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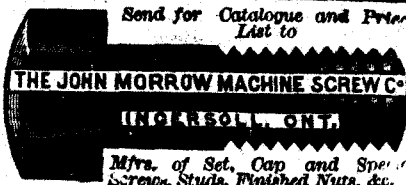
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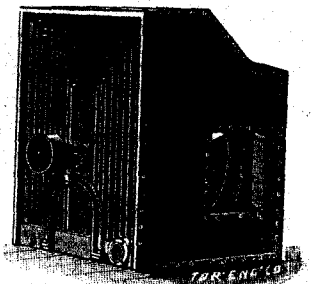
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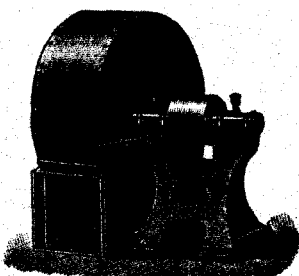
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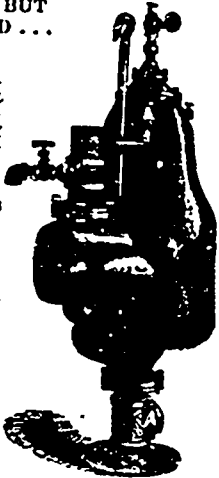
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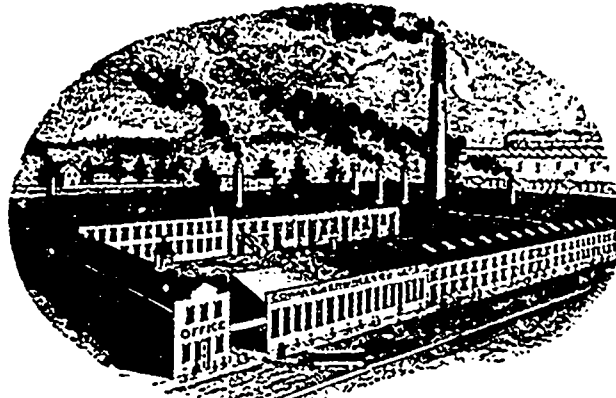
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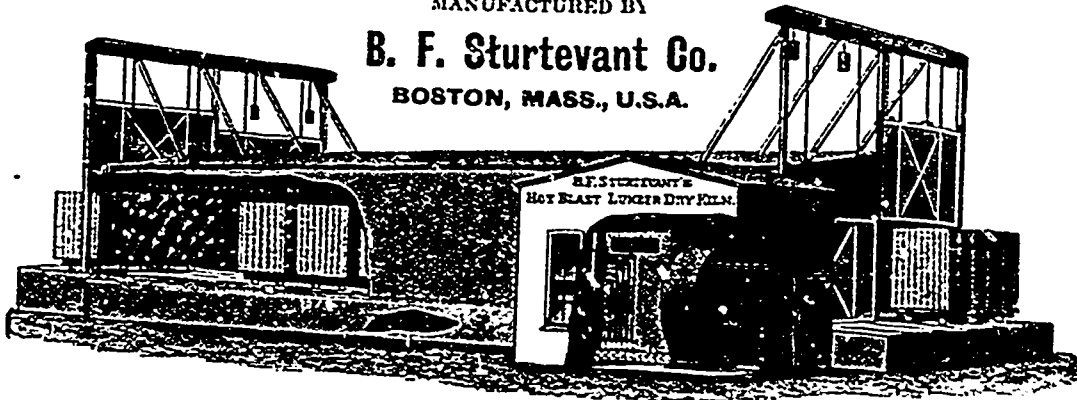
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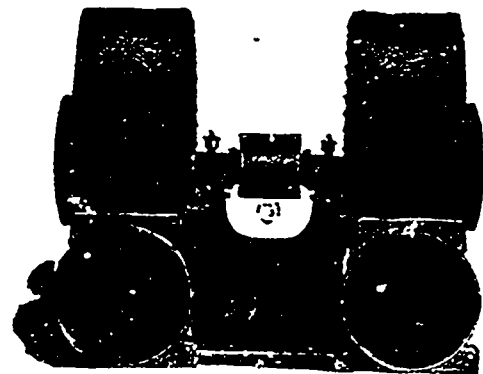
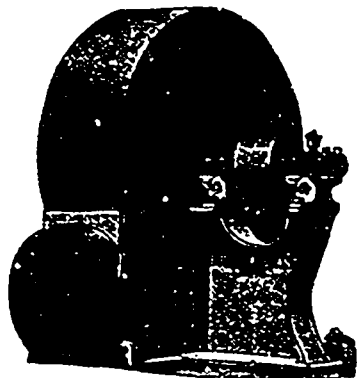
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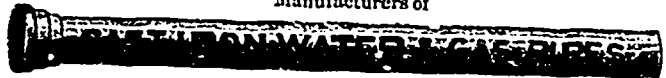
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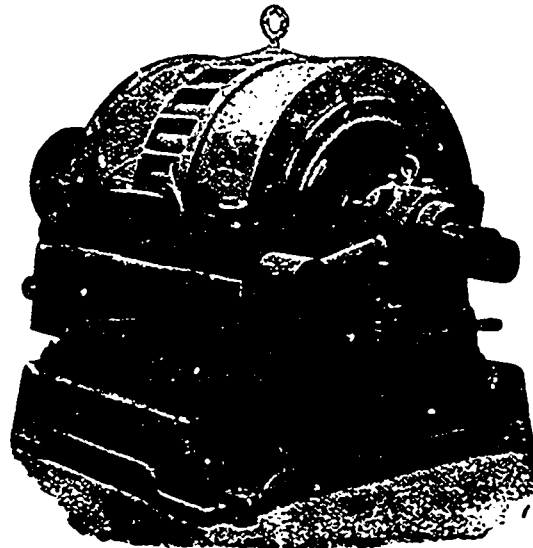
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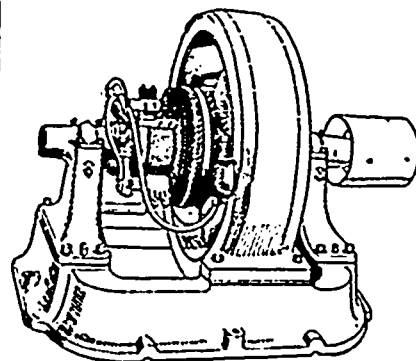
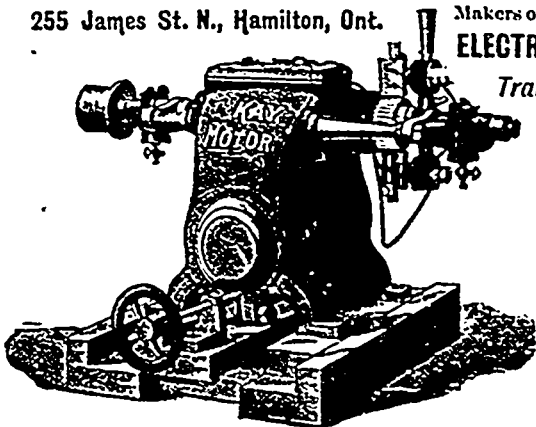
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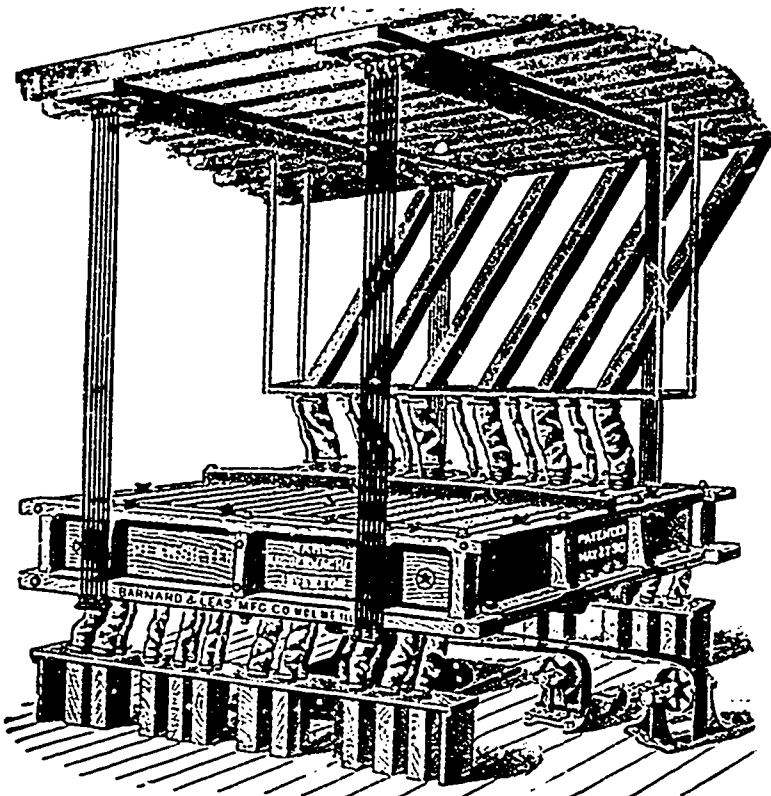
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Robert Sugden, Holt	30
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Jos. Knox & Co., Stayner	75
E. W. B. Snider, St. Jacobs	150
Wm. Ross, Brussels	60
Smith & Scratch, Kingsville	35
Wray & Hawkshaw, Lucan	50
T. Mather, Tilbury	75
Lorenzo Marquerz Milling Co., Lorenzo Marquerz, South Africa	200
John Lockhart, Rainy River	50
Wolseley Milling Co., Wolseley, N.W.T.	100
George Vick & Son, Orillia, Ont.	100
A. S. Bowen & Sons, Kemptville	125
H. Brown & Sons, Carlton Place	125
Hunt Bros., London	250
Wm. Mack, Cornwall	100
George Boxall, Embro	50
Hudson Bay Co., Winnipeg	350
J. L. Meek, Alton	50
Harold Barrett & Co., Port Hope	75
J. W. Cornish, Leskard	50
A. McKillop & Son, West Lorna	50
Donald Currie, Port Lock	30
Cookshire Flour Mill Co., Cookshire, Que.	60
Sadler, Dundas & Flavelle Milling Co., Lindsay	400
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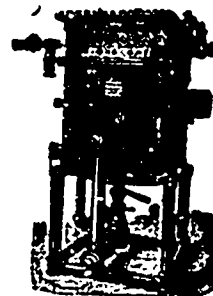
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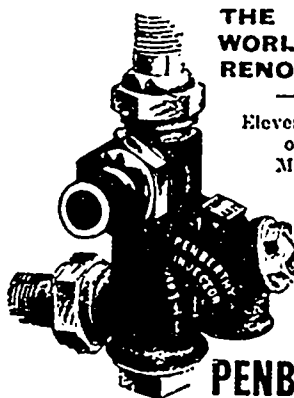


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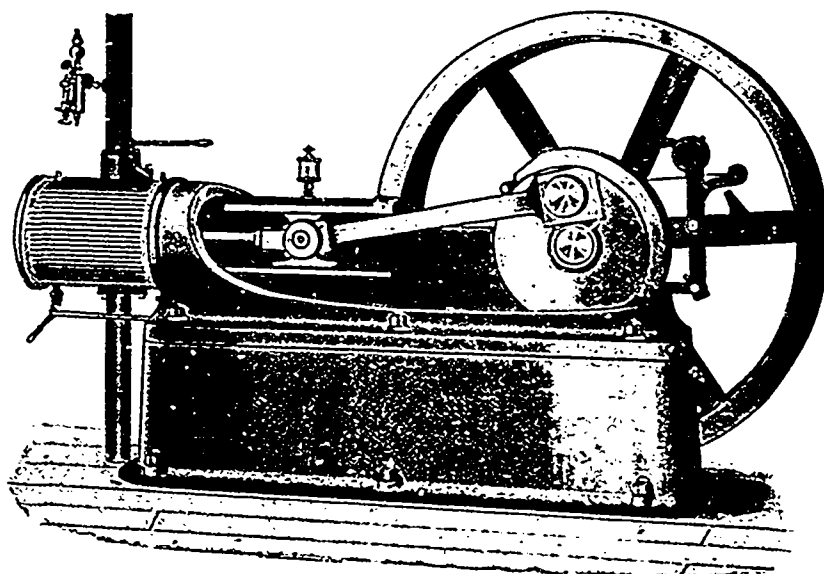
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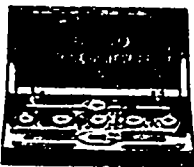
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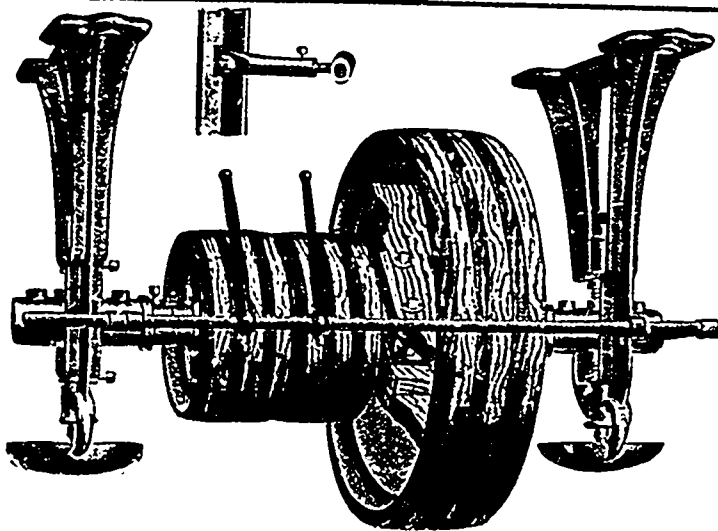
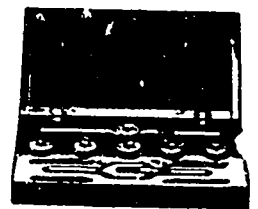
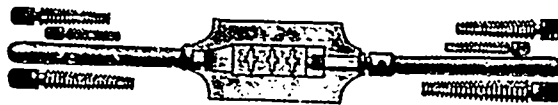
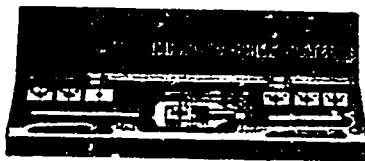


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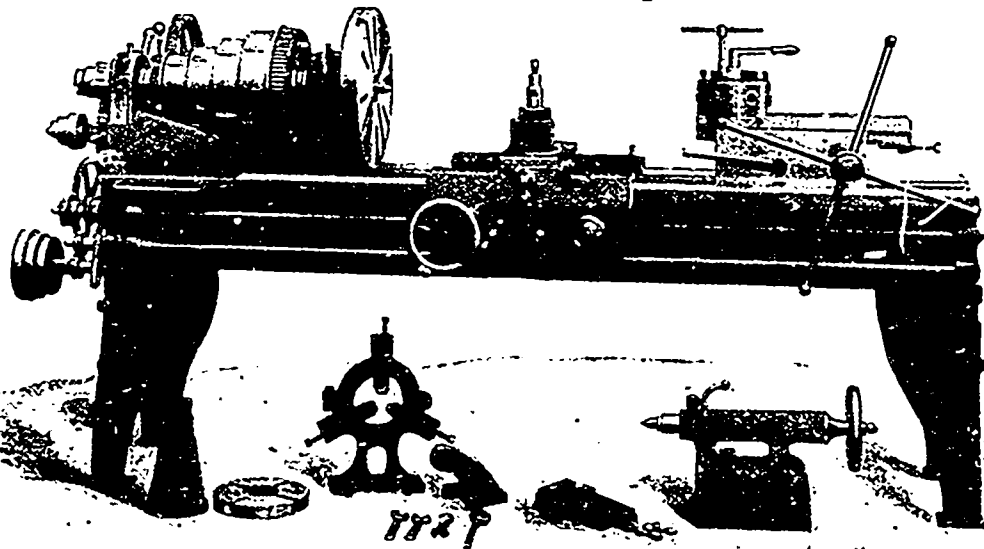
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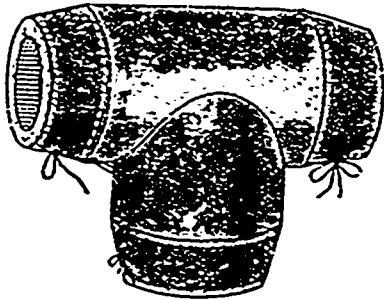
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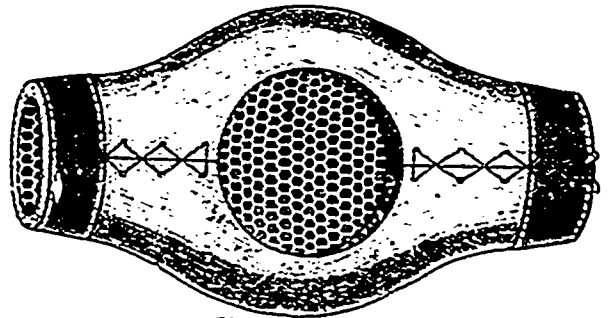


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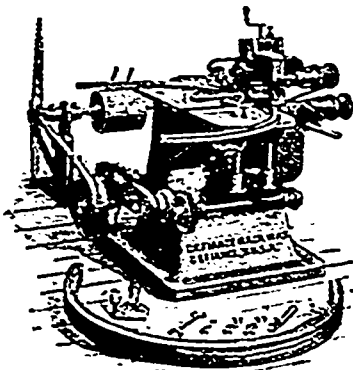
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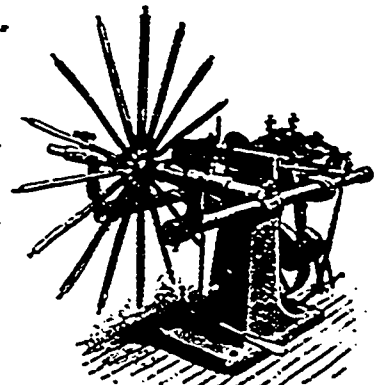
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VERY PRETTY THEORY, BUT—

To compensate, or rather to preserve alive, the shipbuilding industry of the United States, coasting laws have been enacted prohibiting the carrying of goods from one American port to another in foreign vessels. The tariff which increases the cost of every product of the republic kills ship building, which has no incidental protection in the cost of carriage from foreign countries. The people want goods carried from one port to another, and to that end adopt every device and invention available for land and water transportation. But the theories of protection induce them to increase the cost of

water transportation by prohibiting those best qualified to render the service cheaply. The result is an artificial increase in the cost of carrying goods—in the necessary transfer from producer to consumer. This is merely an aggravation of the protection tariff which gives rise to it, and serves to put the nation imposing it at a still further disadvantage. Railways with lines competing with the coast vessel service have an advantage corresponding to the effect of the coasting laws, and the cost of land transportation is proportionately advanced. The protection theory not only regards as an enemy the foreigner who supplies things cheaply, but includes in its condemnation the foreigner who carries them cheaply from place to place.

When the Toronto Globe adorns its pages with literature like the above infantile contribution to the study of international economics it must not feel hurt if some of us even go so far as to smile, and smile rather broadly, at the remarkable ignorance displayed by that ambitious journal. At first The Globe's "lesson in economics" was taken seriously, but people are now beginning to treat it as a joke. The inconsistency of the argument is so apparent and its absurdity is so absurd that it needs no reductio ad absurdum. It reads as though some youthful collegian had been given the conclusion and the demonstration had been asked of him—and our sympathies are with him in his attempt to fit a logical demonstration to an incorrect conclusion.

Perhaps The Globe may have some gentleman on its staff who delights to research into ancient history. It might be well for him to study the history of Great Britain under protection and revert especially to the navigation acts which Cromwell passed about the middle of the seventeenth century when the importation of colonial products in other than English ships was prohibited. Again by Charles II. and by Elizabeth these laws were supplemented and a system of grants to vessel owning companies was instituted. In 1848 the acts were modified. Foreign ships were allowed to trade to British ports and ships not of British build were allowed to be registered as British if wholly owned by British subjects, all of which was simply an intimation of faith that British ships were built as cheaply as any others. Trace the history of the progress of Britain's merchant navy and then decide honestly whether its foundation is due to the protection policy of Britain for two hundred years, or to the free trade policy of Britain for fifty.

Then again, "the tariff which increases the cost of every product of the republic kills shipbuilding," if The Globe is to be believed. Perhaps The Globe can explain how it is that under a tariff "which increases the cost of every product of the republic," wire nails are exported to Great Britain where The Globe's goddess, Free Trade, holds sway, and, of course, allows wire nails to be produced cheaper than anywhere else in the world (to use The Globe's logic). This tariff in the United States "kills shipbuilding," says The Globe. How, when, and where did it do so? Does not The Globe know that the protection given the British merchantman two hundred years ago developed the shipping industry of Great Britain so that the United States has never yet been able to compete with it on the sea? And here is another suggestion. Let The Globe study the lake shipbuilding of the United States. The gross tonnage that passes Detroit every year is greater than the shipping trade of Great Britain at Liverpool and London combined can show. Does that look as though the United States had killed its shipbuilding by a tariff? The

tariff would probably be held up by The Globe as the cause of the dullness of Canadian shipbuilding on the lakes. The Globe would be right; it is due to the tariff—but to the tariff of the United States as the relatively small lake carrying trade of Canada in proportion to that of the United States will testify upon the most cursory examination. So much for The Globe's accuracy and The Globe's competence to reason logically.

As to The Globe's charge that railways competing with vessel lines raise their rates according to the advantage given by these coasting laws. We would advise The Globe to compare the rates on English railways with the rates for similar distances on similarly situated railways in the United States and meditate until it has found out a reason for the difference of twenty or twenty-five per cent. in favor of the American railways.

We were about to say that The Globe, in all fairness, should give its readers the result of the researches we have requested it to make, but upon reading the last clause of the "lesson in economics" we despair.

Our contemporary has evidently not yet learned that cheapness is a term which expresses, not the low selling price of an article, but the relation of the price to the labor used in making the article. Nevertheless, it may be The Globe will attempt to defend its principles. In that event we shall peruse with interest any argument The Globe may see fit to produce.

#### COLONIZATION RAILWAYS.

The policy of the Ontario government has been to bonus only those railways that are opening up new country. In accordance with this they have this year announced the grant of subsidies to five railways which will develop hitherto unopened parts of the province and greatly aid in the development of agricultural and mineral resources. Last year a subsidy of \$1,000 a mile was voted for 165 miles of the eastern portion of the Ontario and Rainy River Railway. This year the remaining forty miles of the railway was subsidized to the extent of \$120,000. This line is essentially a development line which will open up easy access to gold-bearing territory in the Rainy River country and will also colonize a large area of splendid farming country near the Rainy River and Rainy Lake.

The James Bay Railway project has also received the endorsement of the government to the extent of a bonus of three thousand dollars a mile for forty miles of the distance between Parry Sound and a point near Sudbury. This makes a new vote of \$120,000 for this purpose, but the government have added to it the unearned subsidy voted to the Nipissing and James Bay Railway in 1889. This latter sum was a bonus of three thousand dollars per mile for a distance up to fifty miles, so the total government grant to the James Bay Railway is \$270,000 up to date. This line will do more toward increasing the resources of this province than any other of those lucky enough to receive subsidies. It will provide a through route to the great inland sea away north of us and its completion will be the first step in the march of settlement over a territory far greater than that portion of Ontario already settled. The country north of the height of land is rich in a hundred different ways. It contains timber wealth so great that its value is not within the power of anyone to estimate.

It contains mineral wealth beyond the dreams of Midas and thousands of broad acres lie waiting for the settler's plough. Then there are the fisheries, and they are no least item in the revenue which the great north-land of Ontario will produce. We cannot have the James Bay Railway too soon. We must grow out away to the north and we must be quick about it. In 1889 the Nipissing and James Bay Railway was before the public. Although it was bonused by the government it never was built. We cannot afford to let time pass further. Delay in this matter is dangerous. Ontario cannot afford to be behind in the race with Quebec. Toronto cannot afford to let Montreal out-reach her in the struggle for the trade of the great north country. Already a large part of it is going to Montreal and already a charter is asked from the Dominion government to build a railway from a point near Montreal north to James Bay, which it will touch at Rupert's House on the eastern side of the Bay. A railway from Toronto would touch James Bay at Moose Factory which is, at least, a hundred miles west of Rupert's House as the crow flies. The farther south they come the more widely divergent the two lines will be, but the one that first opens for through traffic will get the trade from the James Bay district. The Ontario government acted wisely in granting a bonus of \$270,000 toward a work of such great public benefit as the James Bay Railway.

The Irondale, Bancroft and Ottawa line receives \$30,000 subsidy for a distance of ten miles beginning at a point about forty-five miles east of Irondale, the section was bonused last year. This, too, is a railway line that will be found a valuable addition as it extends through a section of country where railways are not by any means so numerous as to become a nuisance and where the agricultural and mineral possibilities are great.

The re-vote of \$90,000 to the Bay of Quinte Railway is still another practical attempt to assist the province. North of village of Tweed up in Elzevir, Grimsthorpe and Tudor, there is iron, and it is desirable that the railway shall be extended into the iron region to promote the development of the iron mines.

The last subsidy of all was that of \$10,000 for the Pembroke Southern Railway which wants to add three and one-half miles in the township of Alice to its length. This line is to run from Pembroke to Golden Lake.

The policy of thus aiding railways that will be of assistance in developing our undeveloped territory is a sound one. We have named the railways subsidized this year and endeavored to make plain the reason why government assistance to them will be likely to aid the province. We believe in progress, and we believe this system tends toward progress. We are glad to note and approve this step forward and confidently expect within the next few years to make a flying trip to the northern salt water on the James Bay Express.

Toronto Board of Trade will hold elections next Tuesday to decide who shall be its officers for the next year. Mr. Elias Rogers is president by acclamation and the vice-presidency has been accorded unanimously to Mr. A. E. Kemp, of the Kemp Manufacturing Co., so the members are not taking as much interest as usual in the elections. Their choice of first officers is a commendable one, and the Board of Trade should enjoy a most successful year under their control.

IGNORANT LEGISLATION.

It is not at all uncommon to find on our statute books laws the nature of which is bountiful evidence that the men who enacted them were either ignorant of what they did or had no regard, not only for the rights, but for the necessities of their fellow men. It is a pity that every constituency is not represented by a thoroughly able man. It is still more a subject for regret that the men who compose governments do not always appreciate—or, at all events, do not always heed—the facts of the case for legislation. Perhaps, of the two, ignorance is rather to be excused than carelessness in such matters as these.

A case very much in point is that of the Pharmacy Act of Ontario and with it, and in relation to it, might be mentioned the License Act. By legislation enacted at the session of the Ontario Legislature in the early months of 1897 the druggists and chemists were placed in a very awkward position, notwithstanding that the Government had been remonstrated with on the floor of the House before the bill became an Act. Such strong representations were made by druggists to the Government upon the state of the new laws that the Government at the recent session decided upon amendment to allow the licensed pharmacist that liberty which he properly should have in the sale of liquor under reasonable restrictions.

The amendments as finally crystallized into law were somewhat different from the original draft of the changes which was printed, submitted to the House, and undoubtedly would have been passed had not such strong arguments been put before the Government that they found they would be in a most ridiculous position did they restrict from general sale all medicines or preparations containing over seventeen per cent. of alcohol. To the work of Dr. G. S. Howard, of Carlton Place, is in no small degree due the changes brought about which show that the Government have been at last induced to listen to reason.

The law bore more harshly, perhaps, on the sale of those medicines which might properly be classed as household remedies and necessities, and upon homeopathic remedies. The ground of action was that these decoctions might be used for beverages and sold for that use. The druggists secured the privileges they asked for themselves but they were hardly as careful to secure the rights of certain other sections of the community. Let us look into the subject and see what the case is.

Alcohol eighty-eight per cent. is known as rectified spirit. Alcohol fifty per cent. is called proof spirit. Alcohol 100 per cent. is termed absolute alcohol. When any preparation, medicinal or otherwise, contains high percentages of alcohol there is no danger of it becoming a beverage. Instead of the danger being that a preparatory medicine of high alcoholic proportions might be a mere concealment for an intoxicating beverage, it would appear rather that the medicine containing a comparatively small quantity of alcohol is far more likely to become mysteriously popular with tipplers.

First-class rye whiskey is plenty strong enough for the majority, even of those who are accustomed to the use of ardent spirits. Yet this same whiskey contains no more than twenty per cent. under proof spirit, and as proof spirit is but fifty per cent. alcohol, the proportion of alcohol in good whiskey is not very great. This estimate is a maximum

estimate for the very best rye whiskey and it should be remembered that the rye whiskey commonly sold is, on an average, about forty per cent. under proof. This disposes effectually of the idea that medicines of high alcoholic parts are at all likely to be intended for beverages.

Now let us turn to the other feature of the case. Under the law, as the Government in all seriousness proposed to pass it, the sale of the simplest essences and tinctures, which every housewife uses, would have been confined to drug stores. This seems scarcely credible, but it is, nevertheless, a fact. The Government had actually not looked into the facts until Dr. Howard laid them before them. Here is a table dealing with some of the common preparations with which we all are familiar:

TINCTURES.	Proportion of drug used	Proportion of alcohol used per volume.	Alcoholic strength per Vol. proof spirit.	Alcoholic strength per Vol. of 100 parts.	Specific gravity estimated by 1000 atoms of water.
			Per cent.	Per cent.	
Arnica, flowers....	1	20	.....	88	.838
Aloes.....	1	40	.....	88	.838
Anise Seed.....	1	5	.....	88	.838
Asafoetida.....	1	8	.....	88	.838
Orange Peel.....	1	10	.....	88	.838
Benzoin, Co.....					
(Friars Balsam)	1	10	.....	88	.838
Bryonin.....	1	10	52	.....	.920
Ruchu.....	1	8	52	.....	.920
Calendula					
(Marigolds)....	1	5	52	.....	.920
Calumba.....	1	8	52	.....	.920
Capsicum.....	1	27	.....	88	.838
Cardamom seeds...	1	10	52	.....	.920
Cinnamon.....	1	8	.....	88	.838
Cinchona Co.....	1	10	52	.....	.920
Rhubarb.....	1	10	52	.....	.920
Tolu Balsam.....	1	8	.....	88	.838
Valerian.....	1	8	52	.....	.920
Ginger.....	1	8	.....	88	.838
SPIRITS.					
Camphor.....	1	10	.....	88	.838
ESSENCES.					
Anise seed.....	1	4	.....	88	.838
Ginger (strong)....	1	2	.....	88	.838
Peppermint.....	1	5	.....	88	.838
Rosmary.....	1	50	.....	88	.838

These tinctures and essences are commonly sold by the grocers and every general store throughout the country carries a stock of them, as they are all used in almost every family for medicine or to flavor food. Had the Act been passed as was at first proposed farmers would have had to drive long distances to secure their supplies of these things. Just one instance in point to show what would have been the state of affairs which was happily averted: In the large county of Carleton there is not a drug store outside of the city of Ottawa. It is forty miles from Arnprior to Ottawa with not a single drug store between these two points. You can see what a hardship it would be to farmers and people of the little villages if they could not obtain their domestic drugs and medicines such as tinctures, pain killers, and the like, at close hand as would be the case if the proposed legislation had become law. We are glad that the Government owned their mistake and corrected it in time to prevent injustice and expense to hundreds of people.

It is not easy to understand why a Government anxious to enact fair laws could not have secured elementary information about this matter. The first step in law-making would appear to be knowledge of what was required, and the facili-

ties for acquiring expert knowledge of all kinds are so great as to leave no excuse for such neglect.

Save us from ignorant legislation.

### THE BOUNDARY QUESTION.

The Alaska boundary question is something that just now distresses many persons in Canada and a far larger number of persons in the United States. After a careful and (as far as may be from available information), close study of the matter one is likely to reach the conclusion that the ten-league coast in southeastern Alaska is the only probable subject that may be in dispute. The far-famed Klondyke is, undoubtedly, in Canadian territory, and Dawson city is a good hundred miles east of the boundary line which, for the information of those unfamiliar with this country, we may add is the 141st meridian. It is interesting to note the remarks made anent this matter by General Duffield, who is Superintendent of the United States Coast and Geodetic Survey. General Duffield says:

In beginning the survey, the start was made from the southernmost point of Prince of Wales Island. The line was followed up Portland Canal till latitude  $56^{\circ}$  north was reached. Then the survey was projected ten marine leagues from the continental coast line, as was agreed upon. This was followed until the intersection of the ten-marine-league line with the 141st meridian, and this was run out clear to the Arctic Sea. Mount St. Elias is near the intersection of the ten-marine-league line with the 141st meridian. To be exact, the summit is  $140^{\circ} 50'$ , or five minutes on the Canadian side, which in that latitude represents two and one-half miles. But on the southern side it is only  $28\frac{1}{2}$  miles from the coast, which brings it inside of the ten-league line, or thirty-mile limit, and one and one-half miles on American soil. At Forty-mile Creek our survey agrees with that of the Canadian survey under Ogilvie, within fourteen-hundredths of a second, which in that latitude represents six and one-half feet. The Canadian line steals the six and a half feet from us. Crossing the Yukon River, the difference in the two surveys is fourteen seconds, which in that latitude represents 300 feet. According to the line of Ogilvie, the Canadian Government surveyor, we gain 300 feet on the British side. We are anxious to compare the two lines at the Porcupine River crossing, which is several hundred miles farther north, but the Canadian Government have given us no notice of where they have fixed their line there. I do not suppose that the difference will be worthy of note.

Such lunatic fire-eaters as Senator Morgan and the New York Independent have suggested an ultimatum to Lord Salisbury bidding him either to instruct the Canadians to reach their recent maps of the Alaskan boundary or get ready for war.

What do you think of such impudence? Senator Morgan threatening the British Government with an ultimatum! Senator Morgan, not satisfied with a not-long-gone ultimatum that was treated with the contempt it deserved and ended in thin air.

Most of us have a very distinct recollection of a certain message sent by one Cleveland, to threaten the British Government with interference in Venezuelan matters. It is equally easy of remembrance that the British Government, out of pity for the sublime ignorance of the United States, paid no attention to this childish and hysterical outbreak. Jingo American journals and jingo American politicians of the Morgan ilk howled gleefully as they proclaimed that the knees of John Bull trembled at the demand of Jonathan.

Still Britain made no move, and still the jingoes shouted. Then came Emperor Hohenzollern's obnoxious threats to assist the Boers to drive English authority out of the Transvaal. The third great power of the world had spoken, and Russia, the second power, stood close behind to help. What happened then? The lion stretched himself and showed his teeth. That was enough for Germany and Russia. Then the sensible Yankee saw the position of ignominy in which Britain had placed the United States by not even noticing her wild rant. We thought the day of such ignorant diatribe had gone by, but it appears not so.

Mr. Senator Morgan threatens another ultimatum to force Canada to change her boundaries. Just a bit of advice to Mr. Morgan and the New York Independent. It will be a waste of ink and paper to send an ultimatum to Great Britain. It will pay them better to send it to Ottawa, not that it will receive attention there, but they will be the less postage out of pocket. There is only room for discussion in one point—the ten-marine-league mentioned in the Russo-British treaty which deals with the southern part of the boundary between Canada and Alaska. Here is the clause in question. Let who will define it.

The line of demarcation between the possessions of the high contracting parties upon the coast of the continent and the islands of America to the northwest shall be drawn in the following manner: Commencing from the southernmost point of the island called Prince of Wales Island, which point lies in the parallel of  $54^{\circ} 40'$  north latitude, and between the 131st degree and the 133rd degree of west longitude, the same line shall ascend to the north along the channel called Portland Channel, as far as the point of the continent where it strikes the fifty-sixth degree of north latitude. From this last-mentioned point the line of demarcation shall follow the summit of the mountains situated parallel to the coast as far as the point of intersection of the 141st degree of west longitude of the same meridian, and finally from the said point of intersection the said meridian of 141st degree, in its prolongation as far as the frozen ocean, shall form the limit between the Russian and British possessions on the continent of America to the northwest. Wherever the summit of the mountains, which extend in a direction parallel to the coast from the fifty-sixth degree of north latitude to the point of intersection of the 141st degree of west longitude shall prove to be a distance more than ten marine leagues from the ocean, the limit between the British possessions and the line of coast which is to belong to Russia, as above mentioned, shall be formed by a line parallel to the winding of the coast, and which shall never exceed the distance of ten marine leagues therefrom.

### FURNITURE EXPORT TRADE.

A curious condition has arisen in the Canadian furniture trade and promises well for the future of the Canadian furniture manufacturing industry. It is the habit of many Canadians to look upon the furniture industry here as something overcrowded to such an extent that cheap furniture was the result of overstocking caused by the operation of factories when the product was in excess of the demand. Such does not seem to be the case. At the recent meeting of the Furniture Manufacturers Association of Ontario, who gathered in Toronto, some surprising facts were put forward from which it appears that the furniture men cannot fill the orders they are getting for export without neglecting their Canadian trade. A newspaper report of the meeting says:

The export trade with Great Britain was the subject of a

prolonged discussion, many of the manufacturers stating that they already had more orders from the other side of the Atlantic than they could fill and retain their Canadian trade. One manufacturer reported having received an order from England recently for 12,000 extension tables. This, he said, he could not possibly fill without stopping the manufacture of all other kinds of furniture for the time being. A committee was appointed to devise a scheme and take whatever action they deem necessary for dealing with the matter, as it was decided that the association as an association could not handle it. The secretary said the outcome of it all would probably be that the committee would send a man over to England to make enquiries and a large stock company would be organized which would operate three or four of the large factories for the export trade alone.

Surely this is a most gratifying condition of affairs and the furniture manufacturers have need to congratulate themselves upon the pleasant prospects ahead of them. The demand for Canadian furniture for export will be decidedly beneficial to the industry. The manufacturers who find a market in Great Britain will find a good market. The other manufacturers will find a better market in Canada by reason of the reduced competition for the domestic trade, so on neither side appears any room for complaint.

The export phase of the matter is worth careful consideration. The opportunity presents itself for the development of a large industry along this line. Great Britain is in the humor to look to Canada rather than the United States and the furniture manufacturers of the United States will reduce each other till a much smaller number exist, if the import trade of Great Britain comes to Canada for its furniture.

That this will come to pass is almost a certainty. We have in Canada every resource for the manufacture of furniture. We have many kinds of wood, we have cheap power, and we have artisans whose skill is second to none, and machinery that will compare with the best wood-working machinery in the world. We can supply Great Britain—we can do more—we can supply the whole world with furniture. This is just another line along which Canada is about to develop with the advent of her advancement in every direction. The day is at hand when our broad Dominion must take rank as a great nation and claim a high position among the great nations of the world.

#### WHO ARE OUR KIN?

Lieut.-Col. G. T. Denison in a recent letter to the Editor of *The Toronto Globe* replied to the criticisms which Mr. Platt saw fit to make upon his discussion of the situation of England from which we quoted at length in the last issue of *THE MANUFACTURER*. Mr. Platt in the course of his remarks made use of the following expressions:—

"I myself think it extremely unlikely that the United States would take up arms against England. . . . The ill-feeling that exists in the States against England is not, I think, national. . . . I think that deep in the hearts of the people of both countries there lies such an enduring affection that will prevent either country from actually proceeding to take up arms against the other. . . . We are all Anglo-Saxons after all."

Col. Denison is particularly apt in his reply and points out specially Mr. Platt's words—"We are all Anglo-Saxons after all," which he terms one of the many hallucinations of the British mind in reference to the United States. Let us quote Col. Denison's own words to prove his point:—

New England, of course, was mainly settled by English Puritans and Virginia by English Cavaliers, but New York was settled originally by Dutch, Pennsylvania to a great extent by Germans, Delaware and New Jersey by Dutch and Swedes, the Carolinas partly by French Huguenots; Louisiana by French; Florida, Texas and California by Spaniards. In the last census, that of 1890, of 9,121,867 foreign-born citizens less than one-third were Anglo-Saxons. About 8,000,000 of the population are negroes. I am sure that no more than 15,000,000, or about twenty-five per cent. of the United States population are of the Anglo-Saxon race.

It is time this talk about kinship, common blood, etc., should cease, for it is based upon an absolute fallacy, for the majority even of the small proportion who are of Anglo-Saxon descent have been for generations growing up under such different conditions as to have developed into a very different type.

It is almost apparent that Mr. Platt has undertaken something beyond his power to accomplish, and that his deference of the United States laid him open to much severer castigation than may be received at the hands of Col. Denison. No sane man, who is loyal to our Queen, or, for that matter, no sane American who was planning a campaign to capture Canada, would for a moment see with Mr. Platt, when he fears that six million Canadians could not defend our wheat fields against sixty million people south of us. It should not have needed Col. Denison's answer to bring out the idea of Great Britain concentrating a large part of her forces on the defence of her wheat supply, if ever such a crisis came to pass. That Canada is the proper provider of breadstuffs for Great Britain no one will gainsay. That Canada's broad acres would be defended in event of attack is equally true for there are sons of the land of the maple who would stand shoulder to shoulder in a line from the Atlantic to the Pacific if ever the necessity came to defend our country.

Oh, no, Mr. Platt. Don't you go away with the idea that the Americans are tremendously in love with Canada. They are quite the reverse. They have not forgotten the lesson we were obliged to teach them in 1812 and they have a wholesome dread of any repetition of the rough experiences they met with on the great cliff that rises high to the south of the quiet old town of Queenston. The policy of the United States is military bluster and industrial war. Canada cannot afford to let the United States have one least chance to boast of our dependence on her. We don't desire to be on unfriendly terms with the United States. Neither do we desire to become so intimate as to be in any danger of losing our commercial, much less our national, identity in the shadow of the American Eagle. There is a place waiting for Canada among the nations. We cannot afford to stop short of the destiny that awaits us. Give us in Canada not apologists for the eagle's screeching, but men who are loyal ever. Give us no laws to truckle to the republic where no opportunity is passed to give Canada the disadvantage in their statute-books. Give us no overtures from Washington but rather a closer bond between Great Britain, the Mother of Nations, and Canada, her fairest daughter, the Britain of the West.

The Cobden Club that presented Sir Wilfrid with his famous medal, had an annual re-union the other evening. Thirteen persons were present, twelve men and one woman. It is presumed the woman took Sir Wilfrid's place.—*Guelph Herald*.

"The most unkindest cut of all."



## ILL-ADVISED ACTION.

Manufactured door and window frames, doors, etc., have been exported from Canada and the United States to Great Britain for many years. Recently the Amalgamated Society of Carpenters and Joiners of Great Britain made up their minds to stop it and issued an edict forbidding any member of their Society to handle such imported joinery. Up to this point the society acted within its rights, as the rights of such organizations are recognized both in America and in Europe, but there is one feature of their action to which exception may be taken. The exceptionable feature is the reason they gave for their action in which they stated that the joinery sent from America was manufactured by poorly paid labor and under conditions opposed by labor organizations.

As a matter of fact the Amalgamated Society of Carpenters and Joiners of Great Britain, should at least have separated Canada from the United States in their statement. The United States is always ready to defend itself where, as in this case, the defence is one of argument. Whatever faults there may be in the joiners industry across the line, they do not exist in Canada. United States door and sash makers may be owners of sweatshops, but in Canada no such condition of affairs exists. The work done in American factories may not be first grade but a similar complaint will not hold good against Canadian factories. Of all our industries this is perhaps less a worry to the labor inspectors than any other. We can assure our over-zealous old country friends that they are altogether mistaken when they charge upon us the stigma of exporting to England joinery made by men who do not get a living wage for their work.

Because they have complaint against the United States they have no right to attempt to include Canada in their boycott. We are not responsible for the deeds of the United States, or any corporation in the United States, or any individual in the United States, and it seems too bad that a sharper line should not be drawn by our own kin beyond the sea between the republic south of us and the Dominion of Canada. It is unfair to Canada, and it is unfair to themselves, that the Amalgamated Society of Carpenters and Joiners of Great Britain should be so careless of the rights of their fellow-men and fellow-subjects. They at least should have ascertained the facts in the case before they made such a decision as they did make. Now that they have injured us, they should at any rate do us the simple justice of making a statement of the facts by way of reparation that may set us right before other people else we know not where we may suffer from their un-called-for and unjustifiable action.

It would be wise, it would be just; it would be but common decency to suspend the operation of their resolution so far as Canada is concerned until they find out the facts they have to work upon.

Let them communicate with President Carey, head of the Trades Congress of Canada, and see what he has to say about it. Mr. Carey is an honest man who is not to be influenced from what he considers right. The Carpenters and Joiners may depend upon his view of the case and should have secured that view before taking action, if they wished to be certain that Canadian carpenters and joiners would not take as strong exception to their boycott as do Canadian employers.

## HEAT, LIGHT AND POWER.

City and town councils should remember that three very essential factors for the establishment, permanently, of manufacturing, are cheap light, cheap power, and cheap heat. Nowhere is that lesson being more forcibly impressed upon the minds of the people, than right here in Toronto, where the disadvantages of the lack of these facilities is very clearly apparent.

Free sites and exemption from taxation are inducements to a manufacturing concern, but they are, in a certain sense, illegitimate inducements. Understand that by "illegitimate" is not meant "unlawful," but rather "uneconomic," if you will permit the term. This may, perhaps, be more clearly defined, if we put it in this way--that cheap heat, light and power are natural methods, and free sites and exemption from taxation are artificial methods. As between the two, the natural method is always to be preferred when it is at all practicable, although when natural disadvantages exist, benefit will, undoubtedly, accrue from the application of the artificial aids.

What we desire to urge is this:--The necessity for development of every possible natural resource. All over this country we have natural power that is second to none. By nature we are endowed with water-power near enough to almost every town, village and city in Canada, to warrant its development for purposes of application to the necessities of the said town, village or city. And yet how often do we find that advantage has been taken of this? Is it not a fact that, in many instances, coal is being consumed to furnish power where plenty of water-power is at hand to furnish far more power than is needed, and furnish it at much less expense than the cost of power produced by fuel? This is a state of affairs that should not exist. Instances might easily be given of towns which are producing electric light by means of a plant run from boilers heated by furnances, when at the other end of the same town there is a water supply that could be utilized for the same purpose at a reduction of expenses of such amount as to mean the difference between a profit and a loss.

Waterpower is coming into favor for the production of electricity. Turbines are being put in by hundreds who realize the advantages of cheap heat, light and power. Municipalities cannot afford to be without these inducements to manufacturers. Manufacturers who manufacture power for their own factories must have an eye to the main chance and not neglect the opportunity (should it present itself), of supplanting boiler power by water power.

Just a word in conclusion. The preservation of water powers for all time depends altogether upon something in which altogether too little interest is taken by the public generally, viz.: the continuity of our forests. We must see to it that our country is not denuded of its trees, else we shall find all the rain and snow water running away in tremendous freshets instead of being held by the forest and dealt out to us as we need it for water power. Users of power will do well to study the advantages of water power, and the possibility of making it permanent. It is a question of millions of dollars to Canada and Canadians.

## EDITORIAL NOTES.

British Columbia lumbermen have asked the Ottawa Government to put an export duty on shingles and lumber unless the United States puts them on the free list.

The Government of Manitoba are effecting the drainage of several of the largest swamps in the eastern part of the prairie province. They propose thus to reclaim large areas of rich land and render them fit for cultivation. With reference to this The Commercial says:

There is no scarcity of land in Manitoba. At the same time the reclaiming of these lands will add to the prosperity and wealth of the country by rendering large areas of land in accessible districts fit for cultivation. The expenditure in draining the lands will be repaid by the sale of the lands at the advanced values which will attach to them after the improvements are completed.

An advertisement to be successful must not be of a vagrant, intermittent kind. When placed in the right paper and kept there it becomes familiar to the reader's eye. It takes root in his memory, and if it meets his wants as a business man, that is the particular peg on which he hangs his hat, or the pile on which he places his order. The steady "ad" is a loadstone and if it takes time to attract trade, it eventually does so. Returns are not always prompt, and no doubt are sometimes disappointing, but the advertiser is querulous and unreasonable, who, having put his eggs under the hen, looks for chicks before they have time to hatch. If much of the money now expended on circulars was devoted to persistent and rightly placed advertising, we are of the conviction that it would be better for all concerned.—The Age of Steel.

Our esteemed contemporary has talked good, sound, business common sense in this matter. Much money is wasted in circular advertising when it might be expended to good effect in a reputable journal such as THE CANADIAN MANUFACTURER.

The development of this great industry is now an assured fact. Already American manufacturers are beginning to manufacture parts of the machinery required, and in a few years it will all be made at home. This means a great addition to our consumption of iron, which is now seeking new markets in all parts of the world. The capital thus invested will yield a handsome return to all engaged in it, and will go far to open an escape valve for the energy now seeking employment in newer and more profitable fields of employment. Viewed from every standpoint, the manufacture of beet sugar is rich in promise. The farmer, the capitalist, the merchant, the iron manufacturer, the machinery builder, the chemist—all are beginning to see in it an industry which in the course of a few years will contribute largely to their enrichment, and the enlargement of trade activities.—Exchange

Yet here are the Governments of this country neglecting the best possible chance to secure an immense industry for Canada. The United States is fully awake to the importance of this matter and in ten years will supply Canada with the sugar she now gets from Germany unless we take action in our own behalf very soon.

Beet pulp has heretofore been one of the waste products of the factory. It is now, however, being very extensively used for stock. The Watsonville (Cal.), local factory is now disposing of about 300 tons daily for this purpose. Henry Miller, the largest stock raiser in California, uses 125 tons

daily, which he mixes with other forage and finds superior for fattening purposes.—American Agriculturist.

Another addition to the benefits of the beet sugar industry which the rulers of Canada and of Ontario persistently decline to encourage.

The Exporters' Association of America, headquarters in New York, is about to establish in this city (Warsaw), a sample room for the exhibition of American manufactures, together with an agency for the introduction into and sale throughout Russia. This movement is calculated to be of great benefit to the Russian importers and consumers, as well as to the American manufacturers.—Report of U. S. Consul at Warsaw.

The consular agent of the United States Government is ready to work for the commercial interests of United States manufacturers. Canadians must be behind in the race unless they use at least as good methods as their competitors over the line.

South America is to become the great source of supply for the blast furnaces and steel mills of England, says the Minneapolis Journal, if the reports of J. E. York, a well-known north western iron man and member of the British Iron and Steel Institute, are correct. The Bessemer ores of England are about exhausted, and those of the Bilbao district of Spain, from which England draws much of her supply, are growing less and less, and their end is in sight. There is a present demand in England for not less than 3,000,000 tons a year of such ore as can be mined on this concession at prices that will permit the concessionaries in Orinoco to make a profit of about \$1 per ton. It is expected that the first cargoes will be shipped early in the coming spring.

Why cannot Canadian iron mines supply these British demands? The distance for transportation would be a thousand miles less. How is it that Canada is overlooked thus? We have the resources, and England needs the very commodity we are fitted to supply. Yet far-away South American mines owned by citizens of the United States are securing the bonanza.

The severe business depression of the past few years was undoubtedly caused by the enormous profits made by authors and publishers. The writer-barons have been draining the resources of the Republic too long. The time has come to shear the scribes, and prevent the building up of the colossal fortunes now enjoyed by our authors and publishers. To further this laudable object some patriotic statesman, at present a mere congressman, but worthy of filling the highest posts to which an admiring public can elect him, has introduced a bill proposing an amendment to the copyright law, requiring authors and publishers obtaining copyright protection to supply, at their own cost, copies of their books to public libraries throughout the country. It's a good scheme all right, particularly in the case of technical works for which there is a comparatively limited demand, but it doesn't go far enough. Every stove manufacturer who receives a patent on a stove ought to send one free to every courthouse in his state. The man who designs a new hot water heater, and secures letters patent thereon shall be forced to install one free of cost in the executive mansion of every state. Every farmer should present one bushel of wheat gratis to the Board of Agriculture of every state in the Union.—The American Artisan.

Our contemporary pays a deserved compliment to the brilliancy of the congressman who proposed this masterpiece of statesmanship.

The Japanese are not going to let any other country make any more than they can help out of the sale of goods in Japan. Their latest departure is the establishment of a \$250,000 wire nail plant at Tokio, with a capacity of 500 kegs of nails per day. They are sending young men out to learn methods of manufacture in other countries, and within a few years they will not only supply their own market, but they will be formidable competitors in every part of the world, with the manufacturing industries of older nations.

Another bonanza for the farmer is at hand, if it be really true that a Kentucky firm is making cellulose for warships out of cornstalks, for which it pays four dollars per ton. And yet there are cranks who despise the aid science renders to the agriculturist.

We were recently shown some state prison hosiery, or rather a line of hosiery made by convict labor. These goods were fairly well made and sold at a price that brought them into close competition with our manufacturers, merchants and operatives. If these were made exclusively for the inmates of the institutions it would not be so bad; but to have convict labor competing under contract, inside or outside of prisons with our honest laborers, is a wrong that should be righted.—American Knit Goods Review.

The prison labor problem is one that requires careful handling in all countries. There seems to be no reason why the adoption of a system might not make our penal institutions self-supporting as far as the product of everything but food was concerned and thus employ all convicts without bringing them into competition with honest labor.

The province of Ontario has shown its hand in regard to lumber and pulp wood. After next April, pine timber must be made into lumber on Canadian soil, but pulp wood may be exported as heretofore. Doubtless Premier Hardy, of the Ontario government, is acting under the advice of, or at least in harmony with the views of Premier Laurier, of the Dominion of Canada, and presumably the policy adopted by the province will also be that of the Dominion. Therefore, it is reasonable to suppose that there will be no export duty on pulp wood cut in Canada and brought into the United States. Such a condition would indicate very sensible conclusions on the part of Canada, although it is not of especial importance on this side of the border.—The Paper Mill.

Of course it would be sensible for us to allow our pulp wood to enrich American paper mill men. Of course it is of no special importance to Americans, anyway. Of course if we should forget to be sensible and put a nice large export duty on pulp wood that wouldn't make any difference to our friends.

THE - - - -

**WM. HAMILTON MANUFACTURING CO., Limited**

MANUFACTURERS OF

**THE "RELIANCE"**

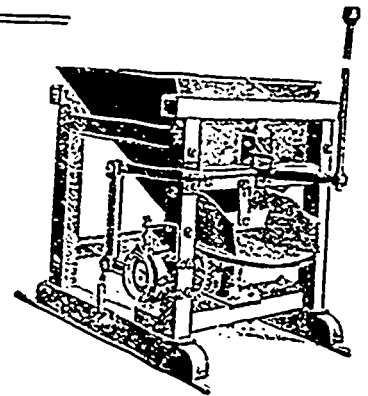
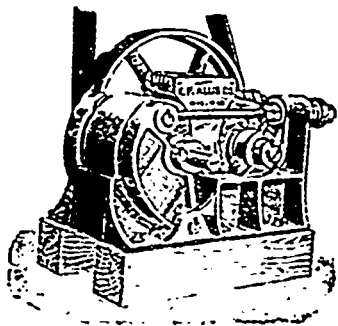
**Mining, Milling**

AND

**Smelting  
Machinery**

FOR THE DOMINION  
OF CANADA

(Under License from The E. P. ALLIS CO., Milwaukee, Wis.)



Crushers, Rolls, Jigs, Concentrators, Screens, Stamps, Pumps  
Compressors, Hoists, Boilers, Engines, Water Wheels, Etc.

Branch Office . . . .  
**VANCOUVER, B.C.**

**PETERBOROUGH, ONT.**

Of course The Paper Mill would be perfectly satisfied. Of course it would never think of shouting itself hoarse—oh! no! never!

The total number of dry docks in the world is 748. Great Britain owns or controls nearly sixty per cent. of this entire number; 249 are within the confines of England, thirty in Scotland and eighteen in Ireland. There are 202 docks in Europe, divided among eighty cities; seventy-six in Asia, divided among twenty-seven cities; 136 in North America and adjacent islands, divided among fifty-nine different cities and towns; fifteen in South America, divided among nine cities; and twenty-two in Oceania and Australasia, divided among twelve cities and towns.—Marine Review.

Occasionally our Yankee contemporaries make a slip. It will now be quite in order for the Review to apologize for its "mistake" and assert that the United States has the greatest dockyards in the world, although only one of the ten naval dry docks of the United States can accommodate any of the United States ships of the line.

People flock from the country to the city, expecting to pick up an easy and genteel livelihood, and stay in the city and beg, sooner than go back to the country and work. That is the trouble. We have too many men who come out here to get more money for less work, and object when they find they have to work harder here than they had to do where they came from. But it is only workers that we want, and only those where there is work for them. And this work is solely on the farms. We want the European peasant farmer to exploit our vast expanses of unoccupied farming country. That is all. Of mechanics, clerks, and brain workers, we have an ample supply. We cannot have too many immigrants of the right kind, and in the right place. If those who are incapable of making a

living in the cities could be scattered over the rural districts and kept there, if the new arrivals, who are not fitted for city life, could be promptly drafted off to the country and set to work there, it would be seen that the nation was the gainer by the addition of so much productive labor.—Canadian Trade Review.

The Crown Lands Department have set apart two townships, in the Rainy River district, near Arno, to accommodate a band of one hundred families whom Rev. R. E. Burris, of Bowmanville, Ont., is bringing in from the United States. These settlers are the sort we want. We are told they are all well-to-do, and will bring with them some two hundred thousand dollars in cash, besides their household goods and farming implements. They will come in just as soon as they can come next spring by boat, and take possession of their new home in the rich farming land district of New Ontario.

The increased lumber tariff has borne its expected fruit in the introduction of a measure into the Ontario Parliament, providing that every license for the cutting of timber on crown lands issued after April 30th next, shall provide that the timber must be sawed into lumber in Canada. As this bill is said to be sure of enactment, it will put an end to Michigan lumber barons rafting Canadian timber across the lakes and will raise the price of lumber still further to the American consumer.—Marine Record.

It is a sight for sore eyes to read this—the first acknowledgment of the truth of what THE CANADIAN MANUFACTURER has contended was true, and in direct opposition to the outcry of American newspapers and of Canadians who would rather see favors extended to Americans than to Canadians by Ontario legislative bodies. We congratulate the Record on its fearless honesty.

**BRYANT . .  
ELECTRIC . .  
SUPPLIES . .**

By special arrangement with the manufacturers, we are placing in stock on Montreal, a complete line of Bryant specialties, including K. W. Rosettes, Bryant Sockets, Branch Blocks, etc., etc. Our catalogue B. showing Bryant goods is now ready, and is the most complete catalogue ever published for the Canadian trade. Write for one.

**The IMPERIAL INCANDESCENT LAMP** IS WINNING FAST FRIENDS WHEREVER USED.

**JOHN FORMAN, 644 CRAIG ST., MONTREAL.**



**THE CROCKER IMPROVED  
...TURBINE.**

**A HIGH-GRADE, MODERN WHEEL—ECONOMICAL AND EFFICIENT IN THE HIGHEST DEGREE.**

The best combination of hydraulic science, with practical results now on the market. Complete Water Power Plants built and installed.

SEND FOR OUR NEW CATALOGUE JUST ISSUED.

*It will interest you.  
Our Prices will Please,  
and to Purchase  
Our Machinery will Pay you.*

**The JENCKES MACHINE CO.,** 28 Lansdowne St., SHERBROOKE, Que.

## LITERARY NOTES.

Under authority from the Board of Trade, George W. Englehardt has issued the "Book of the Board of Trade," which contains two hundred pages of views and history of Toronto. The illustrations are especially good and the letterpress is systematically arranged so as to form a handy reference volume.

The Methodist Magazine and Review enters upon its forty-seventh volume with an admirable number of one hundred and four pages, with over thirty engravings. Among its illustrated articles are one with seventeen half tones on London, "The Heart of the Empire." "Up the Jungfrau by Rail," describes, with several cuts, the most striking engineering feat of recent times. Portraits of Mazzini and the Countess Schimmelmann, with sketches of their remarkable careers, are given, also an illustrated article on "Volcanoes and their Origin." John Wesley is the subject of a fine character sketch by the Rev. T. Bowman Stephenson, LL.D. There are several other articles in lighter vein.

The Christmas number for 1897 of the old Farmer's Advocate, of London, Ont., and Winnipeg, Man., has set a merry pace for agricultural journals everywhere on the globe, and has done a good thing for the cause of farming in Canada. Whatever helps the farmer quickly stimulates the general interests of the country. This paper very ably and artistically sets forth the strong features of this foremost of Canadian industries. A powerful plea is made for the extension of improved live stock rearing, and the object lessons in the way of engravings are unique. The Advocate discusses every question of interest to the farmer and is, par excellence, the farmer's paper for Canada.

## GREAT BRITAIN'S TRADE.

The British Trade Journal deals at some length with the general condition of trade with regard to the United Kingdom and with regard to the Empire during and at the end of the past year. The tone of the article is significant and the last clause of it lays down a programme of information broad enough to include the realization of Canada's desire for an Imperial customs union. We append the article in full, inasmuch as it contains much food for careful thought. The Journal says:—

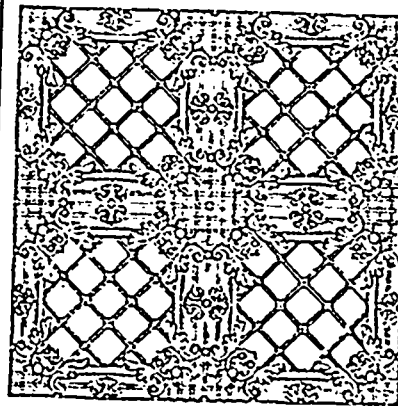
1897—a year which has witnessed the adoption of a preferential tariff by Canada, the denunciation of the Belgian and German commercial treaties, and the introduction of another high tariff wall by the United States—cannot but be memorable in the annals of British trade. In view of the rising tide of foreign competition, it marks a turning point—the beginning of a new era—one in which the Empire rather than the United Kingdom is to play the leading part. A glance at the general situation shows that it is not the speeches of this or that statesman, or the agitation of this or that organization, which has brought into prominence and even into practice the policy of the Dominion. The idea is the natural outcome of the antagonism of nationalities in their search for new markets. Why do the people of the continent strain their gaze towards China? Is it not that there lies the last unappropriated inhabitable and wealthy region of the Northern Hemisphere—one which may become to them what India and the Australian Colonies are to us? That is the predominating idea of the year—the commencement of the final struggle for the unannexed portions of the globe and the consolidation of possessions already appropriated—and to its popularization in this country much was due to the Diamond Jubilee of Her Majesty's reign, the conferences of Colonial Premiers, and the great processions and reviews of June last. That we are beginning to take stock of our possessions and to appreciate their value was also shown by the reports from Colonial Governors in response to the Colonial Secretary's appeal for information, and by the Board of Trade investigation into foreign competition, which confirmed the Colonial Governors' reports in regard to the increasing share of British colonial trade now falling into the hands of our competitors, whose own countries and whose Colonial possessions are closed to us while ours are open to them. The year has also been remarkable for the report of the Royal Commissioners on the West Indian Sugar Industry—a most unsatisfactory and inconclusive document—which made clear only one point, that the only effective means of ending bounties are countervailing duties. The Commission also brought to light the unsatisfactory condition of the Crown Colonies in other respects, one which demands the further investigations of a Royal Commission of Inquiry into their general scheme of government and its results. That the authorities are no longer content to eat the dead-sea fruit of *laissez faire* was also shown by the dispatch of Board of Trade Commissioners to South America to inquire into the success of foreign competition there; and now it only remains to take up one other important point, the causes of the vast and

rapidly-increasing importation of manufactured goods into the home market, for it is certain that if we cannot hold our ground within the United Kingdom, it is useless to try to keep it at the Antipodes. Other leading events of the year have been the premature abandonment of our treaty with Tunis, the advent of French commerce at our expense in Madagascar, the notice to terminate the charter of the Royal Niger Company, the encroachments of France in West Africa, the adoption by Japan of a gold standard, the decline of Indian trade as a consequence of famine and plague, the failure of the cereal crops in Europe, the rise in wheat and in freights, the Greco-Turkish war, and the constant fall in silver prices, consequent upon the failure of the United States Silver Commission, and the action of Japan and the Indian Government. To these untoward events must be added the strike of the engineers, and the unprofitable state of much of the cotton industry.

Bearing in mind the general conditions above noted, it follows that our export trade taken altogether is not flourishing. We have shipped abroad of British and Irish produce and manufactures during the past year about five millions sterling less than in 1896. The first half of the year was in our favor; but with July the engineering strike began, and this has effected our shipbuilding and machinery returns. Fortunately many other branches of industry remained more than usually active. Among these were the production of iron and steel, there being a record output in pig-iron, and a revival during the last few months in the chemical trades. But while the iron and steel industries have improved, there has been no proportionate advance in prices. The United States have made enormous progress in those trades, and to-day pig-iron can be produced more cheaply on the other side of the Atlantic than in this country—a fact of momentous significance in the world's commerce. Many observers are apt to conclude from this that the Republic is on the eve of a great reduction in tariffs on iron and steel manufactures. But we can draw no such inference. The tariff is found to serve the useful purpose of maintaining high prices in the home market, and to ensure the iron producer a steady and remunerative market while he ships his surplus produce at greatly reduced prices, and sometimes at no profit whatever, to undermine our position in neutral markets and even in the Black Country itself. This policy, which is pursued with regard to many classes of manufactures in America and on the continent, involves the trade of this country in a struggle such as

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has not yet been experienced, and places the whole of our fiscal policy on a plane quite unconsidered by those who established it fifty years ago. The new tariff in the States, and its effects, can be traced upon the world's trade. Before July last manufacturers here and on the continent were in a state of feverish activity to execute orders before the tariff was applied. Wool was forced up by sales for the American market. Then came the collapse when the duties were enforced, and from this many of our industries are still suffering. With the increase of competition in the colonies, we find that our exports to them of certain classes of manufactures are declining; while our exports of raw material and partly manufactured goods, machinery and apparatus to foreign countries have increased.

Some writers can see in this merely a deterioration in the credit of the colonies, and they attribute the increase in our imports to the same cause. But it would be difficult to prove that as between 1896 and 1897 there has been any material decline of the credit of

the colonies and foreign countries in the money market. Loans even for such tottering powers as that of China can be readily raised in Europe, while the position of most foreign and colonial stock is better than it was. It is also noteworthy that while exports of our own manufactures have declined, those of our competitors have increased, and if colonial credit were seriously injured this could not have happened. Then, too, it is significant that our shipments of foreign products have largely increased, despite the alleged maleficent effect of the Merchandise Marks Act, all of which facts show that as manufacturers for the world's markets we have the keenest of competition to meet.

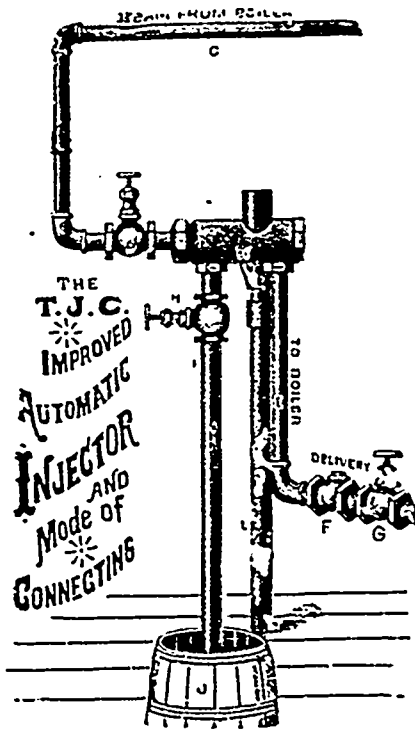
How that competition is to be met is the crucial question of the British industrial world. Prolonged peace has enabled manufacturing rivals to develop industrial operations on a scale hitherto unknown, and this is done with all the experience which this country's workshops could afford. It is done, too, with an assistance from Governments which our industries have to do without.

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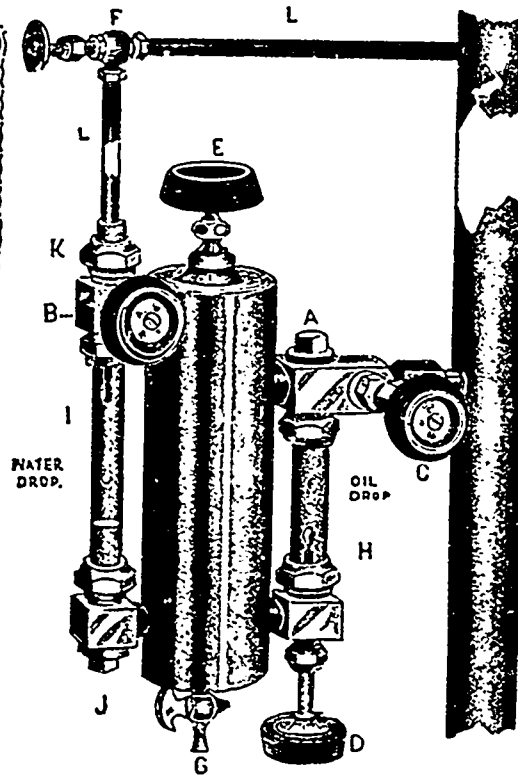
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—with nominal railway rates, freedom from royalties, subsidized shipping, as well as lower wages, longer hours, better technical knowledge and training, and the support which a steady and secure home market ensures. These conditions are augmented in some countries by an abundance of cheap raw material and boundless energy; and hence, it follows that, if peace be preserved, the competition in the world's neutral markets, and probably also at home, will become more and more severe. Our manufacturers, we do not doubt, will be well able to meet it by improving their methods and reorganizing their works. It is a good omen that while strikes are paralyzing some trades, the principal employers therein are abroad studying new machinery and systems, and ready to begin the competitive struggle anew under better conditions immediately the dispute with the Trade Union officials is ended. Our trade has declined not from one but from many causes; and is perhaps well that a reaction has set in against the prosperity of 1896; and that it has compelled us to re-examine our position, to adopt the ideas and methods of competitors wherever possible, and to place our schemes of education, our

factory organization and management, and, if need be, our whole commercial and colonial policy upon a more modern footing.

**A CURIOUS ACCIDENT.**

A curious accident to the engines of a steamer belonging to an English line has come to our knowledge. On the voyage out the high pressure cylinder of a set of triple expansion engines developed a peculiar and most pronounced knock. The engineer had the covers removed twice, but failed to discover the cause. Nothing was found in the cylinder, and the piston, piston rings and rods were found to be intact. On starting again the knock was pronounced, and continued to get worse, until, after some hours of steaming, a crash was heard inside the cylinder, and the engines were entirely disabled. The removal of the cover a third time revealed a different state of things, for a portion of the piston was broken clean off. A minute examination of the engine showed that the pounding in the first place had been

caused by the cylinder liner which was secured at the top end by counter-sunk bolts inserted from the inside. A slight amount of vertical play of the liner seems to have gradually grown into an appreciable movement, which eventually sheared off one of the bolts. This coming into contact with the cover on the upward stroke caused a fracture of the latter, the broken piece falling to the bottom with the result above stated. The engineer was held responsible for the accident for not shutting down the high pressure cylinder as the engine might have been run temporarily as a compound by working the intermediate and the low pressure cylinders only.—Engineer London.

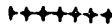
**OUR GRAIN TRADE**

The United States exported to Canada 71,758 barrels of wheat flour, valued at \$348,405, during October, according to the last report of the Bureau of Statistics, against 81,706 barrels, valued at \$311,741, in October preceding; and during the ten months ending with October 411,889 barrels, valued at \$1,862,935, were exported, against 823,-

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 W. W. GREENER, "the Great Authority on the Gun," speaks highly of Chilled Shot, and strongly recommends it in preference to soft shot.

507 barrels, valued at \$3,107,193, exported during the corresponding months of the year preceding.

Canada imported from the United States 727,355 bushels of corn, valued at \$205,451 during October, according to the last report of the Bureau of Statistics, against 1,725,812 bushels, valued at \$459,827 in October preceding; and during the ten months ending with October 10,606,086 bushels valued at \$3,087,954, were imported, against 8,982,954 bushels, valued at \$2,571,859, imported during the corresponding months ending with October preceding.

Canada imported 1,052,958 bushels of wheat, valued at \$1,023,613, from the United States during October, according to the last report of the Bureau of Statistics, against 606,852 bushels, valued at \$445,204, in October preceding; and during the ten months ending with October 5,518,626 bushels, valued at \$5,027,507, were exported

against 4,733,021 bushels, valued at \$3,078,790, exported during the corresponding months preceding.

AND NOT ANY TOO SOON.

Activity reigns at the High Commissioner's Office in regard to the season's emigration work. New and attractive pamphlets, putting all phases of Canadian life fairly and yet seductively before the British public, are being issued in large numbers. Advertisements are being inserted in the leading journals directing inquirers to the Government officials, who are thus able to discourage the unsuitable and show the suitable exactly where they may find best scope for their energies in the Dominion. By illustrated lectures, meetings with farmers at market fairs, and by other well-thought-out methods, Canada is being given her proper place in the

minds of the emigrating public. Canadian Gazette, Eng.

MR. LAURIER IS NOT CANADA.

What is the price we are asked to pay to keep Canada from exterminating the seal herd of the Pacific? Mr. Laurier asks that Canada shall be given the benefit of the 20 per cent reciprocity section of the Dingley law on fish, coal, barley, hay, potatoes, eggs and other products of husbandry. Such a concession would mean the abandonment of a principle to which the present administration stands committed, and of which the President has been the foremost champion for years. —Chicago Times-Herald.

McFarlane Bros., founders and bicycle manufacturers, of Ottawa, have dissolved partnership. Mr. D. McFarlane will continue the business.

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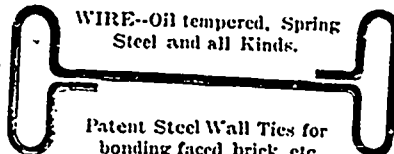
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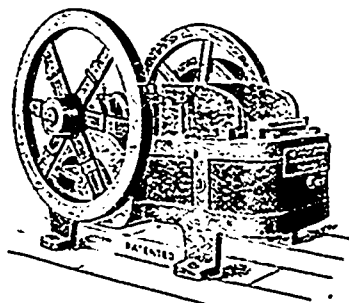
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# CAPTAINS OF INDUSTRY.

The following items of information, which are classified under the title "Captains of Industry," relate to matters that are of special interest to every advertiser in these pages, and to every concern in Canada interested in any manufacturing industry whatever, this interest extending to supply houses also.

If a new manufacturing enterprise of any kind is being started, or an electric lighting plant instituted, or an electric railroad, or a telephone, or a telegraph line is being constructed; or a saw mill, a woolen, cotton, or knitting mill; or if any industrial establishment has been destroyed by fire with a probability of its being rebuilt, our friends should understand that possibly there may be something in the event for them. Do you catch on to the idea?

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, belting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, alkalies, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

The Raymond Manufacturing Company, Limited, have discarded the New York embossing machine in use for the past few years in their factory at Guelph, and replaced it with an embossing machine made by Goldie & McCulloch, of Galt, who also have put in a big lathe for the Raymond company.

The Sturtevant Mill Company, of Boston, Mass., have a new rock crusher which is advertised in another column. It is guaranteed to do fine work on hard material, and in our next issue we shall illustrate and describe it fully, as it is a machine of much interest to Canadians.

The Dominion Paper Box Company, of Toronto, have been burned out, but they are insured to cover all loss.

The stock of the Toronto Electrical Co., Limited, was damaged by water during the fire in the block where they are situated. The stock was partially insured.

A. J. H. Eckardt, undertakers' supplies, of Toronto, have changed their style to Eckardt Casket Co.

Twidale & Co., lumbermen, of Montreal, have been succeeded by Alexander MacLaren.

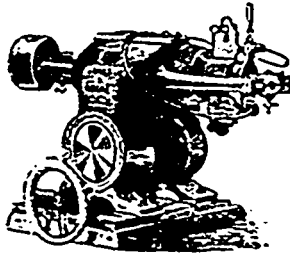
The Novelty Manufacturing Company, of this city have put in a 30-kilowatt generator supplied by the Toronto Electric Motor Co.

The steamers Seguin and Sir S. L. Tilley are being lengthened to Welland canal length. The Tilley will be full length, 260 feet, and the Seguin will be 240 feet after the work is completed.

In addition to the Richelieu & Ontario steamers they have under contract, the Bertram Engine Works, of Toronto, will build three steel grain barges for the Prescott Elevator Company.

The Polson Iron Works are building a stern wheeler for the Stickeen new service.

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Canadian Manufacturer Publishing Co., Limited  
TORONTO, - CANADA

The Ontario Peat Fuel Company, of Wel-land, are fitting up in Toronto a factory for the manufacture of artificial marble from a gypsum which is said to be found in large deposits in the Grand River.

Amongst the patents recently issued at Ottawa is one for a brick, which is claimed to be fireproof and of such constituency that nails may be driven into it as easily as into wood, without chipping it. The brick will grip the nails just as wood does.

The new pulp factory at Chicoutimi is making 35 tons of dry pulp per day and expects to make nearly four times that quantity by the end of the year.

During the past week the bicycles shipped from Toronto to France, Germany and Australia were valued at \$80,000.

A Rochester firm of manufacturing chemists will establish a branch factory in Toronto.

The Ontario Forestry Branch is arranging for a series of experiments to ascertain the commercial value of jack pine.

The president and one of the directors of the Canadian Rubber Company have been in Hull, interviewing the city council with regard to the establishment of a branch of their works at that place.

British imports into Brazil have decreased 33.4 per cent., while Germany's imports into Brazil have increased 117.4 per cent.

Bolivia buys nearly all her imports from Germany.

The Russian Government have restricted the coastwise carrying trade to ships sailing under the Russian flag, except in case of salt imported to Baltic ports from the Black Sea or the Sea of Azov.

Soap manufacturers might find it worth their while to have an eye toward the trade with Zanzibar.

In 1896 Germany sent to Japan three times the quantity of beet sugar she sent in 1895.

Russia is inaugurating many industries and will pay good prices for foreign exports.

In Sumatra every native man carries a knife and the knives are all made in Sheffield.

Japan is developing a surprising capacity for the consumption of sheet and galvanized iron for ships, bridges and boilers.

John Forman, of Montreal, in another column advertises a full line of Bryant electric supplies, the catalogue for which is now ready.

Your attention is called to the advertisement of J. A. Culverwell elsewhere in this paper.

A government cartridge factory is established at Quebec. The machinery was obtained from England and an English firm supplied the powder.

Cement is wanted in Zanzibar, where Belgian cement has eclipsed all others because of its cheapness. Coal is also imported for coaling stations at this point.

In Nova Scotia there are about 1,700 establishments that salt and dry fish, and about 4,000 persons are employed in this industry. A large quantity of salt is used and most of it is imported.

Firearms are being smuggled into Persia, and revolvers and pistols sell at good prices, so that anyone obtaining permission from the Persian government to import them into Persia may derive a good revenue.

In Germany a process has been discovered by which port wine may be made from barley.

## The Manufacturers' Life Insurance Company

Wish their Present and Prospective Policy-Holders

*A Happy and Prosperous New Year.*

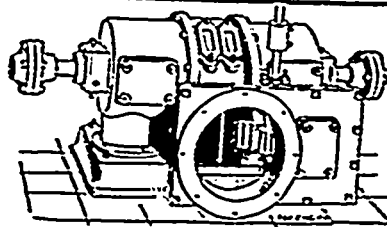
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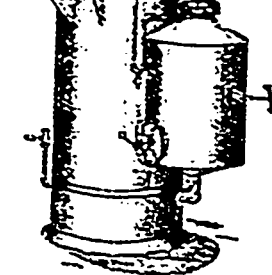
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NIAGARA FALLS ACETYLENE GAS MACHINE CO.  
NIAGARA FALLS, ONT. LIMITED

Sub-  
scribe for The Canadian Manufacturer

The T. Eaton Company have added one 130-kilowatt electric generator, directly connected to an Ideal engine, and three 40 h.p. bi-polar motors to their plant, where eleven motors are now running. The Toronto Electric Motor Co. supplied the machines.

R. E. T. Pringle, of Montreal, has installed a 30-kilowatt generator made by the Toronto Electric Motor Co.

The Jenckes Machine Company, of Sherbrooke, Que., have taken over the business of the Phelps Machine Company, Eastman, Que., and will hereafter manufacture the specialties formerly made by the Phelps Company. Mr. L. D. Phelps will supervise this new branch of work for the Jenckes Co.

The Toronto Electric Motor Company have supplied one welding machine to William Cane & Sons of Newmarket and two welding machines to Mason's Carriage Works, at Davenport, Iowa.

The woollen mills owned by A. Merizzi, at Napierville, Que., were destroyed by fire on the 17th ult. Loss about \$10,000.

The new Toronto city directory shows 3,000 more names than were in the directory of 1897. This means, probably, 9,000 more population than a year ago and brings the total number of names in the directory up to 75,000, which would indicate that the population of the city of Toronto is over 200,000.

The firm of Halpin & Gauthier, carriage-makers, Montreal, have dissolved.

The Ottawa and Hull Printing and Publishing Company is a new organization that seeks government approval.

The Blunt River Draining Company, Limited, is seeking incorporation.

J. A. Bean has sold his powder factory at Tweed.

W. J. Moses & Son suffered a loss by the destruction of their sawmill at Vernon by fire.

The Eastman Lumber Company, of Eastman, Que., has dissolved and L. D. Phelps retires, leaving the business to be conducted by the remaining partners under the old style.

Letters patent have been issued to allow the Montreal Woollen Mills Company to increase their capital stock to \$200,000.

The John Ritchie Company, of Quebec, is seeking incorporation, and will engage in the manufacture of boots and shoes.

The furniture manufacturing firm of Geo. Gale & Sons, Waterville, Ont., has been dissolved, but Francis G. Gale will continue the business under the old style.

The firm of Newlands & Co., of Galt, Ont., manufacturers of glove linings and buffalo robes, now consists of Joseph Stouffer and A. M. Newlands, Jr.

The Hurrow, Stewart & Milne Manufacturing Company, of Hamilton, are applying for incorporation. They will manufacture stoves.

**GEORGE WHITE-FRASER.**

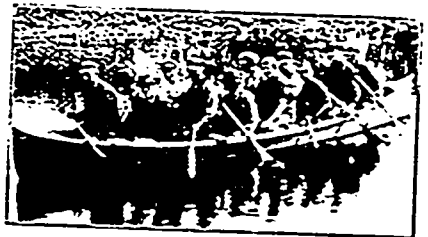
Member Can. Soc. C.E.  
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**CONSULTING and  
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Railways, Lighting, Power Transmissions,  
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**TORONTO.**

**Superintendent Wanted.**

**A COMPETENT SUPERINTENDENT**  
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**B. BELL & SON,**  
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**Canoes for Alaska and Gold Regions**

This cut is one of our 12 foot. No. 6xx  
Canoes, and shows carrying capacity.  
Write for our catalogue and discounts.

Peterborough Canoe Co., Limited, Peterborough

**TANNERS!**

**Grinders and other parts for Tunkhannock Bark Mills.**

Guaranteed to be superior to the American in WEARING QUALITY  
and at LESS COST.

DAVILLE TANNING CO., write:-

"The Grinders LAST MUCH LONGER and GRIND MUCH BETTER than  
any we have ever had."

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Founders and Machinists, - - - AURORA, ONT.

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IT IS NOT WIND YOU WANT.

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**TANNED BELTING**

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26 PITT ST., SYDNEY, AUSTRALIA.

**Wool Buyers' on Commission.**

Letters of Credit must accompany Orders.

BANKERS: Bank of Australasia, Sydney.

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Manufacturers of....

**OIL-CLOTHS OF EVERY DESCRIPTION**

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Enamelled Oil-Cloth, Stair Oil-Cloth, etc, etc.

Office and Works

Cor. St. Catharino and Parthenais Sts., MONTREAL, Que.

**ADVERTISE** in  
...The Canadian Manufacturer

The Yukon and Pacific Railway Company desire to build a railway from Skaguay or Dyea, to Lake Bennett, and thence to Fort Selkirk, Dawson City and Great Slave Lake.

Another company propose to develop in a different direction, a railway from some point near Ottawa or Montreal, to the sources of the Gatineau and St. Maurice; then to the Miskegum or Bell River in the North-east territory; and finally to Lake Mattagami, and by way of the Noddawa River to Rupert Bay.

Jeffrey Alexander and Co have commenced business as millwrights in Montreal.

A. C. NEFF. JAMES WOOD.  
Chartered Accountant. Late Sec. The T. Eaton Co. Ltd.  
**NEFF & WOOD**  
PUBLIC ACCOUNTANTS, AUDITORS  
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BY ANY MEANS  
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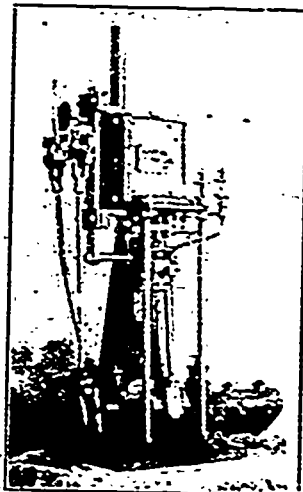
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Makers of

YACHT ENGINES, 1 H.P. to 50 H.P.  
Safety Water Tube BOILERS  
PROPELLER WHEELS  
Stationary Engines and Boilers  
WRITE FOR CIRCULARS

Geo. S. Harwood & Son, of Boston, Mass., write us that they have arranged with the firm of Edward Jefferson & Bro., 28 Strawberry St., Philadelphia, Pa., to carry a line of aprons for Bramwell feeders.

The Gurney Scale Company, Limited, of Hamilton, have built an addition to their works. The addition is 60x30 and two stories high. It is built of brick. The addition gives them more factory room, show room and office room. The offices are fitted with handsome metallic ceilings made by the Pedlar Metallic Roofing Company, of Oshawa, Ont.

The Hamilton and Toronto Sewer Pipe Company are remodelling and adding to their works in east Hamilton. Their factory is 216x110 and two stories high. They have recently put up four new down draft kilns, 35 feet in diameter.

The Hamilton Acetylene Gas Machine Company, Limited, of Hamilton, Ontario, are meeting with great success in the distribution of their apparatus for generating the new illuminating material. They have shipped a big sixty light machine to the Campbellford Rink Company and another machine of the same capacity to J. F. Brownscombe, Uxbridge, Ont. Here are some testimonials they have recently received:—John W. Gage, general merchant, Bartonville, Ont.: I have had one of your machines in my place and it is giving me the very best of satisfaction; far cheaper than coal-oil and no trouble. I can highly recommend it to all who wish the finest light in

the world to-day. Charles Richards, general merchant, Caledonia, Ont.: This certifies that after considerable use and careful testing of the Hamilton Acetylene Gas Machine Co's thirty light machine, placed in my store, that I am delighted with the light and believe it by far the most beautiful and economical I have ever seen. Mr. J. F. Kennedy, Kennedy & Bro., merchant tailors, Hamilton, Ont.: I have pleasure in stating that my family are well pleased with the gas making machine your Company fitted up at my residence. The light produced by it burns perfectly even, and is very satisfactory to all in our house; and there is positively no over-generation of gas, and consequently no waste of calcic carbide. Harry Stark, general merchant, Grand Valley, Ont.: We are very much pleased with the Acetylene gas light put in by your Mr. Suggitt. The store is 24x90 feet, and is, when lighted up, as bright as day. There is no trouble in connection with your new improved machine and there is great satisfaction in being able to light up when we choose, also showing dress goods and silks, shades can be distinguished, as in day light. R. E. Jones, Lynden, Ont.: This is to certify that I have had one of your Acetylene Gas generators in use for last two months, lighting one hotel, two stores, one town hall and also three street lights in our town. It has done all you claimed it would do, and all parties to whom I have it rented are well pleased with it. It has proved economical and satisfactory to me as owner of machine, never producing an over-generation of gas when not in use.

(From "Free Press," London, Ont., December 9th, 1896.)

"Number two Committee of the Board of Education met last night. . . . It was decided to put in two No. 25 Heeson Fire Grates in the Collegiate Institute furnaces. One of these Grates is said to have saved four tons of coal at Princess Ave. School last winter."

These Grates, 16 x 26 inches, are supplied by

**THE HEESON ROCKING GRATE BAR CO. OF TORONTO (Limited),**  
'Phono 1924. 120 VICTORIA STREET.  
Twelve additional sets of these bars have since been put in for the London Board of Education.

ALEX. GARTSHORE, President. J. G. ALLAN, Sec.-Treas. JAS. THOMSON, Vice-Pres and Gen. Mngt.

**THE GARTSHORE-THOMSON PIPE & FOUNDRY CO.**

Limited



3 in. to 60 in. diameter.

**For Water, Gas, Culverts and Sewers**

Special Castings and all kinds of  
**WATER WORKS SUPPLIES**

FLEXIBLE AND FLANGE PIPE.

**HAMILTON, ONT.**



**BENT WOOD SPLIT PULLEYS,**  
RIM... (REID'S PATENT).

The Strongest, Lightest and Best Belt Surface in the World

No Glue, no Nails in Rim like Segment Rim Pulleys, to be affected by Steam, Dampness or Moist Temperature.

EVERY PULLEY GUARANTEED.

The Reid Bros. Manufacturing Co., of Toronto,  
102-108 Adelaide St., West, Toronto.

M. Laporte, of Montreal, has secured a contract from the Ottawa government to construct a collecting drain on the Chambly Canal.

At Point Edward oil has been struck at a depth of 545 feet. A company has been formed, and is securing properties and sinking more wells.

T. Matheson & Co., Limited, builders of steam launches, steamers and marine engines at New Glasgow, N. S., have issued a very neat calendar for 1898. The ornamental portion of it is a handsome reproduction of a photograph of the town where they are located. This is an unusual and attractive idea, which might very profitably be copied by others, as an illustration of that description is sure to be carefully inspected by anyone using a calendar.

The calendar for 1898 got out by The Dominion Foundry Supply Co., of Montreal, is an unmistakable monitor for the man who needs any of their wares. It is illustrated with engravings of a few of the lines of tools they carry, and a pile of barrels of plumbago, charcoal, soapstone, and a number of other commodities required about a foundry.

The American Rattan Co., have completed the removal of their plant from Toronto, and their address is now Walkerton, Ont. Anyone having business to transact with the bicycle department of this firm, should address all communications to Bicycle Department, American Rattan Co., Toronto, as they are not carrying on the bicycle business in Walkerton.

Wm. & J. G. Greer, Toronto, have favored us with a handsome calendar, ornamented with a lithograph representing the complete scalping and bolting outfit of their Plausifier mill, which is an extremely desirable and profitable addition to any milling plant.

Wentworth county farmers who raise tomatoes have organized to secure higher prices from the canning factories.

Lord Douglas of Hawick will return to Toronto shortly, and comes as the representative of a large amount of capital which wealthy English and Scotch men desire to invest in Canadian industries.

Kidd & Mills have started a carriage factory in Danville, Que. Robt. Kidd and Mark Mills are the registered proprietors.

The Lake Bouchette Pulp Co., of Quebec, is asking incorporation.

An item of interest is the announcement of the application for incorporation by the Crow's Nest Pass Coal Co., of Coal Creek, B. C.

The Victoria Yukon Trading Company's incorporation is another evidence of the stir the Klondyke is making in the west.

The Conrichan Lumber Co., of Babeygeon, is applying for a charter.

The Buffalo Mining and Development Co., of Rat Portage, is asking for incorporation.

F. A. McCallum, of Rodney, has sold his planing mill to A. Mitchell.

The Sheba Gold Mining and Development Co., Limited, of Toronto, has obtained a charter.

A charter has been granted to the G. I. Wilson Lumber Co., organized in Toronto.

Hector Lamontagne & Co., of Montreal, have registered a new partnership to carry on the leather business. The proprietors are St. A. Joubert, Joseph A. Baron, Joseph R. Laurandean.

W. H. Polley & Co., Quebec, manufacturers of boots and shoes, have sold out their present business, and will start again in the premises formerly occupied by J. H. Botterell & Co.

The Qu'Appelle Felt Boot Co., of Qu'Appelle, N. W. T., is applying for incorporation.

The Northern Yukon Klondyke Mining Co., is asking for incorporation at Ottawa.

The Tobique Gypsum Co., is asking incorporation, and will develop valuable gypsum properties.

The Ontario Elevator Co., is seeking incorporation.

A despatch from Winnipeg under date of January 4th, says:-- A local leather firm yesterday received an order from New Zealand for fine harness, etc., aggregating \$2,500. It is the first ever received here, and is a trial order.

O. Bell, of New Westminster, B. C., has sold his carriage factory to N. Woods.

Several car loads of mica have been shipped from the Ottawa district to the Old Country. The use of mica in electrical appliances has largely increased the output of it. It is now being used instead of glass to cover port holes in British men-of-war, as it does not fly to pieces, as glass is apt to do, from the concussion caused by firing the heavy guns.

The Belmont and Deloro mines near Belleville are paying out from seven to ten thousand dollars a month in wages. The Belmont mine is putting in a reduction plant, and the other is erecting a separator to separate the arsenic and sulphur.

Victoria, B. C., is booming because of the Klondyke business. The sale of miners outfits is netting big profits to merchants, and a large number of steamers will be placed on the Northern route to handle the big rush of passengers who will start for the Klondyke early in the spring.

We have received from Messrs. Jones & Laughlins of Pittsburg, Pa., a very handy little compendium of useful information for business men, mechanics and engineers. It contains handy tables for use especially in all lines of iron work. Messrs. Jones & Laughlins manufacture steel iron and nails patent, cold rolled shafting, pulleys, hangers, couplings, etc. Their little book contains nearly five hundred pages, but yet it is of size small enough for the vest pocket. The contractor and the mechanic alike will economize time by the use of this little work with its solution of a thousand difficulties.

The Canadian General Electric Company are putting in a plant at Bonnington Falls, B. C., on the Kootenay River, a little more than thirty miles from Rossland. The plant is being installed for a company of which Oliver Durant, of the Centre Star Mine, is president, and the Company's intention is to transmit power to Rossland for use in operating mines. The generators are to produce 2,500 electrical horse power, and a three wire line will carry the current to Rossland at a pressure of 20,000 volts.

The British Columbia and Northern Railway Company have given notice of application to Parliament for incorporation. They propose to build a railway from Ashcroft, B. C., on the line of the C. P. R., to Fort Selkirk.

The Northern and Yukon Railway Company desire power to construct a railway from Edmonton, northwest by Peace River and Tesline Lake, clear in to the Mackenzie River.

Brown & Erb, glove manufacturers and glove leather tanners, of Berlin, Ont., have been succeeded by M. Erb & Co.

The Stickeen and Tesline Lake Railway Company are seeking the right to run a railway line from Fort Wrangell via Stickeen River and Tesline Lake to Fort Selkirk.

## JOHN J. KELLER & CO.

104 and 106 MURRAY ST.  
NEW YORK

220 Church St., Philadelphia.  
135 Pearl Street, Boston.

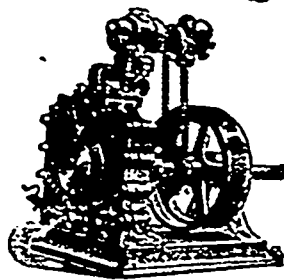
**Aniline Colors,  
Dyewood Extracts,  
Sumac and  
Nutmeg Extracts.**

FAST COLORS for Wool Dyeing,  
One Dip Cotton Colors, Novelties  
and Specialties for Calico  
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MANUFACTURED BY  
**JOHN R. GEIGY & CO.**  
BASEL, SWITZERLAND

## The Dake Engine

For Running Dynamios In



Small Isolated Plants.

### CONTRACTORS' HOISTS

STEADY AND EVEN MOTION,  
ALSO FOR

Attachment Direct to Fans, Blowers, Centrifugal  
Pumps, Stokers, Steering Gear, Etc.

Correspondence Solicited.

**THE JENCKES MACHINE COMPANY**  
SHERBROOKE, QUE.

Succeeding  
**THE PHELPS MACHINE CO., Eastman, Que.**

**NEW ANILINE COLORS.**

Direct Yellow R., as the name implies, is a direct dyeing substantive dye, which dyes cotton full yellow shades with the aid of common salt or similar mordant; it resembles Chloramine Yellow very closely, but is somewhat inferior in fastness to light. Direct Yellow R. is, however, superior to Chloramine Yellow in its coloring power, and on this account will be found to be more serviceable in certain combinations where a yellow at a very low cost is desired.

Jute Yellow G. is only suitable for Jute on which fibre it produces a full old gold shade, which is quite fast to rubbing. The method recommended for dyeing 100 lbs. Jute yarn is as follows:—

Dissolve two lbs. Jute Yellow G. in water at about 140 deg. F.; add this solution to the dye-bath; enter cold and gradually bring to 140 F., at the same time working well; rinse, but not too long, and then dry.

Benzo Nitrol Dark Brown N.—Information was given some time ago in this paper regarding Benzo Nitrol Brown, the above color. Benzo Nitrol Dark Brown N. is a new addition to this series of fast-to-washing cotton browns, by that new process of developing already described, viz:—By dipping

cotton material dyed with the above color or any of the other direct dyeing cotton colors, which are named in our pattern card, into the diazo solution of Paranitraniline. The following colors are also suitable for this after treatment, viz:—Chloramine Orange G., Toluylene Orange G., Direct Fast Brown B., Pluto Black B., Direct Blue Black B. and Toluylene Brown R. A special pattern card has been prepared in which the tests can be removed in order to test their fastness to washing. The Nitrol colors are suitable for dyeing velveteen in consequence of giving such full shades. With this color can be produced on hosiery the oxblood shades so much in fashion now.

Double Ponceau, 1 R., 2 R., 3 R., and 4 R.—A description of the above colors was given some time ago in your paper. They comprise a range of colors twice the strength of ordinary Ponceaus. The cause of shades dyed and found to be too dull is on account of using too much color; an extra brightness may be obtained by using perchloride of tin, so well known to dyers. The easy solubility of the double Ponceaus is excellent, they are very fast to alkalies, acids and stoving, and are faster to washing than the ordinary Ponceaus. Circulars, samples and dyed skeins of any of the above products, and latest

shade cards from Germany may be had on application to the Dominion Dyewood and Chemical Company, Toronto, sole agents in Canada for the Farbenfabriken vorm., Friedr. Bayer & Co., Elberfeld, Germany.

**FAST COLORS ON CARPET YARN.**

Alizarine Carmine Blue G. and B.—In paste have been tried practically on carpet yarn with great success. In Alizarine colors suitable for dyeing with these new colors, Alizarine Cyanine Green G. extra is admirably suited, and which color in combination with Quinoline Yellow, produces bright and clear greens.

The following aniline colors combine well and produce shades much in demand by carpet dyers, viz:—Azo Fuschine G., Azo Crimson, L., Orange Y., Fast Yellow extra, Indian Yellow G. and Quinoline Yellow.

Although the above colors dye remarkably even they must be brought slowly to the boil with usual precautions of entering goods into the tepid dye liquor.

Samples and prices of any of the above dyes will be forwarded on application to the Dominion Dyewood and Chemical Company, Toronto.

**HALF WOOL BLACK.**

A great change has taken place in the last few years in the dyeing of half wool blacks as every dyer is aware. The old two and three bath methods were very long and tedious, and often quite unsatisfactory, having to be repeated sometimes to produce a satisfactory result, the long twisted hand fibre of the cotton and the circular tube shaped fibre of the wool being so totally different in physical and chemical properties that it seemed to place unsurmountable difficulties in the way of getting one color to have an affinity for both fibres. This was, however, overcome when a chemist in the Farbenfabriken of Elberfeld discovered a series of blacks which were found to have an equal affinity for both fibres. The colors referred to are Direct Blue Black B. and N., and Direct Deep Black T. and G., with which dyers have become so familiar; the most satisfactory mordant has proved to be common salt, about 15 per cent.

Six lbs. of any of the above Blacks per 100 lbs. goods gives an excellent full black; raise slowly to boil and boil for two hours; eight lbs. per 100 of goods is required for raw cotton, and 15 lbs. salt, but for half wool, more salt, about 20 lbs. is recommended. Where a standing bath is required, correspondingly less color is required, viz., about one-third less.

The Robb Engineering Company, of Amherst, N.B., have suffered loss by fire which destroyed part of their establishment.

The Dodge Wood Split Pulley Company, of Toronto, have issued a handsome catalogue of power transmission appliances. It is replete with useful information and illustrations of all kinds of apparatus and contains many tables which the millwright will find very convenient for ready reckoning.

Wm. J. Matheson & Co., Limited, of New York York, with a branch in Montreal, have just sent us a very complete sample card showing a large number of dyeings done fast to milling on tweed yarn. The card contains twenty-eight samples dyed in one bath, and an equal number dyed in two baths with a chrome bottom. Careful directions are appended and dyers should make it a point to send for card No. 1804 E.

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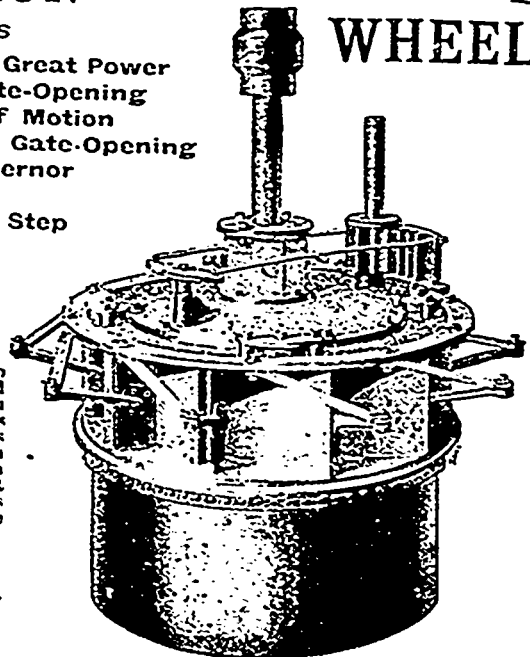
ST. CATHARINES,  
February 9, 1897

Messrs. Wm. & J. G. Greey,  
Toronto.

GENTLEMEN.—Your favor of the 5th to hand, have been away from home, and hence delay in answering your letter. You ask us how your Dominion Wheel compares with the . . . Well, Sir, the comparison is this—we have been using two . . . 38 inch diameter, double wheels, and your 51 inch Dominion wheel we put in December last gives us as much power as both, and does not use but very little more water than one of the 38 inch wheels. Yours truly,  
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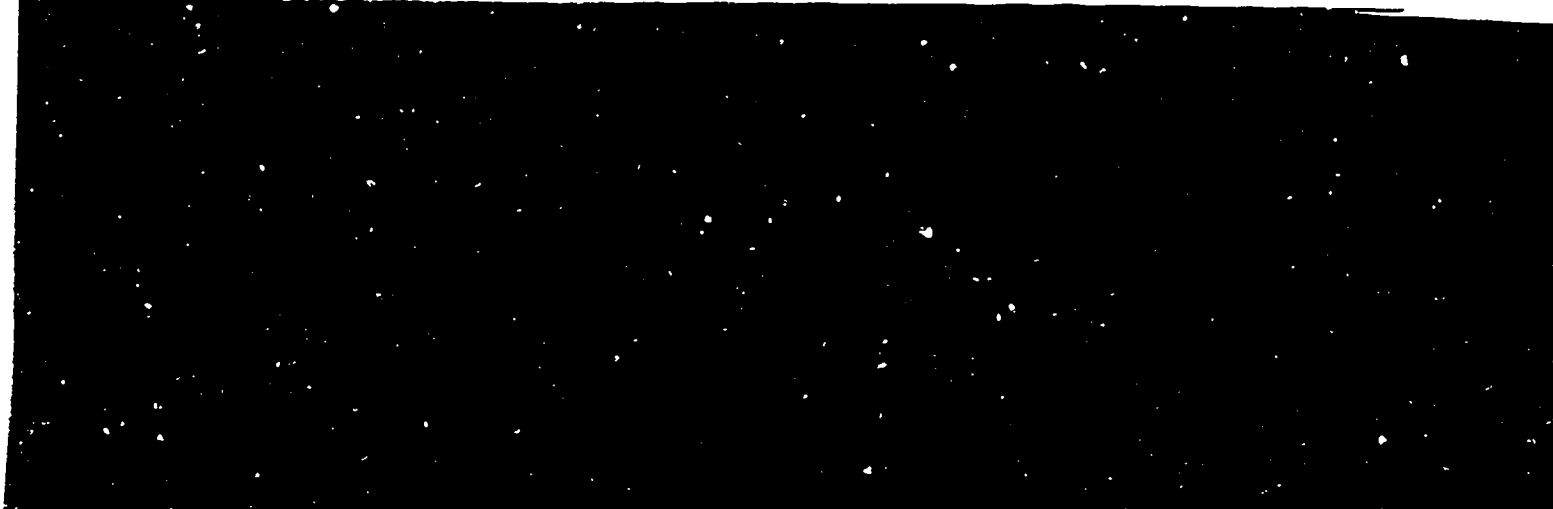
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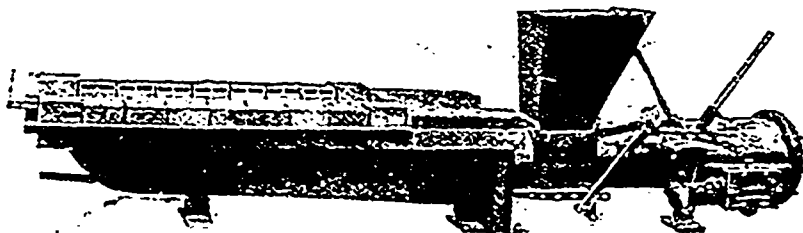
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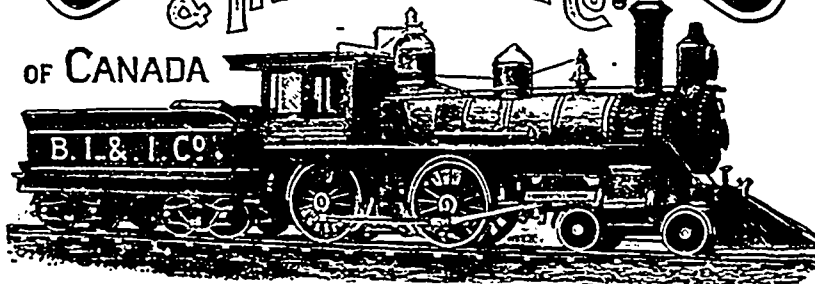
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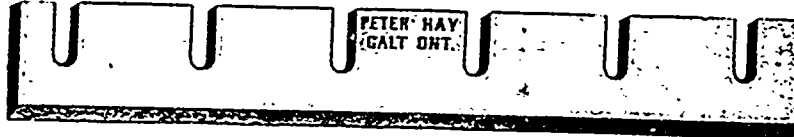
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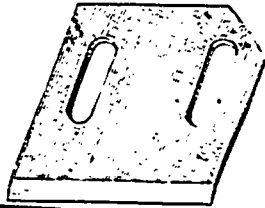
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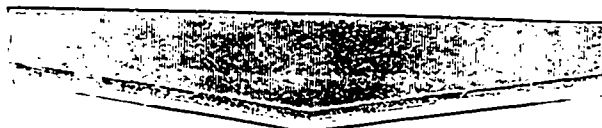
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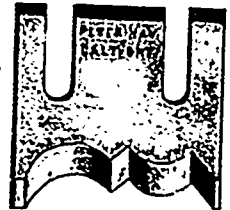
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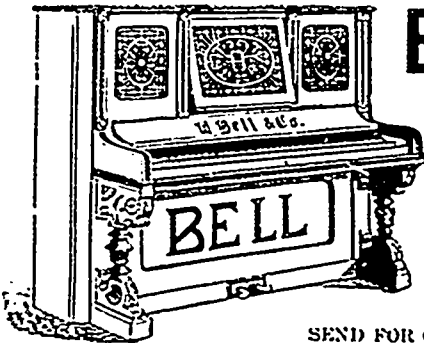
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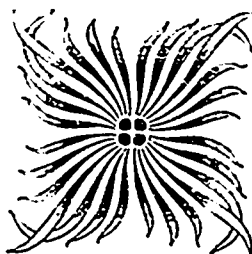
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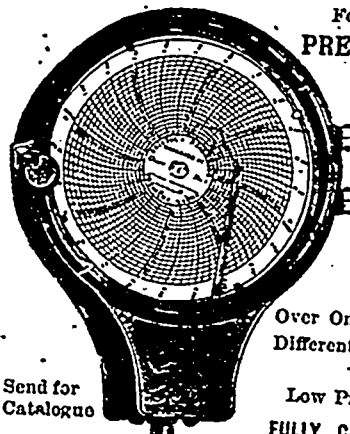
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