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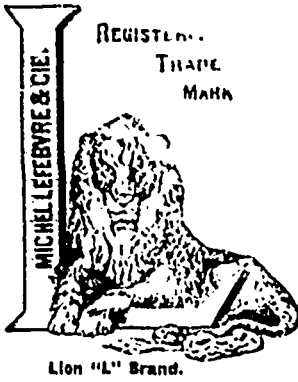
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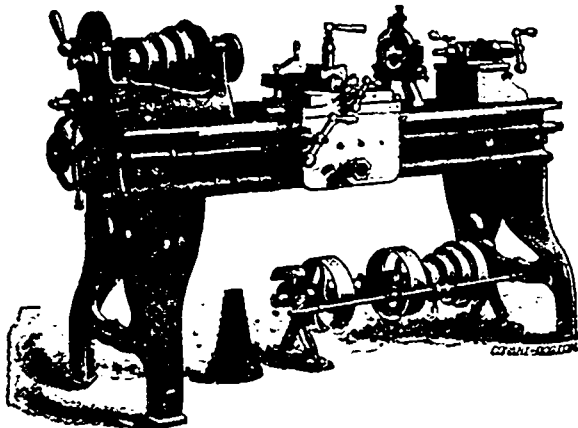
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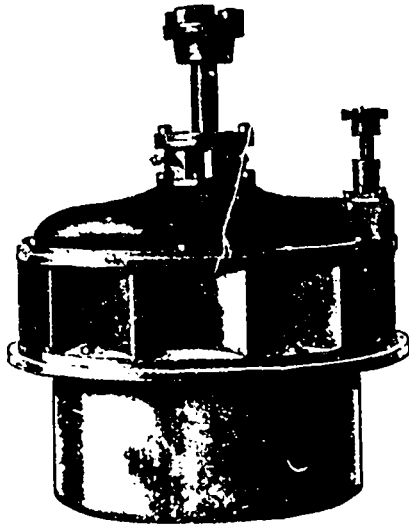
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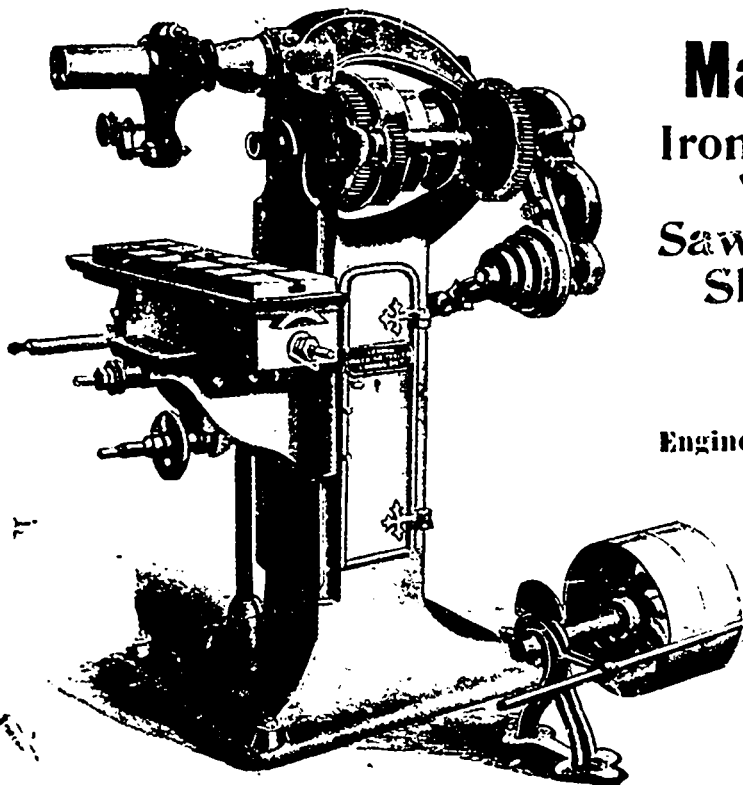
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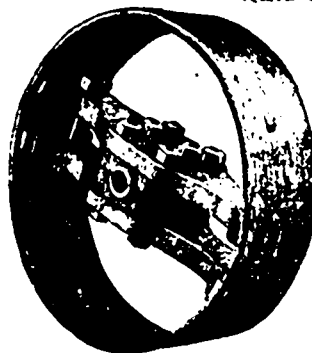
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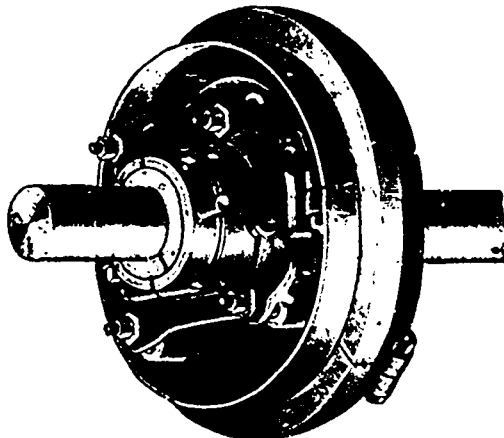
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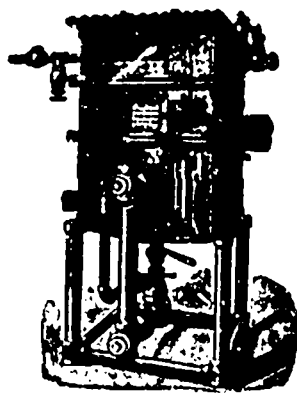
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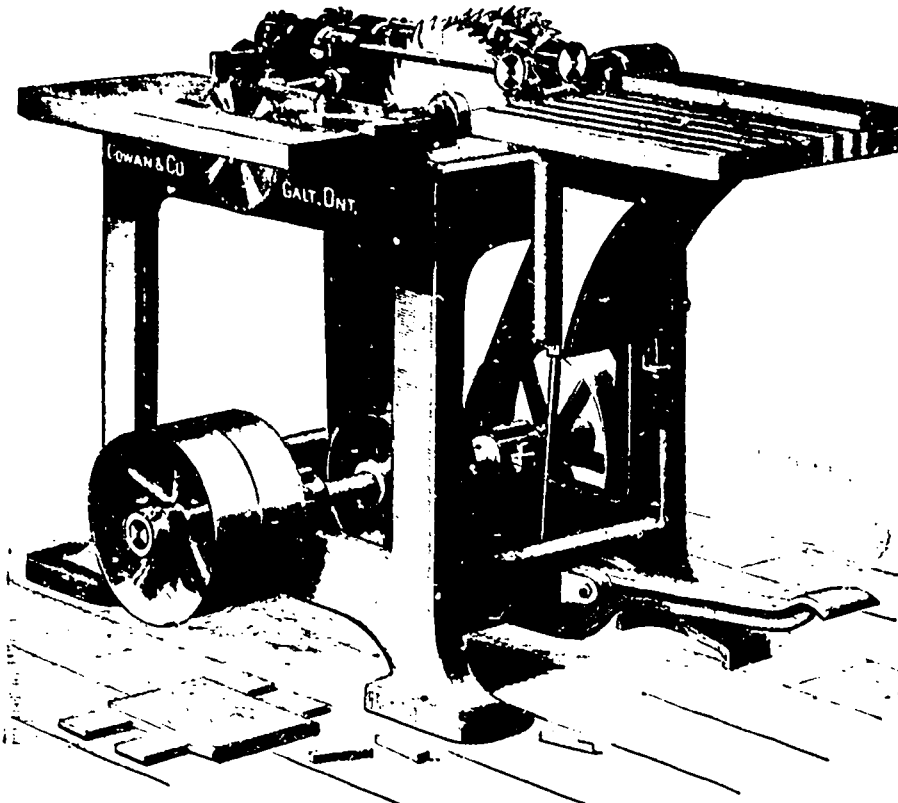
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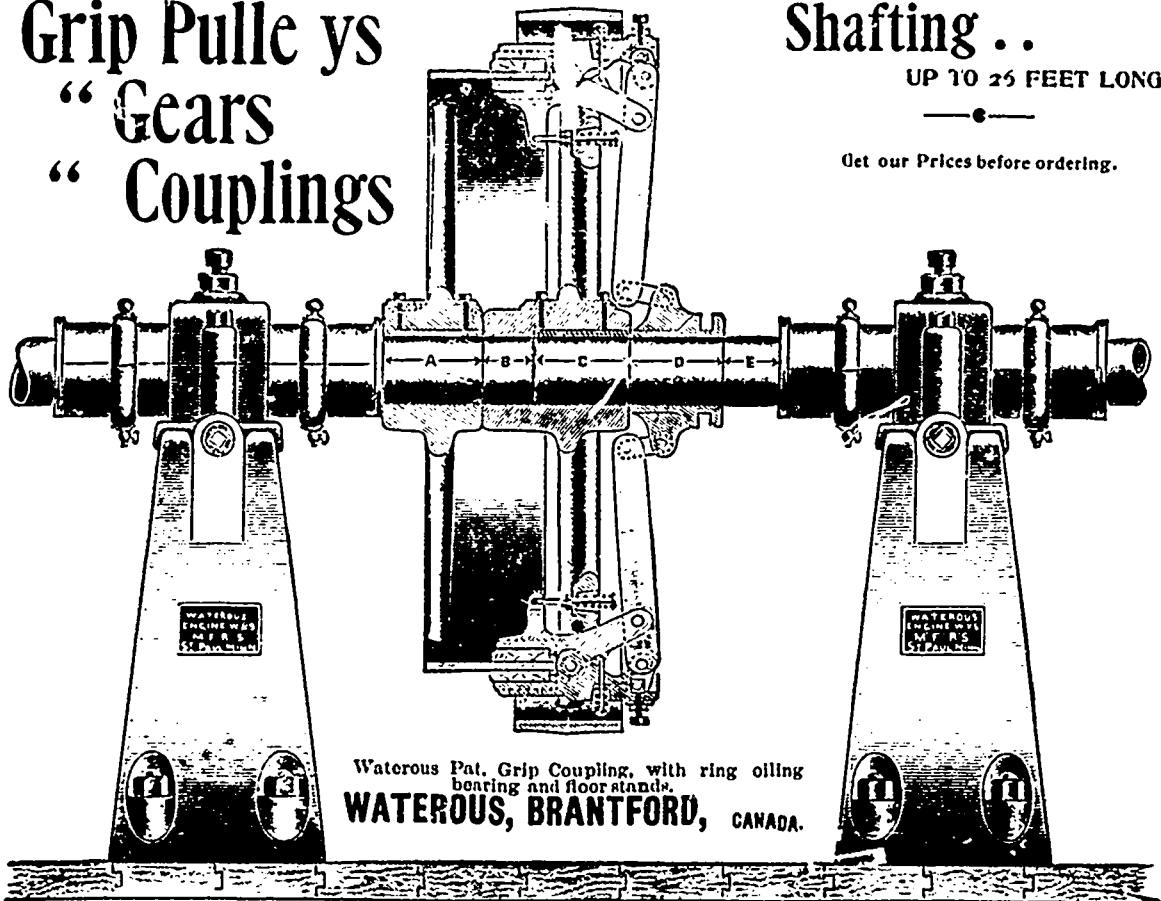
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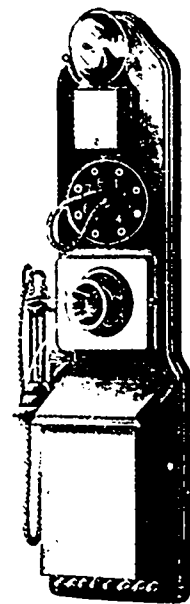
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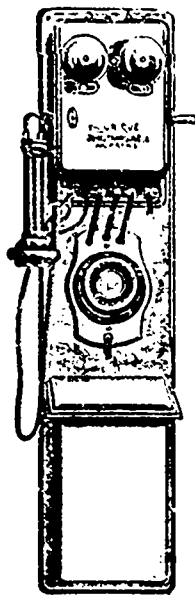
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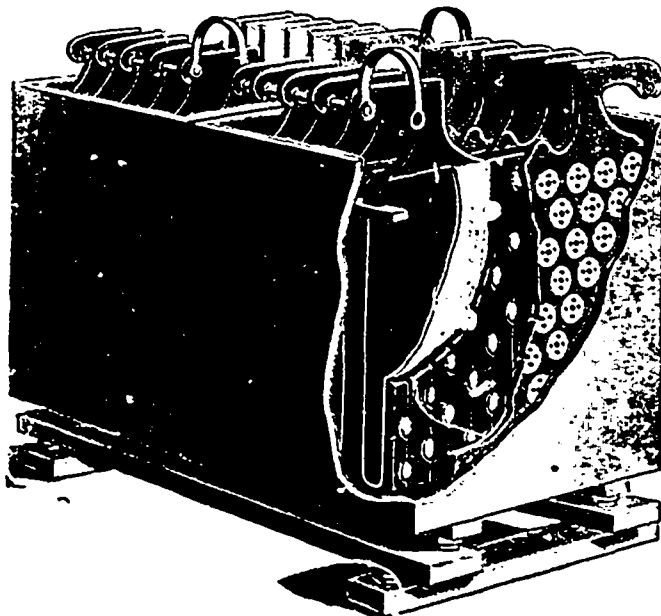
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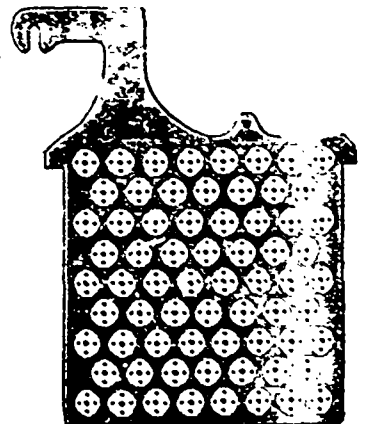
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THIS IS BUSINESS.

The Hamilton Spectator, following the lead of The Toronto Globe, gave currency to the falsehood that the Secretary of the Manufacturers' Association had declared that Mr. Foster, in making his tariff speech, spoke from a brief prepared by the Association. The Globe took occasion to back water on what it had said, but The Spectator never. It not only gave currency to the falsehood which implied a gross insult to a Cabinet Minister, but it also stated that the Secretary during the last Ontario election campaign announced oracularly that the Conservatives of

Ontario could not expect help from the manufacturers. Both these statements are utterly false.

THE CANADIAN MANUFACTURER is authorized to pay The Hamilton Spectator the sum of twenty-five dollars if it will show where, when and under what circumstances the Secretary of the Manufacturers' Association ever said that Mr. Foster in his tariff speech spoke from a brief prepared by the Association; and where, when and to whom the Secretary had oracularly announced that the Conservatives of Ontario could not expect help from the Association.

Here is an opportunity for The Spectator to earn a few healthy dollars—if it can. Let it substantiate what it has said, and gather in the money.

If it does not accept this offer, or apologize, it must stand convicted of having uttered deliberate and malicious falsehoods.

This is business.

LESSONS TO BE HEEDED.

Wonderful and past finding out are the methods of The Toronto Globe in arriving at conclusions regarding the tariff. In a recent editorial in discussing the fact that the Conservative press argue that the commercial stagnation in the United States is due to the change in the tariff in that country, it tells us that it is more rational to conclude that twenty-five years of protection has been undermining instead of building up the industries of the country; that the whole protective system was on a false basis, and that sooner or later it was bound to succumb to its own weakness. It tells us, too, that in making comparison between the United Kingdom and such countries as Canada and the United States it would be misleading to omit reference to the different positions they occupy; that in the one case there is a densely populated country whose agricultural lands do not begin to afford food for its inhabitants, and that this condition should be contrasted with the situation on this continent; and yet free trade Britain, under all its disadvantages, challenges comparison with the world. Every other nation, it says, has levied commercial war upon her, but her resources only increase with opposition, and her manufacturers surmount every barrier that is interposed against them. By the efforts of other peoples to keep her out of their markets many far-sighted Englishmen perceive many advantages to themselves. They feel that so long as other peoples find their ideal in restriction and high taxation, Britain's premier position in the commercial world will be assured.

The Globe tells us also that it was not always thus; that under the protective system Britain herself was brought very low; and it compares the condition of that country in the first years of Her Majesty's reign with her position at any period since. Never, it tells us, has the laboring man been reduced to such straits as were the English masses at that time; and that there is no avoiding the conclusion that to the same pass will a persistence in the Chinese policy of exclusion eventually reduce any community which practises it. We are informed, too, that the elections which overwhelmed the Republicans and put the Democrats in complete control of the House of Representatives were a reflex of distress which was even

then beginning to be felt; and that the reversal of that decision in the elections last November arose chiefly from a feeling that the Democratic party were but faint-hearted professors of the faith that had been proclaimed in the party's platform. That there were some, it says, who were disappointed that good times were not immediately restored cannot be denied, but their irresolution and want of faith prolonged the period of uncertainty.

No stretch of credulity can allow of the acceptance of these conclusions. In the first place history teaches that Britain, under more drastic forms of protection than ever prevailed in any other nation, established industries that made her not only Mistress of the Seas, but also gave her the commercial supremacy of the world. Having accomplished these, it was her policy to throw open her ports to the commerce of all nations; and wherever and whenever she had the opportunity to do so, she forced compliance with her demand that no import duties should be collected upon British merchandise. The *Globe* cannot doubt that if Britain had the power to-day to suppress the manufacturing industries of other countries, and to compel the removal of all protective tariffs, she would do so. She undoubtedly has the inclination to do so, as illustrated in the pressure now being brought to bear by her manufacturers upon the Government to force India to remove the recently imposed duty upon cotton goods.

The mercantile and the manufacturing interests of Great Britain harmonize and co-operate in shaping and controlling the fiscal policy of that country, all other interests being secondary. As Mistress of the Seas, the immense wealth invested in her shipping makes it imperative that nothing stands between it and financial success; and the same applies to her manufacturing industry. Her ships must not be permitted to rust in unproductive inactivity; and the hum of her manufacturing machinery must not cease; but the human beings whose services are required in manning ships and operating factories, receive but scant consideration at the hands of British statesmen.

With her ports open to the products of labor of all countries, what was once one of Britain's most valuable and promising industries—sugar refining—has practically disappeared, British refined sugar being an unknown article in the British market. It is no secret that a strong and influential party exists in Britain for the purpose of bringing about a change in the fiscal policy of the Government, looking to what its leaders call fair trade, meaning the imposition of duties upon merchandise coming from countries imposing duties upon British merchandise. We are told that this is imperative, a strong argument being that it is unfair to admit the products of foreign labor duty free while British workmen are forced into idleness and distress. This condition of labor in Great Britain, under free trade, is decidedly more accentuated than in any country where protection prevails. In Great Britain labor has no rights that the ship owners or the manufacturers feel themselves bound to respect. British ships must sail the ocean, and British seamen must accept such remuneration as their owners are willing to pay; and British factories must be kept busy, even if foreign competition compels the manufacturers to reduce wages to the starvation point. If a foreign country imposes duties

upon British merchandise, the British workman finds his wages reduced to that extent, and it is in this way that, as *The Globe* puts it, her manufacturers surmount every barrier that is imposed against them. If other nations find their ideal in protection, Britain's premier position in the commercial world is assured at the expense of the working classes of that country.

The *Globe* is wrong, too, in supposing that the elections which overwhelmed the Republican party in the United States in 1892 was a reflex of distress produced by protection. Like the free trade party in Canada, that party in the United States had long been clamoring for the destruction of protection, Mr. Cleveland, like Mr. Laurier, promising that if his party were successful, free trade as they have it in Great Britain should be the policy of the Government. Unfortunately for that country the fear that this threat would be put into execution produced a most paralyzing effect, creating a financial and manufacturing crisis that obliterated hundreds of millions of capital, and plunged unnumbered thousands of working people into idleness and misery. Confronted with a depleted treasury it was impossible that free trade as they have it in Great Britain could be put into effect, and the American people at their very next opportunity drove the Democratic party from power and again restored the party of protection. Meanwhile the country still continues to suffer from the evil wrought by Mr. Cleveland and his free trade party, and it will be years before the restoration of the prosperous condition that prevailed under the influence of protection.

It is obvious that free trade is of no value to the masses of the people in Great Britain, whatever it may be to the shipowners, manufacturers and the privileged classes. It is plain, too, that the masses of the people in the United States have returned to their allegiance to the system of protection that lifted them and their country to a most enviable pinnacle of prosperity. These facts are lessons from other lands that the people of Canada will heed.

THEN AND NOW.

Under the protective system Britain herself was brought very low. Let anyone compare the position of England in the first years of her Majesty's reign with her position at any period since, and it will be realized what the emancipation of industry has done for her. . . . Never has the laboring man been reduced to such straits as were the English masses at that time, and there is no avoiding the conclusion that to the same pass will a persistence in the Chinese policy of exclusion eventually reduce any community which practises it.—*Toronto Globe*.

The *Globe* advises Canada to adopt free trade as they have it in Great Britain, and it suggests that a comparison be made between the conditions prevailing there in the first years of her Majesty's reign and any period since that time, in order that we may realize what the emancipation of industry by free trade has done for that country. Whatever the condition of the laboring classes may have been in Britain fifty years ago, if we may judge by the situation that prevails at this time there is no avoiding the conclusion that free trade has not improved it. Read what *Ryland's Iron Trade Circular*, published at Birmingham, England, had to say a few days ago concerning an important

manufacturing industry and the laboring men employed in it :—

There is no improvement in the tinsplate trade, and great distress exists throughout South Wales. A correspondent, writing to one of the Welsh daily papers, says : Factory after factory is closed, and the reasons are not far to seek. American consumption has fallen off by about one-third of its normal quantity, and not only this it threatens ultimately to do without the famous Welsh product. Again, strenuous efforts are being made on the Continent to be self-supporting in regard to the quantity used. True, they have not in either case attained the goal of their ambition. In the meanwhile efforts are being made to start new markets. It is fondly hoped that the commercial tide will flow from the East to save the stranded tinsplate barque from falling to pieces owing to the receding Western waters. There is no doubt that if the output of plates in Wales is to be kept up to anything like its usual average makers will be obliged to use all their energy in opening up new markets. It is no good looking to the States for all our support ; we must have more strings to the bow. The United States have now laid the foundations for a tinsplate industry of their own. It is true that it is only yet in its infancy, but there is little doubt that it will grow, until ultimately they will be able to supply their own demands, if not be able to go into open market.

Also what the Textile Mercury, published at Manchester, England, has to say about wages in the cotton trade :—

A General Committee meeting of the Federation of Master Cotton Spinners decided on Friday of last week to issue circulars to all members of the Federation asking whether they were in favor of notice being given of a 5 per cent. reduction in operatives' wages, providing that four-fifths of the spindles of the Federated and Bolton Employers' Association sign an agreement for that purpose ; and whether they were prepared to stop their mills to enforce the reduction, 14 days' notice to be given.

The Globe cannot be blind to the labor situation in Great Britain. Only a few days ago it published a press cablegram from London which read as follows :—

The strike of bootmakers has been extending throughout the past week, until to-day there are 200,000 idle operators in that branch of industry. The strike affects all the factories in England except those in Stafford, Norwich, and Bristol. Some of the London unions are granting ten shillings a week to the strikers. The employers are not in the least anxious, declaring that they have enormous stocks yet unsold. Nevertheless, they are preparing to protect themselves by the employment of American labor-saving machinery.

Surely the laboring man in Great Britain could not have been in such painful straits under protection fifty years ago as now confronts him under free trade.

FREE TRADE AS THEY HAVE IT IN BRITAIN.

Has the National Policy made you rich?—Toronto Globe.

But recently Mr. Laurier, the leader of the free trade party in Canada, in a political speech made in Montreal, defined the position of his party very clearly as follows :—

Upon the trade policy I need not tell you that we stand at the very antipodes of the Conservative party. The Conservative party believes in protection ; all their hope is in protection. The Liberal party believes in free trade on broad lines, such as exists in Great Britain, and their immediate object is a revenue tariff—a tariff to be derived

from customs, but which will levy no duties except for the purposes of revenue. Upon the question of principle there can be no compromise. We stand here against protection and in favor of a customs tariff based upon the principles of revenue and nothing else.

We are all familiar with the fact that the party of protection in the United States under the policy of McKinleyism determined to establish in that country a tinsplate industry. We are also acquainted with the fact that that effort was eminently successful. And we know that the intention was to give additional occupation to American capital and American labor. The United States had always drawn its supplies of tinsplate from Great Britain, and millions of dollars were sent there annually to pay for that article. Under McKinleyism the industry became well established, a consequence being that the industry in Wales, where it had been carried on to its fullest extent, became demoralized, great distress ensuing to the work-people employed in it. The British Trade Journal has the following to say regarding the situation :—

There is no improvement in the tinsplate trade, and great distress exists throughout South Wales. A correspondent, writing to one of the Welsh daily papers, says :—Factory after factory is closed, and the reasons are not far to seek. American consumption has fallen off by about one-third of its normal quantity, and not only this, it threatens ultimately to do without the famous Welsh product. Again strenuous efforts are being made on the Continent to be self-supporting in regard to the quantity used. True, they have not in either case attained the goal of their ambition. In the meantime efforts are being made to start new markets. It is fondly hoped that the commercial tide will flow from the East to save the stranded tinsplate barque from falling to pieces owing to the receding Western waters. Cape Colony, India, the Indian Archipelago, and the Eastern shores of the Pacific are thought to be suitable places. The same correspondent suggests we should turn our attention to another portion of the globe where, ultimately, very probably a great trade could be done. He refers to the Grecian Archipelego and the countries washed by the Eastern waters of the Mediterranean, especially Palestine and Syria. Very probably a very profitable canning trade may be started there. There is no doubt that if the output of plates in Wales is to be kept up to anything like its usual average makers will be obliged to use all their energy in opening up new markets. The United States have now laid the foundations for a tinsplate industry of their own. It is true that it is only yet in its infancy, but there is little doubt that it will grow.

The Globe and Mr. Laurier and their party friends may say that it was real mean of the Yankees to build up a big industry in their country at such a great cost to the Welsh industry, but they should remember that McKinleyism was legislation intended to be in favor of American industries, but not necessarily against foreign industries. The Globe asks, "Has the National Policy made you rich?" An answer to this is, that certainly as far as the tinsplate industry is concerned it has made the United States rich. And this is a lesson for Canada. Mr. Laurier points with pride to "free trade as they have it in Great Britain" and wants Canada to adopt the same system. As we well know the tinsplate industry in the United States, under their National Policy, is in a flourishing condition : and, as the British Trade Journal—an ultra free trade paper says, the free trade as they have it in Great Britain can't keep the Welsh tinsplate trade from demoralization and ruin.

EDITORIAL NOTES.

A well-known manufacturer, while in New York last week attending a convention, made the following complaint of railroad discrimination in favor of imported goods. He said:—"We are at a great disadvantage through the unjust discrimination of the railroads in freight rates on imported goods. I am not certain that the Interstate Commerce law covers this matter, but if it does not, the law should be so amended as to prevent such unfair practice. Our association has appointed a committee to investigate the discrimination by American railroads in favor of foreign products which go into our markets. The railroads are assisting manufacturers in other countries to ruin our business, and in doing so the companies which give the steamship lines lower rates than they allow us will in time close up our plants and be the greatest losers. English manufacturers can ship into any American city from the seaboard cheaper than we can, although the distance may be far shorter. We formerly had a large trade in Texas, which has been lost to us because of the low rate arrangement between the steamship companies and the railroads. English manufacturers can lay the goods down in Texas cheaper. I have personal knowledge," continued Mr. Goodwin, "of the discriminating practices of the railroads. We import a large amount of clay from England, which we cannot obtain readily in this country as yet. We formerly purchased this clay from an importer at Baltimore, and paid \$1.80 freight per ton of 2,000 pounds from Baltimore to East Liverpool. Recently we have purchased this clay direct from the producer in England, and when billed from Liverpool to East Liverpool we paid only \$1.25 freight for a ton of 2,240 pounds between Baltimore and East Liverpool. This is how the American manufacturers generally are treated by the railroads, and it is a gross injustice which should be stopped, and it will be if the Manufacturers' Association can do it. On the Texas shipments I referred to the railroads carried the foreign goods from the port at one-third less cost than the same goods could be shipped from East Liverpool. Against such unequal conditions we have an uphill fight and the Interstate Commerce Commission should see that the railroads are brought to time."—New York Shipping and Commercial List.

In view of the decision in the famous Bate case, which practically throws open to the world the manufacture of incandescent lamps, it may be interesting to note some of the decisions rendered which declared Thomas A. Edison to be the inventor of that useful appliance. In 1884, the German Patent Court declared Mr. Edison's patent fundamental. In 1886, the High Court of Justice, England, held that Mr. Edison's patent was valid and granted injunction against infringers. In 1887, the Court of Appeal, England, confirmed the decision of the High Court of Justice and continued the injunction. In July, 1891, Judge Wallace, of the United States Circuit Court, in granting an injunction against infringers, said that Mr. Edison "made a lamp which was practically operative and successful, the embryo of the best lamps now in commercial use." On October 4, 1892, the United States Circuit

Court of Appeals confirmed the decision of Judge Wallace.—Electrical Review.

Attention has been called to a report by the American consul at Cardiff, Wales, in which he says that the tinplate industry in that country is about gone. The consul extracts the following from a Welsh newspaper:—"The American tinplate works, which it was thought would have to stop, are going on as vigorously as ever, competing for and often securing orders which formerly came to this country. Their position has actually improved recently, inasmuch as they have obtained a reduction in wages of about 30 per cent., while in this country the strong effort made in the same direction has up to the present time proved futile, except in a few isolated cases. Probably the most striking feature of the year's trading has been the seriously diminished call for terne plates from the United States, the native works being equal to supplying almost the whole of that important trade."

Liberals are now accused of a design to "destroy" the Canadian iron industry. But they have no such predatory intentions. They wish only to permit the restoration of the industries which have been hampered and destroyed by an attempt to force productive activity into unprofitable channels.—The Globe.

If The Globe is so anxious to remove every vestige of protection from the Canadian iron industry why does it not attack Sir Oliver Mowat's Government, and force it to withdraw the bounty offered for the production of pig iron in Ontario.

An exchange informs its readers that Bill Nye once said in a lecture:—"A man may use a wart on the back of his neck for a collar button; ride on the back coach of a railroad train to save interest on his money until the conductor comes around; stop his watch nights to save the wear and tear; leave his 'i' or 't' without a dot or cross to save ink; pasture his mother's grave to save corn; but a man of this kind is a gentleman and a scholar compared to a fellow who will take a newspaper two or three months, and when asked to pay for it, puts it in the office and has it marked 'refused.'"

From the intimations made by General Booth since his departure from Canada it would appear either that he is in the habit of taking rose-colored views of things, or that some one here has been giving him more encouragement than the state of public opinion warrants. We feel quite safe in predicting that any company of colonists sent out to Canada will be, as they ought to be, carefully scrutinized, and that they will not be, as they ought not to be, allowed to settle in one unmixed community. To the better class of reformed criminals and improved paupers Canadians will offer no objection provided that they are not taxed either for their passage to Canada or their support after they come here, and provided that they are allowed to become merged as individuals in the general industrial community. A colony of such people as General Booth has in mind to send us will certainly not be encouraged and ought not to be accepted. We can better afford to leave our public lands unsettled than take the

risk of burdening ourselves with such people in the mass. We strongly approve of and believe in efforts to reform and elevate the submerged tenth, but we wish to avoid placing them here under conditions which would soon submerge them again. It is a sound sociological instinct which has prompted the Toronto Trades and Labor Council to start a propaganda on the subject. The Week.

No policy is national that leaves any branch of industry out of account.—R. W. Elliot.

Free importation is but half of free trade, and the worse half.

Before the foreign producer enters the Canadian market in competition with the Canadian producer he should pay as much or more by way of customs duties as may be equivalent to what the Canadian producer is compelled to pay in support of the state.—R. W. Elliot.

Attention is directed to the correspondence to be found in another page under the caption "Under Which Banner." The first letter is from Senator Boulton who challenges the deductions drawn by Mr. R. W. Elliot in favor of the National Policy in a paper read by him before the recent meeting of the Canadian Manufacturers' Association; the second being from Mr. Elliot in reply thereto. Senator Boulton is a theorist who argues from the standpoint of the British free trader and the Canadian importer, while Mr. Elliot views his side of the question from the standpoint of an old and experienced manufacturer who has for many years given close study to the effects of both the fiscal policies that have prevailed in Canada, and also to those that have resulted to Great Britain under the Cobden idea. Mr. Boulton seems very much concerned in behalf of the Canadian farmer, his idea being that if we had in Canada "free trade as they have it in Great Britain" the aforesaid farmer would be immensely benefited thereby. His argument would be more or less plausible if his facts were correctly stated, but he very studiously avoids showing what the effect of free trade has been upon the British farmer. Certainly if "free trade as they have it in Great Britain" can be a good thing for the Canadian farmer, it should also be a good thing for the British farmer; but we all know that the British farmer is in a much worse condition under free trade than the Canadian farmer is under protection.

We have fortunately made no currency mistakes, nor have we, thanks to the steadfastness of the Liberal party, run to the extremes of protection. The earlier measures of a Liberal Government would tend to the encouragement of every industry which was not a clog to its fellows, for each raw material is as important to the manufacturer as to his customers. The needs for the revenue would not be lost sight of, nor would the position and relations of the various callings that make up the activities of the people. The policy of the Liberal party makes it the savior of industry and not its destroyer.—The Globe.

The people of Canada are not likely to swallow such guff. The Globe's language is intended to be ambiguous. It ought to give a diagram explaining what are raw materials. In many lines Canada is better fitted to produce so called raw materials than the highly finished

products. She is fitted to produce pig iron but not prepared to manufacture steel rails. She can produce bar iron but is not prepared to make fine steel, and articles of steel, such as needles, etc. The Globe wants to sacrifice the industries that produce so-called raw materials, and the needs of the revenue would be looked after by the lowering of the duties to a revenue basis upon everything else that is now produced in Canada. It won't do.

If the overthrow of the manufacturers is to be the first and all-important step taken by the Liberal party should they attain to power at the next election, as The Globe says it will be, how can the people of Canada look upon that party in any other light than as commercial assassins?

The Globe tells us that "Liberals are not a party of commercial assassins." The disclaimer comes with bad grace from a journal that also tells us that "the overthrow of the great taxing combine" as it denominates the manufacturers, "is the first and all-important step towards a commercial regeneration of Canada."

Mr. William Paterson is a queer man, if our Conservative friends are to be believed. He is a manufacturer who, according to Dr. Montague, grew enormously wealthy under the N.P. He is pledged to support a policy which, according to the Conservatives, will close up his factory or factories, is it? and make him as poor as any of his fellow-citizens. And still, as if unmindful of his fate, he goes about asking, "Has the National Policy made you rich?" The Globe.

Mr. William Patterson, M.P. for Brant, now one of the leading exponents of Mr. Laurier's free trade policy, spoke as follows in the House of Commons in 1876:—I am not one of those who believe in erecting a wall so high that you cannot trade with any other country, but I must admit I am in favor of a defensive policy. I cannot view with complacency what I see in this country. We live beside a country with a population ten times greater than ours, whose industries have been fostered by protection until they are enabled, even in some article in which Britain excelled, to challenge supremacy with her. While that nation has erected against us and other countries a hostile tariff, we have our hands bound, and give them a free and unrestricted right to trade in our markets. Fancy a commissioner, delegated by this Government and sanctioned by the British Government, sent to Washington to negotiate a reciprocity treaty. The question might be asked what he desired. He replies: "I wish to have a free market in the United States for the products of our forests, fields and mines." Then the United States commissioner might ask: "And what will you give us in return?" Our representative replies: "The free use of our markets for similar products of your country." The astute American would naturally say: "We have that already; I do not see that you offer anything." We must remember that we should have something to offer when we attempt to open up anew the reciprocity question. I need not remind this House that the great lever we had before in negotiating a reciprocity treaty is ours no longer.

Dominion Analyst McKinley, after a careful analysis, declares the iron ores of Ontario to be at least equal in richness to the best American ores. The policy of the Liberal party is to allow these ores to remain in the earth until the supply elsewhere becomes scarce and foreign iron-workers are compelled to purchase it. The policy of the present Dominion Government, backed by the Conservative

party, is to encourage our own people to mine our own ore and have it worked into iron in our own territory. Development of Canadian resources and encouragement to Canadian industry is the Conservative policy.—*Hamilton Spectator*.

The present Ontario Government, backed by the Liberal party, and led by Sir Oliver Mowat, offers a bonus of one dollar per ton for all pig iron made in Ontario from ores mined in the province.

In Russia, where petroleum is very plentiful, oil is used quite extensively as fuel in manufacturing establishments, but to only a limited degree on steam vessels, where there is a great danger if anything excepting the refuse of petroleum is used. It is now announced, however, that the Russian Steam Navigation Company has decided to fit all the boilers of the larger vessels of its fleet for petroleum firing in place of coal.

Governor McKinley is said to be the central figure in the formation of a protection party composed of Republicans and protectionist Democrats. Electors cling tenaciously to party names, but in the end principles overrule. Since Cleveland's first message in favor of tariff reduction it has been obvious that the republic was destined to a straight division between a free-trade and a protection party.—*The Globe*.

Certainly. The last straight division between a free trade and a protection party in the United States resulted in the complete overthrow of Clevelandism and the destruction of the Democratic party, and the reinstatement of McKinleyism and protection. It is obvious that the republic intends to cling to protection.

The decision rendered by the United States Supreme Court in the Bate Refrigerating case has a widespread bearing on patent rights in that country. According to this decision the rights of patents in that country expire at the same time as those taken in any foreign country. In this case a patent was applied for in the United States in 1876, and pending this application two foreign patents were granted for the invention, for a term of 14 years. After these patents were issued, a patent was received from the United States for a period of 17 years. On the expiration of the foreign patents, suit was brought for an injunction against an infringement of the American patents. This was carried to the Circuit Court of Appeals, and by it referred to the Supreme Court for a decision on a question of law. The opinion was read by Justice Harlan, and reviews all the legislation on the subject; discusses the meaning of Congress as expressed in Section 4,887 Revised Statutes, and concludes as follows:

"Our answers to the questions certified are that the invention for which United States patent to Bate was issued was, under the facts stated, 'previously patented in a foreign country' within the meaning of these words in Section 4,887 of the Revised Statutes, and that the United States patent to him expired under the terms of that section before the expiration of seventeen years from its date."

The decision will affect many important patents, including the Berliner telephone improvements; patents for incandescent lamps; electrical apparatus; rubber manufacture and others, the total capital affected being estimated about \$600,000,000.

A few days ago the following remarkable item appeared in the local columns of the *Toronto Mail and Empire* under the caption "Wanted Tar and Feathers."

After an absence of twenty hours the jury in the case of Ambrose McTiernan, the counterfeiter, returned to the court-room with a verdict of guilty. This extraordinary sojourn was due to the obstinate refusal of one man to agree to a conviction. The evidence adduced at the trial was clearness itself, and at an early stage of the discussion all but one were in favor of a verdict of guilty. But this one man stuck to his guns, and was the means of having his eleven colleagues locked up all night. So chagrined were they at him that a note was written and shoved out below the door, asking the officer in charge to procure for them a quantity of tar and feathers. The night was cold and the jurors were far from comfortable. Comical to relate, the experience had its effect on the twelfth man. Some time during the stilly night his views changed, and morning dawned on twelve jurors who each believed McTiernan guilty. The prisoner's lawyer polled the jury, but without revealing any want of unanimity.

It may be comical to relate one of the most disgraceful episodes that ever occurred in a Court of Justice if the facts set forth are capable of verification. Whether Ambrose McTiernan be guilty or not, the incident should be investigated; and if it can be proven that the one juror who believed him innocent was intimidated by the threats of the other eleven jurors to apply tar and feathers to force his consent to a verdict of guilty, the accused should have a new trial and the recalcitrant jurors made to suffer the penalty of the law for their successful effort to deprive the accused of his inherent right to a fair trial.

Some of the proprietors of large Western farms and ranches are making their wire fences do duty as telephone lines, in many instances with satisfactory results. The *Electrical Review* describes a line of this kind as follows: "Mr. C. Thomson, proprietor of a large nursery near Rapid City, S.D., has a barbed-wire fence telephone line in successful operation. The line is a little over five miles long, and the fence, which is used for the transmission line, has been standing for twelve years. The wire is fastened to the posts with ordinary staples. 'There are no glass balls used,' writes Mr. Thomson. 'I consider them of no use—they may be ornamental.' About April 1, 1893, Mr. Thomson contracted with the Nebraska Telephone Company to extend one of its Rapid City lines about a mile, so as to connect with his barbed-wire fence. Where the line had to pass gates and cross the roads, poles twelve feet high were erected to carry the line across. The line crosses the road four times and passes over five gates. Mr. Thomson, by means of his barbed-wire fence telephone, has communication with all the lines in the Black Hills, 'and there is no better line and few as good in the Hills.'"

It is estimated by Mr. Mulhall, in a recent article in the *Contemporary Review*, that the shipping of all nations is of the approximate value of \$1,100,000,000, while the 110,000 locomotives at work represent a value of \$1,000,000,000. The railways give employment to 2,394,000 people, while shipping employs only 705,000. The life of a locomotive is fifteen years. It will run 270,000 miles, carry 600,000 tons, or 1,000,000 passengers, and earn

\$300,000. Its first cost is \$10,000 and its general average is 300 horse-power.

The National Policy can make the proud boast that it has set at least one infant industry on its feet—to walk over to the United States—that is the Massey-Harris Company.—Peterboro' Examiner.

Don't fret; the Massey-Harris Company have not gone yet, nor is it at all probable that they will go. They know a good thing when they have it, and that thing is the Canadian market. But they are great on playing a bluff game.

It is a dirty bird that befouls its own nest. The Hamilton Spectator, that poses as a friend of the manufacturers, denounces the Manufacturers' Association because it does not contribute to the campaign fund of the Conservative party in Ontario elections.—Canadian Manufacturer.

This statement is just as true as the statement by the same writer that he had prepared the material for Hon. Mr. Foster's last budget speech.—Hamilton Spectator.

Unless the Spectator recognizes the fact that it is a calumniator it will embrace this opportunity to earn twenty-five dollars by certifying to the occasion when this "same writer" ever said that he had prepared the material for Mr. Foster's budget speech. In making its intimation it knows that it is bearing false witness. But the twenty-five dollars awaits the proof of the mendacious assertion.

Truro, N.S., is a flourishing town. The Board of Trade of that place in sending out a circular announcing the names of its officers for the current year, state that the business outlook is encouraging. During the past year two new manufacturing industries were started—one a hat factory the other a woodworking establishment. Extensive additions are being made to three already large concerns—a knit goods factory, a hat factory and the condensed milk factory. During the coming season some \$85,000 worth of new buildings are to be erected. Exceptional facilities are offered to manufacturers by reason of the near vicinity of the great coal and iron deposits of Nova Scotia, cheap electric power is also available for small establishments. Truro has now 14 manufacturing establishments, 13 wholesale houses, one daily and three weekly newspapers, nine hotels, eight churches, three banks, good water supply and fire service, an excellent school system, and is in fact a live, progressive town. Mr. C. E. Bentley is president, and Mr. G. A. Hall secretary of the Truro Board of Trade; and enquirers for business, manufacturing facilities, or residences can obtain information from these gentlemen.

An item in the Manchester, England, Textile Mercury, says:—

It is galling, writes our Dundee correspondent, to see cargoes of jute, grown under the protection of British rule and at the cost of British taxes, shipped to the Continental spinners, who instantly clap a heavy duty on British-made jute goods. It may be all sound doctrine, but it will be hard for idle Dundee operatives to endure.

And they have free trade in England just such as Mr. Laurier and The Globe desire for Canada. Has free trade as they have it in Great Britain made the spinners in the Dundee jute factories rich? We think not.

Fifty per cent. of the entire population of Newfoundland are now receiving aid either from the Government or some private source. They very properly and wisely look to the National Policy to make them rich.—Mail and Empire.

The fiscal policy of Newfoundland is as close an approach to free trade such as exists in Great Britain as possible. And that is the policy that Mr. Laurier and The Globe desire for Canada. Has free trade, as they have it in Newfoundland, made that country rich? We think not.

I believe in free trade such as exists in Great Britain.—Mr. Laurier at Montreal

Has the National Policy made you rich?—Toronto Globe.

See how "free trade such as exists in Great Britain" hits the manufacturers there, as shown by the British Trade Journal:—

That celebrated firm of engineers and boiler makers, Messrs. Harvey & Co., Ltd., of Hayle, Cornwall, are about to close their establishment after a successful career of over a hundred years. The reasons given by the directors for this decision are, increasing labor difficulties, the keenness of home and foreign competition, and the stringent conditions of many of the contracts for mining and other machinery drafted by public bodies and private firms. The foundry has been kept going up to the present with orders on hand received prior to the directors' decision, but new orders are subtle to other firms. It is thought the foundry will be converted by the Great Western Railway Company into a carriage works.

A celebrated firm that have enjoyed a successful career of over a hundred years forced out of business by the keenness of foreign competition. And that, too, in Great Britain under free trade. Carry the news to Mr. Laurier and The Globe.

The Manufacturers' Gazette, of Boston, has added a big pre-fix to its name, and now wishes to be known as the Northeastern Lumberman and Manufacturers Gazette. It has also become an organ—the official organ of the Northeastern Lumbermen's Association; and it has the following to say in regard to the event:—"In deference to numerous solicitations we have decided to devote large space to the interests of forestry, forest products and to the manufacture and sale of lumber in its various forms. Our new title will be the Northeastern Lumberman. We shall strive to co-operate with the lumber manufacturers of this section, and to publish a weekly illustrated lumber journal which shall be worthy of their patronage. Other sections of the country are supplied with able and enterprising lumber journals, and it seems desirable that New England, Quebec and the lower provinces should also have a representative lumber paper in the field."

Our esteemed contemporary, The Industrial Record, of New York, has made a new departure. Heretofore, for twenty-seven years, it has been edited, managed and published in New York, but hereafter, while the main office of The Industrial Record Company will remain at 140 Nassau street, that city, the editorial rooms and office of publication will be at 103 Milk street, Boston. Mr. H. L. Congdon will be in charge of the New York office, and Mr. H. G. Kittredge will have the editorial and general business management in Boston. Instead of being published monthly, as heretofore, The Industrial Record will be issued once a week.

Scribner's Magazine for April abounds in Easter features. The covering itself is a very striking arrangement of Easter lilies. The frontispiece is an excellent engraving by Clossom of a painting called The Worshippers. Then follows a series of Easter pictures which represent Easter scenes in New York, Paris, Old England, and Jerusalem. Another original feature is an Easter hymn in a series of six pages, by Henry McCarter; President Andrew's History of the Last Century in the United States, sustains the great popular interest of the first instalment. Robt. Grant's series on The Art of Living, deals this month with the subject of Education, touching in a practical way the advantages of the public schools as compared with the private. It also contains instalments of serials by leading novelists of England and America, and a poem To a Greek Victory.

A copy of the April number of The Methodist Magazine has been sent us by Wm. Briggs, Publisher, Toronto. This magazine is highly instructive, and contains many interesting and illustrative stories. The contents are:—Our Own Country, a description of the City and River of St. John, N. B.; Everyday in Bible Lands, by the

Editor; The Life of Our Lord in Art, by Frederick W. Farrar; Life in Russia, by Mrs. A. Kirby; A Day in the Toronto Hospital, by Rev. Jno. Hunt; The Star in the East, by Richard Rowe, etc. It also contains some very appropriate poems for the Easter season.

The freshness and daintiness of Springtime and Easter days pervade the pages of the April issue of the Ladies' Home Journal. The contents include a popular discussion of the proper usage of the words lady and woman, by Margaret Deland, Mrs. Burton Harrison and Sarah O. Jewett; The Burning Question of Domestic Service is treated intelligently and interestingly by the Countess of Aberdeen; an article on the Uses of a Contralto Voice, by Jessie B. Davis; Kate Greenaway contributes some quaint pictures of April children whose history is delightfully told in rhyme by Laura E. Richards; The Paradise Club, by Jno. K. Bangs; The Earthquake of Eighteen Eighty-Three, by Josiah Allen's Wife; The True Mission of Women, by Dr. Parkhurst; Laying out a Small Country Place, by Elizabeth Bisland; A Revival of Spangle Work is daintily illustrated. Curtis Publishing Company, Philadelphia.

Outing for April is fully up to the high standard maintained by this excellent sporting magazine. The contents are:—A Tiger Hunt, by J. H. Porter; In the Mountains of Japan, by Laura B. Starr; Number 58, by Cornelia Kane Rathbone; A Mexican Bullfight, by Philip W. Avirett; Duck-shooting in a Crater, by H. D. Couzens; The Conversion of Trapper Lewis, by Ed. W. Sandys; Cycling in the Jersey Pines, by Hy. M. Sayres; Spring in Rome, by Liela Gittings; Jacking for Pickerel, by E. W. Chubb; Football Extravagance, by Walter Camp; Rigging and Sails, by Capt. Kenealy; How Greyhounds Hunt, by A. H. Powers; The Fallen City of Theebaw, by E. A. Dix; Lenz's World Tour Awheel; Spring Birds, by N. C. Brown; The Piper of Craig Ailsa, by Annetta Josefa Halliday-Antona; National Guard of Illinois, by Lieut. Wm. R. Hamilton, and the usual editorials, poems, records, etc.

The study of mind, perhaps the most fascinating branch of science, receives much attention in the April Popular Science Monthly. Prof. M. Allen Starr, M.D., of the College of Physicians and Surgeons, New York, opens the number with an account of Some Curiosities of Thinking. His cases include persons with various strange hallucinations, and some with a single curiously defective or greatly superior faculty. Prof. Sully's paper on Later Progress in Language—the seventh of his Studies of Childhood—gives insight into mental action from another point of view. Communicated Insanity is discussed by Charles W. Pilgrim, M.D. In The Successor of the Railway the extent to which the trolley road may compete with the steam line is shown by Appleton Morgan. An illustrated article describing Some of the "Outliers" Among Birds, curious either in plumage or habits, is contributed by Dr. R. W. Shufeldt. C. H. Henderson presents a plea for Manual Training because of the increased intellectual power which is the necessary physiological result of such training. A timely article is The Shad's Annual Pilgrimage, by A. A. Gouraud. In the Editor's Table the improved relations of science and religion are pointed out, and attention is called to the lack of nervous control that characterizes modern life. New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

The contents of the April Number of the Canadian Magazine are excellent both in the interest of the subjects treated and in literary and scientific quality. In subject matter the contributions embrace a very wide range, from review and scientific articles to excellent fiction. The Art Spirit, by O. A. Howland, M.P.P.; The Lost Colony of Roanoke, by E. Y. Wilson; The Mysterious Spotley, by Bernard McEvoy; Old Ben, by V. C. McGie; Saxon or Slav; England or Russia? an article which was prepared as a lecture for the Political Science Club of Toronto University, by Hon. David Mills; Sunday Morning at the Church of the Holy Sepulchre in Jerusalem, by Thos. Conant; One of the Few, by Kay Livingstone; A glimpse of Robert Barr, by C. S. Allen; Youthful Canada and the Boys' Brigade, by J. Castell Hopkins; A Summer Evening at the Village Postoffice—Waiting for News, by Prof. Tadnor; Rome Revisited, a highly descriptive article referring to old and new Rome, by C. R. W. Biggar. There are also several short poems and many humorous anecdotes, etc. Ontario Publishing Co., Toronto.

Under Which Banner?

Following are communications from Hon. Senator C. A. Boulton and Mr. R. W. Elliot which explain themselves. Senator Boulton criticizes the position assumed by Mr. Elliot in behalf of the National Policy, in his paper read before the recent meeting of the Canadian Manufacturers' Association; and Mr. Elliot adduces additional facts which Mr. Boulton will probably find difficult in answering.

The simultaneous appearance of these communications, the latter being a reply to the former, is accounted for by the desire of the editor of this journal that both might be presented at the same time, to accomplish which Mr. Elliot was permitted the opportunity of seeing Mr. Boulton's letter before it was placed in the hands of the printer.

EDITOR THE CANADIAN MANUFACTURER:

SIR,—Permit me through your columns to reply to the addresses of the president of the Manufacturers' Association and of Mr. Elliot, an

ex-president of the same, at their last annual meeting and published in THE CANADIAN MANUFACTURER of March 1.

Mr. Elliot says that "before any foreign producer enters into the Canadian market in competition with a Canadian producer he should contribute as much, or more, by way of customs duties as may be equivalent to what the Canadian producer is compelled to pay in support of the state. This is the National Policy in a nut-shell." From a free trade standpoint I claim, sir, that under our present tariff the consumer not only pays the duty levied on the foreign article imported from abroad, but double taxation upon the necessaries of life upon which the customs duties are levied for protective purposes. Quoting from a special report on the census returns, I find three hundred and fifty-four million is the capital invested in our mechanical and manufacturing industries. One half this capital is a fixed investment in buildings and machinery, one half is working capital for the conduct of the business, purchase of supplies, etc. I also find that one hundred million dollars wages is paid in the various establishments enumerated as manufactories. The cost of the raw material used in the same establishments is two hundred and fifty-six million dollars and the value of the articles produced is \$476,000,000. Now, sir, computing eight per cent. interest on \$354,000,000 capital invested we have about \$30,000,000. Add that to the wages paid, and the cost of raw material, and we have together the sum of \$386,000,000 as the actual cost of the articles produced. Deduct this from the \$476,000,000 computed as the value by the manufacturers through the census returns, and we find a difference of \$90,000,000 that represents the protective taxation resting on the people over and above the revenue collected upon the articles imported, namely \$21,000,000 in 1893.

If the tariff were changed so that the necessaries of life were free, that \$90,000,000 of taxation would disappear and remain in the pockets of the people to buy necessaries with and to that extent their purchasing power would be increased. To quote a few of the manufacturing industries from the census returns, to emphasize more particularly the correctness of the above statement, I select "needles." Three factories, employing in all 17 hands, the duty collected upon \$44,000 foreign imports is \$13,000, the capital invested in the three factories is \$16,000, wages paid \$5,500, raw material \$2,000. Adding interest on capital, wages and material together and deducting it from \$13,300 value of needles manufactured, we have \$4,500 over plus on \$8,000 annual cost of home manufacture, or, in all, duty on imports and tax on home manufacture, the needlewomen of Canada are bearing \$17,500 of taxation on their prime necessity for employment. Take another industry—"boot and shoe laces," 30 duty collected on \$42,800 imports is \$12,840. One factory with a capital of \$12,000 employs three men and 20 women, \$5,000 paid in wages, \$4,500 in raw material, value of product \$15,000. We have here an excess of \$5,000 on an annual cost of production amounting to \$10,000. Boot and shoe laces, therefore, have to bear \$17,840 taxation. Another industry—"braces and suspenders," showing a larger difference between imports and home manufacture. Import \$68,000, duty collected \$24,000, six factories employing twenty men, forty women, and two girls, produce \$169,000. Value of product, fixed capital, \$9,500, working capital \$44,000, wages paid \$16,000, cost of raw material \$101,000. Adding interest, wages and raw material together we have here a surplus of \$48,000, or a revenue tax of \$24,000 and a protective tax of \$48,000 on braces and suspenders; total, \$72,000. Take another industry—"Nails and Tacks," value of imports \$40,000, duty collected \$15,000, home production comes from 12 factories, employing 300 men, 64 women and 41 boys, the fixed capital invested being \$155,000. The working capital is \$247,000, the wages paid \$152,000, raw material \$457,000, value of articles produced \$744,000. We have here a surplus of \$103,000 over cost of manufacturing home product, with a duty collected of \$15,000, making a tax of \$118,000 on nails and tacks, of which the revenue only gets the benefit of \$15,000. Taking a larger industry as an example, "The Massey Mfg. Company." We name here one factory employing 575 hands, with a fixed capital of \$102,000 and a working capital of \$1,000,000, interest on same at 8% \$100,000, wages paid \$249,000, cost of raw material \$350,000. Total value of articles produced \$1,250,000. Difference between cost of production and value of articles produced is in this case \$550,000. The total value of all of agricultural implements produced in Canada is \$6,900,000, being about \$2,000,000 above the interest on capital, wages and cost of raw material. That is a protective tax borne by the farmers in consequence of the Customs duty, which in the Trade and Navigation returns of 1893, from which I've been quoting, only brought in a revenue of \$100,000. In going through the list of manufactures furnished by the census it will be found that in all cases the difference between the estimated value and the actual cost is about equal to the duty imposed. The number of employees in agricultural machine shops in 1881 was 3,656, in 1891, 4,500, showing an increase only of 844 hands in ten years, during which time the Province of Manitoba and the N.W. Territories were opened out by railway communication.

From a free trade standpoint in its effect upon one of the principal industries of the City of Toronto, namely, the Massey Manufacturing Company, by the abolition of protective taxation upon the necessaries of industrial life, such an impetus would be given to the foreign trade that it would more than counterbalance any loss to the home market through free importation, and that in manufacturing for foreign markets by the cheapened cost of production through free

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trade, instead of employing 575 hands they would be employing 1,575 in supplying the agricultural markets of the world and securing their custom, now limited to a gross export from Canada of \$462,000. As it is they find they cannot take full advantage of the foreign markets under the Canadian taxation, and the makeshift of an export bounty by the remission of Customs duty on raw material is resorted to at the expense of the Canadian farmers. They cannot keep their capital and labor employed at home, the home market cannot keep them going, so they propose moving to the United States to manufacture there. Adopt free trade and we shall hear no more of leaving Canada, but rather the doubling of their working plant and pay roll in Toronto for foreign trade. It would mean cheapened machines for our farmers, enlarged employment for our mechanics and increased exports. In our gross export trade of \$118,000,000 manufactures only amount to \$8,000,000, and more than half then is the manufacture of our own raw material. Under free trade the export of manufactures might be eighty millions, and in speaking of manufactures I do not include lumber. The free trade contention in Manitoba is that we exported last year \$7,000,000 in wheat and cattle, the proceeds of which is returned to us in the necessaries of life, all of which are increased in cost by about 40 per cent. after adding the wholesale and retail profit on enhanced prices, owing to protective taxation, or in other words, under free trade our purchasing power for the necessaries of life would be increased by \$2,500,000, while through protection our country is kept poor, and population kept out, reacting upon every Canadian industry to the extent of our impoverishment. At present our best market for every line of produce is free trade England. The more the principles of free trade are studied by Mr. Elliott from a manufacturer's standpoint the better, not through the light of Benjamin D'Israeli in his younger days—whom he quotes—and who stayed with the protectionists in 1846, but through the light of Sir Robert Peel, who, inspired by Cobden and Bright and assisted by Lord John Russell, brought into play one of the greatest political forces in the commercial history of the world. Mr. Elliott draws a gloomy picture of what free trade has brought Great Britain to. That there is some distress there to-day no one will deny, but it is not through her policy of free trade, but through the lessened purchasing power of Britain's customers through the distress engendered by protection. The quarterly returns now issued by the Minister of Trade and Commerce show a decreased purchasing power of \$7,000,000 for foreign imports in the past six months on the part of Canada.

That is only one of the many evidences of the cause of a decrease in the purchasing power of the people of Great Britain which reacts with an unerring judgment upon Great Britain's customers who seek

her markets for the sale of their products. The same causes must be operating to reduce the consumption of our own home manufactures. Perhaps the President of the Manufacturers' Association or Mr. Elliot can explain how it is the census shows a difference of ninety million dollars, or about 25 per cent. between the cost of the manufactures of Canada in their warehouses, estimated by adding the interest on capital at 8%, the wages paid, and the cost of raw material together, and deducting it from the total value of the manufactured articles produced in Canada.

C. A. BOULTON.

Shellmouth, Manitoba, March 18th, 1895.

EDITOR THE CANADIAN MANUFACTURER:

Sir,—Senator Boulton gives as the amount of capital invested in Canadian manufactures the sum of \$352,000,000; interest at 8% \$30,000,000; wages per annum, \$100,000,000; raw material used, \$256,000,000; assumed cost of goods produced, \$386,000,000; assumed value of same, \$476,000,000; assumed profits, \$90,000,000, or at the rate of about 23½%. This is, however, an utter fallacy, no account being made of insurance, depreciation of plant and buildings, storage, freight, office expenses, traveling salesmen, bank discounts, municipal taxes, advertising, samples, breakdowns, floods, bad debts, etc.

It may confidently be said that there are no Canadian factories that pay any such dividend as that suggested by Mr. Boulton except those producing goods protected by patents. So far as the consumer is concerned it makes no difference whether the duty on a patented article is one hundred per cent. or whether it is free of duty; the owner of the patent fixes the price whether the tariff in force be the McKinley or the National Policy, or whether there be free trade as they have it in England.

Again, the assumption that foreign manufacturers are at all times ready to sell Canadian consumers at bare cost of materials and labor is far from true, a good share if not all of the supposed \$90,000,000 would go, if the goods were imported, to pay the expenses of foreign manufacturers or swell their profits, and profits so earned are a loss to the country, whereas profits earned in Canada go back at once into circulation.

While the foreign manufacturer will not as a rule supply his wares to Canadians at cost price, there are frequently times when were it not for the National Policy Canada would be made a dumping ground for surplus stocks of foreign productions, to the great derangement of all our industries and the injury of all classes of our producers, farmers especially.

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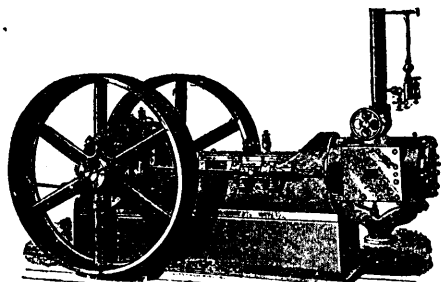
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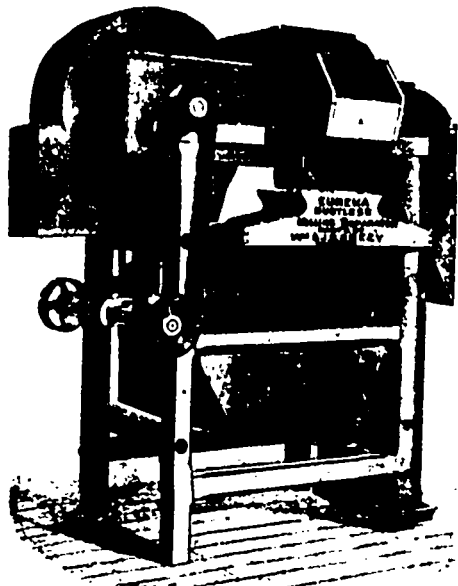
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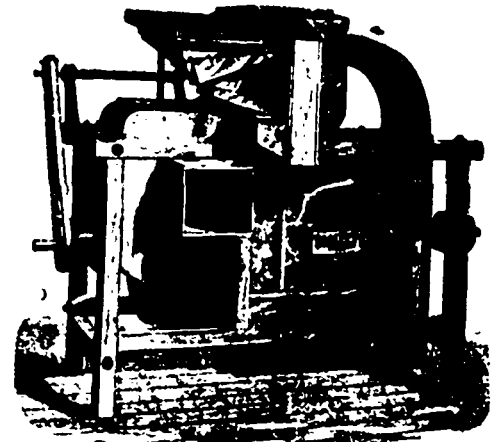
Best ...

Wheat Cleaners

Up to Date

and

Guaranteed.



HUREKA HORIZONTAL CLOSE SCOURING SMUTTER

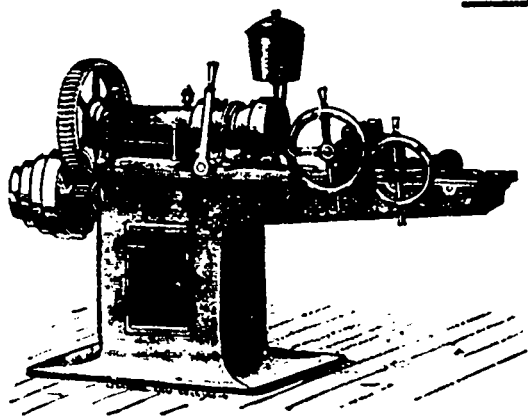
Also Sole Manufacturers in Canada of the

.... CELEBRATED PRINZ

INDENTED STEEL CYLINDER COCKLE MACHINES.

CANADA TOOL WORKS,

Dundas, JOHN BERTRAM & SONS, Ontario.

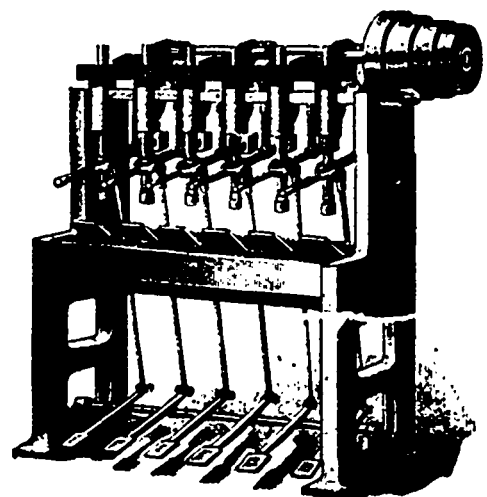


Bolt Cutters, double or single, to cut all sizes of threads from $\frac{1}{4}$ to 6 inches; also to tap nuts. The Acme Machine has no equal.

OUR MACHINE SHOP EQUIPMENTS are the largest in Canada. Special Tools for Electric Street Railways, Bicycle Factories and Agricultural Works.

Correspondence Solicited

Acme Nut Tappers with 4 or 8 spindles, suitable for all classes of work and to tap square or hex nuts from $\frac{3}{8}$ to $1\frac{1}{2}$ inches diameter



We are Manufacturing Agents for Canada.



count, and in my argument the mothers of the nation and the farmers of the nation were pointed out as worthy of the highest consideration, but if we are to develop into symmetrical national life diversity of employment must be provided for by measures that are just to the farming and manufacturing population.

It is a pity that duties on nails, tacks, shoelaces, braces, suspenders and needles should be such stickers to the free trade Senator, but I fail to see the point implied in his argument, namely, that the duty collected accrues as nett profit to Canadian manufacturers of like articles.

What really happens is that a part of the sum necessary to carry on the affairs of the Government having been collected on imports of these articles, a like amount of revenue is remitted on other goods, tea and sugar for instance.

The tariff as it affects tea and sugar are much more important to the poor needlewoman than the duties collected on needles, nails, tacks, shoelaces, braces and suspenders all put together.

Let the agricultural implement manufacturers speak for themselves. At present they seem to be carrying on a game of bluff with the Government, but the common, everyday manufacturers, who do not enjoy their tariff proof patent home market protectors, do not see how it is going to help the Manitoba farmer to lower the duty on implements if everything he wishes to import is prohibited by a Canadian patent.

Leaving out of account the comparative statesmanship of Sir Robert Peel, Lord John Russell or Benjamin Disraeli, let this statement of the case be considered and answered:—"Free importation is but half of free trade and the worse half."

Let it be admitted that the whole ground work of my argument is swept away, if it can be shown that it is unjust or impolitic to carry out this idea—"Before the foreign producer enters the Canadian market in competition with the Canadian producer, he should pay as much or more by way of customs duties as may be equivalent to what the Canadian producer is compelled to pay in support of the state."

In so far as the National Policy carries this rule into effect it carries out the expressed wish of the Canadian people.

Yours respectfully,

Toronto, March 28, 1895.

R. W. ELLIOT.

New Dyestuffs.

Without doubt the most important shade to dye is black; this may account for the interest certain German manufacturers have taken of late in introducing reliable Aniline colors to take the place of Logwood for wool and cotton dyeing. Probably no colors have met with more success for cotton dyeing in one bath as:—

Direct Blue Black B, and Direct Deep Black T, which colors are manufactured only by the Farbenfabriken, vorm. Friedr Bayer & Co.,

Elberfeld. This firm have now brought out another shade of black for cotton to be known as Direct Deep Black R. These colors have the great advantage of dyeing cotton and wool mixed goods in one bath.

Chloramine Brown G. (Patented). This new color dyes cotton in one bath, is very fast to light, air, washing with soap, alkalis, acids, perspiration and is the only existing aniline brown fast to chlorine. Chloramine Brown is moreover a very dyeing product, which is of great importance as it does not dye very full shades. To obtain a dark brown it is possible to work in combinations with Diazo-Black or Diazo-Blue-Black which take on well with Glauber Salts, and such combination shades are very fast to light. The bath does not exhaust and should be preserved for further use.

Chloramine Brown is also manufactured only by the Farbenfabriken, vorm. Friedr Bayer & Co., of Elberfeld, Germany. Dominion Dyewood & Chemical Co., Toronto, sole agents for Canada, who will be pleased to furnish further particulars, shade cards, samples, etc.

Alizarine Cyanine vs. Indigo. A new series of Alizarine colors are being introduced by the well-known firm, The Farbenfabriken, vorm. Friedr Bayer & Co., of Elberfeld, known as Alizarine-Cyanines, which are rapidly coming into use. A proof of the fastness of these new Alizarine Blues for wool is the fact that the German Government (Army Cloth Department) has acknowledged that Brilliant-Alizarine Blue and Alizarine Cyanines are fast products and suitable for being adopted in Military Cloth dyeing against Indigo. Alizarine Cyanines dye all shades of dark blues on wool with Bichromate of Potash and Fluor Chrome mordant. For further information address the sole agents for Canada, the Dominion Dyewood & Chemical Co., Toronto.

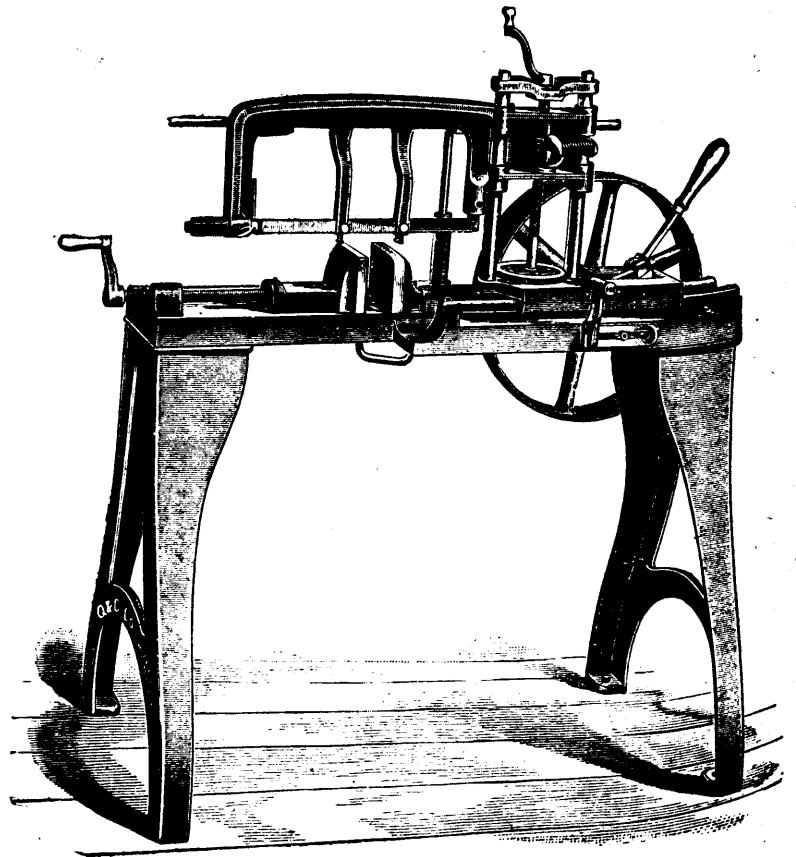
Diamond Black vs. Logwood. Owing to the low cost of dyeing black on wool with Logwood it is difficult to find a satisfactory substitute. Diamond Black has lately come into favor owing to its great fastness to light, scouring and acid and having the advantage of dyeing in one bath. The color being fast to acid is of great importance as the wool can be carbonized after being dyed. Diamond Black is now being used to some extent in place of Logwood by the big hat firm of Christys in Stockport. The color is made only by the Farbenfabriken, vorm. Friedr Bayer & Co., Elberfeld. Dominion Dyewood & Chemical Co., Toronto, sole agents for Canada.

The Telephone and Its Development.

Benjamin Butterworth, United States Commissioner of Patents in 1884, said: "On the 7th of March, 1876, less than nine years ago, the first patent on the telephone was granted. Prior to that date it was unknown in the field of invention. Since that time there have been issued over 1,000 American and over 500 foreign patents, directly traceable to the parent invention." From the date of grant of

Q. & C. Shop-Saw.

Messrs. Darling Bros., Montreal, proprietors of the Reliance Works, are offering an exceedingly useful machine manufactured by them, which they call the "Q. & C." Shop-Saw, an illustration of which is herewith given. The machine is intended for cutting all kinds of metal, iron, steel, brass and castings, including tool steel. It is automatic in its action and is claimed to be a great improvement over the gravity feed or hack saw. The feed is positive, entirely automatic, and can be instantly changed to accommodate any class of work. The common hack saw depends entirely upon gravitation to feed the saw through the work, and as the weight of the saw frame cannot be increased the cutting speed diminishes as the size of the work increases, whereas with the "Q. & C." saw, having an automatic screw feed, the same cutting speed is maintained throughout. The old style of machine drags the blade backward with the return stroke with nearly if not quite as much pressure as when cutting, thereby destroying the keenness of the edge as well as the blade itself. This saw clears the metal on return stroke, effecting an actual saving of 50 per cent. as well, a single blade lasting from three days to two weeks. This saw is specially designed to overcome the weakness of the old style machines which are very slow in operation and very expensive to keep supplied with saw blades. It is claimed for it that the special blades which come with this machine will outwear several dozen of the old style. These machines are supplied with movable vise which allows the use of the entire blade; it also having double adjustable guards, thereby insuring true work. In the old style machine it required from 9 minutes to cut a one inch round steel bar, to 3 hours to cut 4 inches of round steel, while with the "Q. & C." machine one-inch round steel bar may be cut in two in 3 minutes, and 4 inches round steel in 45 minutes. Any who may be interested in this machine can obtain all necessary information by application to Messrs. Darling Bros., Montreal.



the above-mentioned "first patent on the telephone" to the date of its expiration, 17 years later, there were granted in the United States 770 patents relating to telephones, and no less than 2,110 patents to telephone appliances. Prior to March, 1876, there were no speaking telephones in use anywhere; there was not a single yard of telephone wire in use; there were no underground conductors, no telephone exchanges and no persons employed in telephonic work. But an examination of the instructive statistical diagram found in the exhibit made by the American Bell Telephone Company at the World's Fair indicates that at the beginning of 1893 there were in use in the United States alone, in round numbers, 440,800 miles of telephone wire, of which 91,500 miles were underground; 552,700 telephones and 1,350 telephone exchanges; that connected with these exchanges there were over 232,000 subscribers; that the number of connections between the lines of these subscribers in a year reaches 600,000,000, and that the telephone exchanges provided employment for 10,000 persons. These facts speak for themselves, and depict more eloquently than could any amount of additional statement the immense influence exerted by "the still small voice" on society, business and the people at large. Consider the time saved to each of those 232,000 persons by the 2,500 conversations forming his share of the 600,000,000!

Let us think of the habits of concise expression to which the public is educated by the quiet ministrations of the telephone. Let us ponder on the fact that it is possible to call a director's meeting in Chicago, in which some of the directors present are in New York and others in Boston, and to transmit the business of the hour in such a meeting with facility and despatch, or on the enormous amount of travel with the consequent loss of time saved by the existence and availability of the telephone. The side influence of this wonder-working invention is not less important; its use in mines and by the submarine diver, its influence in physic and surgery, and as an instrument of philosophical research, in telegraphy, without wires and in scientific measurement. How great is that influence, considering the youth of the invention! How infinitely small measuring the future by the light of the geometrical progression of rate of progress of the past!

It is possible that within a short time we may be able to announce some important movements in connection with the utilization of the iron ores of British Columbia. A wealthy American syndicate has under consideration the establishment of blast furnaces and iron works at Ballard, a suburb of Seattle, Washington. As a source of supply for suitable ores, they have investigated the iron deposits of British Columbia and have bonded two properties: the Redonda

mines on Redonda Island on the coast and the Glen mine, situated a few miles from Kam'oops. Both deposits are magnetic iron, the former on analysis giving 61 per cent, and the latter 65 per cent, of iron. It is said that the syndicate intends to spend something like \$2,000,000 on its plant, which among other things will include works for the construction of railway freight cars. The capacity of the works is to be 25 cars per day. The wheels and other iron work require about 5 tons of iron per car, so that these works will use, when running to their full capacity, about 125 tons of iron per day. About 300 tons of ore will be required to produce that quantity of iron. It will be seen, therefore, that, should the enterprise be carried out, a large quantity of ore will be mined and a considerable sum expended annually in the Province in wages and supplies of various kinds. - Vancouver, B. C., News-Advertiser.

CAPTAINS OF INDUSTRY.

This department of the Canadian Manufacturer is considered of special value to our readers because of the information contained therein. With a view to sustaining its interesting features, friends are invited to contribute any items of information coming to their knowledge regarding any Canadian manufacturing enterprises. Be concise and explicit. State facts clearly, giving correct name and address of person or firm alluded to, and nature of business.

The Canadian Pacific Railway will rebuild their bridge at Farnham, Que.

The city engineer, Kingston, Ont., is preparing estimates for completing the water works system.

Vancouver, B. C., Water and Light Committee are calling for tenders for arc and incandescent street lighting.

Westville, N. S., will put in a new water works system. Tenders will be received by Mayor Geo. E. Muns until April 15.

The town clerk of Sudbury, Ont., is open to receive tenders up to May 1 for a system of water works and sewage for that place.

The Montreal Silk Mills Company, are moving from Montreal to St. Hyacinthe, Que., where they will occupy part of the Granite Mills property.

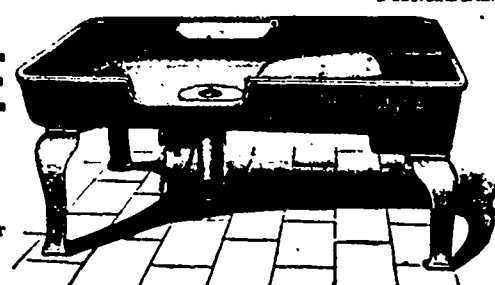
The Fire and Light Committee, of Stratford, Ont., are open to receive tenders up to April 13 for seventy-five 1500 candle power arc lights for that city, also for incandescent lights for City Hall.



Buffalo Planing Mill Exhaust Fans

EFFICIENCY
UNEQUALLED
DURABILITY
UNSURPASSED
SMOOTH
RUNNING
INCOMPARABLE.

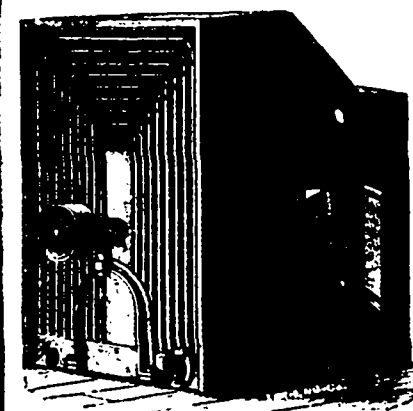
THE LARGEST
FORGE
in the World



Thirty-Eight Other
Designs of
Portable and Stationary Types.

BUFFALO LUMBER DRY KILNS
Blowers, Blacksmiths' Tools, etc.
SOLD IN
TORONTO, ONT., BY H. W. PETRIE.
BRANTFORD, ONT., BY CANADIAN MACHINERY & SUPPLY CO.
MONTREAL, QUE., BY CANADA MACHINERY AGENCY.
CHICAGO STORE, 22 and 24 WEST RANDOLPH STREET.

McEachren's System of Heating, Ventilating and Drying



SOMETHING NEW
Cheap and Effective.
Highly approved of by practical and unbiased men. The following is a sample of letters I get from customers.

For Particulars Address

J. D. McEACHREN, -:- Galt, Ont.

Clinton, January 24th, 1895.

J. D. McEachren, Esq., Galt.
Dear Sir.—Replying to your enquiry of the 21st inst., we may say the HOT BLAST HEATING SYSTEM we purchased from you about 15 months ago is giving entire satisfaction. Our factories contain about 300,000 cubic feet of space which we heat with exhaust steam, except in very severe weather when we use live steam in one half of the heater in the morning only.
As regards the DRY KILN, the Heater and 42 inch Fan you supplied us, they are doing excellent work. We dry out 8 carloads of weather-seasoned lumber, chiefly 1, 1½ and 2 inch walnut per week. We use exhaust steam exclusively in the dry kiln and that during working hours only. It does not require much power to run the fans and they handle a very large quantity of air. We find yours to be a great improvement on the old system of heating with pipes around the factory and under the lumber in the dry kiln.
Yours truly,
W. DOHERTY & Co.,
Organ Manufacturers

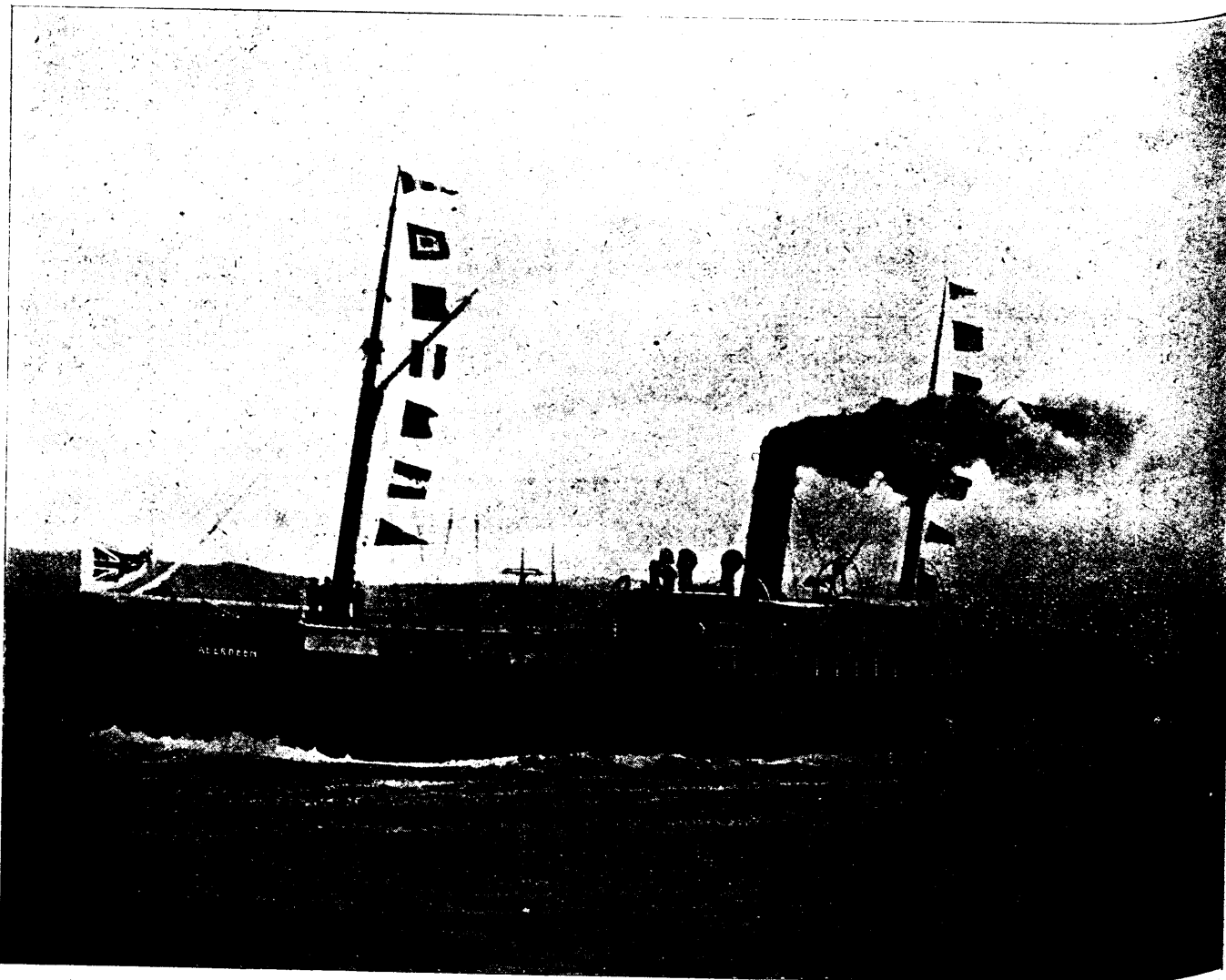
Dominion Steamer Aberdeen.

Through the kindness of Wm. P. Anderson, chief engineer of the Canadian department of Marine and Fisheries, THE CANADIAN MANUFACTURER is enabled to present a view of the Dominion Government steamer Aberdeen. The Aberdeen was built in Glasgow, Scotland, and has been in commission for about three months, her chief engineer reporting that in all respects the boilers and machinery are giving entire satisfaction. The Aberdeen is 180 feet long, 31 feet breadth and 19 feet 3 inches moulded depth. Engines are of the quadruple expansion type. Leading particulars of the vessel are:

Number of engines	One; quadruple expansion
Diameter of cylinders	18, 28, 35 and 54 inches
Stroke of piston	38 inches
Clearance, top	1/2 inch
“ bottom	3/8 inch
Maximum revolutions per minute	96
Number of pumps	Two

Surface	43 sq. ft
Speed of vessel	13 knots

The boilers have an evaporative efficiency of 10 pounds of water per hour per pound of coal with natural draught. The builders of them claim that they are especially suitable for large powers, it being possible to take as great or even greater powers that has been the practice with the cylindrical boilers, and they also obviate the subdivision of large power into a great number of boilers with their numerous fittings and details. The size of tubes is not reduced to a diameter that makes them liable to be choked, but is kept of a diameter which enables them to be readily cleaned. Drums are of a size that allows of a good supply of water always being in the boiler, as well as an ample steam space, doing away with all liability to prime, and at the same time making regularity of water level a certainty. The whole of the inside of the boiler can be easily examined by taking off the ordinary manhole doors, no special jointed doors or caps being required to get inside to tubes. There are no landings or joints in fire and no liability to leakage through expansion strains. In the event of any tube requiring renewal it can be drawn into the up-

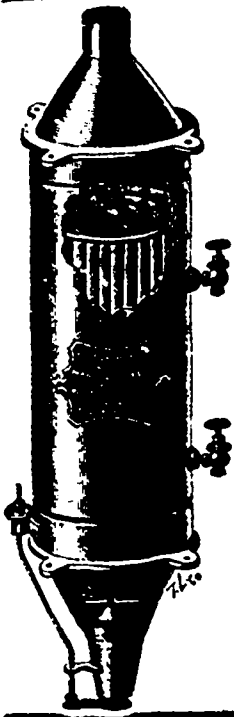


CANADIAN GOVERNMENT STEAMER ABERDEEN.

Indicated horse power with natural draught	1,510
Steam pressure in boiler	220 lbs
Boilers	Patent Clyde water tube
Number of boilers	Two
Working pressure	220 lbs
Diameter of drums	Top drum 6 ft.; bottom drum 3 ft
Diameter of tubes	2 1/2 inches outside
Heating surface in one boiler	1,412 sq. ft
Grate area	50 sq. ft
Weight of one boiler complete without water	27 tons, 13 cwt., 3 qrs
“ “ with water	35 tons, 14 cwt., 1 qr
Feed pumps	Ordinary type, wrought off air pump levers
Diameter of pumps	3 1/2 inches
Stroke	16 inches
Propeller	Built type; four blades; manganese bronze
Diameter of propeller	12 ft
Pitch of propeller	16 ft

per drum and replaced in the same way without cutting out any of the other tubes or parts of casing. The manufacturers say they are not the lightest possible water tube boiler, nor have they the greatest amount of heating surface—too often gained at the sacrifice of working efficiency—but they are fit to stand the everyday wear and tear of constant service.

Messrs. Darling Brothers, Reliance Works, Montreal, report the following sales recently made:—J. Alex. Stevenson, Montreal, 100 h. p. Webster Vacuum Feed Water Heater, also one of 150 h. p. for Dominion Oil Cloth Company, Montreal. They have supplied Morse Valve Reseating machines to Montreal Street Railway Co., Riordon Paper Co., Merritton, Ont., James Shearer, Montreal, and have shipped 50 of these machines to L. M. Gartman, London, Eng. They have also supplied two Wright's reducing indicator motions to Toronto Street Railway Co., one to Board of Trade Building, Montreal, one to Northey Mfg. Co., Toronto.



WM. & J. G. GREEY, TORONTO, ONTARIO.

Manufacture THE VICTOR WHEAT HEATER,

The benefits secured are

WHITER FLOUR,

UNIFORM GRADES,

CLEANER OFFALS,

BROADER BRAN.

.. IMPORTANT .. TO LIGHTING STATIONS.

OUR NEW

ALTERNATING CURRENT INDICATORS

Are now ready. Before purchasing elsewhere send for our New Catalogue, which contains the prices and description of the above instruments, and also a list and prices of other new instruments of our manufacture.

WHITNEY

ELECTRICAL INSTRUMENT CO.

Sherbrooke, P.Q., Canada.

Penacook, N.H., U. S.

.. AGENTS ..

Henry F. Kellogg, General Selling Agent.

- BOSTON, MASS., W. S. Hill. BALTIMORE, M.D., The Poole Electric Co. CHICAGO, ILL., Electric Appliance Co. CINCINNATI, O., Kowotny Electric Co. HALIFAX, N.S., John Starr, Son & Co. Ltd. NEW YORK CITY, Geo. L. Colgate, 136 Liberty Street. SAN FRANCISCO, CAL., California Electrical Works. TORONTO, ONT., Toronto Electrical Works.

LAW.

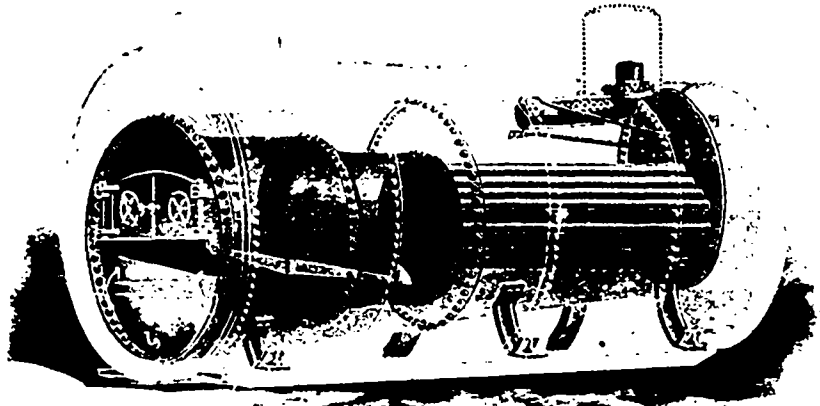
W. B. BENTLEY & CO.,

BARRISTERS, SOLICITORS, ETC. Spec. Bally. COMMERCIAL & LAW. Toronto, Canada. Cable address, "Bentley," Toronto. Patents procured in Canada and Foreign Countries.

Robb==Armstrong

= = Automatic Engines

SIMPLE, TANDEM AND CROSS COMPOUND.



MONARCH ECONOMIC BOILERS

Require no Brickwork and give the HIGHEST POSSIBLE ... ECONOMY. ...

Robb Engineering Co., Ltd., Amherst, N. S.

AGENTS:

The Canada Machinery Agency, 345 St. James Street, Montreal. Wm. McKay, Seaforth, Ont., Travelling.

A. C. NEFF, CHARTERED ACCOUNTANT. Canada Life Bldgs., Toronto. A specialty of Audits and Investigations or work requiring expert knowledge of Accounts of Manufacturers, Companies, Estates, Municipalities, etc.

Emery Emery Wheels, Grinding Machines, Grinders' Supplies. Quick process and large stock. WHEN IN A HURRY ORDER OF The Tanite Co., Stroudsburg, Pa., U. S. A. New York, 161 Washington St. Cincinnati, 1 West Pearl Street. London, Eng., Thos. Hamilton, 60 Cannon St., E. C.

ON HAND

1 16x42 Reynolds' Corliss Engine

FOR SALE VERY LOW.

I. Matheson & Co., Engineers,

NEW GLASGOW, NOVA SCOTIA.

The Canadian Canoe Co., Ltd.

BOX 107, : PETERBORO, ONT.



We build Canoes of CEDAR, BUTTERNUT, BASSWOOD and other woods, for Paddling, Sailing, Racing, Fishing, Etc. Skiffs of all sizes.

STEAM LAUNCHES to carry six persons, from \$175 up.

... WRITE FOR CATALOGUE ...

Waterloo, Ont., had decided to put in a sewage system.

The factory of the Foam Yeast Co., Toronto, was damaged by fire on April 1st, to the extent of \$8,000.

Mr. Sayer, St. Catharines, Ont., will remove his carpet manufactory from St. Catharines to Blenheim, Ont.

Messrs. Aloyes Bauer & Co's shoddy factory, Waterloo, Ont., was destroyed by fire March 14th. Loss about \$3,000.

The Portage la Prairie oatmeal mill has been sold to Messrs. Alex. McKinnon, and Andrew Kennedy for about \$10,000.

The Niagara River Tramway Co., has been incorporated with a capital stock of \$40,000 to establish a cable tramway over the Niagara River, in the Counties of Lincoln and Welland, Ont.

The Oriental Steam Laundry Co., Toronto, Ont., are applying for incorporation with a capital of \$20,000 to manufacture laundrymen's supplies, and to carry on a general laundry business, etc.

The Barrett Milling Co., Port Hope, Ont., are applying for incorporation with a capital stock of \$49,000 to acquire the business, etc., heretofore carried on by Harold Barrett Miller, of Port Hope, Ont., and to manufacture flour and other milling products, etc.

The Hamilton Bridge Works, Hamilton, Ont., are applying for incorporation with a capital stock of \$10,000 to acquire the business formerly owned and carried on by the Hamilton Bridge Co., and to carry on business as manufacturers of steel and iron bridges, ships, etc.

The A. R. Williams Machinery Co., of Toronto, have been incorporated with a capital stock of \$300,000 to manufacture engines, boilers, motors, steamships, etc., and to take over the business of the firm of A. R. Williams, Toronto, and that of The Canada Machinery & Supply Co., of Brantford, Ont.

We are in receipt of the following notice which explains itself:—
Office of The Packard Electric Co., Ltd. Montreal, April 1st, 1895.

We beg to announce that the business heretofore carried on by the Dominion Electric Co., Ltd., and The Packard Lamp Co., Ltd., has been acquired by The Packard Electric Co., Ltd., a new company recently incorporated by a Charter of the Dominion of Canada. This company has assumed the obligations of the old companies and will continue the business. Yours very truly,
The Packard Electric Co., Ltd., Chas. C. Paige, Manager.

Thompson & Co.

SHERBROOKE, QUE.

—Manufacturers of—

BOBBINS & SPOOLS

every description for

Woolen, Cotton & Rope Mills

Extra Facilities for supplying New Mills and filling large orders.

WRITE

FOUNDRY FACINGS

Ceylon Plumbago Foundry Supplies, Fire Brick, Fire Clay and Moulding Sand.

Canadian Agents for

COLLIAU CUPOLA FURNACE.

—0—

HAMILTON FACING MILL COMPANY,

Hamilton, Ontario.

Tenders will be received up to April 15 for constructing a water works system at Digby, N. S.

The Canadian Mineral Wool Co., Toronto, have removed their office from 122 Bay St. to 24 Scott St.

R. Anderson, Ottawa, has ordered another electric motor from The Toronto Electric Motor Co., Toronto.

Stuart & Harper, Winnipeg, Man., will handle The Toronto Electric Motor Co.'s electric machines in Winnipeg.

R. H. Toye, Kingston, Ont., has installed a 8 h.p. electric motor by The Toronto Electric Motor Co., Toronto.

The R. S. Williams & Sons Co., Toronto, Ont., has been incorporated with a capital stock of \$500,000 to manufacture pianos, organs, and other musical instruments.

The Deschenes Electric Co., Aylmer, Que., are applying for incorporation with a capital stock of \$60,000 to construct works to manufacture electricity for light, heat and power, etc.

The Disney & Devlin, Mfg. Co., Hanover, Ont., are applying for incorporation with a capital stock of \$24,000 to operate a planing mill and sash and door factory, iron foundry, etc.

The Bennett & Wright Co., of Toronto, Ont., are applying for incorporation with a capital stock of \$98,000 to manufacture boilers, furnaces, and other heating apparatus and appliances, etc.

Duncan & McLennan, Campbellton, N.B., have installed a 150 light dynamo made by The Toronto Electric Motor Co., Toronto, and have ordered another for 60 lights from the same concern.

The Tulameen Mining Co., British Columbia, has been incorporated with a capital stock of \$20,000 to carry on the business of hydraulic mining, and to establish works and factories to operate the ore acquired, etc.

At Toronto on April 3rd fire destroyed the buildings occupied by W. A. Bradshaw & Co., soap manufacturers; Britten & Bradshaw, chewing gum manufacturers; and the Anglo-American Novelty Co., manufacturers of check books. Loss about \$20,000.

The Welland Vale Mfg. Co., St. Catharines, Ont., who recently made a departure in their business by the manufacture of high-class bicycles, have established a very handsome and attractive salesroom in Toronto, at 133 Yonge street, under the superintendence of Mr. Bert Brown, where these goods are on sale.

The Municipal authorities of Kingston, Ont., have perfected arrangements with the Dominion Steel & Blast Furnace Co., of Youngstown, Ohio. The report will be approved by the Council and a by-law will be submitted to the electors asking for permission to raise \$250,000, wherewith to pay a bonus to the enterprise, etc.

The Welland Vale Mfg. Co., St. Catharines, Ont., manufacturers of the Perfect, and Garden City bicycles, have sent us their bicycle catalogue for 1895. It is complete with illustrations and prices of their wheels, and sundries required for bicycles. It also contains a table by which the gear of a wheel can be figured. The following is a list of some of their machines:—Perfect Racer, Perfect Roadster Model A, Perfect Roadster Model B, Garden City Roadster and Perfect Ladies.

THE PETERBOROUGH

CARBON AND PORCELAIN CO.,

LIMITED

MANUFACTURERS OF

Carbon Points for All Systems of Arc Lights

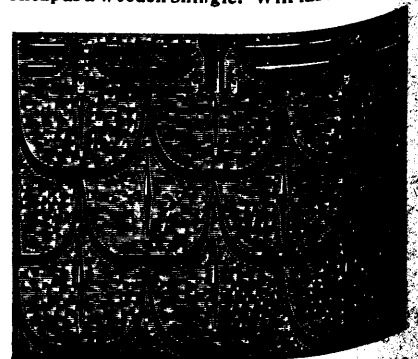
BATTERY PLATES, CARBON BRUSHES, and all kinds of PORCELAIN for Electrical and Hardware Lines.

All goods guaranteed equal in quality to the best manufacturers in the world.

PETERBOROUGH,
ONTARIO.

METAL ROOFING.

Those contemplating building the coming season would do well to send for our catalogue. Cheap as a wooden shingle. Will last a life time.



Guaranteed to be Water, Wind, Storm, Fire, and Lightning Proof.

THE PEDLAR METAL ROOFING CO.
Office and Works, - OSHAWA, ONTARIO.
In answering please mention this paper.

ADVERTISE
IN THE
CANADIAN MANUFACTURER

Mr. Barker, Burford, Ont., is about building a large sawmill. The Murphy Cheese & Butter Mfg. Co., will build a factory at Hungerford, Ont.

A large cheese factory under the management of Geo. Vance, is to be built at Kingston, Ont.

The Union Leather & Shoe Co., Winnipeg, Man., has been incorporated with a capital stock of \$45,000.

The drying kiln of the Royal City mills, Vancouver, B. C., was destroyed by fire March 20. Loss about \$8,000.

Wm. Faint's woollen mill, Ashburnham, Ont., was damaged by fire on March 22 to the extent of about \$500.

McGlynn's planing mill, and Smith's threshing machine works, in Montreal, were damaged by fire on March 21st to the extent of \$2,000.

J. J. McLaughlin, Toronto, has decided to rebuild his mineral water factory on Sherbourne St. Electric power will be used instead of steam.

The Stratford Mill Building Co., Stratford, Ont., are applying for incorporation with a capital stock of \$30,000 to manufacture mill machinery, etc.

The Londonderry Iron Co.'s blast furnace at Londonderry, N. S., has been rebuilt and is now 75 ft. high. The whole plant has been put in excellent condition.

The Winnipeg, Man., Street Railway Co., have awarded the contract for the engines, boilers, etc., for their new power plant to the Laurie Engine Co., Montreal.

The agricultural works of Sylvester Bros. Mfg. Co., Lindsay, Ont., were partially destroyed by fire on March 14. Loss about \$5,000. The factory will be running as usual in a few days.

The new steamer America, at Brockville, Ont., formerly Maud, will be equipped with an excellent electric plant. A search light will be put on her as powerful as the one now on the steamer St. Lawrence.

The Collins Bay Rafting Co., Collins Bay, Ont., have built a marine railway to enable them to haul their boats out of the water to be repaired, and they will also erect a sawmill to manufacture lumber, etc.

Messrs. Hephurn & Co., Preston, Ont., propose to transfer their saw factory to Brantford, Ont., if they can form a joint stock company with a capital stock of \$100,000. They will employ about seventy hands.

Pontbriand & Frere, Sorel, Que., are applying for incorporation with a capital stock of \$50,000 to manufacture engines, boilers, saws, plants for cheese and butter factories, etc.

The Laughlin-Hough Drawing Table Co., of Guelph, Ont., are applying for incorporation with a capital stock of \$55,000 to manufacture the Laughlin-Hough Drawing table, and drawing, sketching and designing tables, etc.

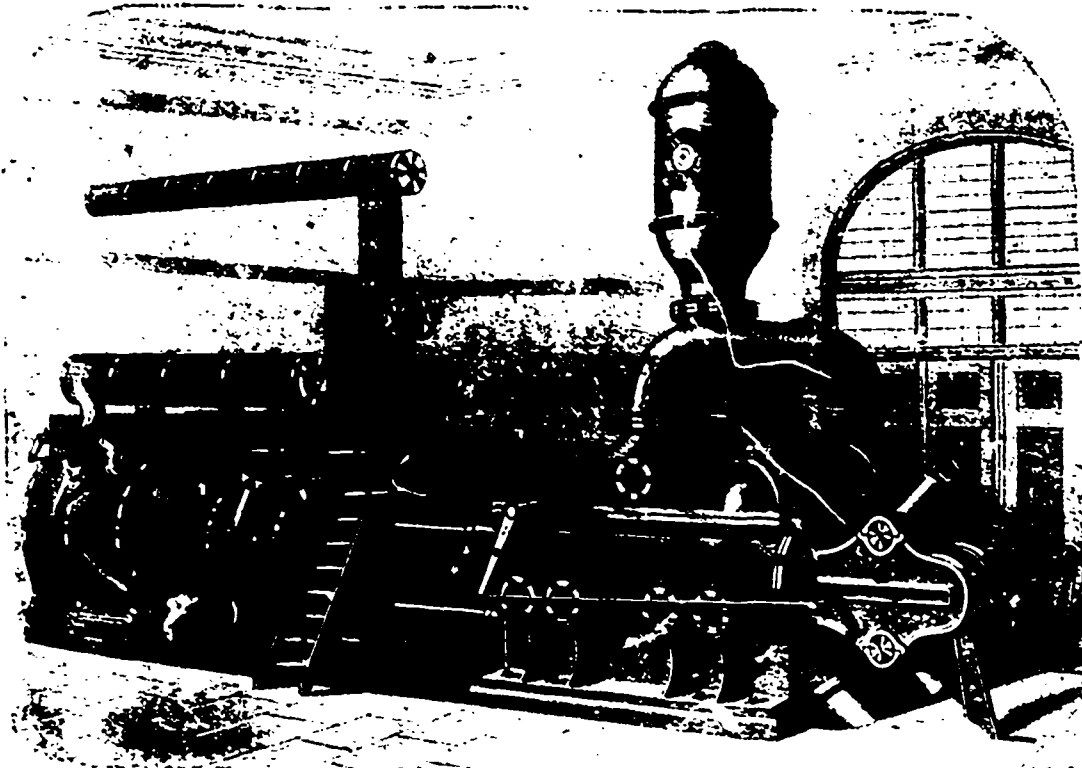
Mr. B. C. Steele, a member of the Platt & Washburn Refining Co., New York, was in Kingston, Ont., a few days ago. He has just come from North Frontenac, and believes coal oil and natural gas can be found in that district. His company will likely bore for oil in the township of Oso, on land given free for the purpose by Messrs. Thompson & Avery. The well be sunk about 1,800 feet. Mr. Steele says there would be no use in boring a less depth. Oil is not generally found at a depth of 500 or 600 feet. If oil is found Messrs. Avery and Thompson will be given a royalty.

The joint committee appointed by the City Council of Kingston, Ont., met last week to consider a letter received from the Dominion Steel and Blast Furnace Co., accepting the terms offered for the establishment of a blast furnace and rolling mills at that place. An agreement to be entered into between the corporation and the Blast Furnace Company was passed and sent to the company for their signature. When this document comes back, accompanied by the plans of the works proposed to be built, and the committee is satisfied as to the financial standing of the company, the Council will be asked to pass a by-law, to be submitted to the people, for permission to issue bonds for the amount to be lent to the company.

The Dodge Wood Split Pulley Co., Toronto, manufacturers of power transmission specialties and power saving appliances, have sent us one of their catalogues and revised price-lists for 1895. It is complete with illustrations and descriptions of their pulleys, clutches, etc. It also contains tables showing how to order these goods; auto-graph letters from manufacturers who are users of them and who give convincing evidence of their merit; and details of parts. Among the most important and exclusive specialties are:—Independence wood split pulleys with patent bushing system; iron centre wood rim dynamo and motor pulleys; special iron spider wood rim pulleys; wood rim separable fly wheels; patent disc wood split pulleys; Dodge patent American system rope transmission with special system of winders, slack take ups; compound system for outdoor or exposed drives, double wind system; main engine drives, electrical tell-tales electric let-offs; Dodge patent split friction clutches for pulleys couplings, etc.

JOHN M^CDOUGALL,

CALEDONIAN IRON WORKS, MONTREAL, QUEBEC.



General Agents
 in Canada for
 THE FAMOUS
Worthington
 Pumps
 Hydraulic
 Machinery
 Condensers and
 Water Works
 Supplies.

WORTHINGTON PUMPS ARE UNEQUALLED FOR EFFICIENCY AND ECONOMY

The Packard Transformer



The Transformer can be cut out of circuit and a burned out fuse replaced without the use of any tool whatever.



Packard
Transformer
Fuse Box
Complete.

(2-3 SIZE.)

The Packard Electric Co., Ltd., MONTREAL.

MAKERS OF PACKARD LAMPS AND TRANSFORMERS.

.....THE.....

Goldie & McCulloch Co.,

Limited,

Galt, Ontario,

MANUFACTURERS OF

STEAM ENGINES,
BOILERS,
WATER WHEELS,

Steam Engines, Boilers.

Water Wheels, Flouring and Saw Mill Machinery, Wood Working Machinery, Wool Machinery.

Fire and Burglar-Proof Safes, Vault Doors.

Wood Rim Split Pulleys, Friction Pulleys, Friction Clutch, Couplings, etc.

“Dumfries - Foundry,”
Galt, Ontario, Canada.

WM. & J. G. GREEY, TORONTO,
MANUFACTURERS OF

SUPERIOR CHILLED ROLLS.

Perfect Surface, Deep Chill, Hard, Tough, Durable, Guaranteed Free From Flaw.

—FOR—

Iron Rolling Mills,
Rubber Works,
Paper Mills,
Flour Mills, Etc.



For Rolling
Iron, Steel, Cast
Silver, Brass, Copper
Wire, Lead, Paper, Etc.

Have the Largest and Most Complete
Plant of Grinding and Corrugating Machinery in Canada.

Messrs. Moffatt & Kinch proprietors of The Ontario Iron Works, Peterboro' Ont., have dissolved partnership. Mr. Moffatt has sold out his interest to Mr. A. E. Kinch who will continue the business.

The following item appeared in a recent issue of the Manchester (Eng.) Guardian: It may interest our readers to learn that the Manchester Ship Canal was well supported by local firms last year. The arrivals of dyewood consisted of seventeen complete cargoes, of which no fewer than eight came to Bury, all for Messrs. Mucklow & Co. Of a total of 7,540 tons for the year, nearly one-half or 3,750 tons—was consigned to this firm, whose founder, Mr. Edward Mucklow was among the original shareholders and guarantors of the preliminary expenses when the great scheme was in its infancy. Messrs. Olive Bros., papermakers, Elton, also made extensive use of the Ship Canal last year for the conveyance of wood to be converted into pulp. The Dominion Dyewood & Chemical Co., Toronto, are sole agents in Canada for Messrs. Mucklow & Co.

The Dodge Wood Split Pulley Co., Toronto, have issued a circular which contains what they call "Facts for Consideration," the reference being to the wood split pulley manufactured by them. In this circular they speak of this pulley having been on the market for more than nine years, during which time more than 580,000 of them have been sold. Regarding their guarantee the company say: We guarantee every pulley made by us shall be, in every respect, as represented. We guarantee our pulley in every case to transmit from 25 to 60 per cent. more power, with the same belt, than any iron pulley made, with like tension belt. We guarantee the compression fastening in every case to be perfect, and to hold firmly upon the shaft. We guarantee the compression of wood on iron to hold stronger than set screws in any case, and to be the most perfect fastening ever invented. To summarize: We guarantee satisfaction entire. Any pulley found defective and not as represented, may be returned at our expense. We will allow any party who is skeptical as to the merits of our wood split pulley, and who means business, a trial of 30 days, and if not satisfactory, to be returned at our expense.

T. C. STEWART, Electrical Expert. C. M. ARNOLD, M. E. F. J. CROSS, E. E.

STEWART, ARNOLD & CO.,

CONSULTING ELECTRICAL ENGINEERS

... AND ...
MANUFACTURERS OF **ELECTRICAL APARATUS**

And Dealers in all kinds of Electrical Supplies.

We make a speciality of
ARMATURE AND ARC LAMPS.

All Work Guaranteed.
Repairs Promptly Executed.

164 KING STREET WEST.

AUBURN WOOLEN CO.....

PETERBOROUGH, ONT.

MANUFACTURERS OF

FANCY TWEEDS, ETC.

Selling Agents, D. MORRICE, SONS & CO., Montreal and Toronto

HAMILTON COTTON CO.

Hamilton, Ontario

DYERS, BLEACHERS

AND MANUFACTURERS OF

Warp Yarn, in Beam, Chain or Skein, White or Colored.

Single and Double Yarns, Cop Yarn, Single and Double Hosiery Yarn in all Colors, including genuine "Fast Black."

PAUL FRIND & CO., - TORONTO

Selling Agents for Beam Warps

A bonus of \$15,000 has been granted to J. C. McFarlane & Co., Acton Vale, Ont., towards the erection of a cigar factory which will give employment to from 50 to 70 hands.

Application will be made to the Quebec Legislation for a charter to form a joint stock company with a capital stock of \$99,000 to take over the leather belting and mill supply business of the J. C. McLaren Belting Co., Montreal, Que.

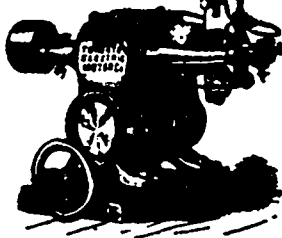
The F. D. Cummer & Son Co., Cleveland, O., manufacturers of hot air apparatus, dry kilns, etc., inform us that they have recently supplied one of their hot air systems, which is used for drying bricks, terra cotta, pottery, lumber, etc., having a very large capacity indeed, to a very prominent brick and terra cotta company in England. They are also in receipt of a cable from Belfast, Ireland, ordering a system for a large concern there engaged in the making of brick. They are now erecting a very large system for a concern in Canada, the apparatus to be used in drying moss, to be used as bedding for horses and other animals, it also having a very wide use besides for antiseptic purposes. The discovery of this bed of moss was a very important find indeed, and it may interest our readers to know that this material when dried is capable of absorbing fifteen to eighteen times its dried weight of moisture and volatile properties from materials with which it is mingled. The Cummer Company have also just received an order from England from a concern which has the reputation of being the largest manufacturers of soda ash in the world, for one of their largest drying machines, which is to be used by them in calcining their carbonate of soda. The Iron-ton Brick Co., of Ironton, O., have within the last few days placed an order with this concern for one of their hot air systems for drying bricks. The Company say that they guarantee that their hot air system will do more drying with a given amount of fuel than any other system now on the market; and that while they guarantee to evaporate twice as much moisture with a pound of fuel, they can show their system in operation where it is doing over three times as much work with a given amount of fuel as the steam system ever did which it displaced. This steam system to which they refer was, we are informed, supplied by one of the largest concerns in the United States, engaged in the making and supplying of steam hot air systems.

Toronto Electric Motor Co.

MANUFACTURERS OF

DYNAMOS

AND MOTORS



Our Motors give the Best Satisfaction and are cheap.

WORKS AND OFFICE:

107 & 109 ADELAIDE ST. W., TORONTO.

Penman Manufacturing Co., Ltd.

.... PARIS, ONT....

Manufacturers of...

Hosiery, Shirts, Drawers Glove Linings and Yarns

Selling Agents: D. MORRICE, SONS & CO., Montreal and Toronto.

ROSA MOND WOOLEN CO.

... ALMONTE, ONT...

Fine Tweeds, Cassimeres and Fancy Worsted Suitings
and Trouserings.

Guelph Woolen Mill Co., Ltd.

GUELPH - - ONTARIO

Manufacturers of

UNDERWEAR, HOSE, WHEELING, FINGERING and WORSTED YARNS EIDERDOWN FLANNEL, Etc.

Selling Agents: DONALD FRASER, MONTREAL: E. H. WALSH & Co., TORONTO

The S. Hayward Co., St. John, N. B., has been incorporated with a capital stock of \$200,000 to manufacture hardware, paints, oils, woodenware, etc.

The Three Rivers Iron Works Co., Three Rivers, Que., has been incorporated with a capital stock of \$100,000 to manufacture iron, steel, and brass wares, gas and water pipes, and machinery and implements used in foundries, etc.

Now that a clean 14-foot draught is in sight through the St. Lawrence system of canals, Canadians are awakening to their transportation facilities. The C.P.R. is having a side-wheel steamer built on the Clyde for the route between Owen Sound and the Sault. She is to have a speed of 22 miles an hour. The Thousand Island Steamboat Co., Kingston, is having built at Philadelphia a 20-knot side-wheeler to cost \$85,000. The King Ben, a new steamer, has just been launched at Kingston, for the Oswego, Kingston and Ottawa route; her dimensions are 111 feet long, 22 feet beam, 8 feet 6 inches depth of hold. The Ottawa River Navigation Co. are having built at Ottawa a steel steamer 158 feet on keel and 27 feet beam. A site is being selected at Midland, Ont. for a new dry dock to be 400 feet in length, 50 feet wide and 16 feet in depth.—Marine Record.

The British Columbia Iron Works, Vancouver, B. C., have increased the capacity of their machine shops by two rooms; a new bolt-making machine has been put in, and in addition a hydraulic press of 50 tons capacity specially adapted for car wheels and other mechanical work calling for compressing appliances of great strength. A compound condensing engine designed by Mr. Rebeck has also been put up. The company is now engaged in building a 300 horse-power boiler for operating the steam dredge of the B. C. Gold Dredging Co., also the dredging apparatus, etc. Stern wheel engines are being built for a new steamer to ply on Kootenay Lake, also a 50 horse-power marine engine and boiler for a steamer to ply on Burrard Inlet and the Gulf. Other orders involve complete equipments for three new canneries, the repairs and re-installment of the Anglo-British Columbia Cannery Co.'s plant, and all necessary fittings for a new cold storage concern in Vancouver. Two boilers, in addition to others previously made, are also being supplied to the New Vancouver Coal Co., Nanaimo, whilst Mr. A. Haslam, M. P.'s sawmill in the same city, is also being supplied with a boiler in addition to a steam logger lately made at the Iron Works for the same concern. 100 horse-power horizontal engine with boiler and machinery are in course of construction for Messrs. Robertson & Hackett's sawmill, and the iron work for the Tatlow block, Vancouver, is also under construction by the Company.

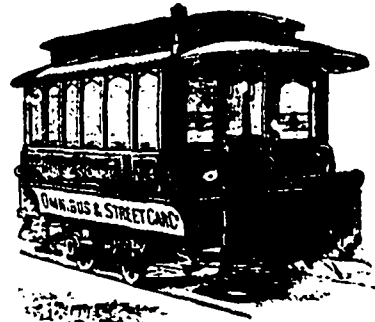
The Provincial Cann'g Co., Eburn, B. C., are applying for incorporation with a capital stock of \$100,000 to carry on the fish canning industry.

The Dunnville Electric Light Co., Dunnville, Ont., intend building a power house in which to instal an alternating plant of 1,000 lbs. candle power capacity.

The Buffalo Forge Co., Buffalo, N.Y., have a system to which they remind the thousands of blacksmiths throughout the United States and Canada also of the list of blacksmith's tools manufactured by them; and they say that this list is absolutely complete and exhaustive. Their system includes a large variety of appropriate literature some of the specimens of which, now before us, is exceedingly beautiful and artistic. It shows the progress of the development of the industry from the time when brick forges and heavy, cumbersome bellows were the styles upon which blacksmiths had to depend, to the portable forges and blowers such as are made by this company, which do not occupy a tenth of the space and are capable of doing ten times the work possible to be accomplished by the old style. The company will take pleasure in supplying this literature free to any who may be interested who will apply to them for it.

St. Charles & Pringle

BELLEVILLE, ONT.



Manufacturers of
Electric...
Cable...
and Horse
STREET CARS
Omnibuses, Horse
Wagons and Vehicles
of All Description.

HEMOLIN

PATENTED

THE Cheapest Black-producing Dye for Wool on the Market. Has all the advantages of Logwood with none of its inconveniences. Can be Dyed in one Dip, or may be employed in Wool Dyeing as a self-color, or in combinations, wherever Logwood is used, by following practically the same recipes.

This is not a mixture, but a new product for which patents have been granted in U. S. A., Great Britain, Canada, Germany, France and Austria, and use in these countries has increased constantly since its introduction.

MANUFACTURED BY

Wm. J. Matheson & Co., Limited, New York, U. S. A.

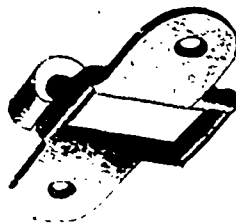
BRANCH HOUSES:---Boston, Providence, Philadelphia, Montreal.

WM. & J. G. GREEY,



TORONTO,

Carry full line
of the



LINK CHAIN BELTING AND ATTACHMENTS,

Also Manufacture any size of



Sprockets

For

Any Chain.



Jas. A. Cantlie & Co.

GENERAL MERCHANTS AND
MANUFACTURERS' AGENTS

ESTABLISHED 22 YEARS

COTTONS—Grey Sheetings, Checked Shirtings, Denhams, Cottonades, Tickings, Bags, Yarn, Twine, etc.

TWEEDS—Fine, Medium and Low Friced Tweeds, Serges, Cassimeres, Doerings, Etolfes, Kerseys, etc.

FLANNELS—Plain and Fancy Flannels, Overcoat Linings, Plain and Faced Dress Goods, etc.

KNITTED GOODS—Shirts, Drawers, Hosiery, etc.

BLANKETS—White, Grey and Colored Blankets.

WHOLESALE TRADE ONLY SUPPLIED

ALBERT BUILDING, 290 ST. JAMES STREET, - - MONTREAL
20 WELLINGTON STREET WEST, - - - - TORONTO

Advances made on Consignments. Correspondence Solicited.

Ogilvie's elevator at Methven, Man., was totally destroyed by fire on March 22.

The Hudson's Bay Company will rebuild their flouring mill at Prince Albert.

The Ingersoll (Ont.) Electric Light and Power Co. are applying for incorporation.

The Julian Sale Leather Goods Co., of Toronto, Ont., has been incorporated with a capital stock of \$25,000 to manufacture pocket-books, purses, trunks, etc.

The mill committee at Elkhorn, Man., intend to form a joint stock company and erect a mill next summer. Mr. Rowland, of Oak Lake, will undertake the management.

The David J. Davidson Mills Purifier Mfg. Co., Sarnia, Ont., are applying for incorporation with a capital stock of \$95,000 to manufacture mill purifiers, scourers, graders, etc.

The Diehl Mfg. Co., Toronto, has been incorporated with a capital stock of \$30,000 to manufacture mantels, furniture, piano keys, and other articles of wood or ivory, and also tiles, grates, etc.

The Smiley-Hemstreet & Co., Otterville, Ont., are applying for incorporation with a capital stock of \$24,000 to manufacture ladies' and gents' clothing, boots and shoes, dry-goods, furniture, groceries, etc.

The Bridgetown, N. S., furniture factory has been purchased by Messrs. Mark Curry, Albert S. Curry and Byron Bent, of Amherst, N. S., who intend to turn it into a factory for the manufacture of all kinds of building materials, doors, sash, etc.

D. L. Shannon, Saskatchewan, who recently sold the machinery of his sawmill at Prince Albert to Smyth Bros., of Steep Creek, has purchased a 50-horse power engine and boiler, and a more extensive outfit of machinery, and is fitting up his mill to manufacture lumber, shingles and lath. The capacity of the new mill will be 20,000 feet of lumber, 20,000 shingles and 30,000 lath per day. About twenty men will be employed during the summer.

The Royal Electric Company, Montreal, have their new machine shops nearly completed but it will be May 1st before the machines are in and ready for work. The building is of steel with glass roof which affords good light to every part. It is 200x100 ft., with a crane way extending the whole length and two galleries on each side. The space of the crane is 45 feet which leaves 25 feet clear on each side for the galleries. There is 40,000 square feet of floor space, which makes this one of the finest machine shops in the Dominion.

John Bain, Elora, Ont., purposes enlarging his woollen mill.

The Mattawa Electric Light & Power Co. has increased its capital stock from \$10,000 to \$30,000.

The Hough-Laughlin Drawing Table Co., have decided to locate in Guelph. They will fit up the McRae woollen mills for their factory.

The Heap furniture factory, at Vancouver, B. C., was totally destroyed by fire on March 7. The loss is estimated to be about \$20,000.

The Prescott Elevator Co. has been incorporated with a capital stock of \$175,000 to carry on the business of grain dealing and elevating, etc.

The Guelph Heading & Stave Co. has been incorporated with a capital stock of \$3,000 to manufacture barrel-heading, staves, hoops, shingles, etc.

The Niagara River Tramway Co. has been incorporated with a capital stock of \$40,000 to establish a cable tramway over the Niagara River in the counties of Welland and Lincoln.

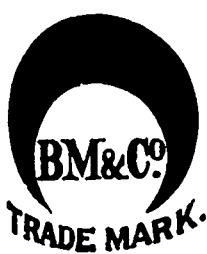
The Pacer Solid Steel Car Wheel Co., of Perth, Ont., has been incorporated with a capital stock of \$320,000 to manufacture wrought or forged car wheels, locomotive wheels and other flanged wheels.

The W. G. T. Labelling Machine Mfg. Co., Vancouver, B.C., has been incorporated with a capital stock of \$25,000 to acquire the patent of W. G. Tretlawey of that place for a labelling machine, and to manufacture the same.

Mr. James Lochrie, Toronto, manufacturer of the celebrated Antelope Bicycles has sent us one of his descriptive and illustrative catalogues. It has reference to the different wheels made by him, and contains the following list of his machines:— Antelope Racer, Light Roadster, Heavy Roadster, Ladies' Antelope, Antelope Tandem, and Antelope Triplet. It also contains illustrations of the separate parts of bicycles which he makes.

The Perkins Electric Switch Mfg. Co., Hartford, Ct., have a large force of men at work preparing their incandescent lamp factory, and expect in about a month to be able to fill orders. The factory for this purpose has been built for several months, but actual preparation for the manufacture of incandescent lamps had been suspended pending the Bate decision; but in a very short time all will be in working order, and an incandescent lamp factory embracing the most modern improvements may be expected. The Perkins Co. are also busy on their regular line of specialties, such as sockets, switches, cut outs, etc., and are having a great demand for the Waterhouse-Gamble incandescent arc lamp.

BRUNNER, MOND & CO., LTD., NORTHWICH, ENG.



MANUFACTURERS OF
PURE ALKALI
GUARANTEED 58 DEGREES.

The Strongest and Purest Form of SODA ASH in the Market, and the Most Economical Form of SODA for the Manufacture of

**SOAP, GLASS, PAPER,
WOOD PULP AND COLORS,**
also for PRINTERS AND BLEACHERS.

and BLEACHING POWDER.

WINN & HOLLAND, Montreal

Sole Agents for the Dominion of Canada

THE PAUL FRIND

Woolen Machinery Company, Ltd.

.....TORONTO.....

Dealers in and Manufacturers of

WOOLEN MACHINERY. MILL SUPPLIES.

Specialties:

English H & T Steel Card Clothing.

Williams' Heddles, Shuttles, Reeds, Heddle-frames, Loom Repairs.

DODGE WOOD SPLIT PULLEYS

Best Oak Tanned Belting and Lace Leather.

Canada Chemical Mnfng. Co.

Manufacturers of

Sulphuric, Nitric and Muriatic Acids, Commercial and Chemically Pure. Mixed Acids for Explosives, Liquid Ammonia, Glauber Salts. Copperas, Muriate Tin, Tin Crystals, Acetic Acid, Nitrate Iron, Bisulphite Soda, Acid Phosphate for Baking Powders and General Chemicals. Fertilizers, Etc.

LONDON,

ONTARIO

The Cone Carriage Coupler Co., of Palmerston, Ont., will increase their capital stock from \$25,000 to \$50,000.

Mr. J. L. Jones, Toronto, the well known wood engraver, has formed a company under the name of The J. L. Jones Engraving Co., The new concern have removed into more commodious quarters at 6, 8 and 10 Adelaide street west, where, in addition to increased facilities for producing every description of wood engraving, they have a new and complete plant for photo-engraving, etc.

Wm. J. Matheson & Co., New York and Montreal, have sent us their bulletin No. XXXIV. having reference to the Alizarin Black 4 B, pat., manufactured by Leopold Cassella & Co., for whom they are sole agents in Canada and the United States. The Matheson company periodically issue bulletins of the latest novelties of practical value in dyestuffs, illustrated generally with dyed samples and receipts, as well as sample cards with dyeings and receipts. There are no charges for them, and those receiving them are under no obligations to the senders.

The Wellington, B.C., Enterprise suggests as follows a possible use for a small part of the bracken which, as a noxious weed, grows so superabundantly on much of our newly cleared farmland: "The Alberni Paper Mills, which were recently compelled to close down, were, we are informed, the only mills in America which manufactured paper out of fern leaves. These ferns grow in great profusion in that district and Mr. Dunbar, the manager, was in great hopes of ultimately turning this bracken to great commercial use. It is hoped that this well-equipped mill will soon be running full blast again." The paper mills in question could—if running—at most use only a very small amount of the Island's bracken. Every use, however partial, of a weed product is, nevertheless, a gain agriculturally and otherwise.

Messrs. Raney, Reid & Selby, Kingston, Ont., have issued a circular in which they announce that they have taken over the premises and plant of the Kingston Foundry and Machinery Co., that place, and will carry on the same lines of manufactures.

The Goldie & McCulloch Co., Galt, Ont., have recently accepted some important orders for machinery included in which are the following:—A plant for the new Incline Railway for the East Hamilton Improvement Company, running to the top of the mountain, including three engines and boilers, and the entire outfit of machinery required for the completion of the job. This company also supplied the machinery for the Hamilton Incline Railway at the head of James street, that city. The Toronto Ferry Company have placed their order for two 100 h.p. Wheelock engines and two 125 h.p. steel boilers. The Canadian General Electric Company are at present having two tandem compound Wheelock engines placed in the Brantford Street Railway Company power-house. Mr. Geo. Elpbick, of Pinkerton, has given his order for mill machinery for his new mill. Mr. Geo. Gray, of Harriston, has ordered a new steel boiler and wood tools. John Campbell, of St. Thomas, a 200 h.p. compound Wheelock engine and three steel boilers. Ross & Taylor, Exeter, a new Wheelock engine. W. C. Edwards & Co., Rockland, Ont., a new 150 h.p. Wheelock engine; W. B. Wood, Brantford, mill machinery; Ottawa Porcelain & Carbon Co., 60 h.p. engine and boiler, and vault doors; Anderson & Co., Walkerton, wood tools; Gilmour & Hughson, Hull, two large steel boilers and stack; C. A. Kent, Truro, N.S., wood tools; Ingersoll Packing Co., 100 h.p. boiler; E. Stone, Waterloo, Que., engine, boiler, and wood tools; Ogilvie Milling Co., Winnipeg, four large steel boilers; Montreal Street Railway Company, wood-rim split pulleys; Macpherson & Schell, Alexandria, wood tools; Phielon & Co., Ottawa, wood tools; the Globe Woolen Mills Company, Montreal, 250 h.p. engine.

GEO. WHITE FRASER,
Consulting Electrical Engineer.

C. E., D. T. S.,
A. Am. Inst. Elec. Eng.

Electric Railways and Electric Light Construction Superintended.
18 Imperial Loan Building, Toronto.

TORONTO CARPET MNFG. CO., Ltd.

TORONTO

Were awarded Gold Medals at the World's Columbian Exhibition, Chicago, for their

INGRAIN
and --
"Imperatrix" Axminster **CARPETS**

SEVEN QUALITIES OF INGRAINS

Kensington Art Squares, Axminster Mats, Rugs,
Squares, Body Border and Stairs.

Esplanade and Jarvis Sts., - Toronto

The Canadian Colored Cotton Mills Co.

FALL 1894

Ginghams, Zephyrs, Cheviot Suitings, Flannelettes,
Dress Goods, Skirtings, Oxfords, Shirtings,
Cottonades, Awnings, Tickings, etc.

NOW READY SEE SAMPLES IN WHOLESALE HOUSES

D. Morrice, Sons & Co.

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MONTREAL and TORONTO.

Cassidy, Bonner & Co.,

Manufacturers of

Leather Belting, Lace Leather & Mill Supplies,

MONTREAL.

ALEX. P. MENDE & COMPANY 14 Water St.,
NEW YORK,

MANUFACTURING CHEMISTS.

FAST ONE DIP COLORS, F Dyeing and Printing of Cot-
ton, Woolen, Mixed
BLACKS AND CHEMICALS O Fibres, Etc., & c.
R SHADES MATCHED.

German Finishing Paste
German Warp Dressing
Cotton and Merino Softeners
Wool and Cloth Scouring, etc., etc.
Cordage and Carpet Size
Shade Cloth Colors and Size
Belt Dressing

The Industrial Economizer Apparatus patented, for reclaiming the valuable products from waste waters. Apparatus in operation at our works. Patented June 26th, 1894.

This means a saving to you of thousands of dollars every year.

I. Butler & Co. Distillers of Benzole, Naptha,

and Manufacturers of Carbolic Acid and Varnish.

303 Front St. East, - - - TORONTO.

FERGUSON & PATTINSON

PRESTON : : : ONT.

Manufacturers of....

Fine and Medium **TWEEDS.**

The Ottawa Saw Works Co., Ottawa, inform us that they are busily engaged filling orders for their goods. They have recently made important shipments to British Columbia and to Nova Scotia.

The Montreal Electric Co., Montreal, agents for the Fensom Elevator Co., of Toronto, report having changed over freight and passenger elevators in Nordheimer's building, Montreal, from hand to electric. The freight is a 6 k.w. motor, belted, while the passenger is a 7 1/2 k.w. motor direct connected, operated in a 250 volt circuit.

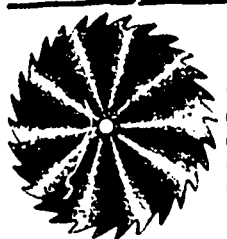
Mr. A. Lemire, Wotton, Que., informs us that he is meeting with success in the sale of his stone lifter and stump puller, recently patented by him. The machine is mounted upon stout wheels and can be moved from place to place, and it has capacity to lift a weight of 18,000 pounds. Within this capacity it can raise stones from the earth and deposit them in walls four and a half feet high. It is strongly built, simple in its mechanism, and not liable to get out of order.

The Massey-Harris Company contemplate building another large addition to their works in Toronto during the present season. The building to be erected will be a four-storey wing, extending 90 feet in length, from the north side of the machine and wood shops, and 60 feet in width. The basement will be used for testing malleable castings. The first floor will be used as a tool room, where all the steel tools used in the machine shops are made and repaired. The second flat will be used as a pattern and experimental department, and the top flat as a paint-mixing room and storehouse. The large four-storey building at the east end of the moulding shop, now used as an experimental department, will then be converted into a fire-proof building for the storage of patterns, which are of immense value. The superintendent reported that the prospects for a good season's business were brightening, and that the blacksmith and bar shops had commenced working ten hours, the whole factory having been on short time.

The Ottawa Porcelain and Carbon Co., Ottawa, recently incorporated, have contracted for the erection of the new buildings for their works, it being expected that the works will be in operation by the first of July. Their premises are 200 feet square, upon which are to be erected three two-storey and eight one-storey buildings, also a large warehouse. When completed the capacity of these works will be to produce 1,500,000 carbon points per month.

Mr. John Forman, 650 Craig St., Montreal, has fitted up a laboratory and has put in a very fine set of instruments including a photometer, a wattmeter and a voltmeter, for testing the candle power, amount of current consumed and efficiency of incandescence lamps. Mr. Forman invites users of incandescence lamps to send him a sample lamp of those they are using and he will test them free of charge, sending back a statement giving amount of current condensed at different voltages, the watts per candle power, and mean efficiency of lamp.

Messrs. Stevers, Hamilton & Co., manufacturers of iron working machinery, Galt, Ont., inform us that they have made several large shipments lately, among which they name: Cossitt Bros., Brockville, Ont., one large Universal Milling machine, two 20-inch drilling machines, one shaping machine; Verity Plow Co., Brantford, Ont., two 20-inch drilling machines; Ahearn & Soper, Ottawa, one shaping machine; Geo. Bailey, Ottawa, one shaping machine; McFarlane Bros., Ottawa, 20-inch lathe and one shaping machine; E. G. Shepherd, Ottawa, one shaping machine; Ottawa Porcelain & Carbon Co., Ottawa, one 20-inch drilling machine, and one shaping machine; Niagara Falls & Park River R. R., Niagara Falls, one 22-inch lathe, one 20-inch drill, one 16x20-inch shaper; Western Wire Nail Co., London, Ont., one 20 inch drilling machine; Joliette Foundry Co., Joliette, Que., one 20-inch drilling machine; Warring, White & Co., St. John, N. B., one 16x20-inch shaper, and one iron turning lathe. They have also shipped 36 sensitive drilling attachments to parties in England.



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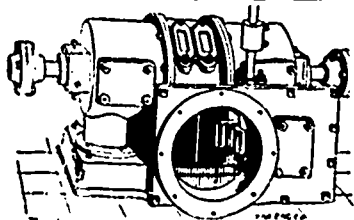
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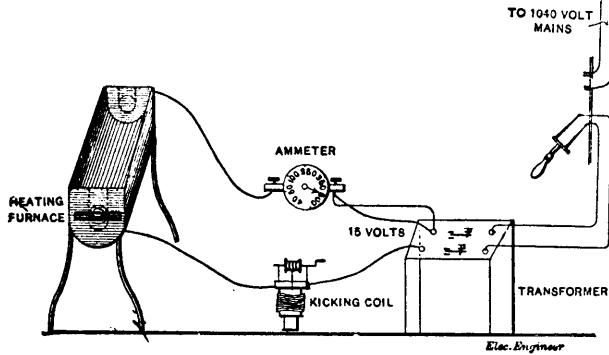
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A New Electric Heating Furnace.

The variety of ways in which electric current can be applied for heating purposes seems to be steadily on the increase. Thus heat can be applied directly to the body by passing the current through it either by the direct or alternating current as in Prof. Thomson's welding process. It can also be subjected to the arc as in the Bernardos process. Again it can be heated under water as in the Hoho process, and finally, the object to be heated can be brought into contact with another body previously heated by the passage of the current. It is an application of the last mentioned kind that has recently been made in Montreal where the Montreal Electric Co., by order of Jas. W. Pyke, that city, Canadian representative for Messrs. Siemens Bros. & Co., have lately installed a furnace for heating iron



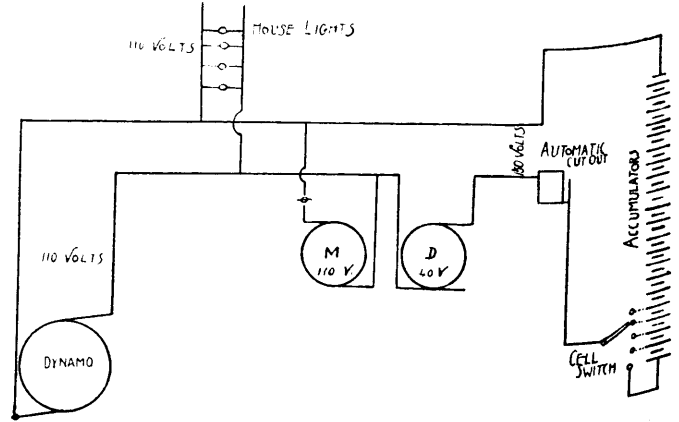
NEW SIEMENS ELECTRIC HEATING FURNACE.

strip used in the manufacture of horseshoe nails at the rolling mills of Peck, Benny & Co., Montreal. The accompanying diagram shows the arrangement. The Local Lighting Co.'s mains are run in delivering alternating current at 1040 volts to a Siemens transformer which reduces it to 12½ or 15 volts as required. The secondary flexible cables pass through an ammeter built on the dynamometer principle, also through a kicking coil having a movable core, and thence to the furnace. The furnace consists of a carbon tube 24 inches long, with one inch bore and walls ½ inch thick, the tube being covered with sand. The current at 12½ or 15 volts passes through this tube, bringing it to a white heat. 500 amperes is usual current allowed, but at starting is increased slightly to hasten the heating of the car-

bon tube which then decreases in resistance allowing the current to be set at normal. It is intended for continuous feed and will heat 5 inches of strip per minute. An experimental apparatus can be seen at the Montreal Electric Co.'s establishment, 302 St. James St.

The Crompton Booster.

At the request of the Canadian representatives for Crompton & Co., of London, Eng., the Montreal Electric Co. have lately installed at the Royal Victoria Hospital, Montreal, a booster in connection with their storage battery plant. The booster allows them to light the house circuits at the same time they are charging the battery. The accompanying diagram shows the principle. Heretofore it was necessary to run the dynamo for charging alone, speeding it up to the required voltage, which, of course, was too high to allow of their running their lamp circuits at the same time.



THE CROMPTON BOOSTER.

The booster is arranged so that the current can also be switched in on their 3-wire bus-bars, which then supplies the boosted current from one circuit when the motor is fed from the other. The batteries can also be discharged either on their two wire or three wire bus-bars. The amount of current furnished to the batteries is 50 amperes normal. Mr. John Forman, 650 Craig street, Montreal, is the Canadian representative of the Crompton Company.

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CANADIAN PATENTS.

The following patents have been issued from the Canadian Patent Office, from January 17 to January 29, 1895, inclusive.

Information regarding any of these patents may be had on application as follows:—

- Fetherstonhaugh & Co., Bank of Commerce Building, Toronto.
 - Ridout & Maybee, 103 Bay street, Toronto.
 - A. Harvey, Central Chambers, Ottawa.
 - J. A. Grenier, Imperial Building, Montreal.
- Copies of American patents corresponding to Canadian patents can be procured from either of these attorneys for the sum of twenty-five cents each.
- 47,934 Automatic rivet making machine, R. G. Beker and Geo. E. Small, Montreal, Que.
 - 47,935 Electric railway, The Thomson, Houston International Electric Co., Portland, Maine.
 - 47,936 Mode of controlling magnetic energy, H. M. Paine, Newark, N. J., and A. R. Brandly, New York, N. Y.
 - 47,937 Wood cutting machine, The International Wood Working Co., Passaic, N. J.
 - 47,938 Wood cutting machine, The International Wood Working Machine Co., Passaic, N. J.
 - 47,939 Tack driving machine, C. S. Luitwieler, Newton, Mass.
 - 47,940 Window frame and sash, Chas. Day Morson, Park Hill, Ont.
 - 47,941 Self-fastening hooks and eyes, Harry Davidson and Alfred C. Clapp, New York, N. Y.
 - 47,942 Toy, T. S. Thorn, Plainfield, N. J.
 - 47,943 Mail and express car, Frank Rowley, West Superior, Wis.
 - 47,944 Electric battery, R. McLaughlin McDonald and Alex. McDonald, Dalmuir, Scotland.
 - 47,945 Weather strip, W. J. Brown, Toronto, Ont.
 - 47,946 Method of producing potassic cyanide, Wm. M. Mackey, Leeds, York, Eng.
 - 47,947 Hernia Truss, Wm. Whittier Turver, Toronto, Ont.

- 47,948 Wire fence, Geo. Lehberger, Newburgh, N. Y.
- 47,949 Hot water tank, Eugene S. Manny et Wm. Robinson, Montreal, Que.
- 47,950 Match box, The E. B. Eddy Co., Hull, Que.
- 47,951 Knobb attachment, Ellen Maloney, Rochester, N. Y.
- 47,952 Fore-leg spreader for horses, Geo. Glasceck and Alva Glascock, Veedersburg, Ind.
- 47,953 Crayon or Pencil, A. K. Cross, Boston, Mass.
- 47,954 Pump, P. A. Myers, Ashland, O.
- 47,955 Cold storage chamber, John Barrett Van Vlack, VanVlack, Ont.
- 47,956 Lace curtain frame, Millie V. Bonsall, Salem, O.
- 47,957 Combination tool, Wm. Siras Clay, D. R. Miller, Harrisburg & Miller I. Kast, Mechanicsburg, Pa.
- 47,958 Coffee pot holder, Chas. E. Presnell, Sedgewickville, Mo.
- 47,959 Coin feed gas meter, R. T. Glover and G. J. Glover, Clerkenwell, London, Eng.
- 47,960 Machine for the manufacture of cigars, Jean Reuse, Enghien, Belgium.
- 47,961 Brake shoe, Archibald Brake, Toronto, Ont.
- 47,962 Weather strip, Chas. Howell Stainton and Peter F. Farrish, Toronto, Ont.
- 47,963 Pneumatic tire, Norman Knowles and Wm. Philipson, Washington, Lancaster, Eng.
- 47,964 Method of and apparatus for ventilating cars, M. B. Stafford, N. Y.
- 47,965 Submerged way, M. Alberto de Palacio, Madrid, Spain.
- 47,966 Washing machine, Chas. Krentziger, Waterloo, Ont.
- 47,967 Cutter for trimming cheese boxes, J. A. Kinsells, Lancaster, Ont.
- 47,968 Spoke attachment for vehicle wheels, Louis Rastetter, Fort Wayne, Ind.
- 47,969 Raisin seeding machine, Charles L. Spencer, Providence, F.I.
- 47,970 Device for heating and ventilating houses, etc., Jno. Cinnamon, New Brighton, N. Y.

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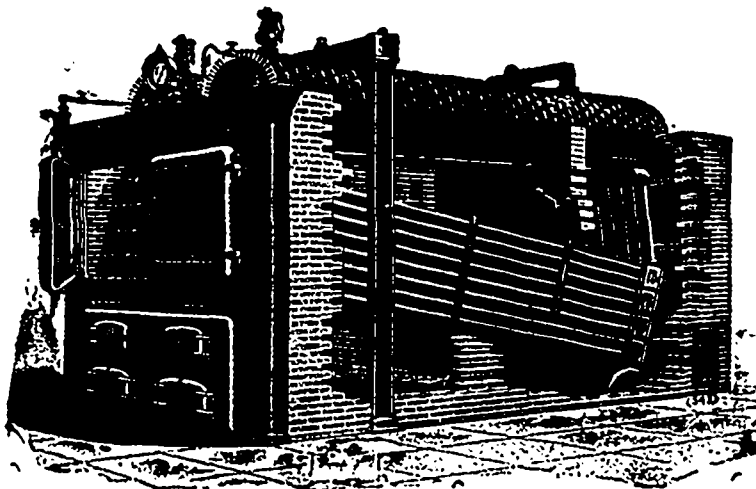
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- 47,983 Liquid fuel burner, A. J. Fowler, and Jno. Young, London, Ont.
- 47,984 Sheet metal pipe, J. W. Abrahams, and Hy. A. Marlin, Allegheny, Pa.
- 47,985 Portable forge, Robt. Sebastian Bozon, Wm. P. W. Brown and A. E. W. Browne, Birmingham, Eng.
- 47,986 Safety device for gas burners, Frederic Reiset, Katowah, N.Y.
- 47,987 Street sprinkler, J. W. Turriff, Toronto, Ont.
- 47,988 Buttonhole sewing machine, J. Laird and Hope Street Factory, Belfast, Antrim, Ireland.
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- 48,006 Sleigh, Jno. Bell, Toronto, Ont.
- 48,007 Spoke tenoning machine, Johann O. Lade, Merrit, Mich.
- 48,008 Display case for cutlery, Wm. A. Dempsey, New Franklin, Mo.
- 48,009 Captive ball apparatus for practising golf, Robt. G. Graham, London, Eng.
- 48,010 Railway spikes and method of manufacturing the same, Graham Fraser, New Glasgow, N.S.
- 48,011 Clamping device, Harace S. Buckland, Fremont, O.
- 48,012 Pencil and attachment, H. S. Buckland, and L. P. Wickland, Fremont, O.
- 48,013 Pencil attachment, C. F. Wickland, Fremont, O.
- 48,014 Knitting machine, Chas. Terrot, Camstadt, Wurttemberg, Ger.
- 48,015 Punch for reducing the size of holes in metal plates, Isaac Whitesmith, Manilla, Ont.
- 48,016 Lamp chimney, Carl Gunther, Stettin, Germany
- 48,017 Water filter, A. H. Kohlineyer, St. Louis, Mo.
- 48,018 Family register, F. W. Bailey, New Haven, Conn.
- 48,019 Ballot Marker, Robert A. Aitken, Montreal, Que.
- 48,020 Oar lock, Jacob Peterson, Two Harbors, Minn.
- 48,021 Watchmakers' caliper, G. B. Farrell, East Las Vegas, New Mexico.
- 48,022 Horse collar, J. J. H. Lafond et Napoleon Lebeuf, St. Polycarpe, Que.
- 48,023 Horseshoe, Cyrus Coplantz, Joliet, Ill.
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- 48,029 Rudder lock, H. L. Bowdoin, Wilmington, N. Carolina.
- 48,030 Steam generator, C. W. Vanderburg, Wellington, B.C.
- 48,031 Coin actuated vending machine, Wm. S. Burnett, Milwaukee, Wis.
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- 48,045 Rotary engine, D. F. Allan, Richburg, N.Y.
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- 48,076 Seed planter, C. E. Packard Hobart, Cherokee, Iowa.
- 48,077 Machine for boring piano or organ keyboards, J. M. Loose, Toronto, Ont.
- 48,078 Dress cutting system, Emma M. Hout, Lewiston, Maine.
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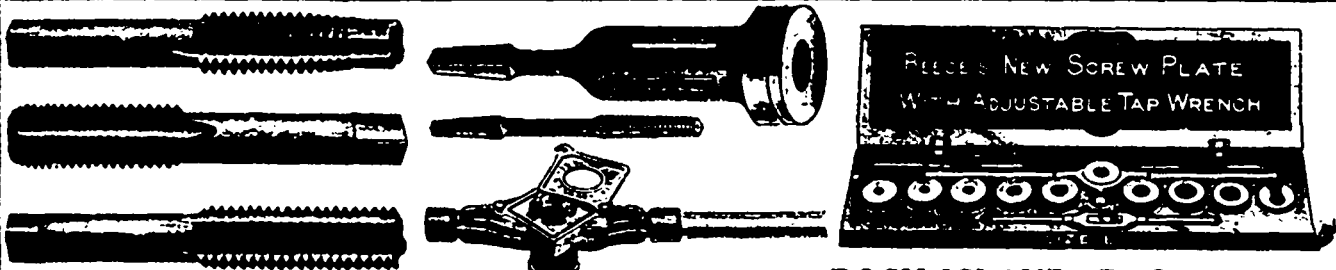
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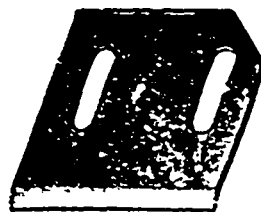
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1 1/4	1 1/4	4.13	4 1/2 cts.	2 1/4	2 1/2	18.91	4 cts.
1 3/8	1 3/8	5.01	"	3	2 7/8	22.59	"
1 1/2	1 1/2	5.94	"	3 1/4	3 1/4	26.60	"
1 3/4	1 11/16	7.46	"	3 1/2	3 1/4	30.94	"
2	1 11/8	9.83	4 cts.	4	4	42.33	5 cts.
2 1/4	2 1/8	12.53	"	4 1/2	4 1/2	53.57	"
2 1/2	2 1/8	15.55	"	5	5	66.13	"

NOTE--Shafting as per Actual Size Column, up to 3 in. dia., always kept in stock.

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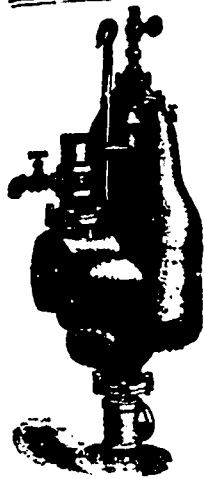
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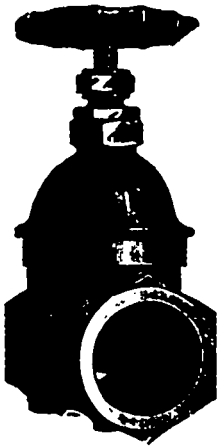


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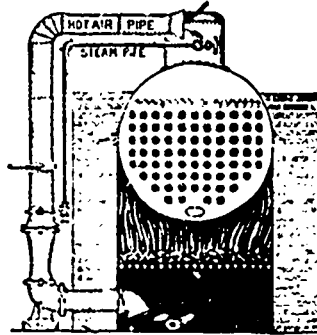
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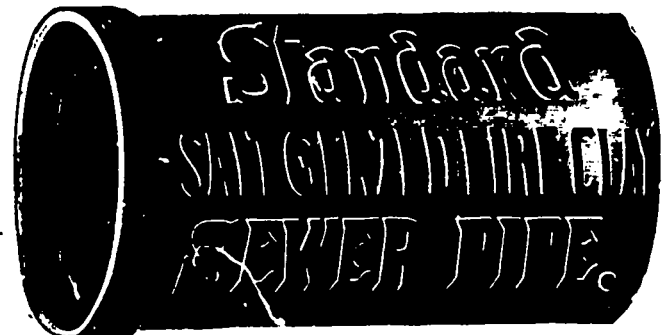
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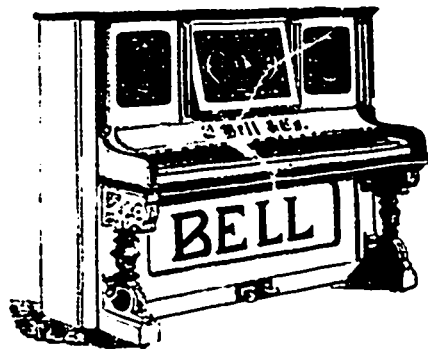
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THE OBJECTS OF THIS ASSOCIATION ARE

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 To enable those in all branches of manufacturing enterprises to act in concert as a united body whenever action in behalf of any particular industry, or of the whole body, is necessary.  
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## Manufacturers' Life Insurance Company.

### Comparative Statement. Five Years' Record.

| ASSETS.                  |  | 1880.        | 1904.        |
|--------------------------|--|--------------|--------------|
| Cash.....                |  | \$ 6,179 44  | \$ 35,210 03 |
| Bonds and Mortgages..... |  | 225,373 21   | 592,751 43   |
| Other Assets.....        |  | 53,939 88    | 82,359 10    |
| Total.....               |  | \$295,502 53 | \$921,320 56 |

| LIABILITIES.                             |     | 1880.         | 1904.         |
|------------------------------------------|-----|---------------|---------------|
| Reserve, and on acct. of Policyholders.. |     | \$180,401 00  | \$642,248 68  |
| Other Liabilities.....                   |     | 5,391 70      | 1,232 43      |
| Net Surplus.....                         | Nil |               | 50,479 72     |
| Income.....                              |     | 157,351 97    | 306,713 63    |
| Expenditure, Total.....                  |     | 147,158 37    | 133,498 37    |
| Insurance in force.....                  |     | \$,110,160 00 | \$,333,300 00 |

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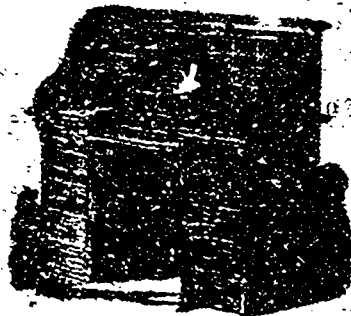
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