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VOL. III. No. 2

FEBRUARY, 1888.

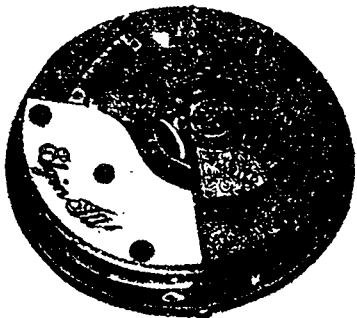
Railway
TORONTO, ONTARIO.

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4 Elgin or Waltham, 11 jeweled, nickel do. do.	10 50	18 00	21 00	29 00	49 00
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6 C. M. Wheeler (Elgin), 15 jewels, gilt, Pat. regular move-	12 50	17 50	22 00	30 00	50 00
7 Waltham or Rockford 15 do. do. (mont)	13 00	17 50	22 00	30 00	51 00
8 C. M. Wheeler (Elgin) 15 do. nickel, do. do.	13 50	18 00	22 00	30 00	51 00
9 P. S. Bartlett (Waltham) 15 jewels, gilt, do. do.	14 00	18 00	22 00	30 00	52 00
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13 Waltham, 15 jeweled, nickel do. do.	17 00	21 00	26 00	36 00	57 00
14 Appleton, Tracy & Co., 15 jeweled, gilt do. do.	18 50	22 00	27 00	37 00	58 00
15 H. H. Taylor, 15 jewels, nickel do. do.	19 50	23 00	28 00	38 00	59 00
16 Columbus or Springfield, 15 J., nickel do. do.	20 00	23 00	28 00	38 00	59 00
17 The Jos. P. Wathier, No. 2, 15 J., nickel do. do.	21 00	24 00	29 00	39 00	60 00
18 H. W. Raymond, 15 jewels, gilt do. do.	22 00	25 00	30 00	40 00	61 00
19 Rockford or Springfield, 15 jewels, gilt do. do.	24 00	26 00	31 00	41 00	62 00
20 B. W. Raymond, 15 jewels, nickel do. do.	25 00	27 00	32 00	42 00	63 00
21 Appleton, Tracy & Co., 15 jewels, nickel do. do.	26 50	28 00	33 00	43 00	64 00
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23 Crescent Street (Waltham), 15 ruby J., do. do. do.	33 00	37 00	46 00	57 00	72 00
24 Railway (Hampton) 15 ruby J., do. do. do.	34 00	38 00	47 00	58 00	73 00
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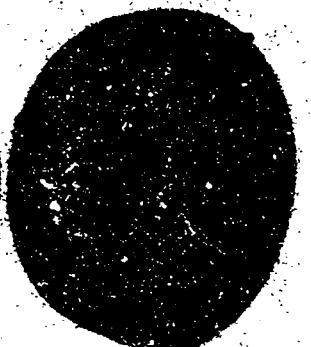
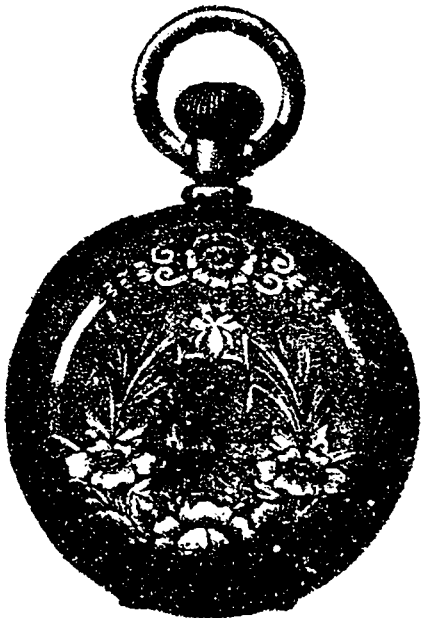
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RAILWAY GAZETTE

A MONTHLY JOURNAL CANADIAN

DEVOTED TO RAILWAY INTERESTS

Vol. III.]

TORONTO, ONT., FEBRUARY, 1888.

[No. 2.

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It appears, after an experiment of several months, the ferry boats plying between San Francisco and Oakland, which had been fitting up for burning petroleum, have now gone back to coal. The economy, as we understand, so far as the consumption of fuel is concerned, is said to be decidedly in favor of petroleum; but the trouble in its use came from the intense heat produced, by which, or by the peculiar nature of the combustion, the iron of both the furnaces and boilers began to indicate rapid deterioration - hence the return to coal.

Puck believes that if George Westinghouse would invent an air brake that would stop a grocer's bill in half its own length, he would earn the gratitude of thousands of estimable people. Our lively contemporary forgets that the feats of the automatic were accomplished only after shutting off steam. This necessary preliminary cannot be accomplished in an ordinary household if a buxom cook is pulling hard to keep that bill running and the grocer has two clerks pushing behind to keep the bill rolling up -- *Railroad Gazette*.

The United States is interested in the construction of an Alaskan railroad, which, if built all, must extend across the British possessions. The project is looked upon with favor by some of our most thoughtful and

practical citizens, and it seems likely that the present generation will not pass before a remarkable change will be wrought in the British north west, giving it an importance at present imagined by but few. -- *Railway Register*.

It is well known that more people are killed and injured in the United States by being struck with trains while walking on the track than in any other way. The danger of track-walking is not, however, confined to American railroads. A Glasgow paper lately gave an account of two railroad men who went out in a fog laying detonating signals upon the rails, and both got killed by a train. A trackman who discovered the mutilated remains of the men went and reported the occurrence at the nearest station, and while he was returning to the scene of the accident he, also, was run over by a train and instantly killed.

The four popular steamships of the Cunard Line, the *Etruria*, *Umbria*, *Aurania* and *Servia*, which perform the fast passenger express service between New York and Liverpool, have recently been docked (alternately) for the purpose of having their bottoms scraped and being generally overhauled for the coming season's business. The wonderful trips of these greyhounds have frequently been noted in our columns, but the regularity with which the service has been performed during this winter is of considerable interest. Of the sixteen recent passages eastward the reported arrivals on the other side were as follows: On Friday twice, on Saturday ten times, on Sunday four times, the fastest trip being 6 days and 7 hours, and the slowest 8 days and 2 hours. It is expected from the overhauling these steamers have received this winter that their time will be shorter than ever.

MR. PETER GRANT, a well-known engineer, now engaged on the Cape Breton Railway, in a pleasant letter gives the following information respecting that important work: Messrs. Reid and Isbester are the contractors from Port Hawkesbury to Grand Narrows. From Grand Narrows to Sydney was taken by

Messrs. Slater and Sims, of Ottawa, whose sureties are now pushing on the work. For mid winter Messrs. Reid and Isbester have a fine force, something like 500 men and 150 horses. They are both heavy contracts in the neighborhood of \$900,000 each. From point to point of the Grand Narrows the distance is about 1,650 feet, with cages on each side for a steam ferry to carry over the train as it stands, locomotive and all. The line is to all intents and purposes an extension of the Intercolonial to Sydney Harbor, although frozen over for a few months in winter. But then, if they push on 18 or 20 miles further they come to Louisbourg, a commodious horse shoe harbor, which does not freeze in winter, and the most easterly point of the Dominion to boot. Mr. Grant promises an account in the spring of the proposed summer's operations.

The English *Railway News* states that "it is reported that when Mr. Vanderbilt reached Constantinople in his yacht, the Sultan made him a proposition to build a system of Asiatic railways. Mr. Vanderbilt said his visit was one of pleasure, not business, that he knew nothing of the country, and was not prepared to deal with so large a question. The Sultan gathered information, and sent the papers to Egypt after Mr. Vanderbilt, and suggested that Mr. Gould might not be disinclined to consider the project. These proposals from the old East to the new West show the march of the times." It is to be hoped that Mr. Gould will take up the project and enlarge his experience, as he has hitherto done all his business with people who had money and exchanged them for Gould bonds. The Turks have lots of bonds, Asia Minor and otherwise, in lots to suit customers, but want to exchange them for Gould's gold. This will be a novel experience for Mr. Gould, and as the Sultan has a liking for steam yachts, and a wizard-like capacity for making gold disappear, leaving only worthless bonds behind, he and Mr. Gould are evidently kindred souls. Kismet! Bismillah! Backseesh!

Kicking Against Competition.

THE great American railway companies are doing all they can to rid themselves of the competition of the Canadian lines. In order that our readers may know the influences at work, which may some day work out important effects upon railway legislation in the republic, the following, from the *Railway World* of a recent issue, is given: Our references in last weeks issue to the anomalous position of American railways in being the only national interest of importance requiring governmental protection that failed to receive it, did not embrace mention of the crowning act of injustice. It arises from workings of the Inter-State Commerce Law, which practically extend important aid and comfort to rival Canadian Trunk lines in their efforts to secure traffic that legitimately belongs to the roads of this country. The United States occupy a unique position among nations in both respects, and the prevailing standard of "free trade" with reference to railway labors is more radical than that ever adopted by any other country in reference to any other subject. Not only are the Grand Trunk and Canadian Pacific permitted to compete for the business of moving freight between American cities and traffic centres, but they are substantially allowed to conduct such movements under more favorable conditions than rival American lines, or exempted from hampering restrictions to which the latter are subjected. An approximate parallel would be presented by a failure to impose any duty whatever on an important class of American products, such as manufactures of iron and steel, or textile fabrics, accompanied with a provision that subjected the competing American manufactures affected with an onerous form of taxation, or complicated and onerous restrictions, to which their foreign rivals are not subjected.

We are glad to notice that reformatory measures are now receiving some consideration at Washington. On Friday last the senate committee on inter-state commerce gave an attentive hearing to James H. Wilson, who clearly pointed out the gross injustice to which American roads are subjected, and suggested some remedies. An abstract of his remarks embraces the following statements: He suggested that section 6 (of the Inter-State Commerce Act) be amended by striking out all the second paragraph, the purpose aimed at being to make it unlawful for any common carriers to receive freight, but not passengers, at any point in the United States, and carry the same through any foreign country to another place in the United States in bond or without paying duty on the same at the port or place of re-entry. Owing, however, to the permissive effect of existing law, and the regulation of the treasury department, by which the Canadian railroads are permitted to take goods from various places in the United States, and carry them in bond and sealed cars through Canada, and bring them back into the United States without paying duty thereon, he would strongly urge the amendment of the Inter-State Commerce Law by substituting for the second paragraph of section 6 the following:

And nothing in this act shall be construed to allow any common carrier to receive any freight in the United States to be carried in sealed cars or in bond by railroad through a foreign country to any other place in the United States free of duty, and all laws and regulations thereunder which have been construed to permit such practices are hereby repealed.

This, he said, was a radical measure, but he hoped to convince the committee that it was called for and justified by our paramount and permanent national interests.

Free Passes Can't Recover.

CHARLES F. ULRICH was on the train that was wrecked near Sputyen Duyvil, N. Y., when Senator Wagner was killed. Mr. Ulrich was injured among others. He rode on a free pass, but had paid \$1 for a drawing-room seat. He brought action in the New York Common Pleas Court to recover \$10,000 damages. The first trial resulted in a dismissal of the complaint. Judge Van Hoesen revised the dismissal, and granted a new trial. This was before Judge J. F. Daly, and resulted in \$1,000 for personal injuries, \$100 for medicines and delicacies and \$300 for doctor's bills. The general term denied the railroad company's motion for a trial. The court of appeals reverses this judgment and sends the case back for a new trial, but the opinion of the court precludes any recovery by Ulrich.

Judge Ruger writes the opinion, and recites that Ulrich had a free pass, subject to the conditions printed on the back to release the company from all responsibility in case of injury. The fact that he purchased a drawing-room seat did not make him a passenger for hire. The agreement on the pass was in full force, and he was being taken over the route between the points indicated on it when the accident happened. He was competent to make a contract, and did make one when he accepted the pass, and inasmuch as he used the pass to make the transit he accepted the provisions of this contract.—*Railway Gazette*.

Inter-State Commission Report.

THE *Railroad Gazette* says: The full report of the Inter-State Commerce Commission has just been issued by the government. Besides the report itself, which has been already noticed, the volume before us contains a series of appendices giving a summary of the work done by the commission. It appears from this that the commissioners received 58 petitions for relief under the fourth (short-haul) section, from 95 different companies, and that they made 20 temporary orders, relieving 43 carriers. Under the thirteenth section, 103 complaints were preferred before the 3rd of December last. Of these 30 were heard and decided, 5 heard but not decided, 11 the hearing was incomplete, 14 were withdrawn and settled by parties, 6 suspended by request of parties, 9 were at issue and assigned for hearing, 11 not yet assigned, 17 not at issue. A number of letters are given, bearing

upon points which were not presented in actual complaints. It is interesting, as showing how much the commission has done in settling disputed questions, to find that all but one of these letters were written before the end of June. Not the least interesting part of the appendices is that which gives a summary of answers to inquiries concerning long and short-haul tariffs. Nearly 300 roads reply distinctly that they do not make tariffs in violation of the letter of the fourth section. Those roads which continue to make higher rates on inter-state traffic for intermediate points, in almost all cases give detailed reasons for the exceptions to the law. The letters giving these reasons are published in full. We are much surprised to find how few these exceptions are, and how generally the officials express a purpose of doing away with them as soon as possible.

Boy Employees.

NOBODY can travel upon American railroads without being struck by the number of persons, who are really only boys, employed as brakemen, switchmen, telegraph operators, and in other responsible positions, and wondering how they meet an emergency. Occasionally something happens which casts some light upon this question. Not long ago a train ran off the track at Pownal, Vt., and two cars were tipped over, sixteen persons being injured, two of them seriously. An investigation by the railroad commissioners showed that the disaster arose from the fact that the switch had been improperly set. It also showed that the setting of this switch was part of the business of the night telegraph operator employed by the railroad company, and that this operator was a boy only seventeen years old, who had been employed in this capacity for the six months. Aside from the duty of looking after switches, the business of telegraph operators on a railroad line constantly involves the safety and lives of many people, and should never be entrusted to a youngster only half way through his teens. The state does not consider a man fit to cast a ballot until he is twenty-one years old, and a railroad corporation has no business to commit human lives to boyish carelessness. The short-sighted economy of the average railroad corporation is a constant surprise. We suppose there is no doubt that the only reason why boys are employed is because they can be hired for lower wages than men, since a man is of course for every reason to be preferred to a boy. This particular boy had been employed by the company for half a year, and it had thus saved perhaps \$10 or \$15 a month—at the outside, probably not over \$100 in all. The damages which the people whom his carelessness injured should recover will cost the company many \$100. But the employment of cheap boy labor is only one phase of short-sighted railroad economy. The saving of the wages that would be required for a thorough inspection of all the dangerous points on a line is every little while being rendered contemptible by the great outgoes for a disaster which such inspection might have prevented.—*Electric Age*.

Making Telegraph Rates.

THERE are 20,000 cities and villages in the United States to which the Western Union runs its wires, and naturally the task of making rates between each of these places and all the others is a grave problem. Four hundred million of rates must be made, and every agent must know them all. When the company was confined to the space between Buffalo and Chicago, the process of arranging a tariff was comparatively simple. But when a boundless continent became its domain, the subject was no longer insignificant. The present method is so plain that the wayfaring man, though a fool, has no excuse for erring thereon. The whole country is blocked out on a map in squares of fifty miles each, and the rate is fixed between each and all of these squares, and printed in a book that is newly revised and issued every six months. The public is greatly indebted to the competition of the smaller companies which from time to time have sprung up as rivals within certain territories to the Western Union for many additional simplifications of this system.

In the East there is but one tariff rate, and between adjoining states a similar arrangement usually exists. These smaller companies have been nearly all swallowed up in the Western Union, but their usefulness to the public in compelling reductions is not slight. The average business done in the main office of this giant monopoly is about 1,400 mes sages. As many as 2,800 have been sent out in a single day, and as 180 other offices are open in this city, these figures tell only a small part of the story. But they serve well to show the immense development of an art and a trade that sprang into existence within the memory of men still young, and which, were they suddenly lost to human knowledge and craft, would leave the world in a strange and dismal darkness.—*New York Tribune.*

Making Pig Iron With Gas.

THE *American Manufacturer* says that Mr. Jacob T. Wainright, a well known metallurgical engineer of Pittsburg, Pa., has succeeded in making pig iron with natural gas as fuel. His furnace differs from the ordinary blast furnace in this, that, while dispensing with coke, it has overcome the great difficulty noted in connection with other experiments in gas furnaces by a mechanical device for supporting the burden. This device consists of a series of pipes covered with fire clay tiles, and at the same time ventilating the pipes with a current of air. A combustion chamber is also connected with the furnace, which reduces the amount of gas needed to produce the required heat, and also prevents the chilling of the furnace, which has been a great obstacle to the success of other experiments.

In the new furnace the ordinary cupola blower is used, and the gas and air are introduced in a very simple manner into the combustion chamber in a separate pipe. The current for cooling the tubes, already mentioned, is supplied from the same air blast, and from thence may be utilized in the furnace. Ordi-

nary cupolas may be easily altered, so as to do the required work, by adding the combustion chamber and the protected tubes for supporting the burden.

The tests were made at the iron and lead works of William G. Price on Pine Street, where the inventor had the hearty co-operation of the manager, Mr. David Carlin. Mr. Carlin says that the furnace worked rapidly, and that its success is no longer an experiment.

The Rotary Snow-Plow.

As it is probable that the rotary snow plow will be in use on the Intercolonial and possibly other Canadian railways next year, the following account of its working in the North west taken from an American exchange, will be of interest. "One of the machines started out about the middle of January after a terrible storm, and while the thermometer was still 30 degrees below zero. The first work done was the cleaning of sidings. The snow on these ranged from one to three feet deep, and one eight-wheel engine pushed the machine through the whole way. The next operation was to open the Northern division from Jamestown to Minnewaukan, some 100 miles, which was packed solid. The first obstacle of any consequence encountered was a cut having twelve feet depth of solid snow. The deep part extended about twenty-five feet, and for one hundred feet more the drift varied in depth from three to five feet. The machine was pushed by two 18 x 24 mogul engines, but they succeeded in pushing into the deep cut only about five feet, when they stalled. They then hacked out and examined the drift, and found that the cut on which the rotary cutters had been working resembled polished granite in shine and consistency. They then shoveled down the sides of the face, and by repeated attacks worked through the obstruction. An officer of the company who went out to the cut and waited to see the two first trials, returned to Jamestown and reported that would not get to Minnewaukan in six weeks. Nearly all the snow-plows belonging to the road were smashed in trying to open the same cut in the previous spring, so it did not seem unlikely that the new machine would fail also, but it did not. Within three hours they had opened that cut and another one five hundred feet long and varying from two to eight feet deep, and gone up to an abandoned and buried train.

The snowed-up train was resurrected and taken to Jamestown, and the snow-plow started again the next morning. During the day an advance of 46 miles was made. Two cuts 600 feet and 800 feet long, blocked with snow from two to eight feet deep, were cleared out. In the deepest parts the snow was packed so solidly and frozen so hard the two powerful moguls could not keep the machine up into the bank, and it was necessary for shovellers to break down the top of the drifts. But the worst cut was opened in fifteen minutes. The previous time that this cut was opened by an ordinary snow-plow, it took 35 shovellers in addition to the plow and

pushers, and they worked hard on it for twelve hours.

Where the snow is not hard packed, that is, not of the consistency where an ox can walk on top and not sink two inches, the rotary plow can be kept into snow ten or twelve feet deep, and it clears out the mass of snow while moving two or three miles an hour. When the machine is not working to its full capacity, it throws the snow over the tops of the telegraph poles—but when the wheel is crowded the snow is dropped from 15 to 40 feet from the track. The machine does extremely heavy work where the snow is deep and hard, for it throws an immense weight of material every minute. The engine operating the machine used close on 3,000 gallons of water in cleaning out five cuts from 4 feet to 6 feet deep, and about 700 feet long each. But this was the Dakota species of snow.

A striking feature about the work done is its thoroughness. The snow is thrown far enough from the track to prevent banking, the rails are properly flanged, and no men are needed behind the machine to clean up anything.

The experience of this winter will suggest some improvements on the rotary snow shovel, but without change it is a remarkably efficient machine."

The Vestibule Patent Dispute.

WHEN the Pullman Car Company first began running vestibule cars, they made such a strong advertising card of the alleged improvement, that their rival the Wagner Car Company, had also to indulge their patrons with the novelty, luxury or latest fashion in cars—a covered platform. When the latter company got their vestibule train running, the former applied to the courts for an injunction to prevent them from using the invention, and the case was argued at great length lately in Chicago before Judge Gresham. In the course of the hearing some very absurd claims were made, as for instance, that the use of the vestibule cars had materially increased the travel between New York and Chicago. Mr. George M. Pullman testified that a valuable patent had been granted on the vestibule as a new feature of car construction, and that the Wagner company had attempted to share in the benefits of the invention by stealing the patent.

On the other hand, evidence was given that the invention was an old device revived, and that it had frequently been tried on American and foreign roads years ago. It was shown that several patents had been granted in the United States and in England for inventions that covered the ground covered by the vestibule patents. The fact that the English Government have used vestibules between their mail cars was proved, and Mr. T. A. Bissell testified that eighteen or twenty years ago a canopied train similar to the Pullman vestibule train was run on the Michigan Central Railroad. By the decision made, the Wagner Company are restrained from using one feature of the Pullman vestibule, but when the change is made passengers will not know the difference.



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Our readers are requested to send us court decisions and newspaper clippings relating to railway interests.

It is desirable that communications, new advertisements and changes in old advertisements be handed in before the 10th of the month.

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TORONTO, FEBRUARY, 1888.

MINISTER OF RAILWAYS REPORT.

THE report of the Minister of Railways and Canals, which has been laid before parliament, is of quite as much interest as any that has preceded it. As the report itself is a summary of important events, any attempt to summarize it here would be useless. The best that can be done is to mention some of the most striking facts it contains, which have not already been noted as matters of current interest in past issues of RAILWAY LIFE.

The government railways in operation, including the Windsor Branch, which is only maintained by the government, have a total mileage of 1,204 miles, 14 miles longer than last year, by reason of the completion of the Indian-town branch. Of this the Intercolonial, the principal part of the system, is 880 miles in length, and has cost, on capital account, up to the 30th June last, \$44,995,982. Of this \$823,239 was added last year. Complaint is made in some

quarters that these additions to capital account are not fairly charged, being in reality expenditures which should be met out of current revenue. Except in the item rolling stock, \$67,516, and one or two others equally small, there does not seem to be good ground for this complaint.

There was a large increase in the business done and a proportionate enlargement of the receipts, which were \$2,596,009, as against \$2,373,200 in the previous year, an increase of \$212,809. Notwithstanding this increase, however, the expenditure exceeded the receipts by \$232,105. In explanation of this the report says: "As in former years the working expenses of the Intercolonial have been charged with the cost of works of improvement, and to this course is largely due the extent of the year's expenditure. The exceptionally severe snow storms of the winter also entailed heavy cost, the direct expenditure for clearing snow being \$92,000, over double the average cost for the last six years, while the indirect cost may be set down as at least \$100,000. The important expensive work of replacing the 56 lb. rails in use with 67 lb. rails is continued, 78 miles of the road having been thus relaid during the year.

On the Windsor Branch, formerly Windsor and Annapolis Railway, the company operates the road for two-thirds the gross receipts, while the government takes the balance and assumes cost of maintenance. Iron rails have been replaced with steel, and many other important improvements having been made, leading, notwithstanding an increase of traffic, to an excess expenditure on the part of the government of \$715. The eastern extension, which has been operated under the direction of the Intercolonial chief officers, since its purchase by the government in 1881, shows a deficit of \$30,146, almost 10 per cent. of which is due to a falling off in traffic.

The Prince Edward Island Railway, which is owned and operated by the government, has a total length of 211½ miles, which has cost so far, in capital expenditure, \$3,741,780. The earnings last year were \$155,303, which fell short of the expenses by \$48,934. There was a fractional decrease in the earnings and a decrease of \$12,506 in the expenditures as compared with the previous year.

A considerable portion of the report is devoted to the lines subsidized by the government, and a most interesting part of the report it is. It is impossible here to state separately even those facts concerning the subsidized lines which may be ranked as important. The table given below, however, showing the amounts paid toward construction thus far, will be of interest and will enable those who desire to know more to calculate the approximate progress made by the several works. The ordinary subsidy is \$3,200 a mile, though in the case of the Northern Pacific Junction it was \$12,000 a mile, and in other cases exceptions have been made. The total amount paid in subsidies to 30th June, 1887, was \$4,189,027, which amount is shown by the following table. Since then, up to 31st December, 1887, \$643,280 has been paid on the same account, but, as this period is beyond the scope of the regular report, the figures are not tabulated. It should be understood that in the following table the Canadian Pacific is purposely excluded, as are also the line from Ottawa to Quebec (subsidy repaid to the Quebec Government), and the St. John Bridge Company, the Albert Railway Company and the Fredricton & St. Mary's Bridge Company, to which advances have been made on mortgage.

STATEMENT SHOWING SUBSIDIES VOTED FOR RAILWAYS AS TO WHICH CONTRACTS HAVE BEEN ENTERED INTO AND PAYMENTS MADE, UP TO 30TH JUNE, 1887.

Railways.	Amount Voted.	Total paid to 30th June, 1887
International Railway, Quebec ..	\$156,800	\$144,000
Quebec and Lake St. John Railway, Quebec ..	384,000	457,991
Napanee, Tamworth and Quebec Railway, Ont.	80,000	
Pontiac Pacific Junction Railway, Quebec ..	96,000	
Caraquet Railway, N. B.	272,000	150,670
Great Northern Railway, Quebec ..	115,200	170,000
Kingston and Pembroke Railway, Ontario ..	76,800	
Northern and Pacific Junction Railway, Ont.	32,000	25,088
Northern and Western Railway, N. B. ..	48,000	48,000
Quebec Central Railway, Quebec ..	660,000	1,284,400
Montreal and Sorel Railway, Quebec ..	660,000	
Montreal and Champlain Junction Railway, Que.	128,000	
Elgin, Petitediac and Havelock Railway, N. B.	19,200	146,200
St. Louis and Richibucto Railway, N. B. ..	32,000	
Canada Atlantic Railway, Ontario ..	140,800	
Quebec Central Railway, Quebec ..	211,200	60,342
Montreal and Sorel Railway, Quebec ..	72,000	69,922
Montreal and Champlain Junction Railway, Que.	30,000	30,000
Elgin, Petitediac and Havelock Railway, N. B.	38,400	38,400
St. Louis and Richibucto Railway, N. B. ..	22,400	22,400
Canada Atlantic Railway, Ontario ..	96,000	92,864

Esquimault and Nanaimo Railway, B. C.	\$750,000	\$750,000
Errie and Huron Railway, Ontario	96,000	96,000
Buc des Chaleurs Railway, N. B.	320,000	250,000
New Brunswick & Prince Edward Railway	118,400	97,440
St. Lawrence, Lower Laurentian and Saguenay Railway, Q.	217,600	64,430
L'Assomption Ry., Que.	11,200	11,200
Great Eastern Ry., Que.	32,000	19,200
Iron Dale, Bancroft and Ottawa Railway, Ont.	160,000	15,000
Buctouche and Moncton Railway, N. B.	96,000	40,480
Albert Southern Ry., N. S.	51,200	1,000
Long Sault & Lake Temiscamingue Ry., Que.	25,600	14,400
		\$4,189,027

The following statement shows the amounts paid to the subsidized lines as a whole, by years, since the system was inaugurated:

Year ending June 30th, 1884	\$ 280,000
" " 1885	403,245
" " 1886	2,171,249
" " 1887	1,406,533
Total	\$4,189,027

Concerning the Canadian Pacific Railway the report deals almost wholly with the main line and the Sault Ste. Marie Line. The total mileage from Montreal to Port Moody is 2,891 miles. The steps taken in connection with the repayment by the company of government loans are recounted closing with the statement "The arrangements immediately contemplated . . . have been duly carried out and the whole road is now the property of the Canadian Pacific Railway Company."

There is nothing stated concerning the Sault Ste. Marie line which was not already known. One of the appendices to the report is an exceedingly well executed diagram, giving a comparison of the distances between different points on the through route from Liverpool to the Orient by different routes. From this diagram the following table is compiled:

LIVERPOOL TO ORIENT VIA MONTREAL.			
	Miles.	Days.	Hrs.
C. P. R. To Yokohama	10,030	22	8
" " Shanghai	11,065	25	1
Nor. P. " Yokohama	10,352	22	20
" " Shanghai	11,387	25	12
Union P. " Yokohama	10,514	23	4
" " Shanghai	11,549	25	20
South. P. " Yokohama	10,714	23	10
" " Shanghai	11,749	26	3

LIVERPOOL TO THE ORIENT.			
	Miles.	Days.	Hrs.
C. P. R. To Yokohama	10,551	23	9
" " Shanghai	11,568	26	1
Nor. P. " Yokohama	10,735	12	16
" " Shanghai	11,770	26	8
Union P. " Yokohama	10,897	24	0
" " Shanghai	11,932	26	16
South. P. " Yokohama	11,097	24	6
" " Shanghai	12,132	26	23

A new feature of the report, and a portion of it which, it is to be hoped, will be published separately for extended circulation, is a series of small maps showing the railways of the Dominion. First, a map of the whole country with trunk lines built or immediately projected, followed by sectional views of the several provinces. These maps have no unnecessary details, but gives a bird's-eye view of the railway development of the Dominion in the best and most instructive form. We have never seen maps which, in design and execution, so completely fulfilled the purpose for which they were intended.

THE MANITOBA SITUATION.

PREMIER Greenway and Attorney General Martin, of Manitoba, have gone to Ottawa nominally to negotiate with the Dominion Government regarding the building of a road by the Manitoba Government through from Winnipeg to the boundary. According to the statements of these gentlemen in interviews with them, which have been published, they exclude from discussion the only point which is really in dispute, the right of the Province to build railways which interfere with the monopoly at present enjoyed by the Canadian Pacific Railway. We have several times before now expressed regret that the fatuous folly of our rulers should have allowed this great question to get into its present shape without any real attempt to settle it upon lines of either reason or law. It was only to be expected that in the position in which the matter was left last year trouble would result, for no settlement was reached, nobody was satisfied as a matter of arrangement, and nobody was defeated as a matter of controversy, but bad blood was aroused, misunderstandings were created, and the difficulty was left to be renewed in what form and at what time nobody could foresee. It was hoped by those who represented the dominant party in the Dominion (until recently the dominant party in the Province of Manitoba) that, with a good crop and general prosperity, the clamor for railway competition, like all other manifestations of discontent, would die away. But the crop has been so much better than was anticipated that what occurs throughout America every year has occurred in Manitoba—there has been a shortage of cars. Great blame is im-

puted to the Canadian Pacific for this shortage by some people who find that they are not served just as soon as they would like to be; but those who consider the short crops that have hitherto prevailed, as contrasted with the almost incredible yield of last harvest, and who consider also the practical difficulties in the way of organizing railway service over such a length of line, and for a new country like Manitoba, will see that instead of being blamed the Canadian Pacific management is to be praised for the efficiency with which they have carried out the work. But even those Manitoba farmers who recognize that the shortage of cars under which they or their neighbors suffered was due to circumstances beyond the control of the Canadian Pacific, naturally were far from accepting the situation as one that could not be remedied. Consequently the agitation for a competing railway, which is always the cure first sought by the people, as the history of Ontario proves, was begun again with increased vigor, so much increased that it led to a change of Government, and the transference of power to Mr. Greenway and his colleagues, whose watchword seems to be "We will build the Red River Valley Railway—constitutionally if possible, but—"

If anything were wanted to prove the folly of leaving the question of Manitoba's right to build railways within the old boundaries of the Province, as it was left last fall, the present situation of affairs would fully supply that want. Not merely Manitoba, but the whole country is kept in a state of suspense and excitement, partizanship manifests itself more and more every day, in this which is a question surely of business and of law in the broad sense, and important interests of the greatest private corporation in the country—one so great that it is really regarded as a public institution—are kept, so far as the people can see, in jeopardy through the action of local partizans. How can it be expected that merely drifting along in this manner will settle satisfactorily and constitutionally the question whether the Canadian Pacific monopoly applies to the original Province of Manitoba or not? Either that right exists or it does not, and the real interests of all the parties to the controversy are in the direction of a settlement by the tribunal already provided, if there be such, or one satisfactory to all, if it is to be created, rather

than in the direction of a mere test of passionate strength or diplomatic skill.

We have never concealed our opinion that, as they stand unexplained, the statements of Sir John Macdonald and others to the effect that Manitoba might charter railways within the old boundaries at pleasure, leave us room for the idea that the people believed when the charter was granted that it carried legal monopoly within those boundaries. There may be some explanation of those words consistent with the idea of legal monopoly, but that interpretation has never been given them by the man who used them. On the other hand, it was well known at the time of the charter, as it has been since, that the Government's policy was in the public interest, to compel the trade of the North-West to seek an outlet through Canadian territory. What understandings stated or implied may have been arrived at between the Government and the Company on this subject it is impossible to say, but on this basis the most the Government could do would be to pledge its own interests and its own existence to the carrying of them out. To what extent the people of Canada have pledged themselves to the fulfilment of those compacts by twice returning the Government to power, it is difficult to say, but it is quite arguable that they have assumed full responsibility.

We do not believe, by any means, in allowing a great railway corporation like the Canadian Pacific to get more than its share of advantage under any bargain made. Such advantage goes not to railway men as such, but to those who buy and sell railway stocks. But it is an old rule, and a good one, that as between the public and private individuals, the liberal reading of the law is in favor of the individuals. In this case, whatever the Canadian Pacific has fairly understood itself to be entitled to, it should have, whether in the maintenance of its monopoly or in compensation for that monopoly if it is lost through the unwillingness or inability of the public to maintain it. This cannot be reached, however, by parties who assume the attitude which the politicians have assumed on this question. To "settle" in the present spirit merely means to leave everything unsettled by establishing a great precedent to prove that in public affairs of this kind might and not right is the argument to be used.

This question we have endeavored to discuss is wholly separate from that involving the public policy of allowing trade from Manitoba to seek an outlet through the United States. And that is too big a subject to discuss within the limits of this article.

THE RAILWAY COMMISSION.

WE make no apology for devoting a great part of the space in this issue to the report of the Railway Commission, presented to parliament during the current session. It is probable that the recommendations of this report, or most of them, will be embodied in an act of parliament, which will, it is supposed, be submitted to the House of Commons, by the government, before the present issue is in the hands of our readers. As the law, not the report, is the important thing, we shall not attempt to analyze closely the recommendations which have been made but shall deal more at length with the bill when it is submitted to parliament.

Generally speaking, the prediction in a recent issue of RAILWAY LIFE has been proven correct, that is to say, in the main the recommendations of the committee follow the line of the Inter-State Commission Law of the United States. Some of the obvious errors of that law have been avoided, however, and none more satisfactorily than that rigidity which characterizes the American statute, and which would cause even more trouble were it applied in Canada than it has in the United States. The commissioners have wisely recognized that this railway question is a great problem, made up of many factors constantly changing their relation to one another, and not to be settled out of hand by a mere effort at law-making. The course they suggest has the merit of allowing reasonable experiments to be made before the system is carried out to the full extent to which, doubtless, it will grow at a future day. It is well, also, that, at the beginning at least, the tribunal to judge of the practical carrying out of the important principles laid down, should be the Railway Committee of the Privy Council. That body, while it has dignity and power enough to be worthy of great respect as a judicial body, is yet amenable to public opinion, being composed of men responsible to parliament. The railways have every-

thing to gain by an open, candid expression of public opinion, but everything to lose if those who are fond of "regulating" matters to their own taste are allowed to have their way. The public, as a whole, will recognize the difficulties in the way of following any exact pattern in railway affairs, and the railway companies have good reason to look for fair treatment at the hands of a body responsible to the people.

The members of the commission, as will be seen by the report, have taken every pains to make their inquiry as full and complete as possible, and, from the evidence taken and the reports and other books read and arranged for this work, summaries of parts of which we hope to publish later, it is evident that they have succeeded in focussing an immense amount of information in their recommendations to parliament.

In the next issue of RAILWAY LIFE we hope to present a summary of the bill which will be presented to parliament, embodying that part of the commission's report which the government is willing to accept.

STUDENTS ON TELEGRAPHY.

THE gravest problem before the railway telegraph operators of America is evidently that of preventing the labor market in their trade from becoming overstocked and prices then cut down below a living rate. Already the operators have suffered not a little from this cause. The Order of Railway Telegraphers is the outcome of an earnest and intelligent effort to overcome this and other difficulties in the way of railway telegraph operators as a body. In *The Weekly Telegrapher*, the organ of the Order, we find a circular signed by S. O. Fox, whose title is not given, but of whom those desiring it are notified to seek information desired concerning the Order. This circular summarizes the principle rules of the Order, and states its objects generally in the following terms:

The objects of the Order are to raise the standard of the fraternity by decreasing the number of students, and striving to furnish good service for a reasonable compensation.

To assist members who are sick or in destitute circumstances, and to enjoy such benefits as generally appertain to societies of this class.

Every other branch of the railway service have their organization and they have proven of inestimable benefit to their members, and we believe from present indications that in the

near future the O. R. T. will rank second to none.

The requirements of membership are, that the applicant shall be of good moral character, 17 years of age and over, and must have had at least one year's experience as a railway operator, if actually in the employ of a railway company at the present time. If applicant is not in the employ of a railway company at the time of making application, he must have had five year's experience as an operator on a surface railway.

The hard work and heavy responsibilities assumed by this class of railway employees entitles them to every consideration. There is no branch of the service in which more good can be done by an organization properly conducted. We are glad to see that strikes are discontinued, though we think that in authorizing the expulsion of a member who seeks to get up a strike, as provided by the rules, they go too far. There are cases—very extreme cases we admit—in which a strike is not only justifiable but necessary, and if the strike is to be arranged for, somebody must take the lead. However, little practical evil and a great deal of practical good will result from the avoidance of strikes, as there are other and more effective means at the disposal of the Order and within the range of its constitution for redressing grievances, and improving the tone and position of this branch of the service.

THE NEW SMOKE CONSUMER.

Dobson & Brodie's Smoke Consuming Apparatus has been attached to one battery of six furnaces at the wheelhouse, Montreal, and we understand that during the two months it has been in use extraordinary results have been shewn, the smokeless chimney suggesting cessation of work, and the fuel consumption being visibly less. Persons residing or even having occasion to pass in the neighborhood of the water-works must have remarked the incessant discharge of densely black smoke from the stack. By the escape of these bituminous gases into the atmosphere a very considerable loss was sustained, and, being now captured and burned as volatilized, the saving of fuel effected and other advantages gained must be clear to every steam user. Evaporation tests shew over 11 lbs. of water to 1 lb. of coal. The issue of soot and smoke from steamboat funnels has ever been a source of annoyance and complaint, and if this evil is to be overcome the prospects of travellers and

excursionists are pleasanter for the coming season.

The throwing on of fuel upon the fire is generally considered as a means of augmenting the amount of heat produced, and, taken as a whole, it does have that effect. But for the maintenance of a steady fire and even heat only a small portion of fuel should be thrown upon the fire at a time. The reason for this is that coal is dependent upon two constituents for its heat-giving properties. One of these, the carbonaceous, remains in a solid state; while the other, the bituminous, is volatilized. As the latter process must be accomplished before the first will be ready for burning, the first effect of throwing the fuel upon the fire is that of cooling. Not only must the solid coal be raised to the furnace temperature, but the volatilization must be carried on. Here the same laws come into play as in the evaporation of water. The evaporation and the volatilization require more heat than that accounted for in the elevation of temperature, and which, therefore, is rendered latest. Hence, unless care is taken to burn these gases as they are given off, it would be better that they did not exist. For it will be readily understood that, if the fire which is due to the combustion of the solid carbons did not have to heat them, it would just give out that same amount of heat that would be available for steam-making. It is due to this fact that coke has been accredited with greater heating properties than bituminous coal, simply because the gases in the coal have been distilled and not burned. These principles simply go to prove what is urged, the proper adjustment of dampers etc., to prevent the formation of smoke. This device is so designed that these gases are thoroughly burned, and the heating properties of the coal are found to be greater by just the amount of heat given out by the combustion of the gases in excess of what was required to distill them.

This firm in setting Lancashire and other flued boilers so build the travels that the combined heat circulates five times instead of three, as is usual.

Mr. W. R. MACKENZIE, an old G. W. R. and C. S. R. boy, recently travelling auditor and stationery agent of the Union Pacific at Omaha, Nebr., has been appointed auditor of the Transcontinental Association, with headquarters at St. Louis.

RAILWAY COMMISSION REPORT.

The following is a slightly condensed reproduction of the report of the Royal Commission appointed in August, 1886, to consider the advisability of creating a permanent Railway Commission.

The Commission have held meetings for evidence in the following cities, in the order named:—Toronto, Halifax, St. John, Ottawa, Quebec, Montreal, Kingston, Hamilton and London.

In taking evidence the Commission soon discovered that their investigations would be indefinitely prolonged—if they examined the railway officials on each point under immediate discussion. The managers of the railways were therefore informed that their testimony would be taken last, and would then apply to the whole subjects dealt with.

Without inviting any personal complaint, the Commission could not avoid receiving evidence of alleged grievances, illustrative of the system objected to. They did not consider themselves authorized to pronounce any opinion on such cases, but only invited the railway managers to offer in their closing examination such explanations as they might deem proper.

The course thus adopted has, it is believed, been promotive of much economy of time, and has given satisfaction. The evidence of the railway managers and officials will be found to contain a lucid and well considered statement of their views, obtained after a full view of all the previous testimony.

ENQUIRY IN UNITED STATES.

The Commission obtained in reply to their applications the fullest published information in regard to the condition of railway legislation in all the States where Railway Commissions exist.

Careful consideration of these documents and also of the books of writers of acknowledged ability on the subject, including Messrs. Hadley, Hudson Grierson (of England) and others, convinced the Commission that their labors and ultimate recommendations could not be confined to information obtained from purely Canadian sources. It became evident that the condition of commerce in relation to railway transportation were in most cases identical with those of the United States, and that, in considering the advisability of placing the railway system more directly under the control of the State, prudence required that the experience of other countries where such control existed should be thoroughly availed of.

The Commission, therefore, on the sixth of September last (1887), appointed Messrs. Burpee and Moberly as a committee to proceed to certain States and obtain from State officials, railway managers and other parties, the fullest information on all points included in the enquiry.

The report of this Committee is attached to an appendix to this report, and will be found of great interest and value.

ENQUIRY IN GREAT BRITAIN.

The Commission obtained, through the High Commissioner, many valuable reports and

documents relating to the progress of railway legislation in Great Britain, and the operation of the Railway Commission, including the draft of a Bill introduced during last Session of the Imperial Parliament extending and perpetuating the Railway Commission.

Believing the discussions upon this Bill would prove of much value, the Commission directed their chairman, on visiting London in the early part of the year eighteen hundred and eighty-seven (1887), to watch the passage of the measure and report to them.

Unfortunately the pressure of other public business upon the British Parliament prevented the Government from proceeding with the Bill, and deprived the Commission of the opportunity of judging of the value of the important modifications proposed in respect to the British Railway Commission.

The Commission herewith submit the entire evidence taken before them, together with all reports, publications and other documents furnished to them, with the following report

RAILWAY PROGRESS.

The Minister of Railways, in his statistical report for 1886, shows the progress of railway construction in Canada, commencing with 1837, when sixteen miles were opened for traffic, increased in 1847 to fifty nine miles, and in 1852 to two hundred and twelve miles. From this time, which marks the initiation of the Grand Trunk system, the progress of construction was more rapid, rising to two thousand and eighty seven miles in 1860, and in

		Tons.
1875	1,826 miles, carrying one mile	5,670,836
1876	5,157 do do	6,341,757
1877	5,574 do do	6,859,796
1878	6,143 do do	7,883,172
1879	6,181 do do	8,318,810
1880	6,891 do do	9,938,858
1881	7,260 do do	12,065,323
1882	7,540 do do	13,575,787
1883	8,126 do do	13,266,235
1884	9,658 do do	14,712,269
1885	10,119 do do	14,659,271
1886	10,697 do do	15,670,160

These figures illustrate the extent and rapidity with which the commerce of the country has become identified with and dependent upon the railway system of transportation.

London *Evening*, August 20th, 1886, page 187, states the average rate on heavy freight in England is as near as may be 1d. or 2 cents per ton per mile. I. S. Jean, in his Annual Statistical Report for 1884, to the British Trade Association, makes the same statement.

For the purpose of comparison, take for England the rate for such heavy articles; for the principal countries of Europe, figures given by Jean's Railway Problems published in 1887, page 277, for the United States, Poor's Manual for 1887, and for Canada, the evidence of the Grand Trunk and the Canadian Pacific, the following results

AVERAGE CHARGE PER TON PER MILE ON FREIGHT TRAFFIC IN CENTS.	
England	2.00
Germany	1.70
Belgium	1.57
France	2.14
Italy	2.40

Holland	1.50
Russia	2.32
United States	1.04
Canada	0.93

A table is also submitted showing the comparative cost of railways in different countries and the population to each mile of railway.

After examining various authorities which do not differ materially, the following figures are taken from Jean's Railway Problems, pp. 541, 542, for the year 1884.

Country	Cost per Mile	Pop per Mile.
Great Britain	\$206,500	1,930
Germany	103,000	2,065
France	134,000	2,110
Italy	94,700	5,000
Belgium	123,400	1,102
Holland	95,200	3,400
Russia	97,200	5,965
United States	61,000	417
Canada	61,000	491

A review of the foregoing tables will show that the cost of railway construction in Canada is at a minimum compared with other countries. It also appears that the charges for moving merchandise by Canadian railways are absolutely the lowest, and compared with the great nations of Europe, very greatly less.

Two natural causes exist whereby the very important advantage of low cost of transportation is ensured to Canada. No doubt the cost of our railways enables their managers to work at smaller charges for capital account; but the main reasons are to be found, 1st, in competition by water; and 2nd, in competition by American railways at all points accessible by our navigable waters.

After referring to the competition by water, the features of which are well understood by Canadians, the Report proceeds:

The American system of railways, also connecting the great lakes with the ocean, is able during the season of navigation to take very low rates from points in Ontario to the Maritime Provinces, and having also possession of one important railway in Ontario, the Canada Southern, can practically compete with the Canadian lines during the entire year; the whole trade of Canada undoubtedly benefitting by the water and rail competition of rival routes. By possessing the control of the St. Lawrence, Canada offers the shortest and cheapest route to the seaboard from the Western States bordering upon the great lakes. Her railways are thus enabled to draw largely upon the commerce of these States, making them contributory to the maintenance of her internal system of transportation, and cheapening the cost of performing it.

Other recent causes are also now operating to develop and extend these advantages. The Canadian Pacific in completing its line to the Pacific Ocean points to an early revolution in the future carrying trade of Eastern Asia and Australia. While the connection of the same railway at Sault Ste. Marie with the new lines leading from St. Paul and Minneapolis seem to ensure the diversion through Canada of a large part of the traffic of the North-Western States with New England and New York. A point of the greater importance, as it is proved that the wheat growing zone in America is,

from some unknown climatic influence, steadily moving northward, promising shortly to be in a great measure confined to the North-Western States, Manitoba and our own North-West Territories.

In proof of the direct advantage of this through American trade to Canada, the evidence of Mr. Hickson, the able manager of the Grand Trunk Railway, may be cited. He says: "The payments by the Grand Trunk Railway in Canada in working the through traffic have not been less than four million of dollars annually for the last four years. The effect of such an expenditure in employment and in the consumption of supplies must have been very beneficial, while as a necessary consequence, the railway service of the entire Grand Trunk system must have been largely extended, to the manifest advantage of local districts."

The importance of maintaining and developing the foreign traffic passing through Canada can scarcely be exaggerated, and the natural advantages we possess, when supported and increased through a wise system of railway construction and management, cannot fail to promote in the highest degree the prosperity of the country.

The Commission consider it unnecessary to examine the theoretical relation of railways, as common carriers, to the State. This subject has been exhaustively treated by many very able writers, and in debates in Parliament and in Congress, to which reference can be had. Whatever judgment may be pronounced on this vexed question, the practical conclusion has been arrived at both in Great Britain and in the United States, that the public interest requires the great powers and privileges granted to railway corporations to be exercised under proper control by the State, and wise, efficient and economical service absolutely obtained. The great benefits derived through the adoption of the system of the transportation by railway must not be permitted to be sacrificed or even endangered through selfish, grasping, or inefficient administration, on the part of the railways.

The Commission in thus strongly stating the principle which they have decided must govern the conclusions of their present report, desire to be understood as distinctly disavowing any intention to reflection on the management of Canadian railways. The evidence taken before them shows a number of cases of complaint, but the Commission have great pleasure in expressing the opinion that the explanations given on each case by the railway officials, if not absolutely conclusive in every case, are sufficient to exonerate them from the charge of wilful favoritism; the blame attaches to defect in the system and existing railway law rather than to its administrators. And it is to the removal of these defects that the attention of the Commission has been given.

The commission now proceed to consider the amendments, which in their judgment are required to meet admitted evils in the present system of railway management, and to provide such control over railway corporations as, while not unduly interfering with their freedom of action, will secure to the country and its commerce all those benefits which a wisely

administered use of the modern system of transportation cannot fail to confer.

INTER RAILWAY DISPUTES

In the order in which the consideration of the subject has been submitted to them, the commission have first to deal with what may be termed inter railway disputes. Their very nature appears to preclude their satisfactory decision by ordinary legal process, as in a majority of cases, if not in all, they require proceedings in the character of arbitration. The Commission believe that their settlement calls for the creation of a tribunal especially qualified to deal with such questions, and it will be their duty, at the conclusion of this report, to express their opinion fully as to the character and scope of the railway tribunal which they regard as necessary.

Attention has been particularly given to the special case of the right of one railway company to expropriate the property of another company. It appears to the Commission that the circumstances attending each case must necessarily be special and peculiar; and in principle it may be admitted that if the interests of the several companies are alone concerned, no expropriation should be permitted. But in almost every case it will probably appear that the public interest and convenience are involved, and the right of expropriation should then rest upon precisely the same considerations of public utility as originally permitted the railway company to obtain possession of the property of an individual.

The Commission suggest—

"That special legislation in each particular case of expropriation is not desirable, but recommend that such questions should be decided by some properly constituted tribunal."

In cases of dispute between railway companies as to traffic arrangements the adjustment of rates for passengers and freight, the crossing of tracks and compensation therefor, including the cost of maintenance, the alignment, arrangement, disposition and location of tracks; rights of way over or through lands owned or occupied by railway companies; running powers; haulage; use of tracks; use of stations and station grounds; adjustment of tables; trans-shipment and interchange of freight; and other matters relating to "powers," "highways" and "bridges," and "traffic arrangements" in the Act of the Parliament of Canada known as "The Consolidated Railway Act, 1879, and its amendments" The Commission decided—

"That legislation was required to empower an independent tribunal to deal with all such questions, whose decision should be final."

The Commission now respectfully offer their suggestions and recommendations upon the general subject of the relations of the railways to the public.

CLASSIFICATION OF FREIGHT.

The convenience to the public and also to the several railway companies of a uniform classification is so obvious that the Commission consider it unnecessary to offer any extended remarks upon it, so far as it applies solely to railways in Canada. But as regards the through traffic from and to the United States, or such traffic as is carried on in connection

with United States railways, it does not appear desirable to insist upon the Canadian classification being made applicable to such transportation.

They therefore recommend—

"That a uniform classification of freight be established and maintained by all railway companies, subject to the adoption, if desired by them, of the American classification for through traffic to and from the United States."

TARIFFS.

The Commission have carefully considered all the information before them on this important subject, and believe the interests of commerce will be best served by leaving the arrangement of tariff rates for passengers and goods in the control of the several railway companies respectively, subject only to approval and revision of the maxima rates by an authorized tribunal.

They therefore recommend—

"That the railway companies may make and establish tariffs, subject to the approval and revision of the maxima rates by such tribunal as may be constituted."

LONG AND SHORT HAUL.

This question has probably given rise to more discussion than almost any other point connected with railway management. It forms the subject of much of the evidence given before the Commission, and the greatest diversity of opinion exists upon it.

It has been the subject of repeated legislation in the United States, and in the celebrated "Granger" agitation in the west uniformity of mileage rates was imposed upon the railways by state legislation. Experience, however, tended to prove that the effect of such laws was injurious, leading to their early repeal or modification.

The subject has also received the greatest attention in connection with the Inter State Commerce Bill, and the principle of uniformity of mileage rates was finally sanctioned by the act, reserving, however, to the Railway Commission power to suspend its operation on sufficient reason being shown. This power has since been exercised by the commission in certain cases, and it is not now imperative on all railways to establish uniform mileage rates under like conditions and in the same direction for long and short distances.

The reasons given for the suspension of this section of the Inter State Commerce Act have received the greatest attention by the commission. They cannot lose sight of the fact, that where conveyance by water comes into competition with railways, it is not in the public interest to compel railways to transport freight at uniform mileage rates, as it involves the establishment either of such low rates as render the local traffic unremunerative, or such high rates as leave the through traffic between the competitive points wholly at the mercy of the carriers by water. The public interest will be best served by permitting rates between such competitive points to be determined by the respective carriers.

It is, moreover, manifest that the through traffic of Canada by railway, which the commission regard as of the utmost importance, cannot possibly be carried on except at such

rates, in combination sometimes with navigation, but more generally with American railways, as would be utterly inadequate if applied to ordinary local traffic.

While stating their opinion that the competition by water and rail from almost every important business centre in Canada forbids the adoption of uniform mileage rates, the Commission have not lost sight of the alleged unfair treatment of certain localities in Canada itself by railways. They believe, however, that such cases can be considered and relief obtained under the powers which they hereafter recommend should be granted.

They therefore recommend—

"That it is inexpedient to adopt a rule of equal mileage rates, irrespective of distance and cost of service."

By the adoption of an uniform unit for transportation it is not proposed to disturb or interfere with the right of the railways to require them to depart from their practice of making their rates per 100 lbs. But the Commission, in view of the general character of the business of Canada, and to avoid complaints by small shippers that large shippers are treated on more favorable terms, desire to establish such an unit of transportation as may govern all transactions that do not absolutely belong to the export trade of the country. It has been given in evidence that the railway companies, in order promptly to furnish cargo for ocean steamships, induce whole sale dealers, by special low rates, to furnish large quantities of grain or flour, and it has been alleged as a grievance that such rates are not granted to shippers of small quantities.

The commission are of opinion that the grain and flour trade of Canada cannot be advantageously carried on unless the railway and the merchant can arrange together, as to the cost by rail and ocean vessel, of delivery in the foreign port.

The same necessity does not exist in regard to the ordinary trade in other articles, and while prepared to admit the necessity, in certain cases, of making the rate of transport depend upon the quantity carried, the Commission consider that this privilege should be confined to not less than car loads, and be subject to the regulations proposed to be established in regard to discriminations.

They therefore recommend—

"That one car load of not less than ten tons shall be the unit of railway transportation, in respect of any special rates granted, all quantities under a car load being treated alike, but the railway company to be at liberty to make special rates for large shipments."

DISCRIMINATION.

Undoubtedly one of the most frequent causes of complaint against all railways, not only in Canada but also in Great Britain and the United States, is that of discrimination of an unjust or partial character between individuals under like conditions. It interferes most improperly with legitimate trade, and should certainly be prohibited by law. It cannot be the desire of the principal railway officers or managers to permit such favoritism, but it is generally the act of local agents—especially such as are paid by commissions,

and influenced either by personal favoritism or desire of gain. The practice should be peremptorily ended and such penalties imposed as will secure the attention of the railway managers to the strict observance of the law by their servants and employees.

The Commission recommend—

"That discrimination of an unjust or partial character between individuals under like conditions be effectively prohibited, and any infraction of such law punished by severe penalties."

Much complaint has also been made of discriminations in favor of one locality over another. These cases differ widely from the preceding, and are found generally to arise from the presence of competition, either by water or by rail. They seem to be inseparable from any railway system and each case requires special investigation. Where like conditions exist, such discriminations should be prohibited and under the pressure of being exposed to penalty the railway managers must exercise the power of determining the respective rates of transport.

The commission believe that these cases will generally be amicably arranged if the following recommendation be adopted, and the difficulty will be met which has been referred to under the head of long and short haul—uniform mileage rates—

"That discrimination of an unjust or partial character between different localities under like conditions be effectively prohibited, and any infraction of such law punished by penalties, after due cognizance having been taken of the effect of water and rail competition."

SPECIAL RATES.

The objection to secret special rates, rebates, drawbacks, and all concessions to shippers of a discriminative character are fully set forth, not only in the testimony given in Canada, but also in the great body of evidence furnished from the United States. The practice is not only unfair to traders engaged in the same business, but has been shown to be opposed to the best interests of the railways themselves, and should certainly be prohibited under penalties for infraction of the law.

The Commission do not, however, desire to object to such special rates or concessions where made to all parties alike, and their existence made public. It is in the interests of commerce, as shown in treating of discriminations, that railway managers should be permitted to grant special relaxation of their tariff rates in certain cases; but such concessions should be alike available to all.

It is believed the case will be met by the adoption of the following recommendations—

"That all secret special rates, rebates, drawbacks or concessions to shippers be declared illegal and made subject to penalties, and that every special rate be made public on demand of any inquirer."

EXTORTION OR UNJUST CHARGES.

The evidence given before the Commission and the information derived from the United States and Great Britain disclose the existence of many complaints by individuals of overcharge under the railway tariffs, or of exactions imposed unfairly in various forms. Such abuses have their remedy under the

common law of all countries, but the process is slow and expensive and presses hardly upon the complainant, who frequently will rather submit to what he considers unjust treatment than enter into litigation with a powerful corporation. In many cases, moreover, the amount at issue is small, though equally vexatious in its supposed extortion.

It appears to the Commission desirable, in the interests both of the public and of the railway companies themselves, to provide an easy and prompt mode of settlement of all such complaints, reserving, however, to the party aggrieved, the option of proceeding through the ordinary law courts, if he prefers.

In the United States generally, the railway commission have power to hear such cases, and in some instances to decide them, while in others the ultimate decision is left to the ordinary tribunals.

The Commission are of opinion, that where the complainant elects to go before the special tribunal to be created in Canada, the proceedings should be final, subject only to the regulations proposed hereinafter in this respect.

In dealing with such cases in other countries, the amount to be recovered in Great Britain is limited to the overcharge, while in the United States it varies; in most cases, being followed by a penalty to be recovered by the complainant of three times the amount of the damage actually sustained.

The Commission, in proposing to apply this remedial system to Canada, consider that the damage claimed should be distinctly limited to the actual overcharge, and that if indirect damage is alleged or claimed, the complainant should proceed by an ordinary action at law. It appears, also, that in many instances, it may be shown that the overcharge has not been wilful or intentionally unjust; therefore, it is thought that the amount of penalty should be in the discretion of the tribunal, but not to exceed three times the amount awarded as overcharge.

As regards the costs attendant upon the investigation of complaints, the tribunal should be empowered to exercise its discretion in awarding them.

The experience of the United States has shown that the existence of such a tribunal leads to the amicable settlement of complaints, and it is believed that a similar result would follow in Canada, removing a fruitful source of litigation against railways.

It is therefore recommended—

"That complaints of extortionate rates, or unjust discrimination, may be referred to an authorized tribunal for settlement, whose decision shall be final. That the damages be limited to the amount proved as overcharged, with any further amount not exceeding three times the sum awarded, as a penalty to be recovered by the complainant, with costs in the discretion of the tribunal. No indirect damage to be considered or awarded. That the right be reserved to the complainant of proceeding at common law, if he so elect."

EXPRESS BUSINESS.

The express business is primarily a commission business, the expressman undertaking to

employ whomsoever may employ him on doing various errands at some other place than where such employer lives, taking care and charge of such commission personally or by deputy. The transportation of merchandise is an incidental matter and dependent upon the commissions given to the expressman to execute. The express companies neither own the lines nor railways upon which they do business, nor have they (as a rule) any exclusive privileges; anyone possessing the necessary security being able to do an express business for themselves. They must employ special teams, drivers, agents, &c., at their offices, and messengers, transfer men, &c., en route, and it would be extremely difficult to bring express charges under any ordinary classification or tariff.

It is therefore suggested:

"That railway companies be not compelled to undertake express business, but must afford equal facilities to all express companies alike in the transaction of the same."

FREE PASSES.

The practice of granting free passes is shown, by the evidence obtained from the United States, to be in many respects equivalent to "discrimination," and therefore objectionable. Its abolition is clearly in the interests of the railway companies, and it certainly cannot be claimed that the public, under any circumstances, are entitled to free transportation.

Under the Inter-State Commerce Law free passes have been abolished, and it is understood the change has given much satisfaction and been beneficial to the railways. It is true that the law in question reserves the right of railway companies to exchange "passes," which is clearly unobjectionable as simply as an exchange of service. In Canada, where the Government as representing the public, are the owners of one important railway, it seems proper that they should at all times be entitled to pass over and examine their railway, but the Commission consider that the privilege of obtaining "passes" from other railways should be strictly confined to the actual officials of the Dominion railway.

They therefore recommend:

"That the grant of free passes by railway companies be abolished, saving the reservations contained in the United States Inter-State Commerce Act, and excepting members of the Federal or Provincial Government on Federal or Provincial railways respectively."

UNIFORM RAILWAY REPORTS.

It is evidently desirable, in the public interest, that the several railway companies should render their reports to the Government in the same form and for the same periods.

It is recommended:

"That the railway companies be enjoined to furnish their several reports to the Government, as required by law, in a uniform shape and for the same periods."

PENALTIES ON RAILWAYS.

It appears important to provide by law for the due observance, by the several railway companies, of all duties and obligations imposed upon them under existing and future Statutes. This is done both in Great Britain

and the United States, and it is believed to have been beneficial in its operation.

It is suggested

"That the illegal infraction of any statutory obligation shall be left to the proposed tribunal, who, after hearing the case, may impose for any proved violation or neglect to comply with the regulations established by law, such penalty as may be deemed proper, being not less than one hundred dollars, nor more than five thousand dollars."

COST OF TRIBUNAL.

The Commission have considered the practice pursued in Great Britain and in the United States in regard to defraying the expenses attendant upon the proposed railway tribunal. In most cases it is met by an assessment upon the railways, based upon various methods. A fair consideration of the whole subject leads to the conclusion that the regulation and control of railways by the State is entirely based upon grounds of public interest, and for the immediate and direct benefit of commerce, involving changes which may in some cases be thought to press somewhat hardly upon the railway companies. It is therefore considered more equitable that the charges connected with the proposed tribunal should, as in the case of other courts, be borne by the community at large.

It is therefore recommended:

"That the expenses connected with the formation and operation of the proposed railway tribunal be borne by the public exchequer, excepting as far as may be caused through the investigation of complaints, in which case costs may be included in the award, at the discretion of the tribunal."

GENERAL REMARKS.

In recommending the foregoing amendments to the existing railway laws, the Commission desire to be understood as in no respect proposing to alter or diminish the existing statutory obligations for prevention of accident and general oversight. They would, however, suggest that special provision should be made into the investigation of serious accidents, as is now provided under the English law. Such enquiries might, probably, in the case of Canada, be fittingly entrusted to the proposed railway tribunal.

FORMATION OF TRIBUNAL.

In considering the important question of the character and composition of a tribunal to give effect to the various recommendations made in their report, the Commission have felt themselves limited to the selection of one of two courses.

First.—The creation of a Commission, independent of Government control, with practically irresponsible authority.

Second.—The maintenance of the Railway Committee of the Privy Council with such extension of its powers and requisite departmental machinery, to secure the proper execution of the law.

In considering the subject the Commission have the advantage of knowing the scope and operation of independent Railway Commissions in Great Britain and the United States. But in the former case they are met by the difficulty that the present law requires import-

ant amendments which have not yet been considered, and which are known to excite much opposition and criticism. In the several States of the American Union very great diversity exists in the powers and character of these tribunals, for each of which methods peculiar advantages are claimed. It may be unhesitatingly stated that the Commission are unable to accept any of these commissions as the model upon which the Canadian tribunal should be framed. Apart, moreover, from the intrinsic defects that are found in them all, it is evident that they are unsuited to the condition under which the commerce of Canada is carried on, through their scope being restricted within too limited an area, and unfitted to deal with the foreign through traffic upon which the prosperity of character is so largely dependent.

The Inter-State Commerce Act and the Commission established to give it effect are much more analogous to the circumstances of Canada, and the Commission would have felt their labours greatly lightened if the operation of this law could be regarded as final and settled. It deals with questions precisely similar to our own, and its working has already proved of the greatest value in the present enquiry. But the Inter-State Railway Commission has, in its initiatory judgments, found it necessary to partially suspend the operation of the most important section (4th section) of the Act, and has already indicated other important particulars in which it desires amendments to the law. It has, however, confessedly been already productive of great good to the public and also to the railways themselves, whose apprehensions of injury from it have been in a great measure dispelled.

With respect to the machinery through which the Inter-State Commerce Act is expected to work, your commission have grave doubts whether it will be found applicable to the vast extent of territory over which it has jurisdiction. They are inclined to believe, that in requiring the presence of even one commissioner at all enquetes, it will be found impossible to meet the demands upon the Commission, and the necessity of making all original applications to the central authority at Washington will, they fear, lead to serious delay, and in the case of such individual complaints as it is proposed to refer to the Canadian tribunal, amount practically to a denial of justice.

Whether these opinions be justified by experience is, however, immaterial, as the Commission cannot recommend the adoption of any system which is now on its trial, and which it is conceded requires substantial amendment, none of the existing commissions having sufficiently extensive powers to deal effectively with the various matters which would come under their jurisdiction. It is undoubtedly the wiser policy to benefit by the experience of others rather than by our own.

The Commission desire to provide by immediate legislation for admitted evils, with the least possible disturbance to existing methods, only accepting such conclusions as have been tested and proved to be beneficial. They

wish to avoid the hasty creation of any system of which experience in the United States, England and Canada may soon require serious modification. They think it better to test the working of the proposed law by temporary provision for its execution, and after full experience of the results of the Inter-State Railway Commission and of our own legislation, to consider whether such system should be made permanent.

Other considerations also weigh with your Commission in their conclusions. The political constitution of Canada recognizes direct ministerial responsibility to parliament, much more than in the United States, and therefore as a railway tribunal is necessarily tentative, it seems to them undesirable to remove its operation, in its inception, beyond the direct criticism and control of parliament.

At the same time the Commission admit that serious objection may be taken to the selection of the Railway Committee of Privy Council as the General Railway Tribunal. The members cannot leave their duties at Ottawa, and must, therefore, delegate to subordinates much very important work, though the Inter-State Commission is open to the same objection.

They hold their office by a political tenure and are liable to sudden change, whereby the value of their experience is lost. They can scarcely be regarded by the public as so absolutely removed from personal or political bias as independent members of a permanent tribunal. They cannot possibly give their exclusive attention to their railway duties, and in taking upon themselves the duties which would necessarily devolve upon them they would in fact be performing judicial functions. These and other reasons occur against the selection of the Railway Committee of the Privy Council as the Railway Tribunal; but it is believed they are outweighed by the considerations of general and ultimate advantage, through proceeding with extreme caution in dealing with subjects affecting the entire commerce and progress of the country; while a material practical advantage is secured by the fact that any required changes in the law or in its application are secured through identifying the government with its execution.

After the fullest discussion and most deliberate consideration the Commission desire to report as their final recommendations:—

"That the powers of the Railway Committee of the Privy Council be enlarged so far as to enable them to administer the proposed law, providing—

"1st. That the Committee shall itself hear and determine all disputes arising between railway companies, with power to appoint proper officers to take evidence locally.

"2nd. That the Committee shall itself decide all questions of classification of freight tariff and uniform railway returns.

"3rd. That the Committee shall have power to appoint officers in each province, to hear and determine all complaints against railway companies, subject to power of reference by such officer of any point to the Committee, and also subject to the right of appeal to the Committee itself."

GENERAL RAILWAY LAW.

The Commission consider the decision of this question to be rendered more difficult from the existence of co-ordinate powers in the constitutions of the several provinces reserving the right of chartering local railways. But as regards the Dominion at large, they are of opinion that a general railway law would be more beneficial than special charters, provided such general law contained provisions for securing the public from undertakings either uncalled for by the community, or projected without adequate security for their bona fide prosecution.

Such provisions should comprise

"1st. The submission of plans and profiles of location of proposed lines, and estimate of cost to be filed for a certain time with the Railway Tribunal.

"2nd. Adequate proof of ability to complete the undertaking, either by subscription of share capital, or by a deposit with the government, subject to release as the works progress.

"3rd. No bonds to be issued until a certain specified proportion of the cost has been actually expended upon the work.

"4th. The operation of such general law to be excluded from any part of the Dominion, wherein parliament has forbidden the construction of railways, during such period as the prohibition may exist.

All respectfully submitted.

(Signed) A. T. GALT, Chairman
COLLINGWOOD SCHREIBER,
GEORGE MORSEY,
E. R. BURFF,
M. S. LONERGAN, Secretary.

Montreal, 14th January, 1888.

The Northern and Grand Trunk.

The London correspondent of the *Toronto Globe* writes about the Grand Trunk and Northern amalgamation meetings as follows:

LONDON, Feb. 25. The readers of *The Globe* will have learned without surprise from my cable on Thursday, that the scheme for the amalgamation of the Northern Railway with the Grand Trunk has been formally ratified by the bondholders and shareholders in the several companies. The special meetings called for this purpose were held simultaneously on Thursday afternoon. In the case of the Grand Trunk all went merry as a marriage bell. Sir Henry Tyler elaborated the statement distributed among the shareholders, of which I sent you a summary last week, and in which the benefits the new scheme would confer were fully described. He stated that in 1879, when he was in Canada, the Hamilton & North Western railway was about to be opened for traffic, and Mr. Hickson and he were then negotiating with certain parties connected with it with the possibility of making it part of the Grand Trunk system. At the end of 1879 the Hamilton Company made an agreement with the Northern Company for a union for twenty-one years. Those two companies had been worked together since, more or less harmoniously, but from time to time there had been certain differences between them. Other proposals had since been made with the object of

bringing about a union of the three companies, and at length the other parties had been found not only willing but anxious for it. Since the agreement had been signed there had been surprising unanimity of opinion, not only among the Grand Trunk, the Northern, the Hamilton and the Great Western proprietors, but also in the Dominion, as to the advantages of the union. They had received proxies representing 2,075 votes and £6,000,000 of stock in favor of the proposal, while only one proxy had been received against it. The advantages of the union to the Grand Trunk Company were these—a free and increased interchange of traffic at Toronto and other places between the three systems; an interchange of traffic between the Canadian Pacific and the Grand Trunk systems on what, he hoped, might be beneficial terms to both companies, with a very important connection, undoubtedly, at Nipissing Junction, which led, by the Canadian Pacific line, to Sault Ste. Marie, a very important port, and which also led to Wumpeg and to the Pacific coast. He hoped the amalgamation would not be a source of estrangement with the Canadian Pacific, but that, on the contrary, it might be a bond of union between them. The Grand Trunk Company would own the greater part of the railway, the only available railway between Niagara and the Sault, and they would be most happy, as he had stated in a letter to Sir George Stephen, to make arrangements with the Canadian Pacific Company for carrying traffic between the Sault and Niagara. Sir George Stephen had told him that the Canadian Pacific Company had no objection to the Grand Trunk Company going to the Sault. Another advantage to the company of the union would be that the competition for lumber traffic which had formerly existed with the Northern Company, would be avoided; and they would also obtain the property of that company at Toronto, which they very much required for working their traffic. Considerable economies in the working would be effected; and the £74,500 which they had held for a long time in the preference stock of the Hamilton Co. would become available at once. These were the advantages to the company, but the arrangement was also a very fair one for the other companies. The agreement now submitted really took the form of a new Act for the united company, which would comprise 4,000 miles of railway with a capital of £54,000,000. As to the actual terms of the fusion the Northern and Hamilton companies had in the past paid their own fixed charges, so that there was no liability with respect to those charges. The preference stocks of the two companies amounted to £320,000, (of which £74,500 belonged to the Grand Trunk Company), and those stocks would be entitled to a dividend equal to that paid on the Grand Trunk first preference stock up to 3 per cent., and to a further dividend equal to that paid on the Grand Trunk second preference stock up to 3 per cent. They would be able to save that out of the conversion of the securities. The ordinary stocks of the Northern and Hamilton companies would be put on exactly the same footing as that of the Grand Trunk Company. He hoped there would be no opposition to the

scheme, for it was advantageous to the Grand Trunk Company and beneficial to the other companies, to the districts through which the railways ran, and to the Dominion, whose interests was the interests of the company. He hoped it would also be beneficial to the Canadian Pacific Company, and the less rivalry between that company and themselves the better.

The resolution ratifying the agreement on the part of the Grand Trunk was supported by three shareholders who invariably "want to say just a few words" at every Grand Trunk meeting, but whose views are usually in utter conflict. On this occasion, however, Messrs. Landau, Abbott and Grimshaw buried the hatchet and united in support of the Board's proposal. Mr. Grimshaw, it is true, condemned the addition of Messrs. Lethbridge and Ford to the directorate of the Grand Trunk, but this point was fully met by Sir Henry Tyler in a brief speech in reply, and the resolution was unanimously adopted.

At the Northern meeting the same harmony did not prevail. The directors evidently resented the interposition of the Hon. J. B. Robinson. After an explanation of the scheme and its advantages by Mr. William Ford, chairman, who stated that the proxies received by the board amounted to almost £630,000, and after Mr. Lethbridge had read a letter from the Right Hon. W. H. Smith, the largest proprietor, strongly approved the proposed arrangement, Mr. Robinson addressed the meeting. However, he had no sooner stated that he appeared on behalf of the City of Toronto to point out that no time had been allowed under the scheme for the full consideration of the important interests it involved, than the chairman intervened to announce the receipt of a cable stating that the Toronto Council had withdrawn their opposition and cancelled Mr. Robinson's instructions. Mr. Robinson replied by expressing his pleasure at receiving similar news, but went on to explain, however, that he appeared there also on behalf of the ordinary shareholders of the line, whose interests had not been sufficiently protected. The chairman evidently thought that the time had come to intervene again.

Some sharp sparring ensued between him and Mr. Robinson, in the course of which the latter affirmed that last year's working really showed a net revenue sufficient to pay 5 per cent. to all the Northern proprietors.

"Perfect nonsense," said the chairman, and a further altercation resulted in Mr. Robinson being asked whether he intended to move a resolution or not. It is needless to record all the incidents of the dispute, the explanation of which plainly was that the chairman and his co-directors were evidently thinking more of the bondholders than of the ordinary shareholders. The meeting was told that Mr. Robinson held only £80 of stock, and the total value of proxies he held, if valid, was £2,258 ordinary stocks, against £86,340 stock held by the board. Though some of the audience showed a desire that Mr. Robinson should be allowed to continue his observations, the chairman applied the cloture in a mild form. As a protest against this treatment Mr. Robinson announced that he should vote

against the scheme, though personally he was in favor of the amalgamation. A poll was accordingly taken and while in progress an opportunity was given for Mr. Robinson to continue his remarks. The suggestion was thrown out that Mr. Robinson should withdraw his opposition so that the proceedings might be unanimous, but Mr. Robinson flatly declined to take this course. The chairman then announced that Mr. Robinson did not hold sufficient stock to entitle him to vote, and that the proxies received from him were unstamped and therefore could not be accepted. There was consequently no valid opposition to the resolution, but as the result of the poll it was stated that some 3,000 votes had been cast in favor of the resolution.

The James' Bay Road.

THE following is from the *Toronto World*: "That as it is highly important in the commercial interests of this city that the first section of the Nipissing and James' Bay Railway from Lake Nipissing to Lake Temiscaming should be proceeded with at once, opening up as it will the trade of the city and of Western and Northern Ontario, the council petition the Lieutenant Governor in Council asking for a grant to the railway, and that the mayor, Ald. Hallam, McMillan, Carlyle, Gibbs, Baxter, Hewitt, be a deputation to urge this upon the government."

This motion was introduced by Ald. (St. Andrew's) Carlyle and Ald. Hallam at a meeting of the city council. It was carried unanimously.

The scheme is one deserving of encouragement. The promoters are not urging for the completion at once of the whole length of the road, but only the first section of 80 miles. This section will link North Bay with Lake Temiscaming, and will open up a rich farming country. Mr. Nevin, the surveyor-in-chief, says that in the ten townships laid out on the west side of the lake by the Ontario Government, there is not 200 acres of poor land. On the east side (the Quebec side) there is already a large settlement. Colonization companies are in operation, and the French community is being constantly augmented in numbers. While the Quebec people are taking advantage of these fine lands, it is thought that the Ontario people should be equally alive to their interests.

Along the route of the proposed line there are some lead mines which promise good returns if developed. Counting the land for six miles on each side of the line as being opened for settlement, the extent of the territory made available will be over 300,000 acres. The temperature of the Temiscaming district does not vary much from that of this section of the province. All kinds of grain are grown, and vegetables arrive at maturity at about the same season as they do here. The promoters claim that this railway scheme should be supported on the colonization road basis. The cost of construction per mile is estimated at \$18,000, and a delegation will wait on the Attorney General to request the Government to bear part of the expense.

The total mileage of the proposed line is 350 miles. It will, when completed, open a

direct line of communication between Toronto and James' Bay. The promoters of the railway are confident of developing great mineral wealth in the vicinity of James' Bay. It has been ascertained that there are large deposits of anthracite coal in this region. With this line in operation Torontonians need not have empty coal bins even though the Yankee retaliatory bill is put into force. The coal and iron deposits found there have led Prof. Bell, of the Dominion Geological Survey, to declare his belief that some day the James' Bay district will be the Pennsylvania of Canada.

Stoves in Cars.

THE Canadian Pacific Railway is experimenting to determine the best and safest means of heating their railway cars. Manager Van Horne has decided that the car stove must not "go" yet for a while. One of the C. P. R. trains between here and Montreal has been fitted up with Jameson's automatic safety appliance. The invention will be given a fair trial.

This appliance can be attached to any passenger coach in connection with the different systems of heating and lighting now in universal use, and, it is claimed, makes it practically impossible for the car to take fire in case of any accident to the train, while no ordinary shunting or oscillation of the car will affect it in any way.

There is no pressure in the reservoir of the appliance until an accident takes place. This will automatically unite the chemicals, which will instantly generate carbonic acid gas, and force the fluid into the heater upon the coal; at the same time a jet of gas will be forced into each lamp, instantly extinguishing the light; while such a small quantity is required and used that it will not affect the passengers in any way. The International Railway is also experimenting with the appliance.

Too Much Title.

"SPEAKING of titles of railroad men," said a well-known Toledo man to-day, "did you ever notice how much the same title may vary in the duties it implies on different roads? The General Superintendent of one road may have a position that would be called Division Superintendent on another. On some roads the master of transportation has the authority of a general manager on another road, while on still others his title would be Train Master. The Traffic Manager on some lines has the authority of a General Manager on others he may be equal to that of General Freight Agent, and so on, through a long list. But speaking of titles reminds me of a story told on D. W. Caldwell, now Receiver of the Nickel Plate. At one time he was attached to the Baltimore & Ohio, and when the proof of his first time card came in he found that he had signed it this way: 'D. W. Caldwell, A. M. of T., C. O. D., B. & O. R. R.' This meant Assistant Master of Transportation, Central Ohio Division, Baltimore & Ohio Railroad. He studied the long row of initials a while and then declared it was altogether

too much title to suit him, and he left the road. Sometimes the title makes a railroad man top heavy." *Toledo Blade.*

That Rotary Motion Engine.

AN English paper says: "An invention, which in the opinion of some eminent scientists and practical engineers will revolutionize the construction of all sorts of steam engines, has been patented by the Rev. Dr. Jones, of Curdworth, near Birmingham. Experiments made recently in the presence of Lord Norton and a company of engineers and some representatives of the press showed that by means of it 68 horse-power could be extracted from a 1 horse-power boiler working at 60 lbs. pressure. The principle of the invention is rotary motion, which is substituted for the reciprocative motion of present-day engines."

Referring to this the *National Car and Locomotive Builder* says: "From which we infer that the ordinary English reporter is about as credulous on mechanical matters as his prototype in this country. We have enjoyed the privilege of investigating the operation of several engines with rotary motion, and they all had one strongly developed characteristic, which was the rapid way they could use up steam. If the newest engine that has come to revolutionize the construction of all sorts of steam engines above referred to showed one horse-power by means of a 68 horse boiler we would credit the performance; but to make the figures read the other way is a story fit only for clergymen and maimes to believe."

A Moscow, Russia, correspondent of the *Cleveland Leader*, in describing railway travel in Russia, says: "The stations are commodious and comfortable. The fastest express trains, which make about twenty miles an hour, stop at every station from five to forty minutes. The guard comes to your carriage door when the train stops, opens it, and tells how long the stop will be. He also points to the restaurant hard by, and tells you what can be purchased, and, further, that there is ample time. It is probable that there is a commission arrangement, or all the restaurants are run by the company. For a run between two cities distant like New York and Washington, or New York and Boston, which occupy five and a half or six hours in America, a day or night of twelve to fourteen hours is consumed. There are seldom closets or drinking water, or similar accommodations. At every station, day or night, old women or children visit the carriages and sell drinking water."

THE Jenkins Live Poultry Car company has been organized in Chicago for the purpose of building and operating cars designed for the shipment of live poultry. The cars have five decks with twenty compartments in which the live fowls are packed. They are open network sides with storm curtains to be used when needed. Mr. W. S. Weed, General Freight Agent of the Toledo, St. Louis & Kansas City road, is one of the directors of the company.

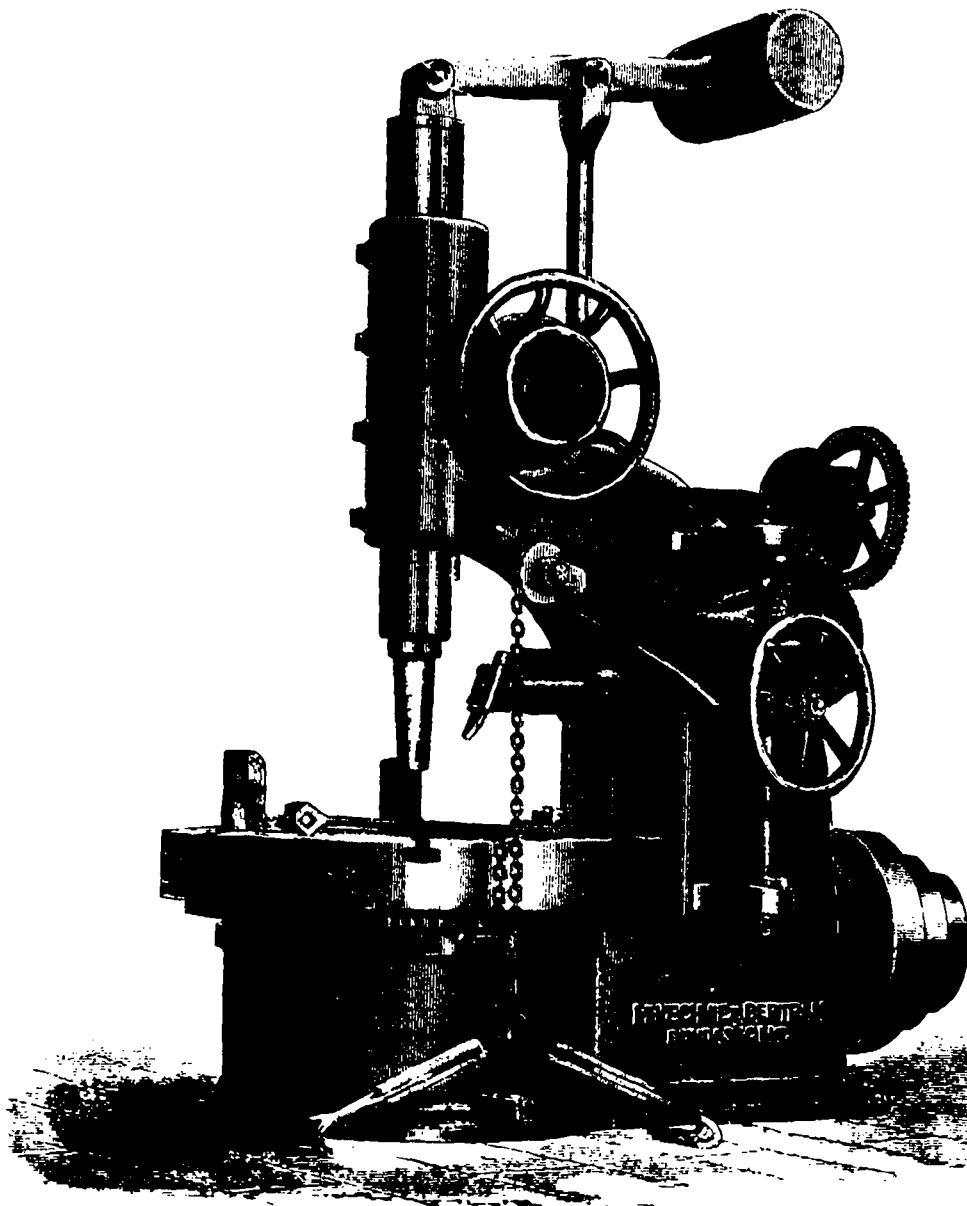
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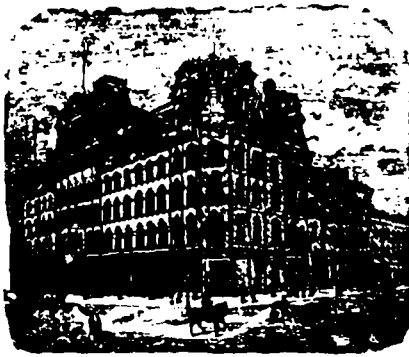
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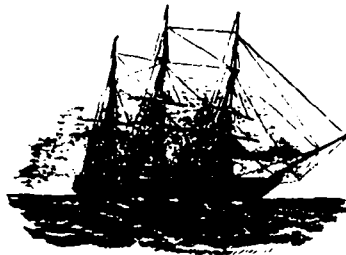
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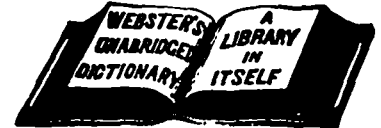
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