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# THE CANADIAN MANUFACTURER

## AND INDUSTRIAL WORLD.

DEVOTED TO \*  
THE  
MANUFACTURING & MINING INDUSTRIES,  
OF THE  
DOMINION. \*

VOL. 6.

TORONTO, MAY 6, 1887.

No. 9.

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# THE CANADIAN MANUFACTURER

## DEVOTED TO \* THE MANUFACTURING & MINING INDUSTRIES, OF THE DOMINION. \* INDUSTRIAL WORLD.

VOL. VI.

TORONTO, ONT., MAY 6, 1887.

No. 9.

### "COMMERCIAL UNION" AND "RECIPROCITY."

THE symposium of views of Canadian manufacturers regarding "Commercial Union," and "Reciprocity in Manufactures between Canada and the United States," published in the last issue of the CANADIAN MANUFACTURER was read with great interest and excited wide and intelligent discussion in both countries. The publication occurred almost simultaneously with the delivery of a speech on the subject by Mr. Erastus Wiman, a Canadian formerly of Toronto but now living in New York, at the annual meeting of the Canadian Club in that city.

The question of the Commercial Union of Canada and the United States was revived and forced on the attention of the public by the introduction into the last United States Congress by Representative Butterworth of a bill providing for a complete reciprocity with the Dominion of Canada. The preamble of the bill sets forth that controversies exist between the Government of the United States and that of Canada growing out of the construction of treaties affecting fishing interests; and that by reason of the contiguity of the two countries and the similarity of the interests and occupations of the peoples, it is desired to remove all existing controversies, and all cause of controversy in the future, and to promote and encourage business and commercial intercourse between the people of both countries, and to enable the citizens of each to trade with the citizens of the other without restriction, and irrespective of boundaries, as fully and freely as though there was no boundary line between them. The first section of the bill provides that whenever and as soon as the Government of Canada shall, by act of her Parliament, permit all articles of trade and commerce of whatever name and nature, the products of the United States, to enter the ports of the Dominion free of duty, then all articles of trade and commerce of Canada of every name and description, produced in Canada, shall be permitted to enter the ports of the United States free of duty; it being the intention of the act to provide for absolute reciprocity of trade between the two countries. The other sections of the bill provide for the methods by which the reciprocity should be carried into effect. The bill failed to become a law, and Mr. Butterworth declares his intention to introduce it into the next Congress, which assembles in December, and to press for its passage.

The move is undisguisedly in the interest of the free trade or anti-tariff wings of both the Democratic and Republican parties in the United States, and it is being agitated with much fervor by the corresponding elements in Canadian politics, both in Canada and before the Canadian Club of New York, of which Mr. Wiman is president.

Mr. Wiman's arguments seem to be all based on the premises included in the preamble of Mr. Butterworth's bill, particularly the reference to the controversy regarding the fishery question. The importance of this question is unduly magnified, and it is used *in terrorem* to force Canadian sentiment into the acceptance of an ultimatum which could never be attained except through fear that refusal would precipitate hostilities on the part of the stronger United States against the weaker Canada. That the Government or people of the United States entertain any such feelings we do not believe, nor do we believe that sensible persons in Canada believe it.

Whatever there may be in the fishery question, the matter can and most probably will be settled entirely without reference to the question of reciprocity. Upon a careful reading of Mr. Wiman's speech it is evident that he and the free traders generally hope to see Canada coerced into an unwilling and unprofitable commercial union with the United States through fear of the enforcement of the retaliatory measures authorized by the American Congress, but which have been wisely withheld by President Cleveland. We are told by Mr. Wiman that early and prompt action is essential for the adjustment of the differences which, by delay, become more and more serious; that complete and full reciprocal relation in trade matters should be created, which would forever settle the fishery question, which, like Banquo's ghost, rises periodically to disturb the peace; that the present is a most critical period in the history of the connection between the two countries; that it is almost impossible to over-estimate the importance of what might occur in the next few months, "nay, in the next few weeks"; that in the settlement of the fishery question compensation from the United States must take one of two forms—either a payment of money, or a complete readjustment of trade relations between the two countries; that the idea of a money payment must be abandoned on the ground that the American people feel that they were tricked and swindled by the Halifax award, and will not countenance any such mode of settlement again, and that the only remaining mode of settlement is by a complete readjustment of the commercial relations between the two countries, based upon the propositions of the Butterworth Bill.

According to these arguments Canada's choice lies between the devil and the deep sea. We have to accept either complete reciprocity and commercial union with the United States, whether we desire such or not, or have the United States go to war with Canada because we insist on our rights in keeping American fishermen out of Canadian waters.

But a new phase of this fishery question is developed in the proposition said to have been made by Lord Salisbury, the

British premier, to the Government of the United States, in which the Queen's Government is favorably inclined to the proposal to revert to the treaty of Washington without suggesting a pecuniary indemnity. A settlement on this basis would be honorable to all concerned, and, we believe, satisfactory. If such settlement is made, the argument in the preamble of Mr. Butterworth's bill loses its point, and the necessity of the passage of that bill, on that account, ceases. If such settlement is made, the terror of retaliation on the part of the United States, so vividly and pyrotechnically displayed by Mr. Wiman also ceases, and the discussion of the reciprocity question must be conducted on its legitimate and proper grounds. It is not to the credit of the intelligence of any man, in either country, to suppose that Canada could be driven into the measure by fear of brute force on the part of the United States, or that the American people could desire to settle the fishery question by such means.

As stated by Mr. Joseph D. Weeks, of Pittsburgh, Pa., in his letter published in this issue, the manufacturers of the United States do not desire this reciprocity, and that as protectionists they view the question as one of national and not of international importance. Protection to American industries became the settled policy of the American Government on the accession to power of the Republican party in 1860, and under that policy the United States have grown to be probably the richest and most powerful nation on earth. England has always viewed that country with a covetous eye, and ever since the days of Cobden has sought to break down the barrier of protection which kept her manufactures to a large extent out of the American market. The free trade element in the United States, to whose cause Mr. Wiman is lending his energies and influence, is constantly endeavoring to change the policy of the Government, but the recent revival of trade there, and the extension of manufacturing industries into all parts of the country, particularly the Southern States, which have heretofore always been of free trade proclivities, have strengthened the protection sentiment most wonderfully, and this move looking to unrestricted Canadian reciprocity is nothing but an effort in a new direction to accomplish the breaking down of the protection barrier, and the establishment of Cobdenism and free trade. That defeat which could not be accomplished at one blow is now being attempted in detail; and if reciprocity could be established with Canada there would be no sufficient reason why it should not be extended to Great Britain and the rest of the world.

Mr. Wiman speaks truly when he says that a strong belief exists in Canada that a complete interchange of natural and manufactured products would result disastrously to the young and promising manufacturing interests of the Dominion, and that these fears would provoke an intensity of conviction and bitterness of discussion. The letters from Canadian manufactures being published in these columns reflect the "strong belief" that the writers entertain on the subject. The animus of the whole matter lies in the arguments made by Mr. Wiman that "reciprocity would result in the building up of a great trade to and from Canada, and in making her vast natural resources contributory to the progress and growth of the United States;" that reciprocity means for the United States "the freest access to every natural product of Canada, which she

greatly needs;" and that the advantage to the United States would be "in the free access to the vast mineral resources, timber limits, phosphate beds and other products of Canada which she so greatly needs." But if the United States need these vast and valuable Canadian resources for their further and greater aggrandizement, surely Canada has greater need of them for the promotion of her own welfare. If American capitalists, iron masters, lumbermen and manufacturers generally desire Canadian ores, and access to Canadian forests; and if Canadian phosphates are desired for the enrichment of American soil, Canada will gladly welcome the erection within her borders of blast furnaces, lumber mills, factories, foundries, workshops and every other character of industrial establishment for the consumption of such products. But Canada does not propose to allow herself to be denuded of all her rich and valuable natural products, the same to be carried away in their crude condition to a foreign country, to give employment to untold millions of capital invested there, and to teeming millions of artisans and skilled workers. Valuable natural resources and a generous protective tariff raised the United States from a lower level than that which Canada now occupies and placed them in a most enviable position. Canada also possesses similar valuable resources and a national tariff policy which will undoubtedly elevate her to a similar position among the nations of the earth. But to be so elevated she must rigidly adhere to her fostering care of her infant industries, and discourage and prevent the exportation of her valuable products in their crude condition. They must be manufactured on Canadian soil.

We resume our

#### SYMPOSIUM.

*From MR. THOMAS COWAN, president of the Canadian Manufacturers' Association, and proprietor of the Galt Foundry Engine and Machine Works, Galt, Ont.*

"Regarding 'Reciprocity in manufactures,' allow me to say that I question if our industries are sufficiently developed yet to cope with the old established and long protected concerns of the States. All manufacturers are aware that it takes considerable time to settle down and fully develop special lines of manufactures, though much has been done in that way in Canada of late years. With their long experience and their well-known preference for 'specialties,' I fancy manufacturers in the United States would have the advantage of us at the start. There would also arise the vexed question regarding patent rights, for in reaching the American market it might be found necessary to wade through a sea of expensive patent-right litigation in the American courts. From a patriotic standpoint I should judge that none of us would propose reciprocal trade relations with a foreign country and deny the same privileges to Great Britain so long as we remain part and parcel of the Empire. Apart from all this I very much prefer the idea of working out our own destiny.

"We have a country of vast extent and unlimited resources, the value of which we are only beginning to realize. Then why not continue as we are doing, to develop the latent wealth of 'Field, Forest and Mine' in our own country, and to occupy the new markets with our own products? I am glad to be able to assure you that already some of our industries are taxed to their utmost to fill orders for new markets recently created by the completion of our 'National highway.' Why then drop the reality to catch at the shadow? In these opinions I believe I am sustained by those in the same line of manufacture as myself, and I do not venture to give the views of those

engaged in other industries though I am inclined to think they will not differ materially from what I here express.

'No pent-up Utica confines our powers,  
A vast, unbounded continent is ours.'

"Let us therefore hold and possess the land."

From MR. SAMUEL MAY, of Samuel May & Co., billiard and pool table manufacturers, Toronto, and Second Vice-President of the Canadian Manufacturers' Association:

"Mr. Erastus Wiman and his friend Mr. Butterworth, who so strongly advocate unrestricted reciprocity between Canada and the United States, evidently do not look at the matter from a Canadian standpoint, or with a fostering care for Canadian commercial or national interests. It is my opinion that such a treaty would have a tendency to depopulate Canada by paralysing our manufacturing industries and driving the people now employed here to the larger factories in the States for employment. It would wipe out our wholesale business, and all goods imported for Canada would be distributed from New York and other American cities. What effect would it have on our currency and banks? American money circulates freely in Canada, but Canadian currency does not circulate in the United States, and with free trade, nearly or quite all of the money in circulation would be that current on the other side. As a Canadian residing and doing business in Canada I prefer our present National Policy. Under it we are daily attracting a most desirable population from the United States. Capitalists and manufacturing concerns who come here to transact business, not only bring in their capital but also large numbers of employees and their families. If free trade existed between the two countries, would such people come and establish industries here? Would we have such concerns as the McAlpine Tobacco Co., New York, the American Rattan Co. of Boston, the Gutta Percha & Rubber Co. of New York, and numerous others, establishing factories on Canadian soil? I think not. And if free trade was proclaimed the American concerns in operation here would soon close out their Canadian branches and do all their trade from their factories in the United States, as it would be much cheaper to simply pay freight on goods to Canada than to operate branch factories. We would also lose many of our Canadian business men and capitalists who would certainly go to the States in order to get a better share of the American trade. Instead of giving ourselves away, as advised by Mr. Wiman, Canadians will prefer to push on as they are now progressing, guard and maintain British Canadian rights, encourage and protect Canadian industries, and, instead of endangering our nationality, work out manfully our own destiny on this Continent."

From MR. EDWARD GURNEY, vice-president of the E. & C. Gurney Company, (Limited), manufacturers of stoves, ranges, etc., and ex-president of the Canadian Manufacturers' Association.

"Mr. Wiman's 'Commercial Union' speeches and letters are interesting and suggestive, but I must say not as practical as one would expect from a business man of his experience and reputation. There are two distinct points of observation from which to view this question which may be briefly stated under two heads:

"1st. That of the Canada citizen who puts aside sentimental consideration, and estimating citizenship in the two countries as quite equivalent to each other, is prepared to discuss the commercial question on its merits and accept the issue whatever it may be.

"2nd. That other citizen who is necessarily no better or more loyal than the first, who, because of love of British connection, family tradition, education, or belief in the destiny of

Canada as a separate and independent power working out a new experiment in human government in friendly competition with our good neighbors to the south, is unwilling to subordinate all or any one of these considerations to the commercial question, and is therefore prepared to accept no scheme that will hazard what in his estimation is the now important matter, but is willing to accept any plan that will advance the material interests of the country without sacrificing its integrity as a nation.

"While the first class is large it is greatly outnumbered by the second, and this question must be considered from this standpoint. It may be accepted therefore that whatever the end sought by the advocates of the scheme, our public are unprepared to accept conditions that will result in political union with the United States.

"It lies with the advocates of this scheme to adjust the relation of Canada with Great Britain on the one hand, and on the other to provide some plan by which the Government of Canada would secure an adequate and continuous return for the contribution of her citizens to the general revenue of the proposed business federation. Beyond a few glittering generalities these two difficult questions are left unanswered.

"In considering this question we must bear in mind the expenditure of the past twenty years in railroad construction, in acquiring territory, and in various ways having in view inter-provincial trade, and the development of Canadian national sentiment through close interprovincial commercial relations, the purpose being to do away with unnatural barriers, and allow each province to cultivate the trade adjacent to it. This suggests the basis of the proposed union which is a treaty—for how long? With what guarantee of renewal? What expectation of generous construction may be justly founded on our experience in the past?

"We have during the past ten years by our fiscal legislation (right or wrong), given a certain direction to the investment of capital notably in manufactures, which it is admitted on all hands must be disturbed, it being claimed that some of our larger manufacturers could survive and that the rest might perish. This is to be done to carry out a treaty with a nation notably unfriendly to us in all its legislation, and one which throughout its body politic has a latent belief in the manifest destiny doctrine of the Seward school, and the consequent correctness of every act that looks that way.

"In our great cities for exactly the same reason a wholesale and jobbing trade has been created which in view of our relative population should be compared with that of Buffalo, Rochester, Albany and Cleveland. To form a correct judgment as to the probable disturbance in this direction, we must not forget that if this interest is to suffer, the re-adjustment is to be by treaty, and can have no permanence apart from political union.

"Your question as to its effect on my company is pertinent. We could do with it or without it. What we want, and what every business house wants is permanence in business policy, and this constant agitation by political philosophers, resident and non-resident, is greatly to be deplored, for capital seeking business investment is nervously sensitive and will not seek a home in a country which is forever deprecating its relative geographical, climatic or governmental advantages.

"We have acquired a certain independence through years of growth which is essential to our national independence, and which we must maintain and increase by interprovincial trade if we entertain any hope whatever of building up here a sturdy national life which will illustrate a new phase of government by the people. We must move slowly in taking steps which may hazard this by making it dependent on anything so lacking in permanence as a treaty with our neighbors.

"Let us be honest with ourselves and determine whether we want political union or not, and adjust our business to the conditions determined, and then 'Let us have peace.'"

From MR. R. W. ELLIOT, of Messrs. Elliot & Company, drug merchants, manufacturing chemists, etc., Toronto, and ex-president of the Canadian Manufacturers' Association.

"THE friends of Reciprocity assume that the opening of markets in the United States, with a population of fifty or sixty millions of people would be a great advantage to Canada with a population of five millions.

"They apparently overlook the fact that their producers are as ten to one, and that they would probably under certain circumstances swamp every existing or possible industry in Canada, including agriculture, manufactures of all sorts, fisheries, and even lumbering. They lose sight of the fact that the control of the home market is virtually essential to our growth and prosperity.

"Computing that two and a-half millions of people in Canada earn an average of one dollar per day, during 300 days in the year, the value of their year's products would be \$750,000,000. The latest trade and navigation returns show our exports to be \$85,250,000 per annum, and our imports \$100,000,000. This shows the vast importance of the home market to our producers.

"Partial Reciprocity means bartering away the interests of those, who, as classes, have not yet produced surplusses available for exports, in favor of those who must sell a portion of their products abroad. Total Reciprocity means the destruction of the vast sums spent on national highways, so that all our producers may have the means of reaching the best available home and foreign markets. It would ruin our manufacturers, and would cripple our wholesale and importing trade by putting large numbers of their ultimate customers out of employment. Banking capital would be injured and the securities of loan and insurance companies impaired to the extent of insolvency in many cases.

"Look at what happened to real estate in New York city where large investments had been made by life insurance and trust companies prior to the resumption of specie payments. Reductions in values wiped out more than thirty-five large companies, including the stocks of investors and the provision made for tens of thousands of families.

"It would be most unfair to tie the future race of producers in this country to a bargain in which they have had no voice, and which may prove so disastrously prejudicial to their interests as to leave no remedy but emigration from their native land.

"The last reciprocity treaty was framed by wise heads and kindly hearts, but ere its twenty-one years of life were ended, it caused great exasperation on both sides of the line, with ill-feelings not even now thoroughly cooled.

"The termination of the Washington Treaty signalized another dispute, but it is surely not necessary to abandon our whole record of the past, and to upset our whole industrial fiscal and national policy, for the sake of settling the true meaning of the fishery clauses of the treaty of 1818.

"This subject should be approached in a spirit of conciliation, and as we are of common stock and language, and have in the main the same ideas of law, order, and justice, a settlement should, after due deliberation, be arrived at honorable and acceptable to both nations, and all parties, the howlers always excepted who will declare 'that we have in any event got the worst of it.'

"There are several important questions which might be settled by treaty with the United States which would be of mutual advantage to both countries. Among these I mention the enlargement of the list of extraditable crimes and misdemeanors; the rendition of goods and money fraudulently taken from one country to another; facilitating the collection of debts from absconding debtors; delimitation of unascertained frontiers, as that of Alaska, and the bestowment of full civil rights within a reasonably short time to those who voluntarily change their residence and allegiance. These questions should be approached in the knowledge that Canada and the United

States have some 3,000 miles of co-terminous boundaries, including over 2,000 miles of land frontier, much the longest of any between any two countries in the world.

"While we should endeavor to cultivate amicable and friendly relations with our neighbors no Canadian government should resign control of the lines on which the commercial and industrial progress of Canada is proceeding.

"It should be remembered that the National Policy has been three times sustained by the verdict of the people at the polls.

From MR. H. E. CLARKE, M.P.P., of Messrs. H. E. Clarke & Co., manufacturers of trunks, Toronto.

"Commercial Union, if it means anything, means the breaking down of all tariff walls between the United States and Canada, and the building up of an outer circle of walls that will take in both these countries and keep all the rest of the world out.

"The difference between that and political union, or annexation, is not worth talking about. It is a difference in time and form more than anything else.

"Canada under a commercial union would simply be a state without representation in Congress—a kind of 'poor relation' living on the bounty of its more wealthy and powerful friends. It would never be an independent nation.

"There is patriotism enough in this Canada of ours to reject any commercial advantages that would have to be purchased at such a sacrifice of national independence.

"Would there be any commercial advantages under such a union? To the manufacturers, No. We might compete with our neighbors just as one state competes with another, but even then we would labor under many and serious disadvantages. We would always be considered an alien people, the poor relation who might have that which could be spared or which could not be conveniently disposed of otherwise. Never, while we remained under a foreign flag, would or could we be admitted to the full brotherhood of the Union.

"In what could we hope to gain? It is said that we would have sixty millions of population to serve in addition to our five millions. But our manufactures are comparatively unknown over the border and could not compete on even terms for the increased territory, while American goods many of which are as well known in Canada as in the United States, would compete on more than equal terms with ours in Canada.

"Canada is not heavy enough in capital or in resources to tip up the United States and roll its wealth or its population in this direction. The drain would all be the other way, and the centres of commercial gravity would be New York, Boston and Chicago.

"Trade under the altered condition of affairs which would be brought about by commercial union, would not leave its ordinary course and rush northward towards Canada any more than it now rushes to Ohio, Indiana, Michigan or Wisconsin. And American wealth will not flow to benefit an alien people any faster than it flows at present to benefit the citizens of the states named, although part and parcel of the American Union.

"As an independent people with a National Policy of our own, we can make our way and hold our ground against our American neighbors. No one can truly say that we are not making successful headway. No one can truly say that we don't compare favorably with Vermont, Maine, Ohio, Michigan, or any of the states lying in the same belt of country. If we don't compare as favorably with New York, Pennsylvania and other seaboard states it is because nature has ordered it otherwise, but nature's law would not be changed for us any more than it is changed for the states with which we can be favorably compared, and the idea that by setting our foot on the edge of the states we would tip all the good things over onto our side is a wild fancy that has no foundation in fact.

"We want no change looking towards a loosening of the bonds that bind us to the Mother Land. We are not ready to

knock for admittance at the doors of the Union. We think very little of the loyalty, the patriotism, or even the worldly wisdom of those who advocate a commercial union with the United States. A union that must mean commercial, and may mean political defiance of the Mother country. We feel and recognize our own nationality when we make our own tariffs, and our American neighbors recognize and feel it too. We don't propose to sink into a dependency of the United States and allow them under cover of a commercial union, or under any other cover, to make our tariffs, shape our policy and eventually cover us with the stars and stripes and claim us as part of the United States of America.

"We have a destiny of our own, and as loyal Canadians we will work it out even though it cost us some sacrifice. but how much more important is it when it is shown that we gain more by following it out than we would if we were to follow blind guides, who would lure us into annexation to the false or the United States under cover of commercial union.

"All talk and writing in favor of such union, and all undue eagerness in favor of reciprocity, even in natural products, is carefully noted by powerful organizations on the other side of the line, and a pressure is exerted accordingly, now in one direction, now in another, but always looking towards the absorption of Canada into the Union. It would be well, therefore, if manufacturers and all other classes would speak out frankly and say that we propose to work out our own destiny on this side of the line, even though it should cost us something to do so, and that we believe we can do very much better under our National Policy than we could if our tariff was in the hands of others, and we had to compete for trade with the accumulated wealth of all the manufacturing states of America."

*From Mr. JOSEPH SIMPSON, manufacturer of knit goods. Toronto.*

"In my judgment reciprocity means absolute annihilation of all the prominent interests of the country. First in order to feel its effects would be the mercantile interests. The country would swarm with commercial men from the United States, who, with their superior facilities, would offer such inducements as to attract from us the trade that is now done by our wholesale merchants. This I consider as inevitable as fate. It has been repeatedly demonstrated in the States, wherever railway facilities have opened communication, that the superior advantages of the larger markets have sufficed to drain all but a small local trade from their smaller and weaker competitors. But suppose it were not certain that such a result would follow, can we afford to run the hazard? Would it be wise for us to do so, for any benefit that is likely to ensue? I trow not.

"Let us review these consequences. The business of our wholesale merchants and manufacturers—the same logic will apply equally to both,—form not only the basis, but the bulk of the business of our banking institutions. They are the initiators of our domestic exchanges and their collections, and to a great extent of our foreign exchanges for purposes of remittances. They are by far the largest patrons of bank discounts, and, in the case of the manufacturers, great assistants to circulation.

"Now drive away or destroy our merchants and manufacturers and our banks would have to close their doors. There would also be danger to the circulating medium of the country. The immense volume of trade which would issue with and through the agency of the States, with their currency circulating at par, and ours taken by their banks only at a discount, (as now), would eventually drive our currency out of use, and so this remaining resource of our financial institutions would be seriously crippled.

"But this is not all, these same great interests now give employment to our mercantile marine in the way of return cargoes of merchandise. With a cessation of foreign importation this resource would no longer exist to ship owners, and

with the inventive discriminating powers of the Americans in favor of their own interests, it would not take them long to complete the paralization of our entire shipping interests.

"The immense plethora of capital, superiority of facilities in established centres of manufactures, their skilled labor, and patent protection law, with their greater development and experience, would enable American manufacturers not only to retain the hold on their own market, but to very soon make them the masters of ours, and so leave our manufacturing industries to die of inanition.

"Then the agricultural interest. Here, it will be acclaimed, in our most important interest that will be immensely benefited by having the opportunity of a larger market. I do not believe it. In the first place the enlarged market means to our farmers increased competition. In the next place, with the destruction of our other great interests and the impoverishment of all classes which must necessarily follow, they will be deprived of to them a much more profitable market nearer home.

"With our financial institutions crippled farmers will be dependent upon foreign aid to move their crops, and in the days of their affliction with short crops, they will soon discover their great disadvantage in lack of facilities to supply their pecuniary needs.

"The fact is there is a mutual interdependence in all our great interests, and they must all be prosperous or the contrary together. One cannot languish and die unless the other does also.

"I think it would be far more economical to give the Americans all the fishing facilities they want than to give away the whole future of the country under the guise of Commercial Union.

"With a little more homogeneity and patriotism among our people, a little stronger appreciation of the magnificent advantages of her political position, and a little less adulation of her neighbor, Canada if let alone, would soon expand in what she has already become a free, happy and prosperous country."

*Letter from Mr. WM. BELL, of Messrs. Wm. Bell & Co., Oryan Manufacturers, Guelph, Ont.*

"In reply to your request for our views regarding the question of reciprocity of manufactures between Canada and United States, I would say that it would be a good thing—to avoid.

"During the regime preceding the adoption of our present National Policy, and when manufacturing industries in Canada were in an exceedingly depressed condition, this country was deluged with all descriptions of the products of American factories and workshops, good, bad and indifferent. Our people thus became familiar with them, and the reputations of many of them are well-known in Canada to-day.

"Until our protective tariff made it possible, we had no large manufacturing industries, and those which have sprung into existence since have had to struggle along in a more or less precarious manner, and establish their business reputations entirely upon the intrinsic merits of their productions, and in the face of the most disadvantageous circumstances. These reputations are, generally, local as to Canada, and do not extend to the United States.

"Many American manufactured products are well known in Canada, while but few Canadian goods of similar character are at all known in American markets. There are no lines of manufactures being produced in Canada that are not also produced in the United States. In the latter country enormous capital is invested in their production, the output of manufactured goods being largely in excess of the home consumptive demand, and the manufacturers are constantly looking around to find slaughter markets for their goods.

"Canada presents an inviting and convenient field in this respect, and should reciprocity prevail it would be the death of



all the weaker industries in Canada, and a fearfully staggering blow to those which could struggle along until such time as they could overcome local objections and prejudices in American markets, conform to local ideas and tastes there, and build up business there in the face of a fierce home competition which has already and fully occupied the entire field.

"Another and vital objection to reciprocity in manufactures lies in the fact that a very large proportion of Canadian manufactured products could not be sold in the United States because they would infringe the rights of American patentees there. The production of such goods here is legal, and there is not nor can there ever be any objection to them in our home markets on that account, but they could not be sold in American markets, and any efforts to dispose of them there would be promptly met by injunctions and expensive law-suits in the United States courts.

"On the other hand similar American goods could be sold in Canada without restriction, and, coming from over-stocked factories, sold at prices against which it would be ruinous for Canadian manufacturers to compete. Such being the case, of what possible benefit could such so-called 'reciprocity' be to Canadian manufacturers? In my opinion instead of any benefit accruing to them it would be a blow from which they would never recover, and which would prove a serious drawback to all Canadian prosperity and all Canadian industries."

*From MR. GEORGE BOOTH, of Messrs. George Booth & Son, manufacturers of copper and brass goods, Toronto, and treasurer of the Canadian Manufacturers' Association.*

"As manufacturers of sheet metal wares we are not in favor of a treaty with the United States for reciprocity in manufactures. "The competition would be unequal. With their immense capital they would freeze us out.

"We are selling some of our goods in Canada to-day at the same price that similar goods are sold at in the United States for their home trade; but with the tariff removed we would have to succumb to the potent power of their larger capital.

"The American idea of trade is *monopoly*. They aim (and in many cases successfully) to control the respective industries in which they invest their capital.

"Their extensive markets enable them to concentrate on the manufacture of one or more special lines. Availing themselves of every device and facility that capital commands, they produce their goods at the lowest possible cost. These goods are put on the market at figures which defy competition, and which swamp and annihilate all attempts at rivalry. After which, having the market to themselves, they establish satisfactory and paying prices. Should any newcomer with small or insufficient capital appear, allured by prospective profits, and embark in the business in hopes of participating in their trade, they forthwith drop prices and freeze him out. In the event of capitalists coming into the field and making a fight, combination is the order of the day, and the monopoly is more fully assured.

"Of what avail would reciprocity be to Canadian manufacturers in coping against such odds? Once throw open our ports and we close the doors of all our factories. The Monroe doctrine of 'America for Americans' would be asserted, and Canadian identity be lost.

"We want none of this jug handle reciprocity. We would have equal rights with our neighbors on parchment only. They would have the substance while we would have but the shadow. It would be a costly and foolish experiment which we cannot afford to try. We do not want it and we would be better off without it. Let us work out our own destiny. We are not yet tired of the Union Jack. Imperial Federation would be far preferable to any union with the United States. If we have to yield our trade and commerce let us throw it into the lap of our mother. But we have faith in Canada; in her rulers who have nailed the N.P. flag to the mast, and in the people who have so recently voted renewed confidence in them mainly on this issue."

*From MR. W. CHRISTIE, of Christie, Brown & Company, biscuit manufacturers, Toronto.*

"In answer to your request for an expression of opinion on the question of Reciprocity with the United States, I presume you wish me to deal with the probable effects it would have on our business. I am under the impression that no eastern Canadian biscuit manufacturer could do any business west of Port Arthur under Reciprocity. Manitoba and the North-West Territories, would buy in Chicago, St. Paul or Minneapolis; British Columbia, from San Francisco or Portland, and Nova Scotia, New Brunswick and Prince Edward's Island would buy in Boston, Portland or New York city, cutting off a large trade which is now ours, the tariff being only a little more than an equivalent for the difference in freight rates.

"On the frontier, where large cities exist, the business would be done from such cities irrespective of any boundary line. Detroit, Buffalo and Ogdensburg would get large slices of the trade now done by Ontario manufacturers. And what pray, would the Ontario biscuit makers get in return? The privilege of selling to 60 millions of people. But unfortunately for us, they are already supplied with biscuit makers, as many to the acre as we Canadians have. A manufacturer situated in Toronto, or for that matter, in any Canadian city, could not expect to compete successfully with those situated in cities hundreds of miles distant with no advantage in the purchasing of raw material. Freight rates and the difficulties of supplying fresh goods to distant markets would most effectually keep Canadian biscuit makers at home, excepting those making specialties; and the tendency is greatly in that direction, in the United States. The conclusion then is irresistible that 'unrestricted reciprocity' would not benefit Canadian biscuit manufacturers."

*From MR. J. MACFARLANE, Managing Director of the Canada Paper Company, Montreal.*

"I have no hesitation in saying that I believe unrestricted free trade, taking all the circumstances of our present position into consideration, would, even if it were practicable, be detrimental to the interests of Canada."

*From MR. A. E. KEMP, of McDonald, Kemp & Co., proprietors of the Dominion Tin and Stamping Works, Toronto.*

"Referring to your circular asking for views as to the effect that 'Commercial Union' or 'Reciprocity in Manufactures with the United States' would have on Canadian manufacturing industries, I believe that this question is not a practical one for Canada, as its tendency is undoubtedly towards annexation, and I do not think any true Canadian wants annexation.

What effect reciprocity would have on our manufacturing industries needs hardly be discussed, particularly when we remember our geographical position, and that many parts of Canada are very near many of the manufacturing centres and markets of the United States, from which American goods would be supplied. Canadian manufactures being in their infancy, it is not reasonable to suppose that we should be in a position to successfully compete with old and perfectly equipped American concerns, which have any amount of capital at their disposal, and which in many instances are over-producing largely.

"I do not intend to convey the idea that Canadian manufacturers could not compete with American manufacturers if on equal ground. I believe we could, and that we would make formidable competitors, for we are just as ambitious, enterprising and intelligent as they are.

"Whatever difference there may be among us as regards politics, it is high time for the welfare of our country that Canadians should decide such questions as this, or else admit that we cannot run our own country, and that we require the assistance of our friendly Uncle Sam.

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**GEO. F. HAWORTH,**

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"Our hopes are in our country's great future, and we should be willing to rise and fall with her destiny.

"I voice the sentiments of a great many Canadians, whose thoughts I do not see very largely reflected in the press, when I say that what we do want is a more intensely national feeling, a feeling which would give our politicians enough scope and earnestness in dealing with Canadian affairs, without bringing up questions for discussion which are entirely foreign to our welfare as a people.

"First of all let us be Canadians, and let us have our country's interests at heart. Let us insist on our rights and in this way help to foster a national feeling and win the respect of our neighbors. This being done such questions as 'Commercial Union' Reciprocity, Free Trade, Annexation, etc., will readily adjust themselves."

From MESSRS. S. DAVIS & SONS, *Cigar Manufacturers, Montreal.*

"We received your circular requesting us to give our views regarding commercial union, or reciprocity in manufactures with the United States; and what effect it would have upon Canadian industry. We are of the opinion that if a union of this kind could be brought about, all manufacturers worthy of the name, that is to say those able to compete in ordinary manufactures, would derive a decided benefit therefrom. Canadian merchants are far more conservative than the Americans, who will not refuse to purchase from strangers and look upon them with suspicion, as they are often looked upon by us on this side when they endeavor to sell us their goods. On our part we certainly should be glad to hear of such a union being entered into; and our opinion is that any manufacturer who knows his business could not possibly raise any objection to such an important advantage as would be derived from having their field for enterprise so greatly extended; and instead of catering for about four millions of people have their market enlarged to sixty millions."

From MR. JOHN LIVINGSTONE, *Trustee of the Joseph Hall Machine Works, Oshawa, Ont.*

"Commercial Union with the United States is impracticable. Our connection with Great Britain is an effectual bar to it.

"Canada has the power to make laws for the protection and development of her own industries, and in this Canada is as free as if an independent nation. Under commercial union Canada would have to make her tariff in all respects like that of the United States. This would of necessity be a necessary condition of the union. Commerce then would be free as between the two nations, but free trade between Canada and the United States would mean such trade protected as against that of all other nations.

"The goods of the United States would come into Canada, and those of Canada go into the United States, free of duty, while those of Great Britain would be charged the same in Canada that would be imposed upon the goods of all other nations, the United States only excepted. Would England submit to legislated discrimination against her trade with an important colony like Canada? I think not.

"I am a Protectionist; I worked for the National Policy, and I would do the same again. Why? Because we bordered the great American nation of 60,000,000 people, having a tariff so high that we could not enter there with Canadian manufactures, whereas our Canadian tariff was so low that they had only to shave the values of their goods and thrust their over-productions into Canada, demoralizing, impoverishing and bankrupting our manufacturers. A protectionist policy for Canada was therefore essential to progress in manufactures. Under commercial union we would be admitted to free commerce with 60,000,000 people in a country more highly protected than Canada, barring out the productions of cheap labor

populations thus in and with 60,000,000 people, Canada would have protection in its most pronounced form, and free trade with 65,000,000 of the Anglo-Saxon race, nor would their circle in which to trade be narrowed locally to the two countries. The same opportunities and possibilities that exist now in respect to foreign and Pacific trade, would exist in equal force, under commercial union.

"Some Canadian manufacturers fear commercial union in belief that they could not live against American competition. I am sorry to see such an opinion advanced. If our manufactures have grown to proportions which are the surprise of observers, the pride of Canadians, and the envy of enterprising American manufacturing competitors, Canadian manufacturers should not fear, but rather hail gladly the opportunity of making trade for their mills throughout the length and breadth of the American continent. With commercial union they can do so; they are equal in intelligence with the people across the border, they are hard working, industrious and enterprising; the public works and railways undertaken and built while we are yet only a few million people, attest the truth of what I write.

From MR. JAMES WALKER, *president of the Hamilton Iron Forge Company, and proprietor of the Dominion Hat Company, Hamilton, Ont.*

"A union with the manufacturers of the United States against England, would be disloyal to our empire, and unprofitable to Canadian intents."

From the proprietor of an extensive manufacturing establishment in Toronto.

"Commercial Union or Reciprocity might be advantageous to a few but it would be injurious to many.

"The large amount of capital and plant unoccupied in manufacturing in the United States would enable manufacturers there with small additional cost to make sufficient for the Canadian trade, when special low prices would be given on their surplus stock, and Canada be again made the favorite slaughter market for such products.

"It would be very injurious to our business, as a great many lines of what we manufacture are covered by patents in the United States which would prevent our doing business there."

From MR. FREDERICK TOWNROE, *Manager of the Ontario Silver Company, Thorold, Ont.*

"Regarding Commercial Union. If Canada is to take her place amongst nations she must hasten to develop and increase her manufacturing industries, for the national mind and thought grows, expands, and quickens in direct ratio with the growth of its manufacturing industry. History clearly demonstrates this.

"To this policy of protecting and encouraging its industries the United States is indebted for its present prosperity.

"'Commercial Union' or 'Reciprocity in Manufactures' would be a backward movement which would result in closing three-fourths of our young industries. The concern I represent, after sinking upwards of \$50,000 in three years in the endeavor to establish business in Canada, has as yet barely succeeded in placing their business on a paying basis, and to us Reciprocity would mean closed doors and a useless plant, for our competitors in the United States have been steadily over-producing for several years, and their accumulated surplus stocks would be thrown upon the Canadian market and swamp us."

From MESSRS. BICKELL & WICKETT, *tanners, Toronto.*

"As to reciprocity or commercial union, we already have it in hides, kips, calskins, plaster-hair and tan-bark, and in the ordinary grades of shoe leather we should be quite ready to adopt it; but in viewing it in the interests of Canadian manufacturers generally, we do not think it best. The fact is, we feel that while our people would be ready to buy American

goods in all special or high grades of manufacture, such as bag, satchel, furniture, enamel and colored leathers, the Americans would not naturally look to buy ours, as it would not be expected that they would be better or even equal to theirs for some time to come. Therefore we say commercial union would set us back many years.

"We have read the utterances of Mr. Wiman with great interest, and believe he has Canada's prosperity at heart, but closer trade relations must come, if at all, in a gradual way. For instance, let the United States concur in Lord Salisbury's proposal regarding the fishery question, which means 'free trade' in that line. No doubt there are many other things that could be added much to the advantage of both sides. But as a young Dominion we need protection on the same principle that the United States need protection against British and other foreign goods coming into their country."

*From MR. THOMAS C. BRAINERD, president of the Hamilton Powder Company, Montreal:*

"The Hamilton Powder Company is strongly in favor of reciprocity. Experience proves that many articles can be made in Canada cheaper than in the United States, and we want that market. There is a permanent advantage in our excellent labor, to which may be added lumber, many minerals, fuel in some sections, water power, etc. Believing fully in protection as a legitimate method of developing manufactures, the geographical handicap of a thin line of population strung all along the United States boundary makes the odds so heavy as to discourage large enterprises. No amount of margin will make business profitable without buyers."

*From MR. JOSEPH D. WEEKS, Editor of the "American Manufacturer," Pittsburgh, Pa.*

"I think I express the sentiment in the neighborhood of Pittsburgh when I say that I do not believe in reciprocity with Canada. We never have believed in it, and I do not believe the manufacturers of this country believe in it. As protectionists we believe that this is a national and not an international question. It is a question that Canada must settle solely for herself, in view of her own best interests."

*From MR. ERASTUS WIMAN, of New York.*

"I thank you very heartily for having sent me the symposium which appeared in your paper of April 15th, giving the views of the manufacturers in relation to commercial union. I am glad to see such a strong expression of opinion, though so largely adverse to what I conceive to be for the best interests of Canada. The points made are of course from a purely manufacturers' view, without any reference to their possible extension into this country. It is too early to make any attempt to answer them. I shall wait until the paper of May 6th is issued, and if I feel confident to meet at all squarely the objections urged to commercial union, will endeavor to do so in my feeble way."

A NUMBER of important communications received from Canadian manufacturers are yet in hand, but which we are unable to print in our symposium in this issue, will appear in our next.

PROFESSOR ISHISUKI TUJIOKA, of the Imperial College of Japan, at a recent public meeting in Philadelphia read an interesting paper on the progress of electrical engineering in Japan. On the Emperor's birthday temporary plants furnished electric illumination for the festivities, and the Tokio Company has the contract for lighting the Imperial Palace with 2,000 incandescent burners and 100 arc lights. There is only one gas company in Tokio, and electric lighting will be the rule. The numerous small factories there offer a clear field for electric motors.

## LABOR AGITATORS.

EVERY true friend of the workingmen must regret the aggressiveness shown by self-constituted leaders of the Labor Party towards the proprietors of industrial enterprises. Canada is but young as a manufacturing country, nevertheless the artisans employed in our factories and workshops are advanced over those of any other country in the world, as regards the rate of wages compared with the cost of living. Canadian artisans can earn a sufficient wage to enable them to live in luxury as compared with their fellow toilers beyond the sea; they have comfortable homes, splendid educational facilities for their children, and it has been truly said that a European workman, whose lot is a happy one if he gets meat once a week can live on the waste of an American artisans home. We are no advocates of bringing down wages to a European level. We believe that the prosperity and well-being of the working classes is but a measure of the general prosperity of the nation, but will our labor friends, not necessarily our enemies as certain "jawsmiths" would have them believe, pause a moment to consider the question of supply and demand. It is a well-known fact that with the present price of labor and high rate of bank interest, combined with the limited demand of a limited market, our tariff is barely sufficient to enable many industries to maintain existence and afford employment to their operatives. This being the case is it not necessary for both sides to conciliate each other and endeavor to establish a *modus vivendi* without calling in the aid of professional beneficiaries calling themselves labor reformers, whose interests are best served and whose pockets are better lined when a strike is in progress. Negotiation is better than open and costly warfare, but the *Labor Reformer* published in this city, probably alarmed that threatened strikes are likely to be averted through the common sense of both employers and employed who have evinced a disposition to come to an amicable arrangement, indulges in the following philippic which for blatant bombast, cool assumption and the very quintessence of whining hypocrisy which it pretends to decry, would be difficult to surpass. It says:—

"Some of our friends, the enemy, are greatly concerned because the tyrannical trades unions and Rights of Labor interfere with the individual rights of members to make such bargains as they choose with employers. They declare that men so interfered with are denied the rights of freemen, for they must first ask the permission of another before they are allowed to earn their living. But, friends, how is it that you cannot see with your pur-blind eyes that our whole industrial system, based on land and money monopoly, makes it necessary for all toilers to first get the permission of some land or money king before they can earn their living—aye, before they can get a spot of earth to live on?

"Were it not for labor organizations, these land and money lords would be able absolutely to dictate the terms on which each of God's children should be allowed to live on earth. And were it not that workingmen have had wisdom enough to combine, they would not dare so much as hesitate to accept the first terms offered.

"To be sure our friends, the enemy, do not like labor organizations. To be frank, these organizations were not calculated or intended to give pleasurable sensations to Labor devourers. Quite the contrary, in fact; consequently, we will hardly change our methods because these gentry do not like them. Indeed, their expressions of dislike rather confirm us in our belief that these methods are wise and in the best interest of the wealth-producers.

"Keep up your fight, gentlemen; do your little best to destroy and break up Labor organizations. We do not ask or expect anything resembling friendship; but you might as well refrain from earning contempt by playing the hypocrite, by pretending that your hostility is prompted by love of individual liberty."

It is to be deplored that such ill timed and intemperate articles should be dished up for the lelectation of the working men, but it is only by such and similar methods that professional agitators and labor reformers who do not know by practical experience what labor really means, are able to stir up that spirit of discontent upon which they fatten and thrive. Were the working classes to remain happy and contented these vampires would have no blood to suck and their occupation would be gone, hence their anxiety to foment strife, advise strikes and boycotts and conceive other *modus operandi* for extracting contributions from their dupes. It is only the other day that a "walking delegate" in this city was bragging to the reporter of a local paper of the size of the "boodle" he had been entrusted with to carry on industrial warfare. Naturally this well paid delegate had no interest in effecting an amicable settlement; clothed in a little brief authority and with, according to his own statement, a bank account at his command, he could stand the siege as long as the contributions held out, but we venture to say no longer. We are watching the outcome. Already some of the labor organizations are seceding from the Knights of Labor. Already many are getting heartily sick of perpetual assessments which are mainly devoted to maintaining a few demagogues in elegant leisure, and the time will come when the "wild mobs' million feet" will give these gentlemen the grand bounce and an emphatic intimation to endeavor to earn their daily bread by the sweat of their brow, a process to which they are as yet totally unaccustomed.

#### A NATIONAL DISGRACE.

For the especial benefit of the *Labor Reformer* we quote a passage from the *Toronto News* of the 27th ult., a paper which also claims to speak authoritatively on the Labor question. Referring to the Salvation Army it says:-

"The Sals did a Christian act on the quiet yesterday that deserves notice. A member of a certain union in this city got away behind in his dues. The sum amounted to nearly \$10, and he couldn't work until that sum was forthcoming. He was hard up, and badly run down one way and another, and was becoming hopeless. Some how or other the Sals got a hold of him, yanked him off to their meetings and proceeded amid tremendous enthusiasm to save his soul. They did more. They went up to the secretary of the union yesterday, whacked up every cent of the back dues and set the young fellow on his pins again. He is busy working now with better hopes for both his body and soul. That's the kind of Christianity I like. We can't have too much of it in this country."

Talk about hypocrisy! Can a more tyrannical proceeding than the above be imagined? In a so-called free country a man is willing to work and able to work, but because through ill health or some other cause he may have allowed his dues to an organization for the benefit of labor agitators to have run behind, he is hounded from honest employment and allowed to starve, or in his desperation to become either a criminal or an object of charity. It cannot be said that we have over-

drawn the case, for of this poor young fellow, our authority the *News* says "He couldn't work until that sum was forthcoming. He was hard up, and badly run down one way and another, and was becoming hopeless." That such a species of terrorism exists in our midst is a national disgrace, and the voice of the people will be promptly raised against such a high handed and despotic proceeding. The falsity of the pretensions of these men is becoming apparent to the general public, and the veil of hypocrisy which has heretofore shrouded their nefarious practices from the public gaze is now being torn asunder. In the course of his remarks to the jury in a case at the Hamilton Assizes, recently, Sir Matthew Cameron said --

"In one of the letters put in this case it was said that the Knights of Labor were taking up this matter. Whether that be so or not I do not know. Speaking for myself individually, I do not think there is a more dangerous organization in the community than the Knights of Labor; not because the people who are concerned in it are not respectable people, but the principle promulgated by the order is an interference with individual liberty, and the greatest blessing a people can enjoy is that each man is at liberty to do just what he pleases as long as he does not interfere with the rights of anybody else. I think that mechanics and laboring men who adopt that principle will find that they will always be rewarded for their trouble, and that organizations of that kind are injurious to themselves and drive away capital. This is the view I take, and I hope I feel as kindly in my heart towards the honest workingmen of this country as any other man living."

The telegraphic reports say that His Lordship spoke very impressively and his remarks created quite a sensation in the court room.

#### LABOR LEGISLATION.

A LOCAL labor paper, referring to Hon. Mr. Fraser's consent to allow his bill to amend the Factories Act to stand over till the objections of Labor organizations could be formulated, remarks "Never in the history of Canada has a legislature been so willing as the present to meet the views of the labor organizations. We had not much apparent success at the general elections, but had we not made ourselves felt then, we would not now be getting the needed legislation we are getting." We admit that this willingness has been very conspicuous, and for the benefit of our readers, the manufacturers, who are too apt to allow things to go by default until the shoe actually pinches them, we submit a review of labor legislation that occupied the attention of the Ontario Legislature during its recent session.

The "Compensation for Workmen's Injuries Act" has been considered in committee, the secretary of the Manufacturers' Association being present, but no changes have been made as regards its application to manufacturing establishments, and railway corporations having benefit societies for their employees have been exempted from the operation of the Act for another year.

The "Factories Act" has been amended by the insertion of several clauses, one of which provides for the employment of two or more inspectors when considered necessary, in place of having only one inspector for the whole province as provided for in the original Act. Some time since a deputation from the Manufacturers' Association waited upon the Hon. Mr. Mowat and explained to him the danger of having only one

inspector in whom would be vested almost unlimited powers. The amendment is in the direction suggested by the deputation, and it is to be hoped that the ministry will appoint competent and impartial men. The labor papers are already clamoring for the appointment to be made from the ranks of organized labor, but we believe that representatives of both capital and labor will receive positions, in order that in the event of dispute a consultation may be held thereby preventing as much friction as possible. It may readily be seen that otherwise a manufacturer having any dispute with his employees might be put to unmeasurable trouble and expense by a partizan inspector, from whose decision there would virtually be no appeal. Another clause of the amendment reads:

"Boys under twelve years of age, and girls under fourteen years of age may be employed during the months of July, August and September in any year in such gathering in and other preparations of fruits or vegetables for canning purposes as may be required to be done prior to the operation of cooking or other process of that nature, requisite in connection with the canning of fruits or vegetables. The place, room or apartment in which such boys or girls may be so employed shall be separate from any other wherein the cooking or other process aforesaid, or the canning of said fruits or vegetables is carried on."

This reasonable clause met with strong opposition from the Labor organizations, so much so, that the *Toronto Globe*, the organ of the administration felt called upon to remark that "employment of children under the prescribed conditions is likely to prove a positive advantage both to the children and the parents, and the labor organizations are hardly wise to prejudice their influence by offering an unreasonable opposition to reasonable legislation. There is always a danger that excess of vigilance may degenerate into narrowness." This caustic rebuke had the desired effect, and the Government were not further harassed by obstructive tactics.

An Act respecting conditional sales of property was introduced by Mr. Nairn, M.P.P., but happily, owing to the timely representations of manufacturers, it was withdrawn. Last session Mr. French, M.P.P., introduced a similar Act, not quite so stringent in its provisions, and now that it is understood that public opinion is strongly against such a measure, it is to be hoped that its annual reappearance may not recur. In brief, the proposed Act provided for the compulsory registration in similar manner to chattel mortgages of all goods and chattels sold on the instalment plan and on which a lien might be retained by the manufacturer. Such an Act if it had become law, would have encompassed an ordinary commercial transaction with so many cumbersome restrictions that trade would have been seriously affected thereby. Manufacturers of agricultural implements, machinery, safes, sewing machines, musical instruments and numberless other articles may congratulate themselves that the bill in question did not pass its third reading.

The Ontario Government have definitely decided to abolish the contract system of prison labor. The existing contracts do not expire until 1889, but in the meantime the Hon. Mr. Hardy has promised to look into the matter and to submit a scheme that will be in the interests of all concerned. There are at present two firms who contract for the labor of the convicts in the Central Prison. Messrs. Nelson & Sons employ 72 prisoners in the manufacture of brooms, and the Brandon Manufacturing Company employ 98 in the manufacture of wooden-ware and children's toys. The revenue to the Government from these contracts was \$16,000 in 1885, and \$19,000 in 1886.

◇ THE ◇

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J. J. CASSIDEY, *Managing Editor*.

ED. D. McCORMICK, *Secretary*.

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# Editorial Notes.

MR. FREDERIC NICHOLLS is Secretary of  
The Canadian Manufacturers' Association,  
The Woollen Manufacturers' Association, and  
The Tanners' Association.

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.

*Every business man who receives the CANADIAN MANUFACTURER should carefully observe the business cards displayed therein, and, in corresponding with advertisers, mention this journal. This will be of benefit to both the buyer and the seller, and the medium by which they are brought together will also be made more valuable.*

WITHIN the past few weeks four manufacturing concerns in the United States have established branch factories at Windsor, Canada, and another such, employing a large number of hands, was established there a few months ago. These concerns are all doing a gratifyingly large business, and the occasion of their coming over to this side was that they could supply the Canadian demand for their products without the payment of import duties. These establishments give employment to a large number of skilled Canadian artisans who live on Canadian soil, contribute to the support of Canadian local and general government, consume the products of Canadian farmers, and wear and use the products of Canadian mills and factories. This is one of the results of the N.P. Without that policy, or with "reciprocity of manufactures," these industries would not have been brought to Canada, and their establishment here is an unanswerable argument in favor of the existing policy of the Canadian Government.

A DELEGATION from the Cooperage Manufacturing Association, in which is embraced the manufacturers in the counties of Essex, Kent and Lambton, visited Ottawa a few days ago for the purpose of requesting the Government to put an export duty on elm and ash logs, and on elm, ash and basswood bolts for the manufacture of staves, hoops and heading. They say that Americans are purchasing great quantities of these logs, taking them to the States and manufacturing them into staves and headings there. The logs now go into the States free of duty, yet the American Government levy a duty of ten per cent. on staves and thirty-five per cent. on hoops and headings. What the delegates want is to place their manufacturing industries on the same footing as Americans. The capital invested in this industry in the three counties mentioned is about \$81,000, the number of men directly employed in the mills 1,319, and the annual production of these mills exceed \$1,189,000. Altogether there are thirty-five mills actively engaged in this industry in the above three counties. The delegation was headed by Mr. Harvey Morris of Dresden.

MR. ERASTUS WIMAN writes us that he is glad to see such strong expressions of opinion regarding reciprocity in manufactures as are shown in our symposium, coming as they do from Canadian manufacturers. He says that these expressions are

largely adverse to what he conceives to be for the best interests of Canada, but accounts for them as having been taken from a purely manufacturers' view, "without any reference to their possible extension into the United States." It is not quite clear just what Mr. Wiman means when he attempts to palliate the objections of Canadian manufacturers to reciprocity by saying that their views were given from their standpoint, and without reference to the extension of those views into the United States. It is certain that American manufacturers are no more in favor of reciprocity than are the manufacturers of Canada. No doubt American manufacturers would be pleased to see an enlargement of the field in which they might sell their products, but to advocate a policy which would break down and destroy the bulwark which has made manufacturing possible in Canada, merely to extend their business into this country, would be to stultify themselves and invite a destruction of the bulwark which shields them from the competition of cheap labor and over stocked markets in Europe. They have a formidable foe to fight against in their own country—the free trade element of both the Democratic and Republican parties—which would use the fact of reciprocity in manufactures between Canada and the United States as a potent argument in favor of similar reciprocity between the United States and the rest of the world. American manufacturers will never countenance this, nor will the masses of the people of that country ever countenance any move that might finally attain any such result.

## PARLIAMENTARY.

NOTICE has been given by Sir John Macdonald of a bill respecting the Departments of Customs and Inland Revenue. It is thought by many at the Capital, who are supposed to be well informed, that this means the consolidation of these two departments.

SIR CHARLES TUPPER has presented a report which deals exhaustively with the Canadian Department of the Indian and Colonial Exhibition. The total cost to this country was \$120,857 of which amount \$8,500 was for salaries of officials, and \$14,000 for freight charges. We had anticipated that the cost would have been considerably larger than the sum mentioned above.

THE Government contract for postage stamps, postal cards, etc., has again been given to the British American Bank Note Co. of Montreal. This company were the former successful tenderers, and their contract has been renewed for five years on condition that they remove their establishment to Ottawa within twelve months. The price is fifteen per cent. below their former contract.

A PETITION has been presented from the municipal council of the County of Kent, praying for the passing of an Act adopting a standard weight for barrels of salt. It is also probable that owing to the representations of the Dominion Millers' Association, the Montreal Board of Trade and others, that the Government will introduce a measure to amend the law respecting the inspection of flour.

WE are glad to see that it is the intention of the Government to create a new portfolio by establishing a Department of Trade and Commerce. Such a step was advocated in these columns as far back as 1883, when we then ventured to prophesy that within a few years it would be found to be a necessity. Time has vindicated the correctness of our contention, and we feel like demanding that the only Wagnons should go halves with his prophetic laurels.

THE receipts of the Patent Office are again largely in excess of expenditures, the year just ended having witnessed an increase of six hundred applications over the preceding one; and it is expected that at the end of the current year this increase will be doubled. Many manufacturers claim that greater facilities should be given to



enquirers at the patent office, and as this department is more than self-sustaining, greater liberality can afford to be shown. We hope the whole department will be re-organized when it is removed to its new quarters in the new departmental block.

It is probable that in connection with the Customs' Department will be organized a court of appeal from the decisions of local collectors and appraisers. Importers who have complained that decisions are often both arbitrary and final will welcome this new move when it comes to pass, and we see no reason why it should not be given a fair trial. The precaution should be taken, however, to provide that in the event of the appeal being declared against the importer, that he should pay the costs, otherwise the number of such appeals will be legion with a big L.

THE report of the Commissioner of Inland Revenue on the inspection of weights and measures and gas, gives us the information that Hamilton and Montreal are the only divisions in which the receipts exceed the cost of collection although Toronto shows almost an even balance. The total expenses are about fifty per cent. in excess of the revenue, and the report says that a much better showing might doubtless be made by a majority of the divisions if the officers in charge were more attentive to, and energetic in the discharge of their official duties. If this is the case the dilatory officials should be incontinently sat upon.

THE librarians of Parliament have a busy time just now and honorable members on both sides of the house are lavish of their encomiums on the value of the services of Messrs. Martin J. Griffin and A. De Celles. A paragraph of their annual report reads, "Special attention has been paid to the literature dealing with the great questions of the day; and members will find on the shelves all works that could be obtained or that were considered valuable concerning the relations of Capital and Labor, the operations of the Commissions of Industrial Statistics in the United States, and the working of the system of Railway Commissioners in England."

THE proposition to construct the Lake Superior canal at Sault Ste. Marie is a timely one. Canada has already wisely spent millions in perfecting a canal system that has no equal in any other country in the world, and by means of which uninterrupted communication is secured from the Atlantic to the head waters of Lake Michigan. The proposed new canal which is to give us independent connection between lakes Huron and Superior will be about a mile long and is estimated to cost less than a million dollars. In this case the quotation "millions for defence but not one cent for tribute" is peculiarly apt considering the present attitude of many of our American neighbors.

If the Knights of Labor do not get everything their own way, it is certainly not for the want of asking. In one day—the 20th of April—not less than five separate petitions from labor organizations were laid on the table of the House praying for an Act to provide for the inspection of workshops; for an Employers' Liability Act for manhood suffrage, and for an Act providing that any terms or stipulations other than for the rendering of an equivalent for wages, insisted upon or demanded by employers in the engagement of employees, should be rendered null and void, and that any attempt at their exaction should be declared a criminal offence, punishable by imprisonment for a specific period, on proof and conviction in any court of competent jurisdiction.

THE British Board of Trade is a Department of the Government to which appertains all official matters relating to trade and commerce, and it is likely that our new Department of Trade and Commerce, which the speech from the throne foreshadows, will be modelled somewhat on the same lines and that particular attention will be paid to the collection and compilation of statistical information, the lack of which has been a "long felt want." The British department not long since commenced the publication of an official monthly journal which has already proved of great value to the mercantile community and which contains a digest of the trade reports of the consuls in every part of the world. In this country the CANADIAN MANUFACTURER has been the only journal which has kept its readers constantly posted in reference to the extent and requirements of foreign markets.

MR. BAKER M.P., having asked, what is the contract price or prices per yard paid by the Government for white flannel and brown and yellow cloth supplied the Penitentiaries of the Dominion; the name or names of the contractor or contractors; duration of contract or contracts, and date and expiry of same? the Minister of Justice

replied. "At Kingston Penitentiary the price paid for white flannel is 44½ cents per yard; brown and yellow cloth, 48 cents. Mr. John Lazier has two contracts which expire on the 30th June next. At the St. Vincent de Paul Penitentiary, 40 cents per yard is paid for white flannel, and 50 cents for brown and yellow cloth. Lamallice Bros., Montreal, have the contract, which expires on the 30th June next. At the Dorchester Penitentiary the price paid for white flannel is 48 cents per yard, and for brown and yellow cloth 64 cents. Thomas R. Jones, St. John, has the contract, which expires on the 30th June next. At the British Columbia Penitentiary, cloth and flannel is not furnished by contract. The white flannel was furnished by Messrs. Lamallice Bros., the St. Vincent de Paul Penitentiary contractors, at 53 cents per yard. No brown or yellow cloth was furnished this year (fiscal year) to this penitentiary. In 1885-86 this cloth was supplied by the St. Vincent de Paul Penitentiary at 74½ cents per yard. It was furnished by the St. Vincent de Paul Penitentiary owing to the fact that the cloth was wanted in a hurry and before it could be procured by Lamallice Bros. At the Manitoba Penitentiary, 60 cents per yard is paid for white flannel, and 44 cents for brown and yellow cloth. The Hudson Bay Company have the contract, which expires the 30th June next."

THE Herr Piano Company, Toronto, having largely increased their working force, have organized a brass band of twenty pieces, the bandmaster being Mr. Pye. The instruments are in the hands of the musicians.

MESSRS. J. L. GOODHUE & Co., manufacturers of leather belting of Danville, Que., report business in their line as being very good. The following are some of the larger belts recently turned out by them: A 36 inch double 107 feet long for Halifax Electric Light Co., Halifax, N.S.; a 30 inch double 73 feet long; a 24 inch double 63 feet long; and a 16 inch double for Price Bros. & Co., Quebec; a 24 inch double 62 feet long for Coaticook Cotton Co., Coaticook, Que.; a 24 inch double 50 feet long for Hall, Neilson & Co. of Three Rivers, Que.; an 18 inch double 78 feet long for R. Forbes & Co., Hespeler, Ont.; a 16 inch double for Boyd, Caldwell & Son, Carleton Place, Ont.; and an 18 inch double for Brunet Saw Mill Co., New Westminster, B.C. They claim to make as good an article as can be produced anywhere and the above list would show that their goods are giving satisfaction to some of our largest mills and factories.

THE Automatic Refrigerator Company of Ottawa, are now building an immense automatic refrigerator, Hanrahan's patent, for Messrs. Brown Bros. Windsor Market at Montreal, which it is claimed will be the finest and most perfect article of the sort ever produced either in Canada or the United States. The dimensions of this refrigerator are: length, 26 feet; height in the clear inside, 9 feet; outside height, 11 feet; depth, 22 feet. The ice chamber extends the entire length of the back of the refrigerator, and is 5 feet deep giving a space of 26 feet by 17 feet for storage purposes. Its outside is beautifully finished in cherry with polished brass ornamental trimmings. In the front are two doors, double, the upper parts of which are heavy beveled plate glass windows, 2 feet 6 inches wide by 4 feet high; two beveled plate glass mirrors 5 by 6 feet, through which the contents of the interior may be observed, and which are handsomely embossed with the names of the proprietors, Brown Bros., and their coat of arms, and a central heavy plate glass mirror 2 by 6 feet, on which is shown the name of the manufacturers. The top is beautifully ornamented with carved work.

MESSRS. McDONALD, KEMP & Co., proprietors of the Dominion Tin and Stamping Works, Toronto, have sent us a copy of their new illustrated catalogue and price list of goods manufactured by them, in which are included plain and retinned stamped ware, railway milk cans, tinner's trimmings, japanned ware, toys, pieced ware, heavy polished ware, wire goods, galvanized ware, coal hods, spoons, copper ware, machine oilers, shovels, stove boards, elbows, stove pipe thimbles, baking powder, druggists' and grocers' tins, lanterns, house furnishing goods, Walters' patent metallic shingles, etc. A notice to the trade announces that the new and enlarged factory of the firm, fully equipped with improved machinery, and with the superior facilities which they possess, enables them to produce the largest assortment of such goods made in Canada. The catalogue under consideration is well gotten up, printed on heavy tinted book paper, the illustrating cuts and text clear and distinct; a page of description of sections shows in what part of the book the line sought may be found, and a well arranged index alludes to each and every article mentioned. The book includes 112 pp., size 7½ by 10½ inches, in stout paper cover.

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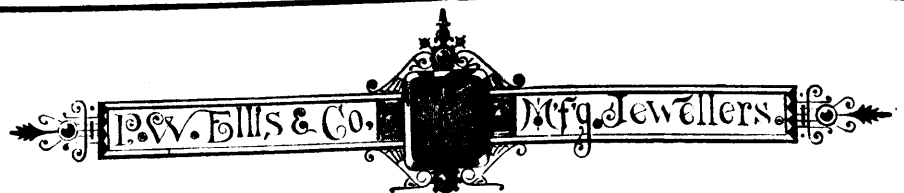
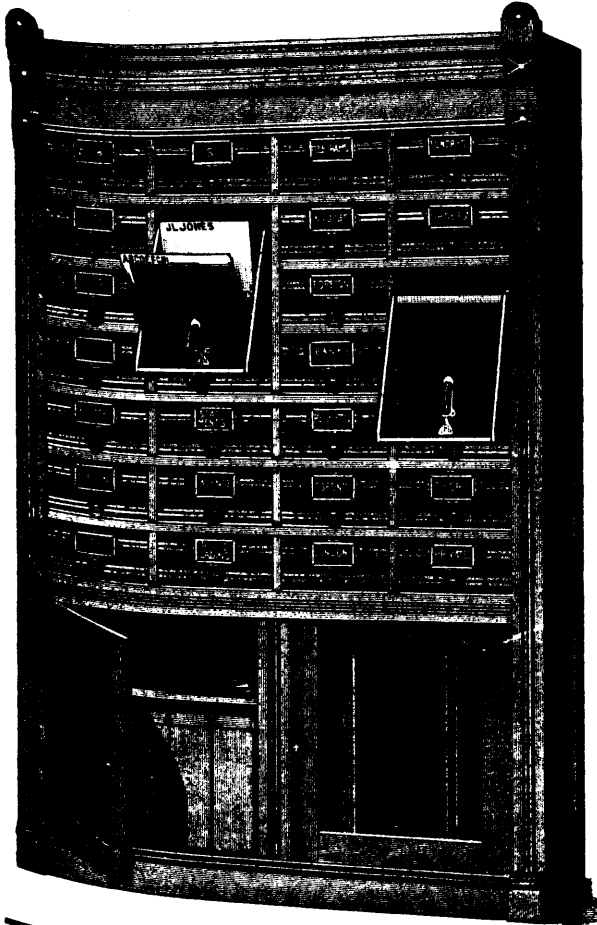
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- SECOND.—The entire contents of the File are uniformly compressed into the smallest possible space with perfect ease by means of the lever clamp.
- THIRD.—No parts of papers filed are mutilated by wires or otherwise.
- FOURTH.—The upright position of the File when in immediate use renders it always most convenient when hung up where its weight is supported.
- FIFTH.—Any letter or paper may be instantaneously placed within or taken from the File without disturbing other papers.
- SIXTH.—Papers may be read without being taken from the File.
- SEVENTH.—The clamping device is of strong malleable iron, handsomely plated; not complicated; cannot get out of order.
- EIGHTH.—The operation is easy and simple, and cannot be misunderstood.
- NINTH.—Is adapted to use in Automatic Suspension Cabinets, to which we have exclusive rights.
- TENTH.—Is adapted to use in little cabinets which lock, and afford system and privacy for every man's business, large or small.
- ELEVENTH.—It impresses favorably every man who gives it his attention for a moment.

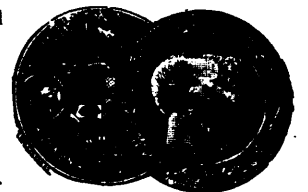
GRAND & TOY, Stationers, Leader Lane and Colborne St., Toronto,  
Sole Agents. Write for Price Lists, etc.



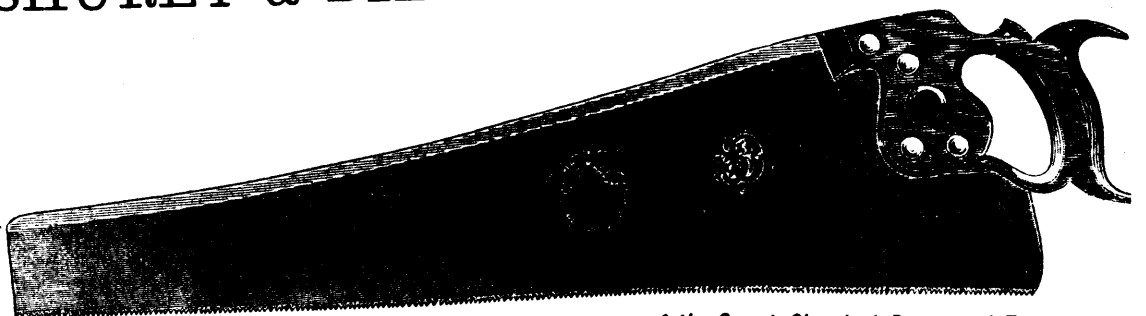
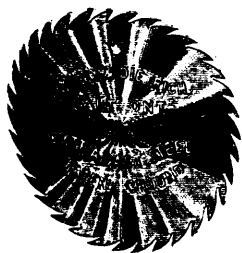
*P. W. ELLIS & CO.*

Manufacturing and Wholesale Jewellers, Medallists, Etc.

Beg to direct special attention to their facilities for the manufacturing of all kinds of GOLD, SILVER AND BRONZE MEDALS, suitable for Colleges, Exhibitions, Agricultural Fairs; also Badges for Athletic Sports, Celebrations, Presentations, etc. Having by far the largest Jewellery Factory in the Dominion, our exceptional facilities enables us to do work of the highest order, either plain or in enamel, at the lowest rates. DESIGNS AND ESTIMATES FURNISHED ON APPLICATION.

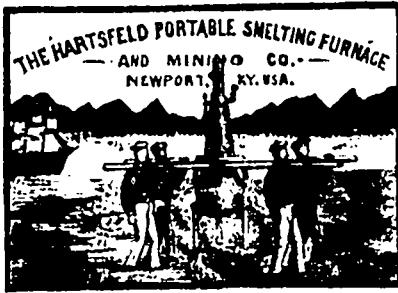


SHURLY & DIETRICH, Galt, Ont.



MANUFACTURERS OF SAWS OF ALL KINDS.  
LARGEST SAW MANUFACTURERS IN CANADA.

Sole Proprietors of the Secret Chemical Process of Tempering.  
Our Silver Steel Saws are unequalled.



MANUFACTURERS & DEALERS IN  
**MINING and SMELTING  
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 Engines, Boilers, Shafting  
 Pulleys, Blowers,  
 Pumps, Portable Compressors, and  
 Turn-Tables, Diamond Drill  
 Drills, Air Compressors,  
 Electric Gold and Silver Mills,  
 Electric Amalgamating  
 Table and Plates.

**Desulphurating, Roasting and Smelting Appliances.**  
 W. T. Garratt & Co., San Francisco, Cal.; F. A. Huntington, City of Mexico, Mexico  
 A. Spil 29, Cincinnati, O., Manufacturers on Royalty. C. C. Custer, 372 Arapahoe  
 Street, Denver, Colorado. Agent.  
 Send Stamp for Illustrated Catalogue. Mention "The Canadian Manufacturer," and  
 it will be mailed to you FREE.

**The Hartsfeld Portable Smelting Furnace and Mining Co.**  
 Lock Box 151 Reduction Works, 90, 92 & 94 Thornton St., Newport, Ky

## To Users of Glue.

**W**E are manufacturing a reliable GLUE, and  
 can supply a limited number of consumers  
 only. We guarantee our glues to be made  
 from selected stock, and to be of the same  
 uniform quality. Glues not as represented,  
 or not proving satisfactory, returnable at  
 our expense.

**JAMES HAY & CO.**  
 WOODSTOCK, ONT.

## THE JOSEPH HALL MACHINE WORKS, OSHAWA,

Have on Hand and for Sale the following:—

- 1 only Lffel Water Wheel, 52-inch, with sun,
- 1 " " " " 52-inch, against sun,
- 1 " " " " 48-inch, with sun,
- 1 " " " " 44-inch, against sun,
- 1 " " " " 44-inch, with sun,
- 1 " " " " 35-inch, against sun,
- 1 " " " " 35-inch, with sun,
- 1 " " " " 23-inch, with sun,
- 2 " " " " 20-inch, against sun,
- 2 " " " " 20-inch, with sun,
- 1 " " " " 17-inch, with sun,
- 1 " Champion Water Wheel Governor.

### Iron Pulleys, Flangers, Shafting, Couplings

A large assortment, almost every size and kind of Pulley in stock, finished  
 and ready for use.

### 15,000 PATTERNS,

In Wood, Iron and Brass, covering almost every requisite for the most extensive  
 Foundries in the Dominion, for

**General Machinery, Railway and Car Work, Mill  
 and Fancy Castings, Agricultural Implement  
 Work, Engine and Boiler Work.**

Enquiries will please send descriptions of what they may require. For prices and  
 terms, apply to

**JOHN LIVINGSTONE, Trustee.**

## BEAVER LINE.

The Canada Shipping Co.'s Line of Steamers,

BETWEEN

### MONTREAL AND LIVERPOOL.

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

LAKE ONTARIO, Capt. Wm. Bernson.....	25 30
LAKE SUPERIOR, Capt. Wm. Stewart.....	24 00
LAKE HURON, Capt. H. Campbell.....	1,199
LAKE WINNIPEG, Capt. M. L. Tremay.....	330
LAKE NEPIGON, Capt. P. D. Murray.....	23 00

### SPRING SAILINGS, 1887, WILL BE AS FOLLOWS:

#### FROM LIVERPOOL:

Lake Winnipeg.....	Wednesday, April 29
Lake Superior.....	" " 27
Lake Nepegon.....	" " May 4
Lake Ontario.....	" " 11
Lake Ontario (new).....	" " 18

#### FROM MONTREAL:

Lake Winnipeg.....	Friday, May 6
Lake Superior.....	" " 13
Lake Nepegon.....	" " 20
Thamesford.....	" " 27
Lake Ontario (new).....	" " June 3

The Steamers connect at Montreal to Liverpool for all ports in Canada, Manitoba,  
 North-West Territories and United States, to which through tickets are issued.

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 venti-  
 lated and heated by steam.

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

#### RATES OF PASSAGE:

Montreal to Liverpool, Saloon, \$40, 5-6 and 5-9. Round Trip Tickets, \$80, \$6 and  
 \$10, according to steamers. Interim Date, \$30. Steerage, \$20.

For Freight and other particulars apply In Belfast, to A. A. WATT, 3 Custom  
 House Square; in Queenstown, to N. C. STEWART & Co; in Liverpool, to R. W. ROBERTS,  
 21 Water Street; in Quebec, to H. H. SKELTON, 125 Peter St.

**H. E. MURRAY,**

General Manager,

1 Custom House Square, Montreal.



## Department of Inland Revenue.

OTTAWA, MARCH 31st, 1887

NOTICE is hereby given to Manufacturers, Importers and Vendors of Wines, Spirits, and  
 under the Weights and Measures Act, 4 Vic. Chap. 104, the Sale by other than  
 the Dominion Standard Gallon (heretofore known as the Imperial Gallon) is illegal, and  
 that this Department has instructed its officers to enforce compliance with the terms of  
 the law.

E. MIALL,  
 Commissioner.

## GALT FILE WORKS.

F. Parkin, Galt, Ont.

Manufacturer of all kinds of Files and Rasps.

Equal to the Jowitt File.

All Work Guaranteed.

Recutting of all Description.

Send Postal for Terms and Discounts.

# Manufacturing.

THE CANADIAN MANUFACTURER.

Send \$2.00 and receive it twice a month, postage paid, for one year.

**RAT PORTAGE MAN.**, has determined to buy a steam fire engine and 2,000 feet of hose.

**THE Dominion Terra Cotta Lumber Co.**, Deseronto, have applied for incorporation. The capital of this company will be \$200,000.

**WILSON BRO.'S** hammer manufactory, Merriton, Ont., was totally destroyed by fire April 15th. The fire is supposed to be the work of an incendiary.

**MESSRS. JOHN BLACKWOOD** and **A. J. SNOW** have established an iron foundry in Mount Forest, Ont. Mr. Blackwood was lately with Messrs. Goldie & McCulloch, at Galt.

**PRINCE EDWARD ISLAND** this season has exported 91,000 cases of lobsters, mostly to Europe. They are valued at half a million and involved the slaughter of 35,000,000 lobsters.

**MR. B. WILLIAMS**, woolen manufacturer, who was proprietor of the Glen William Ontario Mills, which were burned some time ago, was recently in Winnipeg prospecting for an opening in that line.

**RHODES, CURRY & Co.**, Amherst, N.S., are enlarging their factory by an addition 44 by 38 feet, two stories high. They will fill this with additional machinery, and will employ a larger force of workmen.

The new pumping machinery recently built by Messrs. Northey & Co. Toronto, for the town of Paris, Ont., has been shipped to destination. This machinery was alluded to in a recent issue of this paper.

**MESSRS. PETER R. LAMB & Co.**, Toronto, are manufacturers of sand and flint paper, neat's-foot oil, blacking, glues, fertilizers, etc. The trade handling or using such goods would do well to bear this fact in mind.

**THE Bowmanville Piano and Organ Company**, at Bowmanville, Ont., have recently received several car loads of veneering, manufactured by J. B. Wurt, at his Basket and Veneering factory at Green River, Ont.

**MR. GEORGE F. HAWORTH**, Toronto, is offering mill owners a superior quality of rubber lined linen and cotton fire hose, which is described as being a strong and serviceable article, especially adapted for factories and mills.

**MESSRS. SHERWOOD BROS.**, Peterborough, Ont., have started a broom factory at that place, and are turning out some twenty five dozen brooms per week, which output will be increased to fifty dozen as soon as additional machinery arrives.

The export of cotton goods from Great Britain last year was 4,850,030,200 yards, valued at \$259,851,170, against 4,374,516,500 yards the year before, valued at \$241,384,275. The increase has been mainly to the newer markets.

**MESSRS. S. DAVIS & SONS**, Montreal, inform us that they are the largest manufacturers of cigars in Canada, and one of the most extensive in the world. All lovers of good cigars are familiar with the goods manufactured by this firm.

A NEW YORK company proposes to purchase the Fall River (Mass.) Iron Works property to cut steel nails from imported English plates, which it is said can be done for less money than iron could be rolled and cut by the old company.

**MR. THOMAS GOWDY**, manufacturer of agricultural implements at Guelph, Ont., who made an exhibit at the Colonial Exhibition in London, last year, has recently received an order for sixty of his lawn mowers from a concern in London.

**PROF. STANLEY**, Ont., has voted a bonus of \$5,000 to the McClary Manufacturing Company, of London, Ont., in consideration of that firm establishing a branch of their stove foundry at that place. There was but one vote cast against granting the bonus.

A NUMBER of business men of Berthier have made application to the Lieutenant-Governor in Council to obtain incorporation as "La Compagnie Industriale de Berthier," for the manufacture of all kinds of work in wrought iron, with a capital stock of \$30,000.

The directors of the recently incorporated Herr Piano Company, Toronto, are Messrs. David Blum, A. A. Allan, D. McDonald, and J. Donaldson. Mr. Jacob Herr, who has a valuable and large experience in the manufacture of pianos, is manager of the works. The capital stock of the company is \$75,000.

*The Machinery Market*, a trade journal published in London, Eng., has an illustrated article in a recent issue descriptive of the Dodge interdependence wood split pulley, a description of which has heretofore appeared in these pages. These pulleys are manufactured in Toronto by the Dodge Wood Split Pulley Company.

**MESSRS. McMULLEN & MITCHELL**, Victoria, B.C., who claim to be the first contractors for electric stations in the Dominion, were in Montreal a few days ago, and closed contracts with Mr. Lawson for central station plants for Vancouver, B.C., and Brandon, Man., the former for 800 lights and the latter for 500, on the Edison system.

**MR. CALVIN CARTER** of Belmina, Wolfestown, Que., has received the medal and diploma awarded him by the Intercolonial Exhibition in London, for his exhibit of soapstone in block and in powder. He is sending large quantities of the powder to Montreal where it is used in the manufacture of belting, car springs, fire proof paint, paper, etc.

**MESSRS. BEATTY & SONS** of Welland, Ont., have shipped to Mr. Geo. Shields, of Brockville, one of their new steam hoists, to be used in the handling of coal at the Canada Pacific Railway. Messrs. Beatty & Sons have the contract for supplying all the machinery needed at Brockville by Mr. Shields, who is in charge of the supply department at that place.

**THE Bell Organ**, manufactured by Messrs. Wm. Bell & Co., Guelph, Ont., is claimed to be the only instrument of the kind made having a perfect dust, moth and mouse excluder, which is always closed. The company own the patent on this arrangement, and say that no other make of organs is provided with this most important and practical improvement.

**MESSRS. THEO. H. EATON & SON**, Windsor, Ont., and Detroit, Michigan, proprietors of the "Old Dyewood Warehouse," established 1838, are importers of Aniline colors, dye woods, dyeing drugs, chemicals, etc., and manufacturers of glauber salts and extracts of indigo. They are also sole agents in the United States and Canada for the Crown aniline dyes.

**MESSRS. JAMES HAY & Co.**, Woodstock, Ont., are manufacturing a reliable glue which they guarantee to be made from selected stock and to be of uniform quality always. They can supply a limited number of customers only, and any goods of their make which do not come up to their representations, or not proving satisfactory, may be returned at their expense.

The manufacturing industries at Moncton, N.B., are in a flourishing condition. The refinery, cotton mill and gas house make a large amount of traffic over the wharf siding. The refining company who are shipping largely to the Upper Provinces, have recently forwarded a cargo of shooks to Halifax for shipment to Barbadoes, and are receiving cargoes of raw sugar by rail from Halifax.

**MESSRS. BLACKBURN & HODGES**, 43 Wellington Street, East, Toronto, have just opened an establishment in which will be carried lines of office furniture, fittings and accessories, such as cabinet letter and document files, hydrostatic letter and invoice presses, desks, etc. The Tucker cabinet handled by them seems to embody all that is desirable in such an essential article of office furniture.

**MR. BICKLE**, an experienced manufacturer of cheese boxes, proposed to establish a cheese box factory in Peterboro', Ont., if the cheese manufacturers there would give him their support. He received more support than he asked to start with. He will commence the manufacture of boxes as soon as he can get his factory ready. This will be a convenience for the cheesemakers of that section.

**THE Joseph Hall Machine Works**, Oshawa, Mr. John Livingstone, Trustee, are offering for sale a large number of Leffel water wheels, iron pulleys, hangers, shaftings, couplings, etc., and some 15,000 patterns in wood, iron and brass, covering almost every requisite for any foundry manufacturing general machinery, railway and car works, mill and fancy castings, agricultural implement works, etc.

**MESSRS. RICE LEWIS & Co.**, Toronto, wholesale and retail dealers in hardware, edge tools, machine tools, etc., call attention to some of the special lines which they carry. Among these are machinists' tools, screw pitch gauges; steel squares of all descriptions; call-

pers and dividers; chucks, drills, vises, etc. They are also sole agents for the Wiley & Russell Manufacturing Company's screw cutting tools.

THE jack rabbit cannery at Nampa has added two more stamps, an amalgamator, and another bone-picker to its machinery, and will be well able to handle the coming blackbird crop. Poney Young says that unless Boise City catches on and reopens the crick foundry (pulling off the tails of black crickets and shipping east for black-berries) she will drop to the rear of the procession.—*Wood River, Idaho, Times.*

MESSRS. JOHN BERTRAM & SONS, proprietors of the Canada Tool Works, Dundas, Ont., have opened a wareroom at 38 Yonge Street, Toronto, where the trade and those using machine tools and wood-working machinery are invited to call and inspect the goods on exhibit. They have a full line of machines of various kinds in stock ready for immediate delivery, all new, and of the latest and most improved patterns.

MESSRS. McDONALD, KEMP & Co., Toronto, call attention to the Walter's patent metallic shingles manufactured by them. These shingles are widely known and used throughout the United States. They make a most durable metal roof; are not expensive; are attractive in appearance; are much lighter than wooden shingles, and only about one-ninth the weight of slate, and they can be put on by ordinary workmen.

BARRELS are now made from paper pulp, and an inventor of the process says that the weeds and rank grasses that grow on meadows will produce an excellent pulp for this purpose, and that thus such practically waste lands may be made productive and profitable. The cost of manufacturing paper barrels is no greater than that of making the wooden article, and, with the patented machine, it is said that two men can produce 600 barrels in a day.

THE Ontario Silver Company, Thorold, Ont., who make a specialty of manufacturing genuine nickel-silver spoons and forks, claim to be the only concern in Canada, who manufacture that particular class of goods. The metal of which these goods are made is 25 per cent. pure nickel, while the best American-made goods of similar description contain but 22 per cent. of nickel. The Ontario Company's goods are the equal in every respect of any made in England.

MR. JAMES PENDER of St. John, N.B., is filling an order for five tons of horse nails for a business house in Dublin, Ireland. The nails are to be shipped by bark "Oliver Emery." Mr. Pender is also manufacturing several tons of nails for Australia for a firm to which he had before shipped a sample. A manufacturer in Brazil is also negotiating with Mr. Pender. There is no doubt Mr. Pender would be able to carry on an extensive foreign trade if he could make direct shipments of his goods.

THE Barnum Wire and Iron Works, Windsor, Ont., have the contract for making all the wire and iron office railings, fixtures, etc., for the Toronto branch of the Bank of Montreal building, at the intersection of Young and Front Streets. This building is one of the finest in the city, and it is being fitted up regardless of expense, and the concern doing the work here alluded to have shown most excellent taste and fine workmanship in the fittings they are now putting into the bank. The Barnum Company supplied the elegant fittings in the new office of the Montreal Star, and in the Bank of London, at London, Ont.

MESSRS. C. N. VROOM & Co., St. Stephen, N.B., in October last began the manufacture of carbonized drain and sewer pipe, and during the winter, six men were employed, who manufactured 10,000 feet of pipe, 4 inches, 6 inches, 8 inches, 10 inches, and 12 inches in diameter, and a large supply of what is known as "crooked work," including collars, branch pipes, traps, bends, and double branch pipes. The force is at present reduced, but operations will be conducted during the entire summer. The superiority claimed for the carbonized stone pipe over all others consists principally in the use of the carbon, which hardens the composition to such an extent that it is nearly as hard as stone, and is said to be the nearest approach to the latter that art has yet invented.

MESSRS. GRAND & TOY, stationers, Toronto, have on exhibition and in operation a hydrostatic letter press which should command the attention of all business men who have occasion to have a great deal of copying done. These presses are operated by being connected with the water supply pipes, or a pump may be used where connection with the street service is not convenient. By turning a suitable valve, supplied with the press, a small quantity of water is admitted under a rubber diaphragm, by which the lower plate is raised, forcing the copying book up against the upper plate, only about one

pint of water being necessary to perform an operation. It can be successfully operated by a child. Messrs. Blackburn & Hodge, 43 Wellington Street, East, Toronto, are the sole agents for Ontario and Quebec.

THE Sheffield correspondent of an English trade journal says: Few people seem to have any idea of the magnitude of the steel required in umbrella manufacture. "Wisacre" the other day, seeing in a local paper the item of 100 tons of steel wire for that purpose, sneered at it as a very small line, although at the lowest price—£40 per ton—it would represent £4,000, and at £75 per ton, £7,500. How many miles of wire this would run to when drawn out is more than I care to calculate. One great firm of this district—Messrs. S. Fox & Company, Limited, Stockbridge Works, Deepcar—have made fortune after fortune out of their paragon frames alone. It is believed that the original founder of the works is one of the wealthiest men in South Yorkshire, and the company of which he is now the chairman have their shares £80 paid, quoted in the market at £148. It is no secret that although they engage in other industrial processes their leading speciality is that I have mentioned.

DR. GEORGE WOODS of Pittsburg, Pa., is authority for the statement that seventy-five cents worth of iron ore made into bar iron is worth \$5, horse shoes \$10.50, table knives \$1.80, fine needles \$6,800, shirt buttons \$29,480, watch springs \$200,000, hair springs \$400,000, pallet arbors \$2,577,595. There is much, very much, in the above estimate that should receive the attention and consideration of our capitalists. Said John S. Clark of Boston in an address before the Franklin Institute of Philadelphia in 1881: "I hold in my hand a piece of steel. Its value is perhaps five cents. And yet it may be said to represent hardly more than so much raw material. In this hand I hold another piece of steel of similar quality, but less quantity, and yet this latter has a value of \$20. What makes this difference in value? Simply this, that human thought has been playing, as it were, about this latter piece of steel, and has made it the basis upon which it has concreted itself so that we have an instrument of great practical use, a micrometer caliper, mainly the product of thought as expressed by skilled labor."

IN numberless instances the steam engine could be dispensed with, and water power employed instead, if manufacturers would but recognize the fact that water wheels or turbines close to a mill are not necessities, and that the power which resides in a volume of falling water can be utilized in various ways perfectly practicable and ready of application, although they may appear at first sight to be novel and impossible. The plan of transmitting power by ropes from water wheels or turbines is by no means new. It has been extensively employed on the continent, and it is being adopted on no small scale in the United States. The length of rope used varies from a couple of hundred yards up, and it has never yet been decided what is the limit of distance beyond which a rope cannot be used with advantage. If we consider how wide a range of country would be opened up if only the power might be dispensed at a distance from the factory, it will be seen that the extension of the system is likely to be fraught with immense benefit. For example, falls often exist near the foot of a hill, at points almost if not quite inaccessible for factory purposes, while two or three miles lower down may be found a thriving town. Here rope transmission would do excellent service. Again, a fall is two or three miles from a railway; the factory must be near the railway. If, then, power can be led across the country to the mill a great difficulty is disposed of.

MACHINERY in store for sale may be kept in good condition by applying to the finished parts the best sperm oil. A mineral oil is manufactured by a special process which, owing to a peculiar cohesiveness, is very efficient for rust prevention. Ordinary lubricating oils are not suited to this use. They do not have either the heat-resisting, the cohesive or the adhesive qualities. Metal coatings of amber color are made from petroleum, which have a melting point of 105 to 125 degrees F.; their consistency is between that of lard and tallow. A cheaper product from earth oils, and of less body, is obtainable; it is of a dark color, and its use can be made efficient and easy, as workmen very readily see if all parts are thoroughly covered with it. For heavy machinery to be long exposed to the weather, or for ocean transportation, the "old-fashioned" mixture of white lead (ground in linseed oil) and tallow is unrivaled, for the reason of its great body, and because it is heavier than water. There are patent compounds in which gum of various kinds exist dissolved in solvents, of a very vaporous nature; these do not meet with general favor, as the volatile part renders them dangerous when used in the vicinity of a lamp or gas; also they are liable to give trouble by working into the bearings of machinery not possessing any lubricating properties.

## Textiles.

THE CANADIAN MANUFACTURER.

Send \$2.00 and receive it twice a month, postage paid, for one year.

THE shareholders of the Merchants' Manufacturing Company, of Montreal, will issue first mortgage bonds upon their cotton mills to the extent of \$200,000.

MR. R. A. DIXON of Paris, Ont., has had his new needle factory placed on the list of properties entitled to exemption from taxation. This is said to be the only factory of this kind in the Dominion.

MR. RICHARD HUNT of Summerside, Prince Edward Island, believes that flax culture may be profitably undertaken by the agriculturists of the Maritime Provinces, and is out in a letter in the *Charlottetown Examiner* in advocacy of that idea.

ONLY the dyeing rooms of the table cloth department of the Dominion Oil Cloth Company's works at Montreal, suffered to any extent by the recent fire there. New machinery and appliances have replaced those destroyed, and the works are in full working order.

THE Pennan Manufacturing Company, proprietors of the Grand River Knitting Mills, at Paris, Ont., have introduced automatic sprinklers into their mills, which will be connected with the water works system of the town. They will also erect hydrants on the street near the works.

THE dyeing power of the coloring matters derived from one ton of Lancashire coal, will astonish any thoughtful mind, for the magenta will dye 500 yards of flannel, the aurine 120 yards, the vermilion scarlet, 256 yards, and the alizarine (Turkey-red cotton cloth) 256 yards.

THE striking silk dyers of Paterson, N.J., who have been "out" since February, resumed work a few days ago. It is estimated that they have lost \$150,000 in wages by the strike. The other silk operatives thrown out of work have lost \$900,000, and the loss to the business interests of Paterson will amount to fully as much more.

AT Menasha, Wisconsin, all the girls in the carding department of the Menasha Woolen Mills are out on strike. The proprietors of the mill recently ordered all the windows facing the street painted, so that the girls employed would attend strictly to business and not be tempted to watch passers-by. The girls refused to return unless the paint was removed.

MESSESS. KENNEDY & BUNSTON of the Walkerton Woolen Mills, Walkerton, Ont., have submitted a memorial to the Walkerton council asking a bonus of \$4,000, to assist in the development of their business. They propose to expend \$7,000 in additional machinery and building, and to employ from forty to fifty hands, guaranteeing a pay sheet of \$10,000 a year.

MESSESS. J. B. & F. GOSSELIN of Bedford, Que., have sold their woolen factory, machinery and water power, adjoining the Pike River mills, at St. Charles de Stanbride, to Feodor Boas & Bros., of Montreal, and Mr. Morrison, of St. Hyacinthe, and in future this mill will be run in connection with the knitting factory. The latter establishment is in a very prosperous condition and its productions find a ready sale at good prices.

MR. SLINGSBY of Brantford, Ont., has received the diploma and medal awarded him at the Colonial Exhibition in London, for his exhibit of Canadian made blankets. Mr. Slingsby has a world wide reputation in the manufacture of his blankets. In 1851, at the first great World's Fair in London, inaugurated by the late Prince Albert, he secured a medal, and also the gold medal at the great New York exhibition, besides many diplomas.

AT the recent sale of the Port Elgin Woolen Mills the whole property was knocked down to Mr. Emerson for \$50. It is understood that Mr. Emerson represents the Merchants' Bank of Halifax, a creditor, and that the purchase by the bank was for the purpose of securing itself as well as other preferential creditors. There is a debt of some \$10,000 secured on the property ahead of the preferential claims. A strong combination of Amherst financiers have, it is understood, entered into negotiations with the bank for the purchase of the whole property, for the purpose of transferring the plant and business to Amherst and operating it on a large scale.

IT may be interesting to know that James Hargreaves, the Englishman, who in 1764 devised the famous spinning jenny, derived no money from his invention. Under the pressure of poverty he made and sold several of his machines before taking out a patent.

When the spinning jenny had revolutionized the weaving trade Hargreaves found that his invention was pirated in all directions. The combined manufacturers offered him £3,000 as a recompense and for permission to use his machine, but he demanded a much larger sum, which was refused; and he then began a series of law suits—ultimately abandoning them on being advised by his attorney that his rights could not be sustained.

MACHINE embroidery has hitherto been chiefly made by the following methods:—First, by large machines having several horizontal rows of needles working against a fabric or embroidering ground, stretched upon a vertical frame. The latter is suspended and balanced in such a manner that it can be controlled by a pantograph, the needle of which is carried over an enlarged pattern sheet by the hand of the attendant working the machine. These machines are the foundation of an important industry in Switzerland and Saxony, and serve chiefly for the manufacture of lace and trimmings. Secondly, by specially constructed embroidering machines, working with one or more needles, and chiefly used for curtains and other articles of large and complicated designs. Thirdly, by means of an embroidering attachment to ordinary sewing machines, the cloth being shifted at every stitch by hand and without the aid of an enlarged pattern sheet, a method which requires much time and skill for producing accurate work. In order to remedy this defect a German inventor, Herr von Pittler, says *Industries*, has provided the sewing machine with a pantograph, which acts on the same principle as in the large embroidering machine, but is modified to suit the horizontal position of the cloth. Almost any ordinary sewing machine can, by the addition of Herr Pittler's pantograph, be adopted for embroidering at a trifling cost, and the manipulation can be easily learnt by persons of ordinary intelligence.

FEW people ever stop to think of the twistings and turnings and the various processes that cotton fibre goes through after it is taken from the pod before it is wound upon a spool and ready for the housewife's needle. The whole story is told, however, in a small space in one of the cases in the hall in the National Museum, given up to an exhibition of textile fabrics. This is one of the many object lessons in the museum, which combined are intended to tell the story of man as he exists on the earth. First is shown a specimen of cotton in the pod just as it is picked, without having the seed removed. Next is shown a specimen of the same cotton after it has been ginned and the black seeds have been removed. The Sea Island cotton is used for thread on account of the length of the fibre. A sample of the sacking in which the cotton is baled is also shown. Then the cotton is supposed to have been baled and shipped to the thread factory. Here the first thing that is done with the cotton is to subject it to the "picker" process, by which the cotton from several bales is mixed to secure uniformity. During the picker process much waste, in the form of dust, dirt and short fibres, is separated from the good fibres by the picker. Next the "picked" cotton is wound on a machine, in sheets or laps, into a roll. The next process illustrated by a practical exhibit is the carding, by which the sheets of cotton are combed or run out into long parallel fibres. The cotton is next seen drawn through a trumpet shaped opening, which condenses it into a single strand of "silver." Then eight such silvers are run together into one, six of the strands thus produced are drawn into one, and again six of the strands from the last drawing are combined into one. Then comes the slubbing or fast "roving" process, which consists of winding the strand and bobbin. Two strands are twisted and again wound on a bobbin. After a number of other twistings and windings, during which the strand is gradually reduced in size until it begins to assume a threadlike appearance, two strands of this fine "roving" are run together and twisted, under considerable tension, on a bobbin that makes 7,000 revolutions a minute. Two of the cords thus produced are then wound together on a spool, and then twisted from that to another spool. The two-cord thread thus produced is transferred thence to another spool, and then three threads of two cords each are twisted together, forming six-cord thread. One who has followed the process sees the cotton gradually transformed from a wide band or sheet of loose cotton to a compact thread that will pass through the eye of a needle. The six-cord thread is at last taken from a bobbin and reeled into a skein, in which form it is bleached or dyed. Then it is wound back from the skein upon a big spool, from which it is supplied to little white birch spools, upon which it is wound in regular courses, and is then ready for market. The machine that regulates the last winding measures the number of yards wound on each spool. The spools are made of various sizes, to hold from 200 to 12,000 yards of threads. The labels that decorate the ends of the spools when they are sold are last put on. They are cut and passed on by machinery with great rapidity.—*Washington Star*.

# Milling.

THE CANADIAN MANUFACTURER.

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THE town of Austin, Man., offers a bonus of \$3,000 for the erection of a flour mill. Millers seeking a location should notice this fact.

THE European wheat harvest of 1887 promises to be about a month later than usual, but of generally fair prospects considering the time of year. If a month late, the importing countries will require a larger quantity of foreign wheat.

CITIZENS in Sarnia, Moore and Sombra townships, Ont., intend forming a joint stock company with \$50,000 capital for the purpose of erecting and operating a large roller and buhr flouring mill, to be located in either Moorestown or Courtright.

THE United Kingdom, provided consumption be normal, will require to purchase in and ship from all foreign countries from April 16, 1887, in time to arrive by August 31, 1887, upward of 50,000,000 bushels of flour and wheat. The average stocks of wheat and flour in the United Kingdom, taken June 30 and December 31, for six years, have been slightly less than 16,000,000 bushels. The stock of flour April 1, 1887, does not seem to be excessive for 37,000,000 population, being only about 1.37 of a barrel per capita. — *Brad-streets.*

A TELL-TALE paint has been invented by an Englishman for showing when a bearing is hot. At a normal temperature it is a brilliant red, but as it is heated it grows darker until at 150 F. it is quite brown. As it cools it regains its original color. If the bearings of an engine or machine be covered with paint the man in charge can tell at a glance if they are running cool, and if they become hot he can watch from a distance the effect of the lubricant he applies.

IN the county of Pontiac, Que., are three extensive roller-process flour mills besides the usual number of stone mills. Messrs. Shaw Bros. own two of the former, the chief one being at Portage du Fort, with a capacity of 700 barrels per day, the second with a capacity of 600 bushels per day. The third roller mill in Pontiac County is at Quib, and averages about 500 bushels per day, averaging in all about 540,000 bushels of wheat ground a year by these three mills alone.

LATE Paris advices place the requirements of France for the remaining portion of the cereal year for foreign wheat and flour at 22,000,000 to 34,000,000 bushels. The French wheat harvest promises to be a late one. French stocks of wheat and flour together, in the ports, in and out of bond, and in Paris are only about equal to 5,000,000 bushels of wheat. M. Narcisse Meyer, Paris, estimates that France required to import about 60,000,000 bushels of wheat between February 1st last and September 10th next.

YANKER genius has succeeded in applying the principle of the injector to a grain elevator. Science gives the following description of this new invention. The grain is run from the jar to a revolving hopper, through an aperture in the bottom of which is forced a powerful blast of air, which carries the grain at a certain distance up a horizontal tube. At intervals in this tube are bends, or horizontal curves, forming relays. These relays act as auxiliary hoppers, a fresh blast of air being admitted at each one, which carries the grain to the next higher relay. In this way the grain may be raised to any desired height. A modification of this device is arranged to raise grain from the hold of a ship or boat.

Two cylinders have recently come under our notice, one which has run eighteen years and another fifteen years, the first without any lubrication and the second with only a little attention in this respect once a week. Both cylinders were polished like a mirror and neither were appreciably out of true. The condition of these cylinders after so long a run leads one to question the necessity or advisability of pouring so much oil through engines as is frequently, it may almost be said usually done. It appears that a cylinder can be so made and the piston so packed as to run without it, without especial injury to itself in a long term of years, but it is probable that the diminution of friction which would accrue from the use of oil would more than balance the expense and trouble of its use. There is no doubt, however, that there is an immense amount of oil used needlessly in this way. — *Western Manufacturer.*

ANOTHER barrel has been patented, and when manufactured on a large scale and introduced to the trade, promises to become a popular package. It is made of hard and soft wood, each alternate stave being of the soft variety and slightly thicker than the hard wood stave. The edges of the staves are cut square, and when placed together to form the barrel, the outsides are even and there is a Y-shaped crack between each stave from top to bottom. The driving of hoops forces the edges of the hard staves into the soft ones until the cracks are closed and the extra thickness of the latter makes its inner edges lap over those of the hardwood staves, making the joint doubly secure.

PROFIT sharing is not an experiment. Profit sharing in milling is hardly possible for a very conspicuous reason. However, since 1882, the Pillsburys, of Minneapolis, have divided \$81,000 among their employees. Edw. P. Allis & Co., of Milwaukee, are operating upon a scheme which savors of profit sharing. N. O. Nelson & Co., of St. Louis, a manufacturing establishment, have been operating under the profit sharing plan and are highly pleased with its success. One idea in connection with this plan is that it increases the profits by diminishing the waste and that the difference between a profitable year's business and one which is unprofitable may be made in very small things which are beyond the control of the employers. It is said that profit sharing is profitable to the capitalist for that, and other reasons. Labor strikes have been the cause of a great deal of trouble and solicitude among manufacturers, and that reason profit sharing affords stability to a manufacturing establishment which employs a large amount of help. There are plans which have just a little flavor of this idea whose only purpose is to hold the help in a position where they will not strike. It has only a slight flavor of the real idea in it. It is simply a scheme to prevent strikes and other labor troubles. — *M. Stone.*

THE Rio de Janeiro Flour Mills Company may be regarded as fairly established. Our readers will remember that but a short time since the project was launched, and although from the first the scheme appeared feasible, it was just a question whether in the present cautious mood of investors the £250,000 that were required for the undertaking would be readily subscribed. The result has shown that the British public are still ready to lay out money in enterprises which can show a fair chance of legitimate profit. It was stated at the first annual general meeting of the company, held at Cannon Street Hotel a few days since, that nearly three-fourths of the capital has already been subscribed. A healthful feature is the presence on the subscription list of merchants and other commercial men residing in the Brazils, or having business with that empire. For the rest it appears that the directors of the company have not been idle. The company has already been registered in Rio de Janeiro, and the site on which the mill is to rise has been legally conveyed to the company. The contractors, Messrs. de Morgan, Snell & Co., have already commenced clearing the ground for the erection of the mills, which are to be fitted by Mr. Henry Simon, of Manchester, and are to have a very large capacity. Brazil, although it is said to be a largely bread-consuming land, has hitherto been greatly dependent on foreign sources for its supplies of wheat and flour. Hopes are entertained that the establishment of this gigantic flour mill will stimulate the native cultivation of wheat, for although Brazil has not hitherto been ranked as a wheat-growing country, it is contended that the three provinces of Parana, Minas Geraes and Rio Grande do Sul are together capable of producing sufficient wheat to cover and more than cover all needs of Brazil. However that may be, it seems certain that in about a year or eighteen months the capital of Brazil, a city of some quarter of a million souls, will be provided with a mill capable, and more than capable, of furnishing all its supply of flour; and as the policy of the Brazilian Government is to encourage in every way the development of native industry by the taxation of manufactured articles and free admission of raw material, it seems probable that for some years to come the new company, which has been floated by British enterprise, will enjoy a lucrative monopoly. — *The Miller [London].*

MESSRS. PALLISER, PALLISER & CO., Architects, New York city, have sent us a copy of a specification blank published by them, for frame or brick buildings costing from \$500 to \$4,500. These blanks are prepared for brick or frame buildings of every kind, in three different forms to suit cost of structures. They are formulated by practical architects, and would be invaluable to builders and those who design building, as by their use they will save hundreds of pages of writing and copying. This firm are getting out a fine and large, yet inexpensive work on plans and details, which is now in the hands of the printer, and which will be issued in the course of a few months.

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*Gentlemen:* You ask why we use the Dodge Patent Pulley. I answer because we consider them the cheapest, most convenient and satisfactory in all particulars.  
Yours truly,  
S. R. STIMSON, General Manager.

**C. L. RICK, AGENT, CHICAGO, ILL.** **OFFICE OF NEWTON WAGON CO.,**  
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*Dear Sir:* Replying to your favor, will say that after using the Dodge Wood Split Pulley for a year or more we are satisfied they are a good thing, if not the best Pulley made, and shall use them hereafter in preference to any other we know of.  
Yours truly,  
NEWTON WAGON CO.

*We have sold these pulleys for one year, and they have been put to every kind of service, and their popularity is wonderful. We refer to the following users for proof of the above statements: Pillsbury & Hulbert Elevator Co., Minneapolis; R. M. Minneapolis Elevators; Northern Pacific Elevator Co.; The Pacific Elevator Co.; Minneapolis Harvester Works; Minneapolis School Furniture Co.; M. & St. L. R. Co.; Willford & Northway; Washburn, Crosby & Co.; St. Paul Electric Light Co.; St. Paul Roller Mill Co.; Minneapolis Brick Co.; N. W. Mfg. & Car Co., Stillwater, Minn., and very many others.*  
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**W. H. DODGE, PRES.** **THE WORLD'S INDUSTRIAL AND COTTON**  
**DODGE MFG. CO., MISHAWAKA, IND.** **CENTENNIAL EXPOSITION,**  
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*Dear Sir:* I have a number of your Patent Wood Split Pulleys in use here at the Worlds Fair and Cotton Centennial Exposition, driving Dynamos for Electric Lighting. They are doing heavy work, and are held upon the shaft by the compression of wood on iron. They hold firmly, and do not slip. I have watched with a great deal of interest the many Pulleys of your make running at this Exposition; and I think them the best Pulley I have ever seen. I believe them to possess the following points of merit over any other Pulley: All Pulleys being split or in halves; best belt surface; best shaft resting; best method of utilizing Pulleys to shafts of different sizes; best balance; lightest on the shaft; strong, and I believe durable. I heartily recommend them.  
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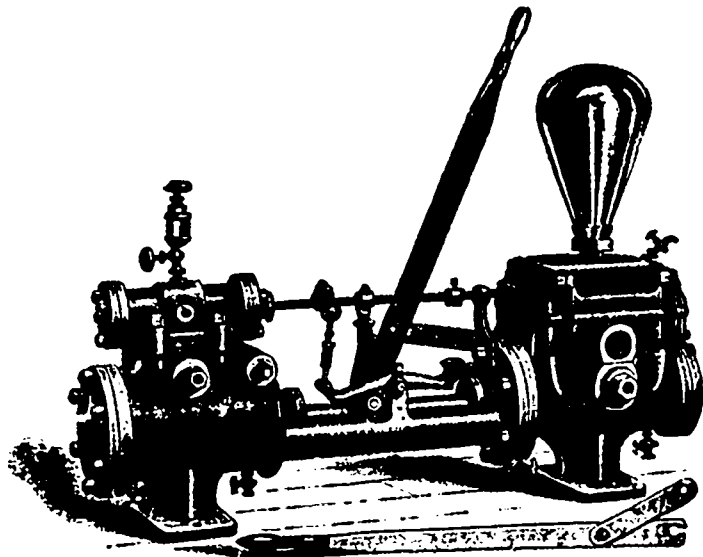
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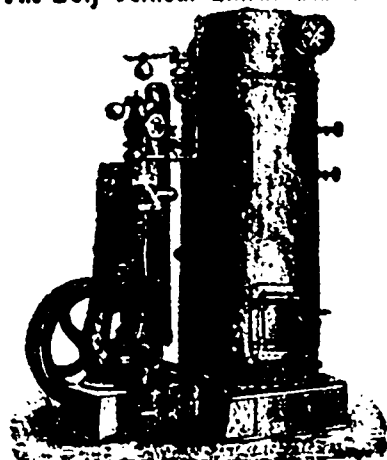
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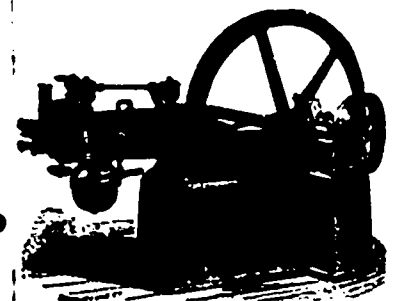
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## Lumber.

THE CANADIAN MANUFACTURER.

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Messrs. B. Toombs & Co., Moncton, N.B., have six ship loads of pulp wood and 30,000 railroad cross-ties ready for shipment, the most of which will go to Philadelphia.

D. Wright & Co. manufactured a large number of spars this winter at their camp in Ogemaw county. Several car loads will be shipped to Halifax, N.S. They are the full length of two cars, and the largest of them are fully 18 inches in diameter at the top.—*Lumberman's Gazette.*

PERHAPS the most beneficial of the numerous changes sought to be effected in the tariff, is the increase asked for by the lumbermen in the export duty of Canadian logs. A year or two since the Government acted wisely in imposing this duty as a means of diminishing the shipments of forest produce in its unmanufactured state. But with the exhaustion of the American lumber supply the drain on Canadian timber resources is increasing, and a further export tax is considered necessary to prevent the destruction of our forests. If we are to continue to export timber to the States, it is, of course, thus securing additional employment for Canadians. But it may be fairly open to question whether it is advisable that we should export considerable quantities of saw-logs or lumber to the States, seeing that in a very few years we may need all we can produce for our own use. The Government might very reasonably go further in the direction of restricting the output of forest productions, by putting an export duty on sawn lumber as well as increasing that on saw-logs. There is this advantage in such tax, that it would all come out of customers. If the Americans are forced to buy from us by reason of having exhausted their own supplies, we may just as well make them pay handsomely for the privilege.—*Toronto News.*

It is estimated that owing to the enormous quantities of snow that has fallen in the woods during the past winter, that the lumber cut will fall off at least 25 per cent. as compared with 1885. The estimate of square timber made in the Ottawa and Nipissing districts during the season just closed is: White pine, 530,000 feet; waney pine, 355,000 feet; red pine, 485,000 feet, or a total of 1,370,000 feet. This is exclusive of 14,000 pieces made on French River and 150,000 feet on Black River. An approximate estimate of the total log cut of the Ottawa and its tributaries places the figure at 600,000,000 feet. The movement of sawtimbers is now up the river to engage in the spring work. The large emigration to Michigan has about subsided. Wages during the coming season will range from \$16 to \$30 per month and board, according to capabilities and experience. It is estimated that upwards of 75,000 standards of logs will leave the Nipissing district for Michigan this spring, and from present indications a large exportation of logs in this direction is likely to be made annually in future. A movement is on foot among the Canadian lumbermen to induce the Dominion Government to increase the export duty on logs as the only means by which the rapid depletion of Canadian forests from this cause may be arrested. They also represented to the Government that logs cut in Canadian territory should be sawn in Canada and give employment to Canadian people. Already a very large area of the Nipissing limits has fallen into the hands of Americans, and these possessions are likely to be extended.

SCARCELY any of the woods that promise a greater or less competition with pine, are making more rapid progress than hemlock. There is every reason to look for a larger production of hemlock from the Michigan mills this year than was ever made before, and for its introduction on its merits into consuming districts where but recently it was pine or nothing. This wood, as it spreads out south and east from Chicago and Michigan distributing points, will find itself met by hemlock from Pennsylvania, and find itself also in the presence of no mean competitor. For some time back, in central and southern Ohio, the hemlock from the forests of western Pennsylvania has been coming in along side of the pine from the lake markets and from central Michigan, and in many cases beating its rival in a fair fight. Hemlock has the advantage of comparative cheapness, and that is of course a telling one. The difference of a couple of dollars or so a thousand usually turns the scale in its favor, and in consequence its use is growing there, as it is growing wherever it has come into market for sale upon its merits. Hemlock makes a reasonable light, strong, durable timber, and there is no reasonable objection to its free use in building. As it is bound

to come more and more into market, as the stock of pine diminishes and its cost advances, it is proper the trade should understand that it is not a timber to be despised by any one. It is to a great extent the bill stuff timber of the future, though it seems its usefulness is to be limited to so narrow a field as that and similar purposes. It proves a very successful material for shingles. Pennsylvania makers are turning out shingles with a fifteen-year warranty behind them, and what is more, they are laying them down along side of pine shingles at prices which the latter can hardly match. It is said that the timber which the manufacturers in the Keystone State are now cutting is much better than much of that which they have sent to market in times past. As they are compelled to go farther back from the stream, and gather in the trees standing higher up in the mountains, they obtain a better quality of timber, freer from shake, and showing a finer and closer texture. It appears to be well liked by consumers, who buy the shingles freely under a warrant which they cannot get with any pine shingles they are offered, and which would be practically worthless if it were made. Within the past year the development of the western trade in Pennsylvania hemlock has been very marked, and the indications are that its rise is but just begun.—*Chicago Timberman.*

THERE are few tools more ancient than the saw. All the ancient nations appear to have had it; certainly the Hindoos, the Egyptians, the Greeks and the Romans. The saw may have existed even before there were any men on earth. The ancient saws differed from ours in two ways. The teeth were so arranged that the cut was made by pulling instead of pushing; and the teeth, instead of being set one to the right and one to the left alternately, were set so that ten or a dozen in succession were slanted one way, and the same number the other way. The ancients have several varieties of the implement. The Greeks, for example had cross-cut saws for two men, also saws for cutting marble into slabs. And they had a kind of tubular saw for hollowing out a marble bath-tub, similar in principle to the method now employed. Sawing by hand is about the hardest work that men ordinarily have to do. It is therefore not surprising that our ease-loving race began to experiment a good while ago with a view to applying the forces of nature to the performance of this toil. A learned German investigator who has investigated the subject very thoroughly states that the first trace of saw mill yet discovered is in the records of the German city of Augsburg, for the year 1337. The reference is slight, and does not fix the fact with certainty. But there are two saw mills near that city, which are known to have existed as far back as 1417, and they are still used. Before that valuable invention, all boards and planks were split with wedges, and then hewn to the requisite smoothness with the axe. The splitting of boards is still practised in remote settlements, as I myself have seen, and it is recorded of Peter the Great, of Russia, that he had much difficulty in inducing the timber cutters of his empire to discontinue the method. At length he issued an edict forbidding the exportation of split planks. Even in Norway, covered with forests as it was, there was not one saw mill before 1530. Nowhere in Europe, it appears, was the introduction of the saw mill so long resisted as in England. In 1663 a Hollander erected one near London; but it brought upon the poor man such an outcry and opposition that he was obliged to abandon it. The sawing of timber by hand furnished occupation, at that time, and long after, to large numbers of strong men. In every town there were saw pits, as they were called, for the convenience of the sawyers, one of whom stood at the bottom of the pit and the other on the log. In 1767 an English timber dealer of large capital built a saw mill to be moved by the wind. It was thought to be a great and difficult enterprise, and it attracted much public attention. Some years before an author had explained the advantages and economy of saw mills; then the society of arts gave the scheme of building one their approval, and, finally, the mill was actually built by an engineer who had studied the saw mills of Holland and Norway. No sooner was the mill complete than the sawyers assembled in great force and tore it to pieces. The Government compensated the owner for his loss, as was just. Some of the rioters also were convicted and imprisoned. A new mill was then built, which was allowed to work without molestation, and proved so profitable that others were soon introduced. In no part of the world, probably, has the saw been more minutely and curiously developed than in Great Britain, where they have saws so fine as to cut diamonds, and circular saws nine feet in diameter. They have also veneer saws so accurately adjusted as to cut 18 slices of veneer from a rose-wood plank an inch thick. In London they will put a log of mahogany upon the mill and cut it into slices so thin that the sawdust weighs more than the veneer. Yankees have beaten this performance. They take a piece of mahogany or rosewood, soften it by steam, and cut it into veneers with a knife, without making a grain of sawdust.—*Journal of Progress.*

# Mining.

THE CANADIAN MANUFACTURER.

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## A COUNTRY FULL OF IRON

CANADA is full of iron. Valuable deposits have been found in every province and territory of the Dominion, and new discoveries are being made almost every day. Moreover, scientific experts have pronounced most of the Canadian ores to be of the very best quality, and, indeed, large quantities of ore are now exported from Canada to the United States for admixture with inferior American ores. Nova Scotia is the most favored province, having rich deposits of iron ore in close proximity to unlimited quantities of coal. Passing to New Brunswick, we find large deposits of good iron ore in Carleton county. There is also bog iron ore in Queen's, Sunbury, Restigouche, and Northumberland counties. In the Province of Quebec the richest beds yet discovered are in the county of Ottawa. Within a few miles of the city of Ottawa is an iron hill, which has been estimated to contain 100,000,000 tons of accessible mineral of the best quality. Immense blocks of ore protrude from the hillside. The Hull or Baldwin mine is situated here. Eight miles north-east of Ottawa city is the Haycock mine, where Professor Chapman estimates that there could be an output of 1,000 tons of ore per day for 150 years without exhaustion. There are believed to be other rich beds in the neighborhood. Deposits of iron ore have also been found in many other parts of the province, including the Eastern Townships. At Moisie there are immense beds of very valuable iron ore, and large quantities of bog iron ore of remarkably good quality are found in the districts of Three Rivers. In the province of Ontario, nearly all the eastern and central counties have enormous deposits of superior iron ore, while the north shore of Lake Superior is believed to be even richer in iron than the southern shore, where are located the most valuable mines in the United States. In many parts of Manitoba and the North-West Territories very rich iron beds have been found, and new discoveries are constantly being made. British Columbia is rich in iron from the mountains to the coast, and the islands along the coast are also bountifully supplied.

But in the manufacture of iron we have to consider not only the ores at hand, but the supply of fuel and fluxes. Limestone is commonly used as a flux to promote the fusibility of the ores, and all the Canadian provinces have limestone deposits. The coal areas of Canada are estimated at 97,200 square miles, not including those of the Far North. In Nova Scotia there is said to be more coal to the square inch than in any other part of the world.

Bituminous coal of the best quality is found side by side with iron along the coast of British Columbia and on the neighboring islands. No doubt it also exists in other parts of the province. On the Queen Charlotte Islands there is anthracite coal. There is also anthracite coal of the best quality near the Western boundary of the North-West Territory of Alberta. Further east in Alberta there is good bituminous coal, while in Assiniboia and Manitoba there is lignite. There is no coal in Quebec or south of the ridge of high land in Ontario, but in the far northern part of Ontario south of James Bay, probably 500 miles north of Toronto, and a shorter distance from Ottawa, there is said to be bituminous coal. The climate in this northern latitude owing to the low elevation and the influence of the open waters of Hudson Bay is much more moderate than would be expected, and if the reports regarding the existence of coal be true, railways will probably be built in a few years connecting the districts with the iron regions of Ottawa and Port Arthur. However, this may be, Ontario and Quebec will have to depend upon charcoal for smelting fuel for some years to come. It is a noteworthy fact that most of the iron districts of Ontario and Quebec are well wooded, while they are in many cases comparatively useless for agricultural purposes. With wise forestry laws stringently enforced there is no reason why Ontario and Quebec should not produce unlimited quantities of charcoal for all time to come. There is little demand for it at present, but there would be a large demand if a number of blast furnaces for the manufacture of charcoal iron were in operation. According to a table published last year by Mr. James M. Swank, Vice-President of the American Iron and Steel Association, pig iron was manufactured with charcoal in nineteen states and one territory in 1885. It was made with bituminous coal in fourteen states and with anthracite in four states. In many cases the ore or fuel was carried from one state to another. For instance New York imports all its coal from other states, and although both Pennsylvania and Ohio are well supplied

with iron ore they annually make more iron from ores mined outside their borders than within them. This is no doubt due in part to the fact that the home ores are sometimes unsuitable for the use without admixture with other ores. The state of Illinois, one of the leading producers of iron and steel, is obliged to import most of its ore from Michigan, while it hauls its coal from the bituminous region of Connellsville, Pennsylvania, 600 miles away. Ore in some cases is hauled 1,000 miles to the blast furnaces and the average distance over which all the domestic ore used in the manufacture of iron in the United States is transported to the blast furnaces is not less than 400 miles. Then the United States in addition to the domestic iron ore used imports considerable quantities from other countries generally for admixture with inferior American ores. In the year 1884 there were imported from Spain for the manufacture of iron in the United States 374,943 long tons of iron ore.

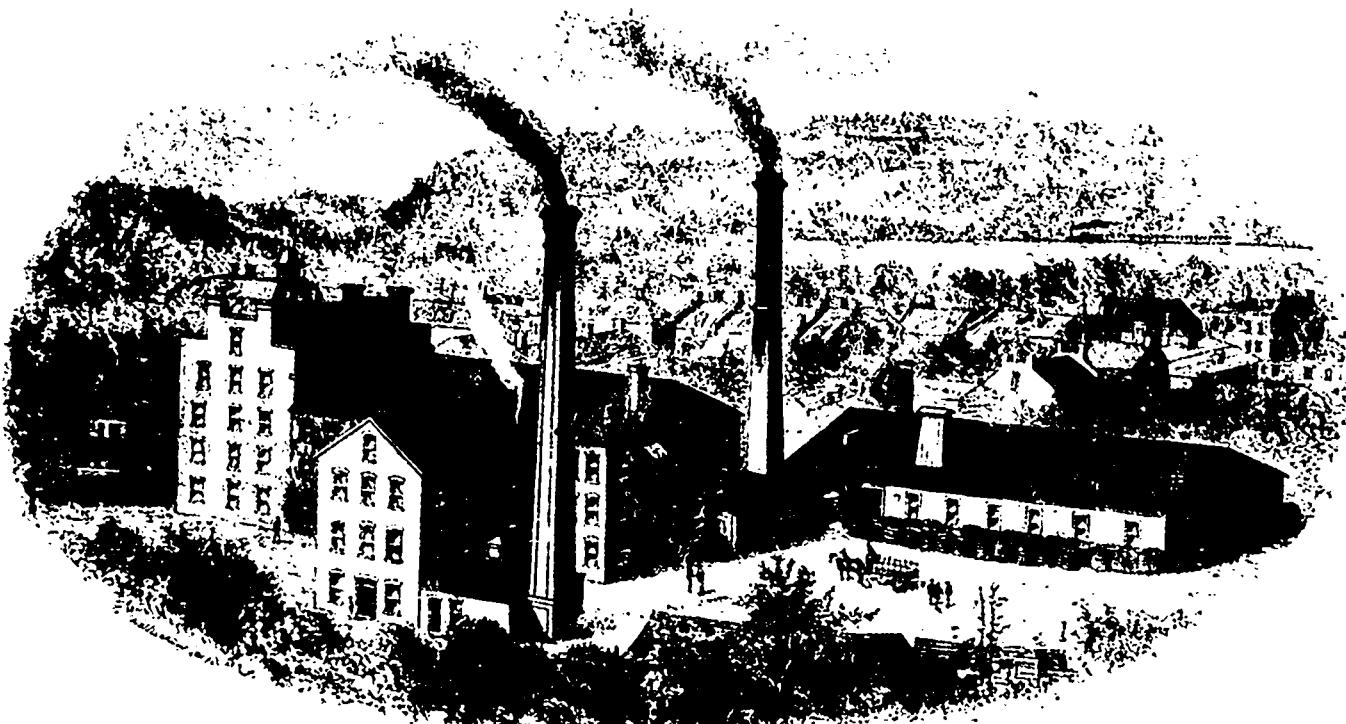
Canada is so well supplied with every variety of iron ore by nature that we would not need to import ores from foreign companies for use in our blast furnaces. Following is a list of the companies which propose starting blast furnaces for the manufacture of iron in Canada as soon as they are satisfied that the Government will give them sufficient protection. The Cape Breton and Pictou Iron Company, limited, propose to establish iron works at Sydney, C.B. The Pictou Coal and Iron Company will establish iron works in Pictou County, N.S. In Quebec Mr. Geo. Macdougall proposes to start a charcoal blast furnace at Three Rivers; Mr. Earnshaw Bradley, a charcoal blast furnace at Bulstrode Station, Que.; Ottawa Iron and Steel Manufacturing Company, a charcoal blast furnace at Hull. In Ontario the Furnace Falls Iron Company have a charcoal blast furnace partially built; the Irondale, Bancroft and Ottawa Railway propose to start a charcoal furnace at Irondale, Ont.; Rathburn & Sons, of Deseronto, a charcoal blast furnace at Deseronto; and the Central Ontario Railway Co., charcoal blast furnaces at some point along the line. In Manitoba the Intercolonial Mining, Smelting and Manufacturing Company of Winnipeg, propose to start charcoal blast furnaces, and the Moss Bay Iron and Steel Company, of Workington, England, have announced their intention to establish branch iron works on the coast of British Columbia. When it is known that a blast furnace costs from \$300,000 to \$400,000 it will be understood that these blast furnaces would represent a large capital. Perhaps all of them would not be established at once but in the case of the Nova Scotia companies all arrangements have been made to begin operations as soon as sufficient protection is granted. At Londonderry the Iron and Steel Company of Canada already have extensive works, but owing to insufficient protection they have not so far proved profitable.—*Montreal Star.*

SOMETHING novel in the way of exploration was carried on by the Cleveland mine, at Ishpeming, Mich. The extreme cold formed 9 feet of ice on the surface of Lake Angeline, when a diamond drill was taken out upon it and several holes bored in the bottom of the lake, which resulted in finding an extension of the Lake Superior hematite running along on its north shore. The lake is surrounded on all sides but the west by high precipitous bluffs of diorite and mixed ores. Along its south shore is the Lake Angeline mine; very near the northwest end is the Superior hematite mine, and the basin of the lake was always supposed to contain large quantities of iron ore. The drill holes put down showed that supposition to be correct. Probably no one ever before took a diamond drill on the ice to explore the bottom of a lake.

No better evidence need be adduced of the enormous advantage of the N.P., to the coal mining industry of Nova Scotia, than by comparing the sales of 1878 with those of 1886. In 1878 the total sales amounted to 693,511 tons, and in 1886 to 1,373,666 tons. Regarding this fact the Halifax *Herald* says: "In the eight years of the National Policy our coal sales have just about doubled. In other words the development in our coal mining industry during the past eight years has equalled that of all our previous history. Our sales in the upper provinces have increased nearly seven fold, and now amount to within 96,000 tons of our total sales in 1878—just ten years ago. Our sales in the upper provinces now amount to 70,000 tons more per annum than did our sales to the United States in the most flourishing year of that trade. Our coal trade with the United States is now actually less than with Newfoundland. And,—most significant of all,—our local consumption of coal has nearly doubled in the eight years, which indicates a corresponding increase in coal-using industries. It is thus very evident that there is at least one Nova Scotia industry that is not going to the dogs, and that has not been ruined either by the N.P. And it is further evident that our coal mining industry is not dependent on the American market, though at a time not very distant it was vehemently contended that it was."

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Bright Wire, drawn, straightened and cut to length.

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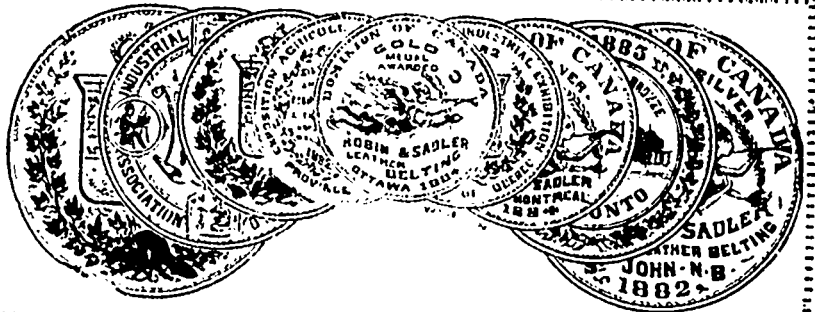
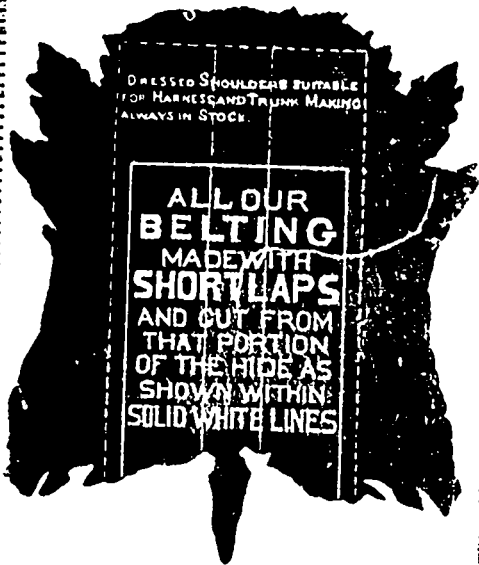
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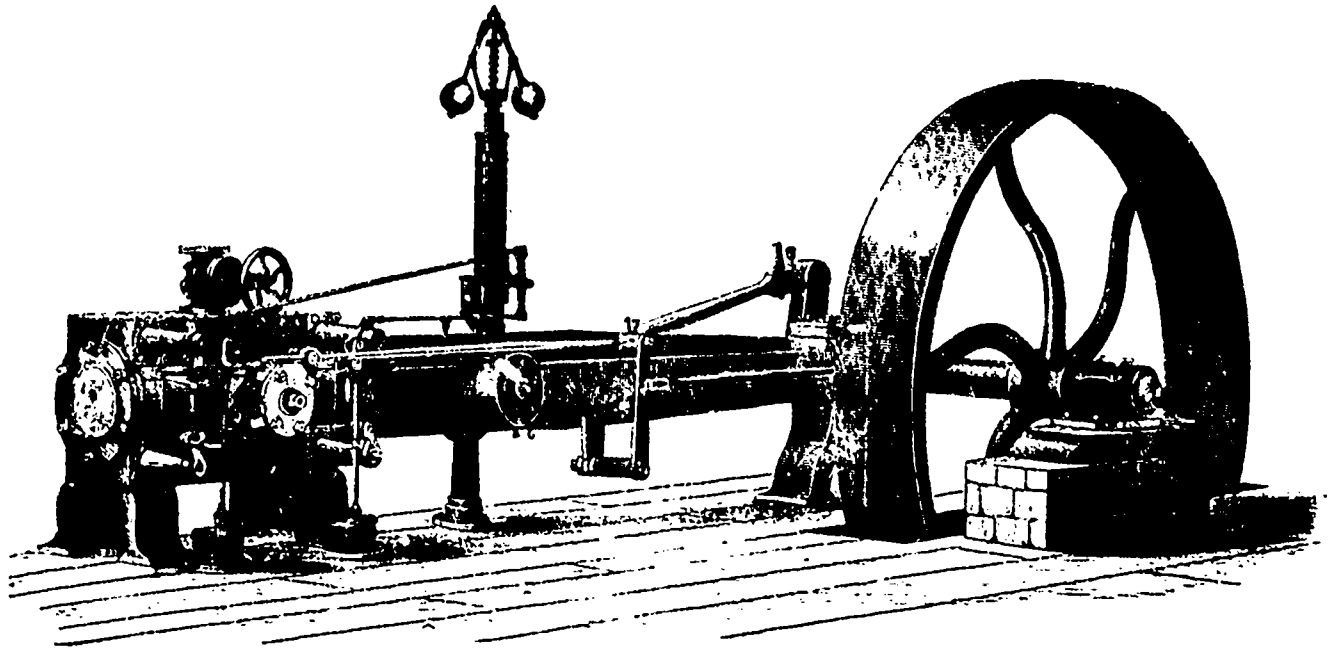
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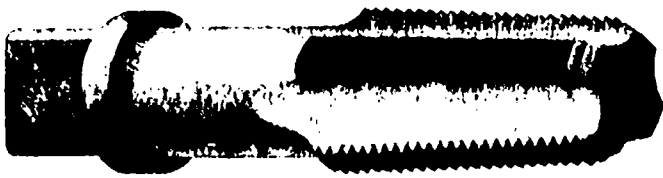
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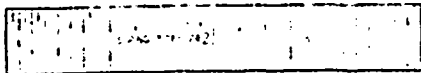
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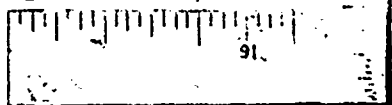
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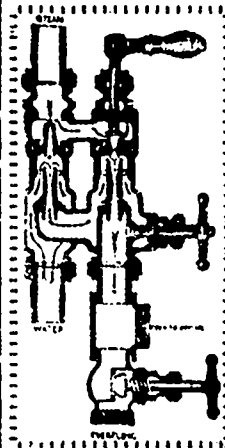
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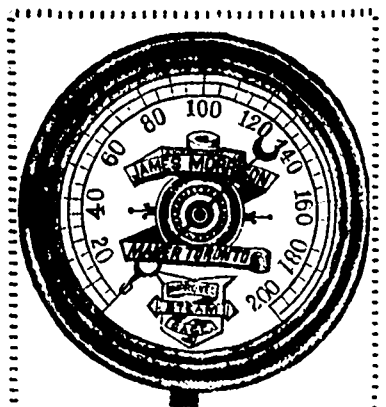
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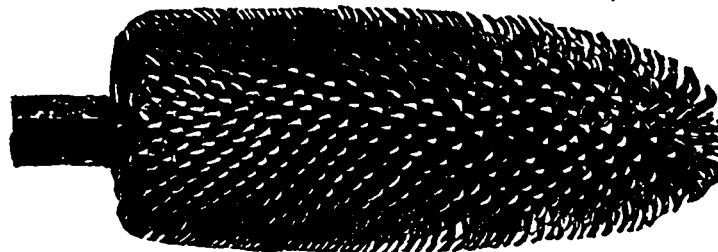
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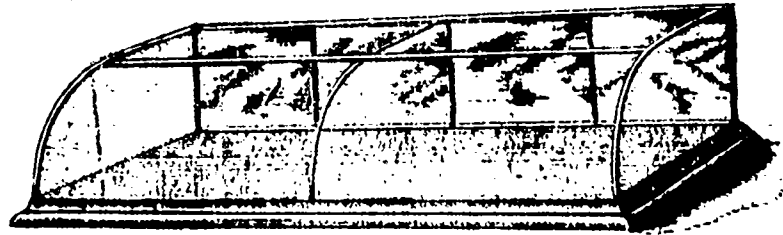
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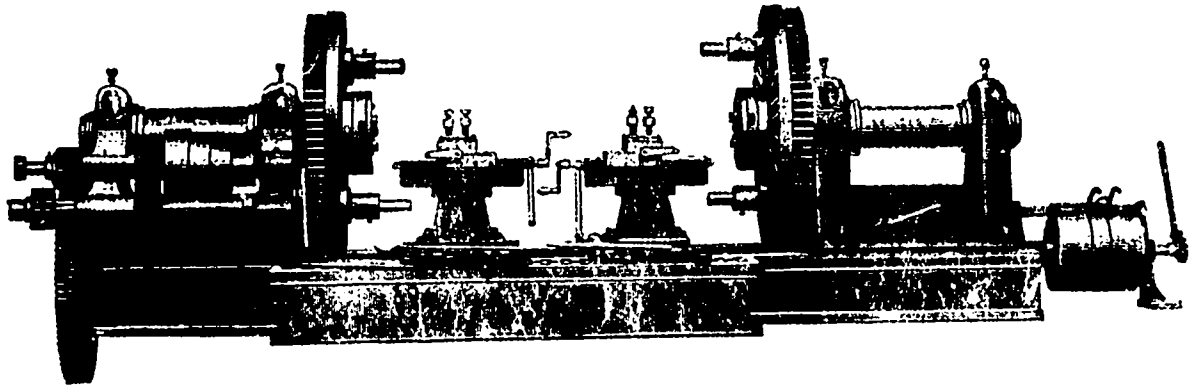
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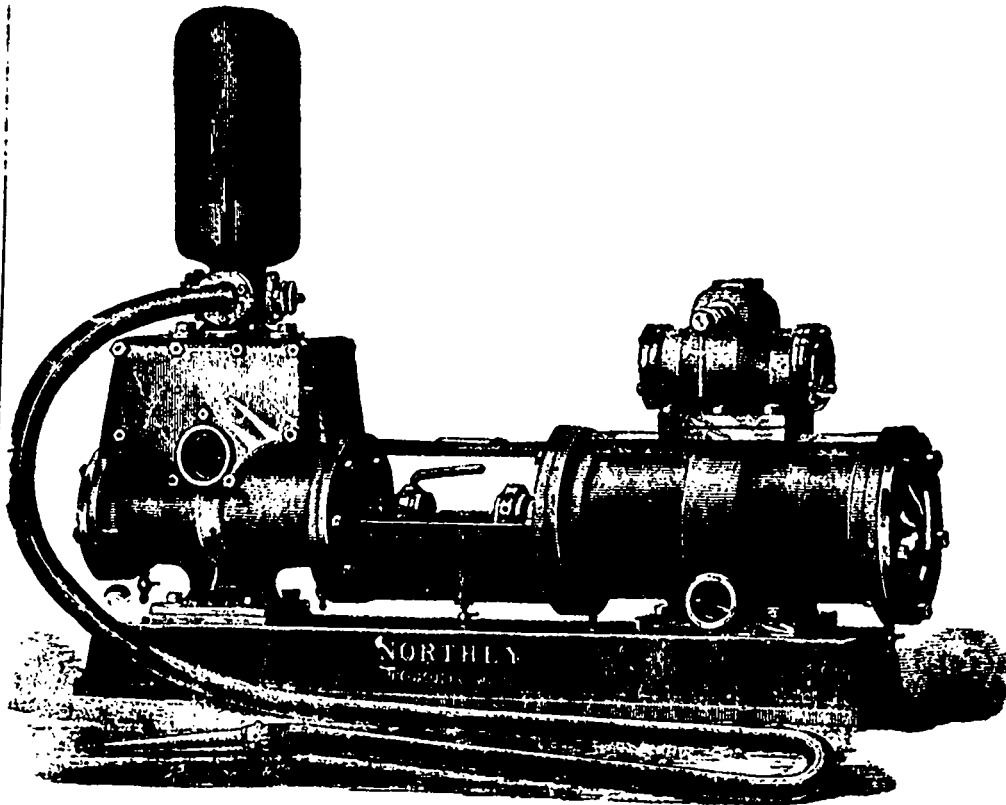
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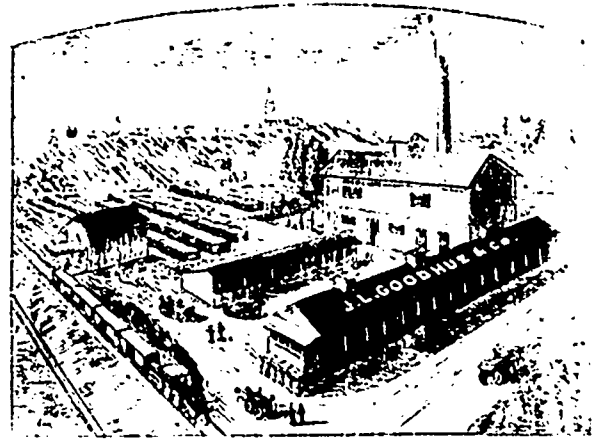
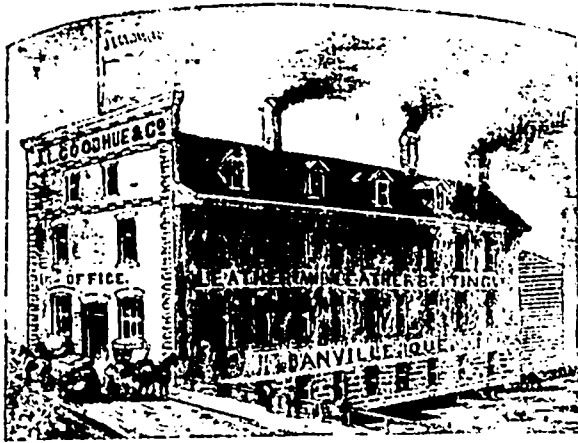
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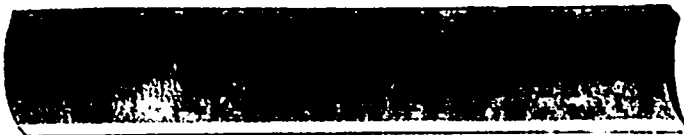
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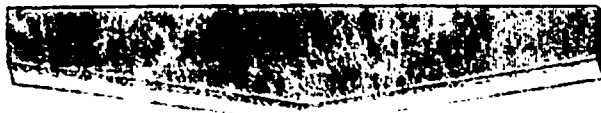
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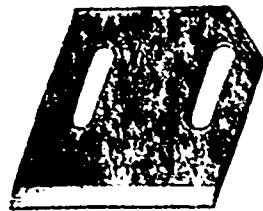
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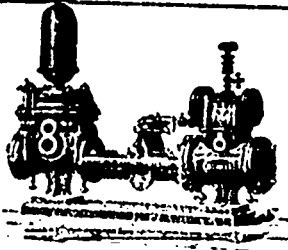
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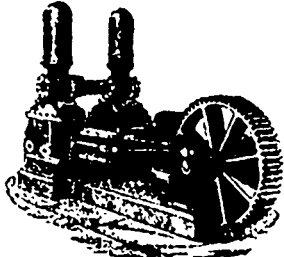
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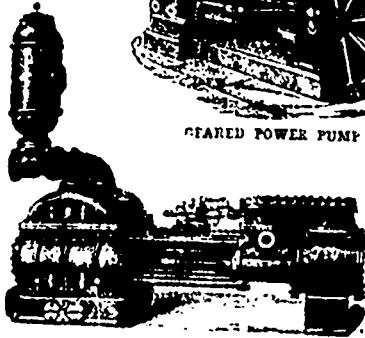
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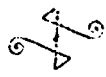


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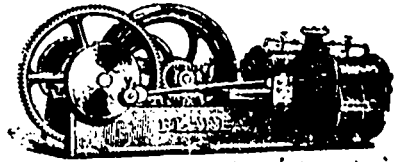
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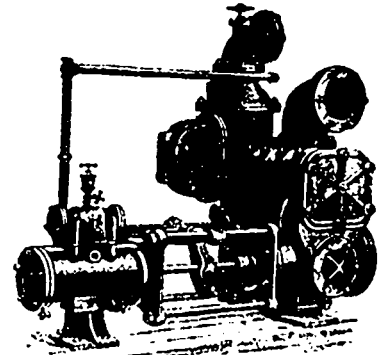
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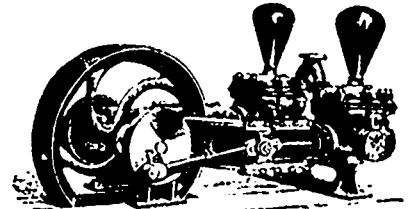
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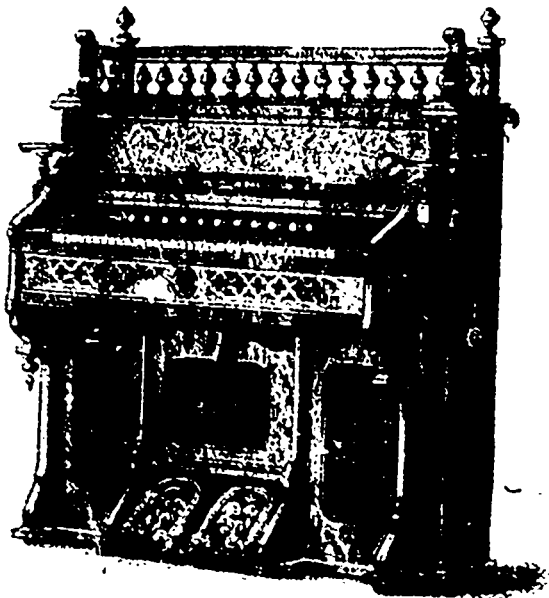


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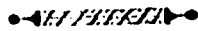
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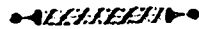


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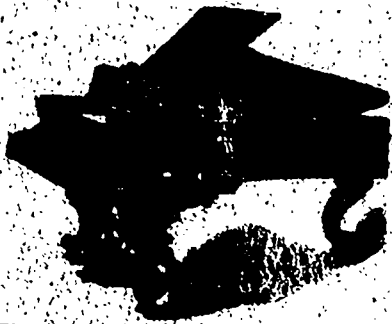
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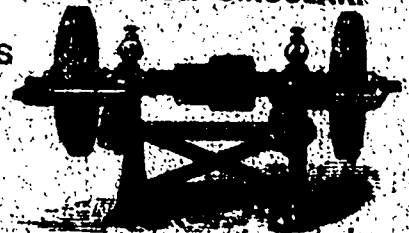
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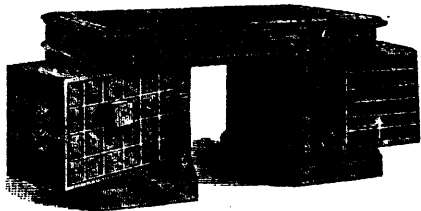


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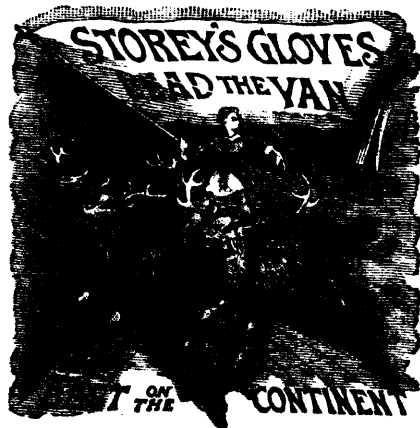
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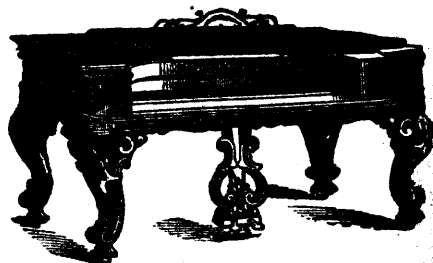


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