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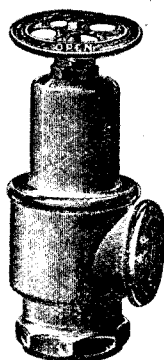
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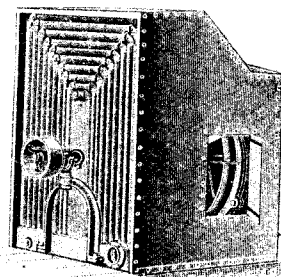
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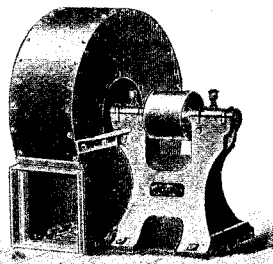
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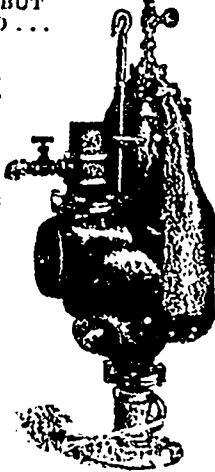
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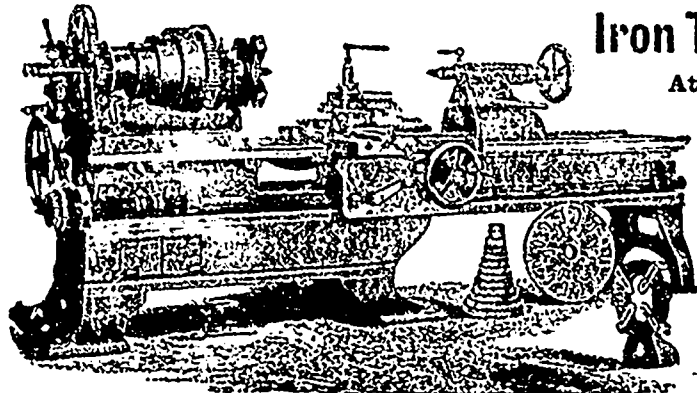
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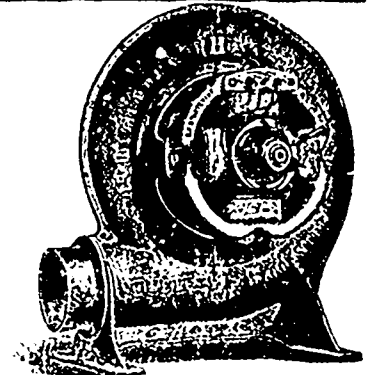
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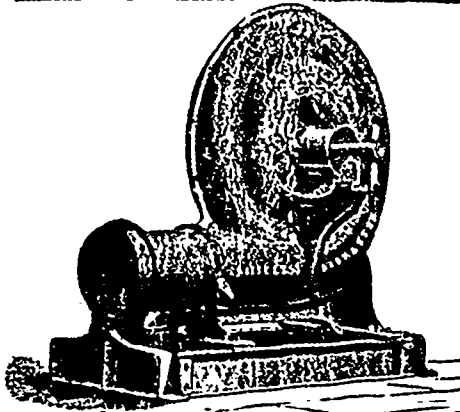
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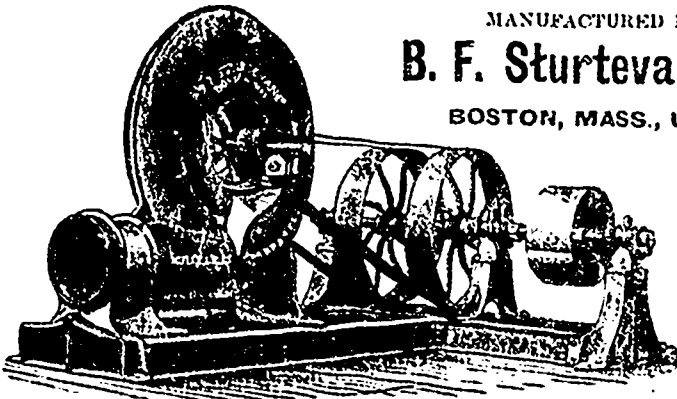


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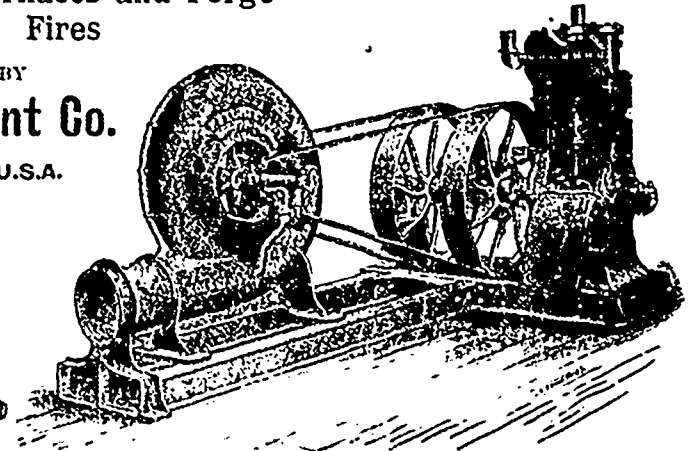
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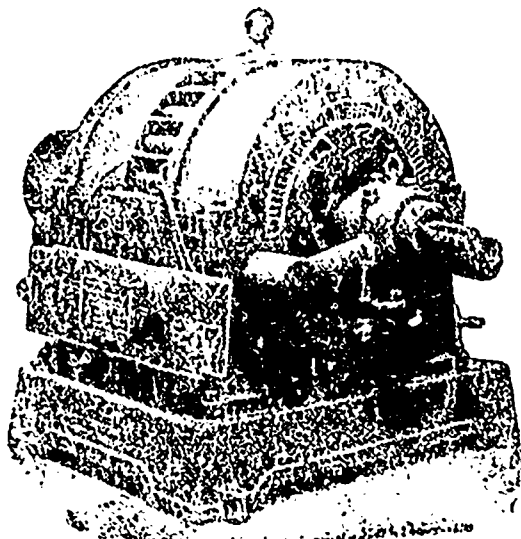
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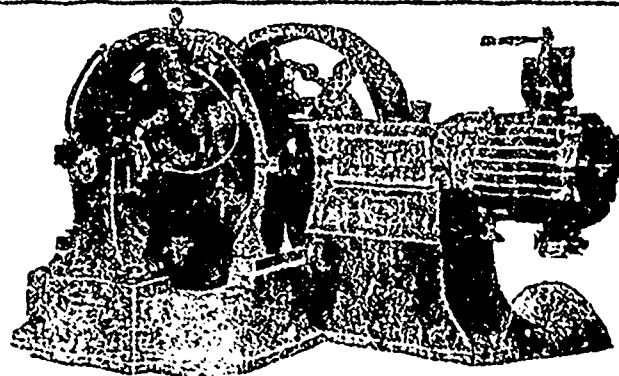
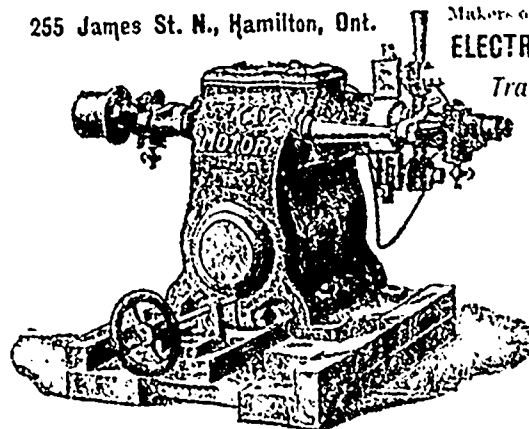
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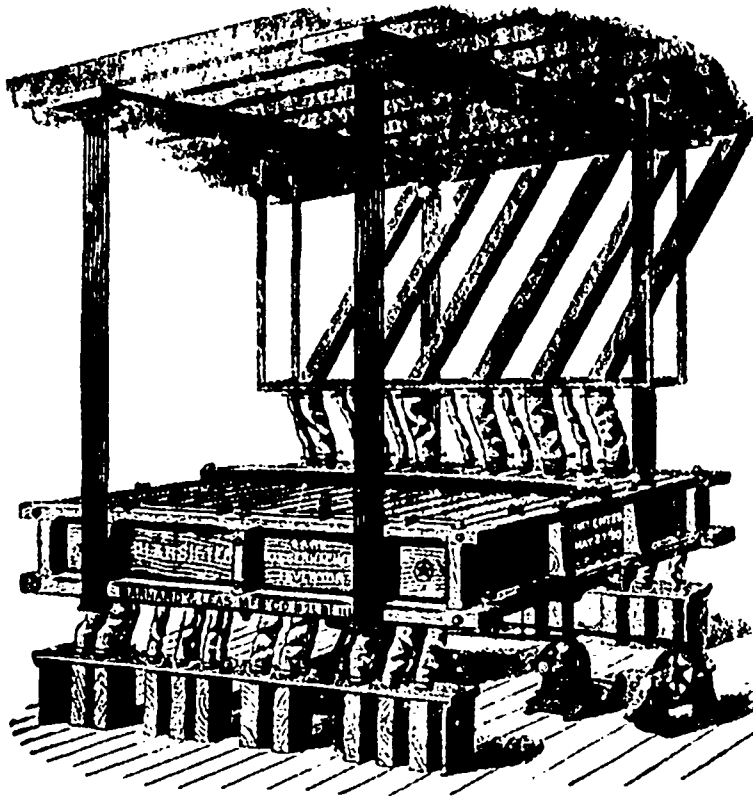
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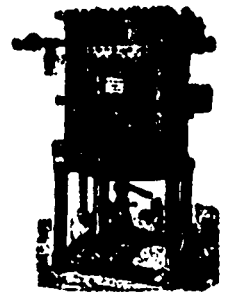
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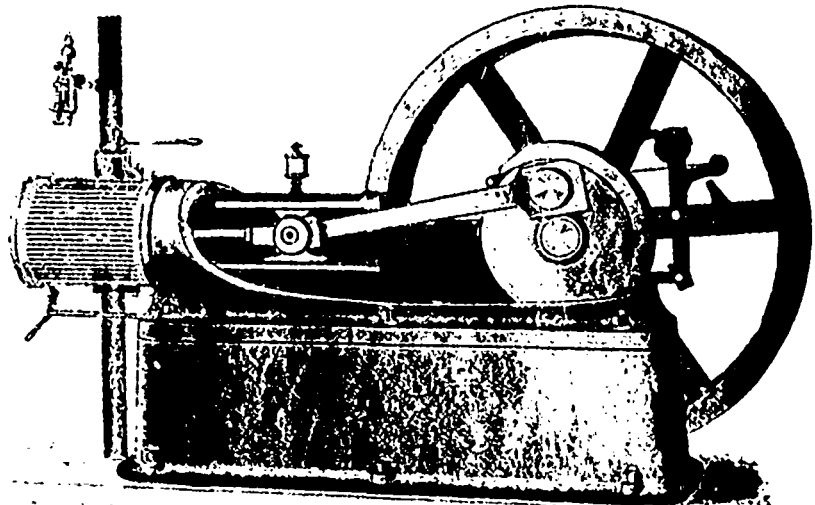
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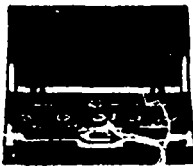
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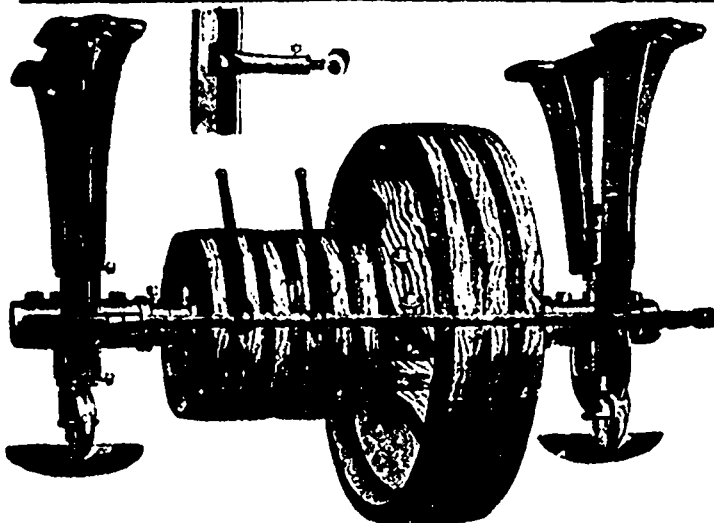


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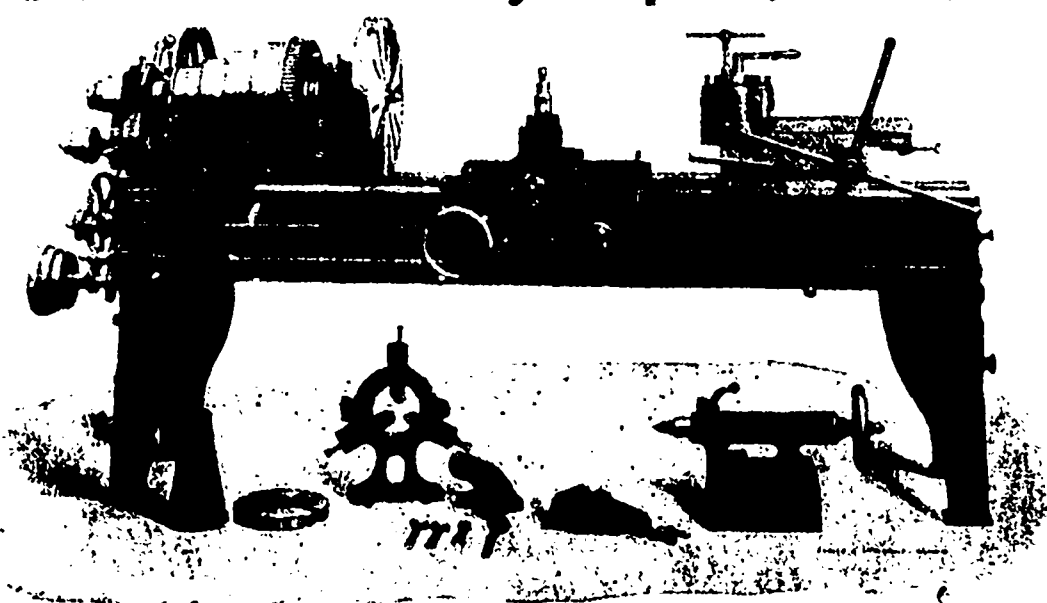
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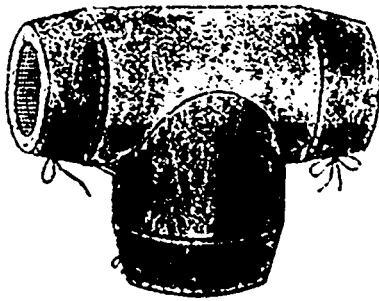
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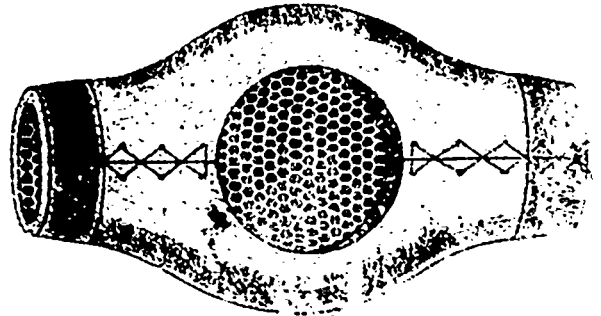
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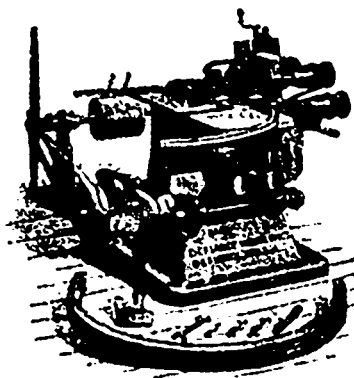
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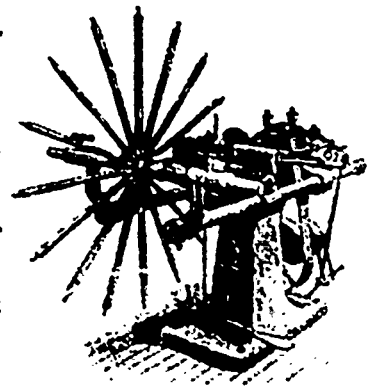
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**A MERCHANDISE MARKS ACT.**

Why should not Canada have a Merchandise Marks Act somewhat on lines similar to that in force in the old country? It would be another step in the direction of assisting the people of this country to an understanding of exactly the peculiarities of Canada in an industrial way, and thus it would be a factor in the development of many lines of manufacture that have not, by any means, reach their limit.

There are dishonest men in all lines of trade, and these it always has been and always will be the aim of THE CANADIAN MANUFACTURER to expose and to frustrate whenever possible.

When a man breaks into your house and makes inroads upon the portable portion of your lures and penates, he is termed a burglar. When a man sneaks into your office and picks up your property while your back is turned, he is called a thief. When a man gets your good coin for his private benefit upon misrepresentations that are not in accordance with facts, and bring you no return, he is called a swindler. Yet this species of crime is quite surpassed by another sort of deception every day of the year, and the culprits are not called to account.

When a customer goes to a dry goods establishment, and asks to be shown their assortment of tweeds, he is usually shown a large number of patterns and values. After some examination of the various qualities and prices, the customer usually casts aside all but two or three. When he has reduced his selection down to this point, the obliging salesman usually takes a hand in and assures you that one of the three is not to be compared with the others, "as you are, doubtless, aware." This tribute to your knowledge of tweeds narrows your selection to the remaining two. Then you weigh these two articles, and you try to arrive at a decision. The salesman will settle it for you by the remark that one piece of goods is imported, and they will guarantee it to wear well, and keep its color, while the other piece is Canadian-made, and he wouldn't advise you to take it. The piece he recommends is the best Scotch, and, of course, your selection is in favor of it at a higher price than you would have paid for the other choice. Just here is where the unfairness may come in, and the chances are about ten to one that the blame does not lie with the firm who sold you the goods.

The "importer," as he styles himself, is the gentleman who causes the trouble. Some specimens of this class of tradesmen do not hesitate to buy Canadian goods, and sell them as genuine imported goods. Of course the retailer has to carry a line of Canadian goods, and the goods he gets are made by exactly the same man who manufactured the "imported" article, and of the same quality.

The only difference is the price, and a Merchandise Marks Act would very promptly awaken the purchasing public to the fact that a considerable proportion of what they buy for imported goods is really the product of Canadian mills. What we should have is a statute providing that every yard of goods made in Canada shall be so stamped. Then we shall have protection for the retailer and the consumer, and a surprising boon in the popularity of Canadian-made goods, which purchasers will very soon realize are as good as the best imported article.

What has been stated above does not apply only to tweed, but to other manufactured articles, and the proposed Act will be equally effective in other lines.

Attached to the Act must be a clause providing a heavy penalty for its infraction, and this nefarious practice will be stopped.

**LET US SAW OUR OWN LOGS.**

The Michigan correspondent of the Canada Lumberman says that S. O. Fisher, of Bay City, expects to cut about 20,000,000 feet of lumber in the Upper Peninsula of Michigan and in the Georgian Bay country, and Fisher and Turner will cut some 30,000,000 feet in Canada, and the logs will be towed to Bay City for sawing. Incidental to this,

the same writer informs this paper that a log-towing association has been formed at Cheboygan by Thomas Charlton, of Tonawanda, and Thompson Smith's Sons, of Cheboygan.

The name Charlton has a very familiar sound in connection with lumber matters. It was a gentleman named Charlton, if we mistake not, who introduced to Hon. A. S. Hardy a deputation of American lumbermen, who threatened the Government of Ontario with dire vengeance, in the shape of retaliation from Washington, in case they saw fit to prevent the export of logs from Canada. Mr. Charlton's good work for the American lumbermen, and against the interests of Canada, should not be forgotten when he goes again before the electors. During the season of this year a pretty fair quantity of logs was rafted from the Georgian Bay to Bay City. The correspondent of the Canada Lumberman estimates it as follows:

	Feet.
May.....	9,525,320
June.....	37,125,034
July.....	43,342,448
August.....	22,145,276
September.....	20,983,472
October.....	13,209,603
Total.....	146,630,853

Of course the gentlemen who owned the logs will remember that one good turn deserves another when they come to raft their Canadian logs next year (if Mr. Hardy is foolish enough not to stop them). An application of this maxim will certainly not be inimical to the business interests of the new towing company at Cheboygan.

The United States is sending lumber to Australia and to the West Indies. At the same time it is taking immense quantities of logs out of Canada. We are allowing them to rob us of one of our most valuable assets. This state of affairs can and must stop. Why should not we supply these other markets with lumber and let the United States attend to its own supply? As we have before asserted, the United States must have our lumber. Let it pay for it. Prohibit the export of logs from Canada and the United States threatens us with a higher tariff against our lumber. Very well. Let the United States consumer either pay the amount fixed by that tariff, or manufacture the lumber from American logs, cut from American trees in American forests. The end of the domestic lumber supply of the United States is in sight. Canada could exist without her custom, till she was obliged to come to us. In the course of a recent editorial on the Menace of Treelessness, the New York Tribune spoke strongly in this matter. From this article the following excerpts are made:

If it should appear that the growth of trade in any important product was tending to exhaustion of native resources, and consequent domestic embarrassment and disaster, the circumstance would give rise to apprehension rather than pleasure, and economical wisdom would suggest the direction of efforts toward the restriction of that industry or toward such modification of it as would avoid the evil results threatened.

That is the case at present with the lumber trade. It is a legitimate and important industry, and one that should be so cherished as to insure its profitable permanency. But it is now growing at a rate which threatens in the near future its own self-exhaustion, and the reduction of this country to the deplorable and ruinous state of treelessness. The facts can not be concealed and should not be ignored.

It is idle to point to the vast expanses of untouched woodland that still remain and boast that they are inexhaustible. They are not inexhaustible. On the contrary, the time when they will all have been destroyed is now within measurable distance. It is easily within the lifetime of men now living. This year, as already stated, our exports of lumber are about 25 per cent. greater than last year, and 100 per cent. greater than ten years ago. Even at the present rate of cutting the forests would not last long. But at such an increasing rate their disappearance is startlingly close at hand. Nor is that all. The figures cited are only those of exports. Domestic consumption is increasing still more rapidly. The single item of wood-pulp for paper manufacture means an enormous destruction of timber never dreamed of a generation ago.

The Tribune goes on to point out that lumbering should mean only the thinning out of the forests, and not wholesale destruction, and suggests forest cultivation. If no regulation is established to prevent it, we will find the drain on Canadian forests resources a serious matter for us, inexhaustible as we consider our forests to be. Again we repeat it—we must see that the benefits of our lumber industry are kept, as far as possible, in Canada, and we must guard against injurious deforestation of our north country with its million lakes. Our wants are not so pressing that we are obliged to submit to dictation from Washington. The Paper Trade Review, of London, England, says:

There are at present several Canadian schemes being projected with British capital, and if such a step was advisable, British papermakers would be prepared to form themselves into a combination and erect extensive chemical and mechanical pulp works in Canada or elsewhere from whence to draw their supplies. British papermakers and financiers are following the example set by American manufacturers in acquiring timber lands in Canada.

What more evidence do we need that we can obtain capital from Great Britain to develop our natural industries without being in any degree dependent upon our American neighbors. Let Canada secure all the profit she can justly have from her timber and her pulp-wood.

### PROTECTION AND THE FARMER.

Farming is an industry that ranks among the manufactures. The farmer's raw material is the seed and the soil. With his skilled labor he manipulates these to produce returns that shall enable him to pay for his seed, for his farm machinery and his labor, and leave him a margin of profit. Farming is what is called a natural industry, and the boast of the Liberal orators, in days not very long gone by, was that the farmers of Canada were free-traders. We are told that they desired to have the markets of the world open to them, and have Canada thrown open wide to receive all the products, natural or manufactured, of every other country. The first step in the argument was faulty. They agreed that the farmer would benefit from the lowered price of the machinery he was obliged to buy. He would get cheaper sugar, cheaper clothing, cheaper boots, cheaper kerosene; everything he had to buy would be cheaper, and farming, being a natural industry, prices would not be changed, with regard to any products of the farm. This petty set of theories was forthwith adopted by those who had nothing to lose, and who grasped at the glamor of the sweeping generalities. The thoughtful ones read between the lines, and asked for proof. There is proof

very easy of access, and it may more easily be deducted from examples in the United States, than from examples in Canada, because we here have been largely spared the vicissitudes of tariff that periodically shake the commercial foundations of the United States, till they seem almost ready to totter and fall.

Let us contrast the condition of the unfortunate agriculturist in a good farming district in Ohio under a high tariff, and under the Wilson Bill which cost the Democrats the control of the Government of the United States. Empire township is located in McLean County, Ohio. On Oct. 9, 1891, corn sold at forty-nine cents a bushel. The crop amounted to 159,100 bushels, and at forty-nine cents that netted \$77,959 to the farmers of the township. In 1896 the amount of the crop was practically the same, but on Oct. 9, 1896, the price was but eighteen cents a bushel. This meant a total of \$28,638, as against \$49,321, less than exactly the same amount of corn sold for five years earlier.

In the same township, on Oct. 9, 1891, oats sold at twenty-six cents a bushel, and the crop of 80,900 bushels was worth just \$21,039. On Oct. 9, 1896, the price of oats was ten cents a bushel, or \$8,090 for a crop of 80,900 bushels. Thus the loss from the decrease in the price of oats amounted to the considerable sum of \$11,944.

The wool crop of the township in 1891 was some 130,000 pounds. The price paid for it was eighteen cents per pound. In 1896 the product had fallen off one-half, because of the Wilson Bill. If it had not fallen of at all, the value of it at ten cents per pound would have \$10,400 less than the value in 1891.

These three items—corn, oats and wool, brought the farmers of Empire township \$71,665 less revenue in 1896, under the free-trade policy, than the same quantity of these commodities brought in 1891. And yet the farmers are supposed to be free-traders, and those who tell us so insist that the farmers of Empire township saved more by the cheapness of the articles they bought, than they lost by the cheapness of the articles they had to sell. Experience under the policy that reduced the value of their products was a prime factor in the removal of the then administration, and the introduction of William McKinley, and a policy of sound protection.

#### THE AUSTRALIAN MARKET.

The anxiety of the British manufacturer is at present directed to Australia, where Colonel Bell, the United States Consul in Sydney, recently boasted of the increase of imports from the United States to New South Wales since 1894 by 130 per cent. The argument of Col. Bell does not contain as important a statement as might at first appear. As a matter of fact, the United States in 1894 sent to Australia products to the value of £542,000. With the single exception of 1893, this is the smallest amount of this trade since 1880, when it was £387,000. The trade in 1896 amounted to £1,730,000, and it is of the increase of this over the £542,000 trade for 1894 that Col. Bell waxes eloquent. If he stops to consider that in 1885 the imports into New South Wales from the United States were £1,008,000, that in 1886 they were £1,018,000, and in 1889 they rose to £1,094,000, while in 1891 they reached the sum of £1,277,000, he will perhaps see less cause for rejoicing.

There is a point in this increase that we propose to bring out by a close examination of the details. It would appear that some £276,000 worth of these imports come into competition with the British manufacturer. The rest, to a very large extent, is simply so much trade that the United States profit by when Canada might just as well have it.

To itemize the variety of imports into New South Wales would require a list of nearly all the various articles of trade, but the recent increase to the present figure is owing very largely—in fact chiefly—to the trade in agricultural products. For example: From 1891 to 1895 the value of grain exported by the United States to New South Wales was £4,000 in round figures. A deficiency in the Australian crop caused this item to suddenly jump in 1896 to £717,175. This is an important consideration for Canada. Australia is in need of grain. The grain dealers of the United States promptly proceed to supply that need. Why should not Canadian grain have filled the granaries of our Antipodean cousins? But there is another feature perhaps more important even than this.

It is that in the year 1896 the United States sent to New South Wales lumber to the value of £116,000. And yet the United States has to come to Canada every year for millions of feet of lumber. Canada's lumber interests must not neglect their own advantage by leaving this big market to American lumbermen. In a recent issue in these columns reference was made to the statement of Mr. J. S. Larke, our Commissioner to Australia, with regard to the apparent carelessness of Canadians whether they secure any of the Australian trade when it is fairly thrust upon them. And yet New South Wales pays over half a million dollars yearly for American lumber. Just a few half millions each year spent in Canada would mean an era of prosperity such as Canada has never known. There is absolutely nothing lacking. We have the articles wanted. We have the opportunity to dispose of them. Surely there is willingness on the part of the owners of idle Canadian sawmills to set them running again at a good profit, and surely there are men enough willing to work in these mills and earn fair wages for their labor.

Yet no one has made an effort to get control of the Australian market. Will some one please explain why this is?

#### HASTEN THE DAY.

According to the returns just made public, exports of cutlery from Sheffield, England, to the United States amounted to only \$60,000 for the last quarter, as compared with \$150,000 for the same quarter, July, August and September, of 1896. This is the worst showing made by the cutlery exporters of Sheffield for seven years. Again it comes, another argument for the introduction of protection of some kind in Great Britain, and a still stronger argument for the establishment of an Imperial customs union of the motherland and all her colonies to control the commerce of the world. Three-fifths of the Sheffield cutlery trade with the United States wiped out at one stroke. A decrease along the whole line of Great Britain's export trade with the United States. Six and one-half per cent. less exports during September of this year than during the same month of last year. Such a state of affairs is gradually opening the eyes of the men who

direct the trade policy of Great Britain and the end can be but one result—Imperial Trade Federation.

A series of articles which is attracting much attention, headed "Marching Backward," has been appearing in The London (Eng.), Daily Mail. The writer has shown that Great Britain is falling behind in the great industrial race, and has demonstrated how the United States, France and Germany can show increased exports to the amount of £21,000,000 in the twelve years extending from 1883 to 1895. It is further proved that the exports of the United Kingdom in the same period decreased £9,000,000. From these figures it would appear that the total loss to Great Britain is £30,000,000, inasmuch as her own trade has decreased £9,000,000, while the United States, France and Germany have secured an increase of £21,000,000, which, under proper conditions, might have been secured by Great Britain. There would be no shadow of difficulty in securing the consent of all Canada to a proposition for a British Customs Union. The difficulty lies with the Imperial end of the bargain.

With just a trifle more persuasion of the pounds, shillings, and pence variety we may expect that all doubts will be removed from the minds of the statesmen of Britain. The day of preferential trade within the Empire is far toward the dawning. Within a very few years we shall see it. Let us have a care to hasten its coming by every means in our power.

#### WANT PREFERENTIAL TRADE.

The sentiment in the British Isles is gradually coming around to favour a tariff and a preferential trade league of the whole of the British Empire. Mr. Ernest E. Williams, a well-known English writer, is at present in Canada and will write a series of articles on this country. Mr. Williams is a well-known authority in trade questions and is the author of "Trade with Germany." In a recent interview he delivered himself of the following opinion upon England's present and future position upon the trade question:—

A few years since so-called free trade principles were well nigh universal in England, and the man who suggested that the doctrine of Cobden did not embody the whole economic faith of nations was regarded as a sort of criminal lunatic. Now, however, a change is slowly coming over the public mind. Men who study trade developments, and, more especially, men who are actually engaged in England's productive industries, and who find themselves more and more harassed and frustrated by the competition of countries who have built up rival industries by the aid of protectionist tariffs—these men are coming to doubt the wisdom of England in opening her ports to the free ingress of foreign products. I have sufficient faith in my countrymen's common sense to hope, with confidence, that they will some day give up their Cobdenite fetish, and return to fiscal sanity. Nor do I think that the day is very far distant. But the time of its accomplishment will depend not a little on the action of the daughter States of the Empire, and this is a point I wish to press earnestly upon Canadians.

The new protectionism will be a broader and more statesmanlike affair altogether than the old. True, in the old days the colonies were given a preference in England's markets, but that preference was a mere incident in the fiscal scheme. Under the new protectionism it will be an integral factor. The commercial federation of the Empire is the form which the coming rebellion against Cobdenism will take. We in England are just beginning to wake up to the fact that the Mother Country is a part of a great Empire, the greatest Empire the world has ever seen, and it is an Empire surround-

ed by eager and jealous enemies. They are not at present trying to crush us with armies and gunboats; their method is to destroy us industrially. As far as the Mother Country is concerned, their task is rendered easy by that country's foolish practice of throwing open wide the gates; and in respect to the daughter States, Mr. Chamberlain's recent blue-book shows what insidious but deadly advances foreign countries are making in colonial markets. What we need above all things now is a Customs union within the Empire. England must place duties on foreign imports in favour of her own and her daughters' industries, and conversely the daughter States must admit British products on more favourable terms than they admit foreign products.

#### THE IMMIGRATION PROBLEM.

In the United States considerable difficulty has been and is now being, experienced in assimilating the diverse elements of the foreign population into anything like harmony with the American idea of republican principles, that erroneous institution which has flourished under it a system of white slavery, even worse than the black slavery that caused the Civil War. They claim that Teutonic and Celtic races are easier to assimilate than the other races of immigrants. The general ignorance of these immigrants is given as the chief reason for the difficulty in uniting them with the nation. Fortunately, in Canada, we have not the experience of dealing with these people. Although our growth of population has not kept pace with that of the United States, yet we have the satisfaction of knowing the respectability of every class of our citizens, and that they are not prone to the unseemly, uncivilized exhibitions which occasionally disgrace the boasted civilization of the United States.

There is a class of sentimentalists who claim that state interference with entrance into and exit from a country, or a nation, is unwise and unjust. It would appear that these theorists do not recognize the state's duty as embracing not only administrative functions, but also the securing to its citizens of political, economic and social well-being in the highest attainable degree of perfection. For its own self-protection a state has unquestionably the same right as had the tribal government, of which it is a development, to decide who shall be admitted to the protection of its laws and the privileges of its citizenship. The individual's right must be subordinated to the exigency of the nation on the principle of the greatest good to the greatest number. The very existence of a government depends upon a sort of contract between the citizen and the state, under which the citizen shall not assert himself to the detriment of public interest.

When full and free immigration was allowed to come into Canada we had use for the large majority of the immigrants in the ranks of unskilled labor, from which Canadians had largely withdrawn. Proper legislation of a true national spirit has prevented Canada from becoming a great dumping ground for the refuse of Hungary, Italy and Bohemia. The United States has gone on the principle that any specimen of the genus homo had an inherent and inalienable right to change his home and his allegiance. In 1868 Congress declared in favor of that principle by resolution. The United States and the Chinese Empire in that year also entered into a treaty in which freedom of emigration and immigration was duly set forth. Then came Chinese cheap labor, the famous acts of the California Legislature and the Act of 1888, which shut out the Chinese.



In 1848 Austro-Hungary contributed 82,400 to the population of the United States. It is estimated that the Russian expulsion of the Jews brought in 7,500 per month. Up to 1890 Italy sent 321,000 of her sons to the United States. Since 1820 it is estimated in round numbers that four million Irish, two million English, Welsh and Scotch, four and one-half million Germans, nearly one million from Norway and Sweden, and large numbers from other countries have come out to join fortunes with the American republic. Verily, the race problem in the country to the south of us will some day be a perplexing national question.

In dealing with immigration Canada cannot exercise too much care. There are objections to unrestricted emigration from four standpoints. Criminals should never be admitted into the country, but with all possible care this cannot be always avoided. Another feature important from the standpoint of the moral consideration of the case is the low class immigration. Education is at a high standard in Canada, but a ceaseless influx of ignorance and illiteracy will tend to neutralize the splendid work of our educational institutions.

Then there is the pauper and imbecile immigration, which should be stopped. The countries of Europe have a quiet method of shipping paupers to Canada. Let us ship them back at the expense of the steamship company that brings them here. And, in addition to that, the United States of America are occasionally guilty of deporting to Canada some unfortunate victim of the pauper or imbecile class. As protection is necessary to the manufacturer to enable him to develop his industry, so as to compete in the world's markets, on the same basis the Canadian artisan must be secured against cheap immigrant labor, because adequate compensation for the workingman is a necessary factor in the healthy condition of the state. We took occasion, recently, in the course of a criticism of the sweating system, to give our views plainly concerning that.

Aside from the moral and industrial objections there are what we might term ethnic reasons why we must be careful. We do not want Canada's population to be composed of sharply defined bodies of races. They must fuse healthily into a nation or else we don't want them. We can never assimilate the Chinese into our social and political conditions. The Slav races are practically not to be considered now in dealing with the problem of Canadian immigration, but we don't know how soon they may have to be reckoned with. We don't want them. The experience of the United States teaches us that and we should run no risk of having immigrants of that class in this country.

The political corruption that exists in the United States is openly charged upon the ignorant and illiterate section of the community, among whom the "boss" system flourishes. Surely no one desires to see Canada filled with a population of men whose votes are to be wielded by the first party "boss" who secures control of them by no matter how corrupt methods.

These several points, upon which we must stand on guard, can be controlled only by regulation. Prohibition is too stringent a measure to direct against any country, but when we admit immigrants into Canada we owe it to ourselves, our fellow-men and our children, that they shall give evidence of their ability to at least not become a charge upon the community.

#### FROM THE LAKES TO THE SEA.

In the American Review of Reviews for November Carl Snyder has an interesting article dealing with the recently invented devices that have rendered possible a ship canal from Lake Erie to the Hudson River. Mr. Snyder tells how the Suez Canal cost \$100,000,000 to build, and traffic through it amounts to about 800,000 tons yearly. The Nicaragua Canal is estimated to cost \$50,000,000 and will not have the traffic of the Suez Canal. The American canal at Sault Ste. Marie carries about 18,000,000 tons yearly, and the entire commerce of the Great Lakes is estimated at thirty or forty millions tons per annum.

This traffic is equal to one-third of the traffic of the United States 200,000 miles of railway, which cost some \$10,000,000,000 or \$12,000,000,000 to construct. Mr. Snyder gives Canada credit for even more progressive spirit in canal construction than the United States. When the Erie Canal was begun the city of New York had but 120,000 population. The Erie Canal cost over \$7,000,000, and if the proposed ship canal cost even \$100,000,000 it would not be such a burden on New York State as the Erie Canal was. The writer magnanimously points out that Canada will benefit from the ship canal, and uses the Chicago Drainage Canal to prove the possibility of the project.

The wonderful special machinery devised for use on the Canal at Chicago have succeeded so tremendously that they will build the canal at far less than its estimated cost. Mr. Snyder puts up a strong argument for the construction of the ship canal, and it behooves Canada to look alive and secure deep water canals of her own, so that deep draught grain boats may carry their freight from the Northwest. Only 1,000,000 tons of the Great Lakes freight pass through the Welland Canal, and but one per cent. of this finds its way through the water route to the seaboard.

Mr. Snyder points out that to let the big freighters from Lake Erie into Lake Ontario would require eighteen locks, each as big as the "Soo" lock, which is 800 feet long and eighteen and a half feet lift. These locks would cost \$90,000,000. Mr. Snyder adds that the St. Lawrence canals would require from twenty to fifty locks, to say nothing of canals. He then describes a new pneumatic lock that will raise ships 180 or 200 feet, and goes on to speak of the various routes. He unhesitatingly adopts the Canadian St. Lawrence canal route, and with the greatest sang froid estimates that \$10,000,000 would refit our canals. The Canadian canal is to be used as far as Lake Francis, and from there a forty-mile cut is to be made into Lake Champlain.

The cut from Lake Champlain to the Hudson will be twenty-seven miles long, and the projectors are really generous enough to offer to build a canal from Lake St. Francis to Montreal that we may have some pretension to a deep waterway of our own. Just consider what it means. Enough water will be taken from the St. Lawrence River to turn the current of Lake Champlain and raise the Hudson at Waterford so that the largest craft may come up from the sea. The proposition to carry our freight down to New England via New York savors of the "nerve" which we have long since experienced from our American neighbors.

Canada would be very foolish to surrender anything of the control of the St. Lawrence canals. The United States proposes to handle our freight, and profit thereby. The Laurier

Government might be much worse occupied than in discussing the feasibility of a ship canal to Montreal from the Georgian Bay by way of the Ottawa River and connected lakes, and other water-ways. There seems little doubt that such a canal should be constructed at a cost that would be a mere bagatelle compared to the \$300,000,000 the Americans want to construct their proposed work. Unless more action is taken promptly in the matter we shall find the United States ahead of us. We cannot afford to lose the opportunity of carrying our own lake freight to the sea.

#### AN OLD-TIME IRISH PROTECTIONIST.

An entertaining correspondent of Mr. Swank's Bulletin, writing of two celebrated old-time cotemporaneous protectionists, Oliver Cromwell and Bishop Berkeley, gives liberal quotations from the writings and sayings of these men, and, comparing their character, says that the inflexible back-bone of Cromwell shows through more than two centuries of British shipping laws. A farmer, a soldier and a ruler, he was a man of action. Bishop Berkeley, who was an Irishman, and to whom Pope ascribed "every virtue under heaven," was a man of thought. No two men could have been more different than the fighting Puritan and the kindly Bishop. Cromwell might be called a modern Caesar. Berkeley was a Christian Plato. Cromwell was lacking in the graces of scholarship. Berkeley possessed them in larger measure than any man who ever wrote in English. Yet when Berkeley discussed plans for home industries he expressed himself as Cromwell might have done. People who look on Berkeley as a mere dreamer might well read his "Querist." Here are a few of his questions.

"Whether the creating of wants be not the likeliest way to produce industry in a people? And whether if our (Irish) peasants were accustomed to eat beef and wear shoes they would not be more industrious? Whether, if drunkenness be a necessary evil, men may not as well drink the growth of their own country? Whether he whose luxury consumeth foreign products, and whose industry produceth nothing domestic to exchange for them, is not so far forth injurious to his country? Whether these same manufactures which England imports from other countries may not be admitted from Ireland? And, if so, whether lace, carpets and tapes, try, three considerable articles of English importation, might not find encouragement in Ireland? Whether there be any art sooner learned than that of making carpets? And whether our women, with little time and pains, may not make more beautiful carpets than those imported from Turkey? And whether this branch of the woolen manufacture be not open to us? Whether it would not be more prudent to strike out and exert ourselves in permitted branches of trade than to fold our hands and repine that we are not allowed the woolen? Whether Ireland alone might not raise hemp sufficient for the British navy?"

Question after question, equally clear and suggestive, might be taken from Berkeley's pages. It is discouraging to think that many people, who have been misled by free trade writers, do not even know that Bishop Berkeley wrote on political economy. Defoe, who embarked in the wildest speculations of his day, whose bankruptcies numbered half a

score, whose disposition resembled that of his own Robinson Crusoe, who spent a large part of his time eluding the sheriff's officers, is accepted as a thoroughly practical man. Berkeley, who never visited any place without making it better for his presence, is often looked upon as a visionary. He was one of the most practical men that ever lived. If his thoughts soared beyond the clouds he was trying to bring down some blessing for man.

#### EDITORIAL NOTES.

Pleasant it must be to the judges of the United States Supreme Court to think that their important judgments are being revealed to certain speculators prior to the judgment being made public in court. Thirty thousand dollars is the subject of a law suit in which a clerk will try to realize the sum which he says was promised him as a bribe for giving the "tip" on a recent decision. A nice state of affairs, truly.

The telephone's latest use is to connect an ocean steamship as it lies at its moorings, with the shore. The ocean grey hounds of New York are all connected with the city's system of telephones while they are in harbor. Indeed, the slipping of their connection with the 'phone is one of the last acts in putting out, and the connection is always re-established as soon as the steamer is within reach of the system.

The theorists even are swinging into line for preferential trade. Mr. Shadwell sets forth the facts of the use in good shape. Preferential trade is in the near--the very near--future. Canada has plenty of space for millions more, and an Imperial Customs League would, undoubtedly, bring about an era of unprecedented prosperity.

The bread-eating population of the world is estimated at 510,000,000, and experts are trying to prove that the supply is insufficient; and cannot be increased to be sufficient.

The concentration of capital has done much to bring the producer of raw material and the consumer of the product into closer relations by decreasing the expense of the transfer.

Mr. Arthur Shadwell, writing on "The Canadian Enigma," in The National Review, declares that Canadian sentiment is not in the least in accord with the free-trade doctrines of Sir Wilfrid Laurier. He says:

What Canada wants to-day is discrimination in the English market against foreign produce, and, above all, against the United States. That would gratify sentiment and business at the same time. It would, undoubtedly, lead to a great expansion of the agricultural industry in the Dominion. Last year we imported ten times as much wheat from the United States as from Canada; she could grow it all, without any doubt. There is plenty of room, and Canadians believe that they could do it in a few years with a little encouragement. The effect of a slight preference in the English market, they say, would be to bring over hundreds of farmers in the Dakotas and other Northern States, who would become Canadian citizens, and settle in Manitoba and the Northwest. However this may be, it is easy to see why such a programme should have attractions for Canada. The sturdiest free-trader does not venture to deny its popularity; he takes his stand on the improbability of England consenting to a preferential

arrangement. Sir Wilfrid Laurier himself admitted in the Daily Chronicle interview that the temptation would be almost irresistible.

Montreal business men should have an eye to the Ship Channel. Mr. E. S. Bond, president of the Marine Underwriters' Association, has written a report on the channel, and from it the present system appears very clearly to be inefficient. They should insist on having more buoys and permanent steering marks.

Up in Gravenhurst the effects of the probable lumber regulations are already evident. A despatch from that place says that not one man could be found idle in the town by a contractor who wanted forty men.

It was said of the great Talleyrand that he could hold his tongue in seven languages. Similar proficiency in two would have kept Sir Laurier and Sir Davies from making themselves so ridiculous on the occasion of their recent trip to the Capital of the United States.

When you have read your copy of THE CANADIAN MANUFACTURER, turn it over to your assistants. Teach your employes to read, mark and observe. It is a good thing to train them to think and to form their opinions along those lines you yourself support.

Taylor Bros., the Toronto paper manufacturers, have received an order from Japan for 110 tons of paper. That is

a step in the right direction. May it be but the beginning of a big export trade for Canada with Japan, not only in this, but in many other lines.

The New York Sun reminds us of King Richard and his wild cry for a horse. The Sun is bound that the United States shall have a navy and keeps bravely banging away with editorial support of the expected request of Secretary Long for three new battleships and ten or twelve torpedo boats. The Sun should see to it that the specifications for the new ships will secure their sea-worthiness, and not leave them, as certain other craft, monuments of ignorance of naval architecture. It would pay the United States better to get some country, say Japan, to supply them with battleships ready made.

The total length of the world's telegraph system has now reached 1,908,823 miles, exclusive of 181,440 miles of submarine cables. This mileage is apportioned as follows: Europe, 1,764,790 miles; Asia, 310,685 miles; Africa, 99,419 miles; Australia, 217,479 miles; America, 2,516,548 miles.

It is interesting to note that America has such a relatively large distance covered by telegraph lines although they are increasing all the time in older countries.

Esau, we are told, sold his birthright for a mess of pottage. He committed this foolish act not to possess himself of a golden bauble, but that he might satisfy the cravings of a famishing stomach. The temptation to Esau was great—and he yielded to it—but from that day to this his memory has

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never been held in high esteem. We have never heard that Sir Wilfrid suffered from indigestion or dyspepsia while in England last summer and he certainly had plenty of opportunities of satisfying the cravings of his stomach for food. His craving was not for food, however, but for golden baubles—and he got them—to his heart's content. His Cobden Club medal, he will find, will be less valuable to him than an Esau mess of pottage. All of which shows that personal vanity will induce a man to commit a more foolish act than selling a birthright for a mess of pottage when starvation is the impelling cause.

When will the company that controls the water power on the Canadian side of the river at Niagara Falls be forced to display some energy in the development of their franchise. The session of the Ontario Legislature has already begun, and if a well-directed effort be made surely the Ontario Government can be made to put the matter in better shape. Unless something is very soon done there will be a regular Birmingham on the American side of the river, while the principal features of the Canadian side will continue to be the beauties of nature. Nature has done a great deal for Niagara Falls, Ont., even considering the benefit only from a pecuniary standpoint. But the residents of the town consider that they

may derive still more shekels of income from the use of the waterpower of the Falls without in any degree decreasing their value as a spectacular attraction. We cannot afford to be behind our competitors across the line, and every endeavor should be made to secure the immediate development of this immense factor in the industrial success of Ontario.

A press telegram from London says: "The Prince and Princess of Wales have announced their intention of paying several visits to London, in order to encourage the winter season. Tradesmen of the Metropolis succeeded in conveying a few respectful hints to His Royal Highness to that effect. There is no prospect of a visit from royalty to Canada this winter, but we are quite sure it would be a drawing card if Sir Laurier would show himself on the streets of Toronto bearing upon the wide expanse of his manly bosom that Cobden Club medal recently presented to him. By all means let us have a look at that medal."

It is proposed to construct a railway from Roberval—the Lake St. John terminus of the Quebec and Lake St. John Railway, to the mouth of Nottoway River, on James Bay. This would open up a section of Quebec's newly-acquired terri-

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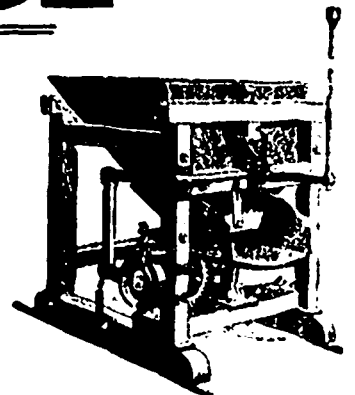
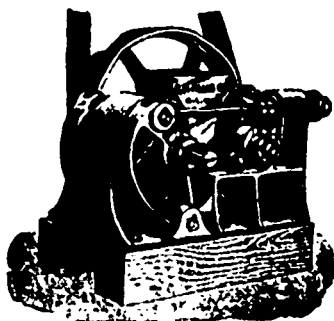
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**Directory to the Iron and Steel Works of the United States**. By James M. Swank. Price, \$6.00. This edition of the Directory is an invaluable book of reference for all business men who wish to correspond with Iron and Steel Manufacturers or with Iron and Steel Consumers, forming in every respect a complete guide to the Iron and Steel Works of the United States, and to the principal works which consume Iron and Steel. It is well arranged for ready reference to any establishment, as it contains an index to the names of firms and companies, and also to the names of works; also an index to brands of pig iron. The book will be sent by mail in a strong flat envelope. This book contains a list of the iron and steel works in Canada. No other edition of this work will be issued until March, 1898.

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tory—380 miles long, and containing 70,000 square miles. This country is a fine agricultural district and the people of Quebec are not, by any means, blind to the development that must ensue from the construction of the line. Will the ancient city of Quebec get a through line to James Bay, before Toronto gets her railway started to the north limit of Ontario?

The London Economist deals with the method of transporting grain from our great western territory to the seaboard. After relating many facts about the traffic, it remarks that although Canada has spent \$60,000,000 on her St. Lawrence canals, the bulk of the Manitoba wheat must go to Europe by way of Buffalo, because Canada's canals are not deep enough to admit the passage of the large grain carriers of the upper lakes. We must have some provision ere long to enable Canada to keep her grain carrying trade in her own hands. Not only is this desirable from the standpoint of Canadian commerce, but it is necessary because under existing conditions, the United States controls the supply of our grain to the bakeshops of Great Britain.

There is a demand for paper in Portugal. Why should not Canadian mills supply that demand? In the city of Oporto, Portugal, the following firms are engaged in the paper trade:—Eduardo Motto Ribeiro, rua do Duque de Loule; Jose Pinheiro da Silva et Cia, rua das Flores; Nunes Forrado et Cia, rua Santa Catherina. These firms are all open to do business in paper lines and a letter of inquiry as to grades, etc., from Canadian paper manufacturers may bring forth good results.

Thomas Carlyle says that "man is a tool-using animal. Weak in himself and of small stature, he stands on a basis, at most for the flattest soled of some half-square foot, insecurely enough. Feeblest of bipeds! The steer of the meadow tosses him aloft like a rag. Nevertheless he can use tools, can devise tools; with these the granite mountain melts into light dust before him; he kneads glowing iron as if it were soft paste. Nowhere do you find him without tools; without tools he is nothing, with tools he is all." The Scottish philosopher had a hard head, and the above quotation from his pen is a text for the soundest kind of a protectionist sermon.

Industrial statistics of Great Britain for the month of September show a startling falling off in the number of mills and men employed in the manufacture of tin plate. Out of 484 mills reported, only 273 were at work at the close of the month. For the same months in 1896 the mills that were running were 306.—The Age of Steel.

Another effect of a protective tariff, which has caused such a sudden impetus in the tin manufacturing industry of the United States.

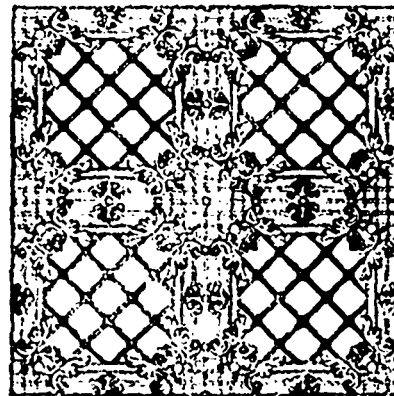
The Philadelphia Bulletin, the organ of the American Iron and Steel Association, feels very, very much put out because the Edinburgh Water Trust accepted an Old Country tender for 1,000 tons of cast-iron pipes at £5, 6s. per ton, when an American firm put in a bid at £4, 16s. per ton. The Bulletin thinks the Water Trust made a very lame excuse for rejecting the American bid when they claimed to be in too much of a

hurry to wait for the pipe to be shipped across the Atlantic. How the Bulletin would howl if a Philadelphia firm accepted the tender of a British contractor. It is awful to think of it.

At the fifth annual meeting of the Farmers' Binder Twine Company, Limited, held at Brantford, Ont., on November 10th, a resolution was presented by Mr. Wm. Turnbull, of Brant, seconded by Mr. J. W. Howell, of Wentworth, possibly two of the best agriculturists and strongest Reformers in the Dominion, censuring the action of the Dominion Government in placing the article binder twine on the free list, as they contend it was wholly inconsistent and uncalled for at this stage, as this, the Farmers' Company has been a medium or regulator in the farmers' hands in reducing binder twine to a minimum price, and that there was no object or occasion now to do anything that would militate against the working classes of this country by making Canada a dumping ground for low grade American twines, and that the Government's action had already been instrumental in closing down the majority of the Canadian binder twine mills, and if it were not for this company's myriad of loyal stockholders that gave them such distributing power, they too would be forced to succumb. The motion was put to the meeting and carried unanimously, with expressions of opinion from many representative farmers present that free trade applied to binder twine was a grievous mistake as against a legitimate manufacturing interest representing millions of dollars invested, and that if the act is consistent with one,

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then it must be applied to all manufactures in the near future if the interests of the great agriculturists are to be considered in the deal. A further demand was made by the farmers present that the Government must be asked to observe that in the manufacture of any binder twine by convict labor, the bales and tags be correctly marked, indicating where the twine is produced, whether the prison manufactory is absolutely controlled by the Government, or independent as now, in the hands of speculators.

South Australia is experiencing the familiar difficulty of protection, the reflex action against the industries on which the burden falls. An encouragement has been given to the sugar industry, and the proportionate discouragement has fallen on the fruit canning industry. This reflex action is as inevitable as the equality of action and reaction in dynamics. The recoil of a gun must be equal to the force of the discharged bullet, and the propulsion of a boat must be equal to the pressure of the oar against the water. A tariff on imported sugar has enabled the sugar manufacturers to collect an enhanced price from the canners. These men find the payment of the encouragement such a heavy addition to their ordinary expenses that they are not able to make a profit in competition with canners not subjected to that condition. Were it not that the canners are doing an export trade the matter could be adjusted, so far as they are concerned, by a tariff which would again shift the burden to other shoulders. It is generally the exporter who finally bears or is crushed out by the burden of protection. The more widely the load is distributed the less obvious it becomes. —The Globe.

What about Germany? The gun theory would apparently make shooting a dangerous pastime, as the butt of a gun

would be as fatal as the muzzle. As for the boat—it progresses, and the water remains at the same level as before. Really, The Globe should be a little less childish.

LITERARY NOTES.

The Christmas Ladies' Home Journal opens with a page of pictures of beautiful children, selected from thousands of portraits. The children's holiday greeting is a pleasing introduction to the excellent articles pertaining to the great festal season. One of these interestingly describes Christmas in the Palace at Potsdam, telling how the German Emperor and Empress and the Royal children celebrate the day. There are also two short Christmas stories. The only correct and authorized version of "The Lost Chord" ever published in the United States appears with an autograph note by its famous composer, Sir Arthur Sullivan. Mrs. Rorer, in addition to her cooking lesson, has an instructive article on candy-making, and another on how to set the Christmas dinner-table, and cook and serve the dinner. The Curtis Publishing Company, Philadelphia. One dollar per year.

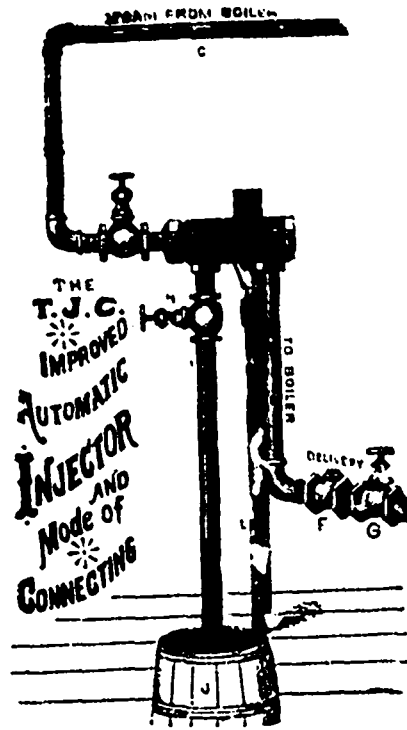
Good fiction and abundant and novel illustrations are the features of the Christmas number of Scribner's Magazine. A. B. Frost strikes the note in the frontispiece, which depicts the famous Christmas scene from Pickwick—"The Slide." Henry van Dyke in "A Christmas Loss" tells a tale of Antioch, fifteen hundred years ago. In "The Feet of the Young Men," Rudyard Kipling has put into stirring verse the hunger of young men for the wilderness when the old spring fret comes o'er you, and the Red Gods call for you. Another Southern story, dealing with the "point of honor" as to when a man is justified in shooting his enemy, is told by Sarah Barnwell, and illustrated by Walter Appleton Clark.

In the December number of the Methodist Magazine and Review is published their programme for 1898, which is an unusually attractive one. The reviews of high class literature—a special feature—will be continued. The subjects announced under the head of illustrated articles are of great variety and interest to all classes of readers, the subjects covering matters from all quarters of the globe. Under social and religious topics appears the name

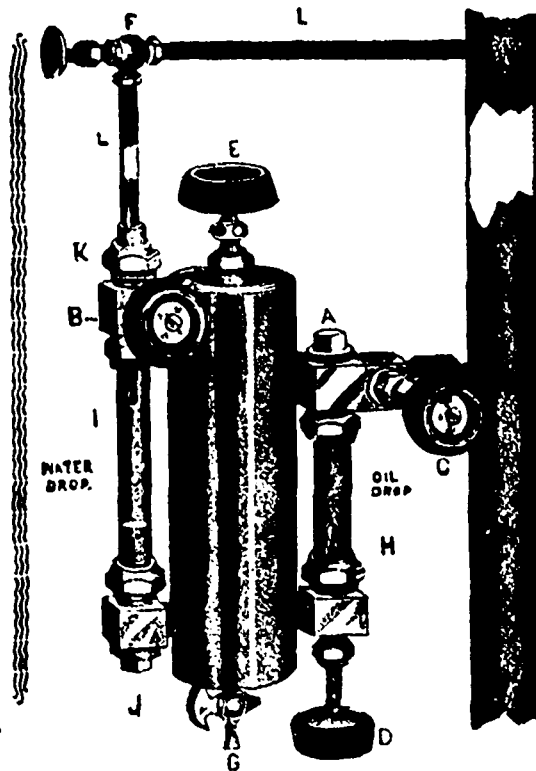
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of Rev. Principal Grant on the subject, "The Relations of Canada to the Empire," and Ian MacLaren on the subject, "Christian Telepathy." Besides the names of these two well-known authors appear the names of several Canadian writers on subjects that will have special interest for Canadians during the coming year. Other topics are character studies and sketches; serial and short stories; missionary articles; scientific papers, etc., all of which go to make up one of the most interesting programmes ever promised by this progressive magazine. Toronto: Wm. Briggs.

#### A MODERN ELECTRIC KITCHEN.

In the Duane street station of the Edison Electric Illuminating Company, of New York, has been arranged a complete electrical kitchen, which is presided over by a skilled chef, who serves electrically cooked luncheons for the officials and heads of departments of the company. It is done by the Edison Company largely with the view of illustrating the practicability of the electric system of cooking.

The electric ovens are brought to the desired heat in a very short time, and a uniform degree of temperature is easily maintained, so that the cooking process requires less time than by the ordinary heat direct from coal. For boiling vegetables, sauces, etc., special stew-pans and pots are utilized which are attached by means of a plug to the circuits and are operated independently, so that as varied a menu as may be desired can be prepared by merely attaching boilers and kettles to the service circuits. The kitchen is fitted with stone slabs for the cook's work, a white-tiled sink with hot and cold water, and in the corner, standing close against the largest piece of cooking apparatus, the electric

ovens, is the refrigerator, the radiation of heat being so slight as not to effect the ice in close proximity. "This beats my old coal kitchen, for I have no ashes nor dirt, and when the heat is wanted it is there."

"It cooks in two-thirds the time that would be needed in an ordinary stove," said the chef. "I can bake a loaf of bread in sixteen minutes, a pie in nine minutes and biscuits in four minutes;" and, he added, "your fire won't die down so that you must put fresh coal on, which deadens for a spell and then gives too much heat."

The apparatus used is that manufactured by the American Electric Heating Corporation, of Boston, who have done so much to advance the art of cooking by electricity.

One of the officials of the Edison Company said that current for electrical cooking at consumers' rates costs slightly more than fuel for cook stoves, but the economy was in the fact that work is done in less time with the current, and the heat is generated only when desired for service, ceasing the instant it is turned off, but that it had great advantages in cleanliness and ease of management, which would soon bring it into more common use.

#### ALUMINUM SHEETS CHEAPER THAN BRASS.

Sheet aluminum is now cheaper than sheet brass for sheets of equal size and equal thickness. According to a circular just issued, the price of aluminum sheets in widths from six to fourteen inches, and No. 19 or any heavier gauge, is thirty-eight cents per pound, with discounts of ten and five per cent. on quantities of 4,000 pounds and over, making the net price 32.40 cents per pound. The base price of sheet brass is twenty-two cents per pound, with a

## MACHINERY and EQUIPMENT

FOR

# Mines

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MANUFACTURED BY

**Canadian Rand Drill Co.,  
MONTREAL.**

### FIRE PROTECTION.

INDICATOR VALVES. CHECK VALVES.  
INDICATOR POSTS.  
FIRE HYDRANTS. CAST IRON PIPE.

For the modern equipment of your Mill with Automatic "Sprinkling System," write us.

We manufacture a full line of these goods.

**ST. LAWRENCE FOUNDRY CO.**  
OF TORONTO (Limited),  
TORONTO, - CANADA.

## Sulphur

ROCK  
ROLL  
FLOUR  
GROUND

English Recovered

- Sicilian -

Etc,

The Anglo-Sicilian Sulphur Co.,  
Limited.

**Arthur P. Tippet & Co.,**

CANADIAN AGENTS,

30 St. Francis-Xavier Street,  
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### BICYCLE CHAINS

—MADE WITH—

**HARD PINS AND HARD BLOCKS**

Write for Samples and Prices

Manufactured by ....

**McKINNON DASH AND HARDWARE CO.**  
ST. CATHARINES, ONT.

discount, making the net price 12.1 cents per pound. Special discounts on large lots reduce this to 11.338 cents per pound. Sheet brass is 3.19 times as heavy as aluminum, so that bulk for bulk, or square foot for square foot of sheet of the same thickness, the price of brass as compared with aluminum would be  $11.338 \times 3.19$  or 36.169 cents, to 32.49 cents for aluminum. The same circular quotes aluminum in ingots, guaranteed to be over ninety nine per cent. pure, in ton lots at thirty-four cents per pound, and nickel aluminum casting metal, which is pure aluminum alloyed with less than ten per cent. of nickel and other ingredients, thirty three cents per pound. A special casting alloy containing over eighty per cent. aluminum, used in place of brass, is quoted twenty seven cents per pound. These reductions in the price of aluminum are likely to increase its use in the manufacture of articles for which sheet brass has been heretofore employed. --Iron Trade Review

**BRIGHT OUTLOOK FOR THE STEEL CAR.**

The 600 steel cars of 100,000 lbs. capacity built, or to be built, by the Schoon Pressed Steel Co., for the Pittsburg, Bessemer & Lake Erie Railroad, the fifty steel cars ordered by the Pittsburg & Lake Erie Road, and the plans of the Pennsylvania Co., to build cars to carry 110,000 lbs. of coal or ore, indicate that the era of larger loads, of lower percentages of dead weight and consequently of lower costs in the transportation of heavy freight, is at hand. The Railroad Gazette, in writing of "The Coming of the Steel Car," says:

"Naturally the present development of very capacious cars is in steel, because, for several reasons, steel cars can be made lighter than wooden cars of the same capacity, particularly when that capacity is great. More paying load can be hauled in a train of the same gross weight. Very capacious steel cars can be built for approximately the same cost per ton of carrying capacity as wooden cars. To handle a given amount of traffic fewer cars would be required, and, for a given load, the train would be shorter. In these two facts are practical advantages which all railroad men will recognize. Less track and yard room would be required, fewer men to handle and care for the rolling stock, and other advantages, of short as compared with long trains on the road, are sufficiently obvious. Furthermore, the metal cars would be safer from destruction by fire. Beyond this it is probably true

that steel cars can be so built as to reduce very greatly the maintenance account and increase in equal degree the life of the rolling stock even up to a life of fifty years under normal conditions.

"A little analysis of comparative train weights shows some significant facts. If we assume a train of thirty steel cars with a capacity of 100,000 lbs. each, it will carry 1,500 tons of paying freight, and the dead weight of the cars will be 510 tons, or a total of 2,010 tons. A train of the same gross weight, of the best standard 60,000-lb. capacity cars, would be made up of two thirds paying load and one-third weight of cars; that is, the cars hauled would weigh 703 tons, or 193 tons more than the car weight in the steel-car train. This item alone is more than the average train-load of paying freight, counting all train mileage, on many respectable railroads. The average, for instance, on seven important representative roads from the latest official figures is 257 tons, which is considerably higher than the average of the roads of the country.

In his example the saving in train length would be more than 500 feet, which is a very important consideration from the operating standpoint. The saving in weight only indicates a part of the saving in the cost of hauling. Increasing the number of cars in the train adds to journal friction and rolling friction and to all wearing and breakable parts. It increases the resistance on tangents and to a still greater degree on curves.

"Considering these facts, there is ample reason why those railroads which are blessed with a heavy and steady tonnage should be looking seriously into this matter of greatly increasing the carrying capacity of cars by the use of steel."

**Dominion Oil Cloth Co.,**

Manufacturers of...

**OIL-CLOTHS OF EVERY DESCRIPTION**

Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth, Enamelled Oil-Cloth, Stair Oil-Cloth, etc., etc.

Office and Works

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

**The Packard Electric Co., Limited.**

MAKERS OF

**Lamps and Transformers**

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

**CLEVELAND WIRE SPRING CO.,**  
CLEVELAND, OHIO, U.S.

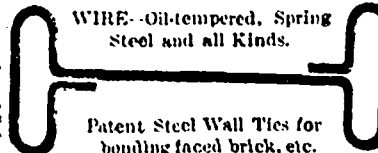
TEMPERED STEEL MACHINE SPRINGS.



Tempered Steel Machine Springs A Specialty.

SPECIAL SPRINGS of all description to order, and for Upholstery, Furniture, Beds, Chairs, etc. Close prices upon application.

WIRE--Oil-tempered, Spring Steel and all Kinds.



Patent Steel Wall Ties for bonding faced brick, etc.

**.. STEEL..**

**LA BELLE STEEL CO.**

PITTSBURG, PA.

Manufacturers of STEEL  
PLOW SHAPES, HARROW DISKS,  
CULTIVATOR PLATES, and  
AGRICULTURAL STEEL of all Kinds.

FINE TOOL STEEL

- FOR -

DIES, DRILLS, TAPS,  
BICYCLE CONES,  
PUNCHES, MAGNETS, Etc.

And for all purposes where requirements are exacting.

For Prices, Etc., Address,

**W. G. BLYTH,**

Agent for Canada.

29 Melinda St., - Toronto, Ont.

**The DRIER the STEAM the GREATER the POWER.**

"Eureka"



**OUR SECTIONAL PIPE AND BOILER COVERING**

Almost Entirely Prevents Condensation of Steam when Passing Through the Pipes

**EUREKA MINERAL WOOL & ASBESTOS CO.**

114 BAY STREET, TORONTO.

ASBESTOS GOODS.

MINERAL WOOL.

ENGINE PACKING.

The Perth Water Works Company, Limited, Perth, Ont., which is installing the water works system for that town, will use electric power for pumping. Their pump house is located within the limits of the town, but the power which they intend using is about four miles away, on the Tay River. Here they are installing a water wheel and a 200 h.p. generator which will, in addition to supplying the power for pumping purposes, furnish light and power for the town. The Water Works Company has bought out the old Tay Electric Company, and will distribute light and power on their old circuits. The electrical machinery is being installed by the Royal Electric Company, who will use their "S.K.C." two-phase system for this work. The pumping is to be done by means of a seventy-five h.p. motor, belted directly to a triplex, double-acting power pump which pumps directly into the mains, no gravity system, or stand pipe being employed.

The sand of the beach of Lake Michigan a little north of Waukegan, Ill. has been discovered to contain considerable iron, and a company has been formed in Chicago for the purpose of separating the iron from the sand and making it into iron and steel. The company has been incorporated under the name of the United States Malleable Iron & Steel Co., with a capital stock of \$100,000, by Henry H. Blake, Frank J. Kilcrane and Manuel Friedlander. The office at present is at 210 Chicago Opera House Block. The promoters of the company have leased five miles of the lake front along the shore north of Waukegan, the property extending one-half mile or more into the

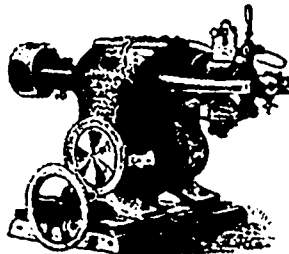
country. The sand has been analyzed and is found to contain an average of ten per cent. of iron ore, which runs about sixty-six per cent. in metallic iron. The ore is secured from the sand by magnetic separators and an experimental plant has been erected on the beach. These separators will each of them extract forty-two tons of ore from the sand per hour and the capacity of the plant will be limited only by the number of separators which are erected. The land is owned by a syndicate of Chicago and eastern capitalists. It is expected that the company will be prepared in a very short time for business. It is proposed to erect a plant for the manufacture of iron and steel, and a process employed to manufacture products direct from the ore. Some small samples of iron and steel made from the ore have been tested and show a very excellent quality.

Recently a gentleman who is fond of arithmetic made up his mind that he would find out how much a dinner really cost. This gentleman asked how much a simple dinner that he was eating cost, and he was told seventy-five cents. He contradicted this, and then made out the following statement about the cost of that dinner: The pepper, he said, came from ten thousand miles away. It grew on a little bush about eight feet high, which must have had a growth of at least five years. The pepper was picked green; it had to be dried in the sun, and this meant employing women. It took one ship and a thousand miles of railroad so bring the pepper to Canada. The tea on the table came from China, and the coffee from South America. The cod-fish had to be brought from Newfoundland.

Men had to be employed to catch the fish, other men and women were employed in drying, packing, and boxing it, and it, too, had to make a long railroad journey. The flour of which the bread was made, was grown in Manitoba; some one owned the land, and that meant the investment of capital; and then he had also to pay wages to workmen. The flour had to be ground, and the building of the mill and the plant, or machinery, meant more money invested. The millers had to be paid; coopers had to be hired for making the barrels; and, of course, the wood of which the barrels were made had to be cut and sawed and shaped, and this meant the employing of some more men. Then the flour had to be shipped over the railroad and handled again by cartmen. Before it came into the house the salt came from Windsor. The canned peaches came from Niagara, and they, too, represented the employment of capital and labor. The spices in the cake came from Spice Islands in the Indian Archipelago.

Admiral Makarof of the Russian navy has invented a species of ice-plow capable of breaking through ice from twelve to even twenty inches thick. The experiments have proved so satisfactory that the government has given orders for the immediate construction of two vessels of 10,000 h.p. each, armed with these plows, by means of which it is expected to keep not only the river Neva, but also the various Muscovite ports open to navigation throughout the winter. The majority of Russia's ports and naval arsenals are ice-bound during more than four months of the year.

**ELECTRIC BARGAINS.**



ONE EDISON MOTOR,  
ONE BALL MOTOR,  
TWO DYNAMOS.

Above almost new.

We install complete plants at lowest possible figure. Write us to force buying.

Motors, Dynamos and Platers  
Manufactured in all sizes.

THE JONES & MOORE ELECTRIC CO.  
22 Adelaide Street West,  
TORONTO.

**VALVES AND PIPE . . . FITTINGS**

WRITE FOR LATEST PRICES

**RICE LEWIS & SON, Limited**

Corner King and Victoria Streets

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**ATLAS METAL**

Speak louder than words, and

ATLAS does not rely on empty talk for its UNSURPASSED REPUTATION.

It Has Been Undeniedly Proved that ATLAS METAL is Superior to all and has stood under Enormous Pressures and Phenomenal Speed

TRADE MARK.

TRY ATLAS METAL. WHERE ALL OTHERS HAVE FAILED.

**WE CHALLENGE A TEST**

Against any Anti-Friction Metal on the Market.

THE ATLAS METAL CO., Limited  
75 Queen Victoria St., London, Eng.

H. G. McLAREN, General Agent for Canada,  
318 ST. PAUL ST., MONTREAL, QUE.

**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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BOSTON - Exchange Bldg. CHICAGO - New York Life Bldg. ST. LOUIS - American Central Bldg. TAMPA, WASH. - 102 South 10th St.  
BUFFALO - No. 1130 Guaranty Bldg. PHILADELPHIA - Gear Bldg. SAN FRANCISCO - Mill Bldg. ATLANTA, GA. - Equitable Bldg.  
WESTINGHOUSE ELECTRIC COMPANY, Ltd., 32 Victoria Street, LONDON, S.W., ENGLAND.

For CANADA address - - - - - AHEARN & SOPER, - - - - - OTTAWA, CANADA.

# CAPTAINS OF INDUSTRY.

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

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

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

There is quite a boom in the boiler making trade at present, and mostly all of these mechanics are engaged. There is much work being done in Angel's shops, and a new boiler is being made for the Dock pumping house. Angel's firm are also putting new hot water heating apparatus in St. Patrick's Convent, the improved "Buffalo" water heater being used. They are also doing a similar service for George St. Methodist Church.—St. John's (Nfld.) Herald.

Mr. R. P. Slaton, President of the Board of Trade, Niagara Falls, Ont., has written the Mayor and Council of Toronto as follows:—

"We notice your city are investigating different schemes for developing power.

We wish to call your attention to the fact that we have within the distance of 4,500 feet north of the Cutler Bridge, on Niagara River, forty eight to forty nine feet of fall, with unlimited water. We have an approximate estimate from a hydraulic expert, that, by conveying the water through a 20-ft. tube or pipe, that ten to twelve thousand horse power can be developed; and this amount of power can be increased to 50,000 or even 100,000 horse power by increasing the size of the pipe, or laying additional pipes of the same size. This power in no way interferes with the contract made by the Government and Park Commissioners with the Canadian Niagara Power Company. The Park Commissioners have

fully investigated this matter and have plans on file in their office here. Should you consider this question, we should be glad to give your committee and engineer every assistance to investigate the project."

The outlook for cheaper coal and coke in the East and West Kootenay districts is very promising; the reports from the West are that work has been proceeded with so actively on the Crow's Nest Pass Railway that it has been graded to within twenty miles of Moyie Lake. Simultaneously the Crow's Nest Pass Syndicate are actively engaged in prospecting work with diamond drill outfit which they ordered through the James Cooper Manufacturing Co., Montreal, and they expect before the completion of the Railway to have opened their property to such an extent as to supply trade.

The Goldie and McCulloch Company, Galt, Ont., are filling orders for a 350 horse-power engine for the Rosamond Woolen Co. Almonte, Ont., and a 50 horse power engine for the Winnipeg Hospital. They have also an order from Haaper & Co., Dundas, Ont., to re-model all their milling machinery.

Messrs John McDougall & Co. are rebuilding their iron blast furnace at Drummond, Que., and preparing to melt iron on a larger scale than ever.

The Twentieth Century Churn Company, Toronto, has been incorporated with a capital stock of \$1,000, to manufacture churns, washing machines, etc.

The Ontario Lithographic Stone and Mining Company, Peterborough, Ont., has been incorporated, with a capital stock of \$250,000, to do a general mining business.

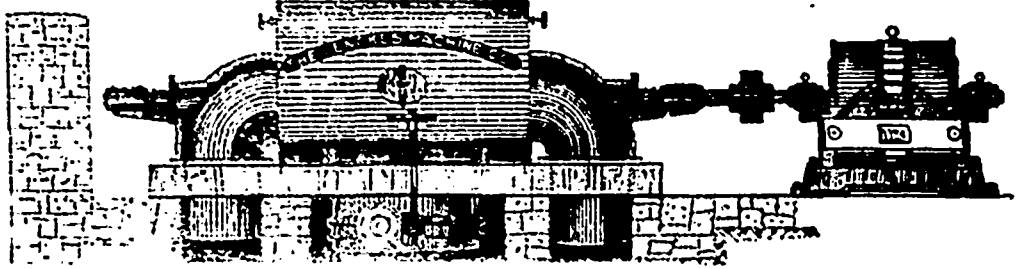
# Electrical Supplies, Incandescent Lamps.

HEAVY AND COMPLETE STOCKS.  
BEST VALUES. PROMPT SHIPMENT.

JOHN FORMAN, - 644 Craig St., MONTREAL.  
SEND FOR CATALOGUE.

# THE CROCKER TURBINE.

The cut shows the direct connection of two 20 inch.  
**Crocker TURBINES**  
Under 50 feet head to  
**ELECTRICAL GENERATOR**  
At Power Station of North Shore  
Power Co., at St. Narcisse,  
Quebec.  
Two sets were furnished for lighting  
and power for City of Three Rivers.  
17 Miles Distant from  
Power Station



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

**COMPLETE WATER POWER PLANTS  
BUILT AND INSTALLED.**

Address for Catalogue and full information -28 LANSDOWNE STREET

The Gill Soap Company, Tilsburg, Ont., has been incorporated with a capital stock of \$3,000.

The corporation of Fort William, Ont., is about to erect as complete an electric lighting plant as, perhaps, is in use in any town in Canada. They are installing one 60 light 2,000 c.p. arc dynamo, with thirty-five double or all night lamps for lighting the streets of the town and the C.P. Ry. yards, and for the incandescent service are installing an S.K.C. alternating current dynamo with a capacity of 1,000 lights with Stanley transformers throughout. The corporation expect to be in a position to furnish light by the 1st of January. The entire electrical equipment has been bought from The Royal Electric Co., and the engines and boilers from The Robb Engineering Co., of Amherst, N.S.

The Jones and Moore Electric Company, Toronto, have recently sold motors to the following Toronto firms: - S. R. Hughes & Co., Excelsior Manufacturing Co., St. Lawrence Foundry Co., W. and D. Dineen, J. O'Connor, Crawford & Co., W. Harris & Co., The Evening Telegram, George H. Hees & Co., Jas. Ford, W. White & Co., Toronto Show Case Co., and have sold lighting plants to Jas. Fair & Co., Clinton, Ont., and the Reeves Pulley Co., Toronto.

J. Richardson & Son's elevator at Kingston, Ont., was destroyed by fire a few days ago. Loss \$75,000.

The St. Lawrence Anchor Fence Company, Montreal, is being incorporated with a capital stock of \$20,000.

The St. Jerome Power and Electric Light Co., have had such success in canvassing for lights that they have changed their order from 1,000 light S.K.C. machine to one of 1,500 lights capacity.

The Fern Mine, Hall Siding, in the Rossland district, B.C., are lighting up the mill and yards, as well as the tunnel of the mine, by electricity, and have placed the order for machinery and apparatus with The Royal Electric Co.

We have to thank Messrs. Sadler & Haworth, manufacturers of oak leather belting, Toronto and Montreal, for a handsome pen wiper. This is one of the neatest advertising novelties that has come to our office.

The new gold district in Calumet Island, Ontario, is coming to the front. There has been some preliminary work done, and on the Calumet property it has opened up showings so promising that the company have placed an order with the James Cooper Manufacturing Co., Montreal, for a complete drilling, hoisting and pumping plant.

The Windsor Electric Light and Power Co., of Windsor, N. S., whose plant was destroyed by the late fire, have immediately started to rebuild the same, and have given an order to the Royal Electric Co. for apparatus and transformers, etc., consisting of S. K. C. alternators and Stanley transformers. The ashes of the old station had hardly grown cold before the order for the new apparatus was placed.

Fred Bellocance's sawmill, at Sayabec, Que., was destroyed by fire a few days ago.

Joseph Saulnier, manufacturer of hats, Truro, N.S., has removed his works to St. Johns, Que.

# 6 OPTIONS - 6 . . . .

Granted to the holder of the 20-year DISTRIBUTION POLICY of the **Manufacturers' Life**

IF HE SURVIVES THE PERIOD HE MAY

- (a) Surrender his policy and receive (1) Cash, (2) Paid-up Insurance (3) Annuity; or,
- (b) Retain his policy and take his profits as (4) Cash, (5) Bonus addition, (6) Annuity.

If he dies during the term his beneficiaries receive the face value of the policy. These options, together with the liberal benefits guaranteed in the policy, render this plan one of the most attractive ever offered.

**HEAD OFFICE, - TORONTO.**

GEORGE GOODERHAM, President.

J. F. JUNKIN, General Manager.

GEO. A. STERLING, Secretary.

Agents Wanted in Unrepresented Localities.

## Railway Spikes.

Pressed Spikes

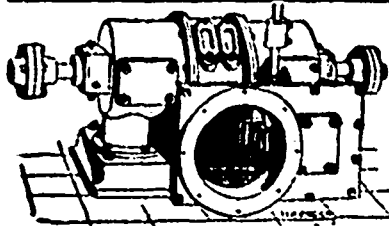
Washers.

Rhode Island Horse Shoes

Cut Nails

Bar Iron and Steel

## ABBOTT & CO., - MONTREAL



Horizontal Type.

**"LITTLE GIANT" TURBINE**  
... FOR ALL PURPOSES ...

HORIZONTAL AND VERTICAL  
BUILT IN 44 SIZES.

We guarantee a higher percentage of power from water used than any other wheel on the market.

Water Wheel Governors, Machine Dressed Gearing, Pulleys, Shafting and Bearings.

Catalogue and Gear List mailed on application.

Correspondence Solicited.

## J. C. WILSON & CO., - GLENORA, ONT.

### J. A. CULVERWELL,

LOCAL MANAGER

TORONTO & CENTRAL ONTARIO

London & Lancashire Life Assurance Co.

12 ADELAIDE STREET EAST,

TORONTO.

### AULD MUCILAGE CO.

Manufacturers of the Celebrated

Premium Mucilage, Lithogram Composition, Lithograms Ready for Use.

Printers' Premium Roller Composition.

Write us for Quotations.

750 CRAIC STREET, - MONTREAL, P.Q.

### Leitch & Turnbull

Canada Elevator Works,

Queen and Peter Streets, Hamilton, Ont.

Patent Safety Hydraulic Hand and Telephone Connection.

### POWER ELEVATORS

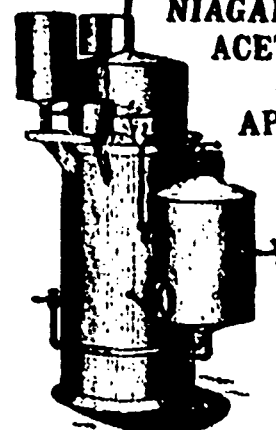
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YOU WANT THEM. WE MAKE THEM

WRITE FOR PRICES

**BANNERMAN & FINDLATER,**  
Boiler Makers, OTTAWA, ONT.

### THE NIAGARA FALLS ACETYLENE GAS APPARATUS



Patented in Canada, United States and Great Britain

This is the only machine perfectly automatic in its action, requiring little or no attention. Machines made in 10 sizes, costing \$15 and upwards.

### Acetylene Gas the Coming Light.

CHEAPER THAN ELECTRIC LIGHT

COAL GAS OR COAL OIL

For Private Dwellings, Business Houses

Churches, Public Halls and Offices.

For particulars write to the

**NIAGARA FALLS ACETYLENE GAS MACHINE CO.**

NIAGARA FALLS, ONT. LIMITED.

Subscribe for **The Canadian Manufacturer**

The Niagara Falls Laundry Company's works, Niagara Falls, Ont., were burned a few days ago. Loss about \$1,000.

We have received from Messrs. Wm. J. Matheson & Co., 184 Front street, New York, handsome samples of Formyl Violet on wool and unions, anthracene acid brown N and dyeings on unions with mercerized cotton, the latter showing some handsome shot effects.

S. B. Wilson & Son's sawmill at Louise, Ont., was destroyed by fire a few days ago.

Mr. A. J. H. Eckardt, of Toronto, has decided to erect at once a progressive lumber dry kiln. He has given the order for fans and heaters, and small engine for same, to the McKechren Heating and Ventilating Co., of Galt, Ont.

The Kingsville, Ont., Electric Light & Power Co. have placed an order with the Royal Electric Co. for a 50 light 6 1/2 amp. arc machine, with lamps for lighting the streets of that town.

Messrs. Dearborn & Co., of St. John, N.B., have purchased the five-story brick building on Water street in that city formerly owned by the People's Bank, and will remove their spice grinding plant to the same about the first of the new year. It is the firm's intention to add a considerable amount of new machinery, and when this is done they will have an establishment second to none in the maritime provinces. - Maritime Merchant.

The Vulcan Iron Company, Winnipeg, Man., has sold out to John McKeelnie.

The New Gold Fields of British Columbia propose to actively take up the development of their several properties in the Kootenay district, and are at present devoting most of their energies to the opening of their Velvet mine, in which they have several very promising showings. They have their new hoisting engine plant installed, which was supplied by the James Cooper Manufacturing Co., Montreal, through their British Columbia agent, Mr. James D. Sword.

The Canadian Cotton Mills of Milltown, N.B., have closed a contract with the Royal Electric Co. for one of their 30 K.W., S.K.C., two phase dynamos, wound to deliver 110 volts to the service mains. Within the last eight weeks this is the third large manufacturing establishment to install these machines of the Royal Electric Co. in preference to direct current, the Pennan Manufacturing Co., of Paris, and the Cook shutt Plow Co., of Brantford, being the others.

The sight of Burr Bros. factory being lit up at night till eight o'clock, working overtime, is good. The Raymond Co. started this week on full time, an experience the workmen have not had for years, while Bells, Armstrong's, Golden's, Woodyatt's and the woolen mills are all running full time. - Guelph Mercury.

Negotiations have for some time been under way between the City Council of Hamilton, Ont., and the Heinz Pickle Co. of Pittsburgh, Pa., with the view to have that company establish a branch factory at Hamilton, and a resolution was passed by the City Council a few days ago granting the privileges asked by the company.

Mr. Elias Rogers, coal dealer, Toronto, will build an engine and boiler house and will generate his own electric power for operating his unloading appliances.

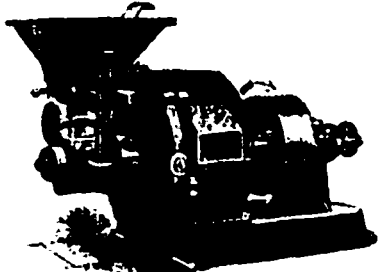
The felt factory in connection with the Government Indian school at Fort Qu'Appelle, Assn., was destroyed by fire a few days ago. Loss about \$5,000.

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Member Can. Soc. C.E.  
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**CONSULTING and  
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CRUSHERS AND MILLSTONES.  
FRENCH BUHR AND ESOPUS STONES. *Send for Circular.* **STURTEVANT MILL CO.**  
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**GENUINE**   
**ENGLISH OAK  
TANNED BELTING**  
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**Wool Buyers' on Commission.**  
Letters of Credit must accompany Orders.  
BANKERS: Bank of Australasia, Sydney.  
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**A GOLDEN OPPORTUNITY!**  
Are you desirous of purchasing  
**ARC LIGHTING MACHINERY, LEATHER BELTING,  
WATER WHEELS, or SHAFTING?**  
If so, you cannot afford to miss this opportunity. Owing to extensions necessitated at our generating station we are obliged to discard the above-mentioned material. Communicate with us at once for all information and particulars.  
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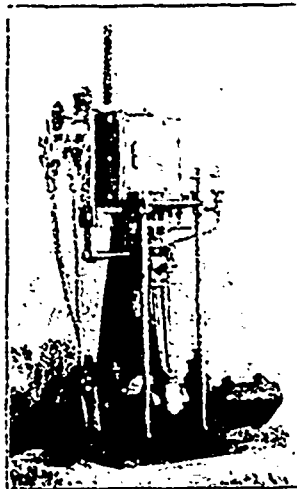
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**Galvanized Steel Pails**

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 NO HOOPS TO FALL OFF.

PRICES ON APPLICATION.

Another Montreal industry wants to move to Cornwall. At a special meeting of the town council recently Mr. Major, of the firm of Major Bros. & Co., manufacturers of tar-felt, strawboard, etc., was present, and stated that this firm would like to move to some place where they could better expand their business. If sufficient inducements were held out they might come to Cornwall and build a mill for the making of their wares from the raw material. This mill would employ forty or fifty hands. They would like a site of ten acres of ground. A bonus and water power were also mentioned. A committee was appointed to confer with Mr. Major as to site, terms, etc. - Kingston News.

The plant of the Rivington Cutlery Company, Montreal, was slightly damaged by fire a few days ago.

The Royal Electric Company are shipping the Hamilton, Ont., Electric Light and Power Company, one of their single phase 2,000 light alternators with station apparatus, etc. This became necessary owing to the large increase in incandescent lighting, and speaks well for the new manager.

The Kettle River Dressed Beef and Provision Company, Greenwood, B.C., has been incorporated with a capital stock of \$50,000.

The Packard Electric Company, St. Catharines, Ont., have put in an improved sand blast frosting machine which will enable them to produce frosted lamps of any style or pattern desired.

The Goldie & McCulloch Company, Galt, Ont., recently shipped a large boiler to the Ontario Rolling Mills, Hamilton, Ont.

Cloward & Gibbons' laundry, at Nelson, B.C., was destroyed a few days ago. Loss about \$2,500.

The Manufacturers' and Merchants' Cycle Company of Toronto, has been incorporated with a capital stock of \$24,000, to manufacture bicycles.

The marble industry promises to be an important one in Cape Breton. Over fifty vessels have loaded marble or lime at Marble Mountain during the last four months. The company operating at this place are doing a large and increasing business, and has made it a permanent success. Besides giving employment to a large number of laborers, the company purchases material to make thousands of barrels annually from the farmers. - Maritime Merchant.

The sash, door and blind factory at St. Cunegonde, Que., occupied by H. Fauteux, was destroyed by fire a few days ago. Loss about \$25,000.

The Victoria Wheel Works, Galt, Ont., are now lighted by electricity, a new plant consisting of twenty incandescent lamps and ten arc lamps having recently been installed for the purpose.

Walter Frederick Taylor, Norman William Telfer and Lorenzo Henry Telfer have commenced business as dealers in electrical supplies, etc., in Montreal, under the style of Taylor, Telfer & Co.

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

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

These Grates, 16 x 26 inches, are supplied by

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

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

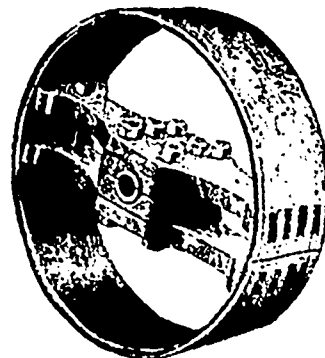
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3 in. to 60 in. diameter.

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Special Castings and all kinds of **FLEXIBLE AND FLANGE PIPE.**  
**WATER WORKS SUPPLIES HAMILTON, ONT.**



**BENT WOOD SPLIT PULLEYS.**

(REID'S PATENT).

The Strongest, Lightest and Best Belt Surface in the World

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

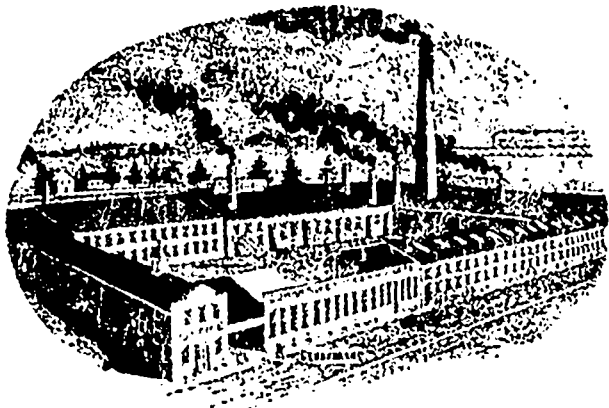
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Manufacturers of

## Woodworking Machinery

Curtiss, Slide Valve Engines, Boilers, Heaters and Saw Mills.

Old Wood Tools, Engines and Boilers, taken as part pay on new.

We have on hand a number of

The Corporation of the City of Lachine are installing in their power house one of the Royal Electric Co's 2,000 light alternators.

The Steamship Arbela Company, Rouses Point, N. B., is being incorporated with a capital stock of \$160,000, to build a steamship to be known as the Arbela.

The Kettle River Dressed Beef Company, Greenwood, B.C., has been incorporated with a capital stock of \$50,000

Messrs. Moodie & Son, of Terrebonne, Que., have completed their new factory, and are lighting the same throughout with electricity. The order for the electrical apparatus has been placed with the Royal Electric Company, Montreal.

C. C. Woods, can machinery and supplies, Dundas, Ont., has been succeeded by the Canister Machine Company.

Mr. McLeod Stewart, Ottawa, who recently returned from London, England, says that he has made arrangements for proceeding with the work of surveying and building the Ottawa and Georgian Bay Canal.

Mr. J. W. Misner writes us from Muirkirk, Ont., that he has leased railway lands there and is removing his sawmill and handlo factory from Turin, Ont., to Muirkirk. He expects to be ready for business by January 1st. It is his intention to manufacture handles and hardwood lumber for export. A planing mill will be added in the spring. He has also taken a partner in the business and the new firm will be known as Misner & Murphy.

The city hall, Stratford, Ont., was burned a few days ago. Loss about \$15,000.

Messrs. John Bertram & Son, Dundas, Ont., recently shipped a large quantity of machinery to Wellington, B.C., for the railway repair shops there.

Mr. G. T. Martin, of Smith's Falls, has taken out a patent for a new bicycle—his own invention—the running gear of which is different from any yet on the market. It is driven by a combination of sprocket and bevel cog wheels, from which marvellous speed can be obtained. Mr. Martin has taken out patents in Canada, United States, England, Germany and France. —Perth Expositor.

Peat, similar to that found in Ireland, has been discovered in the Blue Mountains in the county of Grey, Ont. A sample sent to the Bureau of Mines was tested, and found to be genuine.

The Klondike Trading and Outfitting Company, Vancouver, B.C., has been incorporated with a capital stock of \$50,000.

The business of the Jones & Moore Electric Company, Toronto, has increased to such an extent during the past year that they have found it necessary to double the capacity of their factory. They are putting in new machinery and have now facilities for the manufacture of all sizes of electric light and power apparatus for any current.

The factory belonging to the Art Metropole, Toronto, was destroyed by fire a few days ago.

The Kobold Gold Mining Company, Ottawa, has been incorporated with a capital stock of \$500,000.

The Cumming Milling Company of Lyn, with head office at Lyn, Ont., has been incorporated with a capital stock of \$75,000, to do a general grist and sawmill business.



HAMILTON, - CANADA

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104 and 106 MURRAY ST.  
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Dyewood Extracts,  
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Nutmeg Extracts.**

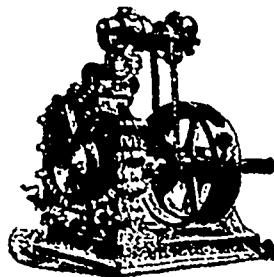
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Small Isolated Plants.

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**Phelps Machine Co'y,**

EASTMAN, P.Q.

Messrs. Squaro, Briggs & Downs' saw-mill, Canal Flat, B.C., have sold out to Mr. McRae.

The Hamilton Powder Co. are equipping their Nanaimo works with a new hoisting plant, having placed an order with Mr. J. D. Sword, representing the James Cooper Manufacturing Co., Montreal, for one of their standard link motion hoisting engines.

The American Rattan Company have just completed their new factory and are removing to the town of Walkerton, Ont. They have purchased from the Royal Electric Co., for lighting their factory, a complete electric lighting equipment.

Leopold Benz's saw and grist mill at Wetaskiwin, N.W.T., was destroyed by fire a few days ago.

The Star Iron Company, Montreal, is being incorporated, with a capital stock of \$60,000, to manufacture hot water and steam heating furnaces, hot air furnaces, etc.

The St. Jerome Electric Light Co., of St. Jerome, Que., have purchased from the Royal Electric Co., and are installing in the town, a 50 K.W. S.K.C., two phase alternating current dynamo, with Stanley transformers, etc. They expect to start up with 750 lights installed.

Mr. J. W. South, Brampton, Ont., has recently installed in his flour mill a new plant of one hundred barrels capacity.

The Dominion Cotton Mills Company have decided to abolish the use of steam for power purposes, and have given a contract to the Lachine Rapids Hydraulic and Land Company by which the latter will supply electricity for power for a period of twenty years.

The Raymond Manufacturing Company, Guelph, Ont., have put an incandescent lighting plant of their own in the stone shop, and the men in that building are now working thirteen hours per day. The adjusters at the brick factory are working the same number of hours, and the other departments are running full time. The probabilities are that before long the entire establishment will be running over time, as the orders are coming in very freely.—Guelph Herald.

The McEachron Heating and Ventilating Co., of Galt, Ont., is a busy concern these days. Besides having a lot of small orders on hand, they have received large orders from Messrs. A. Davis & Son, King, Ont., Bowman & Zinkan, Southampton; A. J. H. Eckardt, Toronto; and The T. Eaton Co., Toronto. They have also taken the contract to equip the tannery of Messrs. A. Davis & Son with complete heating and drying apparatus.

The absence of railway communication has retarded the opening up of the boundary country to a great extent, but notwithstanding the difficulties that have to be surmounted in getting machinery in, several of the companies who have had enough preliminary work done to warrant their putting in a plant, have decided to haul their machinery in by wagon road. The Brandon & Galt Crown Mining Co. have decided to proceed actively with development work, and have placed an order with James D. Sword, representing the James Cooper Manufacturing Co., Montreal, for a complete hoisting, pumping and drilling plant, which is now on the ground. As soon as this is set up a large force of men will be put on the work.

The Canadian Acetylene Company, Levis, Que., is being incorporated, with a capital stock of \$50,000.

The Massey-Harris Company have in contemplation the adoption of an elaborate system of fire protection for their Brampton works, at a cost of about \$8,000.

The Defiance Machine Works, Defiance, Ohio, recently shipped a full equipment of wagon machines to the Milner Walker Wagon Company, Limited, Walkerville, Ont., who have now one of the best equipment of wagon machines in the country.

Messrs. Jns. Angell & Co. have secured the contract for making a new steel boiler for Mr. D. Thistle of Whitbourne, who will shortly open a new sawmill of large dimensions at Colnet. The boiler is 14 feet in length by 4 feet diameter.—St. John (Nfld.) Herald.

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NEW and GOOD SECOND-HAND WOOLLEN MACHINERY

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Strength and Durability  
Freedom from Trouble with Step  
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Accessibility to all Parts

ST. CATHARINES,  
February 9, 1897

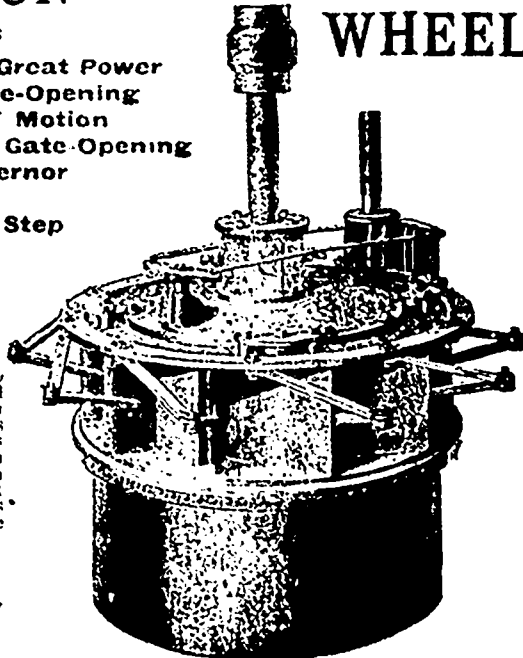
Messrs. Wm. & J. G. Greey,  
Toronto.

GENTLEMEN:—Your favor of the 5th to hand. Have been away from home, and hence delay in answering your letter. You ask us how your Dominion Wheel compares with the . . . Well, sir, the comparison is this—we have been using two . . . 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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to  
*Owners*  
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*Boilers.*

**THE JUBILEE SMOKE CONSUMER**

Is the only Smoke Consuming Device which at once CONSUMES COMPLETELY Smoke and Gases of every kind.

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Is the only one which can be adapted to locomotive and steamboat boilers, as well as to boilers used in workshops and large factories.

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Is the only one which saves fuel considerably.

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Is the only one which gives entire satisfaction under every prospect, its work being always perfect and continuous . . . Or no sale.



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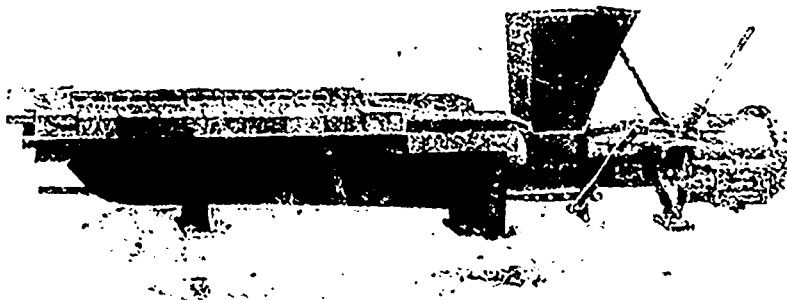
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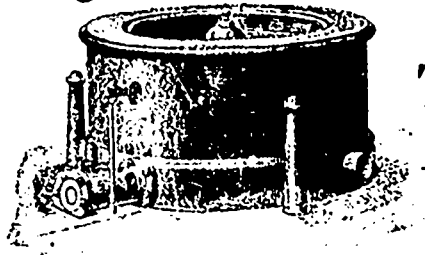
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BRAND "SIEMENS."

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ALL PIPES CAST VERTICALLY

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FROM 1/2 TO 6 INCHES IN DIAMETER. GUARANTEED STRAIGHT AND TRUE TO WITHIN 1/32 OF AN INCH.

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RAILWAY AND ELECTRIC RAILWAY CAR AXLES

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Tee Rails, 12, 18, 24 and 28 lbs. per yard

HEAVY FORGINGS a Specialty

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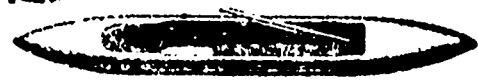
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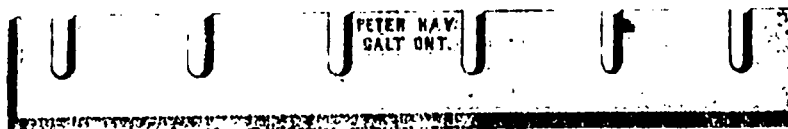
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# GALT MACHINE KNIFE WORKS

PETER HAY,

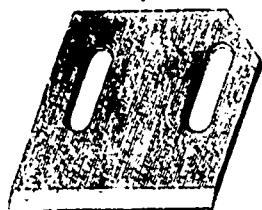


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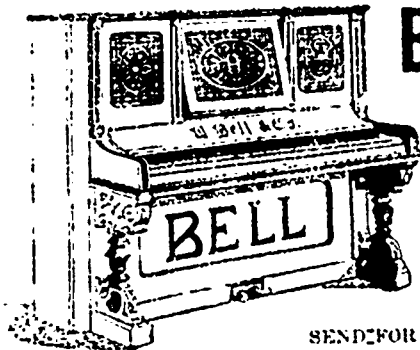
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KNIVES  
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KNIVES  
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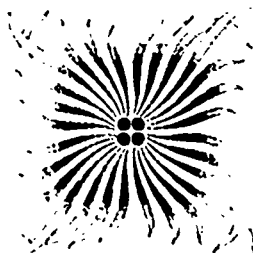
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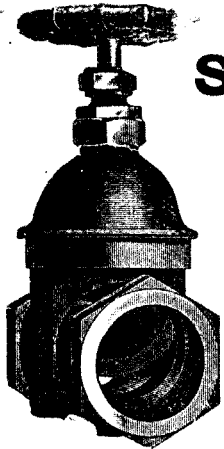
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