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THE CANADIAN MANUFACTURER

AND INDUSTRIAL WORLD.

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OF THE
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Vol. 13.

TORONTO, DECEMBER 2, 1887.

No. 11.

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. Vol. XIII.

TORONTO, ONT., DECEMBER 2, 1887.

No. 11.

UNJUST TAX EXEMPTIONS.

THE Trades and Labor Congress which was in session in Hamilton, Ont., in September last, passed the following resolution :

Resolved, That justice and good government demand that no persons, corporations, bodies or classes should be exempt from the payment of any tax which is levied on the rest of the community.

We most cordially endorse this resolution to this extent : All lands and buildings should be taxed, except only those belonging to the government and in use for governmental purposes; all unoccupied public lands, and such property as may be used for public school purposes—schools to which the children of the masses have free and unrestricted access, and the expense of which is borne by the municipality. Every square foot of land belonging to others than the state, or some integral part thereof, and every foot of land occupied or used for other than the purposes above indicated, should be taxed *ad valorem* equally with all other lands in the state. We are opposed to any tax exemption whatever in favor of any church, religious, semi-religious, educational or any other congregation, organization or body.

One needs but the suggestion to look around and observe the vast tracts of valuable ground in every city and town in the land, exempt from any taxation whatever, and in it see the reason for our opinion. Churches and church establishments are desirable in the community, and so are colleges and similar and other institutions, but our contention is that those who desire them should support them at their own proper charge and expense, but they should not be supported at the expense of the municipality.

The extent to which tax exemptions is carried in different countries of church and quasi church establishments is fearful, and of course works the grossest injustice to those who pay taxes. The value of the real estate in Mexico which was exempt up to 1859, belonging to the Catholic Church, was estimated at from one-fourth to one-third of the value of all the real estate in that country, and represented not less than \$300,000,000. In the South and Central American States a similar condition prevails, the general rule being that the poorer and more ignorant the masses of the people, the larger and more valuable the property of the Church, all of which is exempt from taxation; and we have but to cast our eyes towards France, Spain, Portugal and Italy to observe the same state of things. A question which is now receiving much attention in England is whether the Church shall continue to have its property other than that occupied by church edifices and buildings go longer, untaxed, and whether the clergy and

beneficiaries of the Church shall continue to hold and exercise power to levy and collect taxes against lands and hereditaments which do not even belong in fee to the Church. It matters not whether the Church was or was not a creation of the parliament, nor from whence its present power was derived, but the concern is whether it shall be allowed to retain and exercise that power. The emoluments of the clergy of the Established Church of England are chiefly derived from land rent and tithes, and some of the high functionaries of that Church—the Spiritual Lords get as much as \$75,000 a year from these sources. These pampered ones do little or nothing to earn the money bestowed upon them, and many of them actually have chaplains in their retinues who say their prayers for them. If these churchmen went about doing good as it is said Christ did, the situation would be bad enough, but many of them are not celebrated for either humility or piety, and some of those who have church livings at their disposal lead disgraceful and debauched lives. We point to the fact that the Earl of Lonsdale owns no less than fifty-nine livings, and the Marquis of Ailesbury eleven livings, which they have the so-called "right" to bestow at pleasure. Although there is no State Church in the United States, the value of exemptions of Church property from taxation is enormous. In some of the States which were acquired since the formation of the Union, as for instance those now comprised in the territory ceded by France—Missouri, in which is the city of St. Louis, and Louisiana, containing New Orleans, vast bodies of land other than that occupied by church edifices, and valued at many millions of money, are exempt from taxation; and we believe that in every State all churches and church parsonages and rectories are thus exempt. In Canada, particularly in the province of Quebec, conditions prevail which are very similar to those which at one time existed in France, and which were largely the cause of the Revolution and the Reign of Terror. In the city of Quebec, and in fact in all portions of the province where the French language is generally spoken, and where the Church as such exercises powers which should always reside with the people free from priestly influence, the situation is simply deplorable, and in the city of Montreal it is not much, if any, better. There is fully \$9,000,000 or \$10,000,000 worth of property in that city belonging to religious bodies which is not taxed. The conditions are not much better in Toronto, or Ottawa, or any where else in Ontario. Both Catholic and Protestant church organizations have from time to time acquired landed property until now millions of dollars worth of property, which is used not only for religious but for mercantile purposes also, are exempt from taxation to the detriment of the prosperity of the entire community. It was but recently in this city that com

plaint was made to the Court of Revision by certain clergymen that while they were assessed a certain tax upon their incomes or salaries, certain other clergymen evaded the tax upon their incomes by saying that, their all being vested in their church, they had no incomes subject to taxation—a very cunning and curious specimen of tax dodging. Scarce a month ago there was a formal opening in this city of the newly erected and elegant hall of the Young Mens' Christian Association. Besides the auditorium, which can comfortably seat 1,300 persons, there is a gymnasium which is said to be the largest and best equipped on the continent, dressing rooms, lockers, swimming, shower and private baths; reading, meeting and recreation rooms; offices, reception rooms, music rooms, parlors, lodge rooms, etc., all fitted and furnished in sumptuous style, at a cost of some \$77,000 for ground and building alone; and it was stated at the opening exercises that the association did not intend to end their building enterprises with that magnificent structure, but proposed to erect similar ones in both the east and west districts of the city. This elegant building is exempt from taxation, although there are several stores and places of business in it which yield large rentals, and the auditorium was rented only last week for a semi-theatrical entertainment, for a large money consideration. The oriental appointments of baths, gymnasiums, etc., of this establishment are not open free to the public, although the public are compelled to give it the same care and protection that is afforded to other private property on which taxes are paid. It is said that these associations in Canada and the United States have a membership of nearly or quite 160,000 persons, own property valued at more than \$6,000,000, and libraries aggregating some 300,000 volumes. We might also enlarge upon the situation as affecting non-public schools and colleges, showing the enormous values of property owned by them and used for their own private purposes, and upon which no taxes are paid.

This system of tax exemption bears heavily on all who pay taxes, from the hard-working artisan and laborer, whether he owns his humble little home or rents it, to the more pretentious marts of trade, and the manufacturer who must of necessity have extensive buildings and who gives employment to hundreds of people. The lofty cathedral with its spires and bells, its expensive organ and its cushioned pews, costing thousands and thousands of dollars, and used almost exclusively by wealthy people, goes untaxed, while perhaps across the street, or within the shadows of its walls, is the small factory where the poor man works for his daily bread, and the humble cottage that shelters him and his family, and which are taxed, a part of the tax money going to support and protect the rich man's church.

It is all well enough to have churches, colleges, Young Men's Christian Association halls and Salvation Army barracks, but let those who want them pay taxes on them, even as the mill, the factory, and the poor man's cottage is taxed. All such unjust discrimination and exemption from taxation should be abolished.

THE indications are that very extensive mining operations will be begun in different parts of Canada early next spring. A large number of outfits of valuable machinery, some of them very expensive and intricate, have been and are being built in both England and the United States, and some of these have already been placed in the mines where wanted.

THE TARIFF WILL REMAIN.

It is said, on very good authority, that President Cleveland's message to Congress will contain as urgent an appeal for tariff reduction as words can convey. A pitched battle will be fought over this question.—*Toronto Mail*.

During this year four States have rejected Prohibition. These are Michigan, Texas, Tennessee and Oregon.—*Toronto Globe*.

THE United States Congress assembles in regular session next Monday, and one of the most important questions to be discussed will be that of a reduction of the revenue. The revenues of the United States government now amount to more than a million dollars a day for every day of the year, that derived from internal taxation for the fiscal year ending June 30 last being \$118,829,523. This was from taxation on spirits, \$65,829,321; on fermented liquors, \$21,922,187, and on tobacco, cigars, etc., \$30,108,067.

It is noticeable that in discussing this question of reduction of revenue, the *Globe* and many other papers imply by their tone that it can only be accomplished by modifications of the tariff. The wisdom of the *Mail* is quite overpowering when it tells that "President Cleveland's message to Congress will contain as urgent an appeal for tariff reduction as words can convey." Of course it will, but Mr. Cleveland's appeal would be received with much greater consideration, and be more likely to eventuate in the desired result, if Mr. Cleveland appealed for "revenue reduction" instead of tariff reduction. The tariff laws, and all other financial legislation in Congress, must of necessity originate in the House of Representatives, and Mr. Cleveland's party—the Democratic party—now predominating in that branch of Congress, was in the majority there several years before Mr. Cleveland's accession to the presidency. There has been no time within the past six or seven years when a reduction of the revenue might not have been effected if the Democratic majority in the House could have agreed upon a method of doing so. But there is a very considerable portion of the members of that body who, in common with the Republicans, are strong advocates of protection, and these are not at all likely to consent to any onslaught on the tariff for the sake of reducing the revenue, while that object can better be accomplished in another way. The *Globe* tells us also that "Mr. Cleveland and the leading members of his Cabinet are in favor of reducing the surplus by serious reductions in the duties on raw materials, and that at the President's instance a bill to thus amend the tariff by such reductions has been prepared." No doubt. But there is little prospect of effecting any material reduction by this method. It is true that Mr. Cleveland has been strengthened by the result of the recent elections in his State—New York—but the Democrats there placed themselves very distinctly on a tariff platform, and Mr. Cleveland himself declared himself in sympathy with that move.

And here it is that the temperance question is forced in to do duty in behalf of the Free Trade wing of the Democratic party. The tariff men propose to reduce the revenue by abolishing all laws by which internal revenues are raised, which, of course, means that there shall be no federal taxes on the manufacture of spirituous and malt liquors, tobacco and cigars. Such repeal would, as we have shown, effect a curtailment of the revenue to the extent of over \$118,000,000, which is about the extent of

the desired reduction, but the Free Traders resist this on the grounds that the internal revenue taxation is only upon articles of luxury, and appeal to the temperance element to assist them in resisting the enactment of any laws which might enlarge the production of the intoxicants and narcotics.

Some good people seem to think that there is much force in this argument, but on examination it does not so appear to us. The United States government do not license any one to manufacture whisky, beer or cigars; but it does impose taxes upon all who engage in those occupations. If such licenses were granted, the licensees would be authorized to carry on their business wherever they pleased, regardless of State lines and localities; but we all know that the manufacture and sale of these articles is subject to the police regulation of the respective States entirely, and that the payment of federal taxes against such occupation gives no license to carry it on in States where prohibition laws exist. In all States where such business is allowed, not only federal taxes are levied, but state, county and city taxes also, and the limits of such taxation are prescribed by law. There is nothing to prevent any State, by the authority of the people, to impose a tax on such business to any extent of a thousand dollars a year, or a month, or a day, or a hundred times that amount, or to prohibit it absolutely; and it would be an outrageous assumption of power if the general government should do any thing of the sort. It does not lie with the government of the United States to prohibit the manufacture or use of these pernicious articles, but that power does reside with the several States. The evidence of this is seen in existing laws in Maine, Iowa and other States, and the recent futile attempts to enact similar laws in the States alluded to by the *Globe*.

The wonderful prosperity of the United States was accomplished chiefly through its tariff laws, which restricted, and in some instances prevented the competition of foreign with domestic enterprise and labor. As might have been expected there is a certain element led by politicians and some interested in the importation of foreign merchandise, both there and abroad, which chronically antagonizes the tariff, but the conservatism of the masses—those who believe in protection and prefer the prosperity of their own country to that of any other, will not allow their servants in Congress to imperil and sacrifice American manufacturing industries, even if the vaults of the treasury are overflowing with receipts of revenues. They are willing to remove all internal taxation which would bring the receipts within desired limits, and let the respective States take care of the temperance question if they so desire, but the tariff must remain.

THE MERCHANDISE MARKS ACT.

THE Merchandise Marks Act, which passed the British Parliament last session, is of so strict a nature as to call for careful study on the part of those who trade with that country. Some of its provisions are very stringent, and with a view to preventing annoyances that might arise from innocent failures to comply with them, the London (Eng.) Chamber of Commerce have sent the following communication to the Toronto Board of Trade. It is written by Mr. K. B. Murray, Secretary:—

"I am desired by the council to call your attention spe-

cially to the passing in the late session of Parliament of the Act bearing the title the Merchandise Marks Act, 1887, the objects of which are to extend further protection to the owners of trade marks, and to preserve the community at large from fraudulent misrepresentation. This measure is the result of mature consideration of the evil effects upon trade of certain practices which had been carried on to a notorious extent, and is an earnest attempt on the part of Parliament, at the instance of those representing commercial interests, to clear British trade of the stigma of false marking, and to guard the honest trader against unfair competition. To fully attain the desired end, however, it is absolutely necessary to obtain the active assistance and co-operation of the British colonies and possessions in persevering with the policy of which the lines are laid down in the new enactment. The Council of the London Chamber, recognizing the vast British trading interest in the Colonial markets, are seriously impressed with the possible danger of those markets being flooded with spurious imitations of British manufactures (the sale of which is now prohibited in the United Kingdom, unless similar protective measures are adopted to that devised by the British Legislature. The Council of the London Chamber of Commerce would therefore venture to suggest to your directors the desirability of considering whether, in the interests of honest commerce, they cannot bring their influence to bear in obtaining from your local legislative body a measure based, as far as possible, upon the Merchandise Marks Act. As the Act does not raise any question of finance or of tariffs, it appears to possess a peculiar fitness for other communities of traders, and my council trust that your association, after considering its provisions, will make every possible endeavour by the usual means to secure its early passage through your Local Legislature. This step should be easier to take by reason of the absolutely unanimous promise given by the delegates at the Colonial Conference of this year to introduce any necessary new legislation to prevent fraudulent misrepresentation, even where the Trade Marks law is already stringent. In the meantime my council would be glad to receive definite and authentic particulars as to any instances of false marking or misrepresentation of British goods which may be brought under the notice of your association, the pursuit of which cannot but be of mutual benefit."

IT PAYS TO TRADE FREELY.

Those who believe that Canada's trade with great Britain would be cut off if the people were allowed to freely sell to their neighbors, and as freely buy of them when it paid to do so, should study the trade returns of the United States. That country has a comparatively high tariff on imports, yet it was to its advantage to buy from foreign countries during the twelve months ended October 31st last, goods to the enormous value of \$707,062,498, being an increase of over \$50,000,000 worth as compared with the previous year. In payment of these goods foreign countries took \$697,021,848 worth of products of United States industry. No doubt it paid both parties to the transaction of buying and selling, or the trade would not have taken place. So it would be, were there freedom of exchange of products between Canada and the United States. No man on either side of the border would wish to sell or to buy from his neighbor unless he knew or believed he would be benefited by the deal. Canadians who say it is disloyal to arrange for such an equitable, peace-providing policy as the proposition involves, either do not know what they are talking about or they are themselves disloyal, and that to the best interests of their country.—*Hamilton Times*.

THE argument of our contemporary is a strong one in favor of the Canadian tariff and its perpetuity, although it was not written for that purpose. The facts quoted are correct. The United States have a very decidedly high tariff as regards such

articles of merchandise as are imported from Great Britain, and yet that tariff does not prevent such importations, although the same lines of goods are also manufactured in the United States. The payment of nearly \$700,000,000 for these importations was almost entirely in agricultural products, and no doubt both parties made money by the transaction. There is no duty on any of these exports, and those who produced them sent abroad only that for which there was no demand at home. These exports were but a small portion of all that was produced, and all the balance of them, excepting what was actually consumed on the farms, were sold for consumption at home. Why did not the farmers who produced all this wonderful amount of grain, butter, lard, beef, pork, etc., send all that they had to sell to foreign markets for sale? Probably not exceeding one-tenth of their produce went to foreign lands, and nine-tenths of it was consumed at home. Who consumed it? Why the millions of busy toilers in the workshops, factories and mines; those engaged in transportation on railroads, rivers, lakes and oceans; draymen, carpenters and bricklayers; those engaged in buying and selling merchandise, and those employed in all the thousand avocations of life. Nine-tenths of all that the agricultural classes produce is consumed at home by the other classes indicated; and if these classes did not exist, or were not so numerous as they are, there would not be such a consumptive demand for agricultural products, and those who produce them would be compelled to accept much lower prices for whatever they had to sell. Further—if the consuming classes were decreased in numbers—if there were fewer mouths to feed—that fact would tell strongly against the producing classes; but if in addition to this the decrease of consumers became an increase of producers, the situation would become intensified and aggravated to the sorrow and dismay of those who are engaged in agricultural pursuits.

What are the conditions prevailing in the United States which make it possible for American farmers not only to sell \$700,000,000 worth of their products a year to foreign consumers, but ten times as much to people who live in their own country? The answer is in the words "Protective Tariff." Before the inauguration of that system in the United States that country was just as boundless, as fertile and as capable of production as it is to-day; but agricultural pursuits were at a comparatively low ebb, and not as remunerative as they are now. The country was always in debt, and financial panics were of frequent and painful occurrence. Now the most valuable and productive agricultural districts are those contributory to manufacturing centres, and the more numerous the workshops, factories and other industrial establishments, and the larger the numbers of working men and their families connected with them, the more prosperous the farmers and more valuable their farms. As between the producers of agricultural merchandise in the United States, and the consumers of it in foreign lands; and as between the manufacturers of foreign merchandise and the consumers of it in the United States, "no man on either side would wish to sell or buy unless he knew or believed he would be benefited by the deal," yet this international trading is carried on between highly protected America on the one hand, and free trade Britain on the other.

The same conditions which brought such wonderful wealth and prosperity to the United States prevail in Canada, and if

they are allowed to remain unmolested Canada may reasonably expect similar results. These results are now fast advancing from their incipency in proportions and at a speed of which Canadians should be proud.

But the conclusion at which the *Times* arrives is illogical and insulting to the perception and good sense of Canadians. The protective policy of the United States is "peace-providing," for that nation to-day is at peace with all the world, and more prosperous than any other nation of the world; and when Canadians are told that their refusal to abandon their protective policy implies that they are unjust, that they do not love peace that they do not know what they talk about, are disloyal, and that they ignore the best interests of their country, they are most grossly insulted. Abuse is not argument.

GALL.

THE concentrated and unadulterated gall of some of the would-be leaders of the Commercial Union party is worthy of passing note. On the arrival of Mr. Joseph Chamberlain in New York, although that gentleman was fresh from the Foreign Office and consultations with Lord Salisbury, the Premier, and acquainted with the objects of the mission on which he had been sent, Mr. Erastus Wiman took it upon himself to write that gentleman a letter in which he intimated that Mr. Chamberlain was not acquainted with the sentiments of Canada on the matter at issue, and offering to enlighten him. Mr. Wiman's language was: "I think I might contribute to your information in regard to this whole subject if I could be allotted an hour to suit your convenience before your departure for Washington." The government of Great Britain thought it necessary to appoint three of its wisest statesmen to conduct the negotiations with the United States, Sir Charles Tupper, a man most thoroughly versed and posted in Canadian affairs, being one of them. Such negotiations, involving such vast interests and intricate political and international questions, usually require long and patient investigation and discussion, yet this Mr. Erastus Wiman has the flippancy to suggest that he could solve and adjust the whole matter in an hour. He seemed to attach some importance to the action of what he designated the recent "Canadian Inter-Provincial Conference," which approved of Commercial Union between the United States and Canada, but he failed to state that the "Conference" was composed of self-appointed men, who had no other authority for their meeting than their own sweet wills, and that they represented none but their individual selves.

Another and equally delectable exhibition of assinnimity is that of Mr. Goldwin Smith's Commercial Union Club of Toronto, which, at a meeting held last week, resolved to send a deputation of members to Washington to represent to Mr. Chamberlain and Sir Charles Tupper what they claim to be the views of a very large portion of the people of Canada regarding Commercial Union. Mr. Goldwin Smith should restrain the impetuosity of his young men and not allow them to make themselves and him so conspicuously ridiculous.

Mr. Goldwin Smith himself, however, seems to appreciate that his new party will be weighed and measured at its true value, for with an amount of gall not exceeded by either Mr. Erastus Wiman or the nurslings of his Commercial Union Club, in his inaugural address as president of that club, he attempts to throw dust into the eyes of the public by saying that as Commercial Unionists they intend to be and remain unconnected with political partyism. But Mr. Smith is a party man nevertheless, notwithstanding his disclaimer, and aspires to have his new Commercial Union party hold similar relation to the Conservative party of Canada as that of the Mugwumps to the Republican party in the United States.

◇ THE ◇
Canadian Manufacturer.

Published on the first and third Friday of each month, by the
 CANADIAN MANUFACTURER PUBLISHING Co., (Limited).
 6 WELLINGTON STREET WEST, TORONTO.

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Editorial Notes.

MR. FREDERIC NICHOLLS is Secretary of
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 His Office is at the Publication Office of
 THE CANADIAN MANUFACTURER,
 6 Wellington Street West, Toronto.

Any association of manufacturers who may desire to hold meetings for organization or other purposes, are invited to avail themselves of the meeting room adjoining the office of the CANADIAN MANUFACTURER.

A CARGO of 20,000 boxes of smoked herring was recently shipped to Boston, Mass., from St. Stephen, N.B.

SIR HENRY RAIKES, the Premier of New South Wales, when he first landed at Melbourne was a poor youth who made his living by manufacturing toys.

DURING October goods to the value of \$10,841,511 were exported from the Dominion. The total value of the goods imported during the same month was \$8,465,706, of which \$5,253,150 were dutiable goods for home consumption, the duty collected amounting to \$1,700,000.

GENERAL MASTER WORKMAN POWDERLY has written to prominent knights in Indianapolis, Ind., reiterating his intention of withdrawing from the leadership of the order at the next convention. He says the order can select a better man to fill the position, and that he longs to be a free man once more.

ALREADY a number of manufacturers in the United States are using saccharine made from the residuum of coal oil, or petroleum, for the purposes of sweetening confectionery wines, lemonade, oils, essences, medicines, etc. Its sweetening power is said to be 300 times greater than that of refined sugar.

RECENT articles published in this journal anent the bonusing craze have attracted a great deal of attention, and public opinion is being formulated to make a decided and energetic stand against the system. No doubt the matter will be brought to the attention of the forthcoming Dominion Parliament, and an effort made to have suitable laws passed prohibiting or regulating bonusing.

THE *Ottawa Citizen* says "The statement in the *Toronto Globe* that two days before the election in Haldimand an Order-in-Council was passed granting \$30,000 to the Indians, in satisfaction of an old and hitherto disputed claim, is without a particle of foundation. No Order-in-Council was passed on that or any other subject affecting Indian rights in Haldimand. The *Globe* will take good care not to correct its statement, which we brand as a deliberate falsehood."

The imports of barley from Canada into the United States amounted to 10,262,541 bushels during the fiscal year 1875-76. The next year they reached only 6,674,388 bushels, and in 1878-79 the quantity was only 5,308,792 bushels. In 1881-82 the importations were 12,147,924 bushels, and in 1883-84 but 8,596,122 bushels. The quantity of malt liquors manufactured in the United States in 1886 was 640,744,288 gallons, besides 2,221,434 gallons which were imported.

THE *Sherbrooke Gazette* speaking of a recent editorial in this journal regarding the importance of local newspapers being more explicit in relating matters concerning new industries in their vicinity, says:

We would suggest to our correspondents to take the hint. We might mention that a local notice in the *Sherbrooke Gazette* giving some details led to a large sale of real estate to parties at a distance which would not otherwise have been so readily effected.

A CABLEGRAM has been received at Hamilton, Ont., from Glasgow, Scotland, making a favorable offer in the way of building a steel passenger steamer for the route between that city and Toronto. Mr. Simpson, of Toronto, who has taken preliminary steps for the construction of the wooden steamer for the same route, expresses his willingness to cancel the contract provided the company wish him to do so. If the vessel is built in Scotland, of steel, instead of in Canada, of wood, the additional cost will be about \$20,000.

By offering certain inducements to manufacture beet sugar, that industry has been established on a paying basis in Europe. It is calculated that the supposed money sacrificed to realize this idea in the several European countries has been as follows:—France, \$13,120,000; Germany, \$9,420,000; Austro-Hungary, \$5,000,000; Belgium and Holland, \$5,200,000. These countries have, by granting such encouragements, brought about agricultural reforms, made new demands for iron and coal, and, most important of all, for labour.

THE Commercial Unionists, otherwise the Annexationists, are thus patronizingly encouraged by the Pittsburgh, Pa. *American Manufacturer*: "We are not anxious to annex 'hopeless and helpless' people, but presume we will be obliged to take a few of this kind along with the rest. Under the inspiration of American citizenship they may become hopeful and helpful. Possibly, after all Canada becomes thoroughly ripe for annexation, the Goddess of Liberty will hold out her apron and catch her as she involuntarily falls from the parent limb."

FEMALE passengers from Europe are giving New York Custom House officers much trouble, on account of their propensity to smuggle. A few days ago not less than eighty six women who came on a single ship were detected with contraband articles on their persons to the value of nearly \$7,000. We notice, however, that these women were detected in their nefarious business. The Canadian Customs officers, particularly those at Windsor, Ont., are respectfully referred to the fact here cited. The bridal trousseau smuggling bag so prevalent as an article of apparel among the "ladies" of Windsor should be investigated.

We take pleasure in directing attention to the "Manufacturing" department of this journal. It is a special feature, and the utmost attention is given to it. It is a compendium of current events transpiring in Canada relating to manufacturing industries. The facts contained in it are compiled from authentic and reliable sources, and all our readers are invited to promptly send us whatever items of interest that may come to their knowledge having reference to any new enterprises that are being started, any changes, enlargements or improve-

ments that are being made, or anything else of interest coming within the scope embraced in our journalistic field.

THE Royal Labor Commission, appointed for the purpose of making enquiries into all subjects connected with labor and its relations to capital, have been holding meetings in Toronto this week. As the labor organizations did not have the naming of all the members of the commission, and as they cannot force the enquiries exclusively into such channels as they would prefer to have them take, they do not appear to be violently enthused in giving testimony. In fact many of the so-called "leaders" among the laboring classes keep loudly silent. On the other hand the employers of labor—manufacturers and others—willingly appear and freely and fully answer all questions propounded to them on the subject, and are equally willing that any and all of their employees should also testify.

THE Dry Goods Credit, Guarantee and Indemnity Co. is probably the first corporation of its kind in the world. It has been incorporated in New York with a capital of \$1,600,000, to protect merchants from loss through giving credit, and when \$250,000 shall have been paid in and \$100,000 deposited with the department, the company will proceed to business, and will work on the same basis as an insurance company. If a merchant who has sold a lot of goods on credit has insured himself, the company will stand the loss if his customer fails to pay within a prescribed time. Those who are interested in the venture say it is bound to bring about a revolution in business circles, and the influential standing of the incorporators appears to guarantee its genuineness.

THE Supreme Court of the United States have recently decided that what has been known as the Green patent for driven wells is invalid. The case was carried up on appeal from the United States Circuit Court for Iowa, where suit had been brought by Green and others to recover royalty on such wells that had been made there. The Supreme Court holds that fact, now made to appear for the first time in the driven-well litigation, that the invention was used in public at Cortland, N. Y., by others than Green, more than two years before the application for a patent was made, is a fact which is fatal to the patent's validity. As driven wells are coming into general use on farms and elsewhere in Canada as well as in the United States this decision by the highest court in the land is of great significance.

IN an article which appeared in the last issue of this journal there was a statement which we are informed is incorrect. It was stated that not long since the Markham authorities had granted a bonus to a woolen manufacturing company as an inducement to start a mill there; that the machinery of the mill had been removed to another town, and that the mortgage given to secure the town in the matter was valueless. We are informed by Mr. Fred. A. Clarry, managing director of the Clarry Wool and Manufacturing Company, Toronto, that there is but one woolen mill in the town of Markham—the Lansdowne Woolen Mills—and that his company are the proprietors thereof, and that there is no other woolen mill in that town. This mill is now running to its utmost capacity, and has never been stopped, nor has any machinery ever been moved out of it.

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Mr. JOSEPH WOOD, of Halifax, N.S., who was recently in this city endeavoring to interest the merchants in a proposed line of steamers between Halifax and the West Indies, says that over 900,000 quintals of fish are annually exported from Newfoundland and Nova Scotia to the West Indies, and the greater part of the 400,000 quintals of fish exported from Nova Scotia and Newfoundland to the United States is re-shipped to the West Indies. The exports are now taken in small, slow craft, and his object is to have the fish products of the Maritime Provinces exported to the West Indies by a line of fast steamers which would be subsidised by the Government, and which would not only carry fish and farm produce from the Lower Provinces, but manufactured goods from Ontario and Quebec. Mr. Wood says negotiations are now in progress for an immediate starting of one or two steamers to carry the Bermuda and Cuba mails from Halifax.

THE Brandon, Man., *Sun* says that the banks in that place have been instructed to charge two per cent. on American currency, and five per cent on American silver. The Winnipeg, Man., *Commercial* says that "American money has to again submit to a shave, rates quoted by Manitoba banks being two per cent. on notes and five per cent. on silver currency." Toronto banks charge a premium for American money when requested to exchange current Canadian money for it. Receiving American currency in Manitoba only at a discount of two or five per cent. is an outrage on those who are compelled to submit to the transaction. It would cost no more to move American currency from Manitoba to Chicago where it could be redeemed at face value in gold coin, than it would to move Canadian currency from there to Toronto or Montreal. It is all well enough to invite our Yankee friends to come over and spend their money in Canada, but it is unfair to charge them an extortionate discount. The tendency is to drive trade away.

THE St. John, N.B. *Sun* gives an interesting account of the red granite industry in that province. It is shown that Ontario is the principal market, the computation being that granite to the value of over \$100,000 has found its way in this direction this year. The *Sun* also shows that one concern alone, in St. John, engaged in the manufacture of brass goods, chiefly steam fittings, sends \$100,000 worth of their goods a year to Ontario. The granite and brass industries of New Brunswick do not furnish a very large proportion of exports to the other provinces, but the value of the interprovincial trade in those articles is equal to half the value of lumber products shipped to the United States; exceeds the aggregate value of all the horned cattle, sheep, poultry, butter, cheese, eggs, hides, beef, pork, mutton, sheep skins and wool exported from New Brunswick to the United States during the last fiscal year, and is nearly double the value of the total exports from that province to the United States of fruit, grain of all kinds, hay and potatoes.

When the Royal Labor Commission reaches Hamilton the commissioners will probably feel it to be their duty, in the interest of the public, to summon a few of the coal dealers before them, to give sworn evidence touching the cost price of coal, the freight rates on the same, and other kindred subjects that may go to show that the workingman of Hamilton does not pay

enough for his coal, and that the dealers are losing money.—*Hamilton Spectator*.

We would also suggest that the commission make it their duty in the interest of the public to summon Mr. A. T. Freed, Mr. D. R. Gibson, contractor Cripps, and "Buscombe," to testify under oath what they may know touching the recent conspiracy in that city on the part of a certain labor organization to compel the city authorities to discharge a bricklayer named "Buscombe" from his job building city sewers, because he declined being blackmailed by that organization. Such testimony might go to show that the workingman of Hamilton does not get either justice or protection there, and that those who might and ought to expose such nefarious doings are afraid to do so. Perhaps it is too near election time.

Mr. HENRY GEORGE now falls back upon his main expedient for the abolition of poverty. This consists of printing and selling for five cents a copy a newspaper that is not worth one cent.—*N. Y. Sun*.

Mr. J. B. McLEAN, the secretary-treasurer and manager of the *Canadian Grocer*, recently started in Toronto, will be the commercial editor of the *Empire*, the new daily morning paper which is about to be started in this city. The position is a responsible one and will be well and worthily filled by Mr. McLean.

THE travellers of the electric cars last evening emitted the most beautiful electric lights, in continuous and brilliant flashes, causing the two moving wheels to appear like two moving meteors. The light was green, blue and white, and was caused by the non-conducting ice formation on the wires.—*Thorold Post*.

A RUSSIAN lieutenant of engineers has perfected an apparatus for intercepting telegraph and telephone messages in time of war. The apparatus is contained in a small oblong box and weighs rather less than three pounds. The telegraphic receiver is of the recording type, and a battery for returning false messages to the enemy forms part of the equipment.

A LARGE stove consuming the same amount of coal as one of smaller size will radiate more heat, and is therefore the more economical. The reason for this is that the larger stove has more surface, and hence when hot its effect is greater upon the surrounding air. Of course the factor of intelligent management must be taken into account with this comparison.

THE Dundas Screw Works will be closed down on the last of this month, after which the work of removal of the machinery to the Hamilton Screw Works will be begun. A 200-horse-power engine is being set up in the new Hamilton works which is highly spoken of. It is a compound engine on a newly patented principle, and was manufactured in Ohio. Manufacturing operations will begin in the new works on or about January 1st.—*Hamilton Spectator*.

FREIGHT business on the line of the Intercolonial Railway is keeping up well. Large quantities of coal are being shipped to the upper provinces, which have taxed the car capacity of the road to such an extent that a lot of new rolling stock had to be ordered. The first winter boat has arrived at Halifax, which will further increase the traffic from ocean freight. There are also indications that a large traffic will be developed in raw sugar, the Montreal sugar refiners bringing their imports via Halifax.

To ascertain whether cars loaded with live stock could be weighed while in motion, the Western Railway Weighing Association a few days ago made a test at the Chicago Stock Yards with ten loaded cars. The cars were run over the scales at the rate of three miles an hour and the weights taken. The stock was then unloaded and weighed on platform scales. The difference in the weight of the ten loads was found to be only 500 pounds, the actual weight being that much less than the weight taken when moving. The test, it is claimed, establishes the feasibility of the plan.

THE Canada Shipping Company—Beaver Line,—of which Mr. H. E. Murray, Montreal, is general manager, have put their usual winter schedule in force, the steamers of the line now sailing from Liverpool for New York, calling at Boston to land Canadian through freight, making fortnightly trips during the winter season. The steamers of this line comprise the following first-class Clyde built, full powered iron vessels:—*Lake Ontario, Lake Superior, Lake Huron,*

Lake Winnipeg and Lake Nipigon. They are all built in water-tight compartments and of special strength for the North Atlantic trade.

SEEMING that Brantford is in the bonus-giving mood, three manufacturing firms have asked that city what it will give them if they will make it the scene of their operations. One of these manufacturers is already established in St. Thomas and the other in Acon. Regarding the application from St. Thomas, one of the Brantford papers counsels caution. It says the firm may be merely seeking an offer from Brantford in order to secure a better bid from St. Thomas. This is only a speculation, and it may be groundless; but the suggestion shows that under the bonus system there are boundless possibilities for the expert subsidy-seeker.—*Toronto Mail.*

THE *Winnipeg Free Press* stupidly asks, "Is it loyal to trade freely in potatoes but disloyal to trade with equal freedom in sewing machines?" Commercial Unionists are hard up when they try to twist the truth in that way. Their proposal makes the question "Is it loyal to trade freely in potatoes with both England and the States, but disloyal to admit sewing machines free from the States and tax them when they come from England, which takes the bulk of our produce and affords us the protection of her strength, whereas the States try to rob us of our fish and allow their citizens to invade and try to destroy our country." The answer is, yes.—*Pelth Expositor.*

THE Christmas number of the *Illustrated London News* (American edition) will contain seventeen cuts and four chromos among its many other attractions. The cuts are all excellent works of art by such acknowledged masters as R. C. Woodville, A. Hunt, G. Montbard, Kate Crawford, Remeeck, Louis Wain, Lucien Davis, Hal Ludlow and Stanley Berkeley. The chromos illustrate "A Christmas Adventure, in Four Tableaux," drawn by Woodville, and are of a size suitable for framing. They are designated "Bubbles," "A Rose and Chrysanthemum," "Faith," and "Don't Touch." The retail price of the holiday number will be fifty cents. The *Illustrated News Co.*, Potter Building, New York City.

THE Cleveland (O.) *Iron Trade Review* has passed into the hands of the Cleveland Printing and Publishing Company, which has recently been organized with a capital stock of \$50,000. The old proprietors of the paper, Messrs. Day & Carter, are prominently identified with the new concern, Mr. W. M. Day being president and Mr. F. N. Carter, secretary. Mr. Day will have editorial supervision of the company's various publications, among which are the *Iron Trade Review* and *Western Mechanist*, assisted by Messrs. Felix Rosenberg, associate editor, and E. C. Pechin, M.E., special contributor. The *Iron Trade Review* is a thoroughly reliable and wide-awake trade journal, and is always a welcome visitor to this office.

To make a serviceable telephone, from one house to another, only requires enough wire and two cigar boxes. First select your boxes, and make a hole half an inch in diameter in the center of the bottom of each, and then place one in each of the houses you wish to connect; then get five pounds of common iron stove-pipe wire, make a loop in one end and put it through the hole in your cigar box and fasten it with a nail; then draw it tight to the other box, supporting it when necessary with a stout cord. You can easily run your line into the house by boring a hole through the glass. Support your boxes with slats nailed across the window, and your telephone is complete. The writer has one that is two hundred yards long and cost forty-five cents that will carry music when the organ is playing thirty feet away in another room.—*Demorest's Monthly.*

IN the old days of the republic the line was sharply drawn between the Whig and Democratic parties. It was on the question of a protective tariff that Mr. Calhoun and his friends proposed to secede from the Union. Prior to the war of 1861, it was, next to slavery, the strongest issue ever made in American politics. Three years prior to the war the free-traders succeeded in getting the tariff reduced to a minimum. The effect was that within eighteen months the warehouses of the United States were absolutely bursting with foreign goods; the manufactories of the United States were idle; skilled workmen roamed the streets unable to obtain employment and to feed their families, and a very great proportion of the gold that up to that time had been dug from the mines of California, had been shipped away to Europe to pay for foreign goods.—*Salt Lake Tribune.*

THE *London Army and Navy Gazette* learns that the United States is imitating Russia, and beginning largely to discard coal for liquid fuel, which prompts it to say: "We think the Admiralty should send some competent official to the Petroleum Exhibition to be held at St. Petersburg, under the auspices of the Russian Gov-

ernment, in November. At this will be shown in working order all the appliances for burning liquid fuel in steamers and locomotives in vogue in Russia, and as these number some 30 or 50 different types, it should be possible for a good commissioner to obtain valuable data regarding the best. We may mention that between 200 and 300 steamers and over 1,000 locomotives and stationary engines now burn liquid fuel in Russia. The Russian Admiralty is now having liquid fuel furnaces fitted to the heavy ironclad *Tchesme*, at Sebastopol.

A CORRESPONDENT whose opinion is entitled to considerable weight, calls our attention to the Merchandise Marks Act, which passed the British House of Commons last session. This Act, he assures us, is of so strict a nature as to call for the careful study of Canadians trading with this country. One striking instance he gives: "If in future any dealer here exposes Canadian Cheddar cheese for sale as 'Cheddar cheese,' without the additional designation of 'Canadian'—and we know that this is frequently done in deference to the supposed prejudice arising from the past classifying of Canadian and United States goods as alike 'American'—he will subject himself to a severe penalty. The Canadian article is, we hope and believe, creating for itself in British markets a deservedly high name; nevertheless, Canadian exporters and their agents here will do well to mark this new legislative enactment.—*Canadian Gazette.*"

BRANTFORD is apparently destined to become inundated with bonus applications from a number of outside factories. The recent grant of \$20,000 in this respect has evidently led a number of other establishments to cast longing eyes in this direction, but the fact seems to have been lost sight of that very few other enterprises could offer similar advantages to those which the city will undoubtedly secure from the carriage works. All such applications should, of course, receive a courteous and tolerant enquiry, but Brantfordites have spent enough money on bonusing just at present, and anything beyond taxation exemption is not likely to receive any serious consideration. Although there is not a ratepayer who regrets the recent grant, or would fail to vote for the by-law again, if need be, the fact remains that the residents of the municipality are generally of the opinion that legislation cannot be adopted at too early a date to abolish bonusing altogether.—*Brantford Courier.*

THE *Globe* finds fault with Mr. Wills for occupying the dual position of Secretary of the Board of Trade and Secretary of the Wholesale Grocers' Guild. Its attack on him and the president was quite uncalled for. The Guild wanted an energetic secretary, and they found one in Mr. Wills. If the *Globe* objects to any one occupying more than one position why does it not attend to the member of its own staff, who is also a correspondent for several leading American dailies. All good Canadians are very much interested in his immediate suppression. He has done more to injure Canada's reputation abroad than have all the recent disloyal articles in the *Globe* and *Mail*. One of the latest dispatches, which was scattered broadcast over the States, said that a mob of blood-thirsty Orangemen attacked Cardinal Taschereau at a banquet in this city; that a serious riot ensued, etc. Not one portion of the dispatch was correct. On the contrary, Cardinal Taschereau was received as kindly here as he would have been in his native city.—*Canadian Grocer.*

PHILADELPHIA is pushing its title to the "City of Homes." All sorts of schemes are on foot within its limits by which men in moderate circumstances can secure building lots in the suburbs at such reasonable figures and upon such easy terms that there is no excuse for anyone not being a real estate owner. New and pretty settlements are being laid out under the auspices of co-operative companies, and all of these offer special inducements to investors. The rule is to require a payment of ten dollars down for a lot, and instalments of five dollars a month thereafter. Then there are several companies in the city that have a system of advancing money with which to build houses, the company taking the houses as security, and the owner agreeing to pay so much per month, the payment including not only interest, but a percentage of the principal and a life insurance premium as well. If the owner dies the house is declared free of all incumbrance, and reverts to his heirs or whoever may be named in the insurance policy. Surely there are all the inducements to secure a home for himself that any industrious, energetic and ambitious man can desire.

MR. EDWARD ATKINSON writes with characteristic force and lucidity on the advantages of Commercial Union between the United States and Canada. He gives a very apt illustration of the effect of the existing duties on Canadian products by referring to those common articles of food for the poor, fish and potatoes. Last year we imported \$2,250,000 worth of fish from Canada, and added

\$500,000 to the cost of our people for a revenue that we did not need. We imported \$650,000 worth of potatoes because our people needed them in addition to our domestic supply, but they were compelled to pay \$292,000 duties to get them. Of course the consumers had to pay this in the price of the food supplies. Who benefitted by it? Possibly the Gloucester and Portland fishermen, who employ Canadian crews for their vessels, and who are anxious to keep all fish out of our markets except what they bring. To accomplish this, which is plainly against the interest of everybody else, they are willing to keep up the trouble over the fishery question, and even to embroil the whole nation, not only with Canada, but with Great Britain, with losses compared to which their interests are a bagatelle.— *New York Times*.

S. R. MATHEWSON, an expert civil engineer, has been looking over the situation in this State relating to practical irrigation of un-reclaimed land. The *Reno Gazette* reports him as saying that he believes there is enough water in Lake Tahoe to irrigate 1,000,000-000 acres, or all the available land in western Nevada. But he doesn't believe in running a tunnel four or five miles to tap the lake. He believes that the water can be taken out of the lake with an iron siphon, and at one-twentieth of the expense. The siphon need not be more than a mile and a half long. The difference in the elevation of Lake Tahoe and Carson valley being somewhat more than 400 feet, the power generated would be equal to not less than 30,000 horse-power. This same principle could be applied not only to Carson valley, but to Truckee Meadows, Mason valley, and all other valleys in the vicinity. By a series of check valve motions the water could be taken out of the siphon anywhere between the highest point on the lake and the lowest in the valley. By the use of this enormous water pressure all kinds of manufacturing establishments could be started, and the land of sand and sagebrush might not only be made to bloom and blossom, but be covered with manufacturing villages as in New England. Mr. Mathewson says it is only a question of time when something of this kind will be done to reclaim all of our Nevada lands.— *Virginia City Enterprise*.

THE Ever-Ready Dress Stay Company, Windsor, Ont., is a new concern just began business in that city, and is a branch of a concern of the same name at Ypsilanti, Mich. The article manufactured is a thin strip of steel encased in rubber and covered with satcen, and is so light that half a dozen weigh but an ounce. It is used as a stay for ladies' dresses, and is said to be a great improvement on anything of the kind in the market. It was invented by Mr. Bowling, of Ypsilanti, and is patented in the United States, Great Britain, France, Germany, Belgium, Austria, Italy, Spain and Canada. The manufacture of the invention was begun in February of last year in a very modest way, one girl being then employed. At the present time they employ upwards of 100 girls, and have, in addition, introduced machinery which enables the company to turn out an enormous quantity of goods. This year their sales will amount to upwards of \$300,000. The Windsor branch is in charge of Mr. S. J. Bowling, a son of the inventor. He has already about half a dozen girls employed, and finds the trade developing wonderfully. There are several valuable machines in use, and Mr. Bowling contemplates putting in a gas engine at an early day. The Canadian tariff is credited with the establishment of this industry in Windsor, but should Commercial Union occur the business would be consolidated at Ypsilanti.

MR. MACLEOD STEWART, Mayor of Ottawa, has recently returned home from a meeting at Banff, N.W.T., of a coal mining company, of which he is president. The mines are at Anthracite, about three miles east of Banff, the name of the station having been given because of the mines of the company, where anthracite coal is now produced in large quantities. Mr. Stewart, in his description of the works, the product and the market, declared his belief that it was destined to be the biggest enterprise in the North-West. Although there are other coal mines in that section, Mr. Stewart says that those in which he is interested are the only ones that are being actually worked. There are about 150 hands employed, and the latest and most approved coal mining appliances, brought from Pennsylvania, are used, and the company are in position to supply a large part of the demand for anthracite from all over the west and the Pacific coast. Large quantities are being shipped to San Francisco and as far south as San Diego. The Pennsylvania coal has to be hauled to the Atlantic seaboard, loaded upon vessels and sent all the way round Cape Horn, while this goes through to Vancouver and sent by vessel to San Francisco. It takes months to carry coal by Cape Horn, while this can put it on the wharf at San Francisco in a week. It is claimed that the anthracite here alluded to is actually more valuable as fuel than that of Pennsylvania, Mr. Stewart stating that he witnessed a three days' competitive test in

the Spreckels sugar refinery works in San Francisco which proved the fact.

THE *Oshawa (Ont.) Indicator* gives an account of a special meeting of the town council there, called to discuss the proposition of Mr. Thomas McDonald, of Toronto, anent granting him certain bonuses and exemptions, should he acquire the proprietorship of the buildings of the Joseph Hall Machine Works in that town. The following is a summary of the proposition:—Mr. McDonald asks for a bonus of \$10,000, \$5,000 to be paid in cash, and balance in ten equal annual instalments with interest yearly on the unpaid amount at the rate of five per cent per annum, and also exemption from taxes on his factory for ten years. In consideration of this he will buy the Hall Works and carry on therein for ten months of the year the manufacturing of range boilers, galvanized pails, patent elbows, Walters' patent metallic shingles, fruit cans, liquid paint tins, tubular lanterns and other specialties. The works would commence with at least fifty operatives, working up at the end of the year to at least one hundred, and each of the subsequent years employing continuously for the said number of months at least one hundred and twenty five operatives, one half at least of said operatives being in each instance men. Mr. McDonald will place fixed machinery to the value of \$3,500 in the buildings, and movable machinery to the value of \$10,000, and will give the town a first mortgage on the real estate and fixed machinery, and partly by the retention by the town of the accruing instalments of the bonus and otherwise to the satisfaction of the town. Mr. McDonald stated that he would have \$50,000 at his disposal, and thought that capital would be ample. It was resolved that Mr. McDonald's proposition be entertained, and a by law be prepared and submitted to the vote of the ratepayers. There seems to be no doubt but that the by law will be passed.

NOVA SCOTIA COAL.

MR. R. G. LEEKIE, manager of the Cumberland Coal and Railway Company, whose coal mines are at Springhill, Nova Scotia, states that the output of his mines this season will be over 500,000 tons, about seven eighths of which goes to the other Provinces. During the season now just closed about 50,000 tons were shipped from Parrsboro to American ports, but of this this quantity 35,000 tons were for the Grand Trunk Railroad. At the time the old reciprocity treaty with the United States was in force but a comparatively small quantity of bituminous coal was mined in that country, and there were no adequate facilities existing for moving it to the seaboard. Now, however, railways run through the whole bituminous coal regions and connect with the seaboard, carrying coal at a very low rate of freight. In some instances it has been carried at as low a rate as less than three-tenths of a cent per ton per mile, and there are steam colliers and lines of barges which carry coal from Baltimore and other points to the New England States. Coal has recently been selling in Boston as low as \$3.25 per ton, whereas, at the time of the old treaty, the price was \$4.50 and \$5.00. Another consideration is the fact that by the completion of a few links the bituminous coal fields of the States have been brought within 400 miles, by rail, of Montreal, whereas, Pictou is, by rail, 840 miles distant, and Springhill only a hundred miles less. It is thus the duty alone that preserves for Nova Scotia the Montreal market. The company ship coal for the royal mail steamers as far west as Brockville, and certain kinds are sent as far as Cobourg. Under reciprocity the company would certainly lose the Montreal market, while it is very doubtful if Pictou and Cape Breton could successfully compete in the New England markets. Mr. Leekie felt safe in saying that the leading coal owners of Nova Scotia prefer retaining the Canadian market and the existing conditions rather than risk a change, the results of which would, at the least, be very uncertain. The Springhill company will increase their business by putting down two vertical pits one over 1,200 feet deep, with two pairs of hoisting engines each. The output of the deep pit will be about 2,000 tons of coal per day, and that of the other nearly as much. Within a couple of years the mines will be developed and equipped equal to an output of 1,000,000 tons a year. The coal industry in Nova Scotia has gone ahead by leaps and bounds since the change in the tariff gave Nova Scotia coal a chance in the upper province markets. In the last year of reciprocity the sales of coal from Nova Scotia amounted to 558,520 tons. Thirteen years later, in 1879, the sales reached 688,628. Then came the protective tariff, and the next year 954,659 tons were sold. In 1882 the amount was 1,250,179 tons, and this year it is estimated at 1,500,000 tons. The Springhill mines alone produce more coal now than was ever sold to the United States in any year of reciprocity.

Manufacturing.

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 Joggins Coal Co. St. John, N.B., are preparing to double the output of their mines.

NATURAL gas has been discovered at St. Barthelemi, near Montreal, at a depth of 95 feet.

THE Clinic Hardware Company, Quebec, have been incorporated with \$100,000 capital stock.

THE Cookshire Mill Company, Cookshire, Que., will erect an extensive saw mill at Sawyerville, Que.

THE Montreal Watch Case Company, Montreal, have been incorporated with \$30,000 capital stock.

THE Peterboro Review has added vastly to its value by establishing a "Manufacturing Notes" department.

A SHIPMENT of stoves from the Windsor (N.S.) Foundry Company, for Toronto, passed through Moncton a few days ago.

MR. T. R. FOSTER, Tara, Ont., will build a woolen mill at Brandon, Man., if an inducing bonus is offered him to do so.

THE Lakefield Lumber and Manufacturing Company, Lakefield, Ont., have been incorporated with \$300,000 capital stock.

THE woolen mills of Samuel C. Martin, at Speedsville, Ont., near Preston, were destroyed by fire Nov. 21st. Loss, about \$10,000.

THE shingle mills of Messrs. Gilmour & Co., Trenton, Ont., were almost entirely destroyed by fire on November 20th. Loss about \$8,000.

THE saw and planing mill of Mr. A. G. Jones, Rochesterville, near Ottawa, was destroyed by fire November 23rd. Loss about \$10,000.

IT is stated that the Canadian Pacific Railroad Company will give a liberal bonus to have woolen mills established at Calgary, Alberta.

THE Canada Lumber Company have purchased from the Muirhead heirs the McLaren saw mill property at Carleton Place for \$15,000.

THE Blythe Woolen Mills Co., Peterboro, Ont., having made considerable improvements in their mill and machinery, have again started up.

MESSRS. G. S. TICKELL & SONS, Belleville, Ont., furniture manufacturers, are preparing to open a branch of their establishment in Toronto.

MR. JONATHAN ELLIS, Port Dover, Ont., manufacturer of woolen goods, whose mills were recently destroyed by fire, will rebuild at a cost of \$50,000.

MESSRS. MILLER & WOODMAN, St. John, N.B., have purchased the old oil mill property at Spur Cove, near that city, and will equip it as a shingle mill.

THE municipality of Sorel, Que., have decided to grant a liberal bonus to any boot and shoe company who will erect their establishment in that town.

MR. A. B. GRIFFIN, South Grimsby, Ont., has discovered coal on his premises, at that place, at a depth of 65 feet, and will sink a 12-foot shaft to reach it.

THE St. Hyacinthe Manufacturing Company, St. Hyacinthe, Que., are erecting a fine large woolen mill, which they expect to have in operation at an early day.

MESSRS. INGLIS & HUNTER, Toronto, are building the new flour mill machinery for Mr. B. Hoover, Markham, Ont., whose mill was recently destroyed by fire.

CAPT. J. NORTHEYS, of Lennoxville, Que., has supplied the Silver Side Works, at Capelton, with 100 tons of asbestos, from the Wobster mine, Lennoxville.

THE Ontario Car Company, London, Ont., are building 100 coal cars for the Intercolonial Railroad, which will be fitted with the Westinghouse safety air brake.

MR. J. McCOMB, formerly of Orono, Ont., has removed to Peterboro, Ont., and engaged in the manufacture of gloves. He will employ about twenty-five hands.

MESSRS. MANN & KEMP, Peterboro, Ont., have just built a woolen factory in that city which they expect to have in operation by the beginning of the coming year.

MR. PETER LOGGIE, manager of the Morrison shingle factory, Fredericton, N.B., is adding several new shingle machines to the plant and making other improvements.

MR. W. E. ADAMS, Paris, Ont., will erect a two-set woolen mill in that town if a \$5,000 bonus and ten years exemption from taxes be granted him. He will get it no doubt.

MESSRS. SHIPMAN BROS., Almonte, Ont., has recently been making extensive improvements in their furniture factory, adding considerable new labor-saving machinery, etc.

ACCORDING to the Petrolia Advertiser, the Lowrie works, of Sarnia, have recently shipped a consignment of two hundred and twenty-seven bob-sleighs and cutters to Winnipeg.

MESSRS. GANONG BROS., St. Stephen, N.B., manufacturers of confectionery, candles, etc., recently made a shipment of sixteen tons of their products to Montreal customers.

THE Ontario Canoe Company, Peterboro, Ont., have recently made a shipment to the Argentine Republic, South America. They anticipate a large trade in that direction.

MESSRS. C. G. THOMPSON & Co., Sherbrooke, Que., have resumed operations in their bobbin and spool factory. It will be remembered that these works were recently destroyed by fire.

MR. THOS. DALEY, of Upper Wakefield, Que., has struck a vein of mica, also one of iron and another of stone suitable for porcelain, on lots 18 and 26, Portland township, Pontiac, that Province.

MESSRS. S. R. FOSTER & SON, St. John, N.B., manufacturers of tacks, etc., report that they are full of work and that their factory is being run day and night to enable them to keep up with orders.

THE Watson Manufacturing Company, Ayr, Ont., manufacturers of agricultural implements, have sold every implement that they made during this year. They will greatly increase their output next year.

MESSRS. RAND & Co., Moncton, N.B., who has for some time been occupying the premises and using them as a saw and planing mill, has bought the property of the Moncton Agricultural Implement Company.

MESSRS. JOHN CAMPBELL, James Campbell and Thomas Grand will build a marine railway at Port Townsend to cost not less than \$50,000, and of capacity to haul out a 1,500-ton vessel, if a \$5,000 bonus is awarded them.

MESSRS. A. H. RAND & Co., Moncton, N.B., have purchased the plant of the defunct agricultural implement company at that place, and put the entire works in first-class order. The works are under the management of Mr. G. H. Brown.

MESSRS. G. H. NICHOLS & Co., Orford, Que., are constructing extensive works at their copper and nickel mines at that place for the manufacture of sulphuric acid. The works are nearly completed, and work will be begun in a few days.

MR. F. SHIRLEY, of the Du Lièvre Milling and Mining Company, left yesterday for the Buckingham mining district. He will put into operation his new process for utilizing nearly seventy per cent. of phosphate ore.—*Ottawa Citizen*.

MESSRS. T. McLEROY, JR., & Co., proprietors of the Toronto Rubber Company of Canada, are just opening a branch warehouse and salesroom at London, Ont., where every variety of their manufactures will be on exhibition and sale.

THE Lakefield Lumber & Manufacturing Company, Lakefield, Ont., has been incorporated with \$300,000 capital. The company is an enlargement of the firm of Messrs. R. & G. Strickland, of Lakefield, and have acquired their business.

THE Carriage Builders' National Association, at their last meeting, passed a resolution approving of the adoption of 4 feet 8 inches, measured from outside to outside of tire on ground, as the standard track for carriages in the United States.

MESSRS. KEHR BROS., Walkerville, Ont., are calling the attention of the trade to the Webster's patent straightway valves for steam, water and gas, manufactured by them, and for the manufacture of which they have the sole right in the Dominion.

THE extensive woolen and cotton mills of Messrs. Harvey & McQueen, at Hespeler, Ont., were offered for sale at auction at that place Nov. 22nd, by the Bank of Montreal, but the highest bid being short of the reserve price the sale was adjourned.

MESSRS. W. H. STOREY & SON, Acton, Ont., manufacturers of gloves, inform us that they are operating all branches of their factory to its fullest capacity, and that they are doing at least 25 per cent. more business this season than during any previous year.

MR. MANSON CAMPBELL, Chatham, Ont., manufacturer of agricultural implements, recently made a shipment of three car loads of fanning mills to Winnipeg, Man. Before the year closes he will have made about 2,500 of these mills alone, besides other goods.

MESSRS. GEO. F. HAWORTH & CO., Toronto, call the attention of all users of belting to the fact that they are now fitting up, at 11 Jordan street, this city, a first-class leather belting factory, which they expect to have in operation about the first of January next.

MR. MCGOWAN has been granted a bonus of \$3,000 by the rate-payers of the village of Durham, Ont., to assist him in erecting a new roller flour mill at that place. The mill will be a four-story brick building, and will have a capacity of not less than 75 barrels per day.

THE Canada Screw Company suspended work at their works at Dundas, Ont., this week, as their plant, machinery, etc., is being removed to their new and extensive buildings at Hamilton. A full description of these new works has heretofore been printed in the pages of this journal.

MESSRS. JAMES HARRIS & SON, St. John, N.B., have contracted to build some 400 freight cars for the Intercolonial Railroad, 100 of which will be supplied with the Westinghouse air brake. It is said that the Intercolonial is the only railroad in Canada that has its freight cars fitted with these brakes.

THE Orford Copper and Sulphur Company, Orford, Que., are making considerable additions of new machinery to their works, and large quantities of ore are being mined. Present shipments to New York are about 1,500 tons a month, which will be considerably increased when the alluded to additions of machinery are completed.

THE Dominion Lime Co., Dudswell, Que., of which Mr. F. P. Buck is the manager, have recently started in business, and during the past season have erected and put in operation two patent kilns of large capacity, uncovered a large quarry of limestone, built many miles of roads, etc. Next season four more kilns will be built.

THE tin plate industry in Great Britain includes the manufacture of about 10,000,000 boxes of plates per annum, weighing 112 pounds each. This requires the consumption of 750,000 tons of pig iron, 10,000 tons of tin and 800,000 tons of coal. The United States is the largest consumer of these tin plates, there being no tin plate works in operation in that country.

THE Maritime Saw and Lead Works, St. John, N.B., have recently been making extensive improvements in their works, included in which is a new boiler house and boiler which cost some \$3,500. These works give employment to more than 30 skilled artisans and a number of boys, and the outlook for next year's business is reported as being very flattering.

THE Grand Trunk Railroad car shop now being built at Stratford, Ont., is 300x120 feet, and is a part of the main building, which will be 700 feet long. The buildings which will comprise the equipment of the works will be engine shops, boiler shop, foundry and all others necessary to the carrying on of the whole work of locomotive building, and will give employment to some 700 or 800 men.

THE J. C. McLaren Belting Co., Montreal, are calling the attention of the trade to the different styles of card clothing manufactured by them, and those interested would do well to read what they have to say concerning it. They are sole agents for the Dominion of the Sykes' patent needle-pointed cards. They suggest that now is the time to place orders for goods for early spring delivery.

THE Lansdowne Woolen Mills, at Markham, Ont., last week turned off 207 pieces of woolen goods, 50 yards in the piece, containing 3,572 pounds of spun yarn. Within another week these mills will be producing 250 pieces, or 12,500 yards per week. They give employment to 60 hands, and the monthly pay-roll averages \$1,400. Mr. Wm. Morrison is the superintendent. The Clary Wool and Manufacturing Co., Toronto, are the proprietors of these mills.

MESSRS. F. C. IRELAND & SON, Lachute, Que., manufacturers of their celebrated "Our National Foods," are going extensively into the same business in Toronto. Their works here will be equipped with a full set of new machinery, including two barley mills, oatmeal machinery, "Our National Food" machinery, etc. The entire concern will be run by steam power. After the Toronto works are in full operation those at Lachute will be transferred to this city.

THE people of Belleville and Brockville are feeling sad over a rumor in circulation in the respective towns that within the next two years the G.T.R. shops, located in them, will be transferred to Kingston, and this city made the head of two divisions. There is ground for the rumor, and it is certainly desirable that the city council should at once place itself in communication with the G.T.R. authorities and hasten the consummation of the project. *Kingston Whig.*

MR. D. A. DUFFY, proprietor of the Brass and Iron Hardware Works, Moncton, N.B., is negotiating for the acquisition of the works of the Peters Combination Lock Company in that city. The buildings consist of brick factory 35x165, three stories, brick boiler and brass moulding shop 30x60, iron moulding shop 40x80, japan house and coal and oil houses, alone costing about \$20,000. The whole property, including land and machinery, is worth about \$50,000.

ALL paper cigars which cannot be distinguished from those made of tobacco, are being manufactured in Albany, N.Y. A special quality of paper is made for the business, which is subjected to thorough impregnation with a strong decoction of tobacco. It is then cut into desired shapes and pressed in moulds which give the venation and general appearance of the genuine leaf tobacco, the imitation being so close as to deceive both expert cigar makers and old smokers.

THE Geo. T. Smith Middlings Purifier Company, Stratford, Ont., are building, for the new Keewatin flouring mill, twenty 9x30 and seventeen 9x24 solid iron roll frames, Alis pattern, twenty-four No. 2 Smith purifiers, twenty four Printz dust collectors, twenty-two Smith centrifugal reels, and twenty eight Smith inter-elevator bolts. The upright shafts, 7 1/2 inches in diameter, and all other shafting, pulleys and iron work will be supplied by the Smith Company.

A ST. CATHARINES (Ont.) gentleman was in town Saturday, looking for a suitable site for the establishment of saw works. He was much pleased with Peterborough, which he said suited him better than St. Catharines, as it was more centrally situated. Mayor Stevenson offered him the usual terms of exemption from taxation, and correspondence is going on ament the subject. If the St. Kits man starts a saw works here he will employ about forty or fifty men. *Peterborough Examiner.*

MESSRS. W. R. BROCK & CO., Toronto, importers of general dry goods, etc., announce that they are prepared to pay "spot cash" for clearing lines of goods of Canadian manufacture, which lines they promptly offer to customers at a small advance upon first cost. They make a specialty in Canadian tweeds, blankets, flannels, yarns, knitted goods, cottons, etc. Manufacturers with lines of fabrics on hand which they wish to dispose of promptly for cash should bear this matter in mind.

THE Newfoundland Coastal Steam Co. have been incorporated in that Province with a capital stock of \$155,000, and are having two steamers built in Dumbarton, Scotland, which will cost \$150,000, to ply on a fortnightly line along the north, south and west coasts of Newfoundland and between St. John and Halifax. This company have secured a contract with the Newfoundland Government for carrying the mails over the route indicated, and a subsidy of \$65,000 a year has been granted.

THE town council of Papineauville, Que., have passed a resolution to the effect that an area of about 100 acres of ground lying within the limits of the town, and in the immediate vicinity of the railway depot, will be exempted from all municipal taxation for a term of 15 years in favor of any manufacturing enterprises that may be erected thereon. It is said that Messrs. McLaughlin, of Arnprior, and Messrs. Gillies & Bros., of Braeside, Ont., intend to build extensive sawmills on these grounds.

The Canadian Lumber Cutting Machine Company, Toronto, have applied for incorporation with capital stock of \$350,000, the incorporators being Messrs. Robert Hay, John Beverley Robinson, John W. Langmuir, Robert N. Gouch, John Dennis, James W. Hughes, Samuel S. Mutton, and John S. Davidson, of Toronto, and Heman S. Smith, of Geneva, New York. A detailed account of the operation of this lumber cutting machine was published in these pages in our issue of August 5th last.

The Rising Sun Canning Company, Hamilton, Ont., is a new concern just organized, with a capital of \$25,000, who will engage in the business of canning fruits, vegetables, etc. During the busy season they expect to employ about 300 hands. They have secured for their works the large building formerly occupied by the Dominion Hat Works. It is claimed that this will be the largest canning factory in Canada. Mr. Edward Lindner will be the manager, and Mr. Isaac Reckhowe superintendent.

Messrs. A. W. Morris & Bro., Montreal, proprietors of the J. A. Converse Manufacturing Company, are again calling the attention of the trade to some of the lines of goods manufactured by them. They mention Manilla, Sisal, Russian and jute cordage, bed cords, lath ties, etc.; Red Cap brand Manilla binding twine, "always uniform;" jute and cotton bags, Hessian hop sacking, etc.; calcined and land plaster, Portland cement, cod oil of all brands, etc. Their new bag works will be opened early in 1888.

The William Hamilton Manufacturing Company, Peterboro', Ont., have their establishment full of work. Among some of their recent shipments of machinery are an 18x24 inch slide valve engine and equipment for a saw mill for the Georgian Bay Lumber Company; an 11x24 engine and shingle mill equipment for the Midland North Shore Lumber Company, Parry Harbor, Ont.; and a lot of heavy machinery, boiler, etc., for the Haslan Lumber Company, Nanaimo, B.C. They are now building a 13x30 inch 50 horse-power Corliss engine for the new works of the W. F. Cochrane Roller Mills Supply Company now being built at Dundas, Ont.

Messrs. FRIEDERICKS & STAFFIN Windsor, Ont., have established stained glass works in that city, and are meeting with a large and increasing demand for their goods at remunerative prices. They state that they were induced to start these works because of the protection afforded the industry by the tariff. The plain glass plates are imported from European manufacturers. Under the superintendence of Mr. Raymond, assisted by a corps of skilled and competent workmen, every variety of stained glass work is done.

Mr. W. H. ROGERS, Inspector of Fisheries for Nova Scotia, Amherst, N.S., has invented a fishway which makes the passage of fish over mill dams, natural falls, and other obstructions free and easy. The invention is described as being an auxiliary dam used in connection with a fishway where the more common mode of construction is impracticable, as in the case of natural falls and great dams. About one hundred of these fishways have been erected in Canada and the United States, and their utility has been recognized.

At the recent annual meeting of the Moncton Cotton Manufacturing Company, Moncton, N.B., a first dividend of 2½ per cent. on the capital stock was declared. The earnings would have admitted of a much larger dividend, but in view of the fact that the company started without sufficient working capital the policy of retaining in the business the bulk of the earnings has been thought advisable. The company had previously reported considerable profits but declared no dividend. The old directors and officers have been re-elected.

The mammoth timber raft which has been in process of construction at Joggins, N.B., for some time past, was successfully launched a few days ago, and taken in tow by a steamer to be towed to New York. The raft is 585 feet long, 62 feet wide and 37 feet deep, weighs 9,000 tons and draws 19½ feet of water. If the trip to New York is made successfully many other such rafts will be built. In fact, it appears that another will be built at the same place without delay, which will contain some 50,000 sticks of timber.

Messrs. JOHN GILLES & Co., Carleton Place, Ont., lately manufactured four 5-horse-power coal oil boilers for the Fish, Oil and Guano Co., St. Thomas, Que. They will be used for driving two separate engines in a catamaran, which is built entirely of steel. The vessel will also be fitted with a 2-horse-power coal oil engine supplied by the same firm, for driving an electric light dynamo. This vessel is only an experiment, but if it proves successful the company will order ten more of the same style, built on a larger scale.

Messrs. THOS. MARKS & Co., Port Arthur, Ont., have contracted with Napier, Shanks & Bell, of Glasgow, to build a fine steel propeller, of 2,500 tons capacity, for grain carriage, between Port Arthur and Kingston. She is to be in commission next May, and will be 250 feet long, 40 feet beam, 23 feet molded depth. She will have triple expansion engines and make fourteen miles an hour when loaded to fourteen feet depth. To get her to the lakes from the Clyde, she will have to be cut in two in order to pass the St. Lawrence canals, as was the Chicora.

The Chatham Manufacturing Co., Chatham, Ont., manufacturers of the celebrated Government Standard Chatham Wagons, etc., are filling a \$7,000 order for goods for Mr. R. J. Latimer, of Montreal, included in which are nearly 100 wagons, 25 Champion hay racks, carts, trucks, etc. It is probable that this large order will be supplemented as the season advances. From every section of the Dominion where this company have established agencies, equal confidence is shown in the Chatham Wagon, and the prospects are that the works will be taxed to their utmost capacity during the coming season in filling orders.

The Gutta Percha & Rubber Manufacturing Company of Toronto, have issued a circular to the trade in which they call attention to the fact of the removal of their office and warehouses from their factories at Parkdale, near this city, to 43 Yonge street, Toronto, where they will keep a complete assortment of all regular lines of goods manufactured by them, in order to facilitate prompt shipments. In consequence of frequent misunderstandings arising from a similarity of the name of another rubber manufacturing concern, the company request that all communications to them be addressed to their office as above indicated.

Mr. J. THEUS MUNDS, representing the Randolph Paper Box Company, Richmond, Va., visited this office last week. This company claim to have the largest and most thoroughly equipped paper box factory not only in the United States, but in the world, and they confine themselves exclusively to the manufacture of paper boxes and similar supplies for druggists and physicians, and of boxes for watch manufacturers. Their products amount to almost uncounted millions of paper boxes annually, and they supply to one watch factory alone 40,000 boxes a month in which their watches are packed for marketing.

The Messrs. Loggie have this season preserved and canned eight carloads of blueberries at Pokemouche, on the line of the Carraquet Railway; Messrs. R. & J. Young canned six carloads at Carraquet and Tracadie—making fourteen carloads in all. New York and Chicago are the principal markets. The canners pay one and a half cents per pound for the berries, and the amount of cash distributed by the two firms named for berries, tins, boxes, etc., is estimated at \$12,000 to \$15,000. Some French families are said to have earned sufficient to purchase one barrel of flour daily in the blueberry season.—*Moncton Times*.

The Auburn Woolen Mills Co., Peterboro, Ont., have recently added ten new Crompton looms to their works, replacing machines formerly in use. These looms are of the latest improved build, and will be worked on lines of new tweeds and fancy cashmeres, having an increased capacity over the old looms of from 150 to 260 yards per day. Several sets of new cards have been added, and new machines placed in the picking room. General attention has been given to the departments and improvements added that will tend to keep the mill well in the van and strengthen the hold on the market which the goods turned out have already acquired.

The Dodge Split Pulley Company, Toronto, last week finished and shipped to destination a pair of their patent split pulleys for rope transmission of power. The driver wheel is 68 inches diameter with 22 inch face, and the driven wheel 144 inches diameter with 21 inch face, and grooved to accommodate twelve wraps of one inch Manilla rope. This machinery was built for the Granby Rubber Company, Granby, Que., and will transmit 250 horse-power from the 6-foot water flume from the driving wheel, which will make 215 revolutions per minute through the driven wheel, making 100 revolutions, the length of the rope used being 1,000 feet.

Messrs. T. McAVITY & SONS, St. John, N.B., manufacturers of McAvity's patent improved boiler feeder, McShane's sight feed lubricator, McShane's straightway swing check valve, Jenkin's valve, etc., are employing over 100 hands in their works, and have orders already booked to keep them busy until next April, and if they had the necessary machinery and facilities they could keep 200 hands busy all the time. They do a large business in the upper provinces, and their sales this year in them will approximate \$100,000. They have recently been making some experimental shipments of their goods to Australia, and they expect to build up a prosperous trade in that direction.

A MEETING of those interested in the establishment here of a saw and file works was held on Wednesday afternoon. A satisfactory arrangement was made for a building suitable for the commencement at an early date of the manufacture of saws and files. Other details were settled and, the stock book being opened, a fair amount was subscribed. The subscription of \$5,000 more stock is required before the company can start operations. Those interested in the town, and especially those largely interested in real estate, should not allow the arrangements for establishing this industry here to fall through when but little assistance on their part would assure its success.—*Peterboro' Review*.

WE have been informed by Mr. Thomas McDonald, late senior partner of Messrs. McDonald, Kemp & Co., Toronto, that he has taken over the extensive buildings on Sherbourne street, this city, recently occupied by the Toronto Electric Light Company, and is fitting them up for his new business. He is now placing machinery for the manufacture of galvanized iron range boilers ranging in capacity from 30 to 100 gallons, galvanized iron scuttles and buckets, patent stove pipe elbows, fruit cans, liquid paint tins, Walter's patent metallic shingles and a number of American specialties. The works will probably be in full operation by January, and new lines of products will be added from time to time.

THE Gendron Manufacturing Company, Toronto, inform us that they are having a fine trade in some of the special lines of goods manufactured by them, chiefly in children's carriages, velocipedes, bicycles, tricycles, dog and goat sulkies, express wagons, sleds, sleighs, etc. By an ingenious arrangement their baby carriages are removed from the wheels and placed upon the Gendron row steel runner, the boxes being made to fit the carriage axles. As the front axles of nearly all baby carriages are shorter than the rear, the axle boxes are so constructed that the runners are parallel. These goods are now "just the thing" in view of the holiday season. They are neat and tasty in appearance, strongly made and not expensive.

A BY-LAW bonusing a company to run the Hall works will shortly be submitted to the people. It is not perhaps advisable to discuss the proposition in advance, but on its face it is one of the best that has been before any town for years. The man who is at the head of this firm is a live man, thoroughly master of the business, and will make a very desirable citizen. The security is very large, and the conditions for the town are very liberal. The preliminary bond is now being largely signed, and it is hoped that within a week men will be at work on the buildings. *Oshawa Vindicator*. This evidently has reference to Mr. Thomas McDonald, late of McDonald, Kemp & Co., Toronto, a further explanation of which is made elsewhere in these pages.

THE International Terra Cotta Lumber Co. is a concern which holds the American and foreign patents covering the manufacture and sale of porous earthenware, terra cotta lumber, brickwood, cellular pottery, etc. We learn that the Montreal branch of the concern is now getting into operation under auspicious beginnings, numerous other plants being in operation in the United States. Samples of blocks are shown, intended for exterior walls, covered with a perfect water proofing which closes the pores of the material, and prepares it for receiving coatings of paint in any ornamental style to suit. These blocks are as smooth as the pressed brick that go into the construction of buildings, and when laid in walls have the appearance of dimension stone.

IN the last issue of this journal it was stated that the W. F. Cochrane Roller Mills Supply Co., whose head offices are at Hamilton, were preparing to go extensively into the manufacture of their roller mill machinery at Dundas, Ont. The company has taken an old foundry and connected buildings in Dundas, which they are remodeling and fitting up for their purposes, and will immediately erect an additional building of very substantial character, of brick, two stories high, covering 56x48 feet. They will also build a new flume for their water power. As we before stated, Messrs. John Bertram & Sons, of the Canada Tool Works, Dundas, have contracted to build the special machinery for the new works, the cost of which will amount to about \$15,000.

MESSRS. HEINTZMAN & Co., Toronto, commenced the erection of their new piano factory at West Toronto Junction, a suburb of this city, a few days ago. The building, which will be of brick, will be 300 feet long, 43 feet wide, and five stories; high and a suitable building, also of brick, which will contain the boilers and steam engines, will adjoin the main building. There will also be a drying kiln capable of containing 125,000 feet of lumber. It is expected that these works will be completed and occupied next summer, when employment will be given to about 200 hands, the capacity

being to manufacture from 50 to 60 pianos a week. These works, it is claimed, will be by far the largest of the sort in Canada. The occasion of turning the first sod for the foundations of these works, was celebrated in due and elaborate style, amid mirth, music, speech-making and congratulations.

THE Hamilton (Ont.) Steamboat Company have contracted with Mr. Melancton Simpson, of Hamilton, for the construction of a steamer to ply between that city and Toronto. Work upon her is about being commenced, and the boat will probably be ready for service early in May next. It will be a screw propeller, 165 feet long, 27 feet beam, and 10 feet depth of hold. The hull will be of white oak and the sides will be diagonally braced with iron. She will be fitted with the finest cabin accommodation, and have a capacity for carrying about seven hundred passengers. She will be driven by a triple expansion engine of 700 horse-power, which is now being built by Messrs. Kerr Bros., of Walkerville, Ont., and the boiler will be made by Messrs. Inglis & Hunter, of this city. It is calculated that she will attain a speed of eighteen miles an hour and complete the trip from Hamilton to Toronto in two hours. The estimated cost of the steamer is \$44,000.

THE "Wilson" mill has passed into new hands and will, as soon as placed in condition, be started up. Messrs. Robt. Mann and H. Kemp, both experienced men in the manufacture of woolen goods, take the mill and will at once engage in manufacturing. Mr. Mann has for some years been employed at the Auburn Mills as foreman of the finishing department, and is well up in the details of the trade. Mr. Kemp has been engaged as overseer of the Blythe Woolen Mills, where he has done excellent work and handled the mill to advantage. The Wm. Hamilton Manufacturing Works are putting in the necessary shafting, etc., in the "Wilson" mill, and expect to have the work completed in time to start the machinery early in December, when the manufacture of several special lines of woolens will be at once commenced. The new firm are pushing, experienced men, and will no doubt add to the roll of young business firms who are building up the town and district.—*Peterboro, Ont., Review*.

MESSRS. JOHN McPHERSON & Co., Hamilton, Ont., have recently moved into their new shoe factory in that city, which is described as being one of the largest and best equipped in the country. The building is a substantial four story brick structure with large, well-lighted basement, with a frontage of 70 feet and a depth of 140 feet. Everything in connection with the works has been so arranged that there is no unnecessary handling of materials or finished goods, particular attention having been given to the prevention and spread of fire within the building. The stairways are all entirely cut off from the main building by brick walls and self-closing doors, and there are self-closing hatches in the elevators on each floor. The engine and boiler house is disconnected from the main building. The building has an aggregate floor space of about 40,000 square feet, and was erected at a cost of about \$22,000. The factory gives employment to over 250 hands, and the weekly pay-roll amounts to more than \$2,000.

THE Dodge Manufacturing Company, Mishawaka, Ind., sole manufacturers in the United States of the celebrated Dodge wood split pulley, have recently put into the new carriage manufactory in Chicago, Ill., of the Studebaker Bros. Manufacturing Company, of South Bend, Ind., a system of rope transmission of power, which Mr. J. M. Studebaker, vice-president of the company, says has met the requirements fully and to spare. The power is conveyed vertically from the basement of the building to the eighth floor, the power transmitted being that of a 50 horse-power engine, and the distance between the driver and driven pulleys being about 150 feet. The main line of shafting on the top floor of the factory extends out through the wall of the building into an open space. The driven pulley is on this end of the shafting, the transmitting pulley being housed, but the rope is exposed. The tension or take up pulley is suitably arranged on a sliding carriage, actuated by its own weight, sliding on gas pipe ways perpendicularly. This transmission attracts more than ordinary attention because of its pecuniary importance, as conveying power that distance with a vertical shaft would be both expensive and unmechanical, and to run a steam pipe would involve a loss of 25 or 30 per cent. of energy by condensation, besides other obvious expenses. There are four wraps of $\frac{3}{4}$ inch Manilla rope, the breaking strain of which is 4,500 pounds; but the strain on this rope, in transmitting this 50 horse-power, is but 184 pounds. Mr. Studebaker says that the adoption of this system effects great economy, and that it is, in his opinion, the very best means attainable for conveying power long distances. The Dodge Wood Split Pulley Company, Toronto, are the sole manufacturers in Canada of these pulleys and transmissions.

The Emery Lumber Company is composed of the Emery Bros., of East Tawas, and the members of the Saginaw Lumber and Salt Company, of East Saginaw. This concern owns about 100,000,000 feet of pine in the Georgian Bay (Ont.) district. Two years ago they conceived the idea of bringing the timber from that tract to the mills of the company at East Tawas, and Crow Island, on the Saginaw River, for manufacture, the export duty exacted by the Canadian authorities on logs in the rough being only \$1 per thousand feet. It was finally decided to construct a barge sufficiently large to carry 500,000 feet of logs at one cargo, with appliances for loading and unloading the logs by steam. Accordingly the contract was let for the construction of a craft at Bay City, and she was completed a year ago last spring and called the *Wahnopita*, after a river in the Georgian Bay region. This craft is 275 feet long, and 51 feet breadth of beam. Her cost was \$30,000, and she was put into the log carrying business between the points named, the company having cut 13,000 pieces on their Canadian timber limits. Several trips were made, but during the season the Canadian authorities increased the export duty on logs to \$2 per thousand feet, and it was found that they could lumber more profitably by manufacturing the log stock cut on the Canadian side. Last spring the *Wahnopita* was put into the lumber carrying trade in which she has proved a bonanza. Her trips have all been made from the Lake Superior country, and had the monster craft been ten inches wider she could not have passed through the Sault Canal. She has made six round trips, carrying an average of 2,000,000 feet of lumber at a load, the freight averaging \$4. She is now bound down from Ashland to Tonawanda with a cargo of about 2,000,000 feet. Her up freights amounted to \$7,800 on ties carried into Duluth. Her largest cargo was 2,409,800 feet—the largest ever carried by a lake craft—which was loaded at Duluth and carried to Tonawanda. On one trip between the same points she carried 2,181,000 feet. This cargo was piled 22 feet high and she drew only 11 feet of water.—*Saginaw (Mich.) Courier*

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1st.—Birch Hill Road to Pugwash Junction.....	13 miles.
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3rd.—Pugwash Junction to Wallace Station.....	7 miles.
4th.—Wallace Station to Mingo Road.....	17 miles

Tenders for Grading, Bridge and Culvert Masonry, Fencing, Etc.

SEALED TENDERS, addressed to the undersigned and endorsed "Tender for Oxford and New Glasgow Railway," will be received at this office up to noon on Friday the 18th day of November, 1887, for the grading, bridge and culvert masonry, fencing, etc.

Plans and profiles will be open for inspection at the office of the Chief Engineer of Government Railways at Ottawa, and also at the office of the Oxford and New Glasgow Railway at Wallace, Cumberland Co., Nova Scotia, on and after the 10th day of November, 1887, where the general specification and form of tender may be obtained upon application.

No tender will be entertained unless on one of the printed forms, and all conditions are complied with.

This Department does not bind itself to accept the lowest or any tender.

A. P. BRADLEY,
Secretary.

Department of Railways and Canals,
Ottawa, 20th October, 1887.

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Armstrong, J. A. & Co., Guelph, Ont., Carpets.
 Automatic Refrigerator Co., Ottawa, Ont., Hanrahan's Patent Automatic Refrigerators.
 Barnum, The Wire and Iron Works, Windsor, Ont., Wire Goods of all descriptions,
 Railing, Cresting, Fencing, etc., etc.
 Barber & Ellis Co., The, Toronto, Ont., Manufacturing and Wholesale Stationers,
 Account Books, Office Sundries, etc.
 Bertram, John & Sons, Dundas, Ont., Iron and Wood Working Machinery.
 Blake, George F., Manufacturing Co., Boston, Mass., Steam Power Pumping Machinery.
 Boeckh, Charles & Sons, Toronto, Ont., Brooms, Brushes, Woodenware, etc.
 Breithaup & Co., Berlin, Ont., Leather.
 Brush, George, Eagle Foundry, Montreal, P.Q., Blake Stone Crusher.
 Bostwick, George F., Manufacturer in Canada of Amberg's Cabinet Letter Files.
 Baines, Geo. W., Montreal, National Water Purifier.
 Batten, John, Pittsburg, Pa., Automatic Fire Escape.
 Beatty, Wm. & Sons, Welland, Ont., Centrifugal Pumps and Contractors' Machinery.
 Clare Bros. & Co., Preston, Ont., Stoves and Furnaces.
 Cowan & Co., Galt, Ont., Wood Working Machinery, Engines and Boilers.
 Creelman Bros., Georgetown, Ont., World's Star Knitting Machinery.
 Crompton Corset Co., Toronto and Berlin, Ont., Corsets.
 Canadian Harness Co., Toronto, Harness and Saddlery.
 Ching, J. Lionel & Co., Sydney, N.S.W., "Dugoug" Oil and Ointment, and "Dugoug"
 Ivory Tusks and Hide.
 Canada Screw Co., Hamilton, Ont., Wood Screws, Set Screws, Bolts, etc.
 Duperow Bros. & Co., Toronto, Varnishes, Japans, etc.
 Dalley, F. F. & Co., Hamilton, Ont., Extracts, Essences, Blacking, and Grocers'
 Sundries.
 Donald Produce Co., Norwich, Ont., Evaporated Fruits.
 Doty Engine Co., Toronto, Ont., Engines, Boilers, etc.
 Dominion Barb Wire Co., Montreal, P.Q. (C. A. DeLisle Western representative), Barb
 Wire, Plain Wires and Wire Rope.
 Dovernort Twine Mills, Toronto, Ont., Twines and Cordage.
 Dominion Starch Works, Walkerville, Ont., Corn Starch and Laundry Starch.
 Dominion Show Case Co., Toronto, Show Cases.
 Ellis & Kelghley, Toronto, Ont., Coffees, Spices.
 Elliot & Co., Toronto, Ont., Manufacturing and Wholesale Chemists and Druggists.
 Ellis, P. W. & Co., Toronto, Ont., Manufacturing and Wholesale Jewellers.
 Fenwick & Selater, Montreal, Que., Files and Mill Supplies.
 Finch, W. S. Toronto, Wood Filter and Preserver.
 Gate City Stone Filter Co., New York, Water Filters.
 Oil Ies, John & Co., Carleton Place, Ont., "Shipman's" Coal Oil Engines and Steam
 Launches.
 Globe Tobacco Co., Windsor, Ont., and Detroit, Mich., Tobaccos.
 Goodhue & Co., Danville, Que., Leather Belting and Laco Leather.
 Grand & Toy, Toronto, Ont., Tucker Automatic Letter and Document Files.
 Grand River Knitting Mills, Co. Paris, Ont., Snyrna Itugs and Knit Goods.
 Grape Sugar Refining Co., Walkerville, Ont., Syrups and Glucose.
 Gray, Wm & Sons, Chatham, Ont., Carriages and Sleighs.
 Gillett, E. W., Toronto and Chicago, Yeast and Baking Powder.
 Gardner, W. H., Montreal (successor to H. H. Warren), Manufacturer of every descrip-
 tion of Hammers.

Gurney, The E. & C. Co., Hamilton and Toronto, Gravity Springless Locks, and Rotating
 Door Knob Furniture.
 Gurneys' & Ware Scale Co., Hamilton Ont., Platform and Counter Scales.
 Hudson Bros. (Limited), Sydney, N.S.W., Australian Timber and Cabinet Woods.
 Hamilton Industrial Works Co., Hamilton, Ont., Wringers, Mangles, etc.
 Hart Emery Wheel Co., Hamilton, Ont., Emery Wheels and Emery Wheel Machinery.
 Hay, Peter, Galt, Ont., Machine Knives.
 Hearle, J. G., Montreal, Que., Toilet Soaps and Perfumery.
 Howland, H. S., Sons & Co., Toronto, Ont., Hardware Specialties.
 Howland, H. S., Kleinburg, Ont., Flour.
 Hemming Bros., Toronto, Ont., Fancy Plush Goods and Jewellers' Cases.
 Herman, J. W., Toronto, Boiler Water Purifier.
 Hamilton Whip Co., Hamilton, Ont., Whips.
 Ives, H. R. & Co., Montreal, P.Q., Fencing, Cresting, Stoves and Hardware Novelties.
 Jardine, A. & Co., Toronto, Ont., Coffee, Spices, and Pure Gold Baking Powder.
 Jenkins & Co., Toronto, Ont., Bedding of all kinds.
 Kerr Bros., Walkerville, Ont., Water, Steam and Gas Valves of Improved Pattern.
 King, R. W., & Co., Georgetown, Ont., Power Knitting Machinery.
 Leslie, James, Montreal, Que., Woollen and Cotton Mill Supplies.
 McCaskill, D. A., & Co., Montreal, Que., Varnishes and Japans.
 Miller Bros. & Mitchell, Montreal, Que., Beaudry's Steam Power Hammer.
 Munderloh & Co., Montreal, Que., Watchmen's Clocks.
 Morris, A. W. & Bro., Montreal, Que., Cordage and Binder Twine.
 Morrison James, Toronto, Steamfitters' and Plumbers' Supplies.
 McLaren, The J. C. Belting Co., Montreal, Mill Supplies.
 Montgomery, L. D., Toronto, Mill Supplies.
 North, Wm. & Sons, Leeds, England, Teazels.
 Northey & Co., Toronto, Ont., Steam Pumping Machinery.
 Northumberland Paper Co., Campbellford, Ont., Straw Board and Tarred Paper.
 Ontario Bolt Co., Toronto, Ont., Bolts, Nuts, Spikes, etc.
 Oshawa, Stove Co., Oshawa, Ont., Cooking and Heating Stoves.
 Pepper, T. & Co., Guelph, Ont., Carriage and Wagon Axles.
 Pillow, Hersey & Co., Montreal, Que. (Geo. A. MacAgy, Western representative),
 Nails, Tacks, Bolts, etc.
 Ramsay & Son, Montreal, Que., Plate and Stained Glass, Paints, Oils, etc.
 Robin & Sadler, Montreal, Que., and Toronto, Ont., Leather Belting and Laco
 Leather.
 Simpson & Co., Berlin, Ont., Furniture.
 Smith, R. H. & Co., St. Catharines, Ont., every description of Saws.
 Stahschmidt & Co., Preston, Ont., Office Desks, Chairs, School Furniture, etc.
 Slight, H., Toronto, Florist.
 St. Thomas Featherbone Co., St. Thomas, Ont., Featherbone Corsets, Whips, etc.
 Strickland, George A., Lakefield Ont., Patent Cutter.
 Taylor, John J., Toronto, Fire and Burglar Proof Safes, Vaults, etc.
 Toronto Rubber Co., Toronto, Belting, Fire Hose, Etc.
 Toronto Novelty Manufacturing Co., Toronto, Ont., Ironing Boards.
 Toller, Rothwell & Co., Montreal, Stove Polish, etc.
 Toronto Lead & Color Co., Toronto, Ont., Prepared Paints, White Lead, etc.
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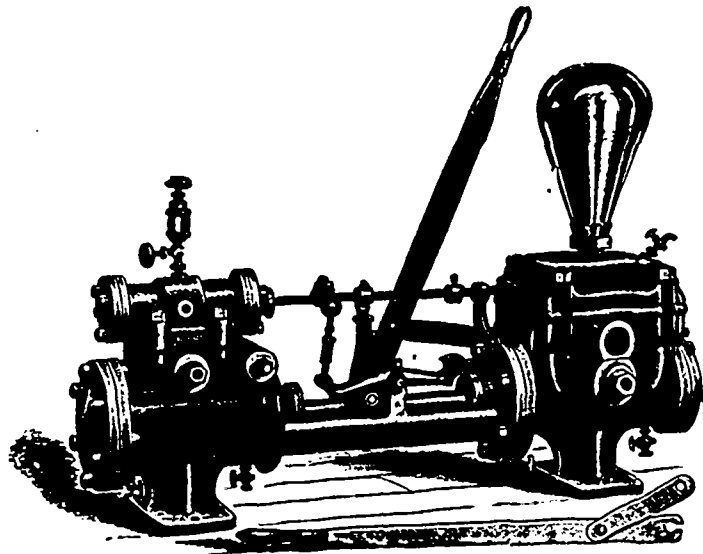
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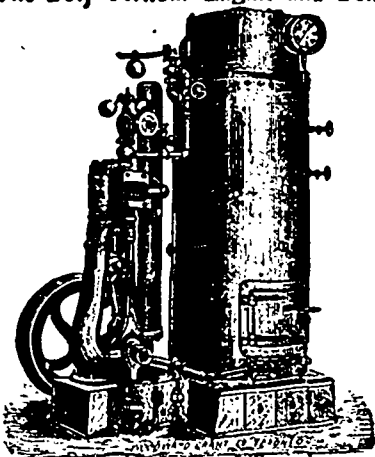
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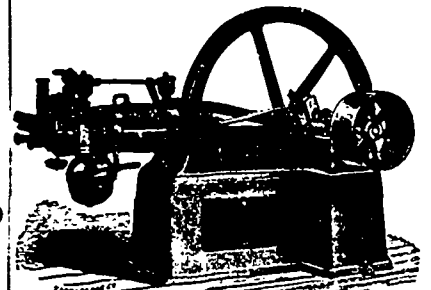
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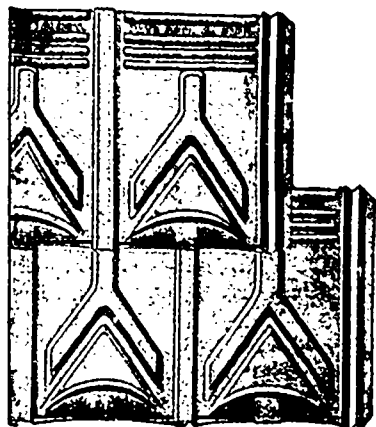
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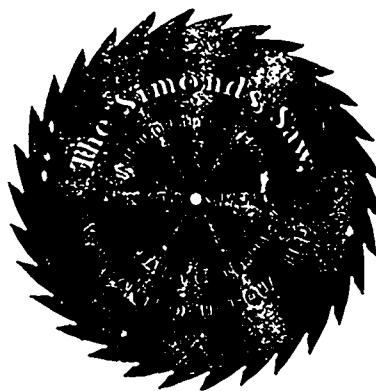
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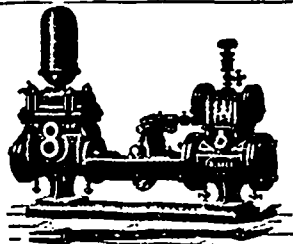
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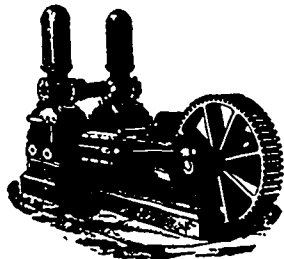
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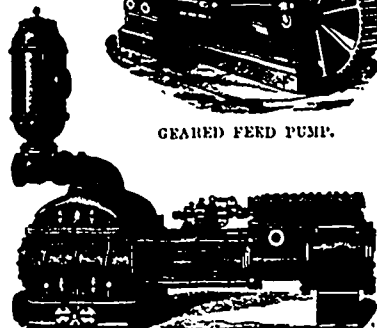
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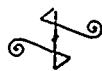
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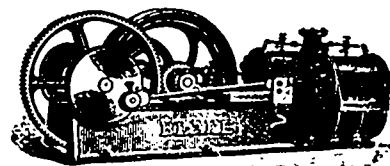
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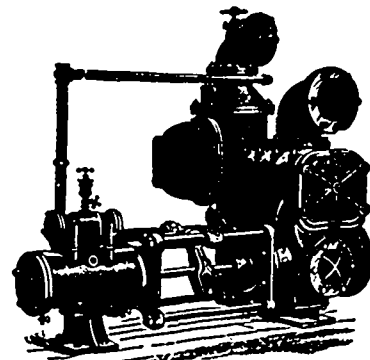
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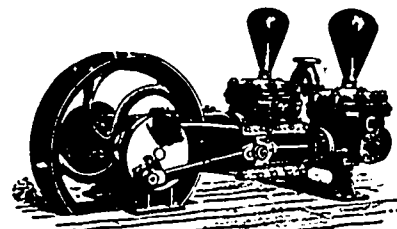
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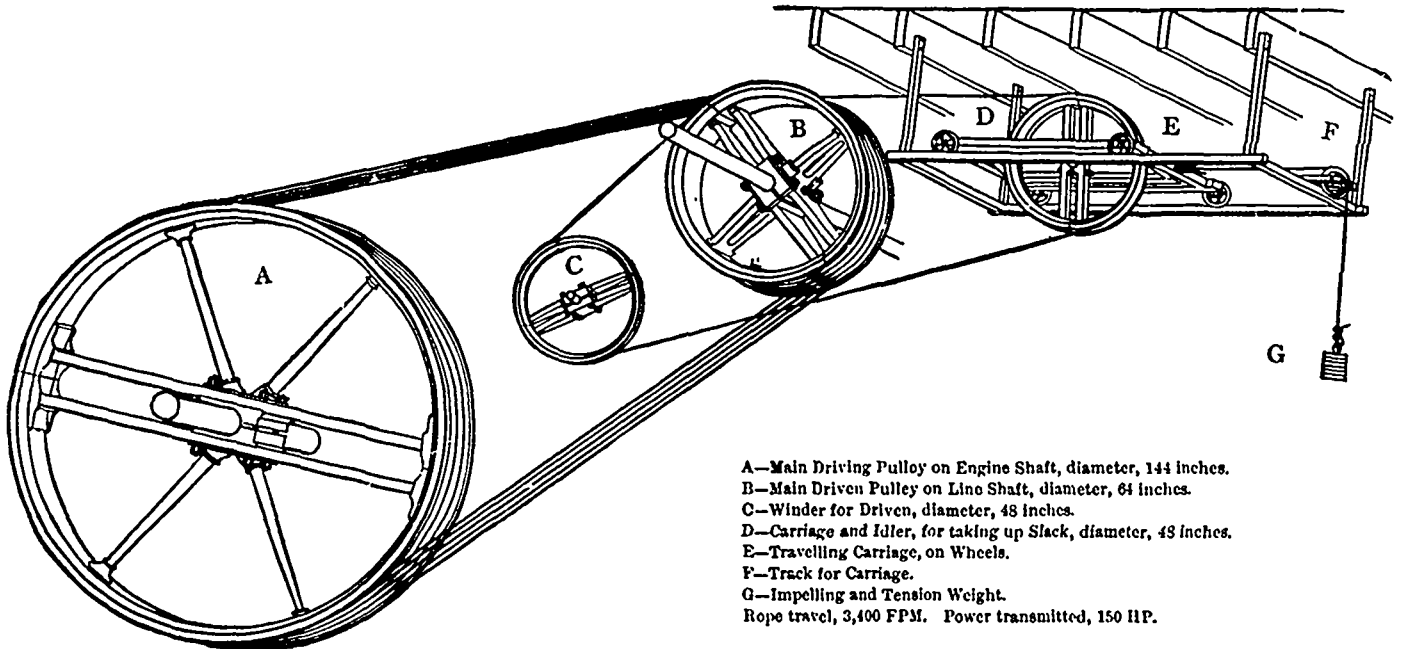
THE TRANSMISSION OF POWER BY ROPES AND THE DODGE PATENT WOOD PULLEYS.

The great advantage of Wood over Iron as a material for belt pulleys (or drums) to transmit power economically, has introduced the DODGE WOOD SPLIT PULLEY CO., of Toronto, to introduce grooved hard wood pulleys for the special purpose of transmitting power by ropes (manilla tallow laid), and in this connection Mr. Dodge has taken out Canadian Letters Patent for a system of applying the ropes, adjusting the pulleys, and taking up slack, that is giving the most unqualified satisfaction.

This system of transmitting power by ropes is cheaper and superior to belts in many cases, such as where the driven shaft is at right angles with the driver, also where the drive is perpendicular, particularly when it is quarter twist and perpendicular; also where the driver and driven are close together; also for long drives, such as across a street, or a stream, etc. For transmitting power from an engine to the line shaft this

system is unequalled; steady all the time, not like a heavy belt, which is always more or less flapping, jorking and stretching, then slipping and losing power. It is safe to say that an engine hitched up by the Dodge Rope System will do 25 per cent. more work on the same consumption of fuel than the same engine would do with a belt. We have put up a number of the Dodge Patent Rope transmissions during the past year, all of which are in most successful and satisfactory operation, as certified by the testimonials published in our catalogue of well-known manufacturers who have them in use. Parties who are in want of anything in this line, or who are interested in the efficient and economical transmission of power, are cordially invited to call at our works, 81-89 ADELAIDE STREET WEST, Toronto, and see the ropes and wood pulleys in operation, as we are driving our whole factory by this system.

WITH OUR SYSTEM OF MANILLA ROPE TRANSMISSION is overcome the objection to Wire Rope (because of crystallizing) and gearing, (because of loss of friction) and shafting (because of the liability to get out of alignment, hence loss of power by friction), and a separate engine plant (because of its great expense); on the contrary, with the Manilla Rope System, under the Dodge patents, the power is transmitted with the same efficiency as though the shafts were close together, there being no loss of power by excessive tension, or bad alignment, but simply the friction of the journals to overcome at the carriers, which have a strain of weight of the rope to carry.



A—Main Driving Pulley on Engine Shaft, diameter, 144 inches.
 B—Main Driven Pulley on Line Shaft, diameter, 84 inches.
 C—Winder for Driven, diameter, 48 inches.
 D—Carriage and Idler, for taking up Slack, diameter, 48 inches.
 E—Travelling Carriage, on Wheels.
 F—Track for Carriage.
 G—Impelling and Tension Weight.
 Rope travel, 3,420 FPM. Power transmitted, 150 HP.

The illustration, as shown above, is one of peculiar construction, and represents an engine transmission of power by a manilla rope, under the Dodge system of patents, and is shown as in actual use at the works of the Dodge Mfg. Co., at Mishawaka, Ind.

The system herewith illustrated and described is one of great interest to all consumers of power. Inasmuch as it takes the place of expensive gearing and broad belts, the advantages to be thus derived may be thus summarized:

To transmit the same power with a rope *versus* a like power with a wide belt, first, requires much narrower faced pulleys; consequently, much less expensive; 2nd, the interest on the money invested in a belt will more than supply the rope, saying nothing about the wear and tear; 3rd, better power, from the fact that all sliding of the belt is overcome, and the rope gear becomes as positive as the cog gear.

The transmission consists of a series of wood split pulleys, and ordinary manilla rope (tallow laid).

The engine used is an automatic, and the size of the cylinder is 18x40, making 90 RPM, and transmits 150 HP., the driver, A, and driven, B, have each several grooves, in which are wound the ropes, the number of wraps being used, as in previous cases, to gain surface in contact, for adhesion of the rope. The winder, C, in this case, is simply used to convey the rope to the slack carriage, to prevent obstruction. This, together with the carriage pulley, D, are each single grooved. The

device for taking care of the slack, and giving the proper tension to the rope, is shown at E, with the impelling weight at G. The slack side of the rope is paid directly from the driver to the carriage, E, which, it will be seen, takes in and pays out slack as it occurs, and acts also for a tension on the rope. The weight at G may be increased or decreased with the power.

This apparatus was erected and started December 2, 1884, and has been running constantly since, with same splice, and transmitting an average of 150 HP.

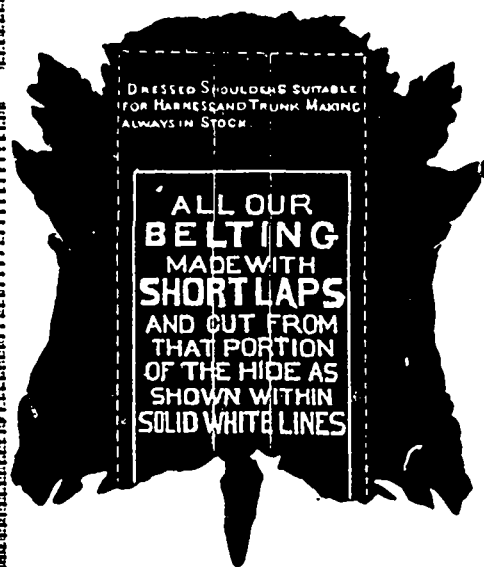
The rope shows no signs of wear, and looks as though it would last for years to come.

The rope is an ordinary one-inch diameter manilla, and travels at a velocity of 3,420 FPM.

We make the following summary:

Velocity of rope, 3,420 FPM. Transmits, as above, 150 HP. (indicated). The tension on the rope is, therefore, $3300 \times 150 = 1,408 + 106$ pounds (one-half the weight in the weight-box) = 1,608 pounds; which is the strain on the rope. There being five pulling wraps of rope, hence the strain would be divided five times = $1608 \div 5 = 321$ lbs. strain on the rope = 33 per cent. of the breaking strain of the rope; it being estimated as safe to use 10 per cent. of the breaking strain of the rope.

[The breaking strain of a one-inch manilla rope is 9,000 pounds.]—*Power and Transmission Journal.*



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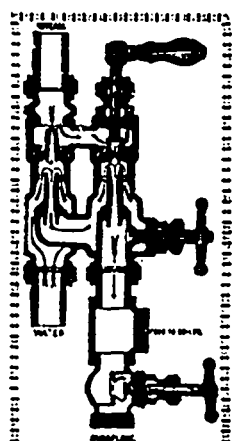
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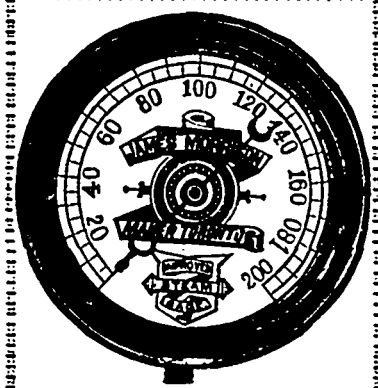
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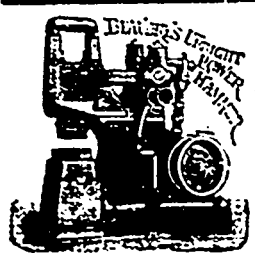


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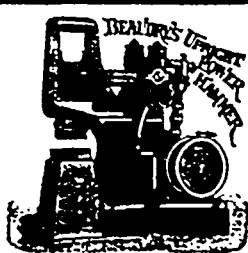


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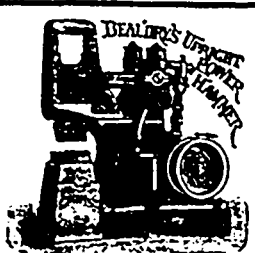
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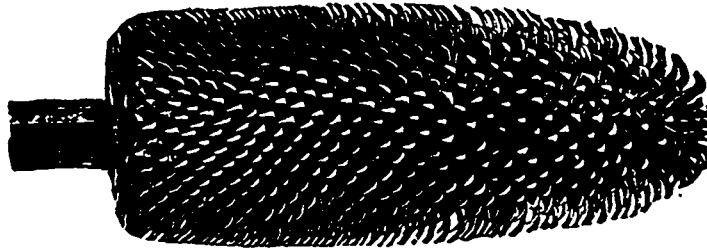
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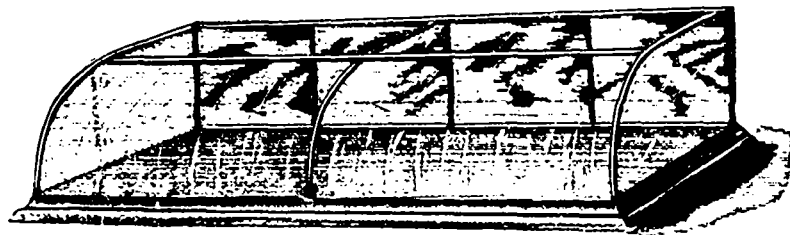
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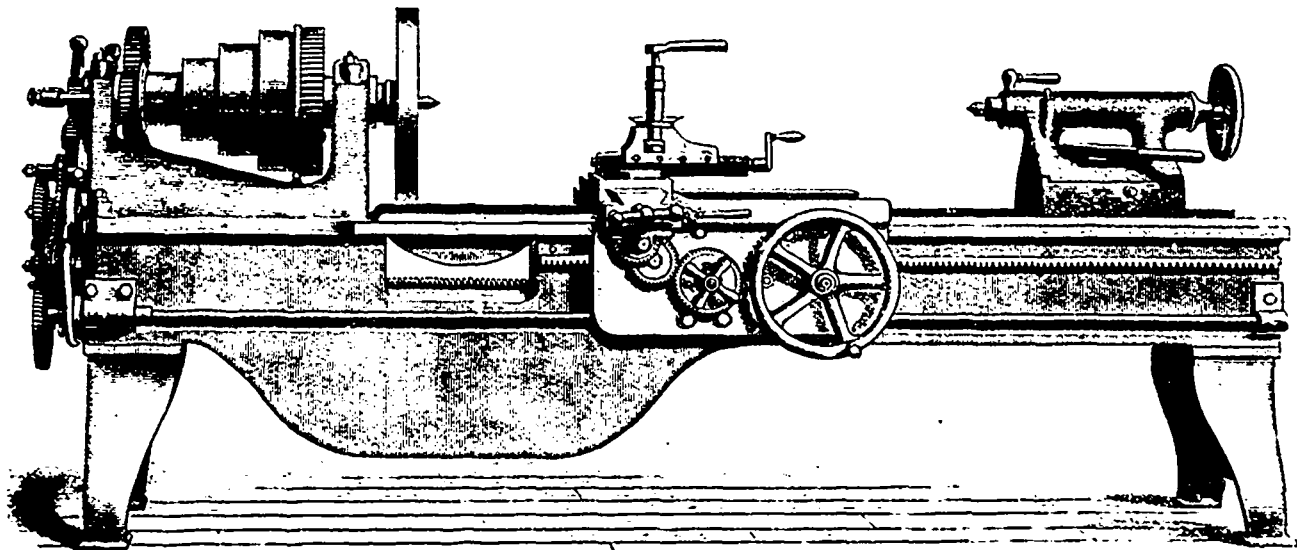
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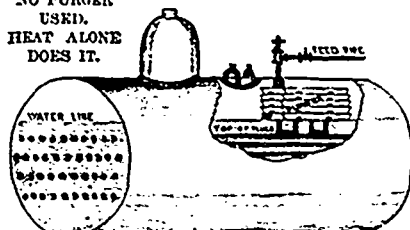
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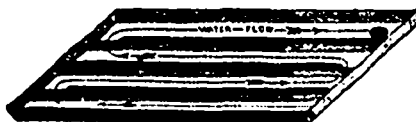
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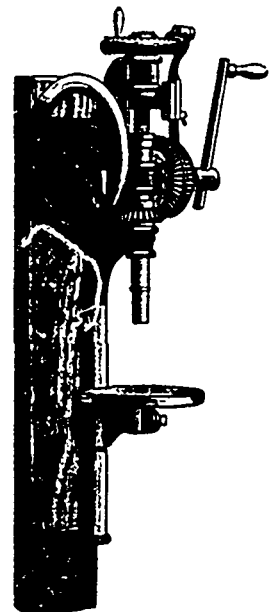
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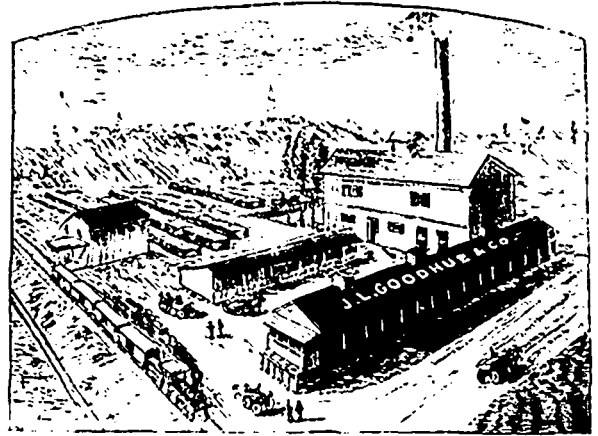
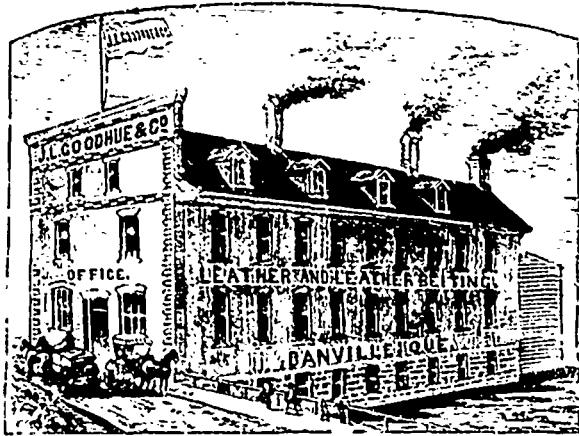
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WRITE FOR PRICES.

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GALT MACHINE KNIFE WORKS.

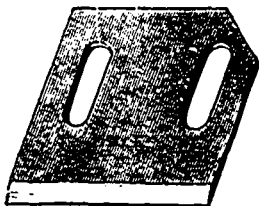
PLANING MACHINE
KNIVES.



STAVE CUTTER KNIVES.



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MOULDING, TENONING,
MITREING,
SHINGLE JOINTER,
And other irregular shapes.

Cheese-box and Veneer, Paper Cutting, Leather Splitting and any special knife made to order. SEND FOR PRICE LIST. ALL WORK WARRANTED.

PETER HAY, - - - GALT ONT.

Millers' and Manufacturers' INSURANCE COMPANY.

STOCK AND MUTUAL OBJECTS.

1. To prevent by all possible means the occurrence of avoidable fires.
2. To obviate heavy losses from the fires that are unavoidable by the nature of the work done in mills and factories.
3. To reduce the cost of insurance to the lowest point consistent with the safe conduct of the business.

METHODS.

All risks will be inspected by a competent officer of the company, who will make such suggestions as to improvements required for safety against fires, as may be for the mutual interests of all concerned.

Much dependence will be placed upon the obligation of members to keep up such a system of discipline, order, and cleanliness in the premises insured as will conduce to safety.

As no agents are employed and the company deals only with the principals of the establishments insured by it, conditions and exceptions which are so apt to mislead the insured and promote controversy and litigation in the settlement of losses will thus be avoided.

The most perfect method of insurance must, in the nature of things, be one in which the self-interest of the insured and the underwriters are identical, and this has been the object aimed at by the organizers of this company.

W. E. HOWLAND, Vice-President.
JAMES GOLDIE, President.
HUGH SCOTT, Managing Director.

Applicants for Insurance and other information desired, please address **MILLERS' AND MANUFACTURERS' INSURANCE COMPANY** No. 24 Church Street, Toronto.

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All kinds, Made to Order.

Highest Quality of Work Guaranteed.

Send full particulars of Dimensions and Quality when ordering.

OLD ROLLERS OR BLOCKS RE-FILLED
WITH SPECIAL CARE.

CHAS. BOECKH & SONS,
MANUFACTURERS.

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Best brands of Crucible Cast, Siemen's-Martin, and Bessemer Steel and Charcoal Iron Rope. Cast Iron Wheels for transmitting power. Moulders, Bellows, Brushes and Riddles; Iron and steel Wire Cloth, all grades and strength. Perforated Zinc, Iron and Steel, all sizes. Bank and Office Counter Railings. Wire Guards, all kinds. Sand and Coal Screens; Sofa and Chair Springs. Blind, Furniture and Fence Staples. Dildone's Adjustable Wire Sieve. Ornamental Wire Work, &c.

Send for Circulars, mentioning your requirements.

B. GREENING & CO.,
HAMILTON, Canada.



A Well Tried Treatment

FOR
Consumption, Asthma, Bronchitis, Dyspepsia, Catarrh, Hay Fever, Headache, Debility, Rheumatism, Neuralgia and all Chronic and Nervous Disorders.

"The Compound Oxygen Treatment," Drs. Starkey & Palen, No. 1529 Arch Street, Philadelphia, have been using for the last seventeen years, is a scientific adjustment of the elements of Oxygen and Nitrogen magnetized, and the compound is so condensed and made portable that it is sent all over the world.

DRS. STARKEY & PALEN have the ability to refer to the following named well-known persons who have tried their Treatment :

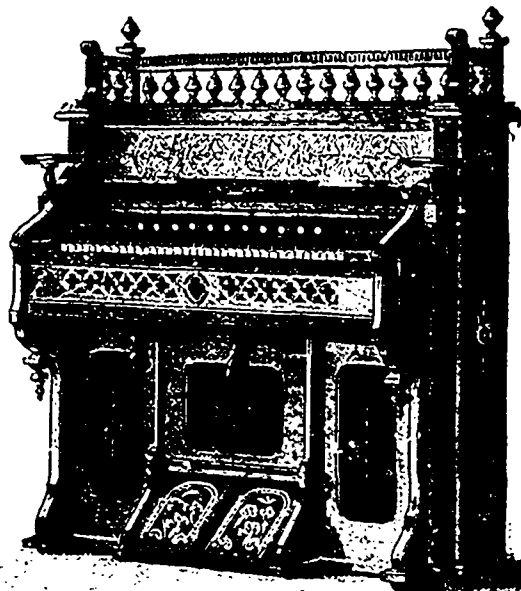
Hon. Wm. D. Kelley, Member of Congress, Philadelphia; Rev. Victor L. Coward, Editor "Lutheran Observer," Philadelphia; Rev. Charles W. Cushing, D. D., Rochester, N. Y.; Hon. Wm. Penn Nixon, Editor "Inter-Ocean," Chicago, Ill.; Rev. A. W. Moore, Editor "The Centenary," Lancaster, S. C.; W. H. Worthington, Editor "New South," Birmingham, Ala.; Judge H. P. Vrooman, Quenemo, Kan.; Mrs. Mary A. Livermore, Melrose, Mass.; Judge R. S. Voorhees, New York City; Mr. F. C. Knight, Philadelphia; Mr. Frank Suddall, Merchant, Philadelphia; Hon. W. W. Schuyler, Easton, Pa.; Edward L. Wilson, 533 Broadway, N. Y.; Editor Philadelphia "Photographer"; Fidelity St. Lyon, Waimea, Hawaii, Sandwich Islands; Alexander Ritchie, Inverness, Scotland; Mrs. Manuel V. Ortega, Fresnillo, Zacatecas, Mexico; Mrs. Emma Cooper, Ullula, Spanish Honduras, Central America; J. C. Hob, U.S. Vice-Consul, Casablanca, Morocco; M. V. Ashbrook, Red Bluff, Cal.; Ernest Turner, Nottingham, England; Jacob Ward, Bowral, New South Wales, and thousands of others in every part of the world.

"Compound Oxygen - Its Mode of Action and Results," is the title of a new brochure of two hundred pages, published by Drs. Starkey & Palen No. 1529 Arch St., Philadelphia, Pa., which gives to all inquirers full information as to this remarkable curative agent, and a record of several hundred surprising cures in a wide range of chronic cases - many of them after being abandoned to die by other physicians. Will be mailed free to any address on application by addressing

E. W. D. KING,
58 Church St., Toronto, Ont.

BELL ORGANS

FOR
Chapel,
Church,
Lodge,
Parlor.



ARE THE BEST

OUR Large Double and Single Manual Organs are the best in the Market, and Musicians should see them before buying elsewhere.

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W. BELL & CO.,

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Industrial and Trade Directory.

Acids and Aniline Dyes.

THEO. H. EATON & SON, Windsor, Ont.; Detroit, U.S.A.—Importers. Every Description **Pure Aniline Dyes** for Cotton and Woollen Manufacturers. **Dyed Samples** furnished on application. Address all correspondence to **Head Office, Detroit, Mich.**

Agricultural Implements.

A. S. WHITING MANUFACTURING CO., Cedar Dale, Ont.—Manufacturers of scythes, forks, hoes, etc.

WELLAND VALE MANUFACTURING CO.—Lock No. 2, St. Catharines, Ont., Canada—Manufacturers of axes, scythes, forks, hoes, rakes and edge tools.

Bobbins and Spools

THOMPSON & CO., Sherbrooke, P. Q.—Manufacturers of all kinds of Bobbins and Spools for Cotton and Woollen Mills—Special patterns made to order from sample.

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DOMINION BRIDGE CO. (Limited),—Shops at Toronto, Ontario, and Lachine, Quebec. Builders of Steel and Iron Railway and Highway Bridges.

Chemicals.

DOMINION DYEWOOD AND CHEMICAL CO., Toronto.—Importers and Manufacturers. Chemicals for Cotton, Woollen, Paper and Leather Manufacturers.

MCCARTHUR, CORNEILLE & CO. (successors to John McArthur & Son), Montreal.—Offer at closest figures chemicals required by soap-boilers, oil refiners, paper-makers, and by manufacturers of woollens, cottons, leather, &c.

Cotton Mills.

HAMILTON COTTON MILLS CO., Hamilton.—Denims, tickings and yarns.

Dyes, Dyeing Drugs and Extracts.

THEO. H. EATON & SON, Windsor, Ont.; Detroit, U. S. A.—Carry full line of Pure Dyeing Drugs, Dye Woods and Extracts adapted for the requirements of Woollen and Cotton Manufacturers. **Paper Makers' Anilines and Chemicals** Address the **Detroit Office**.

Dye Stuffs.

MCCARTHUR, CORNEILLE & CO. (successors to John McArthur & Son), Montreal.—Supply of best quality at closest prices. Every description of coloring materials required by manufacturers of woollens, cottons, silks, paper, leather, &c. Are sole agents in Canada for the celebrated aniline dyes of **A. Porrier, Paris**.

LYMAN BROTHERS & CO., Nos. 71 and 73 Front Street East, Toronto—Dye Stuffs of all kinds for Woollen and Cotton Manufacturers; Warps, Shuttles, Bobbins, Card Clothing, etc., etc.

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DOMINION DYEWOOD AND CHEMICAL CO., Manufacturers.—Pure Dyewoods, Dyeing Drugs. Sole Agents. English, German, and French Aniline Dyes, for Woollen, Silk Paper, and Leather manufacturers.

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WELLAND VALE MANUFACTURING CO.—Lock No. 2, St. Catharines, Ontario, Canada.—Manufacturers of axes, scythes, forks, hoes, rakes and edge tools.

Emery Wheels.

HART EMERY WHEEL CO., Hamilton.—Manufacturers of every description of Emery Wheels and Emery Wheel machinery.

Gas Engines.

JOHN DOTY, Toronto.—Manufacturer in Canada of the new "Otto" silent gas engine, two, four, and seven horse-power and larger.

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W. H. STOREY & SON, Acton, Ont.—Manufacturers of fine gloves and mitts in every variety and style.

Hoist and Elevator Manufacturers.

LEITCH & TURNBULL, Canada Elevator Works, cor. Queen and Peter Streets, Hamilton, Ont.—Patent Safety Hydraulic, Hand, and Power Elevators. Telephone connection.

Hubs, Spokes and Bent Goods.

F. W. HORE & SON, Hamilton.—Manufacturers of wheels, wheel material, shafts, poles, etc.

COWAN & CO., Galt.—Manufacturers of every description of wood working machinery.

H. R. IVES & CO., Montreal.—Hardware manufacturers and foundries; iron railing and ornamental iron work a specialty.

JOHN BERTRAM & SONS, Dundas.—Machine tools and wood working machinery. Toronto wareroom, 58 Yonge St. Agents—The Polson Iron Works Co.

Montreal wareroom, Craig St. Agents for Quebec—The Machinery Supply Association, Montreal.

THE OSHAWA MALLEABLE IRON CO., Oshawa, Ont.—Manufacturers of malleable iron castings, to order, for all kinds of Agricultural Implements and miscellaneous purposes.

SMITH'S FALLS MALLEABLE IRON WORKS, Smith's Falls, Ont.—Manufacturers to order of refined malleable iron castings from air furnace. Agricultural and other heavy castings a specialty. Carriage castings in stock.

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JOHN DOTY, Toronto.—Engines and boilers of every description and capacity, also shafting, pulleys, and hangers for factories.

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THE WHITMAN & BARNES MANUFACTURING CO., St. Catharines, Ont.—Manufacturers of mowing and reaping machine knives, sections, guard plates, cutting apparatus complete, spring keys and cutters, etc.

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S. LENNARD & SONS, Dundas.—Manufacturers of plain and fancy hosiery.

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MCCARTHUR, CORNEILLE & Co (successors to John McArthur & Son), Montreal.—Afford best value in pure olive and lard oils, also in all other leading lines of vegetable, animal, and mineral oils for factory use. Invite special attention to their celebrated crown diamond "engine" and "machinery" oils.

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WM. BARBER & BROS., Georgetown—Manufacturer of book and fine papers.

THE TORONTO PAPER MANUFACTURING CO., Cornwall, Ont.—Manufacturers of engine sized superfine papers, white and tinted book papers, blue and cream laid and wove foolscaps, account book, envelope and lithographic papers, etc., etc.

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R. H. SMITH & CO., St. Catharines.—Manufacturers of all kinds of saws, plastering trowels, straw knives, etc. Sole manufacturers for the Dominion of Canada of the celebrated "Simond's Saw."

Scythe Snaths.

THE DOMINION SNATH COMPANY, Sherbrooke, Que.—Manufacturers of Patent Swing Socket, and every variety of Scythe snath.

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THEO. H. EATON & SON, Windsor, Ont.; Detroit, U.S.A.—Supply at lowest prices all Chemicals used by Tanners and Wool Pullers. Special Anilines for Sheep Skin Dyers, Wool Mat Manufacturers, etc., etc. Address correspondence to Head Office, Detroit, Mich.

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BUTTERFIELD & CO., Rock Island, P. Q.—Manufacturers of Taps, Dies, and all Screw Cutting Tools.—Telegraph Office, Derby Line, Vt.

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B. GREENING & CO., Hamilton, Ont.—Manufacturers of wire ropes, cloth and general wire workers.

TIMOTHY GREENING & SONS, Dundas, Ont.—Manufacturers of the strongest description of steel wire cloth, malt kiln floors and general wire weavers. Telephone connection.

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For a check for \$2. we will print a ten-line advertisement in One Million issues of leading American Newspapers and complete the work within ten days. This is the rate of only one cent a line, for 100 circulation! The advertisement will appear in but a single issue of any paper, and consequently will be placed before One Million different newspaper purchasers;—or FIVE MILLION READERS, if it is true, as is sometimes stated, that every newspaper is looked at by five persons on an average. Ten lines will accommodate about 25 words. Address with copy of Ad. and check, or send 50 cents for Book of 272 pages. **GEO. P. ROWELL & CO.**, 10 SPRUCE ST., NEW YORK.

We have just issued a new edition (the 16th) of our Book called "Newspaper Advertising." It has 272 pages, and among its contents may be named the following Lists and Catalogues of Newspapers:—

DAILY NEWSPAPERS IN NEW YORK CITY, with their Advertising Rates.

DAILY NEWSPAPERS IN CITIES HAVING more than 100,000 population, omitting all but the best.

DAILY NEWSPAPERS IN CITIES HAVING more than 25,000 population, omitting all but the best.

A SMALL LIST OF NEWSPAPERS in which to advertise every section of the country; being a choice selection made up with great care, guided by long experience.

ONE NEWSPAPER IN A STATE. The best one for an advertiser to use, if he will be but one.

BARGAINS IN ADVERTISING IN DAILY Newspapers in many principal cities and towns, a List, which offers peculiar inducements to some advertisers.

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THE BEST LIST OF LOCAL NEWSPAPERS, covering every town of over 5,000 population, and every important county seat.

SELECT LIST OF LOCAL NEWSPAPERS, in which advertisements are inserted at half price.

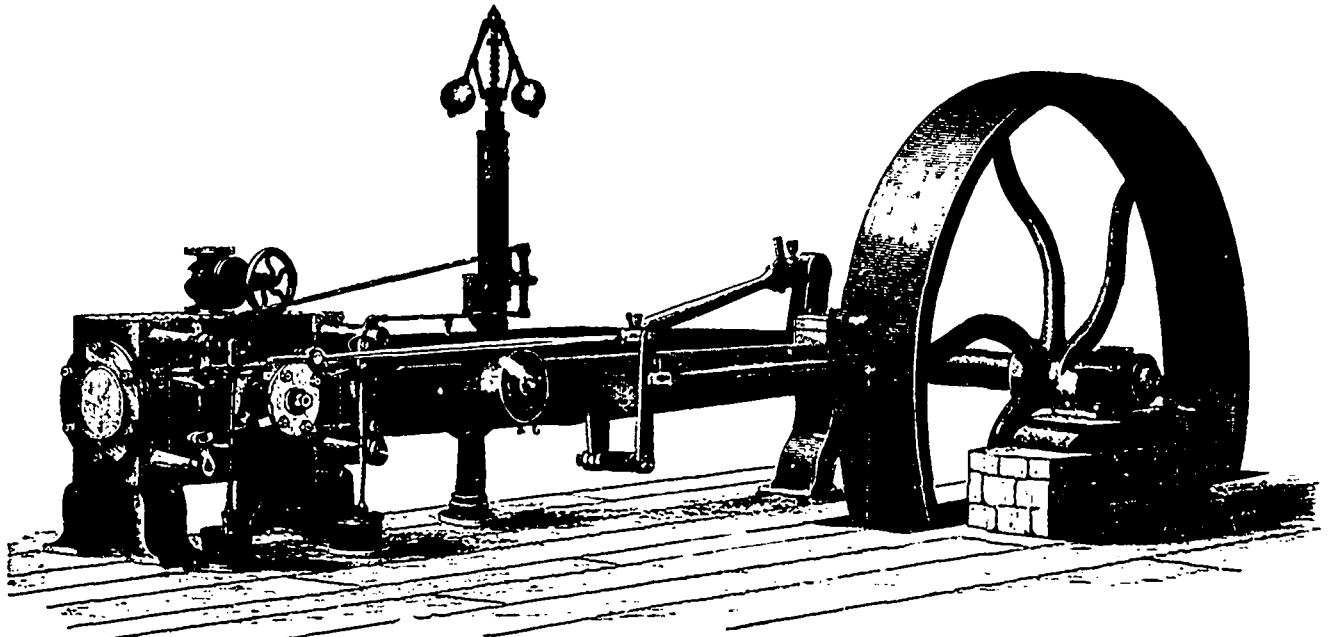
342 VILLAGE NEWSPAPERS in which advertisements are inserted for \$11.40 a line and appear in the whole lot—some half of all the American Weeklies.

Sent to any address for **THIRTY CENTS**.



THE GALT FOUNDRY,

Engine and Machine Works.



THE HARRIS-CORLISS STEAM ENGINE

Is the most perfect Cut-off Engine made. For Economy of Fuel, Regulating of Speed, Accessibility of all its Parts, it has many Imitators, but no Equals, and is Unsurpassed.

While many Engines of the same class have been invented, built, tried and abandoned, the Harris-Corliss has steadily gained in public favor, and is now

Without a Successful Rival.

PLEASE NOTICE SOME OF THE ADVANTAGES OF THE HARRIS-CORLISS ENGINE:

- 1st—**The Steam is admitted at Boiler pressure** to the piston by the main valve and is cut off at the same point, the load determining through the regulator, when the supply of steam shall be cut off. This is the only Engine that thus admits steam at full boiler pressure.
- 2nd—**The success of the Harris-Corliss Engine** lies in the simplicity and precise action of the governing elements, **the Governor** is an independent mechanism, with no extraneous load, and free to instantly respond to all variations in the angular velocity of rotating parts.
- 3rd—**No parts of the regulating medium enter the steam chest** and thereby be out of sight of the engineer, and subject to the corrosive action of steam and the oil used for lubricating the valves and piston.
- 4th—**Regularity of Speed** under varying loads of steam pressure.
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- 6th—**Stop Motion on Regulator** of Engine which effectually stops the Engine whenever the regulator by any means fails to perform its work, thus preventing the Engine from running away.
- 7th—**Having four Valves** either can be adjusted independently of the other with the greatest ease.
- 8th—**The increased amount** of power it develops.

We would draw special attention to our new and improved Adjustable Pillow Block, which is pronounced by all practical men who have seen it, to be the very best in Canada.

COWAN & CO.,

Galt, Ont., Canada.

Manufacturers of Engines, Boilers and Wood-Working Machinery—all kinds, new Patterns, highly finished.



Notice to Contractors.
SAULT SAINTE MARIE CANAL.

CONTRACTORS intending to tender for works of construction of the canal proposed to be formed on the Canadian side of the Sainte Mary's River, are hereby informed that tenders will be received about **January next**, and that the most favorable time to examine the locality will be between the present time and the early part of November next.

When plans, specifications and other documents are prepared, due notice will be given. Contractors will then have an opportunity of examining them and be furnished with blank forms of tender, etc.

By order,
A. P. BRADLEY,
Secretary.

Department of Railways and Canals, }
Ottawa, 24th August, 1887.

Maw & McFarlane
DUNDAS, ONT.

IRON FOUNDERS, ENGINEERS AND MACHINISTS,
MANUFACTURERS OF

Drop Hammers,
LIFTERS, DIE SINKERS AND PRESSES.

✉ CORRESPONDENCE SOLICITED.

TORONTO LITHOGRAPHING CO.
Globe Building, Toronto

MAKE A SPECIALTY OF
Fine Color Work
CHROMO ADVERTISING
CARDS and NOVELTIES
also a Superior Class of Wood Engraving

TORONTO BAG WORKS

DICK, RIDOUT & CO., Proprietors.

MANUFACTURERS OF

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COTTON
AND
JUTE

BAGS

FOR ALL
PURPOSES.
★
ALSO

BAG PRINTING EQUAL TO THE BEST AMERICAN WORK.

HESSIANS FOR MATTRESSES AND BALES,
COAT CANVASES, TWINES, ETC.

11 & 13 FRONT STREET EAST, - TORONTO.

Storage Accommodation Bonded or Free. Warehouse Receipts Issued.

HAMILTON
COTTON COMPANY,

MANUFACTURERS OF

THE STAR BRAND

COTTONADES, DENIMS, TICKINGS.

Star Brand—BEAM WARP.

” HOSIERY YARN

” BUNDLE YARN.

” CARPET WARP.

” BALLED KNITTING YARN.

First Prize, Silver Medals, for Beam Warps and Denims
Toronto, 1881.

General Agents,—

F. McELDERY & CO.,

204 MCGILL STREET, MONTREAL.

22 & 24 COLBORNE ST., TORONTO.

BEAVER LINE.

The Canada Shipping Co.'s Line of Steamers.

BETWEEN

MONTREAL AND LIVERPOOL.

Comprising the following First-Class Clyde-built, Full-powered Iron Steamships:

Ship Name	Tons
LAKE ONTARIO, Capt. Wm. Bernson	5,300
LAKE SUPERIOR, Capt. Wm. Stewart	5,000
LAKE HURON, Capt. H. Campbell	4,100
LAKE WINNIPEG, Capt. M. L. Trautman	3,300
LAKE NEPIGON, Capt. P. D. Murray	2,300

WINTER ARRANGEMENTS.

The steamers of the Line will sail from LIVERPOOL for New York (calling at Boston to land Canadian Through Cargo) as follows:—

Lake Superior	Thursday, Nov. 24
Lake Ontario	Dec. 8
Lake Huron	Jan. 22

FROM NEW YORK FOR LIVERPOOL DIRECT

Lake Superior	Thursday, Dec. 15
Lake Ontario	“ 29
Lake Huron	“ Jan. 12

And fortnightly thereafter during the Winter season.

These steamers are built in water-tight compartments, and of special strength for the North Atlantic trade.

In the passenger departments the most perfect provision has been made to ensure the comfort and convenience of all. In the Cabin the State-rooms are large and airy. The Steerage is fitted with the most approved Patent Canvas Berths, and is fully ventilated and heated by steam.

An experienced Surgeon is carried by each steamer, also Stewardesses to attend to the wants of females and children.

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MONTREAL TO LIVERPOOL:

Saloon, \$67.50. Intermediate, \$37.50. Steerage, \$27.50.

For Freight and other particulars, apply: In Belfast, to A. A. WATT, 3 Custom House Square; in Queenstown, to N. G. SEYMOUR & Co.; in Liverpool, to R. W. ROBERTS, 21 Water St.; in New York to JAS. ARKELL & Co., Kemble Building; in Boston to J. B. BRIGHAM & Co., 38 Central Street.

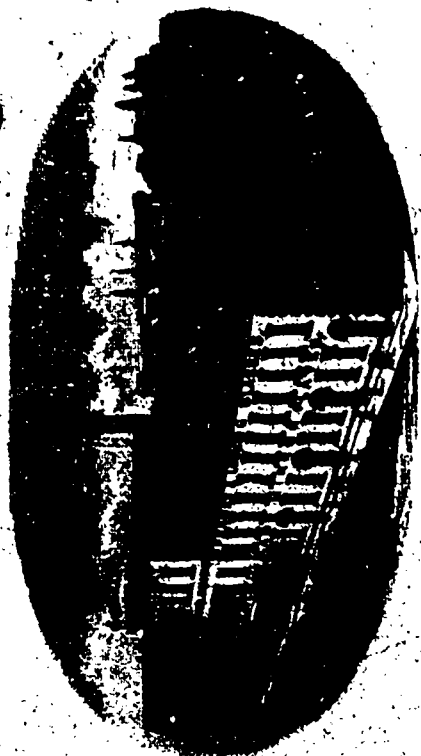
H. E. MURRAY,

General Manager,

1 Custom House Square, Montreal.

Cobban Manufacturing Co'y

Factory & Head Office: Toronto.



Branch: 455 St. Paul Street, Montreal.

MANUFACTURERS OF
Mantles, Over Mantles and Mirrors in Finest Hardwoods. Mouldings, Picture
Frames and Looking Glasses. Mirror Plates: British, French, German,
Shocks. Plate Glass Beveling and Silvering a Specialty.

TORONTO.
MONTRÉAL.
CLOSE PRICES. LIBERAL TERMS.

ONTARIO BOLT CO., TORONTO,

MANUFACTURE

- Threshing Machine Teeth,
- Machine Bolts,
- Bolt Ends and Blank Bolts,
- Bridge Rods and Bridge Rivets,
- Coach Screws and Sinks Bolts,
- The Superb Carriage Bolt,
- The Frise Carriage Bolt,
- The Eclipse Carriage Bolt,
- The Frise Tire Bolt,
- The Eclipse Sleigh Shoe Bolt,
- The Frise Plough Bolt,
- Best Whiffletree Bolts,
- Best Shaft and Step Bolts,
- Best Eccentric Head Spring Bolts,
- Best Elevator Bolts,
- Best Norway Shackles Bolts,
- Best Railway Track Bolts,
- Black Iron Rivets,
- Boiler Rivets,
- Railway Spikes,
- Pressed Spikes,
- Hot Pressed Nuts,
- Bridge Bolts and Bag Bolts.

HEINTZMAN & CO.

MANUFACTURERS OF

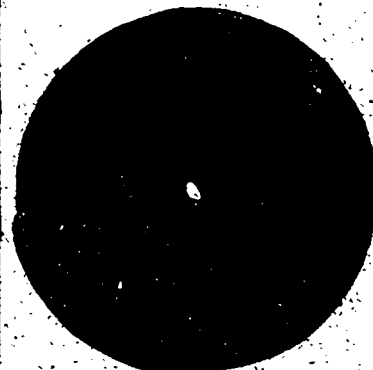


**GRAND,
SQUARE,
AND UPRIGHT
PIANOFORTES.**

SEND FOR ILLUSTRATED CATALOGUE

Warerooms, 117 King St. West,

TORONTO.



**HART
Emery Wheel
COMPANY
(LIMITED),
Hamilton, Canada.**

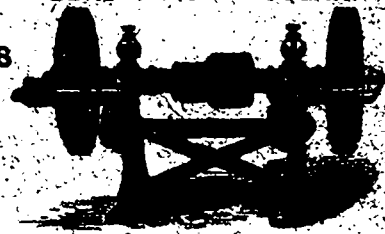
MANUFACTURERS OF

EMERY WHEELS

FOR
**FOUNDRIES, MACHINE SHOPS,
SAW MILLS, & PLANING MILLS.**
SEND FOR CIRCULAR.

Also
MANUFACTURERS
OF —

**EMERY WHEEL
MACHINERY.**



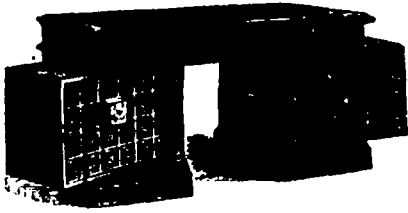
Illustrated Price List sent on Application.

W. STAHLSCHMIDT & CO.

PRESTON, ONT.

MANUFACTURERS OF

School, Office, Church and Lodge
Furniture.



ROTARY DESK

No. 50.

Send for Circulars and Price List. Name this
paper.

S. Lennard, Sons, & Bickford,

DUNDAS, ONT.,

PATENTEES OF THE "ELYSIAN" SEAMLESS HOSIERY,

Manufacturers of Plain and Fancy
Hosiery, Caps, Tugues, Sashes,
etc., etc., etc.,

To the Wholesale Trade only.

Represented in Eastern Ontario, Que-
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by

F. W. NEWMAN & CO.,
21 Lemoine St., Montreal.

In Manitoba by
PEDDIE & CO.,
WINNIPEG, MANITOBA.

In Western Ontario by
S. LENNARD,
Senior Member of the Firm.

ESTABLISHED 1820.

EAGLE FOUNDRY.

GEORGE BRUSH,

14 TO 24 KING AND QUEEN STREETS, MONTREAL.

Maker of

STEAM ENGINES,
STEAM BOILERS,
HOISTING ENGINES,
STEAM PUMPS,
CIRCULAR SAW MILLS,
BARK MILLS,
SHINGLE MILLS,
ORE CRUSHERS,
MILL GEARING,
SHAFTING,
HANGERS AND
PULLEYS,

HAND AND POWER HOISTS FOR
WAREHOUSES, &c., &c.,
and Agent for

"Water's" Perfect Steam Engine Governor, and
"Heald & Sisco's" Centrifugal Pumps.

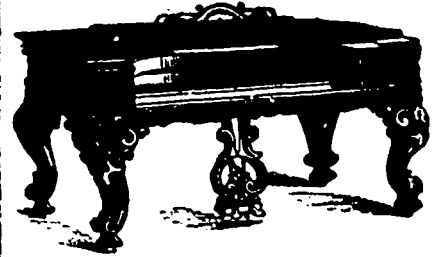


EVERY REPUTABLE DEALER KEEPS
THEM.

Insist on having the Genuine, and see
that they bear our name.

LANSDOWNE PIANO CO.

UPRIGHTS
- AND -
SQUARES



The Leading Canadian Pianos

STRICTLY FIRST-CLASS. Correspondence Solicited

86 York St., Toronto.

Established 1872.

THE ACCIDENT

INSURANCE CO. OF NORTH AMERICA.

NEW FEATURE,

JOINT INSURANCE

FOR PARTNERSHIPS

IMPORTANT TO MANUFACTURING FIRMS.

MEDLAND & JONES,

GENERAL AGENTS,

Corner Adelaide and Victoria Streets,

TORONTO.

J. M. LAUGHLIN'S SONS,

CROWERS
MERCHANTS,
AND EXPORTERS OF

SHINEATELES FALLS
N.Y.

AMERICAN TEASELS.

