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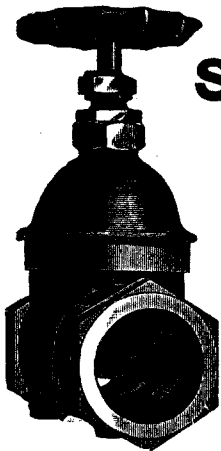
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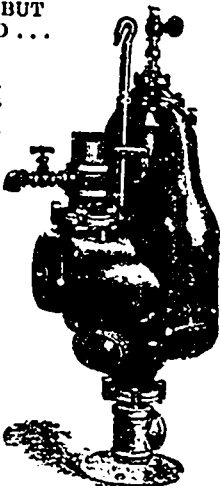
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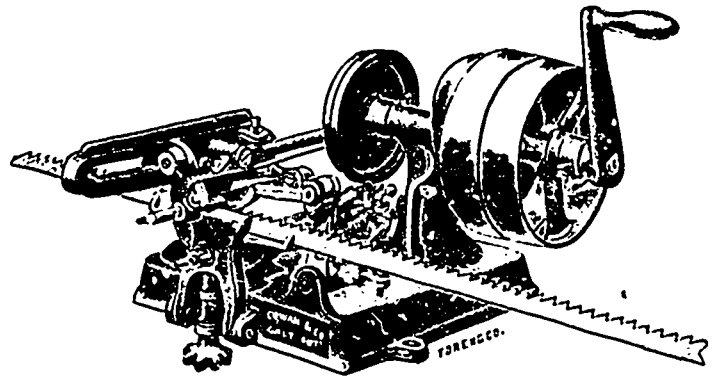


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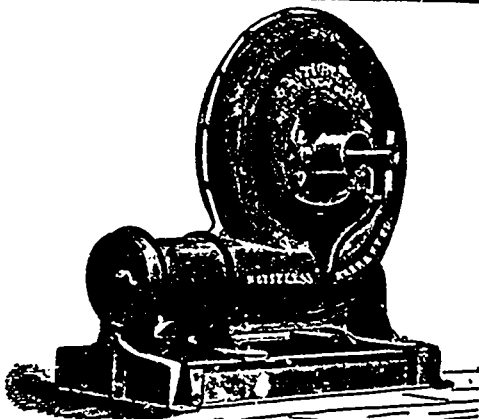
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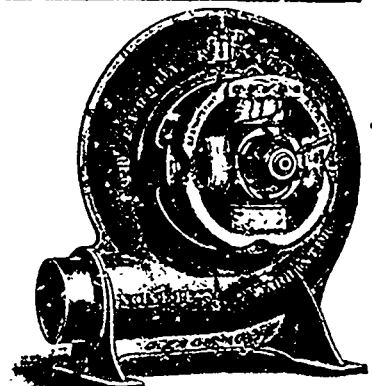
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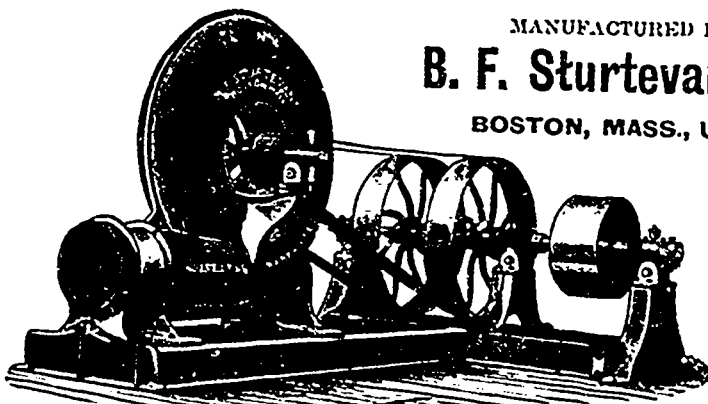
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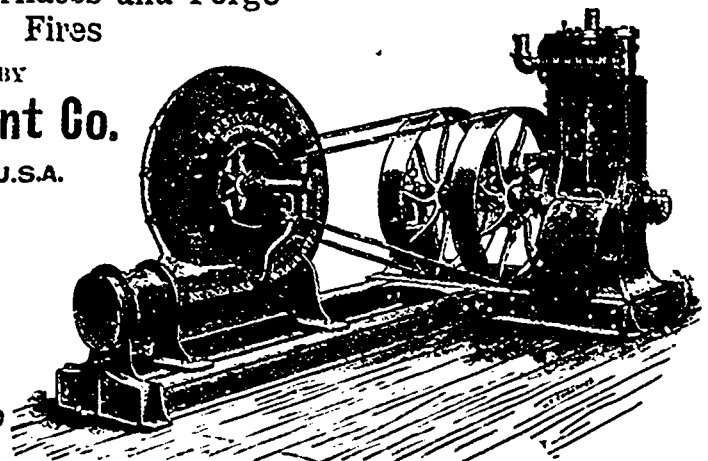
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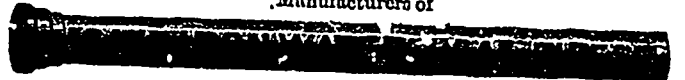
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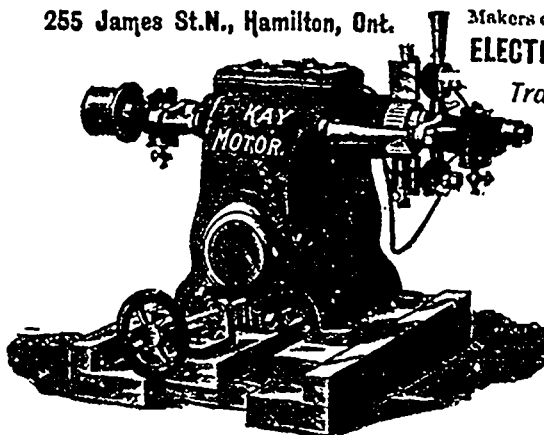
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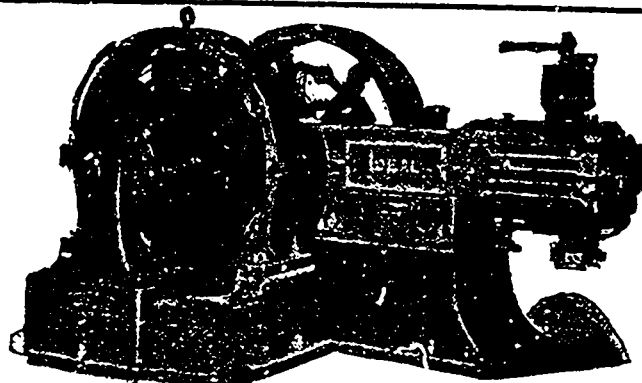
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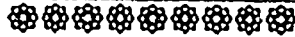


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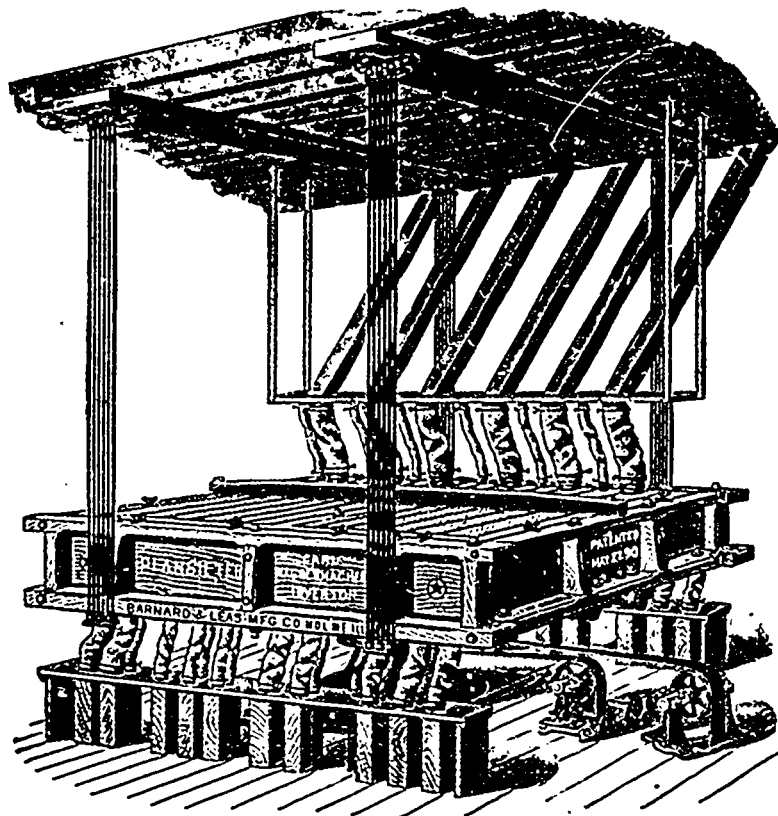


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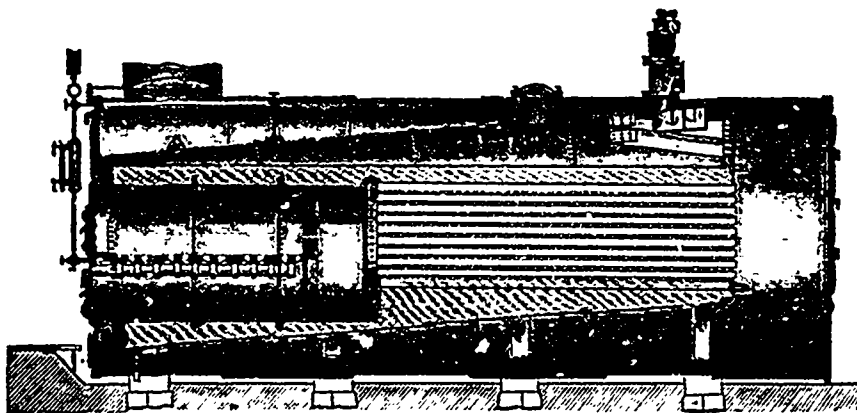
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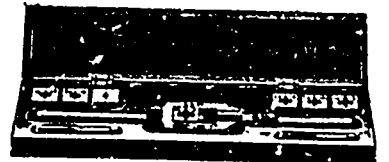
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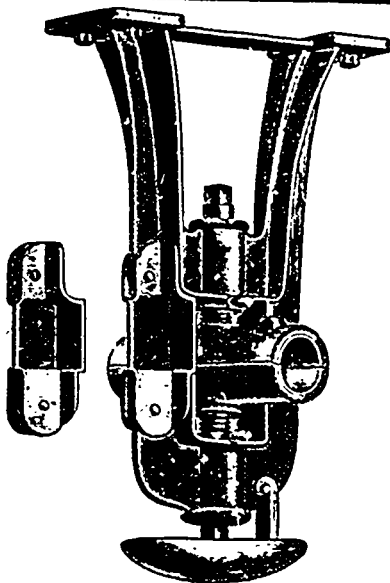
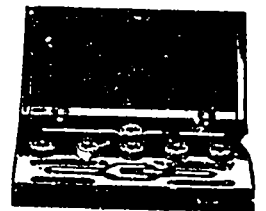
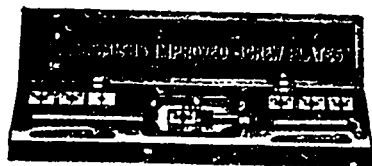
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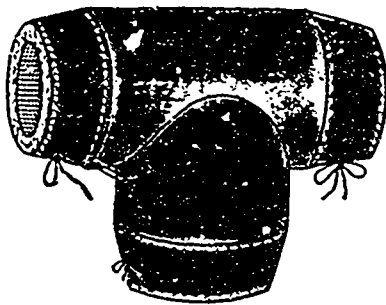
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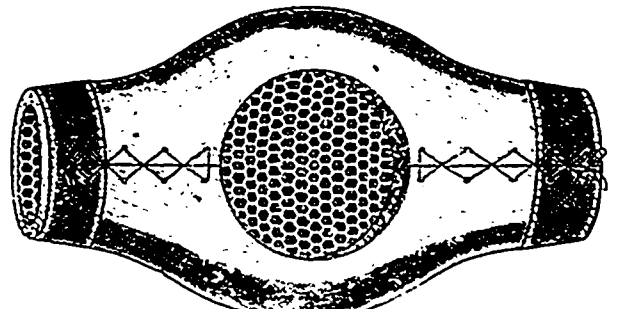
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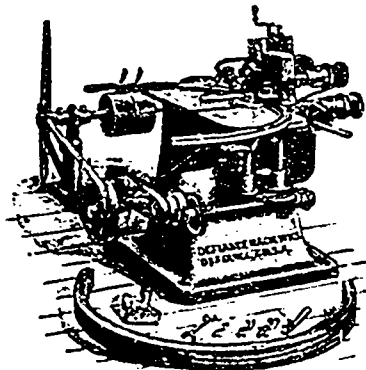
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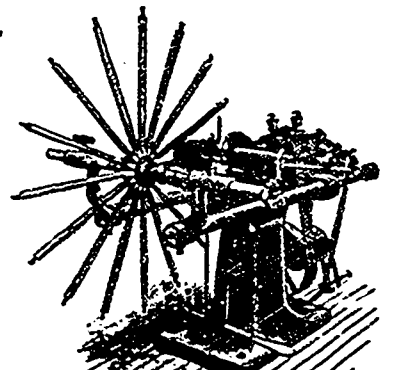
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THE CANADIAN MARKET FOR AMERICAN GOODS.

In a recent issue of this journal was an editorial in which was shown the unfriendliness of the United States to Canada, the logical sequence of which, after many years of endeavor to bring about a kindlier condition of affairs, has resulted in the Dominion Government making a clear reduction of twenty-five per cent. in our import duties in favor of British goods, the probability being that the same favor will be extended to several other countries. Our esteemed contemporary The Manufacturer, of Philadelphia, republished our article, and which it makes the following editorial comments:—

THE CANADIAN MANUFACTURER in response to some remarks which were recently passed by this journal in respect to the Dominion's determination to form a customs union with Great Britain, gives a history of the American policy toward Canada which is reprinted in another column. We confess that we have considerable sympathy with the Canadian journal's line of argument in this connection, and repeat that we are not at all pleased to note in the new Canadian tariff bill, the discriminating duties to England's advantage—it will be more accurate to say to our special disadvantage if it should turn out that other European countries are going to get into the Canadian markets on the British basis. That is still an open question. There is a great deal to be said on the side of letting other nations into a colonial market when those nations have treaties with the mother country guaranteeing reciprocal rights equal to those enjoyed by the "most favored nation." If the Belgian, the German, and other governments have treaties with Great Britain which apply also to the colonies, it is hard to see how the Dominion can have one scale of duties for Great Britain, and a separate scale of duties for the countries to which Great Britain is bound by written international agreement. It is, of course, a delicate question in English constitutional practice, as well as of international law.

However the point may be decided, the United States will get no gain out of the affair, as there seems to be no "most favored nation-clause" applying to the colonies in our treaty with Great Britain. We, therefore, cannot reap the benefits of the proposed twenty-five per cent. reduction, by any hook or crook. It does not appear to be Canada's real intent to start a tariff war with this country, though her love and respect for us is not overflowing and going to waste, as it were, as may be readily gathered by reading the article which we reprint. It is unfortunate that there cannot be commercial reciprocity of some kind between this country and Canada, not free trade, perhaps, but an exchange of privileges in return for a grant of equivalent privileges. It is said, of course, that were we to open to a market from which 70,000,000 people draw, the Canadians would get much more than they with their smaller population could give us in return. There is a grain of truth in this, of course, but with so many more inhabitants we ought to have greater capacity to produce. We should be able to manufacture more cheaply in most lines at least, and ought to have little to fear from Canadian competition, especially since our makers are now becoming so expert that they can ship their goods to all parts of the world, latterly, indeed, even to Europe.

If there are articles which we still need to protect against Canada, let us protect them. That is to be our policy toward the rest of the world. It is the policy of other countries which are upon the protective basis. We need this Canadian market, no matter if it is rather insignificant in comparison with our own. We need the South American, the Central American, and the Mexican markets, the Oriental markets, the South African and the Australian markets, and in short, every market which promises us anything of value. It is folly to hand over Canada to Great Britain, and let the British manufacturers send their goods in with a payment of duties of twenty-five per cent. below ours. It is something which we might have avoided with a rather more liberal statesmanship, and something which we might still avoid if we were to use our prompt endeavors to this important end.

It is exceedingly gratifying to observe that our contemporary, while representing a vast army of American manufacturers, grasps the idea that Canada is no mean country, that it is inhabited by people than whom no nation can boast greater advancement, that the very best that any nation can produce is none too good for Canadians, and that our five millions of consumers constitute a market that cannot but be of the utmost value to whoever can enjoy it. This being admitted, it is no doubt as strange and incomprehensible to our

contemporary as it is to us that the lawmakers of the United States should so far overlook and sacrifice their own interests as to indulge in the tariff hostility that has for so many years characterized them, and which has now resulted, not in Canada retaliating against the United States, but in our inaugurating a system of closer trade relations with Great Britain, the tendency of which will be to transfer much of our trade, heretofore done with the United States to the Mother Country. If our American friends find this to be an undesirable conditions of affairs—if they find that they have killed the goose that has laid so many golden eggs, they have the satisfaction of knowing that the silly act was of their own conception and doing.

The Manufacturer speaks truly when it says that in making our preferential arrangement with Great Britain it is not Canada's intention to start a tariff war with the United States; but its own editorial suggests that if we were disposed to enter upon such a war we could easily find sufficient justification for so doing; and we quite fully sympathize with it in its sentiment that it is unfortunate that there cannot be commercial reciprocity of some kind between the two countries. Unfortunately, however, it hangs to the idea that the 70,000,000 United States market is, or would be, of more value to us than than the 5,000,000 market of Canada is or would be to the United States. There would be some foundation for this arrangement if it could be shown that any disadvantage in such trade as has been carried on between the two countries for many years had accrued to the United States, but the published statistics of that country, and also of Canada, show very conclusively that a very decided advantage, as far as the exchange of merchandise is concerned, has been to that country. In our opinion the number of souls living in the two countries has very little to do with the matter, but rather the requirements of the respective countries. We do not understand that the hostility of the United States tariff towards Canada arises from any fear that this country could or would swamp and destroy the manufacturing industries of that by exporting thereto our manufactured products; the anxiety seeming to be rather in behalf of American agriculturists who object to the competition of the Canadian farmer. But what are the facts? The Commerce and Navigation Returns of the United States for 1896 show that while in the preceding year that country had imported from Canada only \$7,394,183 worth of animals, eggs, provisions, field products, fruits, etc., during the same period Canada had imported from the United States \$13,371,882 worth of the same articles. Is it to the interest of the American people to close their doors against the importation of the smaller value of Canadian farm products, while they find a market in this country for the larger value of their own similar products? Our contemporary tells us that the United States needs the Canadian and many other markets as outlets for their products; and yet it exhibits the most unfriendly tariff objection to Canada that is such a large purchaser of those products.

Viewing the matter from a wider standpoint—that of the entire trade between the two countries, we refer our contemporary to another United States official publication, the Review of the World's Commerce, where it is shown that during the years 1895 and 1896 the United States exported to Canada an aggregate of \$120,972,093 value of merchandise, an average of \$60,486,000 per year, while during the same years the value of merchandise imported into that country from Canada

amounted to only \$78,102,257, an average of \$39,051,000 per year, the excess of value of exports from the United States to Canada being about fifty-five per cent. greater than the imports.

Canada is a purchaser of more than seven per cent. of all the domestic merchandise exported from the United States, and it is incomprehensible why the tariff legislation of that country should be of a character entirely fitted to divert this immense trade to another country.

ANTI-COMBINE LEGISLATION.

Our esteemed contemporary, The Monetary Times seems inclined to think that no great injustice is likely to ensue to Canadian manufacturers through the operation of the proposed anti-combine bill. Referring to the recent discussion in the House of Commons of this matter it says:—

The objection urged that the tariff bill merely contemplates a judicial finding of a fact, instead of a judicial decision, is not weighty. The fact here is the main thing in the case; once it is declared the law denounces the penalty, and gives the administration the latitude of discretion only, between making the article which is the subject of the monopoly, against which remedy is sought, duty free, or reducing the duty on it so as to ensure the breaking of the meshes of restraint by trade competition.

At first blush, the objection that innocent parties outside of combines may be punished with the guilty may cause a tremor, and it is not quite clear that the danger could be wholly obviated, but in actual practice, it would probably vanish in presence of the fact that outsiders would at least prevent the monopoly being complete. Even if it were necessary to indemnify an innocent sufferer from the incidental effect of a law passed in the general interest, it would be better to provide such indemnity than to permit the extortions of monopoly.

We are entirely agreed with our contemporary as to the iniquity of trade combines where the intention is to unduly raise the price of goods, and as to the necessity of suppressing such combinations; but we object to the punishment to be inflicted when it may or will hurt the innocent as well as the guilty; and we fail to see how the proposed law could be put in operation without this two-edged result. A criminal combination may be entered into by a half dozen manufacturers who ought to be punished therefor, but there can be no justice in a law that would inflict equal punishment upon a dozen other manufacturers who refused to join the combine. It is an old axiom of the law, and a good one, derived from Holy Writ, that it would be better for ninety and nine unjust men to escape deserved punishment than that one just man should be unjustly punished. If the Government can discover a way by which to punish the guilty and not to punish the innocent at the same time, well and good; but until such a method has been discovered this anti-combine law should not be enacted.

In the same issue of The Monetary Times in which this proposed law is discussed, is an article having reference to the combination of prominent British thread manufacturers, in which it tells us that the Central Agency, which represents in Canada the Coates-Clark-Chadwick-Brooks combination, is meeting with strong opposition from Belgian thread manufacturers; and that so strong has been the competition throughout Canada from Belgium that the British makers have several times reduced the price of their goods. It tells us:—

A representative of the British interests has been in-

Toronto during the past two weeks, attempting to devise means by which the trade may be securely retained for his clients. It is proposed to adopt the "additional rebate" system familiar to the trade in the sale of other commodities. This method of giving a rebate to the firms who handle exclusively the goods of the combination is not generally regarded as in the best interests of trade. Although it may not come within the letter of the law, as unduly restraining trade, it certainly has the effect of interfering with the freedom of trade. The rebate means additional labor and expense in book-keeping, and on this account is regarded as objectionable by several firms who are not opposed to the principle of monopoly.

The thread combination is one which cannot be broken down by the provision in the tariff bill against agreements as to the illegal restraint of trade. The provisions of the new tariff are, on the contrary, in favor of the monopolists. If Belgium is not accorded the privilege of preferential trade, then the one interest which offers at present any serious opposition to the British thread combination will be handicapped by a substantial discrimination against its goods. When the fight is conducted on narrow grounds, a difference in the customs duty, such as is proposed by the Liberal Government, would probably have the effect of driving independent foreign manufacturers altogether out of the field.

The British thread combine includes all the principle thread manufacturers in that country, and so great has been its power that it has driven into idleness, or from the business entirely, every smaller concern that has dared to attempt to compete with it; and the fact teaches that powerful and unscrupulous combines are not peculiar to protected countries, for this one has its abiding place in free trade Britain.

If combines, then, are such fearful affairs that, if existing in Canada, even the tariff laws must be changed to circumvent them; how, pray, are they to be circumvented and punished when their abiding-place is in another country? If the Government find it their duty to punish combinations by which the Canadian public is being robbed, if the combines have their origin and exist in Canada, how can they punish such combines which, while robbing the Canadian public, have their origin and existence in a country over which Canada has no authority? If the tariff is to be modified so as to fittingly punish Canadian combines, why should it not be similarly modified so as to fittingly punish the British thread combine for robbing the Canadian public? Why not make it possible to institute a judicial enquiry into the matter, and either entirely exclude from Canada this product of the British thread combine, or greatly discriminate against it by higher duties than upon Belgium thread where there is no combine? But instead of doing this the Government, in their preferential tariff on British goods, actually offers a premium to the British combine, while it proposes to destroy any Canadian manufacturers who might be engaged in a business in which there might happen to be a combine.

The Government is inconsistent.

A BANKER'S VIEW OF BUSINESS.

At the meeting of shareholders of the Merchants' Bank of Canada, held in Montreal last week, Mr. George Hague, the general manager, made a most interesting speech in which he alluded to the prospects of business throughout the country. Alluding to the outlook for the manufacturing industries he said:—

With regard to manufacturing, without venturing upon disputable ground, it may fairly be said that a country having

such great developments of water-power as Canada has, and such a command of many raw materials as are within our reach, may surely extend a certain portion of her energies in the direction of manufactures. It was round the water powers of the country that nearly all the staple manufactures of England and Scotland were first established. The great development of the colliery interests afterwards introduced other conditions. But we have these in Canada, too, and where the power and the raw material can conveniently be brought together, these manufacturing industries cannot be said to be an exotic. That the development of these industries promotes the increase of population and the general prosperity of the country can scarcely be doubted; and it can hardly be doubted also that the fostering and encouraging of such industries in their early stages is worthy of the attention of any Government. So far, I think, I enter upon no disputable ground.

I may say this, however, that it is hopeless for manufacturers of any kind, in these times of keen competition, to make profit on their business unless they have the latest appliances in machinery, the most economical appliances of power, the most skilful management in production, the best adaptations of labor, and the best facilities for transportation and communication. Along with these, it is becoming more and more essential that a manufacturer shall have his specialities, that is, that he should produce some goods which are his own, known by his name, which will be such a guarantee of goodness that the name will sell the goods, as with "Rodgers" cutlery, or "Horrocks" sheetings. When a manufacturer attains a position like this, and has his arrangements to keep it, he is a long way towards permanent success and wealth. In some branches of manufacture and production we have attained this position. Certain brands of flour are well-known in foreign countries, as well as certain brands of cheese, and even of deals and timber. A customer of our own has established the reputation of his brand of eggs in the English market, and inquiries are made for it by dealers there. We are exporting furniture to South Africa, agricultural implements and other articles to Australia, butter to Japan, and leather in large quantities to England; and if attention is only paid to quality, to good make-up, and to the exact needs of the market, there is no reason why this should not develop very largely. In such matters as butter or apples it is not sufficient to have simply a good article, it must be well and tastefully packed, according to the fancies of the market it is sent to, or they can never establish themselves in general favor.

Mr. Hague dwelt on the need of developing, preserving and protecting Canada's natural resources, her forests and her mines. He believed that Canada possessed all the fundamental requisites of a great manufacturing country. He spoke of the surprising progress of the North-West, where sixty million bushels of grain were now produced in what twenty-five years ago had been a wilderness. In no other place in the world as in Canada had as much wealth been produced by such a small number of people. England would do well to divert immigration hither. The people of Great Britain should be taught that Canada is not a land of snow and ice, and a work devoted to a description of life in Canada during the summer months should be serviceable to the country.

Referring to the jubilee year, Mr. Hague quoted some interesting figures. In 1837 the capital of all banks in Canada, including four in this province, three in Upper Canada, as well as those in the Maritime Provinces had been \$6,100,000; now it was \$61,000,000, rest in 1837, practically nothing; 1897, \$26,000,000, deposits, 1837, \$2,500,000; 1897, \$206,000,000; circulation 1837, \$3,600,000; 1897, \$30,800,000; loans and discounts, 1837, \$11,000,000; 1897, \$217,000,000.

THE ANGELS OF COMMERCE.

A return has just been published by the British Government, embracing the replies which have been received from consular and other agents abroad in response to a circular asking for particulars as to licenses and other documents, and their cost, required by commercial travelers and agents of firms carrying on business for their principals in foreign countries, a synopsis of which has been collated by the Paper Trade Review.

In the Argentine Republic any business conducted in the country is subject to a system of annual license. The licenses are based on a graduated scale of forty-five categories, rising from \$5 to \$20,000 (say at present rates from about 7s. to £1,400). Banking firms are liable to a higher rate, rising through ten classes, from \$3,000 to \$60,000. In the case of representatives of foreign firms, with or without a business house, the cost of the license varies from \$100 to \$500 levied according to the number of firms represented, and the importance of the business transacted on their account by orders executed on samples. Commercial travelers pay a fixed license of \$50 which covers all their operations in Buenos Ayres and in the national territories, as distinct from the other provinces of the confederation, where the rates are much higher and the transaction of business with which renders the traveler liable to additional charges in the Argentine proper as well.

In Austria the authorities have the right to impose certain fees and require certain licenses to be taken out; but up till the present commercial travelers and similar traders have been practically exempt. By treaty Servian and German travelers and traders operating in Austria, on proving that they pay the legal taxes for carrying on their trade in the country of their ordinary domicile, are not required to pay any further taxes; such persons are provided with certificates, and inquiries at the Ministry of Commerce have elicited the statement that similar certificates will be accepted in favor of British commercial travelers. Permanent agents of British firms are merely chargeable with income tax, industrial tax, and other taxes to which native-born Austro-Hungarian subjects are liable.

In Belgium, British commercial travelers are subject to the payment of a fixed annual license tax (*droit de patente*) of 20f. (16s.), including all centimes additionels, or extra charges whatsoever. The payment may be made and the license obtained, either at the Belgian custom house on entering the country, or at the office of the collector of taxes for the first-commune in which the traveler begins operations. Foreign commercial firms established in Belgium are taxed in proportion to the amount realized by their business transactions. Permanent agents of foreign merchants residing abroad are obliged to pay a license tax, which varies according to the importance of the commune, as well as to the agent's salary.

For the whole of Brazil there is no fixed regulation, each province dealing with this matter in its own special and peculiar manner. In Rio de Janeiro no license for travelers has hitherto been required; but the establishing of a tax is now being advocated in the press. For resident agents the taxes vary in the different towns and municipalities, and are also regulated according to the class of trade. It appears that no certificate is required in any district from British authorities, but travelers are recommended to carry passports with the *visa* of Brazilian consular offices. In Chili there

exists a power vested in the municipalities to compel commercial travelers to take out licenses to trade varying in cost from \$100 to \$300, which has been dormant ever since the time, many years ago, when the municipal taxes were farmed out. Resident agents pay license fees varying from \$500 to \$2,000 a year. In Columbia no licenses are needed, but documents are required for the introduction of samples—a necessary adjunct to business. By an Executive resolution, it has been conceded that all traveling agents may import and re-export their samples within a period of four months without paying duty on their introduction. It is represented, however, owing to the difficulties of traveling, four months is not a long enough space of time.

As French commercial travelers do not require licenses in England, British commercial travelers enjoy the same exemption in France. Resident agents are subject to the same taxation with regard to licenses as Frenchmen. British commercial travelers require in Germany, in order to pursue the branches of their business, a trade legitimation card or license. A statement of the nationality as well as the residence of the traveler is now required.

Commercial travelers are not required to go through any formalities in order to be able to exercise their calling in Greece, nor are they required to take out any license, provided they come and go merely as bearers of samples and receivers of orders. Resident agents must take out a license.

In Guatemala, Nicaragua, and Salvador no license, certificate, or document of any kind is required, nor is any tax or fee levied.

In Honduras passports and consular certificates are necessary, but no tax is imposed.

Travelers or agents of British firms in Italy need not be provided with any certificate, the Italian Government enforcing the production of certificates only in the case of countries which have adopted restrictive measures against Italian commercial travelers.

The only direct tax to which foreign commercial travelers in the Netherlands are liable is that on their professional income, provided they are not domiciled in the country. The amount of the tax for such persons is fixed at 15fl. (£1 5c.) a year.

No municipality of the Republic of Peru has the right to issue licenses, or to impose contributions on commercial travelers or agents carrying samples, since, although by a resolution of Congress the municipalities of the departments of Lambayeque were authorized to impose a tax for licenses of from five soles to fifty soles, this resolution has become null and void by the law of December 20, 1895.

In Portugal no licenses or documents are required.

Commercial travelers in Russia are subject to a custom house certificate payment of 38.50 roubles, or about £4. Resident agents must take out licenses involving a payment of £22 (retail) or of £106 to £115 (wholesale). First and second class licenses (costing, respectively, £4 and £14) must be taken out for clerks also. Foreign Jews of the commercial traveler class, under existing legislation, are not able to enter the country at all, as the Russian diplomatic and consular officials refuse to affix the necessary *visa* to the passports, by which alone they would be permitted to cross the Russian frontiers.

In Spain an identification card is necessary, but nothing more.

No documents are required in Norway; but resident agents have to take out a borgher's license, costing about 80 kroner per annum. In the Odelsting on July, 9, 1896, a law to come into force the first day of January, 1897, was passed, to the effect that commercial travelers to Norway shall on their arrival, obtain a "Certificate for Trade" from the nearest police authorities, which is to cost 100 kroner (£5 10s.) per month. The fine for neglect of this law is to be 100 to 500 kroner (£5 10s. to £27 15s.)

Licenses for travelers in Switzerland cost 140f. (£6) for twelve months, or 100f. (£4) for six months. Residents in Switzerland are quite free to act as agents of British firms, and no tax is imposed.

In the Ottoman Empire neither travelers nor resident agents require licenses.

GETTING ALONG WITHOUT CANADA.

It begins to crop out that Canada is under British influence in her tariff legislation, and a wall or fence is to be erected between the United States and Canada. The London Times in an article discussing Canadian affairs, says: "Canada stands midway upon an imperial high road, the opportunities of which enable her to regard with relative indifference the fence erected along her southern frontier. The longer that fence is maintained in its present position the more assured will be the connection between the Dominion and the mother country, the connection we have now had ample proof that both Canadian parties are desirous of maintaining." Guess Uncle Sam can get along without Canadian lumber, fish, wood pulp, and coal, if need be, as we are not very short of these staples of home production on this side the boundary line. It behooves our Congress to legislate for the United States rather than for British interests in Canada.—Northeastern Lumberman.

The same journal in another article says:

Our pulp and paper manufacturers expect to develop large markets in Great Britain for the American products of pulp and paper mills. To show what an enormous opening there is for American pulp and paper, we have the statistics of the British imports of esparto grass, for the four months of this year, ending May 1, which aggregated 73,353 tons. This would be at the rate of nearly 300,000 tons per annum of the importations of esparto grass for British pulp and paper manufacturers. Certainly American wood pulp might largely displace esparto in British markets.

Our Boston contemporary seems to have a very vague idea of the connections that bind Canada and Great Britain, and it is mistaken in supposing that British or any other influence is being exerted in the erection of any wall or fence between the United States and this country, or that any tariff discrimination whatever against our neighbors is being enacted greater than has heretofore for many years existed. In fact very great concessions have been made, particularly in the steel and iron schedules of our tariff, specially favorable to the United States, and of no particular benefit to Great Britain. It should understand, however, that while we have not raised our duties towards the United States, we have lowered them towards Great Britain. It should also remember that for many years Canada has endeavored to induce the United States to relax some of its overstringent tariff features which have injuriously affected this country, but coming to the conclusion that the fixed policy of our neighbors was in the other direction, naturally enough we offered some of our trade favor to the mother country who most willingly accepts them.

No doubt Uncle Sam can get along very well without Canadian lumber, fish, wood pulp and coal, and so can Canada get along, if need be, without the sixty-six millions worth of American produce that we have heretofore been purchasing, a very large proportion of which consisted of manufactures. Of course we can have no objection whatever to any legislation the United States Congress may see proper to enact, even if it results in sacrificing a market that has consumed more than one-seventh of the exports of that country.

We note that our contemporary anticipates a large development of the British market for the products of American pulp and paper mills. Of course this is entirely praiseworthy; but it should be borne in mind that that trade cannot possibly assume the proportions it otherwise could were it not for the practically inexhaustible supplies of raw materials being drawn in such large quantities from Canada. But the extremely short-sighted policy of our neighbors in legislating as our contemporary says for the United States rather than for Canada, and the exclusion of Canadian lumber from the American market, will no doubt result in an export duty on Canadian logs, pulpwood and pulp, and other articles, that will seriously cripple the efforts of American manufacturers in their struggle to do business in this and other foreign markets.

THE EXPORT DUTY.

One of the most important events that has characterized the policy of the Dominion Government during the present session of Parliament was the announcement of the Finance Minister, Mr. Fielding, last week, that it was the intention of the Government to ask for power to impose an export duty on logs and pulpwood and on certain ores, should it be found advisable to do so before Parliament meets again. He pointed out that Congress had gone very far in the direction of placing a heavy burden upon the Canadian lumber trade, and that it would be advisable to secure power, not to retaliate, but to safeguard the interests of Canada. Sir Charles Tupper cordially approved, and the House, Liberals and Conservatives alike, expressed concurrence therein. The House is undoubtedly in favor of giving the Government the power asked. If the new American tariff goes into force as at present agreed upon, and imposes a duty of \$2 per 1,000 feet on Canadian lumber, the trade will be practically killed off according to the opinion of the lumbermen who waited on the Government the other day. This being the case, they desire, Samson-like, to destroy those who have destroyed them by placing an export duty on the logs without which many lumber mills in Michigan cannot exist. The export duty on gold, copper and silver lead ores will, if imposed, result in the erection of smelters on the Canadian side of the boundary line and the production of bullion from the ores of the Kootenay, which are now exported to the United States to be smelted.

Reviewing the situation The World says:—

The United States Senate having rejected the motion to strike out the duties on lumber and pulpwood imposed by the Dingley bill, it is now in order for the House of Commons to deal with the question from a Canadian point of view. On no public question has there been greater unanimity in Canada than on the proposal to meet the United States \$2 duty on lumber with a similar export duty on Canadian saw logs. The proposal to impose an export duty of \$3 per cord on pulpwood is equally popular. So strong is public sentiment on this matter that the Government will practically have no

alternative but to impose the duties. Business men, bank managers, lumber dealers, paper manufacturers, all classes of the community favor a policy of retaliation. They approve of such a policy, not for the purpose of getting even with the Americans, or out of a spirit of revenge, but simply to protect the interests of the people of this country. When the \$2 schedule becomes operative, as it apparently soon will, the mills on the Georgian Bay will all have to go out of business. The logs that are now manufactured into lumber in this district will be cut up in Michigan if the Canadian Government does not do something to offset the disadvantages which we are about to be subjected to. The head of the Georgian Bay Lumber Company states that unless the Government imposes an export duty of \$2 on saw logs they will be compelled to remove their mills to Michigan, as otherwise they will not be able to compete with American manufacturers. Mr. Beck of the Beck Manufacturing Company of Penetanguishene says the same thing in regard to his business.

The cost of sawing up Canadian pine in Michigan is less by \$1.62 per 1000 feet than the average cost to Canadian mill men. This is the evidence that was recently submitted to the United States Senate by Mr. Carroll D. Wright. Furthermore, the proximity of the Michigan mills to populous centres affords them markets for small cuttings of lumber and mill waste which gives them a further advantage of from forty to sixty cents per thousand feet over their Canadian competitors. Add to these items an import duty of \$2 and we have an aggregate of quite \$4 per thousand feet in favor of Canadian pine sawed in Michigan.

Unless something is done by our Government to prevent it the Canadian lumber business will gravitate to Michigan. If we impose an export duty of \$2 on saw logs it will have the effect of closing up the mills of Michigan instead of those of Ontario. Speaking of the probable result of the proposed export duty, Mr. E. W. Rathbun says:

"An export duty—whether it adds to the cost of Canadian logs to the Americans, or becomes prohibitory—would probably for a time lessen the stumpage revenues of the province, but the growth of timber would no doubt quite repay the province for this temporary loss, and if it resulted in the re-transfer of mills from East Michigan to Canada, it would benefit the wage earners, farmers, railways, merchants and capitalists—it would lead to the establishment of other industries that are founded upon forest supply—it would conduce to the utilization of coarse, and at present, unmerchantable timber and mill waste and thus enlarge and prolong employment, use of capital and Crown revenues and ensure beneficial climatic effects."

If the Government had made a bold move some months ago and had imposed conditionally, the \$2 export duty on saw logs when the Dingley bill was under discussion in Congress, it is altogether likely that the House of Representatives or the Senate would have rejected the \$2 tariff and adopted free lumber. Now that the Senate has confirmed the duty Canada will have to impose a similar export duty with the hope of forcing the Americans to deal fairly with Canada in the lumber business. The Government must make provision by order-in-Council to impose an export duty on logs and pulpwood equal to the United States import duty, should that be ultimately imposed.

MACHINE LABOR VS. MANUAL LABOR.

On a recent occasion in New York city, Bishop Potter in one of his addresses on the occasion of the bicentennial of Trinity Church, used the following language in reference to machinery, which has attracted much attention:

It is doing away with intelligence in labor. It is turning the laboring man into a simple idiot. Not long ago I visited a large factory in this State, and was much impressed with what I saw. The owner proudly showed me around, pointing out the manner in which labor was simplified. I saw a young

man sitting before some sort of a large hammer. He sat with his legs crossed, and all his work consisted in shoving into an opening in the machinery a small piece of iron. He would turn the metal two or three times, throw it into a large box, and take another piece. That was this man's work day after day, week after week. No wonder that at night time he drank, gambled and fought. He had to; otherwise he would go mad. How many of us would stand this and not cry out? Not one of us but would become a striker, myself among the first.

The New York Independent, criticising the remarks of the reverend gentleman, says:—

"This language he modified by no subsequent explanation. It is an attack upon the use of machinery in production, and a declaration that men who use machines are imbruted by it, and liable to be driven to the madhouse or the saloon by the monotony of their work. But is it true? A locomotive is a machine, perhaps the most important of all machines. The alternative for it is a stage-coach. Is the life of the engineer or the brakeman more monotonous, less intellectually inspiring, than that of the stage driver? Or, if this seems an extremely favorable case, take that instanced by Bishop Potter, of a man whose sole business it is to push a boiler plate or a horseshoe under a punch which comes down and makes a hole at the right spot. This is monotonous work; but the workman has many compensating advantages. He works but nine or ten hours, while his grandfather at the forge making nails or horseshoes worked twelve. Then he earns three dollars a day, while his grandfather earned but half as much. Then a dollar of his money will buy twice as much of the comforts or luxuries of life as would his grandfather's. He has his bananas and his bicycle and his daily paper, which his grandfather never saw. It is nothing but machines which gives him these advantages of less hours, larger pay, and lower prices. He has vastly better opportunities for information and culture, and probably improves them. He would consider himself sadly oppressed if he had to go back to the conditions of a hundred years ago. If he goes to the saloon it is his own fault. There was much more drunkenness a hundred years ago.

We see no use in inveighing against machinery or in butting against stone walls. Bishop Potter will not discard machinery, we guess, in building his cathedral, and he will have a more intelligent and—praise heaven—a more contented body of workmen than built Canterbury or Cologne. Of course the Bishop is right in saying that the Church must be the friend of the laboring man, and for that reason it should not blame machinery.

AS OUR NEIGHBORS SEE US.

In the March number of The Forum Mr. E. B. Smalley, deprecating the "booms" that had overtaken and left desolate certain places in the United States, made the declaration that "the day of the boom is past; this country will never see another." Col. Pat Donan, a coruscating newspaper genius, finding the United States rather circumscribed, recently journeyed into British Columbia, extending his travels into the Kootenay district, and in writing home of what he had seen, and remembering Mr. Smalley's prophesy regarding booms, says:

"If Smalley had been with me during the past three months, he would have seen the rising of a boom that, within the next year or so, will surpass anything in the boomeristic line this country or the world has ever beheld since the wildest height of the California gold rush in 1849-50, if even that is not eclipsed. I have seen all the booms of my day and generation, including those of Deadwood, Leadville, and Cripple Creek, but I have never seen anything that compared with

the one now on in that unknown land of yesterday. A waste, howling wilderness five years ago, with scarcely one hundred hardy hunters and trappers and prospectors in all its vast solitude, virtually unexplored; to-day one of the gold and silver wonders of the world, with fully 50,000 busy, enterprising people digging, drifting, tunneling, prospecting and building among its crags and canyons.

"Traversed now by four railroads, each a marvel of engineering, with the oldest but a few months old, and new lines planned and pushing in all directions. Trains running as double headers, with two locomotives and still unable to carry the business. Handsome steamers, loaded to the guards, on all lakes and streams, cities, towns, camps springing up in every direction like magic. Over one hundred producing mines that the first few weeks of this year shipped out 16,174 tons of ore and matter worth two millions and all in the dead of winter. Ninety-eight mines listed in the Stock Exchange with a capital of \$94,450,000 and fifty-seven new mining companies with an aggregate capitalization of \$52,975,000 organized during the single week ending March 9th, an average of \$8,829,666 a day.

"From the Washington and Idaho line to the head of the Kootenai and Arrow lakes the air is filled with rumors of strikes that bewilder the traveler and surpass all belief.

"In April, 1895, a young carpenter named Dougherty did two or three days work prospecting near Rossland, struck ore, and a few months ago sold out his interest in the Crown Point mine for \$50,000 cash, while his partner, Volney Williams, cleaned up \$100,000 in the same deal. A Spokane lawyer bought a half interest in a claim between Sandon and Three Forks for \$500. Last October he sold out for \$150,000 cash, and the mine has since paid more than twice the price in dividends.

"A dead broke prospector found a single boulder in a Slocan creek bed that yielded him 7,800 ounces of silver and 46,800 pounds of lead.

"A Rossland washerwoman, about New Year's of 1895, took a few hundred shares of Le Roi stock for a laundry bill. It has since paid her \$70 in dividends on every hundred shares, and every share to-day is worth \$10.

"The owners of a claim near Sandon drifted two feet, struck ore and had a shipping mine with one day's work. Two tramp prospectors, Joe Bourgeois and Joe Morris, in one day located the five claims that are now the Le Roi, War Eagle, Center Star, Idaho and Virginia mines, worth at the lowest estimate from \$20,000,000 to \$30,000,000. The only recording office in the country was where the town of Nelson now stands, sixty miles away, which was a long and weary journey, as things were then. In the office they met E. S. Topping, and offered him his choice of the five claims if he would pay the \$12.50 fee for recording them. He examined their samples, paid the \$12.50 fees, and took the Le Roi claim. It has paid for all its development and machinery, buildings and roads, has a monthly pay roll of \$25,000, has paid \$375,000 in dividends, has \$500,000 of ore on its dump, and, according to the experts, \$14,500,000 of ore opened up and in sight. There are many such instances, and there will be thousands more within the next few months.

"The town site of Rossland, the principal town in the region, was entered as a homestead by Ross Thompson in 1892. In February, 1895, there were but four log cabins in

the town, one of these being the office of the "Weekly Miner." To-day Rossland is a city of 10,000 inhabitants, with electric lights, telegraph, telephone and messenger service, water works, churches, banks and schools, two daily papers and a half dozen weeklies and monthlies, two railroads that cannot begin to handle the business and forty-five hotels, crowded to overflowing. Oliver Durant is the man who first laid the foundation for the greatness of the Kootenai country."

EDITORIAL NOTES.

Sir Edmund Monson, at the annual banquet of the British Chamber of Commerce, held recently in Paris, said, in reviewing the achievements of the Queen's reign: "British trade with foreign countries has multiplied in value six-fold: the carrying power of our shipping has increased from a little less than 3,000,000 tons to a little more than 27,000,000; while our share of the carrying trade of the world has risen from twenty-seven per cent. to fifty-two per cent. When our Queen ascended the throne there were only 110 miles of railway open in the United Kingdom; in 1895 there were 18,000. The increase of steam power has averaged 220,000 horse-power per annum, the totals standing at 600,000 in 1840, and at nearly 13,000,000 in 1895, while the manufacture of textile fabrics has nearly quadrupled in the same period.

A cablegram from London a few days ago directs attention to a case of much importance to trades unions and to employers of labor in that city. Two shipwrights named Flood and Taylor were employed in 1884 to repair the British ship Sam Weller, then lying at Millwall docks, London. The Boilermakers' Union objected to shipwrights working on an iron ship, and their delegate, Allen, obtained the discharge of Flood and Taylor by threatening a strike of the boiler-makers if Flood and Taylor were not discharged. Later Flood and Taylor sued Allen for wrongfully and maliciously obtaining their dismissal, and were eventually awarded £40 (\$200) damages. Allen then appealed to the House of Lords on the ground that there was no evidence showing he had acted maliciously or had induced the company having the repairing of the Sam Weller in hand to discharge Flood and Taylor. Eight judges of the High Court of Justice were summoned by the House of Lords to consider this important case, and they have just delivered opinions on the question of law as to whether the evidence was sufficient to constitute cause of action. Six of the judges were in favor of the right of action against Allen, and two were opposed to it. The House of Lords will now take time to consider the case before rendering final judgment. Justice Hawkins, on behalf of the majority of the judges, cited cases in support of their view that any language that attempted to destroy the freedom of will of another amounted to intimidation.

Mr. E. E. Sheppard, who is about to leave Toronto as a Dominion Trade Commissioner to certain South American countries was given a complimentary dinner last week. Silver collection at the door. We suppose Mr. Sheppard explained to his hearers his position on the Departmental Store question, and the effect that recent innovation, or the suppression of it, will have upon our prospective trade with our southern neighbors.

The Jubilee stamps issued for the benefit of the Prince of Wales' Hospital Fund, London, are now on sale to the public, says Invention, and can be bought at all stationers and book-sellers, with the exception of the railway bookstalls. They are issued to give small subscribers a handy and convenient form of receipt, and one which they can retain as a memento of the Diamond Jubilee. The basis of the design selected for the stamps by the Prince of Wales is taken from no less an authority in art than Sir Joshua Reynolds, whose well-known picture of "Charity," executed for one of the Virtues in New College Chapel, Oxford, is the most appropriate design that could have been selected, embodying as it does, a beautiful picture, with Mrs. Sheridan as the central figure. After His Royal Highness had approved of the design the engraving was begun, and proved a much more serious affair than anyone unversed in these details would have anticipated. Such an engraving could only be executed by the most skilled hand. After the matrix had been produced and hardened it had to be rolled into the steel plate under a pressure of twenty tons given by a lever set in motion by the foot of the operator, and each impression had to be rolled in separately, the greatest care being taken to adjust the proper distances, and a magnifying glass being constantly in use. Each plate contains a double sheet of eighty, in which one false impression would spoil the whole, and great liability of cracking arises from the weight of the pressure. Every sheet has to be accounted for as carefully as a bank note, and this, again, entails still greater surveillance. The stamps are of two values. The shilling one is printed in dark blue, while the half-crown stamp is of red color.

In the Dominion Senate a few days ago Senator McInnis of British Columbia moved that in the opinion of the Senate it was both desirable and expedient that the Government should at the earliest possible moment establish a mint in Canada for the purpose of coining all the gold, silver and copper currency necessary to meet the commercial requirements of the country. Speaking to his motion Senator McInnes urged the importance of the Dominion coining her own currency. There was no other country in the world of the position and commercial importance of Canada, which did not possess a national mint. Since 1878 the net profit of the United States mint from the coinage of silver alone amounted to the enormous sum of \$78,000,000, and in the single year 1896 to \$2,503,000. During the last fifteen years there had been coined for circulation in Canada, \$3,462,114 in silver, and \$938,101 in copper coins. The silver was coined in the royal mint, and cost Canada three per cent., while the copper was coined by a Birmingham firm at a cost of about ten per cent. During fifteen years the country had paid for coining silver \$103,863 and for coining copper \$54,252, or a total of \$128,115, which was an average of about \$8,000 a year, which amount, he claimed, would be saved to Canada did she coin her own currency. During the last fifty years the output of gold bullion from Canada was \$73,000,000, of which British Columbia produced \$61,000,000, and all this gold found its way into the United States mint, at a loss to the producer of from five to ten per cent. The total cost of establishing a mint sufficient to meet the requirements of the country, he maintained, would be about \$75,000. He had been informed by the Finance Department that out of the \$10,000,000 of

gold held in the Federal treasury nearly all was in the United States gold coin, and of the \$8,000,000 of reserves held by the various chartered banks every dollar was American gold. This, he contended, was a most humiliating condition of affairs for a mineral-producing country like Canada to be in. He appealed to Parliament to have this \$20,000,000 of United States gold coin replaced by a beautiful Canadian coin, with the figure of the Queen's head on one side and the Canadian emblem, the maple leaf and beaver, on the other. If American gold was to be made legal tender in this country why not abolish Dominion bank notes as well, and accept the United States greenbacks as legal tender also? The Government had taken the contract for printing Dominion bank notes from a Canadian firm and given it to an American firm in order to effect a large pecuniary saving. By the establishment of a national mint Canada would do away with the use of United States gold, and also effect a large saving:

A recent article in a Californian paper estimated the number of acres in the State suitable for the production of sugar beets at 1,250,000, and the possible production at 4,631,250,000 pounds. During the year ended June, 1895, it is stated that 3,574,510,454 pounds of sugar were imported into the United States, with a value of \$76,462,836, and the article concludes: "Under favorable legislation, California could have produced this sugar, and nearly \$80,000,000, instead of being sent abroad, would be distributed among the farmers of this State." Another paper, probably of greater protectionist proclivities, goes so far as to assert that "the United States, with a soil that will raise all the sugar she needs, pays foreign countries \$130,000,000 for the sugar she uses," while the American beet-growers are "put on short pay." Notwithstanding, however, the complaints about the position of the beet sugar factories, and whatever may be the condition of the farmers, it is generally believed that the latter are making fair profits; and this opinion seems to be borne out by the fact that a new factory is being built and is nearly completed, about twenty miles from Los Angeles, and that there is now a scheme on foot for erecting in Salinas Valley, Monterey County, what it is said will be the largest sugar factory in the world. It is stated that when finished it will crush daily over 3,000 tons of beets and produce 1,000,000 pounds of sugar, which would be 750 tons more than the capacity of all the existing factories in California.

The late Theodore A. Havemeyer, the New York millionaire, in speaking of the causes of his success in business, once said: "For twenty-five years I was at work at seven a.m., and did not leave the refinery until seven p.m. I never went to bed at night until I had gone through the whole establishment. Many times I worked all the night long. While I was a single man my expenses never exceeded \$50 a month. Pilot bread and cheese made for me many a meal. A canvas suit was my daily apparel, and there was no part of the business at which I and my brother did not work; no part we considered too dirty or too arduous or beneath us." In short, industry and frugality were the foundation stones of fortune in this as in countless other cases; yet the professional agitators, who rail against wealth as a crime, will never believe that it is simply the natural and material increment of the exercise of such virtues.

Recently in the German Reichstag, Berlin, Count von Kanitz-Podangen, Conservative, asked the government if, in view of the increased difference in the duties upon German sugar fixed by the American tariff, it was the intention of Germany to maintain the agreement with the United States entered into in 1891. Continuing his remarks, Count von Kanitz advocated a remorseless tariff war against the United States. Freiherr Marschall von Bieberstein, Minister of Foreign Affairs, said in reply that the governments of Germany and the United States had not as yet taken defined positions upon the question and it would be impossible to foretell what would happen when the resolutions passed by the House of Representatives at Washington should become law. The Foreign Minister then rehearsed the commercial relations between Germany and the United States and protested against the Dingley bill, which, he said, threatened to cancel the concessions made at Saratoga. It was a mistaken conviction which was entertained at Washington that it would be to the interest of Germany to maintain cordiality of relations with America in any event, and he hoped that there would be a thorough change of views in this respect. He objected, however, to an immediate tariff war, which he believed, would be a sinister mistake. Such a situation, he said, was a serious one, and all Europe would take an interest in its development. The government, he said in conclusion, would decide with a degree of energy founded upon its rights in the cause, and consider the best interests of the Empire.

The Iron Age gives expression to the following forecast for the iron trade of the United States: "We feel sure that cost figures with us to-day will a few years hence be welcomed by makers as satisfactory selling prices. The days of large profits all along the line, from the raw material to the finished product, are gone forever, and with them has come the end of the period of high wages. We shall have occasional years of high profits and high wages, but in ordinary years we must steadily approach the European basis."

A promoter is said to be doing a good business in the small towns of the Ohio Valley at the expense of the millowners. His scheme is to induce the town council to grant him a charter to furnish electric lights for the streets, dwellings and stores. He then induces a number to agree to take lights and he installs the plant in the local mill or elevator. As soon as it is running nicely he sells out to the local miller or elevator man, and according to his own story he is "making all kinds of money" at the expense, of course, of the man he sells to. In the first place, there is no necessity for a miller to give a good profit to a promoter for what he can easily do himself, and worst of all, it is extreme folly to pay a schemer five prices for a poor plant, when he can get a good and well equipped plant of reliable manufacturers who will make defects good for one price. If there is an opening for an electric light plant in his town the miller should prepare to supply it. He has the power plant and generally plenty of room to spare, so he can establish an electric light station at a comparatively small cost. The operation of it is not likely to discommode him or interfere with the milling business in the least. If the miller is disposed to go into the electric lighting business he should do the promoting himself and insure a good plant being installed at a fair price.—American Miller.

A writer in the London Ironmonger says: Several of the American journals appear to have quite made up their minds that they are going to completely destroy the trade of the United Kingdom and supply us with American manufactures to the full extent of our requirements. This shows a kindly intention on their part, and to that extent we are grateful, but we would like to mention that up to the present we do not regard ourselves as being quite played out, and we even think that were it not for their high tariff our cousins over the water would find it very hard work to meet us in fair competition in their own market. They can and do "slaughter" here some of their surplus products, relying upon their tariff wall to protect themselves at home, but whenever and wherever we meet them on neutral ground we have no special reason to complain of the broad results.

The Toronto Globe's Jubilee number, out to-day, is by all odds the handsomest and most complete newspaper, extra number, ever published in Canada. Beautifully printed, plentifully illustrated with fine pictures, full of jubilee information of the most interesting kind—the whole well arranged—it is simply immense. It is a credit to Canada.—Hamilton Spectator.

Than Sir John Macdonald no man ever lived who wielded greater influence in shaping the destinies of Canada, and in making it the brightest jewel in the Imperial crown. The Globe's jubilee number contains portraits of big men and little men, and it appeals strongly to our love of country, commending those who, some of them have done much, some who have done little, and some who have done nothing at all to make this Canada of ours the great and glorious and prosperous country it is, but it very strangely forgets that Sir John Macdonald ever lived. Queer.

An official programme has been issued of the Queen's Jubilee procession that is to parade the streets of London on Tuesday. An imposing array of regulars, with bands and seven batteries of artillery, will form the vanguard. Then will come the Royal aides-de-camp, the field marshals and their equeries, the foreign attaches and deputations, the Queen's Prussian Dragoons, the Lord Mayor, thirty-six English and foreign Princes, the Indian escort and Lord Wolseley, the Commander-in-Chief, immediately preceding the Queen, who will have the Duke of Cambridge on her right hand and the Prince of Wales and the Duke of Connaught on her left. Then will follow the Gold Sticks in waiting, the Masters of Horse and the Masters of Buckhounds, with their equeries and the Royal grooms. A large body of home and Colonial troops will come next, the Colonial troops forming the Queen's escort. In the separate Colonial procession it will be noticeable that the Canadian troops are followed immediately by Mr. Wilfrid Laurier, the Premier, who will be first after the advance guard of the Royal Horse Guards, while a portion of the Canadian troops will bring up the rear. All the papers publish editorials welcoming the Colonial Premiers and delegates, especially Mr. Laurier. The Times in an editorial upon the evident design displayed in the arrangement of the procession, says that the presence of the Colonial Premiers, headed by Mr. Laurier, a Frenchman and a Catholic, testifies to the breadth and solidity of the constitutional freedom the British colonies enjoy.

The recent action of Canada in proposing to confer upon the mother country special tariff advantages, is one of the best things we have seen for a long time. Canada has emphatically a great future before it, and the more closely it can approach or be drawn to the mother country, the greater will be the advantage for both. It is within very easy reach of this country, and there is no reason why we on this side should not draw from its fertile domains the bulk of our agricultural produce. Giving a marked preference to this in our purchases would do much to stimulate its more rapid and extended settlement, and this again would correspondingly increase its value as a market for English manufactures. Now the most favorable disposition exists among both the Liberal and Conservative parties of the Dominion. The former has abandoned its separatist policy, and has become a competitor with the latter as to which shall draw the links closest to the old country. That they are wise in this needs no demonstration, because England must remain for many years to come the finest market in the world for Canadian produce.—The Textile Mercury.

Mr. C. Beck, of the Beck Manufacturing Company, of Penetanguishene, Ont., a well-known lumberman, was in Toronto a few days ago, and to a Globe newspaper man expressed his views upon the problem created by the proposals as regards the lumber contained in the Dingley tariff bill. To the question, "How do you think the \$2 duty contained in the Dingley tariff bill will affect the lumber trade in the Georgian Bay district?" Mr. Beck replied as follows:—"I would say that if the Dingley duty is kept on, and no export duty on logs, and no import duty on lumber put on, it would mean that every mill on the Georgian Bay would have to shut up, and we would have either to ship the logs to the United States to be sawed there, or to sell them out and out to the Americans. If an export duty were put on logs it would no doubt make the trade stagnant at the present time, but then the \$2 Dingley duty would shut out our coarse grade lumber, anyhow. As to the threats of retaliation, if we put on an export duty it would be immaterial what amount the Americans will put on, as at present we have a good trade with England for the better grades of our lumber; if the Americans were to want any of the better grade they would have to pay the advanced price, and for our coarse grades of lumber we would have to work up other markets, such as South America, Australia, etc. At present there is, in my opinion, more lumber exported from the United States to foreign countries than is exported to it; therefore, if our people work up that trade, which the Americans have at present, and sell direct to the consumers, they would get the profit which the Americans now reap from our lumber. For instance, I know as a fact there is a large box factory at Tonawanda which receives the principal part of its stock from Canada, manufactures it into box shucks, and ships them to South America. In my opinion, if the Government takes a firm stand, and puts a prohibitory export duty on logs and other material going into the United States it might for a short time not be beneficial, but it would before long prove a great boon to Canadians in general." With regard to the imposition by Canada of import duties, Mr. Beck said:—"At the present time there is an overstock of lumber in the United States, and they are shipping large quantities of coarse grades to Canada at present—

at sacrifice prices. In that way they take our logs, manufacture them, sell the better grades in other countries, and flood our country with the lower grades, which is to the great detriment of our trade."

The Seventh Annual Convention of the Canadian Electrical Association was held at Niagara Falls, Ont., on June 2nd, 3rd and 4th instant, the president, Mr. John Yule, occupying the chair. Mr. Yule read an interesting address which was received with much favor and applause. The Secretary-Treasurer, Mr. C. H. Mortimer, read an interesting report relating to the membership and finances of the Association, which showed that the additions to the membership of the Association during the previous year amounted to forty-four, the roll at the present including 154 active and nineteen associate members. After receiving and hearing the reports of various committees, the following papers were read: Determination of the Heating Power and Steam Producing Value of Coals, from a Preliminary Examination, by Mr. William Thompson; Economy in Circuits, by Mr. D. H. Keeley; Electric Railways—How to Make them a Commercial Success, by Mr. C. E. A. Carr; Water-Driven Plants, by Mr. John Murphy; The Steam End of an Electric Plant, by Mr. A. M. Wickens; Day Loads for Central Stations, and How to Increase Them, by Mr. J. A. Kammerer; Why Some Lighting Plants do not Pay, by Mr. F. C. Armstrong, and Accumulators—Their Application to Central Station Lighting and Power, by Mr. W. A. Johnson. These valuable papers will all be published in full in the report of the transactions of the Association. The following officers were elected to serve for the ensuing year: President, John Yule, Guelph, Ont.; First Vice-president, C. B. Hunt, London, Ont.; Second Vice-president, J. A. Kammerer, Toronto; Secretary-Treasurer, C. H. Mortimer, Toronto; Executive Committee: George Black, Hamilton, Ont.; H. J. Dunstan, Toronto; J. J. Wright, Toronto; A. B. Smith, Toronto; John Carroll, Montreal; F. C. Armstrong, Toronto; Ormond Higman, Ottawa; A. A. Dion, Ottawa; F. A. Bowman, New Glasgow, N.S.; Wilfort Phillips, Niagara Falls, Ont.; W. H. Brown, Montreal. The social features of the occasion were of a most enjoyable character.

The Canadians are making a discrimination in their tariff in favor of Great Britain and against us. What we sell to Canada is of only insignificant importance. But our markets are more important to Canada than any other she has. She should be shut out from them if such is to be her policy.—New York Daily Indicator.

During 1896 the aggregate trade between Canada and the United States, on the basis of goods entered for consumption and exported, amounted to \$103,022,434, Canada's exports to the United States amounting to \$44,448,410, and imports from that country to \$58,574,024. The Indicator thinks that an export trade of over \$58,000,000 "is of only insignificant importance," but it amounted to more than seven per cent. of all the exports of the United States during the year named. It is badly mistaken, too, in saying that the United States market "is more profitable to Canada than any other she has," for out of a total export value of \$121,013,852 in 1896, but \$44,000,000 went to the United States, while Great Britain took more than fifty per cent. more than that amount, or \$66,690,288. Accuracy does not characterize the remarks of our contemporary.

Mr. J. Castell Hopkins has received a marked honor in the permission graciously given him by Her Majesty the Queen to dedicate to her his Canadian Encyclopaedia, now in course of preparation and publication. This is a compliment to Canada as well as an unusual evidence of the reputation which is being won by Mr. Hopkins' literary work. It is probably the only occasion upon which this coveted privilege has been granted to Canada.

Mr. Fielding's fifty-cent free package arrangement makes it possible for a Canadian to buy all his tobacco, cigars, cigarets, seeds, millinery, bulbs, shrubs, vines, printed matter, books, stationery, penknives, pens, drugs, perfumes, brushes, collars, ties, cuffs, shirts, socks, suspenders, caps, ammunition, jewelry, buttons, underclothing, handkerchiefs, fancy soap, sheet music, playing cards, opium, gloves, mits, spectacles, belts, buckles, sashes, skates, needles, pins, combs, hat pins, brass tacks, knives of various kinds, razors, razor straps, spoons, cheap watches, lead pencils, "precious" stones, gold, silver, or aluminum leaf, bronze powders, gold paint, laces, braids, fringes, cords, elastic, corsets, napkins, doilies, sewing and embroidery silk twist, cotton yarns, lamp wicks, photographer's plates, fire-crackers, small fireworks, lantern slides, mathematical and optical instruments, tape lines, tobacco pipes, tobacco pouches, cigar and cigaret holders, purses, pocketbooks, confectionery, and hundreds of the things generally called "notions," entirely free of duty. That fifty-cent arrangement cannot be too soon recalled. If Mr. Fielding allows it to remain he will find a big drop in the customs receipts, and a heap of dissatisfaction among the merchants and manufacturers of Canada.—Hamilton Spectator.

With Mr. Paterson, Controller of Customs, the tariff reformers, himself included, have dealt most mercifully. No disrespectful hand has been laid upon the duty on biscuits, one of the products of his Brantford manufactory. On candies another article turned out by the industry over which he presides, the kindly revisers first left the duty as it was, and in the second edition of their bill were benevolent enough to raise it. So much for his products. Next as to his material. They lowered the duty on the flour he makes his biscuits out of, and on the refined sugar which he manufactures into sweetmeats. These favors should reconcile him to the fact that though he is to be made a full-fledged Minister his salary it not to be increased.—Mail and Empire.

Mr. Laurier did not consult the British Government about his so-called preferential tariff before adopting it, but through Sir Richard Cartwright and Mr. Davies he consulted Uncle Sam about his reciprocity policy. Though the latter declined to be a party to or a partner in that policy Mr. Fielding generously lowered the duties on such American staples as pig iron, scrap iron, bar iron, steel, barbed wire, nails, coal oil, corn, wheat, flour, etc., making our neighbor Canada's most favored nation.—Mail and Empire.

Mr. McMullen, an irrepressible member of the Dominion Parliament, has given notice of a bill that he intends to introduce that will, if passed, squelch the Yankees and drive the ruthless invaders from our soil in great style. He proposes that all persons owning and operating mining claims or properties, inclusive of coal mines, and all persons owning and

operating timber limits in Canada must become residents of the Dominion if not already British subjects. The Dominion needs population, Mr. McMullen says, and could materially add to the population by passing the legislation proposed by him. If it were in force thousands of owners of claims in the Kootenay and western Ontario and many lumbermen who now reside in the United States would be forced to make their home in Canada from where their wealth is obtained. Mr. McMullen is a Liberal, but like many others he does not believe in permitting residents of a foreign country to come in and without making their home in Canada obtain equal privileges in the location of prospects with the people of the Dominion.

The New Brunswick Tourist Association, through their Secretary, Mr. Ira Cornwall, St. John, N.B., have sent us a number of folders and other documents, having reference to the advantages of New Brunswick in general, and St. John in particular as a summer resort for tourists and any who may find it convenient to extend their outing excursions in that direction. A glance at the photographic reproductions of scenes and incidents in that country naturally creates a most enthusiastic desire to visit the depicted places; and as far as our experience goes New Brunswick would be a most desirable country to visit. The Association are sending out a handsome and fully illustrated pamphlet descriptive of the attractions of the Province, copies of which will be furnished on request to Mr. Cornwall at St. John.

The Dominion Parliament Buildings at Ottawa are to be elaborately decorated on Jubilee Day, including an extensive display of electric lights at night. Fully 10,000 incandescent lights will be used in the display, which will be made on the centre block and the Capital. Fully 10,000 incandescent lights will be used in the display at the centre block. Eleven hundred will be used in lighting the main tower alone. Twelve hundred lamps will be festooned across the face of the building between the third and fourth floor windows. On the western tower of the block, in front of the fourth storey windows, there will be a crown of lights enclosed by a circle, and at the same height on the tower, some sixty feet east, there will be two stars within a circle. A short distance below the third storey windows of the western tower, and in line with the crown and circle, there will be the figures "1837," and extending horizontally across to the more eastern tower will be the words "Queen's Jubilee," and "1897." Over the main entrance to the block there will be an arch of lights, surmounted by a crown, and half way between the main entrance and the tower clock there will be a crown and letters "V. R. I." enclosed by a circle. At the Post-office, lights forming the words "Jubilee" and "God Save the Queen," will be strung across the eastern face of the building and the fancy stone work over the clock will be studded with lights.

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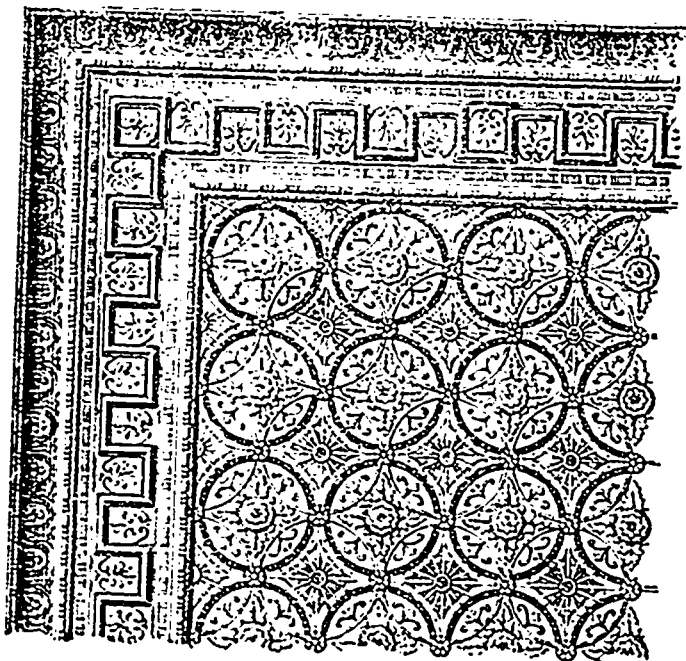
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The McClary Manufacturing Company, London, Ont., purpose establishing a manufacturing branch of their works at Montreal.

E. J. Cuisack, Havelock, N.B., has invented a compressed air motor which, it is claimed, several expert engineers have declared will be a success. He has secured patents in Great Britain, Canada and U. S.

Code's knitting mill, Perth, Ont., has been running night and day for several weeks to overtake orders. Mr. Code is doing a large business with farmers this season, and has been obliged to increase his employees.

WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY PITTSBURG, PA.

THE LEADING MANUFACTURERS OF ELECTRICAL APPARATUS FOR ELECTRIC LIGHTING, POWER TRANSMISSION, AND ELECTRIC RAILWAY PLANTS

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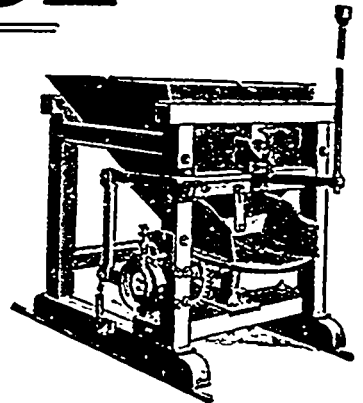
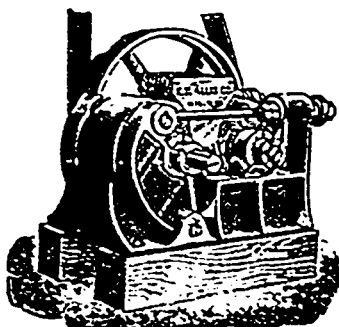
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You may want More Power now

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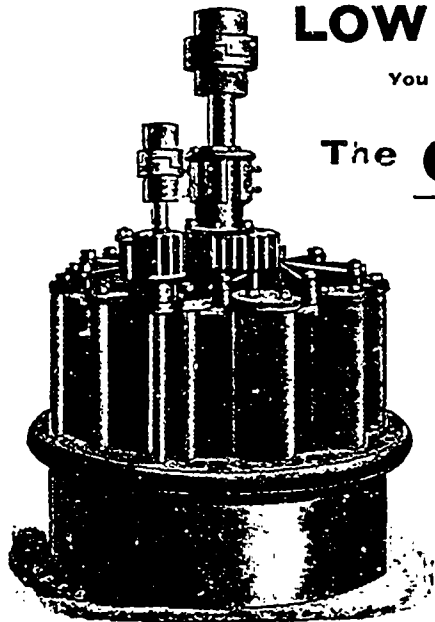
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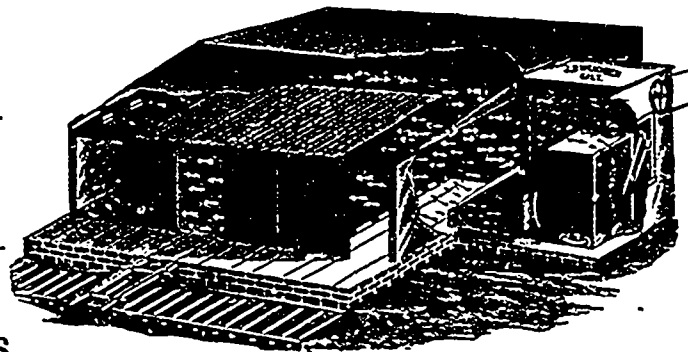
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GALT, ONT.

The Packard Electric Co., Ltd.

MAKERS OF

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Sole Agents for SCHEEFFER RECORDING WATT METERS
ST. CATHARINES, ONT.

There is prospect for a busy summer in the building line at Charlottetown, P.E.I. A new pork-packing building is in course of erection at a cost of \$60,000. The new cathedral will expend, perhaps, \$50,000 more. A college will be built at a cost of \$20,000, and a new wing will be added to the provincial asylum.

The town of Windsor Mills, Que., will soon be lighted by electricity supplied by the Canada Paper Company.

Simmons & Burpee, Hampton, N.B., have the contract for the construction of the Blackville, N.B., bridge. The price is \$7,000. They have also the contract for building a breakwater at Margaretville, N.S., at about \$11,000, and have a contract with the city of St. John, to furnish 1,000 tons of hardwood timber for the Sand Point works.

The new factory, at Parry Sound, Ont., of the Patent Cloth Board Company, notice of incorporation of which is given in this issue, is nearing completion. It is said that they will have the finest equipped mill of its kind in Canada, the plant being of the latest and most improved machinery. The company will manufacture almost exclusively for export. The Canadian Gazette, of London, England, speaking of this class of business for Canada, believes that a trade of large proportions can be built up.

The Twentieth Annual Convention of the National Electric Light Association held at Niagara Falls, on June 8th, 9th and 10th was considered by the delegates to be one of the most successful gatherings in the history of that organization. A number of very interesting papers were read and discussed. The attendance was unusually large and the exhibitions of the electrical apparatus made by the different supply houses throughout the country was of more than ordinary completeness. The exhibit of the Westinghouse Electric & Manufacturing Co. was especially attractive owing to its completeness and the many interesting features which it contained. The Company had on display several induction motors, direct current generators, alternating current generators, switch-board apparatus, lightning arresters, converter arc lamps and incandescent lamps. The latter forming an exhibit made by the Sawyer Manufacturing Electric Co., of Allegheny City, Pa.

A new pulp wood saw mill has been introduced in the Port Arthur district. It is built on a big scow. The log is carried from the water by an endless chain, shifted to a set of barbed rollers from which it is carried to a table with a guide. When it is in right position a lever is pressed and the big circular saw cuts it. By an automatic arrangement the piece of wood is rolled off the table down an incline into the water. It is possible to cut seventy-five cords a day with the machine.

The consumption of wood pulp in Great Britain continues to increase. The official figures show the imports for April to be 25,610 tons, of the value of £131,091; the figures for the corresponding month last year were 24,197 tons, and £118,056. During the present year the arrivals total up to 114,139 tons, of the value of £562,679; including 83,583 tons, of the value of £339,074 from Norway, and 30,546 tons, of £223,602 value from other countries.

The Lake Megantic Pulp Company is framing and laying the foundation of its new pulp mill, on the site of the one burned last January, at Lake Megantic, Quebec.

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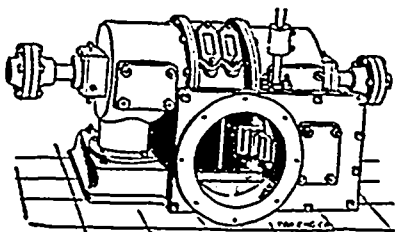


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PUBLIC ACCOUNTANTS, AUDITORS
ASSIGNEES, ETC.
Room 500 McKinnon Bldg., Toronto

Chatham, Ont., will spend \$15,000 in putting in an electric light plant.

A Reid, Stockton, Man., is building a 30,000-bushel elevator at Cypress River, Man.

One hundred refrigerator cars and four hundred box cars are being built by the C.P.R. Company at the Perth, Ont., shops.

Canada is generally spoken of as a great agricultural country, and the credit is properly given, but there are other sources of natural wealth that should be mentioned in connection with the fertility of the soil. The value of Canadian fisheries for 1896 was considerably over \$20,000,000—of this Nova Scotia furnished over a third—and for 1897 the mineral output will undoubtedly eclipse all previous records. Our forests, too, are being drawn on heavily this year, and the cut will be much larger than for any previous year. In no other country in the world, perhaps, exists to-day such a diversity of natural wealth, and Canadians are justly proud of their land.—Yarmouth Daily Times.

The Grand Trunk Railway Company have leased their car wheel works at Hamilton, Ont., to a private corporation made up of the St. Thomas Car Wheel Company and the Montreal Car Wheel Company, and these two companies have entered into a contract with the Grand Trunk to make all the wheels they will require while they have their works leased. The Hamilton works are to be enlarged, and besides all the car wheels required by the Grand Trunk the new concern will seek outside business, such as the manufacture of wheels for other railroads and for electric car companies. The arrangement has been thought more economical by the Grand Trunk management than the former one, which they found needlessly expensive. Its effect will practically be to consolidate a large part of the car wheel interests of the country. The output of the Hamilton works in the past has been about sixty tons a day. Charcoal iron from Radnor forges in Quebec is the chief material that has been used.

Six carloads of electrical machinery were received a few days ago at the works of the Lachine Hydraulic & Land Company, Montreal, from the General Electric Company's works at Schenectady, N.Y. In less than two weeks the latter company will also deliver the temporary switch boards. The works at the Lachine Rapids are to be opened on Jubilee Day, if the arrangement the company hope to effect of having them started by the Queen touching a button connected with the works by means of the Atlantic cable can be carried out.

In the last issue of CANADIAN MANUFACTURER we stated that the Gould Coupler Company of Buffalo, N.Y., were negotiating for the G.T.R. shops at Brantford, Ont., soon to be vacated, with the view of establishing a branch of their works there. It is now announced by the Brantford papers that the Farmers' Binder Twine Company are arranging to take over the shops and utilize them for the manufacture of agricultural implements.

The Toronto Electrical Works Company, Toronto, has been incorporated with a capital stock of \$30,000, to manufacture electrical machinery, appliances and supplies, and to carry on a general electrical manufacturing, machinists and engineering business.

Hugh McLean is building a new saw mill at Salmon River, N.S. Its equipment will include a planer, edger and lath cutters.

Plans have been prepared for a new Baptist church in Berlin, Ont.

Wm. Davidson has started a boiler works at Halifax, N.S.

The Sherbrooke Street Railway Company, Sherbrooke, Que., having succeeded in securing water power privileges, have begun the work of construction of power house and surveys for road bed.

The Sault Ste. Marie Pulp and Paper mills, Sault Ste. Marie, Ont., will be illuminated on the evening of the Queen's Diamond Jubilee, June 22nd. Three thousand incandescent lamps will be used in the illumination.

The Nova Scotia Lumber Company, whose mill at Sherbrooke, N.S., was burned a few weeks ago, will rebuild at once.

The Oxford Manufacturing Company, Oxford, N.S., have begun the manufacture of dress goods, and samples sent dealers throughout the provinces have been well received.

Rev. J. H. Soweby, Guelph, Ont., has invented a three-point ball-bearing for bicycles. The points of superiority claimed for it are simplicity, strength and adaptability to carriages and shafting.

The Mercedes, an English steamer, has just loaded 1,900 tons of pulp for Manchester, England, at Port Medway, N.S. This is the first shipment from that place direct to England. Much interest has been manifested in this new enterprise, and the expectation is, now, that Port Medway will be an excellent port for shipment by steamers for pulp manufactured in the country. There is good storage, ample wharf accommodation, and the port charges almost nothing.—Yarmouth Daily News.

Davidson & Campbell's planing mill at Niagara, Ont., was destroyed by fire a few days ago. Loss about \$15,000.

The corporation of Sherbrooke, Que., will assume control of the city waterworks at present operated by a private concern.

C. B. McAllister, of the late firm of Mel-drum & McAllister, Peterborough, Ont., whose mills were burned some time ago, is fitting up a new flour mill there. He has also remodelled the Trent Valley Mills at Lakefield, Ont.

The Toronto Lithographing Company, Toronto, has been incorporated with a capital stock of \$195,000, to carry on a general lithographing, engraving, electrotyping, printing and publishing business.

Messrs. C. R. Clough & Co., Lennoxville, N.S., are erecting a new grist mill.

On July 9th the ratepayers of the town of Fort William, Ont., will vote on a by-law to raise \$35,000 for the construction of a water-works system for the town.

La Compagnie Canadienne de Construction, Montreal, is being incorporated with a capital stock of \$100,000, to do a general contracting business.

Firstbrook Brothers, Toronto Manufacturers of shipping cases, cigar boxes, etc., will build a three-story brick addition to their factory.

The parliamentary address to the Queen, sent to London a few days ago, was enclosed in a handsome casket made from Canadian wood, Canadian stone and Canadian gold. The body and base are of Canadian birdseye maple, surrounded with sixteen pillars of labradorite, ten inches in height. On the front and sides, between each pillar, are panels showing views of principal Canadian cities from Halifax to Victoria, the centre and largest panel bearing the Royal Arms and supports. On top of the cover is a shield for inscription, and surrounded with a crown. This is surrounded with a circle of shields bearing the arms of each province, and lower down a wreath of maple leaves, the two central shields bearing respectively the arms of the Dominion and a prominent view of the Canadian Parliament Buildings. The interior of the casket is lined with royal purple velvet, the whole in solid silver gilt. The casket cost in the neighborhood of \$500. It stands seventeen inches long by fourteen inches wide; the interior measurements being fourteen inches by eleven inches.

The Brackman & Ker Milling Company, Victoria, B.C., will build an elevator at Wetaskiwin, N.W.T., this season to cost \$50,000.

At a meeting, held in Stratford, Ont., on June 15th, it was resolved to form a company, with a capital stock of \$30,000, to acquire the flax mill and cordage business at present carried on by Mr. John Hogarth at that town. Application will be made for incorporation.

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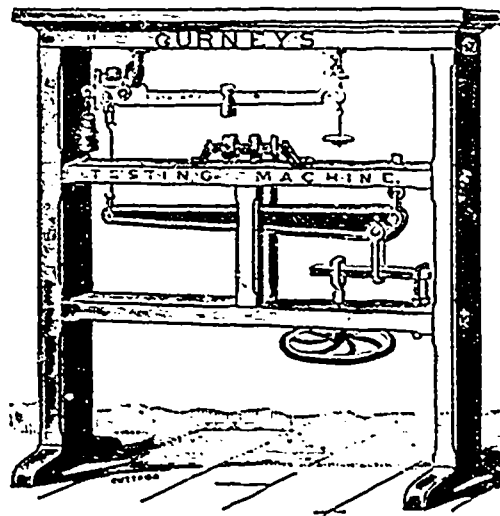
A Durable and Effective
Machine for the Use of Foundry-
men in Testing the Strength
of Best Iron, and
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of Iron for any work,
thus showing positively which is
the Best Iron for the Re-
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CAPACITY, 5,000 POUNDS.



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Messrs. J. and A. Marshall, Ellorshouse, N.S., Jarrigan manufacturers were burned out a few days ago.

Ganong Bros. Manufacturing Confectioners, St. Stephen, N.B., have ordered a 100 h.p. Monarch Economic boiler from the Robb Engineering Co., Amherst, N.S.

C. W. Thompson has purchased the paper mill at Napanee Mills, Ont., and will add extensive improvements.

Kenneth Campbell, Brandon, Man., is putting up an elevator at Forest, Man.

The Dennis Iron and Wire Works Company, London, Ont., are constructing fire escapes for the Guelph General Hospital.

Benjamin Blair, planing mill and lumber, Shelburne, Ont., has sold out to G. B. Richardson.

Goldsmith & Hague are building a 30,000-bushel elevator at Alexander, Man.

The Wingham Farmers' Flax Company, Wingham, Ont., has been incorporated with a capital stock of \$7,000, to grow and manufacture flax, and to carry on the business of a flax mill.

The Kingston Vehicle Works, Kingston, Ont., recently received an order from Nova Scotia for a carload of vehicles. The men are working overtime to overtake orders.

The Sturgeon Falls Pulp Company, Sturgeon Falls, Ont., has been incorporated with a capital stock of \$160,000, to manufacture pulp products and excelsior.

The Dominion Bridge Company, Montreal, have on hand at their works at Lachine, fifty spans of bridge work for the Newfoundland Railway.

The Acadia Pulp & Paper Mills Co., are putting another three pocket grinder in their New Germany pulp mill. It is being built by the Robb Engineering Co., of Amherst, N.S.

The Robb Engineering Co. are building two 300 h.p. tandem compound engines, one for the Halifax Electric Tramway Co. and the other for the St. John Railway Co. This makes five of these engines sold to the Halifax Company.

The Patent Cloth Board Company, Parry Sound, Ont., has been incorporated with a capital stock of \$30,000, to manufacture clothboards, veneers, etc.

The Goldie and McCulloch Company, Galt, Ont., recently filled orders for machinery for the Lorenzo Mcrquez Milling Company, South Africa.

M. P. Tudorf is building a saw mill at Wardner, B.C., with a capacity of 20,000 feet per day.

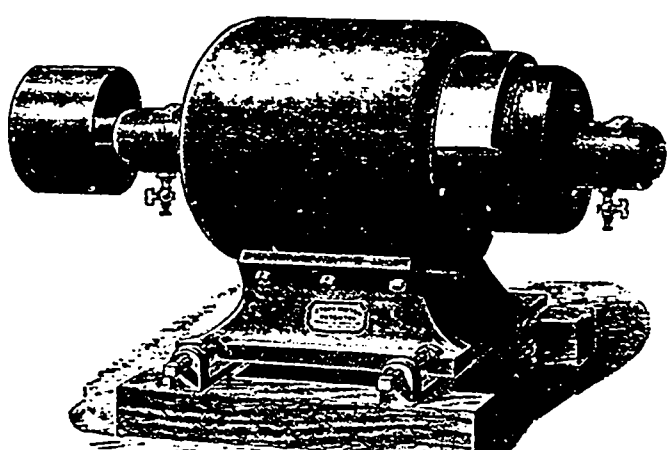
R. B. Bisset, Edmonton, N.W.T., is building an egg case factory to meet the demand caused by the development of the egg trade with the Kootenay district, B.C.



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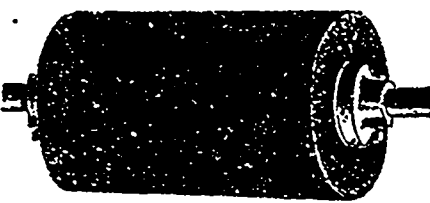


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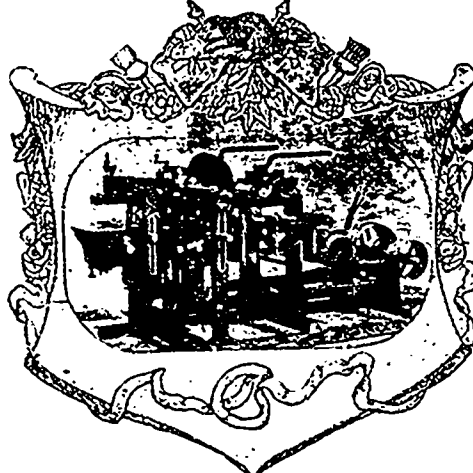
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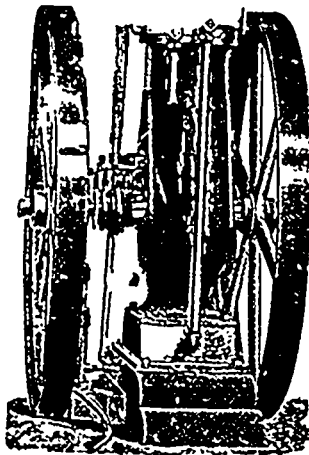
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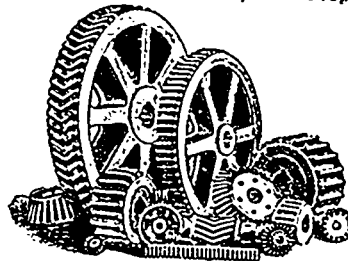


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NOTICE.

THE undersigned, in behalf of John Burchell, of North Finchley, Middlesex County, England, owner of Canadian Patents Nos. 47,621, dated December 6, 1891, and 47,580, dated Dec. 3, 1891, both for improvements in glass letters for signs, advertisements and analogous uses, hereby gives notice, and advises manufacturers and the public generally, that the said owner is ready and willing to grant licenses and permits to any persons desiring to sell, construct and use the same, and the terms and conditions may be known by applying either to the owner, or

EDWARD P. THOMPSON,

Patent Solicitor, 5 Beckman St., New York.

Cossitt Bros. Company's agricultural implement factory at Brockville, Ont., was damaged by fire a few days ago. Loss several thousand dollars.

The Chambly Electric Power Works, Chambly, Que., are making rapid progress towards completion. Five hundred men are employed on the works and the contractor hopes to have the dam finished by fall.

The British Columbia Electric Railway Company has been registered in British Columbia to take over the business of the Consolidated Railway Company and to construct and operate electric railways, etc., throughout British Columbia. The head office is in England.

The Colonist Publishing Company and Pollard & Daniels, Winnipeg, Man., have amalgamated and are seeking incorporation under the style The Colonist Printing and Publishing Company.

The James R. Ayer Company, Sackville, N.B., is being incorporated with a capital stock of \$40,000, to manufacture boots, shoes, harness, etc., and to carry on the business of tanners.

The town of Renfrew, Ont., recently voted to spend \$72,000 for a waterworks and sewerage system.

The Canada Printing Ink Company, Toronto, is being incorporated with a capital stock of \$40,000 to manufacture printing inks, printers' supplies and machinery, dry colors, oils, varnishes, etc.

The village of Arkona, Ont., will build two new bridges this season.

The Brackman & Ker Milling Company, Victoria, B.C., are putting additional machinery into their mills at that place for the manufacture of corn meal.

The Dominion Electric Heating and Supply Company, Ottawa, has been incorporated with a capital stock of \$100,000, to manufacture electric heaters, and other electric appliances, machines, supplies, etc.

The Watson-Foster Company, Montreal, has been incorporated with a capital stock of \$450,000, to manufacture paper hangings, colors, glue, pulp, paper, etc.

The Luxfer Prism Company, Toronto, has been incorporated with a capital stock of \$25,000 to manufacture prismatic glass and other devices in glass goods.

The paper, pulp and saw mills of the Royal Paper Mills Company, East Angus, Que., among the largest of the kind in the country, are crowded with orders. Over 12,000,000 feet of logs, the product of the last season's cut are already at the mill.

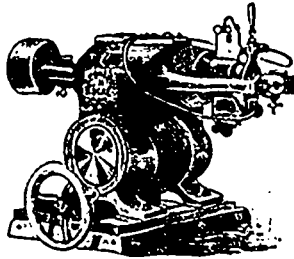
Parties representing German capitalists have called for and are considering tenders for six large buildings to be erected near Capelton, Que., for the manufacture of a secret high explosive to take the place of giant powder, dynamite, etc.

We are in receipt of a diary from the Rolland Paper Company, Montreal, the paper in which is a sample of their linen record. This company manufactures the finest grades of linen ledger, linen bond and fine writing papers. The samples received are of a superior quality.

The Harriston Flax Manufacturing Company, Harriston, Ont., has been incorporated with a capital stock of \$6,000, to grow and manufacture flax.

The Lake of the Woods Milling Company will build eight new elevators in Manitoba this summer.

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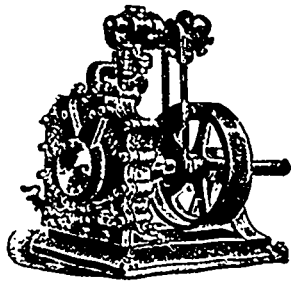
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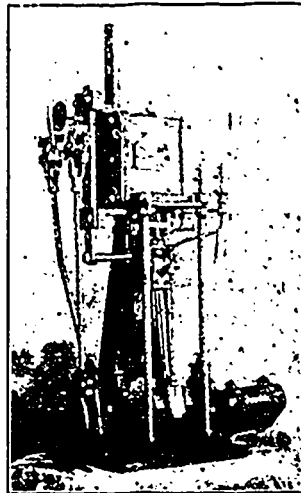
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PRICES ON APPLICATION.

The Brantford Water-Chute Company, Brantford, Ont., has been incorporated with a capital stock of \$2,000, to erect and operate water-chutes.

The Laurio Engine Company's Works at Montreal were damaged by fire a few days ago to the extent of about \$3,600.

The Canadian Pacific Railway Company is erecting new buildings for machine shops and engine houses at Carleton Junction, Ont.

The Wolseley Milling Company, Wolseley, Assn., have fitted up their mills with new machinery.

The Windsor Specialty Manufacturing Company, Windsor, Ont., has been incorporated with a capital stock of \$10,000, to manufacture novelties.

The Jenckes Machine Company, Sherbrooke, Que., recently shipped a car load of machinery, consisting of a boiler, hoisting engine, etc., to Asbestos Mines, Danville, Que. Five other carloads for the same concern are to follow.

The Universal Patent Developing Company, Montreal, is being incorporated with a capital stock of \$20,000, to acquire patents and to fit up and improve machines and inventions.

Messrs. W. S. Rockwell & Co., 26 Cortlandt St., New York, have sent us an illustrated description of their improved duplex system for burning fuel oil, in a thirty-page pamphlet 7 1/2 x 9 1/2 inches. After stating the value of oil as a fuel, the various lines of manufacture in which it can be advantageously employed are named and the features of the duplex system given in detail. The Rockwell burner is made of brass, nickel-plated, and the nozzles are of a durable composition. It can be used for steam or air, the choice of agency for atomizing the oil depending on the purpose for which the oil is used. "The prime object is the destructive atomization of the oil and its intimate association with the oxygen of the atmosphere within the furnace chamber at the proper time, its expansion and vaporization under heat, and final entrance into combustion. The destructive force of steam at ninety pounds pressure is about six times as great as air at fifteen pounds. The temperature of such steam is about six times as great as atmospheric air of average temperature, and its expansive power many times greater. The elements of steam, two volumes of hydrogen and one of oxygen, in proper proportions with the carbon of the oil, are favorable to combustion of a high order. The volume of steam necessary to properly atomize a certain quantity of oil is less than half the quantity necessary to operate an air compressor to accomplish the same atomization with air. The first cost and maintenance of the steam method as compared with the air method are as the cost of a small iron pipe to a large and complicated machine. The compression of atmospheric air adds no more to combustion than the same weight of free air other than by its atomizing or destructive force. The oxygen of free air in its exhaustless abundance will under proper conditions, enter into combustion with carbon as freely and rapidly as that of compressed air." Illustrations are given of hardening and tempering, annealing and hardening, regenerative forge, regenerative heating, brazing, and single-end and double-end annealing furnaces. The heating of rivets with oil fuel is one line in which the Rockwell apparatus has done good work, it is claimed, heating a rivet softer and with less scale than any other fuel.

A ROLLING SHIP.

Mr. F. A. Knapp, a Canadian, is now superintending the construction of a very novel ship invented by him, at the ship-yard of the Polson's Iron Works Company, Toronto, which, if it proves as successful as its inventor hopes, will revolutionise existing methods of water transportation. As viewed on the stocks the craft has the appearance of a hugh cylinder, which it really is, 110 feet long by 22 feet in diameter.

Mr. Knapp says that he first conceived the idea about three years ago, it having been suggested to his mind by observing the ease and rapidity with which a round log may be revolved in the water. His idea is that if so little power be required to revolve a log, but a comparatively small power would be required to revolve and propel a vessel. It would require but little power to put and keep in motion such a ship as his, when, by reason of its air-tight compartments, and its buoyancy it would rest on the surface of the water; and when the power is applied it would acquire very great speed.

A couple of years ago Mr. Knapp had a small working model of his invention made which he submitted to a number of gentlemen who were interested in solving the problem of a quicker ocean passage, but all at first scouted the idea. Nothing daunted, Mr. Knapp continued his experiments, some of which led to improvements, and he finally met in Toronto the naval architect who is now supervising the construction of the vessel. On seeing the model he at first felt rather dubious as to its success, but Mr. Knapp invited him to go down with him to the water side where he would show him what it would do. The model was only fitted up with a clock-work arrangement for its motive power, but when it was wound up and placed in the water it started off at such a rate that the architect was taken by surprise, and what was more to the point came to the conclusion that "there was something in it." He advised Mr. Knapp to go to Scotland and submit his plans and model to some of the great ship-building firms there. Some of these firms came to the same conclusion as the Toronto architect, but none of them would go into the matter. Returning to Canada he met Mr. George Goodwin of Ottawa, the well-known contractor of the Soulanges Canal, who soon became as enthusiastic as the inventor. The result was that negotiations were entered upon with the Polson Iron Works Company, and it was decided that they would construct an experimental craft, Mr. Goodwin guaranteeing at least \$10,000 of the expense. Since commencing to put the craft together the builders have also become enthusiastic, and the experiments will now be carried on no matter how great the expense.

Perhaps the best illustration of the principle involved in this novel vessel would be to think of a squirrel in a revolving cage, the engine in the craft being the squirrel, or to think of a hugh paddle wheel without a ship. Imagine the paddle wheel to be 110 feet long by 22 feet in diameter. The stationary paddles attached to the outside cyclinder and in the centre of the vessel will be sixteen in number, and twenty feet in length, and will correspond to the buckets of a paddle wheel. In the centre of this huge paddle wheel imagine a cyclinder twelve feet in diameter, braced strongly to the outer cyclinder, with a shaft through the centre of this, and one would have an ordinary paddle wheel in shape and principle. But in the vessel now under con-

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St. CATHARINES,
February 9, 1897

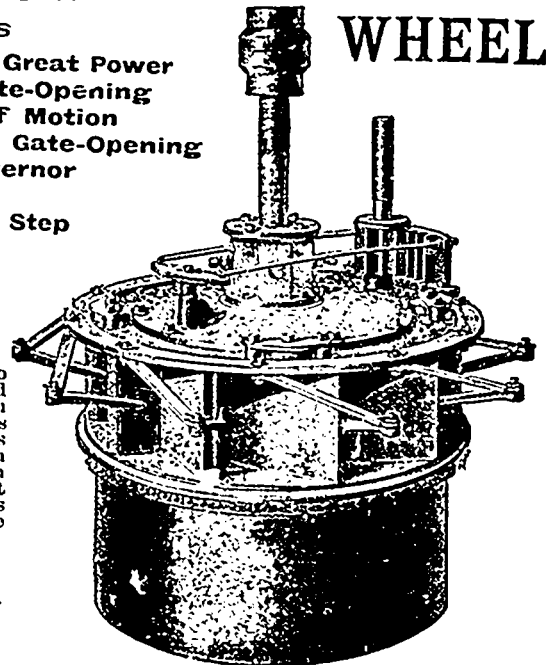
Messrs. Wm. & J. G. Greey,
Toronto.

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, sirs, the comparison is this—we have been using two 33 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 33 inch wheels

Yours truly,
COOKE & SON.

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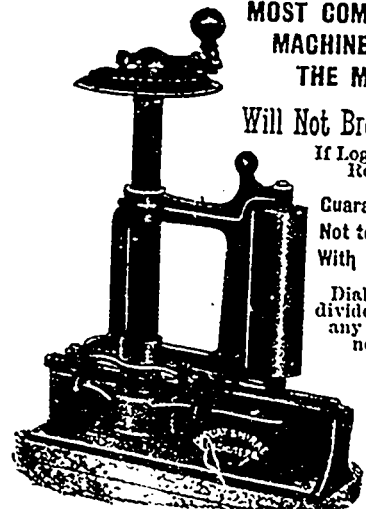
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struction in place of the shaft there is a third cylinder, which will be joined to and supported by the outside or revolving portion of the vessel by ball bearings.

Inside this third cylinder a platform will be constructed, on either of side of which engines of 150 horse-power will be placed. By suitable means these engines will cause the outside cylinders to revolve rapidly, while the inside cylinder remains stationary.

It is intended to provide passenger accommodation within the inside, or third cylinder, the outside or revolving cylinder being used as air-tight compartments. The inner cylinder will be eight feet above the water. The actual draught of this cylinder boat will, it is expected, be only about two feet six inches, which will allow it to roll on the top of the water.

The particular vessel now under construction will not have a great deal of accommodation for passengers or freight, and the entire space of the inside cylinder will be principally used for the development

of power. The steering gear will consist of chains and steel plates, on the lee board principle, which will be placed at each end of the vessel.

The material of which this vessel is being constructed is steel plates, and it is expected that it will be ready for a trial trip in August. The expense of building this vessel is being borne solely for the purpose of proving the correctness of Mr. Knapp's theories, for no matter what amount of success may be achieved the present vessel will be of very little use as a carrying craft, but it will have served its purpose, for after all the experiments have been made and the correct data obtained it will enable a naval architect by the law of comparison to construct what Mr. Knapp had in his mind when he first started out—a giant vessel at least 750 feet long, which he claims will be able to roll across the Atlantic in about forty-eight hours. If the undertaking proves a success, great vessels will be constructed chiefly for the passenger trade, as the time

would be too valuable to allow of much of it being taken up in loading and unloading freight. Ample ventilation will be furnished by the open ends and by means of ventilators cut in the outside cylinder. These will be cut on the same principle as the holes in the bottom of a lifeboat. They will also serve to let out the smoke from the boilers.

As intended at present there will be sixteen paddles placed amidships, each paddle being twenty feet in length.

Wm. J. Matheson & Co., 178 Front Street, New York, have sent us a bulletin showing results obtained by new alkaline tin-discharge for diamine colors, which, it is said, has yielded better results in many cases than the ordinary tin-crystal discharge. This alkaline tin-discharge, it is claimed, possesses the advantage of not injuring the fabric upon prolonged steaming, and of allowing the use of albumen-dyestuffs for the production of colored discharge effects.

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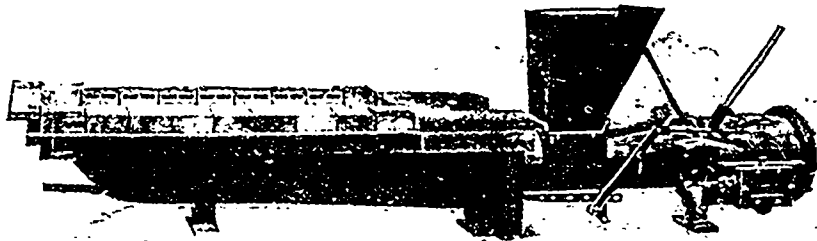
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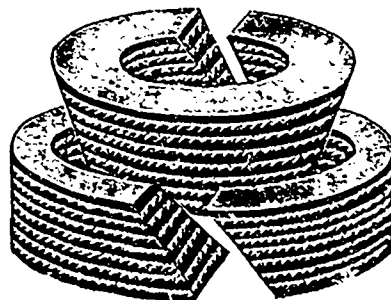
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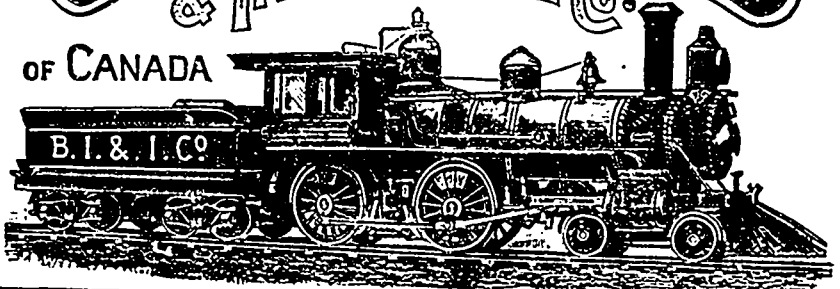
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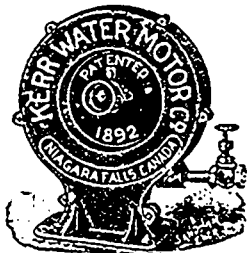
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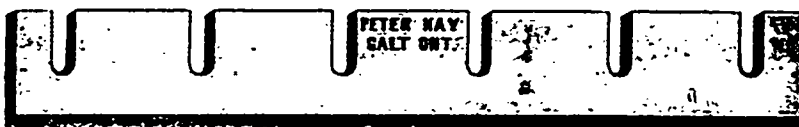
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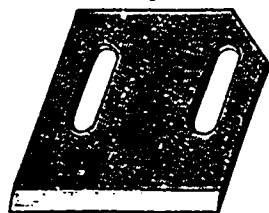
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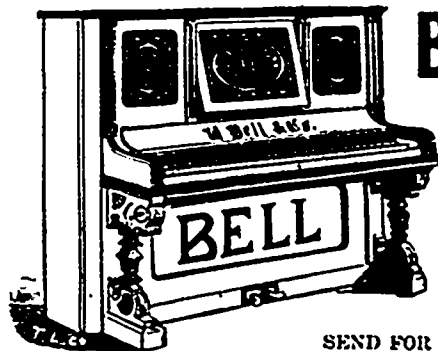
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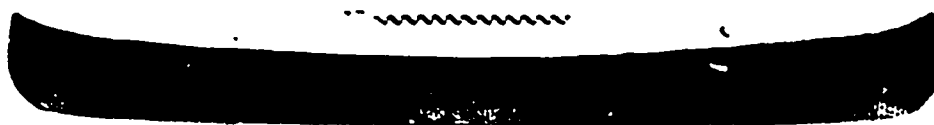
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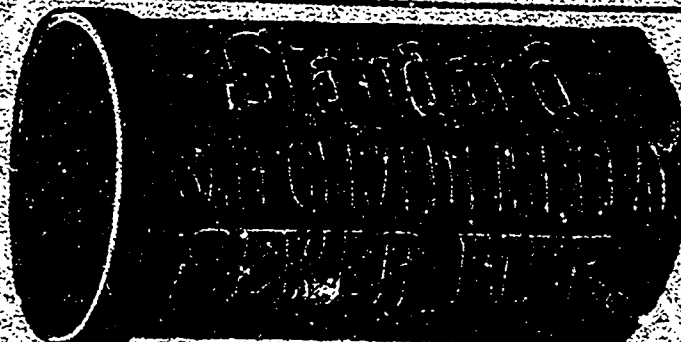
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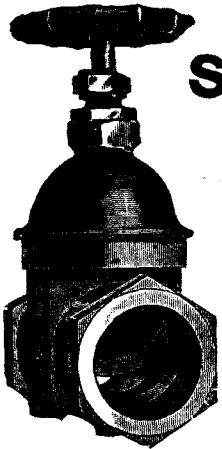
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