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VOL. III. No. 10.

OCTOBER, 1888.

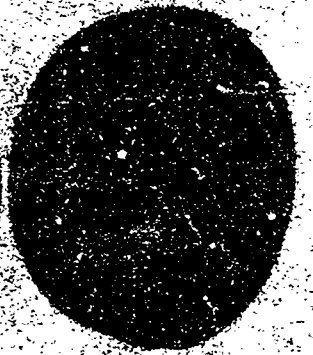
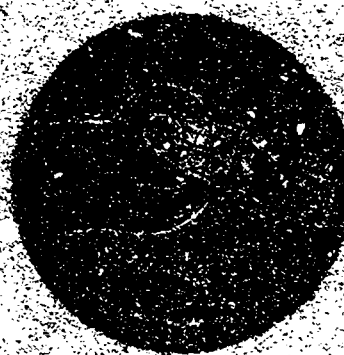
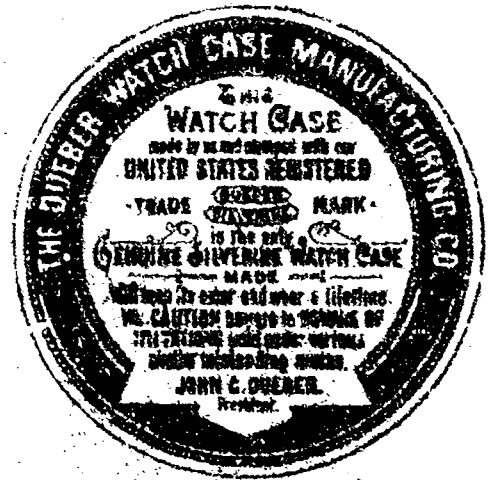
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# RAILWAY LIFE

A MONTHLY JOURNAL  
CANADIAN

DEVOTED TO  
RAILWAY INTERESTS

Vol. III.]

TORONTO, ONT., OCTOBER, 1888.

[No. 10.]

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## A CHANGE OF SYSTEM.

WITH this issue, RAILWAY LIFE completes its term under the old regime. The proprietary will remain the same, but unencumbered by relationships of the past. Our Mr. A. C. Campbell will in future have the editorial and business management of the paper, and will give his whole time to the work.

In order to give the journal a fair start under new auspices, the present issue has been delayed until the 1st October so as to begin the month even. To make up for lapsed issues and for delay in the past, three months will be added to the term of each subscriber without extra charge. RAILWAY LIFE will hereafter be in the hands of our subscribers everywhere in the first week of each month.

Important changes in the editorial management will take place. As rapidly as possible, a corps of correspondents in the railway centres of the Dominion will be organized, so that the events of our railway world may be chronicled as they happen. Efforts will be

made to secure the assistance of the many able men connected with railways in Canada to write or edit papers of interest to Canadians. In this relation, arrangements have already been made for a series of papers on Canadian inventions in connection with railways, to be edited by Mr. Barnett, Works Superintendent G. T. R., Stratford. These papers will be illustrated with cuts of the various improvements, and, wherever possible, with portraits of the inventors. A series of practical shop articles have also been arranged for, to be contributed by Mr. R. Patterson, Locomotive Foreman G. T. R.; and illustrated with diagrams, etc., wherever necessary. Other features will be added from time to time, with a view to constantly maintaining the interest in the paper.

Special inducements will be offered to those sending in clubs of subscribers, details of which will be given in future issues.

RAILWAY LIFE has always been the best-printed paper in the Dominion. No effort will be spared to make it the best and brightest class periodical on the continent.

A. C. CAMPBELL. W. B. CAMPBELL.

THE roadmasters, in convention at Boston pronounced in favor of rails not less than seventy-two pounds in weight per yard.

THE largest case of goods that ever left the United Kingdom was shipped from London, recently, in the steamer "Wilamia." It contained a composite railway carriage, made by Messrs. Brown, Marshall & Company, of Birmingham for the Melbourne Exhibition. At the termination of the exhibition the carriage will be purchased by the Victorian Government for use on the state railways. The case containing the railway carriage was thirty-one feet long, ten feet wide, and weighed sixteen and a half tons.

THE Hudson Bay railway scheme on which a little grading was done last year is again being agitated. Some American capitalists headed by a well-known contractor went to Winnipeg a few days ago to make a proposition for building the road, but it is stated that they were so coolly received by the Manitoban Government that they returned without accomplishing anything. With a direct connection with American railways in Dakota now assured, in addition to the Canadian Pacific rail and water route, it is not apparent that Manitoba has any pressing need for a summer-only line to Hudson's Bay.—*Railway Age.*

AMONGST the attractions of the forthcoming exhibition at Paris will be a veritable "belt line" of railroad, by means of which visitors will be enabled to make a tour of the exhibition grounds in the Champ-de-Mars without fatigue. The endless train will consist of 400 platform cars somewhat similar to those used for freight, the line being sunk so that the floor of the cars will be exactly level with the ground. The train will be run at a sufficiently low speed to enable most people to get on and off whilst it is in motion, but to enable elderly people, females and children to mount, descend, or pass over the moving platform, there will be stoppages of fifteen seconds every minute. The motive power will be electricity.

"Change here for Beersheba, Dan and Jericho," will soon be a sentence that will tax the pronunciation of Israelitish brakemen, for the London *Engineer* states that the railroad, which it appears is actually to be built between Jerusalem and the Mediterranean, will commence at the port of Jaffa, and run in a southeasterly direction by Yazur, Beit-Dejan, Ludiel, Yalo, Soba and Kustul to Jerusalem. Its length will be thirty-three miles. The construction will be attended with engineering difficulties in consequence of the barren and hilly nature of the country through which the line will run. Jerusalem is situated some 2,624 feet above the level of the sea, and the territory in its vicinity will tax the ingenuity of the engineer.

## Grand Trunk Extensions.

THE special commercial edition of the Montreal *Herald*, a valuable publication, is a well-written and very useful compendium of the business of the Canadian metropolis. This edition contains a full account of the history of the Grand Trunk from which the following is extracted:—

In 1874 a change of management was effected, Mr. Bydges being succeeded by Mr. Joseph Hickson. Shortly after the latter gentleman's assumption of office the gauge of the road was changed throughout so as to bring it into harmony with the lines in the United States. This was necessarily a costly matter, as steel rails were also adopted, but from a business point of view the advantages of the change were very great. At the commencement of the present decade dividends were paid in full on the first and second preference stock and in part upon the third. The Great Western railway from Niagara to Detroit, with a link running to Toronto, has been acquired, adding a total mileage to the system of one thousand miles. Of the earnings it was determined to give seventy per cent. of the net earnings to the Grand Trunk and thirty to the Western. In the year 1878 the Government took over the Riviere du Loup section, and with the funds a great deal was added to the western portion of the line, and direct communication was effected with Chicago in the face of the most obstinate opposition by some of the most wealthy capitalists and railway men of the United States. The Chicago and Grand Trunk Railway, which connects the system with Chicago, is under the management of Mr. W. J. Spicer, for many years general-superintendent of the G. T. R., and right-hand man of Mr. Hickson, in Montreal. Since his appointment to the general managership of the C. & G. T., Mr. Spicer has had many flattering offers from American roads, but has remained loyal to the great system whose service he left England to enter upon. Both the Vanderbilt and Gould systems opposed Mr. Hickson's efforts to the utmost, but he finally succeeded in attaining his object, and his conduct of the negotiations has always been regarded as a master-piece of railway zeal and enterprise. The Northern railway system has lately been obtained by the company giving further connections on Lake Huron and elsewhere. The mileage is about 450. The connections of the line have latterly been still further increased by the construction of a line from Fort Covington to Massena Springs in the State of New York, a distance of some twenty-five miles. This gives the line a connection with a large system of railways in the State of New York, the Rome, Watertown and Ogdensburg in particular. A new communication with the west is by this obtained. Another link from Beauharnois to Valleyfield is of use as a feeder.

The commercial advance of the Grand Trunk and the increasing demands made upon its resources necessitate the double tracking of the line throughout its entire length, and this work is being proceeded with as rapidly as the finances of the company render it possible, some sections being already completed.

## Patent Secrets.

THE following applies to the United States, but as nearly all Canadian inventors seek American patents, it will be read with interest:

Every inventor who takes out a patent, does so under the impression that by so doing his secret is safe, and he will be protected in the manufacture of the article against infringements, or the ingenious imitations of others.

Now the fact is, that as soon as a patent is granted, it, together with the claim upon which it is granted, is published, and is no longer a secret, as any one can easily learn what the claim covers, and with this information can go to work to improve upon it, and if successful produces an article that is more valuable, and is a successful competitor against the original, and the poor inventor finds his patents of little value.

In order to protect themselves against such thievishness, many inventors have taken advantage of the system of patent law, which allows a man to file his application and pay a certain amount, which secures him for a term of four years, without taking out his final papers and having his patent published, and his claim made public. At the end of this four years he can renew his application for another term of equal length. In this way his secret is safe, for the patent examiners and those in charge of the matter are under heavy bonds to the government not to divulge the secrets or claims of the applicant for a patent, and those who would steal the patent, or attempt to imitate it either in part or as a whole, dare not do so, not knowing what is covered by the claims of the inventor.—*Manfr's Gazette*.

## C. P. R. Montreal Station.

THE Montreal *Herald* commercial edition in the course of a history of the Canadian Pacific system, says:—This magnificent depot, now in course of construction on Windsor, Osborne and Donegani streets, will be a credit to the railway and an ornament to the city, and will hold first place among Montreal's costly structures. On the first named street it will have frontage of 200 feet, extending from Osborne to Donegani streets. This will be, when finished, one of the finest railway stations on the continent. The waiting rooms will front on Windsor street, but be level with Osborne street. The train house will be ninety feet wide and 500 in length. The tracks on which the trains will enter the station will be eighteen feet over the level of Donegani and Windsor streets. The principal entrance will be on Donegani street, where a long and commodious carriage way will be roofed in. On the corner of Donegani and Windsor streets a magnificent tower will be built, ninety feet on the front of Windsor and seventy feet on Donegani street, and rising to an altitude of 204 feet. Six stories of this tower will be used for offices and four others in the Osborne street wing. This will afford accommodation for the headquarter office of the company. The structure will be built of Scottish stone in the style of architecture generally known as "Scottish masonry," imposing in style, but

simple. Kitchens, dining-rooms and quarters fitted up specially for immigrants are in the design, and the station will be an ornament to the city and a fitting terminus for so great a line in so great a city. It has been the aim of the company to make it such, and it has succeeded if the plans be faithfully carried out. The tracks will not run out of the city on the level, but on an elevated trestle work of iron.

## Advice to Milwaukee.

RAILROAD *Topics*, a thoroughly "live" journal has the following:—

The latest scheme of the Canadian Pacific, that of extending the "true trans-continental" system to Milwaukee is, we are grieved to learn, being looked upon with much disfavor by railroad men throughout the North-west. Even the intellectual, enlightened and enterprising business people of Milwaukee are opposed to it. The latter are men of peace, and being such are opposed to war. They fear that any additional railroad facilities at Milwaukee would make the Badger City the seat of all future railroad wars in the North-west. So they have applied themselves earnestly to the task of belittling and discouraging a unique, international and latitudinal-continental railroad scheme of colossal magnitude and importance.

They seem not to have acquainted themselves with the fact that the proposed Milwaukee acquisition is intended only as the initial section of an all-rail project, which will, in the near future, open up direct communication between Hudson Bay to the Mosquito Coast, and which will make the Badger City, itself, the half way house of the entire system.

If the Milwaukians are possessed of only a small share of the native shrewdness and business tact with which they are usually credited, they will lose no time in supplementing in every possible way the sublime conception and the incomparable and irresistible activity of the Canadian Pacific management.

Really there is no point on the entire route, not even Chicago herself, better fitted by nature as a stop over point for our long estranged brothers of the continental extremities, and we may be permitted to remark, that Milwaukians to make their ground doubly sure, should add to the present splendid attractions of their city by opening a few first-class bear gardens and bull rings, so that the Eskimo and Carribean greasers, when they ramble up and down the new road can enjoy their native sports under the cool, refreshing influences of Milwaukee's famous product.

Apart from these minor considerations is the belief now generally entertained, that the invasion of more American territory by the great "true trans-continental" line can only result in the obliteration of the sentimental and misleading boundary line. The latter is at best only a parallel line without roadbed or equipment, and without equipment, and without a revenue or the slightest prospect of one—simply the miserable and ridiculous makeshift of a handful of clumsy, antiquated and long forgotten politicians—a makeshift that has given the people of this North American

continent much serious trouble in the past, and which is now causing them much anxiety for the future.

Let us receive our enterprising neighbors in a manner becoming a great, generous and hospitable people; let us extend to them the benefits and blessings which we enjoy under the fostering care of the Interstate Commission. And that their happiness may be complete, let us hope that they will soon be able to extend their system down into Mississippi, for, in addition to the Railroad Commission of that State can and doubtless will afford them wholesale assistance in making up the rate schedule for the Southern Division of the "true continental."

### The English Speed Contest.

THE great effort to reduce the time on the regular run from London to Edinburgh referred to in the last issue of RAILWAY LIFE does not meet with the full approval of the authorities upon the subject of railway work. Here is what the *Railway Times* has to say on the subject:—Since we wrote on this subject last week the plot has further thickened, and each of the competitors have achieved a record of rather more than 7½ hours for the journey north, in place of the eight hours apportioned by their recently issued time-table; the Great Northern having beaten the North-Western by six minutes thus far at the highest rate of speed on either side. At the same time the fact that neither competitor feels altogether happy over the profitless contest is conclusively shown by the announcement just made from the 31st inst., the extra-speed trains will be discontinued on both routes. At the London and North Western meeting, Sir R. Moon essayed to accuse Lord Colville of poisoning the stream—as did the wolf the lamb in the fable—and of starting a competitive race which, we have already shown, had been latterly inaugurated by himself. Nor did the general public seem to be much more impressed by the advantages of the movement. The silly scason, with all its imbecilities and "considerations of space," is upon us, and yet we have no gushing letters in the press enlarging upon the "boom" thus bestowed upon travelers to the north. On the contrary, there is an almost *consensus* of opinion that it is a piece of splendid folly, for which nobody asked and by which hardly any one is benefited, and which can only result in undue wear and tear to the line and rolling stock and in corresponding loss to the proprietors. A triumph of mechanical skill is not necessarily a public advantage; and after all, we are reminded that there is nothing new in the fact of engines being capable of such a speed as that noted above, the Great Western having, indeed, forty years ago been the pioneer of similar flights, although only for comparatively short distances, presumably owing to the inherent objections to carrying them out as a regular system, prominent amongst which must be reckoned the prosaic influence of wind and weather. A sensible and general rearrangement of the services in all particulars is far more important in the eyes of the public than

any sensational rate of speed between particular given points by one or two "accelerated specials;" and the practical isolation of cert<sup>in</sup> centres from their circumference is hardly compensated by the fact of nearly thirty trains between London and a few favored towns being duplicated and triplicated every day. When Messrs. Findlay, Oakley, and Tennant have settled, as we trust they will do, the "row" which, according to Sir R. Moon, has resulted from his Jehu-like policy, they may not unfitly turn their attention to such comparatively ignoble, but none the less important, considerations.

### A European Express System.

"John Hoey, president and manager of the Adams Express Company, has sailed for Europe, where he intends to establish an express system on the American plan."—*Associated Press*.

We are not aware that there is a vestige of truth in the above press dispatch, but the assertion will aptly serve to call attention to the "express system" now in vogue in Europe, as compared to the American express system.

There is probably nothing that more clearly illustrates the nature and characteristics of our American institutions, or more aptly exhibits the energy, progress and enterprise of the American people, than does the express service of the country at the present time. Born of a necessity, and from exceedingly small beginnings, it has grown up with the country, occupying nearly every mile of railroad, river and stage routes on this vast continent in one uniform system, and extending not only from ocean to ocean, but across both the Atlantic and Pacific to Europe and China.

Our purpose, however, is not to write up the express service of this country as it exists today, but to compare that system with the manner of doing the same business in Europe, and particularly in Great Britain. It has often been a surprise to us that some system of express service similar to ours, and yet not the same perhaps in all respects, had not been adopted in England years ago.

The kind of service performed in this country by the express companies is divided up in England between the banks, the post-office, parcel post, the railways, and a few firms in some of the principal cities, who merely gather up packages and employ the railways to carry and deliver them.

There are a number of what are known as foreign express companies, with offices in New York City, and the principal cities in England and on the Continent, such as Wells, Fargo & Co., Baldwin & Co., C. B. Richards & Bros., Morris & Co., and others. These firms pack their goods in large packing chests, seal them, and give them in charge to the steamers, which carry them over to Liverpool, Paris, Hamburg, etc., where they are delivered to their correspondents. These chests are then unpacked, and the small parcels are forwarded by the parcel post, and the larger ones by railway, to their destination; but no receipts are taken from the consignees upon their delivery, as we do.

The public has never been so well or so satisfactorily served in Great Britain as it has

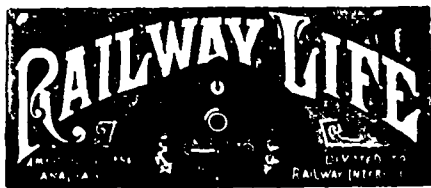
in this country, and a strife has existed for years between the post-office authorities and the railway managers for the control of the parcel package business. Numerous attempts have from time to time been made by Americans to establish the American express system in England, but the railway companies have persistently objected to its introduction, and every effort so far made has been a signal failure. To make our system a success in Great Britain, not more than two express companies should operate the entire railway system of that country. In this way it could be made a complete success, and prove more remunerative to both the railways and the express companies doing the business, and the public would be the gainers in having their packages more promptly and safely forwarded.

In France, the parcel package business is, we understand, done by a company subsidized by and under the control of the Government, while in Germany it is done in the "sealed mail" by the Government.

Some few years since a royal commission was appointed in England to inquire into, among other matters connected with the railway service, "the charges made by railway companies of Great Britain and Ireland for the conveyance of parcels, goods and merchandise, and into the inequality or difference of such charges under similar circumstances, and into the actual cost of such conveyance, and to report whether it would be practicable, by means of any change in the laws relative to railways, to effect a more convenient interchange of traffic between the several systems of railway, thereby effectually securing more safe, expeditious and cheap transit of merchandise and uniformity of charges." This commission sat for weeks, and took the testimony of all the principal railway managers, the authorities of the post-office department, and some of the principal merchants and shippers. The report was a very elaborate one, and wound up with the conclusion "that the time has arrived when railway companies should combine to devise some rapid and efficient system for the delivery of parcels."

There has been but little or no perceptible progress made in establishing an express service, and any attempt therefore to introduce the American system in Europe will be hailed as a public benefit and another recognition of American genius and enterprise.—*Exchange*.

THE *Railroad Gazette* says concerning the United States patent law:—The invention of a subordinate is not the property of his superior (*i. e.*, his employer), unless the inventor has been employed for the purpose of aiding his superior in perfecting an invention. The courts have uniformly held that an inventor has the right to call to his assistance any class of skilled aid and to realize the benefit of any improvements made by such skilled aid while in his employ. The law provides that a patent shall be issued to the first inventor. Hence, if the subordinate was first to invent, and can prove the facts, the patent granted to his superior would be void, and a new patent would issue to the subordinate after interference proceedings duly had in the Patent Office.



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Correspondence invited. Write on one side of paper only, and be specially careful with names and dates.

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 20th of the month.

W. B. CAMPBELL, (Publishers.  
A. C. CAMPBELL, )

Offices—61 Bay Street, Toronto.

TORONTO, OCTOBER, 1888.

#### THE PROPOSED FEDERATION.

MEETINGS have been held at different places in the west, with a view to bringing into actual operation the proposed federation of railway employees. While we wish the men all success in their efforts to better their condition, we trust that those who have the most influence in what may be called the discontented region will propose a better plan than this and will succeed in inducing the men to adopt it. It goes without saying that the wages of railway employees generally are too low, and that the work they have to do generally is too hard and involves too long hours. But this admitted, the question still remains, "What are you going to do about it?" The prompt, aggressive, easily-understood answer of the men who favor the present scheme is, "Federate."

While admitting all that can be said of the good wrought by trades unions, even through strikes, boycotts and all the enginery within their control, and while recognizing that the federation if carried

out would do a great deal of good, we at the same time express the earnest hope that another and, as we believe, better plan will be tried. Good as may be the federation, it is open to two objections. In the first place it is sure to do harm as well as good, and may be made to do far more harm than good. In the second place it is a contrivance the use of which involves immense loss of power, and even though it may accomplish all that could be hoped of it, the advantage would be achieved at a loss as compared with other means that might be employed.

The difficulty, we believe, is that the men do not take a sufficiently exalted view of the objects which they themselves are seeking to attain. What is wanted is justice—nothing more and nothing less. If the railway employees want more, all true men will unite in preventing them from getting it; if they ask less, they stultify themselves and invite defeat. Personal feeling of strife or rancor, desire for revenge or retaliation, can have no proper place in such a struggle as this, for these things tend to blind the eyes and cloud the judgment, obscuring justice from those who seek to be her votaries.

The difficulty is not that this or that railway will not pay its men a given figure, or will not treat them in a given way. For, however much the management would like to do, they are checked and hampered by the conditions in which they find themselves. Each road must meet the competition against it whatever phase it may take. There are some roads that in the effort to make both ends meet, or to put still larger dividends in the pockets of men who, in their private capacity, have competition to meet, initiate new phases in the work of competition. But whether the action is to meet something done by others or as an entirely new step, the companies are not more than immediately responsible for it. The difficulty is in the conditions, and these must be changed before a genuine reform can be brought about. Leave the conditions unchanged and, even though advantages may be won to day, they cannot be held except at the cost of watchfulness and energy, which it is not in human nature constantly to maintain. The fact is the present conditions are those of war, and people might almost as well be slaves at once as be compelled to work

like the Israelites of old, with the trowel in one hand and the sword in the other, from year's end to year's end. In so far as present conditions can be changed by political action, the railway men should act at the ballot box. But, beyond the laws and the work of those who enforce them, there is a force, silent but all-powerful, which railway men should enlist in their favor—the force of public opinion.

It is not merely in dictating the shape and color of a bonnet or a necktie that fashion and custom exert a powerful influence. That savagery known as "modern warfare" has its "laws" put down in no statute book, enforced by no courts, but not the less sufficient to guide resistlessly the action of the millions of official murderers who form the standing armies of Europe. Even when national and personal hatred and devilry of every kind are fiercest, not a single non-combatant will be intentionally hurt, unless, as often occurs in times of peace, a soldier gets drunk and loses his self-control. Any national council might make its constituents rich by a grand system of looting a conquered country, and no punishment could follow other than in a general cry of loathing and contempt from the rest of the world. But that of itself is sufficient to hold in check even the most conscienceless of the people who play with armies of living men as ordinary people do with the pieces on a checker-board.

Nor is it only in matters of fashion or of war that public opinion is supreme. There does not exist to-day a railway manager or responsible official who would dare to move a finger in opposition to educated, active, fully-expressed public sentiment. Every man who has ever been in a strike knows that the only two things necessary to quick and complete success are, first, to have a just cause, and second, to have the people generally know and admit that it is just. In the Burlington strike, as we have previously pointed out, the main object with General Manager Stone, and that to which he seemed to devote most attention, was to make known through the public press his side of the case. And Manager Stone showed in this that he had a level head. Had public sympathy been solidly and outspokenly against him, he could not have held his course for a single day.

There is no complaint more common

than that people will intermeddle in the affairs of others. This great human fact is not to be complained about if the meddling only takes the proper form of sympathy and brotherly assistance. Men are just as ready to take a hand in a quarrel in which they have no concern as they ever were in the world. And they will wade in for the side that they think is in the right of it. All that railway men ask is fair wages and fair treatment, and the great big world stands ready to see that they get it, if only the world gets any kind of a chance to take a hand in the row.

All we urge is that railway employees, instead of treating disputes as questions between themselves and their employers, which they can never be in any fair and just sense, should treat them as questions between certain citizens of the world and certain other citizens of the same. The tendency of people to help in righting a wrong, whether against themselves or others, may be depended upon to bring to the party which is in the right plenty of assistance.

It may be said that this cannot be done in practice. It certainly cannot be done so long as railway men themselves attempt a policy of isolation and of settling these questions according to the code of the labor duello. The present policy evidently suits the railway management well enough. They have their forces well in hand and can strike at a moment's notice, choosing the weakest spot. If the present style of things suits the railway management, this of itself is a fair indication, though not conclusive that the interests of the men lie in the very opposite direction.

Let the railway men federate if they will, but let it be a federation for the purpose of enlisting public sympathy in favor of any just cause they take up, not with a view to attempting the task of enforcing demands, the results of which, however great, are sure to be won at too dear a price.

#### RETALIATION.

It is a long time since there has arisen, concerning Canada, a question which has attracted such world-wide attention as the retaliation policy proposed by President Cleveland. There is hardly an important journal in any country but is having its say on the subject. In fact, considering the very

general attention paid to it, and the very serious consequences which everybody seemed to think might follow, the coolness with which Canadians generally viewed the situation must be at least surprising to people abroad. For this condition of the Canadian mind is not by any means due to lack of knowledge of public affairs, or lack of interest in them. There is no people in the world generally so well informed upon current public questions, especially those of their own country, as Canadians. It is because the people of Canada understand so well the whole circumstances of the affair that they know it to be a mere matter of bluff. A gun is levelled at their heads but they know that it is not loaded and that even if it were, the man who holds it would be afraid to pull the trigger because he would stand a good chance of being more hurt by the recoil than his opponent would by the charge.

The facts are about thus: This is the presidential year in the United States and everything that is done in that country is done with an eye to its effect upon the approaching contest. In anticipation of this, the Fisheries Question has been for some time "worked" by the opposing parties as a means of advancing their own ends. The Republicans had the advantage which always belongs to the party out of power—they were not responsible for the carrying out of any schemes they might find it necessary for party purposes to propose, nor need they be embarrassed by the failure of anything proposed by the government to carry out the object for which it might be intended. A couple of years ago, when feeling ran high in the United States over "outrages" by the Canadian Government upon American fishermen, the Republican Senate proposed that the president should be given power to suspend any or all trade from Canada into the United States if such things were repeated. The democrats could not as a matter of "good politics" refuse to accept the responsibility, and so the Retaliation Act was passed and was approved by the executive. The Democratic President was then on the horns of a dilemma. In case of further "outrages" he must either offend the New England fishermen and the England haters of all classes by failing to use his powers of retaliation, or he must

injure and offend the border cities of Detroit, Buffalo, and others, as well as a vast number of traders in the west, by suspending trade relations with Canada. But in the meantime the Fisheries Treaty was negotiated, and Canada having given up pretty nearly everything that was asked of her, there seemed reasonable ground for hoping that the whole question would be settled. But this would not suit the Republicans and it was a foregone conclusion that the Treaty would be rejected by the Senate, in which there is a Republican majority. And so it came about.

Then President Cleveland saw his chance and took it. He virtually said to the Republicans: "I am in favor of peace myself, but you people have the veto power over me in this matter and you have used it. Now if you insist upon our having trouble with our neighbors, let us resent in kind the injuries which you say they put upon us and at the same time strike them in such a way as to do ourselves a minimum of injury and them a maximum of harm. The fault you find with Canada is that she won't let American fishermen land and ship their fish from her ports by rail into our markets. Now Canadians at present have the privilege of importing goods from abroad in bond through our ports into their own without paying duty. The Retaliation Act, with which you have armed me, gives me no power to reach that trade in any way. Let us give the Canadians tit for tat and close our ports to them for all goods as they close them to our men in the matter of fish."

Thus, instead of assuming the responsibility, he very dexterously put the responsibility upon the Republicans. Canadian newspapers have very freely denounced Cleveland as a demagogue for his action. But we take the liberty of expressing the opinion that Canada never had a better friend than Grover Cleveland has proved himself to be in this very act. He knows that the Republicans do not mean war or retaliation or anything of that kind. He knows they will not dare to act upon the responsibility he puts upon them. But he knows also that if the responsibility of the Republicans in the matter is not made manifest they will go on with their sickening mouthings against Britain and Canada, stirring up further



ill-feeling, and leading to what passion, bitterness and further trouble, none can predict. It is not the man who plainly and manfully states his position and shows his determination to stand by it, that provokes trouble or is likely to get into a quarrel, but the ill-conditioned rogue who threatens and blusters and seeks to set other people by the ears. It may be that were the Democrats in the position of the Republicans they would play the same dirty game that the "Grand Old Party" has played in this fisheries-retaliation business. That does not alter the fact, however, that the Democrats have tried honestly and hard for peace. They wrung from Canada concessions which should have pleased any reasonable people and they were prepared to settle peacefully upon the basis agreed upon. But nothing would suit the Republicans except war, for which the Democrats might be held responsible. Cleveland has given them an opportunity to declare war and, of course, they will not take it. His action does more toward permanent and lasting peace than any other that could have been taken.

There is some speculation in Canada and elsewhere as to the effect upon Canadian railways of retaliation if it really comes into force. There was once a scientist who undertook to write a treatise upon the snakes in Ireland. He began with the sentence "There are no snakes in Ireland," and few people read further in his essay. In that way we would treat the question of the effect of retaliation upon Canadian railways—there will be no retaliation.

#### A VISITOR FROM ENGLAND.

WE were glad to receive a visit from Mr. Daniel Spencer, F.R.G.S., general secretary of the Railway Mission, and editor of the *Railway Signal*—the organ of the mission,—and of the *Christian Treasury*, the old and well-known religious monthly.

Mr. Spencer, who is a busy man, as can readily be imagined, has managed to spare time from his arduous duties to come to this continent, with a view to learning what is being done in the way of Christian and philanthropic work among the railway men here, and to assist in that work so far as his time will permit. In Montreal, Toronto, and other cities he has thus far visited here,

Mr. Spencer has been most cordially received by railway men, as well as by leading men in religious circles who are not in railway employment. During his stay in Toronto, Mr. Spencer met a great many people of all classes personally, and vastly more in public meetings of various kinds. In his addresses at the various meetings, some of them convened specially in his honor, Mr. Spencer has spoken with vigor and effect, leaving behind a good impression both as to his ability and earnestness as a speaker and as to his thorough interest in the work among railway men with which he is identified.

In the course of conversation Mr. Spencer gave, for the benefit of *RAILWAY LIFE*, some very interesting facts regarding the Railway Mission, of which he is the general secretary. This mission is a vast society, made up mainly, if not entirely, of prominent men among the great railway proprietary of Great Britain. The object is to improve by every means the spiritual, moral and social condition of the men in the railway service. The mission seeks to bring out in the men the best and most manly qualities, urging them to perform the duties they have undertaken to the best of their ability, at the same time impressing upon the proprietary and management of the several roads their responsibility in relation to the men to treat them as men and not as mere machines. At the head of the organization is the Earl of Aberdeen, while a number of titled and otherwise prominent people occupy the positions of vice-presidents. There is a central committee having charge of that part of the work relating to England, a Scotch committee, an Irish committee, and an Indian committee. The work is now being extended into South Africa, where the railway development is very rapid, and a part of the organization will be a committee for that country.

The mission is not by any means a mere preaching or tract-distributing organization. It maintains convalescent homes, where men who have suffered accident and have been discharged from hospital can rest for a couple of weeks before returning to work; it promotes the establishment of libraries at important points, and also has an excellent system of small libraries, by means of which even the minor places are reached with good, wholesome books,

which are changed as occasion may require; it has succeeded in getting many a poor, disabled trainman a good "inside job," when but for such intercession he would have been denied any place in the company's service, though injured in the discharge of his duty. The mission also carries on a very important work in general and technical education among the men, giving them every means available to make them more efficient in their work. The publication of the monthly journal, the *Railway Signal*, is no small part of the work of the mission. This is a twenty-four page paper, and is ably conducted and well printed. It has a circulation of over 10,000.

Mr. Spencer, during his stay here, met with many old friends and many who left the Old Land too early to meet himself, but who were not less glad to get from him the news he was able to give them concerning old comrades on the line "at home." He found that the Railway Men's Christian Association are doing efficiently the work that would be done by a branch of the mission were it established, and he does not seem to favor any immediate step in that direction. He said in answer to a question that he found a general feeling among railway men here that "Jack's as good as his master." From this and other remarks of his, it is evident that he recognizes the fact that the good accomplished by the Railway Mission in Britain must be accomplished here in a rather different way—by some means which would recognize the more democratic conditions which here prevail. The religious part of that work is being well done, as Mr. Spencer says, by the Railway Men's Christian Association, and the philanthropic or benefit part of the work will be done by the insurance and similar schemes of the different railway brotherhoods.

But the energy and devotion to duty of such men as Mr. Spencer, would be an advantage to both branches of this work, and it is to be hoped that the visit of this gentleman will do something to stir up the ablest among the railway men here to more far-reaching efforts than have hitherto been put forth.

WE have received from Mr. J. Francis Lee samples of his new Postal Accident Insurance Ticket. This invention is a most ingenious one, and one which will facilitate greatly the taking out of accident policies.

## Editorial Notes.

THE *Weekly Telegraph*, one of the most highly valued of our exchanges, has removed its office from La Porte City, Iowa, to Vinton, in the same state. Wherever it may have its office, we wish for the *Telegraph* long life and prosperity.

THE Manitoba and North-Western Railroad employees' third annual excursion took place at Arden on Friday, 17th August. There was a large attendance and the affair was a great success. RAILWAY LIFE was invited, but we regret that it was impossible for us to attend. Thanks for the kind invitation just the same.

THE Union & Southern Pacific is going to try the experiment of a cheap sleeping-car service between Council Bluffs, San Francisco and Los Angeles, each car to be in charge of a porter. If this enables anybody to escape the present extortion of the Pullman service, it will be a good thing.

MR. VAN HORNE says that the talk about his being knighted is all rot, that the Queen would never knight an American citizen. Is Mr. Van Horne an American citizen? If so, what is the matter with his "taking out his papers," as they say on the other side of the line.

THERE are thirty-one counties in Tennessee without railways. Yet the smart New Yorker, when he happens to pass through some remote part of Canada where the railway accommodation is not equal to that he has been accustomed on his trips to Albany, will write to the newspapers about the backwardness of Canada. You won't find any place in Canada with population to support a horse-car service where there is an area equal to thirty-one counties without railways.

ACCORDING to Poor's Manual, there was an increase of \$110,000,000 in the aggregate gross earnings of the railways of the United States in 1887 as compared with the previous year. The advance in the net earnings in the year was \$34,000,000. This means interest at 5 per cent. on \$680,000,000. But the increase in the liabilities was only

\$519,757,368, so that the earning power of the roads seems to be increasing more rapidly than the liabilities. Wonder if the Inter-state Law has anything to do with that.

MR. JOHN F. ENGLISH, the well known engineer who has had charge of the Baldwin locomotive interests in the long test with English locomotives in South America, has returned to the United States. He warns engineers against seeking the Atlantic Coast countries of the southern continent, where, he says, he knows of many native, English and American engineers running locomotives for \$35 a month.

EVEN yet it seems impossible to estimate the loss that will result to Manitoba and the North-West from the frosts which occurred shortly before the wheat crop was harvested. The estimates of loss vary from ten to fifty per cent. The reason why even those honestly desiring to get at the truth vary so greatly is because the frost was not by any means universal. It seems to have often happened that one field was left untouched, while an adjoining field was almost ruined. Some districts were almost unharmed, while in others the farmers saved little or nothing. In any case, however, the crop is a good one. But for the unfortunate frost it would have been even better than last year.

RAILWAY and other enterprises in Great Britain have suffered by reason of what is known as the "ornamental director" system. Bogus companies are formed, and, to dupe the public, titled people are made the officers, receiving a certain "consideration" therefor. In a recent case a certain Lord Montagu took £1,000 to become a member of a "committee of preliminary expenses" for a certain Anglo-Indian Industrial and Commercial Institution. The liquidator of the concern sued Lord Montagu to recover the money, and Mr. Justice Kay, before whom the case was tried, not only gave the case against the nobleman, but condemned in very strong terms such actions as that of which Lord Montagu had been guilty. By the way, it is strange that an Anglo-Indian institution with a Lord Montagu connected with it, did not revive in the

minds of Englishmen the famous Anglo-Bengalee managed by Tig Montague, Esq., of which Dickens gives such a fine account in "Martin Chuzzlewit."

A DIRECTOR of the Keely motor says that the inventor's friends in Philadelphia have already put up over \$100,000 to assist him in making his experiments. The four New York directors of the company have begun a suit to compel Keely to reveal his secret, which suit the Philadelphia directors resist. Keely's friends talk of getting up a company with \$12,000,000 capital stock, part of which would be used in buying out the recalcitrant New Yorkers. If nothing ever comes of this Keely motor business, it will deserve to rank in history as the most remarkable swindle of all the ages. Keely's friends evidently still believe in him and yet they do not know, and apparently do not want to know, the secret of the man who spends their money with such a lavish hand.

THE Industrial Exhibition at Toronto, from the 10th to the 22nd of September, was in every respect a grand success. There was a variation in the usual programme of the Industrial in that on the most important day of the whole fair—farmers' day—the weather was about as bad as could be imagined. Instead of seventy thousand people on the fair grounds that day, as had been anticipated, there were only about fifty thousand. The total attendance during the fair was close upon three hundred thousand people, a distinct advance upon any former year. The fair grows in interest and importance every year, and with increased accommodation and improvements, which will be made immediately upon securing it, will rival in its attractiveness some of the great exhibitions which large cities on the other side of the line get up for special occasions. A feature of the fair this year was the publication of a small daily paper, for gratuitous distribution on the grounds. This paper contained the daily programme and other valuable information regarding the fair. The publishers were the well-known Budget Printing and Publishing Company of this city. The little journal was well printed and the work of distribution was well and carefully done. A more ambitious effort in the same direction is promised for the next exhibition.

### Mr. Arthur on the C., B. & Q. Strike.

CHIEF ARTHUR, in his address at the reunion of the locomotive engineers in Detroit, said:

On all the railroads we have grievance committees. If any difficulty arises it is the duty of the committee to wait on each officer of the road from say the master-mechanic to the president. If no adjustment is secured, the chief executive of the order must be sent for, and he must take every honorable means to settle the difficulty. In this way we settled every case that has arisen in the past eleven years, until we came to General Manager Stone and Mr. Burleigh, of the "Q" road. We did not get all that we asked in each of these cases, but we bettered the condition of the men. I believe that where 10 per cent. increase is asked for, it is better for the men to take 5 per cent. than to strike. I don't believe in the "whole hog or none" principle. Employers have rights as well as employees. In these cases we made contracts which bound the roads to their agreements.

A year before the "Q" difficulty, we made a settlement with Mr. Potter, of the "Q." On the "Q" line men were receiving about \$1 per day less than men on parallel lines, as, for instance, the Chicago & North-western, from Chicago to Galesburg, paid \$4.37, the "Q," \$3.75. The men finally came together. They formulated a schedule. There were some things in the schedule that looked unreasonable on their face. The men are not lawyers, you know, and didn't know how to place things properly. Mr. Stone printed and spread broadcast over the country the schedule in its worst light and poisoned the minds of the public. The brotherhood wanted the schedule recognized and their families carried free. Mr. Stone refused to grant anything, or to hear the men. I was summoned, and the entire force of officers, with the exception of President Perkins of the road, were present. We took up the first proposition presented by the men. It was that the men be given a fair and impartial hearing before being discharged. That was laid aside temporarily. We only asked that where charges were preferred the men be not discharged without a hearing. We then took up the next proposition, for pay during delayed time. We claimed that if we were delayed for over two hours through no fault of our own that we should be given compensation. Mr. Stone submitted a proposition in lieu of this: we accepted it and then he immediately withdrew it. The men wanted 3.5 cents per mile on four-wheeled engines and 3.8 cents on eight-wheeled. Stone objected and I agreed to make it 3.5 cents on all engines. I showed him that this was the standard price through the country. He would not grant this, even. Then I said, this being the sticking point, if the men on your road strike, I will sanction it. But we decided to make another effort. We tried to reach President Perkins, who was in Boston, and telegraphed him plainly stating the status. He would not answer definitely. He would return to Chicago next week, he said. Had he asked us to wait until his return we would have waited. The men

had all along wanted to strike. Monday morning at 4 o'clock was the time at which the men could stop with least trouble to the road. We notified Mr. Stone of their determination to go out then, if no concessions were made. He said go ahead, and at 4 o'clock all but one crew between Chicago and the Rocky Mountains quit work. As a business proposition, where did the good judgment come in? They paid their new men \$4 per day and board. No one but an insane man would act as Stone did. Have they now a better class of men? Thieves and drunkards are among their employees. Of those who struck, some were tried and trusted employees before Stone wore pantaloons.

We discountenance all acts of violence. We condemn everything dishonorable. My advice to the men has been to be men. I never will, God being my helper, countenance anything that will bring disgrace or dishonor on our brotherhood. When you depart from this you may date the downfall of our Order.

### "The Father" of Railway Tours.

MR. THOMAS COOK, who still lives at a great old age, though, alas! blind, is the father of what may be called the era of excursions, though the great exhibition of 1851—the best of all our exhibitions—did a great deal to develop the new system all over the land. But Mr. Cook had instituted the railway excursion, with its reduced fares and other advantages. He was, as is well known, one of the temperance pioneers. In the Midland Counties, the temperance reformers were numerous and active. Mr. Thomas Cook lived in Leicester, where he has had his home ever since, and one day when there was to be a meeting at a neighboring town of temperance reformers, it entered into Mr. Cook's head that it would not be a bad idea to run a special train thence to the scene of the demonstration, if only the railway authorities could be got to see the matter in a proper light. As the railway in question was the Midland, whose directors and managers have ever been ready to promote anything that was for the public advantage, Mr. Cook did not plead in vain—an excursion train was run, the meeting was well attended, and the result was a great success. Encouraged by it, Mr. Cook ventured on further schemes. Why give to party what was meant for mankind? Why not let the general public share in the benefits of cheap excursions as well as the temperance reformers? There is fine country within a short distance of Leicester: why not let the weary workers in the mill, or at the loom, have a day in it? Why not take people cheaply to see the beauties of the Peak district or the art treasures of Chatsworth? Mr. Cook answered these questions in the affirmative, and the Midlands rejoiced with exceeding joy. The thing grew. Mr. Cook moved his headquarters to London, where he placed his son, as enthusiastic a temperance reformer and excursion promoter as himself. The railways all over the Midlands followed suit. Mr. Cook, however, extended his aims: he invaded the continent; he annexed America.

He opened up Egypt, and Palestine, and India, and now there is scarcely any part of the globe where his name is not known, where he does not send his patrons, where his coupons are not taken as readily as gold or Bank of England notes.—*Temperance Record.*

### Loyalty to the Company.

THAT the managing officers of a railway have it in their power to make the body of employes a willing and enthusiastic or a sullen and inefficient one, is true in the great majority of cases. We know a railway the employes of which were, at one time, as loyal to the road as ever soldiers were to their flag. Each one of them, from conductor and engineer down to the train "butcher," was as proud of wearing the uniform of that company as a soldier is of wearing the badge of some famous regiment with a bright record of battle and victory. These men were always "standing up" for the company. Its interests were their interests—they resented any criticism of its policy, and if labor troubles came to the surface around them they stood by the company—an unbroken body of loyal men. But after a while an entirely new management took control of the road, and in less than three years all this loyalty had disappeared! Instead of defending the management against the criticisms of the public with whom they came in contact, the employes either maintained a grim silence or joined in the fault-finding with curses, both loud and deep. And when labor troubles again arose, and labor agitators began their appeals to prejudice and discontent, they found a fertile soil for the sowing of an evil crop—a soil well prepared to bring forth a mischievous harvest. *Railway Telegraph.*

### The Employee's Creed.

Have faith in yourself;  
Under-rate no man;  
Respect your boss or, quit;  
Report no man for offense to yourself;  
Ask no odds of any man;  
Have patience with a green hand;  
Forget not the sick brother;  
Over-rate rather than under-rate competitors;  
Right is might when might is right;  
Mind your own business;  
Cut no man for mere temper;  
Care chiefly for the approbation of an honest conscience;  
Act to dignify human nature;  
Lament not what is incurable;  
Leave something to God if you believe in him. *W. H. P. in Exchange.*

A SLEEPING car porter on the Houston & Texas Central road, who showed considerable insolence to a passenger in the sleeper was thrown from the train in the middle of the prairie by General Passenger Agent Faulker, who happened to be on board.—*Exchange.*

Toronto as a Railway Centre.

Through the kindness of the *Globe* Printing Company, to whom we are indebted for the plate, we publish in this issue an interesting map showing the position of Toronto as a railway centre. This city holds its proud position as the greatest in this Province and

the first sod of which was turned in 1850. In the thirty-eight years since that time, an immense net-work of railways has been brought into existence, centring at this point, and pouring into the coffers of Toronto business men an immense stream of wealth. A glance at the map will show the advantageous position which Toronto occupies in relation to railway traffic. There is no development of

North-western by the Grand Trunk Railway was a most important stroke both for that company and for the city, as it will mean the more extensive use of connections both north and south, which have been comparatively neglected. The work on the Canadian Pacific Company's new track into the city from the east is progressing very rapidly. Important as this connection is of itself, it is made even



second in the Dominion, mainly by reason of the fact that its people early discerned the importance of the railway, and have always been ready to assist in every way in facilitating the building of roads, connecting with the city wherever reasonable need for them could be shown.

The earliest railway of any importance undertaken in Canada was to connect with Toronto—the Northern Railway of Canada,

this Province, no extension of settlement and business in the American and Canadian West and North-west but must bring traffic in larger and larger volume to this city.

Recognizing this, the two great railway systems of Canada—the Canadian Pacific and the Grand Trunk—are vying with each other in improving their connections here, and their facilities for handling traffic at this point. The recent acquirement of the Northern and

more momentous by reason of the fact that its competition carries with it the establishment of such facilities for handling traffic as will place the Canadian Pacific on a par with its great rival, so far as this city is concerned. And this is leaving out of sight for the moment the connection via Hamilton with the Canadian Pacific Lines in Western Ontario, which, it is generally understood, will shortly be made.

### About Engineers.

THERE is no brighter or better class paper in America than the *Locomotive Engineer*. The editor not only knows newspaper work, but he knows locomotive work as well. Here are three sample bits which will be of interest to those engineers, if there be such, who have not yet subscribed for the *Locomotive Engineer*, and to many others as well:

We recently saw a note written by an engineer to his M. M. that read: "I have already been on duty eighteen hours. If I go out this trip I cannot reach a terminal station until I have been on duty over thirty hours. This I cannot do and keep awake. I would rather be discharged for refusing to go out, than for having an accident for want of sleep—do not send for me until I have had ten hours of rest; I shall not go." This is the right stand to take—an ounce of prevention is worth a pound of cure. The officials of the companies hold men responsible for everything that happens on the road, regardless of the hours of rest he may have had.

**ENGINEERS WANTED.** A few years ago an engineer had fewer responsibilities, but took more risk. He had no air brake to take care of, but he might get killed for the want of one. If he wanted to stop bad he whistled "down brakes," put her in the "breechin," and waited for the brakemen to get in their work. Now every improvement puts more cares on his head and hand. He has the care of and handles a complicated brake, he is responsible for the observance of a thousand signals, the heat of the cars has been asked from his supply, and he will soon have another little engine and a dynamo to care for; yet he is only a laborer in a soft snap; anybody can take his place; you can teach men to run locomotives in school (?) He is getting pay that belongs to the conductor, because the conductor is responsible (for the tickets). These brazen beggars have the impudence to ask for three or four dollars a day while they have got pie in their lunch pails. Some people want the earth—the engineers are some people.

What this country wants is a new set of ready-made engineers. They might not run the trains with surprising regularity, but they could be depended to keep down the excess population.

**SPEAKING** of a newspaper report of a fast run which is credited wholly to the conductor, the *Locomotive Engineer* says:—Wonder what that useless luxury, called an engineer, was doing all the time "Conductor" Jordan and the thirty-nine were making their fast run. According to some authorities, the mere fact that a slick conductor is back in the chair car with his eagle eye on the rail, will just make a locomotive hum.

### Electric Railways.

ELECTRIC railways seem to have been attracting considerable attention in Washington of late, if we may judge from a recent debate in the United States Senate. In June last Congress passed a bill incorporating a railway

company in the District of Columbia, and empowering it to use any motive power approved by the commissioners. Electricity was determined upon by the company, and the commissioners approved their choice. Active work has since been progressing. Senators Hale and Dawes have examined the workings of an electric railway in Richmond, Va., the Maine Senator being favorably impressed therewith, while the Senator from Massachusetts apparently thought the system at least imperfect, to use no stronger word. Senator Vest took the floor in favor of electric railways, and Senator Teller voiced his belief that there was not a successfully operated electric road in the United States. He expressed sincere respect for the management of the electric line in Denver, and yet pronounced it to have been a failure in every sense of the word. The general discussion being of a rambling nature, ascending to telegraph wires, and descending to asphalt pavements, nothing of moment was accomplished. Emphatic expression was given, however, to vigorous hostility to overhead wires as an adjunct of street railways in populous cities.—*Railway World*.

### Don't Blame the G. P. R.

WE do not blame the Canadian Pacific for its desire to build up its own system at the expense of its rivals, and its readiness to run a freight train through an act of Congress. As soon as possible our national law-makers should either relax the restrictions by which the railways of the Republic are fettered, or bring foreign corporations desirous of sharing the same benefits to acknowledge the same authority. If the Canadian government were to enact some blundering legislation exposing its own lines to competition south of the great lakes and the St. Lawrence it would not be long before our railways would embrace the opportunity afforded. But "if" is an important monosyllable. There may be an abstract impossibility in supposing that the Dominion authorities might leave the Canadian Pacific naked and defenceless to its foes, but as a matter of fact they are not likely to do anything of the kind.—*Railway World*.

### Still Harping on the Competition.

ONE of the evil effects of the Interstate Commerce law upon the commerce of points along the Canadian border, where the competition of Canadian railroads, not subject to the law, is felt, is illustrated by the following, from the North-west to London (by Canadian routes) are ten cents a hundred lower than those via the New York route. This great advantage is gained through the agency of the new "Soo" railroad on the south shore of Lake Superior, built by the Minneapolis millers and the Canadian Pacific Railroad, which is not subject to the provisions of the Interstate Commerce law. It is manifest that interior points cannot stand up against such discrimination as this. Unless relief of some kind is to be had, the markets referred to must be abandoned to the millers of the North-west. There are two ways by which relief may be obtained. The build-

ing of a link of railway to connect Buffalo with the Canadian Pacific, which would place Buffalo in a position to enjoy all the benefits that will accrue from connection with this foreign road. We are informed that the advisability of adopting this course is under serious consideration. The other is by appeal to Congress. It would be an easy matter to place such restrictions upon property going through Canada that would deprive the Canadian route of the advantages it now enjoys. That something should be done, and that without unnecessary delay, must be apparent to any one who will take the trouble to study the situation." It would be a curious result of the Interstate law, if a complete system of North and South short line feeders should be built or acquired by the Canadian roads into the United States, to tap the principal points on our trunk lines and draw off our export trade. *Exchange*.

### Honest Wages the Best Policy.

THERE are reasons for believing that the railroads of the United States suffer immense losses by virtue of the cupidity of officials who think that they save money by reducing the pay of the employes below any proper standard of fair dealing. A case in point is given in the dining car service on various American roads, the estimate being that the losses of the service range from \$100 to \$600 a month, and it is reported that one Chicago line, figuring closely, found that the losses in one year footed up \$21,000. In a few instances small profits were made, as for instance the Pennsylvania lines during 1886 ascertained that the dining car service came out \$29.00 ahead. One Chicago road that showed a loss during the year of \$16,000 on its dining car service, believing that a profit could be made by running a dining car, concluded to experiment upon the idea of paying the manager of the car such a salary as would make stealing unprofitable. He heard of an exceptionally competent man who was out of employment, and sending for him secured his services. The proposition to this new official was that he was to receive three times as much yearly salary as during his previous engagements, but this was coupled with the condition that all supplies were to be bought for cash, all commissions on purchases were to accrue to the company instead of to the superintendent, as had been the custom, and all moneys whatever or from any source received were to be turned over to the company, the latter reserving the right to discharge the official on a month's notice without explanation. In other words, he was given a salary that not only paid him to be honest, but inspired him with zeal in watching the interests of his line. The new departure has had a test of eleven months. In more than one direction the results have been a surprise. The dining cars have acquired a reputation of giving a better menu, better cooked, better served than almost any other Chicago line, while in place of a deficit the accounts show a profit to the company close on to \$4,000."

It will be seen that this road the previous year lost \$16,000 by its dining car service. It

had hired cheap men, laboring under the delusion that cheap men are profitable, forgetting that as a general proposition men who are paid less than they esteem themselves worth, will, in ninety-five cases out of a hundred, pay themselves if they have half a chance. The road in question advanced the salary of the dining car manager to three times the amount he had ever received—paid him to be honest. Now the revelation, the \$16,000 loss of the previous year was overcome and a profit in eleven months of \$4,000 secured, and besides, the service was in all regards improved. If such reports do not point a moral, then facts are of no use to the business world. But the conclusion is, facts are of service, and when railroad men conclude to adopt the policy of paying fair wages to employees all along the line, honesty will take the place of speculation and what is quite as disastrous, a disregard of the pecuniary welfare of the owners of the road. Honest pay makes men honest. To be parsimonious, niggardly, unappreciative of men's services, never was and never will be a wise policy. —*Locomotive Firmer's Magazine.*

#### A Self-acting Semaphore.

MR. ROBERT THOMPSON, 91 Seaton Street, has something new which he proposes shortly to introduce to the railway world. It is an ingenious and yet simple device by the use of which, as applied in connection with the semaphore and switch systems on the various lines, will ensure against collisions and consequent loss of life and property. Perhaps it would be useless here to attempt a description of the invention without a wood cut illustrative of its several parts; for to those unacquainted with machinery it will be difficult to give an intelligent statement. But it will be an easy task, however, to state the purposes the invention will accomplish and the effects it will produce, as seen by the working of the model prepared by the inventor. The model has been made of wood, but when put to practical use the apparatus will be constructed entirely of iron.

In the first place there is an air cylinder, sixteen inches long and eighteen inches in circumference, which is situated about thirteen feet from the track. This cylinder receives one end of a horizontal bar extending to the track, and, en route, passing through a box four inches by eight inches square, and twelve inches high. The box is placed about one foot from the nearest rail, and low enough to avoid contact with passing cars. Projecting perpendicularly from it is a lever or bar, extending sufficiently high to reach a striking bar to be attached to the engine. Immediately in rear of the box is a windlass or winch, by means of which the horizontal bar is returned to position after having been displaced by the action of the striking and perpendicular bars. Behind the windlass is an iron framework enclosing two chains fastened within with iron pins. These chains control the semaphores, and are kept in position by running around grooves in two small wheels or pinions.

And now about the work accomplished by the invention. Every train, on entering the station, sets her own signals and in this man-

ner: The striking bar, referred to as attached to the locomotive, colliding with the perpendicular bar, has the effect of raising the semaphore arms before and behind the train, so that she is protected in front and rear. When she is ready to leave the switchman replaces the horizontal bar in position by two or three turns of the winch and inserts the pin which retains in place the chain controlling the semaphore in rear of the train. Then by simply placing his foot on a lever running the box, the semaphore drops while the protecting arm behind remains in position. No matter in what direction the train is about to proceed the same arrangements will suffice. In the case of an express train passing through without stoppage, the action of the striking bar, in connection with the placement of the pin, will drop the hitherto raised semaphore barring her way, while raising the semaphore she has left in rear of her. Between the box and the rail are two rods, termed preventative bars. These are connected with the switch at either side by a wire cable. In the event of siding a train the movement of the switch pulls the preventative bar under the horizontal bar before mentioned, and until the latter is replaced in position the semaphore signalling danger cannot be dropped again.

And now a word about the bridge signal, which is another point recommending the invention. Attached to the wire cable already spoken of, is a weight set in one of the chief supports of the bridge. In the event of a bridge being carried away by a freshet, or through any other cause, the weight descends, and by dragging the cable with it raises the semaphore at each end of the demolished structure, and thus signals the danger to any approaching train going up or down the railway line. Mr. Thompson, it may be added, is a Canadian, and was born in Mimico. He is a carpenter by trade. Mr. J. H. Venables, a gentleman who is generally credited with a thorough knowledge of railway mechanism, has examined the model and predicts that the invention will make a stir in railway circles.

#### Don Extension, C. P. R.

THE following is from the *Toronto Globe*:—The contractors on the Don extension of the C. P. R. say that the work of grading the road is progressing rapidly, but to an outsider everything as yet appears in a state of chaos. The line runs south from the main line of the O. & Q. along the east bank of the Don, until about three-quarters of a mile north of Winchester St., where the stream will be crossed by a massive iron trestle bridge. The distance from that point to the main line of the C. P. R. is two miles and a half, and Mr. J. W. Hendrie is the contractor for the grading of this section. The other portion of the branch which lies inside the city will be graded by the corporation. There are more engineering difficulties, the contractors say, in the two miles and a half north of Winchester Street than in fifteen miles of ordinary road. This arises from the high hills and deep ravines, necessitating an infinite amount of labor before a graded roadbed can be secured.

About 150 men are at work for Mr. Hendrie, with about eighty horses, a large number of waggons and sixty wheel scrapers. This force will shortly be increased by about 100 additional men. There are eleven sections on the line, each looked after by a foreman. Most of the men are lodged in camps, of which there are two. Mr. A. Scott contracts for one camp, where about fifty hands are provided for. Scott's camp is on the Don flats where the bridge is being built. It consists of three tents, one for eating and two for sleeping, and a little wooden shanty where most of the cooking is done. Fried pork is, of course, a staple in the camps, and when the men return from the heavy work in which they are engaged they seem to relish it exceedingly. The potatoes are generally cooked outside in a huge pot, which is placed over a fire built in a hole in the ground, dug out for the purpose. Water is got from springs along the banks of the Don and the men seem well pleased with their surroundings. Mr. Scott, however, has one great grievance, and it is this, he cordially dislikes boiled horse. In fact, it is very improbable that he could be tempted by the finest or the juiciest stake of horse meat that ever graced a Frenchman's table. It is little wonder then that when a horse has died a natural death, perhaps from starvation, he much objects to having it cooked in the vicinity of his camp. Therefore he denounces in unmeasured terms a certain establishment where these useful animals are boiled down, and declares that when the wind blows in his direction the men are unable to eat their meals.

Most of the navvies engaged on the road are of Irish nationality, but there are some Englishmen and one gang each of Italians and Swedes. The second camp, for which Mr. Stewart is the contractor, is located further north than Scott's and affords accommodation for about thirty men. Scott intends breaking up camp and moving into two large houses near Taylor's mills.

The bridge across the Don will be 1,150 feet long and of a most substantial character. Very little work appears to have been done towards its construction so far, but when once the iron work is commenced, rapid progress will be made. Two large stone abutments have been built at each end, and just now the work of making a foundation for the twenty-eight piers, which will support the structure, is being proceeded with. One difficulty which is being encountered is to find bottom. The valley of the Don is prolific of quicksand, and it is not known at present exactly how deep the excavations will have to be made which are to receive the stone foundations of the piers. A ten horse-power engine is used to manipulate a huge crane with which masses of stone are lifted and dumped into the excavations close to the western abutment of the bridge, where there is no quicksand. When these pieces of stone are in mid air it is not always easy for one unaccustomed to such work to tell exactly where they will land, and a stranger will sometimes find himself dodging a huge boulder which he imagined was on a course due northeast, but which was really coming in a northwesterly direction. This might be amusing on the level ground, but the

big bluff which towers above the western abutment of the bridge affords poor footing and takes the enjoyment out of the performance. This hill is the largest on the line and is about one hundred feet high, while the one on the eastern bank is eighty feet. About 50,000 square yards of earth will have to be removed from the former and about 40,000 from the latter before the grade of the road can be reached. The contractor for the stonework of the bridge is Mr. David Chambers, of Owen Sound.

At the present time there are only small sections of the line here and there graded ready for the ties, but the contractors say that by December 1st the job will be completed. It is probable that the railway company will lay the iron themselves, and by the spring it is expected that the line will be in working order.

### Canadian Pacific "Grand Strategy."

It is commonly said that one reason of the change in the Canadian Pacific, by which Sir George Stephen is succeeded in the presidency by Mr. W. C. Van Horne, is a desire to lessen in some degree the force of the agitation against that line, which, for various reasons, has been stirred up this side of the border. It is thought that with an "American" president less prejudice will be felt here against the corporation. Very likely this is to some extent true. Further, it is becoming apparent to a good many who had not thought of it before, that the interests of a pretty important part of the United States will be served by the Canadian Pacific. The people of St. Paul and Minneapolis and of the great region back of that centre will have something to say about any legislation directed against the Canadian Pacific, and if the present plans of that company are carried out it will offer to the country further south a new competing route to the Atlantic. It will not be easy to devise legislation to restrict the operations of the Canadian Pacific that will not also affect the Canada Southern and the Grand Trunk, and through them powerful American companies and interests. On the whole, the situation will tax the ingenuity of the Senate Inter-state Commerce Committee, which is supposed to be brooding over the problem of regulating the traffic across our northern border.

Meanwhile the Canadian Pacific has shown masterly "grand strategy." It has surrendered its monopoly in the North-west, by which it had exclusively a traffic yet to be developed, and got for it a great sum in cash. Having given up the control of the wheat business in Manitoba it has secured control of lines to the greatest wheat markets of the United States—Minneapolis and Duluth. If American roads bring Manitoba wheat to those markets the Canadian Pacific stands ready to take it from them there and bring it to the seaboard; and besides it is ready to take its share of the immensely greater quantity which is collected from the fields south of the border. If the development of Manitoba and the North-western territory are hastened by free railroad building the Canadian Pacific will profit by it; and is also now in position to share in the

development of the towns at the west end of Lake Superior and of the whole American North-west. In fact, it looks as if when the company parted with its monopoly rights it got handsomely paid for doing what it should have done merely as a matter of policy. But the designs of the company are not fulfilled by free access to the markets of the North-west. On retiring from the presidency, Sir George Stephen congratulated the shareholders on having settled arrangements for "a permanent connection with Chicago and the South-west."—*Exchange.*

### The Joggins' Raft.

THE *Canada Lumberman* says:—The task of towing the great Joggins' or O'Leary raft from Nova Scotia to New York has been successfully accomplished. This immense mass of timber, valued at about \$13,000, and consisting of 30,000 logs, varying in length from twenty-five feet to 200 feet, firmly bound with chains and strong iron wire, was guided into New York harbor through Hell gate, on Saturday, August 11. Naturally enough, the event was signalized by any amount of rejoicing, for not only had predicted failure been averted, but the result demonstrated the possibility of an immense saving in the cost of transportation. The trip occupied eleven days and the cost is estimated at about \$5,000, so that, even allowing a pretty wide margin, the profit will be considerable, the raft being worth at least \$40,000. Had it been conveyed by rail it would have required fifty trains of fifty cars each to accomplish the transportation. The smaller forwarders and dealers have all along viewed Mr. O'Leary's scheme with jealous distrust, and their representatives to the government had the effect of inducing the Minister of Marine to promise that if the venture proved a failure as the one of 1887 did, he would use his efforts to secure such legislation as would give him authority to prevent any more experiments of this kind. As it has passed beyond the realm of experiment into acknowledged practicability, it is now altogether unlikely that any measure will be seriously contemplated to prohibit future rafts on this plan being constructed. The railway companies and owners of coasting schooners, as well as the smaller forwarders and shippers, will doubtless feel aggrieved, but there does not appear to be any means by which they can help themselves. By care in constructing the raft or timber ship, and by launching it when reasonably fine weather may confidently be anticipated, there does not seem to be any reason why the O'Leary rafting system should not become an established custom. The main advantages gained by means of such a raft over the custom of employing coasting schooners are these: an ordinary coaster will only carry about 500 piles, and if any are over sixty feet long or eighteen inches in diameter, not many of those vessels can load the logs through the ports. The big raft contained about forty-five ordinary schooner loads and many of the pieces were of two great a size to be taken in any schooner. The net cost of towing the raft is said to be \$5,000, whereas at ordinary freight rates it would cost \$21,000, thus showing a saving of

\$16,000 in freight alone. It is now said that another raft will be built and launched before the stormy weather of November arrives.

Concerning this raft an Ottawa dispatch, dated August 10th, says: The whole ship-owning industry of Nova Scotia and New Brunswick have combined to force the government to bring in legislation next session to prevent the going to sea of large timber rafts, such as that recently sent from Joggins to New York. The danger to navigation has been made the excuse for demanding special legislation, but a leading official of the marine department says that the movement has been started by owners of many thousands of tons of coasting tonnage now engaged in carrying the trade of maritime provinces, whose business is seriously threatened by the rafts. The government, he says, is now considering how far legislative influence can control the matter. The ship-owning interests in the maritime provinces, where the government has a large majority of supporters, is the most powerful factor in politics.

### Downward Tending of Rates.

But to indicate this natural reduction of rates which have been going on for years past, take the case, for instance, of the New York Central road. In 1868 that company received 2.74 cents per ton per mile for the freight which it hauled, but by 1877 the rate had fallen to 1.01 cent, in 1890 it was only .88 cent, in 1881 .78 cent, in 1882 .73 cent, in 1883 .91, in 1884 .83, and in 1885 it fell to .68, though it has since risen to .76, or a trifle more than three-quarters of a cent per ton per mile. The Chicago & North-western in 1868 received 3.16 cents per ton per mile, but the rate has fallen to 1.19 cent. The Pennsylvania receives only three-quarters of a cent per ton per mile, and it has received less within three years. The rates fluctuate a little from year to year, but the general tendency is downward. The St. Paul road received 2.08 cents per ton per mile in 1867, but it has since fallen steadily to 1.17. The Lake Shore receives only sixty-three hundredths of a cent, the Rock Island 1.07 cent, the Erie 63 one hundredths, and the Illinois 1.16 cent. The average of eighteen roads fell from 1.32 cent in 1877 to .99 cent in 1886, in the so called granger States.

The hostility of the people to railroads is one of the striking facts of the times, and it was powerfully illustrated recently by forcing one of the most popular men in the country from the Presidential arena, solely because he was the president of a great railroad, and regardless of the fact that he himself has never done anything inimical to the interests of the people. While recognizing that it is folly for the railroad companies to defy the law or to seek to evade it, may it not be wise for the enemies of the railroads to carefully consider both sides of the question as to what is the proper schedule of rates, and to adjust it to the policy to live and let live? We need good railroad service and it takes money to furnish it. We cannot cripple railroads without injuring our trade.—*Railroad Topics.*

### The "Slow" Canadians.

THE following is from the *Chicago Canadian-American*.—The "slow" Canadians are at it again.

A few years ago they had the hardihood to build a great line of railway across the continent; over rocks, muskegs, prairies, waterfalls and through mountains.

Then they proceeded, without loss of time, to put it in good shape for traffic. While people in this country, where they even sleep in a hurry, were pointing the finger of scorn at their northern neighbors, the latter were organizing for competition with the United States; and it is sufficient to say that they have, in some respects, been eminently successful.

American transcontinental roads are now prepared to credit Canadians with being shrewd and enterprising. So are certain New York and Chicago corporations that have only been checkmated in their designs upon St. Paul, Minneapolis, and the North-west generally, by the daring enterprise and far-sighted policy of a number of Canadian railway builders, whose work, to a great extent, is of an international character.

The latest feat of the "slow" Canadians is the establishment of a fast postal service between London, England, and Vancouver, British Columbia. Mail matter posted in London on May 27th was distributed in Vancouver, 6,500 miles distant, twelve days later. This branch of the Canadian postal service, bear in mind, is only in its experimental stage. The Canadian Pacific Company intend, not only to shorten their line through the Rockies, but to put on a fast fleet on the Atlantic. When these things are done it is believed that the time between London and Vancouver will be reduced to ten and a half days!

We doff our cap to these "slow" Canadians.

### How Much do Wheels Slip.

VARIOUS opinions exist as to the loss of speed by the slipping of wheels. Rabaut, as a result of experiments made several years ago, declared that on down grades the actual distance travelled by the locomotive was from thirteen to twenty five per cent. greater than the distance represented by the number of revolutions of the wheel multiplied by their circumference. Demossieux attributed this fact to a decrease of adhesion of the wheels on the rails, due to inertia and to the pressure of the steam on the bottoms of the cylinders. Moschell, on the contrary, attributed it to the flexibility of the rails, each rail bending under the weight of the locomotive.

Experiments lately made by Stewart tend to prove that all these theories are wrong. Several runs were made by him with a locomotive on the line Liege-Verviers. This line is fifteen miles long, and is well adapted to trials of this nature, the difference in grade between the two extremities being 333 feet, there being also several tunnels and large cuts. The results showed no sensible difference between the actual distance and the wheel dis-

tance (the revolutions of the wheels being registered by an automatic apparatus), either when going up or down grade. It is, however, not stated whether these experiments were made with a single locomotive pulling no weights, or with whole train loads. Such experiments when made under theoretical conditions, such as in the case of a single locomotive going all alone on a sort of pleasure trip, have little practical value, except for scientific men. The general opinion among practical railroaders, and which is daily corroborated by facts, is that the slipping of the wheels of the locomotive when pulling a full load, tends to increase the wheel distance as compared to the actual distance, and to the prevention of this slipping various appliances have been proposed and partly adopted

### The Sun Motor.

INDIA, South America, and other countries interested in the employment of sun power for mechanical purposes have watched with great attention the result of recent experiments in France, conducted by M. Tellier, whose plan of actuating motive engines by the direct application of solar heat has been supposed to be more advantageous than the plan adopted by the writer, of increasing the intensity of the solar rays by a series of reflecting mirrors. The published statements that "the heat-absorbing surface" of the French apparatus present as an area of 215 square feet to the action of the sun's rays, and that "the work done has been only 43,360 foot-pounds per hour," furnish data proving that Tellier's invention possesses no practical value.

The results of protracted experiments with my sun motors, provided with reflecting mirrors as stated, have established the fact that a surface of 100 square feet presented at right angles to the sun, at noon, in the latitude of New York, during summer, develops a mechanical energy reaching 1,850 foot-pounds per hour. The advocates of the French system of dispensing with the "cumbersome mirrors" will do well to compare the said amount with the insignificant mechanical energy represented by 43,460 foot-pounds per hour developed by 215 square feet of surface exposed to the sun by Tellier during his experiments in Paris referred to.—*Capt. John Ericsson in Nature.*

MR. F. E. DEWEY has been appointed general baggage agent for the Canada Atlantic, with headquarters at Ottawa.

MR. JAS. HARRIS, the founder of the car and machine works of James Harris & Co., of St. John, N. B., died at his residence in that city recently at the advanced age of eighty-five years. Mr. Harris was born in Annapolis, Nova Scotia, in 1803, but came to St. John when a young man. In 1831 he, with associates, laid the corner stone of the extensive car works, foundry and rolling mills, over which he has presided almost to the day of his death, achieving a remarkable success. Mr. Harris was a man of wonderful energy and unshaken integrity, and his loss will be keenly felt by the community at large.

AN account of the opening trip over the Oriental railroad, from Belgrave to Constanti-nople and Salonica, in the *Swiss Railway Journal*, tells of some ceremonies in connection with the driving of the last spike, which would certainly draw as a novelty if practiced in the United States. After the spike had been driven the railroad was consecrated by pouring upon the virgin rails, so to speak, the blood of four properly sacrificed sheep, accompanied by a loud prayer delivered in chorus by the ulemas.

THE *Manufacturer's Record*, in an article recommending opium culture in the south, says that, once sown, the poppy is self-perpetuating, and is, in fact, hard to exterminate, reciting the fact that within the last two or three years eminent French engineers have undertaken the sowing of railroad embankments with poppy seeds, as, when once established, that prolific plant would cover the soil with a network of roots that would prevent it from washing away during heavy rains, or from upheaval when frost was coming out of the ground in the spring.



## SAULT STE. MARIE CANAL.

### Notice to Contractors.

SEALED TENDERS, addressed to the undersigned and endorsed "Tenders for the Sault Ste. Marie Canal," will be received at this office until the arrival of the eastern and western mails on TUESDAY, the 23rd day of October, next, for the formation and construction of a Canal on the Canadian side of the river, through the Island of St. Mary.

The works will be let in two sections, one of which will embrace the formation of the canal through the island; the construction of locks, &c. The other, the deepening and widening of the channel-way at both ends of the canal; construction of piers, &c.

A map of the locality, together with plans and specifications of the works, can be seen at this office on and after TUESDAY, the 9th day of October, next, where printed forms of tender can also be obtained. A like class of information, relative to the works, can be seen at the office of the Local Officer in the Town of Sault Ste. Marie, Ont.

Intending contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms and be accompanied by a letter stating that the person or persons tendering have carefully examined the locality and the nature of the material found in the trial pits.

In the case of firms, there must be attached the actual signatures of the full name, the nature of the occupation and residence of each member of the same; and further, a BANK DEPOSIT RECEIPT for the sum of \$30,000 must accompany the tender for the canal and locks; and a BANK DEPOSIT RECEIPT for the sum of \$7,500 must accompany the tender for the deepening and widening of the channel-way at both ends, piers, &c.

The respective DEPOSIT RECEIPTS—cheques will not be accepted—must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted.

The deposit receipt thus sent in will be returned to the respective parties whose tenders are not accepted.

This Department does not, however, bind itself to accept the lowest or any tenders.

By order,

A. P. BRADLEY,

Secretary.

Department of Railways and Canals,  
Ottawa, 9th August, 1888.



# McKECHNIE & BERTRAM,

## CANADA TOOL WORKS

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Manufacturers of all kinds of Machine Tools and Wood Working Machinery. Our Tools are all made from new and improved patterns and with the latest improvements. A large stock always kept on hand, and those not in stock made at shortest notice. In our list will be found the following:

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Palley-Turn-

ing Lathes

Wood Planing

and Matching

Machines

Surface

Planers

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Machines

Morticoing

Machines

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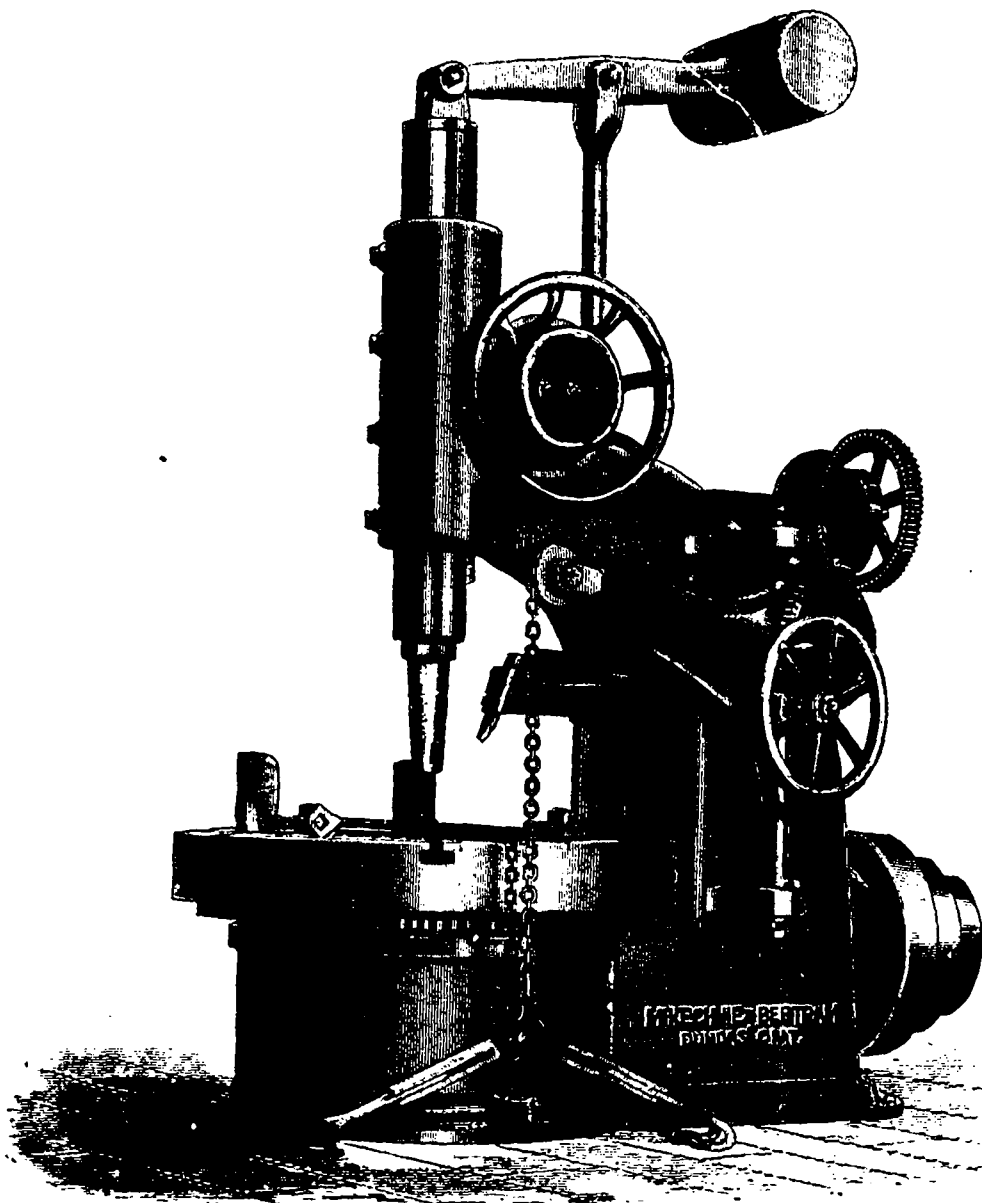
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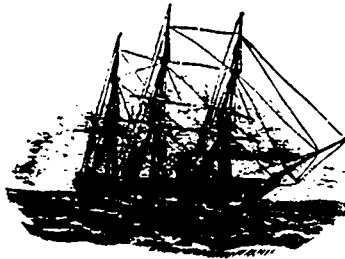
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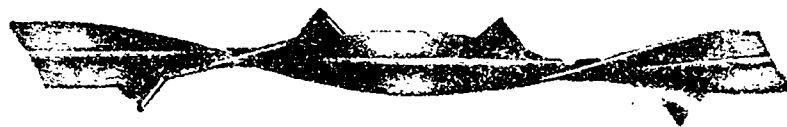
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