drive, type S. does away with the driving belt. A regulating apparatus is adjustable to a constant pressure of 40



New Passenger Train Cars for T. and N. O. Railway

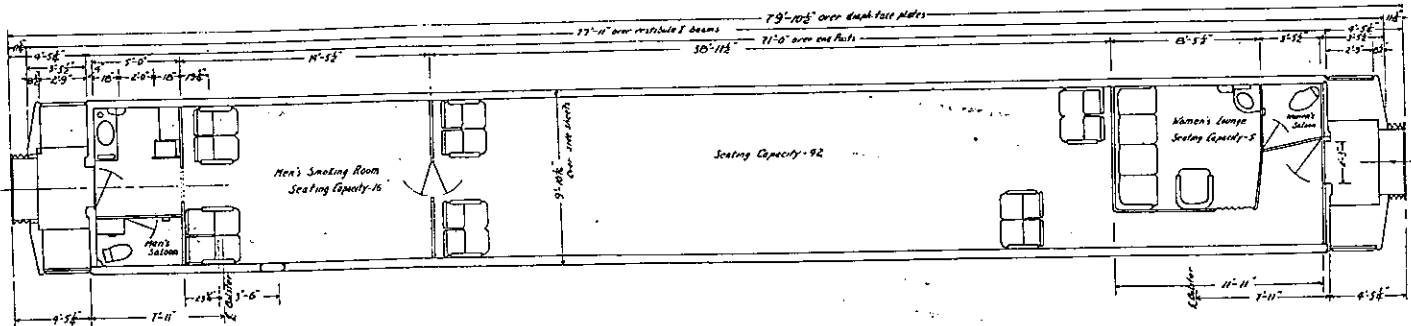
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side sheathing is of copper-bearing, roller-levelled steel, the girder plates below the belt rail being 9 U.S. gauge and the pier plates and letter plates being 11 U.S. gauge. Joints between sheets and splice plates have tar paper applied. The drip mouldings over the

The roof is of the turtle back type, with the carlines (39 per car) of $\frac{1}{8}$ in. O.H.S. pressed U shape, riveted to the side plates. The roof covering is copper-bearing steel sheet, 11 gauge at the sides and 14 gauge at the center.

Insulation—In the floor insulation, the space between the steel floor sheets and

extruded aluminum frame and dehydrated by the Mitchell process. Window guard rail is fitted at the passageway windows, adjacent to the women's lounge. Curtains are silk faced Pantasote, mounted on Rex 1 in. diam. metal rollers, and all exposed metal parts are in statuary bronze finish.



Floor Plan, First Class Car

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Windows—There are 17 windows at one side of the car and 15 at the other, the main windows being 33½ in. wide and those in lavatory and saloon 24 in. wide. The window sash is the Robert Mitchell Co. Thermosash, with two panels of 3/16 in. plate glass enclosed in an

The interior arrangement of the car is as shown in the accompanying floor plan drawing, with the women's lounge and saloon at the A end, followed by the main room, with seating capacity of 42, the men's smoking room, with seating capacity of 16, and the men's saloon and lavatory at the B end.

In the interior finish, there is $\frac{1}{4}$ in. Masonite from window sills to heater guards, with 16 gauge copper-bearing steel sheets back of the heaters. The frieze panel and ceiling are in $\frac{1}{4}$ in. Masonite de luxe, except that the curved portions of the ceiling, at the sides, are of $\frac{1}{4}$ in. Sundeala. Three contrasting fawn shades make up the color scheme, giving the interior a very handsome appearance, heightened by the blue Mar-boleum floor covering, with light blue stripes in the aisles, and by the blue mohair seat upholstery. The partitions throughout are of steel, securely riveted and machine screwed to the car framing.

The seats in the main room are the Heywood-Wakefield model 176-P-6-SS, two-passenger, rotating, reclining type, with aluminum base and black Bakelite arm rests, mohair covered. These seats are locked in position when facing forward, but are free to revolve when in any other position. The cushions and backs are in Dunlopillo cushioning material. In the men's smoking room the seats are upholstered in blue leather. The chair and 4-place sofa in the women's lounge are finished in red leather. One seat is provided in the men's lavatory and is upholstered in blue leather.

The car heating is by the Vapor Car Heating Co. steam heat equipment with fin tubing, the 2 in. extra heavy train-line being covered with J.-M. sectional pipe covering. There are pressed steel heater guards over the pipes between seats and in the saloons, lavatories and women's lounge.

Electrical Equipment—The lighting equipment for these cars, supplied by Stone Franklin of Canada, Ltd., consists of Stone's patented Tonum generators, type XR.29/27; Stone's patented dynamo regulating panels, type XRD. V.D. 75-100 amperes; Stone's patented lamp regulating panels, type CLP. 3/250-75 amperes, and 4 circuit main light panels. The cars are equipped also with Stone's



Record of Train over 30-day Period

Lubrication and Fuel		
1740 Gallons of Fuel Oil at 14c		\$243.60
36 Gallons of Lubricating Oil at 68c		24.48
13.14 Gallons of Gasoline for Air Starting Motor at 18½c		2.43
Total Fuel and Lubrication cost for 30 days		\$270.51
Average cost per mile for fuel		5.16c
Average cost per mile for lubrication .....		.5c
Average cost per mile for gas .....		.05c
Average cost per mile for fuel, gas and lubrication		5.7349c
Cost per 1,000 lb. hauled per mile .....		.025c
Average cost per day		\$ 9.02
Average train mileage per day		157.28

3.25 p.m. daily, and arrives Cochrane 4.25 p.m. Southbound, as no. 150, it leaves Cochrane 5.40 p.m. daily except Saturday, and arrives Porquis 6.35 p.m. Northbound, as no. 151, it leaves Porquis 7.05 p.m. daily except Saturday, and arrives Cochrane 8.05 p.m.

Record of Operation over a 30-day Period

During a recent 30-day period, operating as above described, this train accumulated operating costs as exhibited in the accompanying panel. The figures show that a remarkably low-cost service has been secured, the fuel cost per train

mile, 5.16c, being about equivalent to that for some large buses. The total cost for fuel oil, gasoline and lubricating oil, less than 6c per train mile, is a remarkable figure.

Power Car Has Plenty of Capacity

During the recent Christmas season, it was found necessary to handle, in addition to the two trailers, a fully loaded standard steel R.P.O. car of about 167,340 lb. total weight, the car being equipped with 6-wheel trucks. The Diesel-electric power car was able to handle the extra tonnage in a most satisfactory manner.

Rail Weight and Tie Life

A recent report, based on studies of the life of cross ties conducted on 39 railways in the United States and Canada with total mileage of 226,000, makes evident that the heavier the rail, the less are ties subjected to abuse in service, with consequent lengthening of tie life.

The American Railway Engineering association received, at its recent meeting, a report from a sub-committee of the committee on economics of railway labor, of which E. T. Howson, Western Editor, Railway Age, and Editor, Railway Engineering and Maintenance, was chairman. This report, based on very thorough studies of the subject, demonstrates that the service life of railway ties depends in large measure upon the weight of the rails which they carry. While, of course, tie life is influenced in every great measure by many other things, such as the species and soundness of the timber, the seasoning, the storage and piling methods, the preservative treatment applied, the ballast and the efficiency of track maintenance, it is made evident that the weight of rail in itself has much to do with the manner in which the ties stand up, the report stating as in the following.

"By reason of its greater girder strength, the larger rail distributes the traffic load over a greater number of ties, thus reducing the load on the individual ties. Although they are entirely independent of, but usually incidental to, heavy rail, large tie plates also contribute to decreasing the intensity of pressure on the ties by spreading the reduced load over a greater area of the surface of the ties. Ties fail in large numbers as a result of abrasion induced by relative movement between the tie plate and the tie, and this mechanical action is greatly increased by the wave motion in the rail. Since the heavy rail is stiffer, it has less wave motion and thus prolongs the life of those ties that fail from plate cutting. Spike cutting is another fertile source of tie failure, and because rail renewals are less frequent and less gauging is required with the heavier rail and larger tie plates, the life of ties subject to this type of failure is prolonged. Because of many other factors that affect tie

wood, the type of treatment, the practice of pre-adsizing and pre-boring, the character and condition of the ballast, and others that are in no wise related to the weight of the rail, it is not possible to state in concrete terms the effect of increased weight of rail on the labor involved in tie renewals, although it is clearly apparent that the heavy rail will result in an increase in the life of ties, and thus reduce the labor required for tie renewals.

"Owing to the greater girder strength of the rail itself and to the opportunities the higher fishing affords for better joint design, it is the general experience that an increase in the weight of rail tends to decrease the amount of labor required for picking up joints. There is also a reduction in the labor required for reconditioning the joints and replacing joint bars where heavy rail is used. The effect on labor of this item varies almost directly with the volume of traffic, axle loading and speed.

"Lack of stiffness accentuates wave motion in rail under the rolling wheel loads, thus causing increased vertical movement in the ties. Investigation has shown that the intensity of the blow delivered by the tie to the ballast bed under fast moving trains varies approximately as the square of the amplitude of the wave motion, that is, as the vertical distance the tie moves. These repeated blows tend to drive dirt up from the subgrade through the ballast and foul it. Then, with favorable conditions of moisture, churning results. While churning may, and frequently does, occur at any tie, it is more frequent and generally more aggravated around the joints.

"Since the greater stiffness of the heavy rail reduces the amplitude of the wave motion and, therefore, the vertical movement of the ties, churning is reduced and the amount of labor involved in sur-

or reduced. The committee obtained information as to the magnitude of the excess labor requirement over ordinary maintenance, but referred to a previous report by the committee on ballast, in which it was stated that the cost of maintaining churning track (joints) from 2½ to 4 times that for track in which there are no pumping joints."

The committee's conclusions are:—

1. The use of heavy rail in heavy traffic, high-speed lines reduces the amount of labor necessary to maintain a given standard of track excellence.

2. This reduction is both direct and indirect. The items affected directly include line, surface, gauge, joint maintenance and laying rail. The items affected indirectly include tie renewals, cleaning ballast and ballast renewals.

3. Since the labor required for practically every item of track maintenance is affected also by factors that have relation to the weight of the rail, it is impossible to segregate those factors in such a way that the effect of the heavy rail alone can be evaluated.

4. The magnitude of the economy that can be realized from increasing the weight of rail depends on the relative stiffness of the heavy rail and of the lighter rail that it displaces, the volume of traffic, the axle loads and the speed of trains.

5. For lines of high traffic density, the saving in track labor following the installation of 112- and 131-lb. sections in place of sections weighing 100 lb. and lighter may reach 40 per cent. of the total expenditure for this item. As the volume of traffic decreases, this saving also decreases until a point is reached where considerations other than savings in labor must justify the increase in weight of rail.

Meritorious Service Recognized—Canadian Pacific Ry. Saskatchewan District Educational Bulletin no. 354, of Jan. 3 issued over the signature of H. J. Main, General Superintendent, records the awarding of merit marks to a number of employees for meritorious service. Six agents and an operator were each awarded three merit marks for handling important commercial messages when on duty. An agent was awarded three merit marks for detecting a broken brake rod and another agent received the same recognition for detecting incorrect stenciling on a car. A section foreman was awarded three merit marks for detecting grain leakage from a car. Three other section foremen were each awarded five merit marks for rendering valuable assistance in protecting company property from fire. Two trainmen were each awarded three merit marks for detecting a broken arch bar.

Jasper Park Lodge enjoyed the best season of its history in 1939, according to Fred Brewster, famous outfitter and camp operator of the Northern Rockies who visited Montreal recently. Mr. Brewster added that, with travel to Europe drastically curtailed, the expectations are that the summer of 1940 will be even a busier one than that of 1939 and preparations are being made for an unprecedented influx of visitors. Last year, Mr. Brewster's company increased its horses by 20 to a total of 130, and the herd is being brought up to 150 for the coming season. Jasper Park Lodge will be open this year from June 15 to Sept. 15, and rates for the coming season

Three-Car Diesel-Electric Train on Temiskaming & Northern Ontario

The Temiskaming and Northern Ontario Ry. has recently placed in service, between Cochrane and Porquis, a Diesel-electric passenger train consisting of combination baggage car and power unit, one second class car with small baggage compartment, and one first class car. Details of general dimensions, etc., will be found elsewhere in this article.

The combination baggage car and power unit was converted from a Brill gas-electric, 73-ft. combination power, baggage and passenger car, originally built in 1926. This unit had been in ser-

vice almost continuously since that time, and the gasoline engine had become more or less obsolete and unsatisfactory for service.

In rebuilding the power car, all the passenger seats were removed, and the entire space, except the power compartment, was made into a baggage and express car. To speed up the handling of baggage and express, two additional baggage doors were provided in the body of the car. A number of windows, in the part formerly used as a passenger compartment, was blocked up. The car roof and sides were insulated with two inch thick Salamander, then lead plate cells being carried underneath the power car and charged by the exciter.

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The car roof and sides were insulated with two inch thick Salamander, then

The inside finish is to T. & N.O. standard, consisting of cream ceilings; walls, light grey; window sills, walls below window sills, slate blue floor in the second class main compartment is painted terra cotta, except a 24 in. aisle strip of M/54, "A" Marboleum. The toilets and end passageway floors are completely covered Marboleum of the same color. The are upholstered in black Pantasote, striping in both cars is in blue and red.

The seats in the main compartment of the first class car are upholstered in



The Temiskaming and Northern Ontario Ry. 3-Car Diesel-electric Train.

vice almost continuously since that time, and the gasoline engine had become more or less obsolete and unsatisfactory for service. In view of this, it was decided to replace the engine with a modern compression-ignition engine. To this end a Cummins six-cylinder, model "L" engine, rated at 250 brake horsepower at 1,000 r.p.m., adaptable to meeting the existing electrical equipment in the car, was selected. The new engine, connected directly with a flexible coupling to the original generator, is mounted on a common steel bed plate 1 in. thick. This bed plate was then welded to the car center sills. The bed frames of the engine and generator were secured to the bed plate by means of fitted bolts, and the whole has formed an exceedingly rigid and vibration-free mounting. In addition to the above, and to prevent the vibration existent in the original car, a 3/8 in. cover plate was rivetted from bolster to bolster on the bottom of the center sills.

The starting equipment for the engine is of the compressed air type, manufactured by the Briggs and Stratton Corporation and known as their Type no. 302064, Model "K". This equipment, supplied by the Cummins Diesel Engine Corporation, consists of a small gas engine driven compressor, charging a reservoir with a working pressure of 350 lb. per sq. in. As the reservoir can be charged up to full pressure in 15 minutes, by adopting this method of starting the engine, a set of batteries was eliminated, as it would take about eight hours to charge the batteries as against the 15 minutes of charging the reservoir with air. The compressed air distributor on the engine is also very reliable and of comparatively simple construction.

All the electrical equipment was given a thorough overhauling and no major replacements were required, as it was found to be in first class condition. Since being placed in service the Westinghouse electrical equipment has proved to be entirely satisfactory.

The train lighting is provided by the

finished with 3/8 in. sheathing. The ceiling of the car is painted cream, the sides, grey and the slatted floor, red. In the power compartment, the ceilings and side walls down to the window sills are painted grey, the window sills, black; from the window sills to floor, slate blue. The floor of the power compartment is covered with "A" gauge M/54 Marboleum. The engine and component parts are painted slate blue in color.

On the original car there was no diaphragm arrangement or spring type couplers, and, in rebuilding, standard coach diaphragm and spring type draft gear were applied at the rear end.

The Trailer Cars

The two trailer cars were originally two separate storage battery cars, built in 1924. After many years of service, owing to greatly increased traffic demands, these cars were removed from service and placed in storage. In the spring of 1939, their use was considered as trailer cars, and, after considerable rebuilding, they have proven most satisfactory. Originally these cars were built in order that they could be operated from either end; this therefore meant that, in the rebuilding programme, new vestibules, complete with standard buffing gear and diaphragms, were required. It was further necessary to raise the car body 5 1/2 in. in order to bring the platforms to the standard height.

In the case of the first class car, the entire end had to be rebuilt, as the end was a blind end baggage compartment. Both cars were equipped with water raising systems and other modern toilet facilities. Heating of each of the two cars is accomplished by means of a hot water heater supplying heat through fin type tubing. All ceilings, walls, and floors were thoroughly insulated with Salamander.

Finish of Trailer Cars—The exterior of the trailer cars were finished in the T. & N.O. standard colors, viz., Pullman green, the center name panel in Castilian red, with gold leaf striping and lettering, and the hand grabs and step

plush, and those in the smoking compartment in black Pantasote. The floor of this car is covered with Marboleum, "A" gauge. The lighting of both cars provides an abundance of light.

Chief Dimensions of Cars

The total length of the 3-car train is 186 ft. 10 in., and its total weight 229,100 lb. The chief dimensions of the cars are as follows.

Power Car (no. 1000)	
Length over coupling faces	75 ft.
Length over body	73 ft.
Width over posts	9 ft.
Height from rail to roof	12 ft.
Truck wheel base (front)	7 ft.
Truck wheel base (rear)	7 ft.
Truck centers	54 ft.
Truck (front)	Brill 27 M
Truck (rear)	Brill 27 M
Light weight of car (front)	46,000
Light weight of car (rear)	46,000
Total weight	116,000
Baggage space	55 ft.
Trailer Cars (nos. 1001 and 1002)	
Length over coupling faces	55 ft.
Length over body	54 ft.
Width over posts	8 ft.
Height from rail to roof	12 ft. 9 in.
Truck wheel base	5 ft.
Truck centers	35 ft.
Total weight of car no. 1001	55,000
Total weight of car no. 1002	57,000
Baggage space, car no. 1001	13 ft.
Seating capacity, car no. 1001	
Seating capacity, car no. 1002 (main compartment)	
Seating capacity, car no. 1002 (smoking compartment)	

Route and Schedules

This 3-car, Diesel-electric train operates on the Devonshire Subdivision between Cochrane, the point at which T. and N.O.R. line crosses the C. National Transcontinental Railway and Porquis, the junction with Iroquois Falls and Ramore Subdivisions. The mileage of this route is 28.2. Southbound, operating as no. 148, the train leaves Cochrane 6.40 a.m., daily except Sunday, and arrives Porquis 7.40 a.m. Northbound, as no. 149, it leaves Porquis 8.20 a.m., daily except Sunday, arrives Cochrane 9.15 a.m. Southbound, as no. 146, it leaves Cochrane 1.40

Canadian Transportation

JAN 1941

New All-steel Wood-lined Cabooses, T. and N.O.R.

There were placed in service, recently, on the Temiskaming and Northern Ontario Ry., eight caboose cars of unusual design, built by National Steel Car Corp. These cars, with riveted superstructure of copper-bearing steel, are believed to be the first of the type operated on Canadian railways.

THE ordering of eight caboose cars by Temiskaming and Northern Ontario Ry. from National Steel Car Corp., Ltd., was noted in Canadian Transportation for June last, pg. 295. Official advice of Dec. 5 was that these cabooses had been received and placed in service a short time previously. These cars are of all-steel construction and wood lined, and, as the following description indicates, are of unusual design, the belief being that they are the first of their type to be employed in Canada. The cars, with riveted copper-bearing steel superstructure, were built to specifications and general designs furnished by the T. and N.O.R. Mechanical Department. The length of car over the pulling faces of couplers is 38 ft., and the light weight is 50,000 lb.

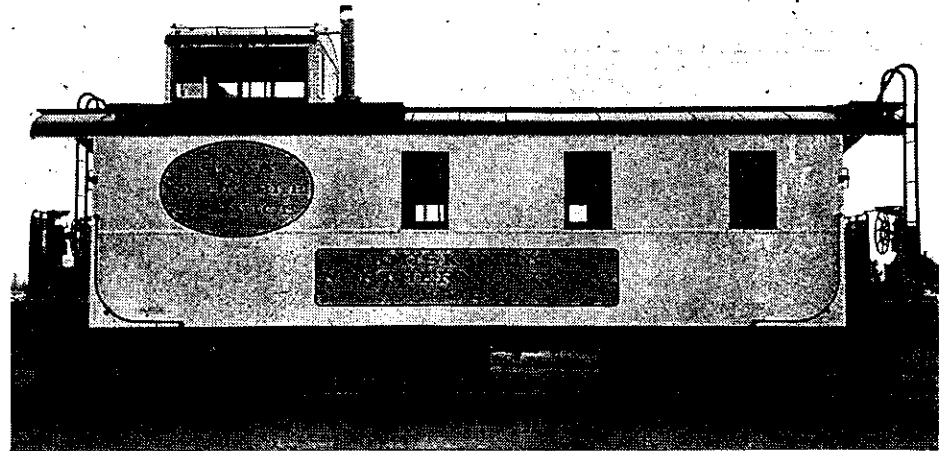
The underframe is fabricated from steel sections, the center sill section consisting of two 12 in. wide x $\frac{3}{8}$ in. thick web plates, two top outer angles $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{3}{8}$ in., four bottom angles (two inner and two outer) $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{3}{8}$ in. and a top cover plate 21 in. wide x $\frac{3}{8}$ in. thick, the whole being riveted together. The depth of the box-like structure is $12\frac{7}{8}$ in. The remainder of the underframe is a departure from the more conventional types of caboose car underframes. The floor is supported on 5 in. I beams at 10 lb., spaced about 37 in. centers and running transversely.

These supports rest on top of the center sills, to which they are welded. Each side sill consists of a 7 in. at 9.8 lb. channel to which is riveted, by one flange, a 3 in. at 5.1 lb. Zee, the other flange of the Zee forming the face for the riveting of the $\frac{1}{8}$ in. thick steel side sheathing. By the use of the transverse I beams, crossbearers are eliminated. The entire underframing is covered with 1/16 in. thick steel sheets supported on and welded to the I beams. Cemented to this floor sheet is a layer of No. 20 J. M. Waterproof Felt bedded in plastic. Six wooden floor nailing strips, 1 $\frac{1}{2}$ in. thick x 3 in. wide, and bolted to the I beams, run full length of car. Between these strips two $\frac{3}{4}$ in. thick layers of J. M. Hairinsul are laid. A 1 in. thick wood floor is then laid diagonally. A layer of No. 20 J. M. Waterproof Felt, laid in plastic, is applied prior to the laying of the top $\frac{3}{4}$ in. thick floor, which is applied longitudinally.

consist of bottom cover plate $\frac{3}{8}$ in. thick, measuring 24 in. wide at center sills and 18 in. wide at side sills, with top $\frac{3}{8}$ in. thick cover plate, being 18 in. wide throughout. Bolster diaphragms of $\frac{1}{4}$ in. plate are spaced 12 in. back to

The platform side sills are 6 in. channels at 8.2 lb., spaced 5 ft. 3 in. over backs.

Other center sill separators are made of 3/16 in. plate pressings carefully fitted.



One of the New Cabooses on the T. and N.O.R.

back. The bolster center sill separator is of cast steel, with extended side arms front and back, the tops of which are flanged inwards to form an additional support at top cover plate. As this is a vital point in car construction, extreme care has been taken in the design of this casting, all bearing surfaces being accurately machined to insure correct and proper fitting at bearing surfaces.

The center plates are A.A.R. Standard design. The back draft stop is cast steel of liberal proportions, and bearing surfaces are machined. Fillets are of generous size, conducive of good foundry practice. The front draft stop and striking casting combined have been designed with an eye to greatest strength possible, the bearing surfaces are also accurately machined to insure proper fitting.

The body end sill consists of a 7 in. channel at 16.4 lb., with a top cover plate 5/16 in. thick x $10\frac{1}{2}$ in. wide, extending full width of car.

The platform end sill consists of a 7 in. channel at 16.4 lb., the back forming the outer face, with top, bottom and back of $\frac{1}{4}$ in. plate, the whole forming a box-like structure. Two pressed steel

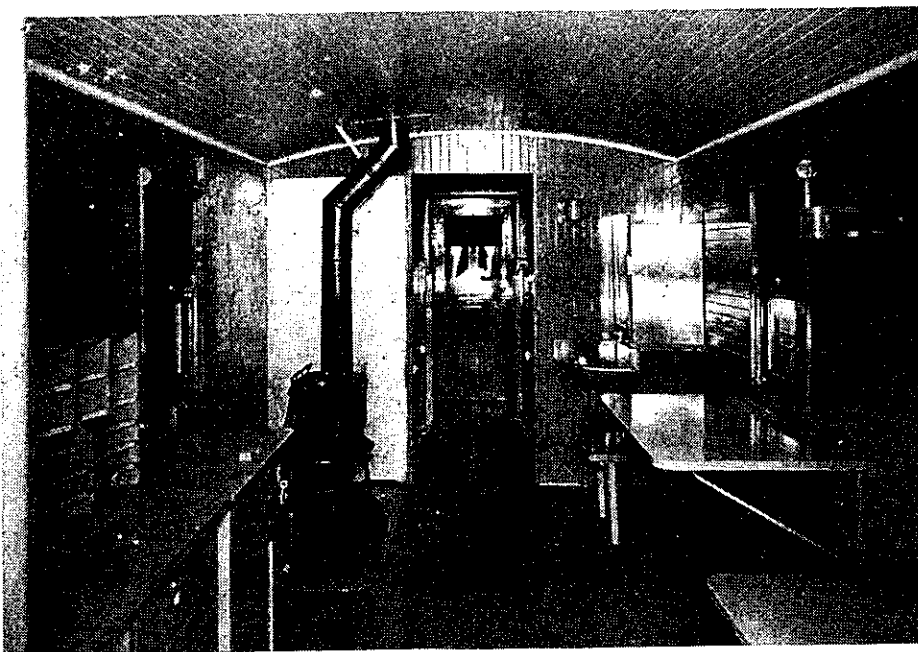
The side posts are 3 in. Zee's at 5.1 lb., 11 each side and spaced according to location. The four corner posts each consist of 4 in. Zee's at 8.2 lb. (to which is riveted a $2\frac{1}{2}$ in. x $2\frac{1}{2}$ in. x $\frac{1}{4}$ in. angle to take side sheet rivets). Between these corner posts there are 4 end posts of 4 in. Zee's at 8.2 lb., suitably spaced; two of these Zee's form the door frame-work.

The roof carlines of the body, 16 in number including platform roof, are $2\frac{1}{2}$ in. x $2\frac{1}{2}$ in. x $\frac{1}{4}$ in. angles formed on a 14 ft. 5 in. radius. The cupola carlines, 4 in number, are of 2 in. x 2 in. x $\frac{1}{4}$ in. angles formed on a 12 ft. $8\frac{1}{2}$ in. radius. Cupola corner posts are $2\frac{1}{2}$ in. x $2\frac{1}{2}$ in. x $\frac{1}{4}$ in. angles with two 2 in. x 2 in. x $\frac{1}{4}$ in. angles forming side posts.

All outside sheathing of body and cupola is $\frac{1}{8}$ in. thick copper bearing steel.

All roof sheets are of No. 14 gauge steel riveted to carlines, with lap and tar paper joints.

Inside wood sheathing 13/16 in. thick x $2\frac{1}{4}$ in. face T. & G., with small V, is blind nailed to wood nailing strips which are bolted to side posts and end posts.



Interior View Taken from Berth Section, Looking toward Cupola.

The cupola inside finish, including ceiling, follows the same treatment.

There is no metal contact from the exterior to the interior; thus, frost from the outside cannot be transferred to inside of caboose.

Before the inside nailing strips and wood lining are applied, the entire interior metal surfaces are coated with plastic, and whilst wet a complete layer or covering of J. M. Waterproof Felt is applied; thus, no bare metal is visible from interior of caboose. The space between posts and carlines is filled with a layer of 1 in. thick J. M. Salamander. The insulation at the side sill recesses has been kept 2 in. from the bottom of the side sill, thus forming a gutter for catching moisture. Two $\frac{5}{8}$ in. holes, drilled in the bottom of each side sill and end sill, in the space between each side post and each end post, drain off any accumulation of moisture. Further, these holes afford circulation of air which assists in keeping insulation dry.

End doors are of wood $1\frac{1}{2}$ in. thick, 2 ft. 5 in. wide, 6 ft. 4 in. in height, with glass in upper portion.

Six windows are located in the body of the caboose. At the upper and lower berth section only, both upper and lower sash are movable; the remainder has only the lower sash movable.

The seats and seat backs, of wood construction, forming the lower berth, slide forward, forming a support for the mattress. When in normal closed position the space under the seat provides a locker for bed linen, the seat forming the hinged cover. The upper berths of metal are raised and lowered according to requirements. All mattresses are 4 in. thick, 30 in. wide and 6 ft. long. A step ladder affords access to each upper berth. Adjoining each berth section is a spacious metal locker for use of the conductor and trainmen respectively.

Adjoining the conductor's locker, a desk arrangement is located, with ample drawer space below and compartment space above. Next in line is the metal

coal box holding about 550 lb. of coal, the inside being arranged to feed coal to door.

The latest type of caboose stove, thoroughly insulated walls, ceiling and floor provide a safe and convenient place for cooking. Under the cupola floor, on this side of the caboose, are storage facilities for either storm or screen sash (according to season) and miscellaneous storage. Next the adjoining locker at end of caboose is the metal lined dope, oil and service supply locker. At the opposite side is the clothes locker for use of the crew.

Under the cupola floor is a $26\frac{1}{2}$ x 19 in. white enamelled metal refrigerator with chromium plated catches and hinges. This refrigerator is not of the built-in type, but one of the existing commercial refrigerators now in use, and is secured in opening provided. Next comes the large cupboard space for food and dish storage. Adjoining the cupola partition is a stainless steel corner type wash basin, above which is a water



View of Interior of Caboose Taken at Stove and Looking toward Berth Section.

Note the facilities for the conductor's use.

cooler of generous size, made of stainless steel. A mirror is also located on the face of the cooler. The whole unit is supported from the cupola partition and side of car, thus forming a clear and sanitary space on the floor.

A lift-up seat, a drop type table and adjoining seat locker complete the pleasant, bright and comfortable surroundings.

The sliding side windows of the cupola are large, eliminating dead vision spots. Each half of the cupola contains the railway company's standard reversible seat. The inner sash of the end cupola windows are sealed, the outer sash being hinged to afford easy access for cleaning.

A Westinghouse air gauge and the latest design of Westinghouse brake application valve are also located in cupola.

As a safety measure, the platform railing has been increased to 3 ft. 8 in. from top of platform floor, with a light weight folding tail gate and additional self-locking safety bar adding further safety for the crew.

Welded platform steps, of the passenger car type, with 1 in. thick oak treads secured to the metal step treads, provide safe footing. The height from rail to top of bottom tread is only $14\frac{1}{2}$ in. instead of the usual 18 in. A vertical handwheel-operated power brake is located at the platform railing at each end of the car, the handwheel being flush with the inner face of platform railing.

Running boards are of wood, $1\frac{1}{2}$ in. thick x $7\frac{1}{2}$ in. face, mounted on metal saddles riveted to roof.

A self-contained all-metal equipment box, 20 in. high x 36 in. wide x 69 in. long, located underneath the caboose, provides plenty of space for the heavier service equipment.

The trucks are composed of Symington 5 x 9 in. cast steel truck sides with lateral motion roller type bolster; Symington resilient type side bearings; double elliptic springs with 3 x $\frac{3}{4}$ in. leaves, 6 leaves being in each section. The cast iron wheels are 33 in. diameter.

The cabooses are equipped with Westinghouse A. B. Brakes.

The exterior sides of the cabooses are finished in Dulux Aluminum, upon which, in a golden yellow panel, with black border, appear the name of the road and caboose number in black. Similar treatment is afforded the worded slogan which appears in an oval shaped design about the center of the cupola. The platform railing ends and ends of cupola are painted with the usual signal red. The underframe and trucks are black in color.

The interior side walls, end walls, doors, and other equipment are painted a light blue grey, with ceilings painted cream and floors painted in terra cotta red.

Chief Dimensions

The chief dimensions of the new cabooses are as follows:—

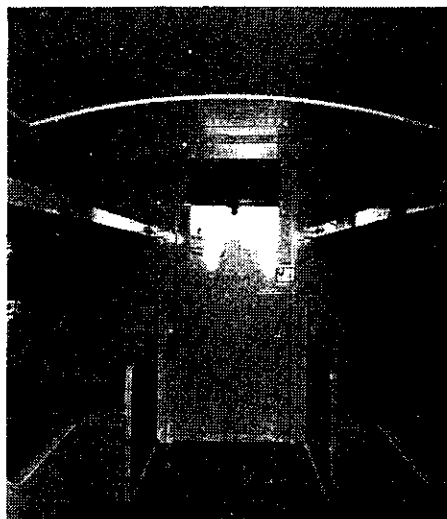
Length over pulling faces of couplers	38 ft. 0 in.
Length over striking castings	35 ft. 5 in.
Length over platform end sills	34 ft. $8\frac{1}{4}$ in.
Length over end posts	29 ft. 2 in.
Length inside (body)	28 ft. 4 $\frac{3}{4}$ in.
Length over cupola end posts	6 ft. 0 in.
Length inside cupola	5 ft. 5 $\frac{1}{2}$ in.
Width over eaves (body)	9 ft. 8 $\frac{3}{4}$ in.
Width over side posts	9 ft. 6 in.

Width inside	8 ft. 10 in.
Width over cupola eaves	8 ft. 10 3/4 in.
Width over cupola side posts	8 ft. 8 in.
Width inside cupola	8 ft. 2 1/2 in.
Height—Rail to center of coupler knuckle	2 ft. 10 1/2 in.
Height—Rail to top of platform	4 ft. 0 3/4 in.
Height—Rail to top of floor (body)	4 ft. 1 3/4 in.
Height—Rail to top of roof (body)	11 ft. 9 3/4 in.
Height—Rail to running boards (body)	12 ft. 0 3/4 in.
Height—Rail to top of cupola	15 ft. 3 in.
Height—Floor to ceiling (body)	7 ft. 4 1/2 in.
Height—Floor to upper berth (open)	4 ft. 4 in.
Height—Floor to cupola floor	4 ft. 7 in.
Truck centers	19 ft. 10 in.
Wheel base	5 ft. 6 in.
Wheel diameter	33 in.
Type of wheel	Cast Iron
Journal size	5 x 9 in.
Light weight	50,000 lb.

List of Equipment

The equipment and specialties for these caboose cars, and the name of the supplier of each, are listed in the following:—

Equipment Item	Supplier
Truck Side Frames	Symington Gould Corp.
Truck Bolsters	N.S. Car Corp.
Spring Plank	Symington
Resilient Side Bearing	N.S. Car Corp.
Journal Box Lids	Rahn Metals
Journal Bearing	International Equip. Co.
Dust Guards	B. J. Coghlin
Elliptic Springs	Dom. Foundries & Steel
Couplers	Dom. Foundries & Steel
Coupler Yokes	Dom. Foundries & Steel
Coupler Centering Device	Union Metal Products
Uncoupling Arrangement	A.A.R. Standard
Draft Gear	Holden Co.
Brake Beams	N.S.C. Corp.



Upper and Lower Berth Section in One of the New Caboosees.

Hand Brake	Can. Cardwell Co.
Insulation	Can. Johns-Manville
Stove	General Steel Wares
Refrigerator	Sanderson-Harold
Wash Basin and Water Cooler	Robt. Mitchell
Air Brake Equipment	Westinghouse
Oil Lamps	T. & N.O. Ry. Standard
Paint (Dulux)	Can. Industries Ltd.
Window Blinds	Holden Co.

Railway Liability re Snow Fences

A judgment written by Chief Commissioner J. A. Cross, of the Board of Transport Commissioners for Canada, upon which that body's order 59,874 was based, is of interest as indicating the liability of railways as concerns damage done or claimed to be done by their snow fences to farmers' lands. This judgment dealt with a complaint by J. E. Smith, of Portage la Prairie, Man., against refusal of Canadian National Rys. to entertain his claim for damages to property and inconvenience suffered by reason of C.N.R. snow fences. Mr. Smith, spoken of in the judgment as a widely experienced and capable farmer, operates a farm through which the C.N.R. lines passes, in the Portage la Prairie district. The railway snow fences caused snow to pile up in large drifts in the nearby area during the winter of 1938-39; this was in a sixty-one acre field. The snow near the fences took longer to disappear in the spring than did that elsewhere in the field, in addition to which excess moisture was left, which was slow in draining away and drying up. Mr. Smith had summer-fallowed this field in 1938, intending to seed it to wheat in the spring of 1939. He had two other fields, each of 60 acres, on his farm, which he seeded to wheat, one on April 18, and the other on April 22 and 23, 1939. But, he claimed, the sixty-one acre field was not ready to seed to wheat in time, and, fearing that if rain came it might be too late to seed the land to wheat, he seeded it to barley. Most of this seeding was done on April 28, but the five or six acres in the snow fence vicinity was not seeded until around May 7 and 8. Chief Commis-

he was satisfied that the area seeded to barley on or about April 28 could have been seeded to wheat, and he mentioned that some of the evidence given at the hearing tended to show that wheat may be sown up to May 10 or 15 in the district. However, on this point, he noted that so much depends upon the nature of the season, following seeding, that he did not consider it necessary to attempt a determination of the matter. The barley crop on the sixty-one acre tract was not satisfactory; it grew too rank, and all lodged when it was green and went down flat, and the heads ripened while the straw was still green. Mr. Smith claimed that quite one-half of the grain was lost on the ground. The barley harvested was 1,891 bush., for which 38c per bush. was received. Mr. Smith claimed that this was the first time in very many years of farming in which he had seeded barley on summer-fallowed land. He stated that his wheat grain in the adjacent fields in 1939 averaged 40 bush. to the acre or better, and he received 55c per bush. He alleged that had he been able to seed the sixty-one acre field to wheat, as he had intended, he would have received \$640 more revenue than he received from the barley. His claim was that this loss was occasioned solely because of the presence of the C.N.R. snow fences.

In his judgment, Chief Commissioner Cross quoted Sec. 164 of the Railway Act, which requires that a railway, in exercising assigned powers, shall do as little damage as possible and shall make full compensation to all persons interested for all damage sustained. He noted further that the Board was given

Dominion Statutes, amending the Railway Act; this repealed subsection 1 of Sec. 203 of the Act, and substituted a subsection empowering the railway to enter lands after Nov. 1 on each year to erect snow fences, and to maintain such fences, subject to the payment of land damages, if any actually suffered, as are thereafter established by mutual agreement; in the absence of agreement, the damages may be settled in manner approved by law, or, in the alternative, at the option of the claimant, by the Board. Chief Commissioner Cross noted that this is the first case heard by the Board under the provisions of the new subsection. He added:—"It is advisable to state how damages, in my opinion, are to be measured thereunder. No authorities have been submitted which are of assistance on this point."

Chief Commissioner Cross concluded his judgment as in the following:—

In *Rickett v. Metropolitan Ry. Co.*, L.R. 2, H.L. 175, the Lord Chancellor, in discussing the interpretation of the proviso in Section 16 of the Railway Clauses Consolidation Act, 1845, which is practically the same as Section 164 above quoted, says:—"The words are, 'shall do as little damage as can be'; which, if applying to a consequential injury, would appear to limit the resulting damage to an immediate consequence and not to extend to a remote one."

Willes, J., in *Beckett v. The Midland Ry. Co.*, L.R. 3, C.P. 82, at p. 94, says:—"The damage complained of must be one which is sustained in respect of the ownership of the property—in respect of the property itself, and not in respect of any particular use to which it may from time to time be put."

Applying these principles to the present case, I think that damages in this case are to be measured by the decrease in the rental value of the land, caused by the erection and maintenance of the snow fence, and not by the difference between the value of the crops which were actually raised and the value of the crops which, but for the erection and maintenance of the snow fence, might have been raised. There was no evidence as to decrease in rental value, and it seems doubtful whether any such evidence could have been produced. At any rate, the onus is on the claimant to prove damages, and he has not done so.

In my opinion, the complaint should be dismissed.

At the hearing, Mr. Stimpson, on behalf of the claimant, asked that if the Board saw fit to rule adversely against the claimant, the Board issue an order refusing the railways the right to erect snow fences on the claimant's land. The erection and maintenance of snow fences is a statutory right conferred upon the railways by subsection (1) of Section 203 of the Railway Act, quoted above, and in my opinion the Board has no jurisdiction to make such an order.

Commissioner G. A. Stone concurred. Order 59,874 dismissed Mr. Smith's application, which was for either damages, or, in the alternative, an order refusing the C.N.R. right to erect and

2/1941

Canadian Transportation

T. & N.O.R. Restaurant Car "Agumik"

This car, of unusual design, was converted from a cafe-parlor car in the North Bay shops, and has met with gratifying reception from travellers on the North Bay-Porquais run.

IN September last the Temiskaming and Northern Ontario Ry. placed in service, on trains 46 and 47 between North Bay and Porquais, a restaurant car which is named the "Agumik", and which, presenting a design which is new and unique among cars in which full course meals, light lunches, ice cream sodas and sundae, etc., are served the travelling public, was converted from a cafe-parlor car, the work having been done at the T. & N.O.R. shops at North Bay. The acceptance accorded the car has justified the careful planning of the interior arrangement, and the travelling public's patronage indicates complete approval of the facilities offered and their arrangement, differing radically in many ways from the conventional.

In its original form, the car, of steel and wood construction, had a dining room, seating 18 persons, separated from the parlor portion by a smoking room, the parlor having been fitted with seats for 12 persons. The kitchen and pantry were located at one end of the car, while at the other were toilet facilities and a locker for the crew. The car was converted from designs prepared by the T. & N.O.R. Mechanical Department staff, the work having been carried out by the regular staff at the North Bay shops.

The Commonwealth 6-wheel trucks under the car were of the bent equalizer type, and as a matter of fact were of the earliest types manufactured by the company. Unit brake cylinders were applied in connection with the application of clasp brakes. Two years ago, a similar car set of trucks was remodelled along the same lines, and in



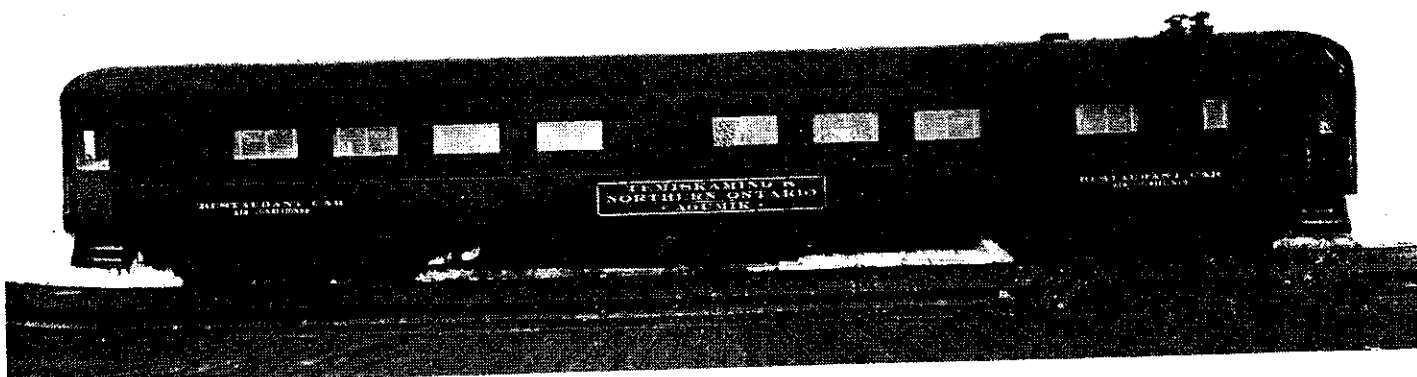
The Main Portion of the Temiskaming and Northern Ontario Ry. Restaurant Car "Agumik".
This view is taken from the passengers' passageway, at the kitchen.

that time a mileage of 290,000 has been travelled, with no expense other than regular service maintenance. The remodelling of these trucks provided more space for equipment under the car.

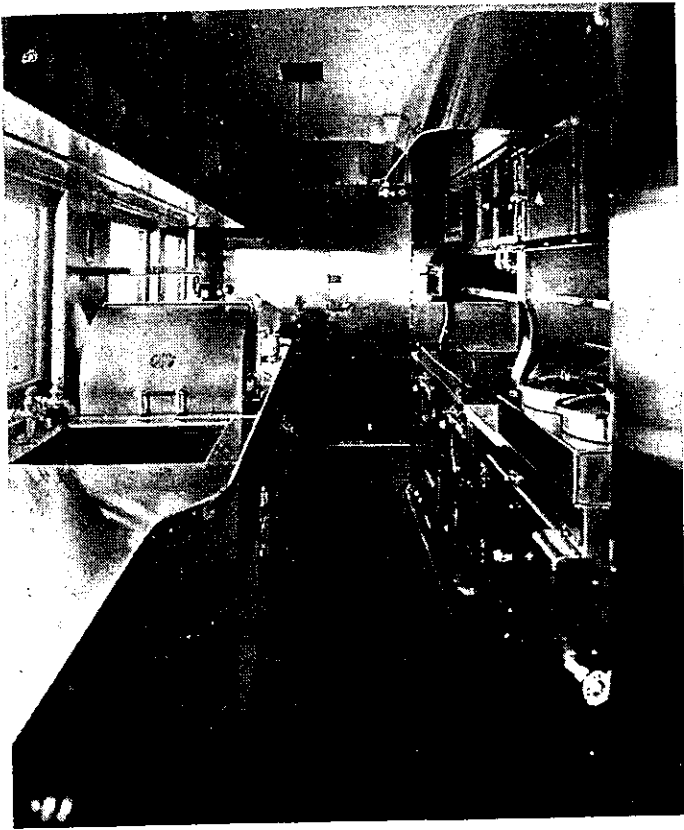
No changes were made to the original steel underframe, which consisted of the center sill section, of the box type, with 18 in. channels spaced 16 in. back to back, with ½ in. thick cover plates top

and bottom. Side sill construction consists of a 5 x 3½ x 9/16 in. angle with a 5/16 in. thick x 2 ft. 11 in. wide steel girder running continuous. Two exceptionally strong fabricated cantilevers, spaced at 33 ft. 1 in., together with end construction of angles, channels and plates, form a sturdy framework.

The entire body was completely rebuilt. Window sill height was raised through-



The Restaurant Car "Agumik", Temiskaming and Northern Ontario Ry.



Kitchen of
Restaurant Car
"Agumik".

Running continuous full length of the main section at the point where the lower deck adjoins the car sides, trough lighting is installed.

On the end partitions, and directly over the counter, are two panels hand carved from white rubber, the recesses in the panels being tinted with a red shade. The upper deck being used as an air duct, the car ceiling is formed in a continuous curve from the lower deck curve. The center ceiling portion carries the Multivent Drafftless air distribution system. The Multivent ceiling was so designed to permit a continuous system of lighting arrangement running along the center of the car; thus, each side of this ceiling is hinged to permit easy access for cleaning. The ceiling is painted a special shade of light grey.

All windows are equipped with Venetian blinds, slats and head boxes being finished in Prima Vera effect to match the window treatment.

The counter chairs, 24 in number, pleasingly harmonize with the interior treatment; the pedestals being finished in light grey enamel and the Dunlopillo seats and seat backs being covered with turquoise blue leather. A chromium-plated hat hook is conveniently located on each seat pedestal.

The design of the counter was prepared after much study, in order to have every inch of available space provide every facility for immediate access to dishes, cutlery and glassware, and other stored materials. Two automatic drinking water stations, of stainless steel, are also conveniently located under the counter. The face of the counter on the passenger side is Formica of a special rust red shade. At each counter chair, a compartment is provided for storing of passengers' small articles and purses, whilst dining. The counter top is covered with a non-skid rubber covering, grey in color, in marble effect. Heating coils for one side of the car are located in a recess, running full length of the counter. The floor covering on the passenger side of the car is non-skid rubber of dark red in marble effect.

The service passageway between the counter and luncheonette is slatted; this

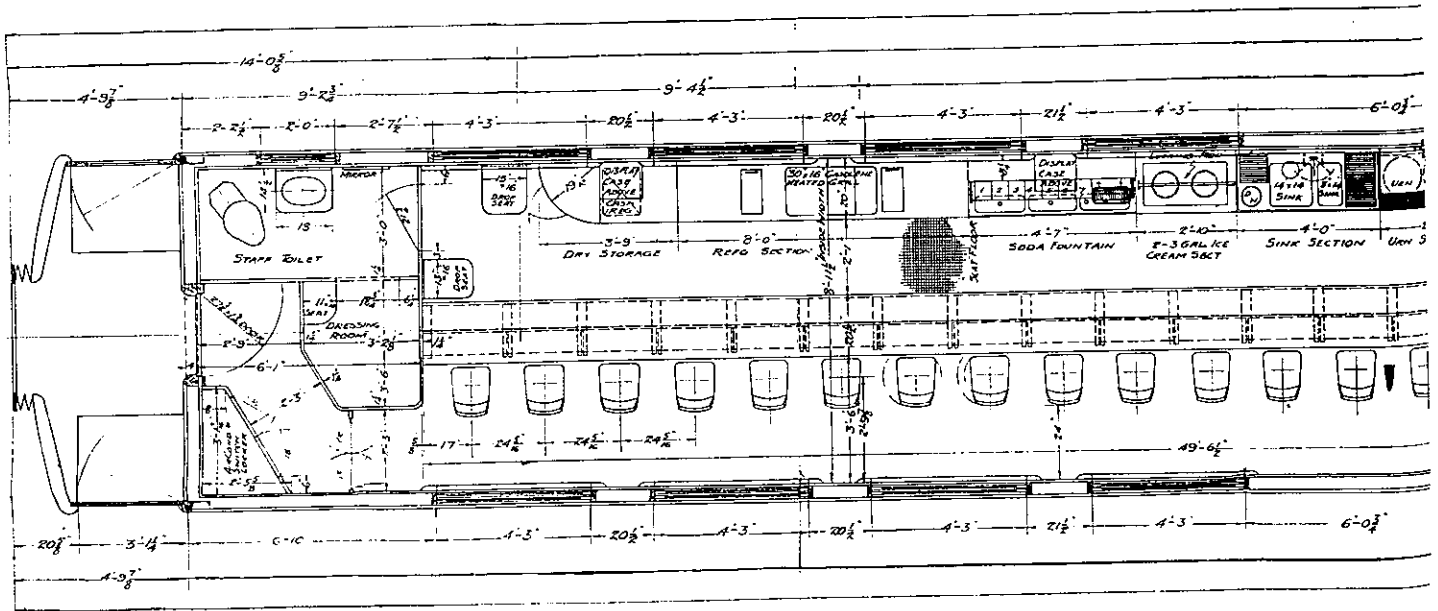
out the entire car to 36 $\frac{1}{2}$ in., to accommodate the luncheonette. At one end of the car, facilities were provided for the car staff, the entrance passageway being revamped in the rearrangement. At the kitchen end of the car, the natural ice refrigerator was rebuilt to provide icing from vestibule instead of roof, and access to refrigerator from inside the kitchen proper. The kitchen throughout is of stainless steel. In order to provide an adequate water supply, a 30 in. diameter x 6 ft. long tank was installed vertically at the end of the steam table, the galvanized tank being housed behind a stainless steel housing.

The kitchen arrangement and equipment has been improved and new drop ceilings applied in the kitchen to conceal the overhead tanks and pipes. Trap

doors, suitably located, provide easy access to the tanks and piping.

The interior of the main part of the car has been completely modernized in a somewhat unique manner, one instance being the window treatment. This window treatment projects into the car about 1 $\frac{1}{2}$ in. beyond the usual inside face, the treatment being finished in Prima Vera Realwood Formica mounted on a plywood backing, each individual window treatment being secured to the side posts with suitable fastenings. The recessed space so occasioned by the special window treatment is faced with turquoise blue Formica. Small individual show cases are also applied to several of the recesses.

The end partitions are faced with Formica of a special shade of rust red.



Floor Plan, T. and N.O.R. Restaurant Car, "Agumik".

removable slat floor rests on a water-tight galvanized iron covered floor, the arrangement of which has proved most sanitary from a cleaning standpoint.

Running along on one side of the car is a 46 ft. 0½ in. long stainless steel luncheonette. This luncheonette is composed of 10 individual sections, each located to provide ease of service. The soda fountain section is of unusual design, its width being only 20 in. and overall height 36 in., thus fitting in nicely below the window sills. Standing on top of the luncheonette at suitable locations are two short order grills, each 30 in. long x 16 in. wide, with a canopy on top, and a coffee urn arrangement of generous size. All short order cooking as well as toasted sandwiches are prepared on these grills, whilst heavy cooking is done in the kitchen on the regular dining car range.

Cooking odors from the grills are removed from the car by being piped to the regular exhaust system of the car's air conditioning equipment, this exhaust being taken care of by the fan located in the staff quarters.

The refrigeration for the luncheonette is natural ice stored in separate containers. The luncheonette rests on metal supports 8 in. in height. This space under the luncheonette provides space for all drain piping, water piping and carbonic gas piping to the soda fountain. A stainless steel baseboard or kick plate, secured to the face of the supports, closes in all the piping. An electric glass washer is also part of the soda fountain equipment.

Other labor saving equipment installed in the car includes an electric meat slicer, electric drink mixers and juice extractor, and in the kitchen is to be found an electric dish washer.

Carbonic gas for the soda fountain is obtained from two standard size tanks located in a locker adjacent to the partition adjoining the kitchen. Above this compartment is the main storage compartment for cigarettes, cigars and confections.

To provide an ample supply of water

storage for the luncheonette and drinking water stations, a 30 in. diam. x 8 ft. long galvanized pressure supply tank is located under the car.

Throughout the car, liberal use has been made of chrome metal mouldings.

The car is equipped with the Sturtevant spray system of air conditioning, complete with air sterilizing unit. The overhead unit is located over the staff quarters, the fresh air inlet in the vestibule and the recirculating grille in the passageway, just below the unit. One exhaust fan is located in the staff quarters and another in the kitchen.

The exterior of the car is painted standard green in Dulux. The Railway Company's standard lettering and name of car, lettered in gold leaf on a panel of Castilian red, are located at the center of the car, whilst on the body, about center line of trucks, are the words "Restaurant Car" and "Air Conditioned" lettered in gold leaf on the green background. The rounded roof is painted black, as are the trucks and underframe equipment.

Electric energy is provided by a 10 kw. generator suspended from the underframe at the staff quarters end of car, and operated by a mechanical drive.

The weight of car in working order is approximately 173,000 lb.

The chief dimensions of the car are:—

Length over diaphragm face plates.....	79 ft. 11¼ in.
Length over end frame.....	70 ft. 3½ in.
Truck centers.....	51 ft. 10 in.
Canilliner Centers.....	33 ft. 1 in.
Extreme width.....	3 ft. 11 in.
Inside width.....	5 ft. 11½ in.
Height from rail to top of roof.....	14 ft. 1 in.

Specialties

Following is a list of the car's special equipment and suppliers:—

Air Brake Equipment.....	Westinghouse
Clasp Brakes.....	American Steel Fdys.
Generator.....	Safety Co.'s
Storage Batteries.....	Edison
Generator Mechanical Drive.....	Mechanical Appliance & Transmission Co.
Sump Pump.....	Darling Bros.
Air Cond. Ice Boxes.....	Can. Car & Fdy. Co.
Air Conditioning Equipment.....	B. F. Sturtevant Co.
Formica Interior Sheets.....	Robt. Simpson Co.
Chromed Mouldings.....	Robt. Simpson Co.
Venetian Blinds.....	Robt. Simpson Co.

Lighting Fixtures.....	Robt. Simpson Co.
Carved Panels.....	Robt. Simpson Co.
Rubber Floor Covering.....	Robt. Simpson Co.
Coffee Urns.....	Robt. Simpson Co.
Short Order Grills.....	Robt. Simpson Co.
Luncheonette.....	Liquid Carbonic Corp.
Paint (Dulux).....	Can. Industries, Ltd.
Multivent Ceiling.....	Burgess (Holden Co.)
Drinking Water Stations.....	Robt. Simpson Co.
Electric Glass Washer.....	Liquid Carbonic Corp.
Carbonic Gas Tanks.....	Liquid Carbonic Corp.
Kitchen Range.....	G. F. Prouse Co.
Water Tanks.....	Crane Co.
Electric Meat Slicer.....	Hobart
Steam Table.....	G. F. Prouse Co.
Car Heat Equipment.....	Vapor Co.
Insulation.....	Johas-Manville
Cash Registers.....	Burroughs
Electric Juice Extractor.....	California Fruit Growers Exchange (Sunkist)
Electric Dish Washer.....	Hobart
Electric Drink Mixer.....	Hamilton Beach
Counter Seats.....	Robt. Simpson Co.

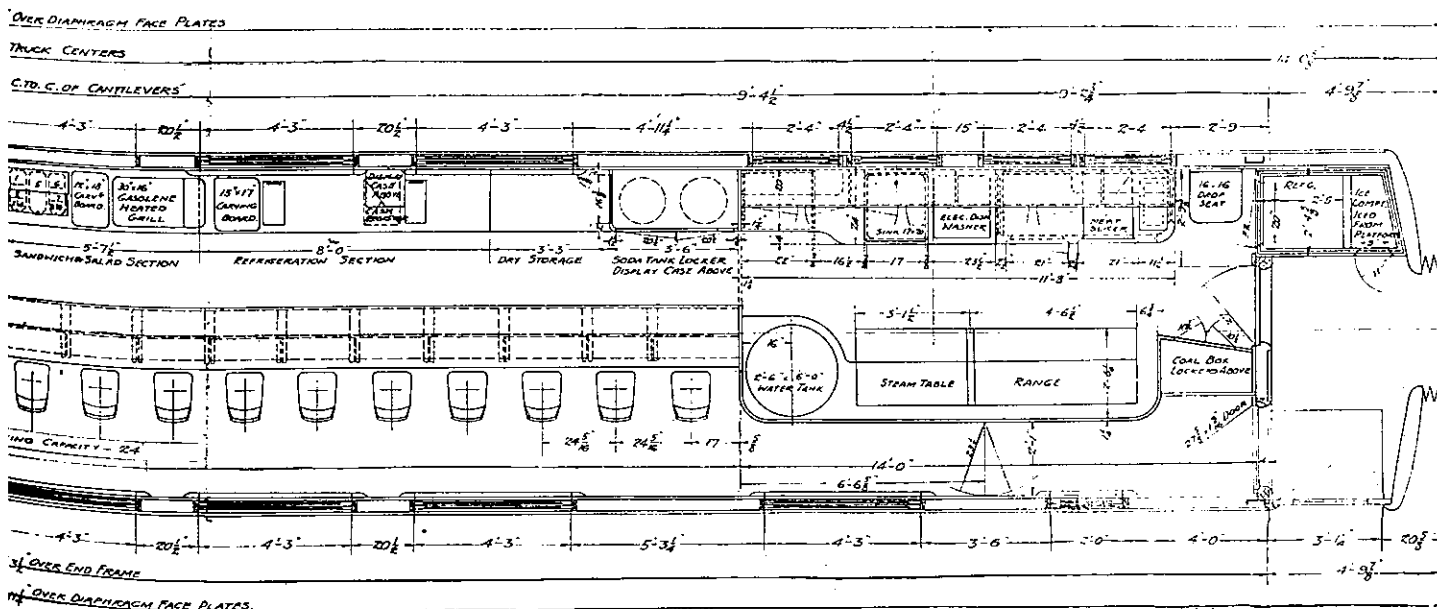
Crossing Protective Appliance Costs

Circular no. 247-R, issued by the Board of Transport Commissioners for Canada, Oct. 23, stated:—

"The attention of the Board has been directed to a protest registered against a major expenditure on grade crossing protective appliances repaired and replaced without notice to a Municipality subsequently billed for its share of the repair and replacement.

"Under direction I am instructed to advise that in cases of grade crossing protective devices where the costs of maintenance or construction are shared with other parties by reason of Board's Orders, and it is found by railway maintenance forces that major repairs to the value of \$250.00 or over are anticipated, the Railway concerned should, before undertaking the work, inform the Board and the other parties interested in the maintenance charges. Such information should advise of the reasons bringing about the necessity of the work and be accompanied by an estimate of the cost of such repairs or replacements.

"This requirement is not to apply in emergency cases brought about by accidents or other conditions where immediate action is necessary."



Floor Plan. T. and N.O.R. Restaurant Car, "Agumik".



New Liskeard Station.

main lighting switch on panel board. Four of the cars are fitted with Edison storage batteries, 25-cell, type A14-H, 595 amp. hr. capacity at 8 hr. rate, and the other two cars have Exide 16-cell storage batteries, 39 M.B.M.H. 1-C. The battery box is of steel, wood lined. The electric lamps throughout the cars are arranged very tastefully. The fixtures throughout are of Safety Car Heating and Lighting Co. make. In the main room and men's smoking room the fixtures, individually controlled at each seat, are mounted in the underside of the parcel racks. There are three ceiling lights in the passageway and one in the women's lounge, a bracket lamp with shade in each saloon and three bracket lamps with shades in the women's lounge, and four vestibule lamps.

The air-conditioning equipment, of ice activated type, forms a S.C. H. & L. Co. carrier system. The air conditioning units, with motor, fan and heating and cooling coils, are mounted in the roof, over the women's lounge. The double door ice box, under the car body, has capacity of 3,150 lb. The air inlet, in the vestibule ceiling, is grilled and fitted with filters. The exhaust fans, of Sturtevant make, are located in the toilets. The ice water sump is of Robert Mitchell Co. manufacture, and the pump and motor, of Darling make, are connected with the cooling coils by copper pipe. Vapor Car Heating Co. control equipment is fitted.

The trucks are Commonwealth Steel Co. cast steel four-wheel type, with integral pedestals and straight equalizers. Truck wheelbase is 9 ft. The equalizer springs, of helical double coil type, are of chrome-vanadium steel, made by B. J. Coghlin Co., and the quadruple elliptic bolster springs, also of Coghlin manufacture, are of chrome-vanadium steel and treated with Noxide. The center plate, bolted to the bolsters, is of cast steel, and the equalizers are of mild steel. The side bearings are the Stucki A-5010 type. The Peech and Tozer solid rolled steel wheels, with heat-treated toughened rims, are 36 $\frac{1}{4}$ in. diam., and the axles are special 5 $\frac{1}{2}$ x 10 in. annealed. The trucks are fitted with Timken roller bearings for 5 $\frac{1}{2}$ x 10 in. journals.

The air brakes are the Westinghouse U.C.-4 schedule, 10 x 10 in., employing Universal passenger car brake equipment, and the brake cylinders are mounted on the trucks, which are fitted with Simplex unit cylinder clasp brakes, with Dominion Brake Shoe Co. C-50-X shoes.

Safety appliances throughout, including steps, handholds and grabirons, meet fully the requirements of the Board of Railway Commissioners for Canada and

the United States Interstate Commerce Commission.

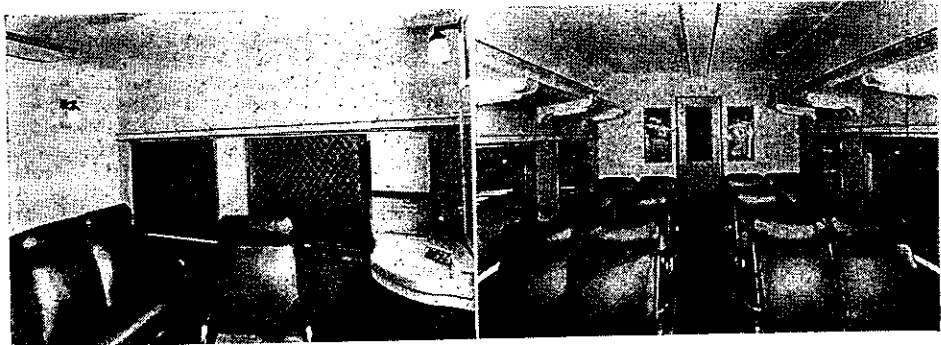
Finish—The cars are finished in T. and N.O. Ry. standard colors, with final finish of three coats of outside finishing varnish, and with all lettering in gold leaf.

Equipment not specifically mentioned in the foregoing includes the following:—Holco standard PC-311 6-ply diaphragms; Miner B-10-X buffing device; Fowler upper buffer springs; Pantasote vestibule curtains with Rex roller and hinged shields and release handle; Railway standard tail gate; National steel trap doors; Miner A-5-XB draft gear; A.A.R. type E bottom-operated couplers arranged for 2 $\frac{1}{2}$ in. tail pin; National centering device; steel doors with stationary glass ($\frac{1}{2}$ in. polished plate) in upper panels, except in body end door, where the glass, of 3/16 in. polished plate, is arranged to drop; rubber weatherstrip on bottom of vestibule side doors and body end doors and Best metallic strip on top and sides of body end doors; Duner lip type saloon hoppers, foot operated, with Whalebonite seat;

racks in main room and men's smoking room, with lighting fixtures integral; Loeffelholz no. 220 trainline connectors; no. 3-G Gibbs two-pole trainline receptacles; Anderson type CC 2728 charging receptacles; Safety Car Heating and Lighting Co. no. 551 pilot lamp receptacle; Westinghouse schedule K signal equipment; Peacock no. 210-C (15:1 ratio) hand brake, applied at outside of vestibule end sheet with inside 18 in. hand wheel.

Combination Baggage and Passenger Cars

As stated in the introductory paragraphs, the four combination baggage and passenger cars built have somewhat more than half the car taken up by the baggage space, while the passenger end has seating accommodation for 38 passengers. The interior arrangement and dimensions are exhibited by the accompanying floor plan. The specification covers a steel frame, steel sheathed car with steel interior partitions and steel interior end finish. The leading dimensions are as follows:—

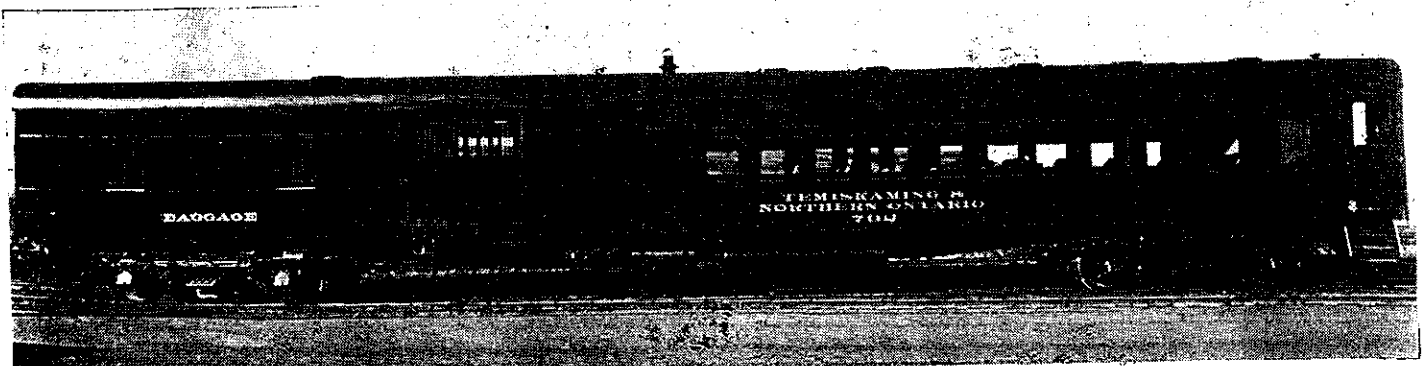


Left, the Women's Lounge, and, Right, the Men's Smoking Room, in the First-class Car.

saloon disinfecting equipment; Robert Mitchell Co. white metal water coolers, with copper coils in the ice compartment directly connected to the water pressure system; Ajax cabinet type drinking cup holders; Robert Mitchell Co. wash basins; T. and N.O. Ry. standard liquid soap containers; Onliwon paper towel holders in men's lavatory and women's lounge; $\frac{1}{2}$ in. plate glass mirrors in men's lavatory and women's lounge; air pressure water supply system, with 22 x 96 in. tank in metal casing; set of wrecking tools; Pyrene fire extinguisher in cabinet; malleable iron signal lamp brackets on vestibule corner posts; door holders at body end door and double swinging doors, and Pantasote finger protection on hinge side of double swinging doors; trimmings with statuary bronze finish; all locks to fit railway standard key; Robert Mitchell Co. basket

Length over diaphragm face plates79 ft. 10 $\frac{1}{2}$ in.
Length over body end posts73 ft. 6 $\frac{1}{2}$ in.
Truck centers55 ft. 2 in.
Width over girder plates9 ft. 10-1/16 in.
Width inside of wainscote9 ft. 6 $\frac{1}{2}$ in.
Height rail to platform4 ft. 3 in.
Rail to top of roof13 ft. 1-5/8 in.

The underframe is of the fish belly type, with built-up bolsters, with cast steel center filler arranged for Security locking device and cast steel buffer and platform, and the underframe details are the same throughout as those of the first class cars, described above, with the exception, of course, that the baggage end of the car underframe structure is blind. The vestibule end is built up with $\frac{1}{4}$ in. pressed steel diaphragms and 17 $\frac{1}{2}$ x $\frac{1}{4}$ in. bottom and 22 x $\frac{1}{4}$ in. top cover plates. The baggage end is cast integral with the steel buffer castings. The lower floor in the cars is exactly the same as in the first class cars, but, in



Combination Baggage and Passenger Car, Temiskaming and Northern Ontario Railway.

fixtures, of which there are three in the baggage room, five in the passenger compartment, one in the vestibule, and three bracket fixtures.

Brakes—As in the first-class cars, the air brakes are the Westinghouse U.C.-4 schedule, with truck-mounted 10 x 10 in. brake cylinders. At the vestibule end there is a Peacock 210-C handbrake, with 15:1 ratio, applied on the outside of the vestibule end sheet, with 18 in. inside handwheel, and at the baggage end there is a similar brake applied on the outside of the end sheet, with both inside and outside wheels. Westinghouse schedule K signal equipment is installed.

The trucks are the same throughout as those of the first-class cars, being fitted with Timken roller bearings for 5½ x 10 in. journals.

Safety appliances throughout are in accordance with the requirements of the Board of Railway Commissioners for Canada and the United States Interstate Commerce Commission. In the baggage compartment there are safety rails of 1 in. standard pipe, with malleable iron brackets. These run longitudinally, a short distance below the ceiling, and their presence enables a man to swing himself up out of harm's way in the event of trunks or other baggage shifting violently about the car. There are also vertical rails to prevent a man from being crushed against the car end.

The seats in the passenger room, of which there are 19, are the Heywood-Wakefield 332 LF walkover type, finished in leather. There are basket racks in the passenger room only.

Other Equipment—The fittings in the passenger compartment are of the same high order as in the first-class cars, there being an air pressure system water supply with 22 x 93 in. tank, adequate for weatherstripping, foot-operated under saloon hoppers, a white metal water cooler in the passageway with copper coils connected to the water pressure stem, Ajax drinking cup holder, one white metal wash basin in the men's lavatory and one in the women's lavatory, liquid soap container, paper towel holder and mirror in each lavatory, a complete set of wrecking tools and two green fire extinguishers. All trimmings are in statuary bronze finish. The crating equipment includes Holco diaphragms, Miner B-10-X buffing device, wiper upper buffer springs, Pantasote vestibule curtains, railway standard tailtie, National steel trap doors, Miner 5-XB draft gear, A.A.R. type E bolt-n-operated couplers and National latching device.

When this description appears in print, ten cars will no doubt be in operation in the Northern Ontario territory owned by the T. & N.O. Ry., and the agents of the northern mining country will be well enabled to claim that they have railway passenger equipment the equal of any on the whole continent.

Railway Accidents Report

September Figures

The Board of Railway Commissioners for Canada reports that in September, 1936, there were 239 accidents on Canadian railways, 23 persons having been killed and 273 injured, and 30 accidents at highway crossings, 13 persons having been killed and 44 injured, a total of 269 accidents, 36 persons having been killed and 317 injured.

Of those killed, 10 were employees and 26 others, and of those injured, 47 were passengers, 196 employees and 74 others.

The highway crossing accidents by provinces were:—Nova Scotia, one, an automobile, through driver's carelessness in running into side of a train.—New Brunswick, one, a truck, through driver's carelessness in running on to crossing in front of train and being struck.—Quebec, seven, automobiles in five and trucks in two; six accidents were caused through drivers' carelessness in three automobiles and two trucks failing to stop for crossings and one automobile stalling on crossing.—Ontario, 12, automobiles in 11 and a truck in the other, all through drivers' carelessness in five automobiles and the truck driving on to crossings in front of trains, three automobiles running into sides of trains, one automobile stalling on crossing in front of train, one automobile's driver failing to see or hear train and one automobile's driver being in an unfit physical condition.—Manitoba, two, an automobile and a truck, both through drivers' carelessness, the truck being driven on to crossing in front of train.—Saskatchewan, four, all automobiles, three through drivers' carelessness, one failing to observe approaching train and being struck.—Alberta, an automobile through reckless driving on part of driver in the only accident.—British Columbia, two, an automobile through driver's carelessness in driving on to crossing in front of train and being struck, and a pedestrian, who walked into path of oncoming train.

Of the 30 accidents at highway crossings, 27 took place at unprotected and three at protected crossings, 21 having occurred during the day and nine at night.

October Figures

In October, the Board reports, there were 194 accidents on Canadian railways, 17 persons being killed and 190 injured, and 26 accidents at highway crossings, nine persons being killed and 50 injured, a total of 220 accidents, 26 persons being killed and 240 injured.

Of those killed, six were employees and 20 others, and of those injured, 21 were passengers, 149 employees and 70 others.

The highway crossing accidents by provinces were:—Nova Scotia, three, an automobile, a truck and a horsedrawn vehicle, all through drivers' carelessness in disregarding crossing bell, failing to see or hear train and in attempting to beat train, respectively.—New Brunswick, one, an automobile through driver's carelessness in travelling at excessive speed and running into side of train.—Quebec, four, automobiles in two and trucks in two, all through drivers' carelessness in failing to stop for crossings.—Ontario, 12, automobiles in eight, seven through drivers' carelessness in three running into sides of trains, three driving on to crossings in front of trains, and one through disregard of bell and wigwag signals; the other automobile, after stopping clear of crossing, was

involved in three accidents, all through drivers' carelessness in one stalling on crossing, in one through reckless driving and in one through defective brakes; a horsedrawn vehicle, the horse being unmanageable and running on to crossing in front of train, was concerned in the remaining accident.—Manitoba, an automobile, through drivers' carelessness, in failing to take precaution and driving on crossing in front of train, was involved in the only accident.—Saskatchewan, three, automobiles in two, through drivers' carelessness in one running on to crossing and being struck by train and in the other through reckless driving and running into side of train; a pedestrian, a boy who stood too close to train and endeavoured to touch it, was concerned in the other.—Alberta, two, an automobile, through driver's carelessness in failing to see or hear train and driving on to crossing and being struck, and a horsedrawn vehicle, the section crew failing to comply with instruction to stop before passing over crossing, being involved.

Of the 26 accidents at highway crossings, 22 took place at unprotected and four at protected crossings, 14 occurring during the day and 12 during the night.

Railway Freight Traffic

The Dominion Bureau of Statistics, Transportation and Public Utilities Branch, reports freight loaded on Canadian railways and received from foreign connections, in tons, as follows:—

	Aug. 1936	Aug. 1935	Aug. 1934
Prince Edward Island	8,699	19,564	4,841
Nova Scotia	628,186	540,564	591,246
New Brunswick	162,547	137,098	123,817
Quebec	999,123	x937,985	856,145
Ontario	2,589,967	2,122,646	2,141,216
Manitoba	551,845	269,588	359,031
Saskatchewan	607,570	407,580	363,777
Alberta	356,909	484,550	530,888
British Columbia	402,563	389,650	383,216

Total6,307,409x5,309,225 5,354,177

	Sept. 1936	Sept. 1935	Sept. 1934
Prince Edward Island	15,124	22,209	10,627
Nova Scotia	649,217	504,710	596,585
New Brunswick	219,757	135,140	133,827
Quebec	1,184,323	995,700	867,474
Ontario	2,600,518	2,383,756	2,062,381
Manitoba	607,635	499,008	653,120
Saskatchewan	1,446,495	903,102	860,542
Alberta	683,225	752,691	856,565
British Columbia	423,827	366,890	369,867

Total7,830,121 6,563,206 6,410,938

The products, in tons, were:—

	Aug. 1936	Aug. 1935	Aug. 1934
Agricultural	1,574,122	1,104,644	1,164,818
Animal	180,688	170,605	195,107
Mine	2,171,229x1,885,134	1,954,528	
Forest	621,165	594,776	553,054
Manufactures and miscellaneous	1,760,215	1,554,066	1,486,670

Grand Total6,307,409x5,309,225 5,354,177

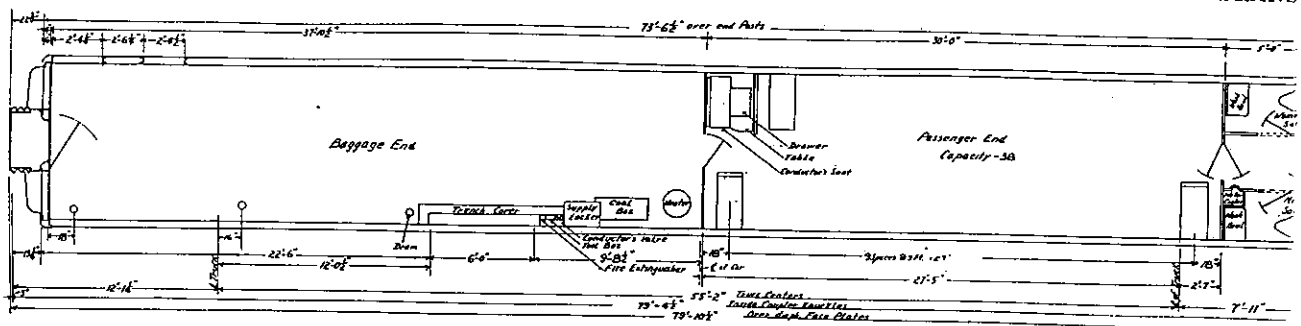
	Sept. 1936	Sept. 1935	Sept. 1934
Agricultural	2,525,814	2,008,694	2,154,412
Animal	204,369	179,389	190,168
Mine	2,655,303	2,247,273	2,203,168
Forest	571,596	x591,988	508,907
Manufactures and miscellaneous	1,773,039x1,535,862	1,354,283	

Grand Total7,830,121 6,563,206 6,410,938

xRevised.

Grain Car Loading—In the handling of the Western Canadian grain crop in October, 1936 and 1935, E. A. Ursell, Statistician, Board of Grain Commissioners, reports, average net bushels per car were as follows, the Oct., 1936, figures being stated first in respect of each variety:—Wheat, 1,499.96; 1,408.1;

U.S.A. Railway Freight Car Situation—The Association of American Railroads, Car Service Division, reports that Nov. 1, 1936, there were 1,742,498 light cars on U.S.A. class 1 lines, of which 226,095, or 13% of total, were waiting or undergoing repairs, compared with 13.9% on Oct. 1, 1936. On Oct. 31 last there were 112,369 surplus light cars on U.S.A. class 1 lines, included in which were 64,778 box cars, 128 gondola cars and 6,055 hopper cars. On Oct. 14, 1936, surplus freight cars totalled 113,526, and on Oct. 31,



Floor Plan, Combination Baggage and Passenger Car

the baggage compartment, an additional floor of 1 1/4 in. B.C. fir is laid crosswise on top of the 13/16 in. flooring laid longitudinally, at the doorway and center section. Also, a trunk slide and permanent floor racks are applied in the baggage end from side doors to end of car, with floor drains. The aisle in the passenger room is covered with 1/2 in. plain A quality linoleum.

The car superstructure is similar to that of the first class cars, but there are only 66 side posts per car, compared with 72 per car in the first class cars. As concerns the body corner posts, the vestibule end is arranged with 4 in. 8.2 lb. Z and 4 x 3 x 1/4 in. angle sections riveted together, and covered with 11 gauge O.H.S. pressed steel with a recess for the vestibule side door. At the baggage end there are 6 in. 15.7 lb. Z and 3 1/2 x 3 x 1/4 in. angle sections riveted together, covered with 11 gauge copper bearing pressed steel. The outside sheathing is the same in both classes of cars, but the sash rests in the combination baggage and passenger cars are of 9 gauge copper bearing steel, while those in the first class cars are of 11 gauge material. The body end door posts in the combination baggage and passenger cars are 6 in. 23.9 lb. I beams at the vestibule end, and 12 in. 31.8 lb. I beams at the baggage end. At the vestibule end there is a platform and buffer casting of cast steel, with buffer wings of 1/4 in. pressed steel forming the connection between the buffer casting and vestibule corner post, with the platform channels 7 in. 9.8 lb. sections extending from the body end sill to the buffer wing, and forming the support for the platform and vestibule steps. At the baggage end there is a cast steel buffer and end sill casting, securely riveted to the center sills. At the vestibule end, there are 4-tread steel platform steps, without flare, the treads being of steel covered with rubber.

The roof, as in the first class cars, is of the turtle back type; there are 40 carlines per car, one more than in the first-class cars. The carline material and roof covering are the same as in the first-class cars.

Interior finish in the passenger room includes 1/4 in. Masonite from window sills to heater guards, with 16 gauge copper-bearing steel sheets back of the heaters. The frieze panel is of 1/4 in. Masonite de luxe. The curved portion of the ceiling, at the sides, is in 1/4 in. Sundeala, and at the center is in 1/4 in. Masonite, the latter material being used also at the pier panels. The body end finish and partitions are built up of steel, securely riveted and machine screwed to the car framing. In the baggage end, the side walls are of corrugated steel lining, 0.037 in. thick, except at back of door and heater guards, where the car is lined with 16 gauge flat sheets. The ceiling is in 20 gauge steel sheets.

The insulation scheme is similar to that in the first class cars.

The windows total 26, there being 13 on each side, with the main windows 28 1/2 in. wide and the saloon and lavatory windows 24 in. wide. The window sash is in mahogany, there being two sashes per window, of the single type, arranged to raise. No storm sash has been provided, but provision is made for future application. The sash fixtures are of Robert Mitchell Co. manufacture, and the glazing is in double diamond glass. There are window guards of 5/8 in. diameter steel bars in the baggage compartment. The curtains are of double faced Pantasote, mounted on Rex metal rollers.

Doors—The end door at the passenger end is of steel, with sash in upper panel arranged to drop. The end door at the baggage end is of wood, steel sheathed on the exterior. It is fitted with a railway standard lock and 2 x 3/4 in. bar.

The baggage side door is of wood, with 1/2 in. steel sheet exterior. The hangers are the Moore no. 315 type; the equipment includes brass hook and keeper lock, with hasp and staple on the side. There are 4 lights, 13 in. door, fitted with double diamond protected by round bar steel. door starter lever is applied, an automatic stop to prevent from closing accidentally. This is applied on the inside of the side door opening. The doors are all of steel. That between the baggage and passenger compartments has stationary 1/4 in. plate glass upper panel, while that between baggage and passenger compartments without glass in the upper panel. vestibule side doors are of stationary 1/4 in. plate glass in panel.

Ventilation is by means of "Utility" center roof type vent in the baggage compartment, passenger compartment, and passageway, with ducts to the exterior. These cars, unlike the first-class cars, are not air-conditioned.

Heating is by the Vapor C Co. hot water system, with tubing, the system including duplex heater. The 2 in. e. trainline is covered with Johns sectional pipe covering. pressed steel heater guards pipes between seats and in the baggage compartment. In the baggage compartment, steam locomotive is employed when the car is set out or is being handled in the freight yard, the duplex heater, which is employed for heating.

Lighting is by Pintsch Safety Car Heating and Light



Left, Baggage End, and Right, Passenger End, Combination Baggage and Passenger Car.

RAILWAYS

The ONR: New Life, New Looks For Old Coaches

Stainless steel coaches have added a new measure of passenger comfort on the Ontario Northland Railway. The first of the new coaches went into service recently and two more are expected to follow in coming weeks.

Described as being the last word in good appearance and riding comfort, the new coaches boast coil spring trucks with vertical and lateral shock absorbers. Huge picture windows and fluorescent lighting are an added touch aimed at making passengers feel right at home.

The exterior of the cars is fluted stainless steel with a green window band. The crest of the province of Ontario is displayed beside each entrance.

Originally built for the Bangor and



Race With Time . . . and a Locomotive

Precise timing is a must as this gang lays ribbon rail trackage in between long-haul and on-schedule passenger and freight trains.

been found unnecessary. Under the best of a summer sun, the Bangor and Aroostook Railroad by the Pullman Standard Company in 1949, the coaches were rebuilt in the O.N.R.'s North Bay coach shop. The trucks were completely overhauled and all electrical equipment was rebuilt. Seats were re-upholstered.

The coaches, which will each accommodate 68 passengers, are 85 feet in length, slightly longer than other

coaches currently in service. Mechanical air conditioning does away with the need for icing. Passengers in the main body of the car are provided with rotating-reclining seats while in the smoking compartments there are ten movable chairs for comfortable informality.

The graceful appearance of the new coaches bears strong testimony to the skill of O.N.R. craftsmen at North Bay.

Award Safety Plaque To CPR

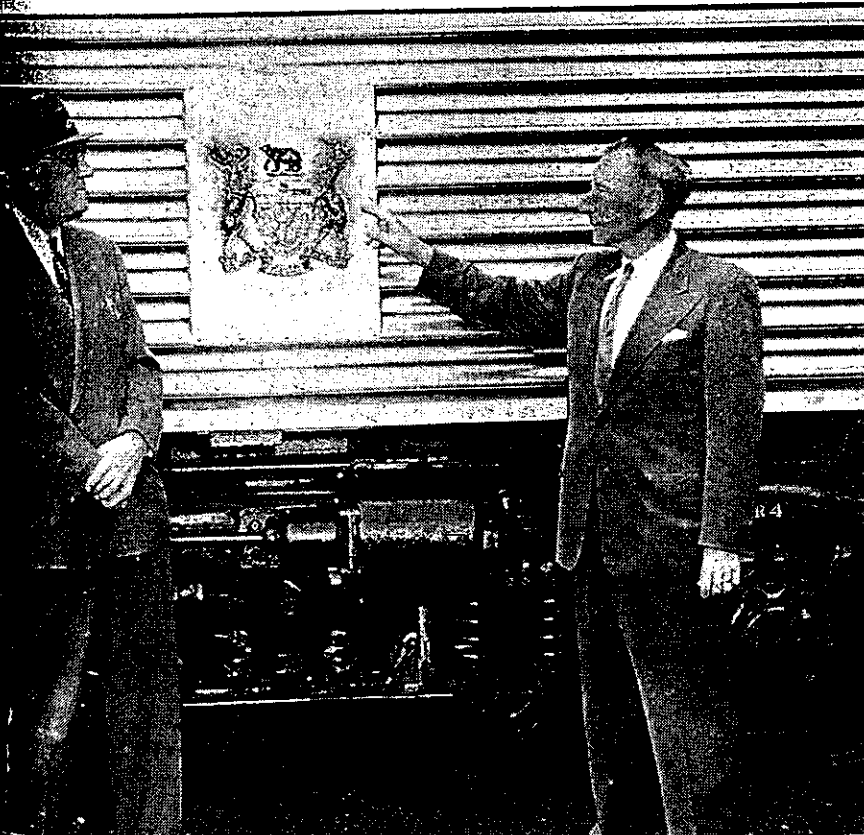
In recognition of its "Outstanding Public Safety Program" for the year 1958, the Canadian Pacific Railway has been awarded a golden rail-spike plaque by the National Safety Council of the United States.

It was the sixth consecutive year that CPR had carried off the prize which was initiated six years ago.

One of the main features of CPR's Safety Program is the extensive coverage of school children. During the past year 283 schools were visited and some 90,000 children were lectured on the dangers of trespassing on railway property. In addition, the railway places its library of safety films at the disposal of organizations interested in accident prevention.

Inspection

Alvin Jardine and J. W. Millar examine Ontario crest on new-style car.



om The ONR: "Last Word In Rolling Restaurants"

Railway circles, Ontario Northland Railway has earned a reputation of all proportion to its actual size as a trailblazer in the application of advanced engineering and scientific principles in the operation of its service. Innovations in railway dining service and equipment brought in by the ONR have been widely copied on other lines. The new restaurant Meechim is certain to enhance the railway's reputation as a leader in the field. The Meechim, fresh from the North Bay shops is the last word in rolling restaurants. The conversion from a former U.S. Army ambulance car, required the engineers and craftsmen to apply manufacturing techniques as sophisticated as any in the country.

The Meechim will succeed the ONR's restaurant car Agumik. The Agumik, brainchild of engineers of the railway's mechanical department, made railway history when it went

into service in September 1940. The car length counter of the Agumik allowed for rapid service of many more passengers than could be accommodated in the standard table service dining cars. Since it went into service, the Agumik has logged more than three million miles of service and its design has been copied and recopied by railways around the world.

The Meechim is sheathed in gleaming stainless steel with the exception of a green band running the length of the car. In bold relief and full colour, the coat of arms of the Province of Ontario are mounted near both ends of the car. Its name comes from the Cree Indian word for "eating place".

Inside the Meechim, the main body of the car is decorated in soft shades of primrose, coral and turquoise. The counter is at normal table-top height and seating is provided by 24 pedes-

tal type swivel chairs. At either end of the counter is a large mural showing the route of the railway along with scenes of lumbering, mining, farming, manufacturing, hunting, fishing and other scenes representative of the territory served by the railway. Picture windows five feet in width give the interior of the car an airy atmosphere.

Behind the counter, a back bar provided full ice cream freezer and soda fountain facilities along with a sandwich counter and six unit vacuum coffee maker. Under normal conditions it will be staffed by three stewardesses.

It has been said that railway chefs are expected to repeat the miracle of the loaves and fishes from the small galleys in which they work. The galley on the Meechim is 14 feet long and seven feet wide, and from this space the chef and his assistant will be expected to turn out up to several hundred meals a day. To help them, they will have every convenience engineers have been able to fit into the space. The galley is sheathed, floor walls and ceiling, in stainless steel. A six burner range fed by bottled gas is the heart of the galley which also contains a portable steam table, counter space, a four compartment sink, a walk-in refrigerator and a deep freeze chest. An intercom links the galley with the far end of the car.

Mechanically-refrigerated air conditioning will keep the dining area cool in summer. Heating and cooling are thermostatically controlled in keeping with the outside temperature. The galley is on a separate air conditioning circuit and an air barrier maintained at the galley doorway to prevent food odors from passing through.

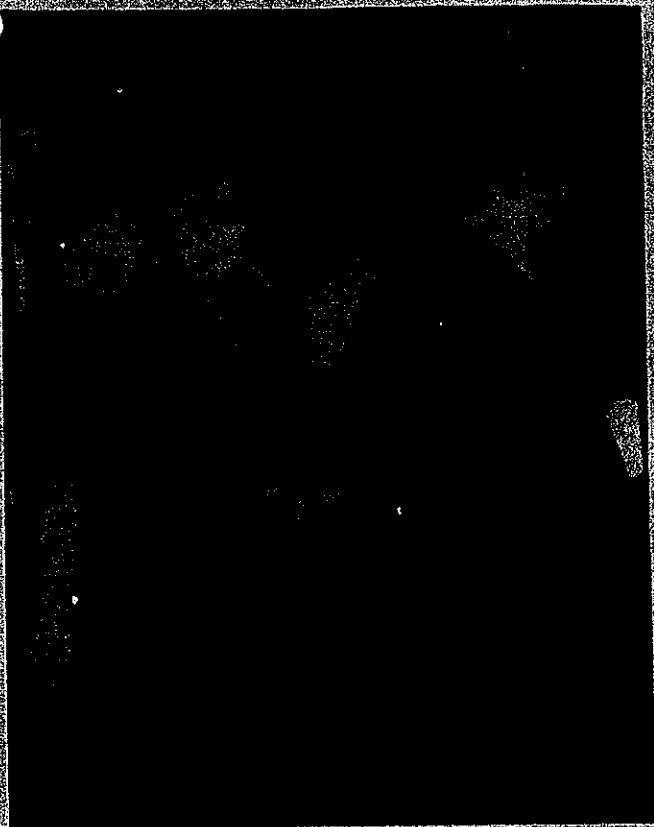
To operate its air conditioning, light, food refrigeration the Meechim is equipped with the largest type of railway generator equipment manufactured. When not running, the car can be hooked up to an outside electrical source, which operates a motor which in turn spins the generators. In this way, the car can be pre-cooled prior to setting out on a run without drawing heavily on its banks of 57 batteries.

The car is 85 feet long and weighs 82 tons. It is equipped with roller bearing wheels and tests indicate unexcelled rideability. It will go into service on Ontario Northland trains



Inside the "Meechim": efficiency and gleaming steel

Carol and Lupescu Escape



Former King Carol of Rumania and his companion, Magda Lupescu (above), gave the slip to their police escort and made their escape in his car across the frontier from Spain into Portugal, it was revealed yesterday. They are seen leaving hotel at Sitges, Spain, where they stayed after their flight from Bucharest. They had been prevented from going to Portugal, and possibly the United States.

Carol Eludes Guards, Escapes With Lupescu

(By LOUIS NEVIN.)

Seville, March 5 (AP).—Carol II, former King of Rumania, stepped on the accelerator of his powerful automobile during a "oulet spin" in the country Monday and it was revealed tonight, drove Magda Lupescu and himself from Spain to Portugal.

Thus Carol and his constant companion escaped from the virtual imprisonment Spain has imposed upon them since they fled last autumn from the Iron Guard terror in their homeland.

Hotel employees said both Carol and Mme. Lupescu went on a short-lived hunger strike shortly before fleeing the country, threatening to starve themselves until the Government allowed them to continue to Portugal. They gave up the strike of their own accord, however.

A "foreign diplomat" who slipped into Carol's Seville hotel a few days ago was believed to have provided him with the papers necessary to cross the frontier.

In Lisbon friends admitted cautiously the ex-sovereign is in Portugal, but declined to disclose his

closed that Carol, in a message to Franco on Jan. 25, accused the Spanish Chief of State of breaking his word and failing to carry out his part of a "deal" whereby Carol and Lupescu were to be permitted to go to Portugal.

"I inform your Excellency," Carol wrote to Gen. Franco, "that I will wait three days more for authorization to leave for Portugal. After that date I will hold the Spanish Government responsible . . . for all the consequences that will result."

The "deal" between Carol and Franco was said to have involved negotiations whereby both the United States and Great Britain agreed not to give Carol and Mme. Lupescu visas permitting them to enter those countries.

Carol, according to the advice from Europe, accepted the conditions but claimed that, after United States Ambassador to Madrid Alexander Weddell and the British Ambassador said no visas would be forthcoming for the couple, he and Mme. Lupescu still were "captive" in Seville, Spain.

INSPECTOR DIES IN LEAP FOR LIFE AS TRAINS CRASH

Engines Hit Head-On, Others Aboard Escape With Minor Injuries

PASSENGERS JOLTED

Litchford, March 5 (Special).—H. C. Bell, 62-year-old mechanical engineer of Montreal, was killed today when he jumped from the cab of a passenger train engine just before it crashed head-on into a freight train near here. Bell landed on a snowbank and rolled under the train, one foot being severed.

Passengers were jolted from their seats and sent sprawling in the aisles when the passenger train smashed into the freight, knocking it 300 yards down the track. Bruce Kerr, a fireman on the passenger train, suffered leg injuries and Engineer William Walker on the freight was cut up slightly.

Bell was inspecting a heating system on the engine and with him was W. D. Capp, also an employee of a Montreal company. He was cut about the face.

The T. & N. O. passenger train, with about 150 passengers aboard, was Timmins-bound when the accident occurred. The freight was backing out of the A. J. Murphy lumber yard and the switch was set for No. 2 siding on which the freight was travelling. The fast passenger train took the same siding and plowed into the freight. It is believed a switch was left open by mistake.

Bell jumped when he saw a collision was unavoidable. Had he remained in the locomotive cab, he would probably have escaped with cuts and bruises.

Half a dozen passengers were treated at Cobalt hospital for minor injuries.

The engines locked together with the passenger shoving the freight locomotive more than two hundred yards. The former then stopped and the freight locomotive ran another fifty yards.

Provincial Constable Arthur H. Souliere of Halleybury, together with Chief T.N.O. Investigator Robert Swan and Constable Hughes of the railway police, arrived shortly after the accident. Coroner Dr. Crann of Elk Lake will preside over the inquest which Constable Souliere said would be held next week.

Although the passenger train was broken into three sections when the bumper rails broke, the cars remained on the tracks.

A H. Cavanagh of North Bay, general manager of the railway, arrived some time after the accident. Two special trains from English River took the passengers on their northern run, and the other a wrecking train came in this afternoon. The passengers left at 3 o'clock. An auxiliary train from North Bay is also assisting in clearing the wreck.

PAY OFF 99-YEAR DEBT

Brandon, Vt., March 5 (AP).—It

Court Says \$15 Wage Gives Woman Two Y

St. Catharines, March 5 (Special).—Imposing sentence of two years less a day definite and an indefinite sentence of two years less a day in an Ontario reformatory on Mrs. Margaret Goodman, 28, this city, Magistrate J. H. Campbell asserted the fact the woman was paid \$15 weekly and had the responsibility of handling large sums of money "has nothing to do with the merits of the case. Ordinarily it should not be necessary for a married woman to work. If she saw fit to work for small wages that's her business."

Tuesday Mrs. Goodman pleaded guilty to theft of \$14,000 from the St. Catharines Cold Storage and Forwarding Company, where she had been employed as a bookkeeper.

D U N F I

TOWN
SUN

MODERN MOD
BUT MODE

Here and there men still to the notion that to dress rationally is to dress expensively. This idea soon takes wing you see the TOWN. For here, in these made custom-styled Craft Suits is every look for in high priced suits even the most income. To know that you are perfectly clad in fabrics, you don't to see anything.

Your Choice of One or Two Trousers

Budget or Charge Account Service to meet your needs

\$10

FIREMAN JUMPS TO DEATH

When No. 47 Runs Head on Into a Freight Train This Morning at Tomiko

Fireman Carmichael of North Bay, superintendent of maintenance of the T. & N. O., over the long distance wire at Tomiko, a Nugget reporter received slight injuries when the freight Special crashed into a freight train at Middle, 33 miles north of North Bay at 7.30 this morning. The freight train was doubling back from the siding when the accident occurred.

None of the passengers on 47 received injuries as the train slowed down considerably and the shock of the collision was scarcely felt by the passengers. In the first-class coaches and pullmans in the rear, Fireman Carmichael, of North Bay, who was killed, jumped from the cab when he saw that a collision was inevitable and in this manner met his death. Had he stuck to the engine he would have escaped with probably but slight injuries.

In conversation with W. A. Griffin, superintendent of maintenance of the T. & N. O., over the long distance wire at Tomiko, a Nugget reporter was told that there were absolutely no injuries received by any of the train crew or passengers, Carmichael according to Mr. Griffin, was killed when he jumped from the train. There is very little damage done to rolling stock although the track will be cleared to permit the trains running through this afternoon. Mr. Griffin also stated that the passengers were being transferred to another train at noon today and they would arrive in Cobalt about three this afternoon.

Both the North Bay and Englehart auxiliary went to the scene of the wreck this morning, the Englehart crew passing through Cobalt at 10.55 this morning. This is the first fatality on the T. & N. O. in which a passenger train was mixed up in the accident since it started operations.

N.B Nugget

August 8 1912

PREPARE TO MOVE

WHEAT OVER T. & N. O.

Hon. Frank Cochrane Says That

T. C. R. is Being Hurried

For This

WINNIPEG, Aug. 8.—The Hon. Frank Cochrane, minister of railways and canals, yesterday gave a flat denial to the statement that there had been a change made in the grade of the Transcontinental railway. As a matter of fact, he stated, the grading of the right of way had been completed for some time. He said it was true that some temporary wooden bridges and trestles have been put in along the line but that had been done for the purpose of hurrying the line to completion in order to assist in the delivery of this year's western grain crop via the Transcontinental and T. and N. O.

August 8
1912

NB
Nugget

INTT GOVERNMENT

PASSENGERS TELL OF

YESTERDAY'S WRECK

Several Passengers On
47 Received Cuts and
Bruises in the Crash

Quick progress was made by the T. & N. O. in clearing the wreck of No. 47 at Middle yesterday when the Cobalt Special piled head-on into a freight train. This morning's train passed the scene and although the wreckage of the engines is still piled on the side of the track, the main line has been cleared. No official report of the wreck has been given out from headquarters. According to hearsay a flagman was sent back a mile to warn 47 and the train is supposed to have passed the red flag. The flagman did not have any torpedoes with him at the time. When the engines crashed, the trains rebounded some three feet apart. The tender of 136 on the passenger train telescoped into the express car, for several feet, but this was the only damage done to the Cobalt Special beyond the damaging of the engine. Engine 121 on the freight train did not fare as well. It received the full force of the hit and had not engineer James McKarrow and his fireman jumped when they saw 46; they would have been instantly killed. Engineer Dan Smith, stuck to the cab on 136, after he had applied the emergency brake, while his fireman Carmichael jumped to his death. Freight cars were piled high in the air, including a carload of concentrates shipped from Cobalt which were strewn over the tracks. A car load of high-grade ore, however, was not badly damaged.

A peculiar feature of the accident was that the crew of the freight train, in charge of conductor Ed. McNamory, had been in the wreck at Thornloe the previous evening when four of their cars jumped the track and delayed 46 for several hours. The cars were repaired on the track again and were mixed up in the second accident the following morning.

Councillor S. B. Ritchie, of New Liskeard was a passenger on the Special yesterday morning. He was asleep in his berth in the pullman in the rear of the train and when the crash came he was rammed against the end of the berth, the blow almost stunning him. He said the crash of the two engines could have been heard for a considerable distance. Pullman Conductor George Temple was in the smoking room, watching when the crash came and he was thrown against a door and a cut over his right eye required three stitches. One or two other passengers received minor cuts and bruises from the force of the shock. William Tindler, another New Liskeard passenger on the train, was in the first-class coach, and the minute the engines crashed together he hurried off the train. Just where he alighted the body of Carmichael, the fireman was lying on a pile of ties at the edge of the track. He lit on his side and death must have been instantaneous, his back being broken in the jump. According to Mr. Tindler another man, who had just come out of the North Bay hospital with a broken leg, had the limb broken in the same place again and was taken back to the hospital.

The passengers were transferred to train No. 4, the mixed which left Cobalt at 8.45 in the morning, and they returned to Cobalt about 1.45 yesterday afternoon, it being the only train that was run north. The passengers on No. 45 last night had to be transferred around the wreckage and only one pullman was at

August 9
1912.

CONDUCTOR HURT IN WRECK

JAN 4
1912

Brakeman Also Injured in Cochrane Yards

Train No. 11, running from Porcupine to Cochrane yesterday morning, in charge of Conductor Tom Hamilton and Engineer Jesaup, ran into an open switch just as it was pulling into the large union station and crashed into a string of cars with damaging results. Conductor Hamilton received a broken collar bone, two broken ribs and a bruised hip, while Brakeman Bill Russell has a badly cut head.

The two injured men were in the caboose of the train, which was next to the engine. When the crash came they were thrown violently in the car and were extricated from the wreckage with difficulty. The caboose and the baggage car next to it were burned while 170 box cars on the siding were also burned.

A car of coal was struck and demolished and the two box cars were next. The engineer and his fireman escaped injury and the engine was only damaged to a slight extent. The passengers were all in the first-class coach at the rear of the train and none of them were injured in the least, although they all received a severe shaking up.

The accident happened at 1.35 yesterday morning and had it not been for the fact that the train was slowing up while entering the station yards a more serious accident might have occurred. This morning the two injured men are reported as doing well and will recover. Tom Hamilton had charge of the morning local between Englehart and Latchford for some time, while Bill Russell was on the same run with Conductor Alex Cumston and both are well known in this section.

This is the first accident of a serious nature where injuries have resulted that has occurred on the T. & N. O. in several years. The last accident was in January three years

NORTH BAY NUGGET

JANUARY 4
1912

T.N.O. FIREMAN DIES AS TRAINS COLLIDE

Special to The Star

Swastika, Jan. 1.—A railway fireman was killed and two women passengers injured when a northbound Temiskaming and Northern Ontario passenger train No. 47 crashed headlong into a snowbound freight train at Tomiko, 27 miles north of here, at 9.22 a.m. to-day.

Two freight cars and the baggage and express cars of the passenger train were derailed. Both engines were badly damaged.

Matthew Johnston, 43, of North Bay, fireman on the passenger train, was killed almost instantly. He leaves a wife and six children.

TORONTO
STAR

JANUARY 2
1934

Two Trainmen Killed in Crash; Three Injured

Cobalt, Jan. 1 (Special). — One man was killed almost instantly, another fatally injured and three others hurt in a freight train collision, on the Ontario Northland Railway two miles south of here early this morning.

J. R. Newton, 22, of North Bay, fireman on one of the trains, was killed in the crash and Engineer Herb Lewis, of North Bay, failed to recover from injuries. He died in hospital at Halleybury early tonight. Lewis was pinned in the wreckage of his locomotive for six hours until rescued by workers with acetylene torches.

Injured were: Conductor William Bourret, and brakeman J. D. Lang and C. E. Phillips, all of North Bay. They were taken to hospital in Halleybury, a few miles north of here.

Newton was fireman of the northbound train which collided head-on with a southbound freight at Pickerel Lake at 6:15 a.m. Both engines buckled under the impact, but remained upright on the tracks. Several freight cars left the rails and some toppled down a 20-foot embankment.

The tumbling cars snapped off telephone poles and temporarily disrupted telephone communication between Cobalt and Southern Ontario.

The trains met two miles from the nearest point which can be reached by motor vehicles, and doctors and nurses had difficulty in reaching the scene of the crash.

Archie Freeman, ONR general manager, went to Pickerel Lake from North Bay aboard an auxiliary train. Another auxiliary train was sent from nearby Englehart.

Pending clearance of the wreckage, arrangements were made to use buses to transfer passengers from other trains around the collision area.

Spectators at the wreck scene said the big freight locomotives "buckled like accordions" as they smashed into each other downline from this Northern Ontario silver town.

Newton, one of the men killed, was born at Chapleau, Ont., near

TORONTO
GLOBE.

JANUARY 2
1948

VILLAGE OF ENGLAND

THE TORONTO

TORONTO, FRIDAY, JANUARY 3, 1913

21st YEAR

SAYS RAILWAY CO. IS SUPPOSED TO USE COMMON SENSE

Need Not Run to the End of Dundas and Roncevalles Lines.

A. B. INGRAM PUT IT UP TO R. J. FLEMING

A Very Positive and Definite Order, Says Mr. Ingram.

THE MEN HAVE NO OPTION

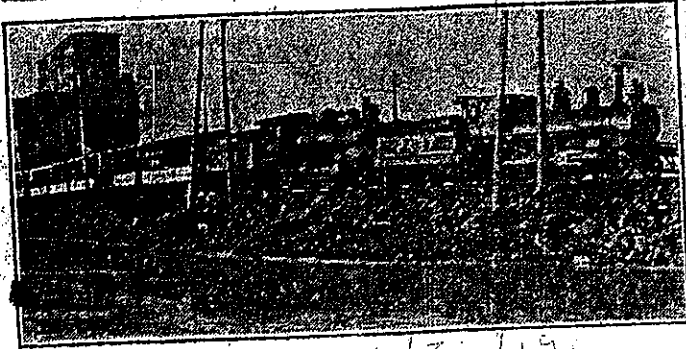
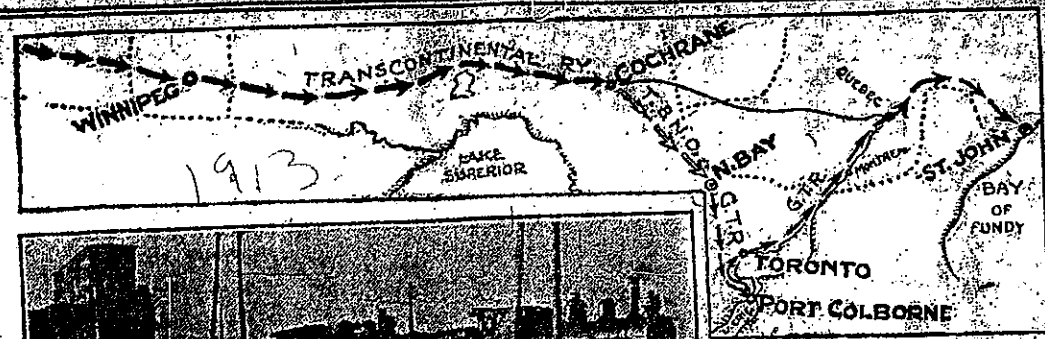
Railway Employees Dismissed If They "Y" Cars Along the Line.

The action of the management of the Toronto Railway Company in interpreting the order of the Ontario Railway Board as unalterable, like the law of the Medes and Persians, and insisting on sending cars right to the end of the Queen and Dundas routes in spite of any accidents or delays which bunch the cars, makes it a great inconvenience to the public, and doubly dangerous to the passengers and pedestrians. This is due to the fact, as the men state, that they are expected to catch up the time, and is being referred to by the employees as "just ugliness," "cussedness," "childishness," etc. The feeling among the men is strong, inasmuch as they run the danger of dismissal for something they cannot avoid.

Mr. Ingram, of the Ontario Railway Board, interviewed to-day, quoted the order of the board, which prohibits the Railway Company from "Y-ing" its cars "at any point short of the end of the line."

Order a Very Positive One. "That is a very positive and definite order," said Mr. Ingram. "At the same time, should accidents happen along any of those lines to the cars, or to a vehicle, which would be the means of bunching the cars, good railway operation would take advantage of the Y's short of these points to turn their cars in order to gain their schedules; it would be very difficult for the motor men to make up sufficient time to regain their schedules without turning as above described. I think a question was asked the board at the

FIRST TRAIN OVER THE TRANSCONTINENTAL



The above photograph shows the first trainload of wheat to be sent east over the new Transcontinental Railway from Winnipeg to Port Colborne, where it is seen standing beside the plant of the Maple Leaf Milling Company, Limited, to whom the cargo was consigned. The wheat was ground into flour at Port Colborne yesterday, reloaded, and reached Toronto to-day, over the Grand Trunk on its way to St. John, N.B. On January 15th the flour will be started for South Africa in the S.S. Bendu. The journey of the wheat from the fields of Saskatchewan to a far-distant British port will mark a new record in such transportation over an All-British route. It will have required less than two months to collect the wheat at Winnipeg, turn it into flour at Port Colborne, and deliver it for consumption at Cape Town.

JOHN FLETT MAY SUCCEED RYAN IN IRONWORKERS' UNION

Hamilton Man Likely to Be Chosen in Place of the Former President Now in Jail—Convention of Men Has Been Called.

A convention of the International Structural Iron Workers is to be called in the near future, local officers in Toronto having been notified to that effect. It will be for the purpose of electing officers for the management of the International Union.

This is the union involved in the recent dynamiting trial at Indianapolis, whose officers were sentenced to various terms. It is understood that Samuel Gompers is aiding the organization in every way and will take charge of the convention.

A rumor in labor circles is to be effect that John Flett, general organ-



J. L. BLAKIE WAS WORTH \$214,601

Will of Former President of the Consumers Gas Co. Has Been Probated.

STOCKS AT \$190,435

Will Long and Supplemented by Two Codicils—Estate Goes to the Family.

Letters probate have been granted by Judge Winchester for the will of the late John Lang Blakie, president of the Consumers' Gas Company, to George, Francis, and Annie Blakie, sons and widow of the deceased. Mr. Blakie died on February 19, 1912, at his home at 127 Bloor street west.

Estate of \$214,601. The total value of the estate is \$214,601.66, made up of \$7,000 in household goods and furniture \$4,866, stocks \$190,435, cash \$1,700, and real estate \$10,600. The entire estate with the exception of \$2,000, is bequeathed to members of the family.

The real estate consisted of No. 127 Bloor street west, worth \$10,000, and the value of the contents of the house was placed at \$7,000. He had insurance of \$4,866.66, and a bank balance of \$1,700.

The following is a list of stocks: 400 shares Canada Landed & N. I. Co. \$31,600 150 shares N. America Life. 6,000 80 Toronto General Trusts 14,400 100 Consumers' Gas Co. 9,700 100 Bell Telephone Co. 14,700 200 Duluth Superior Traction 15,800 100 Western Canada Flour 10,500 37 B.C. Telephone 4,810 24 B.C. Telephone (pfd.) 1,320

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