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THE CANADIAN MANUFACTURER

DEVOTED TO THE MANUFACTURING & MINING INDUSTRIES OF THE DOMINION.

AND INDUSTRIAL WORLD.

Vol. 5.

TORONTO, SEPTEMBER 3, 1886.

No. 17.

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VOL. V.

TORONTO, ONT., SEPTEMBER 3, 1886.

No. 17.

THE TURN OF THE TIDE.

In the United States the business tide has taken a decided turn, and is now visibly on the rise. And a special feature of our present issue consists of such proofs of the fact, taken from American papers, as we have been able to find room for. Already, in previous numbers, we have been endeavouring to lead our readers up to this view of probabilities, to the extent that reliable testimony from time to time appeared to warrant. There is a turn of the tide in Canada, too, but not quite so perceptible, probably because not on so large a scale as in the neighbouring Republic. But that the turn has come here as well as there is beyond all doubt, and let us hope that it will keep on for a while, and so give our business men a chance to redeem losses made during some dull years recently past. There is a turn for the better in the Mother Country, too, but as yet nothing to boast of. For the grim fact remains that the United States and other foreign countries, which formerly were heavy and profitable customers to Great Britain, have become competitors instead, having taken to the system of building up home manufactures by means of Protection. It is futile to object that in so doing they are merely nursing exotic plants, unsuited to their respective soils, and that it would be more profitable for them to stick to agriculture and leave manufactures alone. They do not see it in that light, and it is safe to say that they never will, at all events not in the lifetime of this generation. Have our free traders ever reflected on the pregnant fact that Protection has been deliberately and definitely adopted by both France and Germany—the former a Republic and the latter under what we may call a semi-constitutional Monarchy? Which fact, let us add, is doubly emphasized by another fact, namely—that what happened in both cases was a return to Protection, following after a very slight movement towards free trade. Observe that it was the popular demand, and not the edict of an emperor or his prime minister, that compelled the re-establishment of Protection in France and Germany, and on a broader and more enduring basis than ever before. The result is that French and German duties on English goods are now higher than they were forty years ago, when Cobden's eloquence put England under the tremendous delusion that if she once adopted Free Trade out and out, the whole civilized world would quickly follow. But the civilized world refuses to follow, as witness France, Germany, and the United States—the three nations coming next in commercial importance to England. As these three nations go, so goes the continent of Europe, and all the commercial world outside of the three Kingdoms. Our kin beyond sea, in the Mother Country, will yet have to accept the inevitable conclusion that

there can be no favourable turn of the tide worth speaking of for them, until their commercial system has been reconstructed to suit the time. The times change, and we must change with them, or do worse. All which let the Canadian people duly consider, whenever they are asked to drop the substance of Protection, in order to grasp at the delusive shadow of Free Trade.

SIR CHARLES TUPPER AND THE COLONIAL EXHIBITION.

It is on all hands acknowledged, not only that Canada's success at the Colonial Exhibition, but the success of the Exhibition itself as well, are largely due to Sir Charles Tupper. He has proved himself emphatically the right man in the right place; in fact, we can scarcely imagine how Canada could have got along on the occasion had he not been there. It was therefore deemed fitting, as the *London Globe* says, that prior to his departure for Canada some recognition of his services should be made by those most closely interested, namely, Canadian exhibitors and exhibitors' agents. Accordingly the West Quadrant was on Friday, August 13, the scene of an interesting ceremony, when the exhibitors met in large numbers, with the Marquis of Lorne, Sir Philip Cunliffe-Owen, Sir Adolphe Caron, Sir Samuel Davenport, and other distinguished Canadians and colonists at their head, to present to the Canadian Executive Commissioner an address of appreciation. The Marquis of Lorne opened the proceedings by expressing the gratification it gave him to take part in the meeting, and forthwith proceeded to read the address. In this address were set forth at some length the reasons actuating this formal expression of the appreciation of the services which Sir Charles had in an "earnest and ungrudging" spirit rendered to Canada through the Exhibition. "We already have," continued the address, "abundant indications that this Exhibition will work a new era for Canada in her commercial relations with the outside world. The distinguished part you have taken in the attainment of this result is too well known to our countrymen to need emphasis here, and we trust that your mission home in this connection may be entirely successful." The desire was also expressed that the good wishes of the exhibitors might be conveyed to Lady Tupper.

Our High Commissioner, of course, thanked his friends in his usual felicitous style. But this was not all; he did this and something more. He said that the success of 1886 should be vigorously followed up, and urged the establishment of a permanent Colonial Exhibition in London, to the making of which

Canada, he felt sure, would contribute her share. And he hoped that this would be the result of his present visit to Canada. Well, Sir Charles has put his hand to the plough, and he is one not likely to turn back.

THE NEW GLASGOW STEEL WORKS.

A PARAGRAPH has been going the rounds of the press to the effect that the Nova Scotia Steel Company (Limited), of New Glasgow, N.S., have experienced difficulty in floating their issue of preferential stock. This is not the case, as almost the entire amount, that is to say \$95,000 out of the total of \$100,000 is already taken up, the larger proportion by the original shareholders, too—thus showing that they have all confidence in the success of the enterprise. The original capital of the concern was \$160,000, which would have been sufficient had operations been confined to the few lines of production at first contemplated. The Canadian market for each particular line of goods being limited, however, it was found necessary to go into some additional branches of output—in other words, to diversify the production—and with this view other plant and machinery to a large amount was put in, being provided for by the issue of the preferential stock above mentioned. It is desired that the Canadian public, but especially in the west, where the facts relative to this and other iron-making ventures down by the sea are apt to get mixed up, should understand that the New Glasgow concern is now in full blast, with the best plant and abundance of capital to run it, and turning out steel and steel manufactures at the rate of ten thousand tons per annum.

In this connection it should be remembered that the present duty on steel is \$3.00 per ton and 10 per cent. on the value, which comes to from 12½ per cent. on the higher grades to 18 or 20 per cent. on the lower. Canadian steel producers would certainly be better protected than they are now were the old duty of 17½ per cent. still in force. The fact is that, as we have so often had occasion to contend, rational and effective Protection to the important interest of iron and steel production is something which we have never had in Canada so far—something which is yet to be. Let us hope that though long delayed it soon will be, after all.

TAKING WARNING BY EXPERIENCE

"Does Protection protect?" is a question that has time and again been raised by free traders; and it is generally put in a sneering way, as if the failure of Protection to protect were a fact so notorious that only one answer could be given. In 1879 the scoffers at protection, who are always waiting for something to turn up to help their waning cause, had a windfall come to them in the shape of the extraordinary turn in the iron market the latter part of that year. That remarkable event, its causes and consequences, have time and again been explained in our columns. This time we avail ourselves of an article from the *American Manufacturer*, which will be found on another page, under the heading of "The Fall of 1879 and the Fall of 1886," in which the difference between the situation of seven years ago and the situation of to-day is clearly pointed out.

Not only is the situation of 1886 materially different from that of 1879, but the policy of American makers of iron and steel has in the meantime undergone a great change. The sharp lesson of 1879 and years following has been taken deeply to heart, and the blunder of seven years ago will scarcely be repeated, in our time, at all events. Not soon will the allurements of a "boom" again induce them so to advance prices as to make the coast clear for the importation of English iron and steel, even in spite of the high duties. After this they will take good care always to keep home quotations several points below the figure at which importations could be made *without loss*. So much they have learned in the dear school of experience, and they propose that for the time to come they shall profit by the lesson.

One feature there was in the experience of 1879 which is worth recalling. While "boom" prices prevailed, British iron and steel firms rushed over, not merely enough to meet apparent demand for the time being, but a vast surplus in excess of all this, supposing that the extra demand would continue. Afterwards, when American makers had recovered from their surprise and had got their mills started up, it was found that the bonded warehouses were full of imported iron and steel to which there was no sale. And this imported surplus remained on hand and blocked the market for years after, a terror to American makers, and preventing any improvement in prices to speak of. The British exporters themselves, or some of them, must have lost by their long "wait" for a market; and indeed it would not be easy to say who gained by it. The surprise of 1879 did a great deal of damage all around, and no good to anybody. It was, as we may say, a great commercial *accident*, for the repetition of which English exporters of iron and steel will look in vain.

TORONTO'S GREAT EXHIBITION.

THE great improvement which Toronto's Industrial Exhibition shows each and every year over the year preceding, suggests a mathematical problem, namely:—what the result will be if this progress goes on *ad infinitum*. One of the most remarkable improvements of this year is the Electric Railway, reconstructed by Mr. J. J. Wright, who built his new motor in Toronto. This motor has as many "attachments" as a twentieth century sewing machine may be expected to have, and appears to be quite capable of running itself. Toronto has now the first electric railway and plant manufactured in Canada, which leads us to remark that perhaps protection does protect, after all. Visitors will note a conspicuous advance in other departments of the Exhibition as well. We 'aesday next, 8th inst., is the opening day for the public.

AN ERROR CORRECTED.

WE have to correct a certain mistake, but not our own. In an article in the *Canadian Manufacturer* of August 6, we said:

"Wherever Canadian's National Policy is objected to, either directly or by implication, Sir Charles Tupper may be trusted to speak out for the Dominion, if he be there to hear, or to see. It is no mere dummy or "Lumber Log" High Commissioner, to quote an expression of Carlyle's, that represents us in Lon-

don to day. We learn from the *Canadian Gazette* (London) that at a recent Congress of the Chambers of Commerce of the British Empire, Mr. J. G. Colmer read a paper on 'Emigration.' He thought that some emigration scheme or other might be organized on a commercial basis—advances to be made to settlers in order to give them a start, the same to be repaid in a few years when improved circumstances enabled the settlers to do so. In the very brief and condensed report of Mr. Colmer's speech, we see no allusion to protection in Canada, but something of the kind there must have been, as appears from what our High Commissioner said afterwards.

An interesting discussion took place, and Sir Charles Tupper said he thought it right to explain that Mr. Colmer had presented in his paper, not the ideas of the Canadian Government, but his own as a member of the Chamber of Commerce. The fiscal policy of Canada to which Mr. Colmer had objected was not a matter of choice on the part of the Dominion. With a population of 5,000,000 alongside a population of 50,000,000, as in the United States, they found that by free trade instead of contributing advantages to Great Britain, New York and Boston were rapidly becoming the commercial capitals of Canada. The certain amount of protection adopted had not had the effect of decreasing British imports into the country, but had actually increased them, while the surplus revenue acquired by Canada had enabled them to develop their internal resources. He thought Her Majesty's Government could not confer a greater service upon the Empire than in lending to industrious emigrants the means of taking up that rich fertile soil of which Canada make a free gift. By so doing millions of strong arms and loyal hearts would be found ready to defend the Empire in case of need. Mr. Andrew Robertson, of Montreal, also took part in the discussion; and a resolution urging Her Majesty and the Colonial Governments to take steps to encourage direct emigration to the British Colonies was adopted.

Now in the *Canadian Gazette* of July 15, the following turns up:

"In our account last week of this Congress of Chambers of Commerce of the Empire, before which Mr. Colmer read a paper respecting emigration, the following paragraph appeared in the report of the speech of Sir Charles Tupper. "The fiscal policy of Canada to which Mr. Colmer had objected, was not a matter of choice on the part of the Dominion." To make the sentence correct the name of Mr. Allen, of Bristol, should be substituted for that of Mr. Colmer."

The same error occurred in the *Times*' report, and was corrected next day. But observe our remark, that in the very brief and condensed report of Mr. Colmer's speech, we saw no allusion to protection in Canada. Of course, we thought that something of the kind there must have been, judging from what Sir Charles said afterwards. The saddle is on the right horse now.

THE FALL OF 1879 AND THE FALL OF 1886.

(*American Manufacturer.*)

In his letter this week our English correspondent says, in substance, that the progress of the revival in the American iron trade is being watched over there with growing interest, and that some of the best informed iron and steel men of England are freely expressing the opinion that it is to this country that they must look for those orders which shall put their mills, forges, and blast furnaces again into a condition of prosperity, or approaching it. It is very true that the demand for iron and steel has been constantly growing in this country for several months past, and that under the influence of this growing demand prices of pig iron and steel rails have advanced and importations of most descriptions of iron and steel have increased, but our friends on the other side of the Atlantic will

be seriously disappointed if they expect a repetition of the "boom" of 1879, or anything approaching it. This will be impossible. The conditions are almost entirely absent. In the latter half of 1879, after a prolonged depression, lasting from the latter part of 1873, a remarkably sudden and large demand sprang up for all kinds of iron and steel, which could not be satisfied by the domestic works, and prices mounted upward with astonishing rapidity, these two conditions necessitating and inviting unusually large importations. The inability of the domestic works to supply the demand was largely the result of the inability of the blast furnaces to get ore. There were large numbers of furnaces idle—more than half, as we now recollect—but only a few of these, especially those west of the mountains, could blow in, from the fact that the Lake Superior mines had sold their product and it was too late in the season to mine and ship more. At the present time all the conditions that produced the state of affairs described as existing in 1879 are entirely absent, except as to heavy demand, and even this has come very gradually, and has been prepared for.

In brief, the sudden, great and unexpected increased demand for iron and steel which sprang up in the latter half of 1879 found a helpless scarcity of all kinds of raw material and an inadequate Bessemer steel capacity, but the gradually increasing demand at the present time finds abundant capacity and production at the open mines, the blast furnaces, and the finished iron and steel works. There is no pinch and no helplessness anywhere. There is a great demand all along the line, but the domestic mines and works are entirely equal to it, and this is demonstrated by the low prices of iron and steel, the steel rail manufacturers being about the only ones who are entirely satisfied with the prices they are getting, and these have it in their power to fill all orders.

The report of the Board of Directors of the Atlantic Mill Corporation, reveals the fact that Treasurer Gray owed the Atlantic Mills \$329,738, and the Indian Orchard \$560,813. The authorities of the Atlantic Mills, Lawrence, say, however, that Gray's default will not cause the least stoppage to the mills.

There is a big opposition to the shipment of petroleum in tank steamers. The adoption of this system of shipment it is claimed would wipe out the very large business directly and indirectly interested in the shipment of oil. The capital invested in this business is said to aggregate several millions of dollars, while from 30,000 to 40,000 laborers, in and about New York, are now employed in loading oil for export, and the Standard Oil Company alone employs some 1500 coopers.

An American glass manufacturer who recently visited the principal factories in Europe, says he is convinced that Pittsburg, Pa., is ahead of all the European centres of the glass industry. The large sale of foreign window glass in this country he attributes not to higher quality, but to lower prices, due to the low wages paid in Europe. The plate glass made in this country, he says, is superior in quality to French plate, and when enough factories are built in this country French importations will cease. America, he says, is far ahead of France and Belgium in the manufacture of novelties, as regards ingenuity of design, labor-saving machinery and cheap production.

The commissioner of navigation expresses the opinion that the decline in shipbuilding, which has marked each recent year in comparison to that immediately preceding, has not been repeated this year. The aggregate tonnage built in the United States during 1886 will be shown to have been fully equal to that for the fiscal year 1885. The estimate of \$180,000,000 as the value of the floating property under the American flag will be affected for 1886 in about the same proportion as for 1885. The commissioner says that he is not surprised that the shipping for the past year was not more favorable. The shipbuilding interests are among the last to feel the influences of reviving prosperity, and even if there had been material improvement in the conditions influencing this industry he does not think there has been sufficient time for the benefit to be manifested.

THE
Canadian Manufacturer
AND INDUSTRIAL WORLD.

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

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J. A. Pillow, Montreal.
A. Warnock, Galt.
W. Millichamp, Toronto.
R. McKechnie, Dundas.
B. Rosmond, Almonte.
Geo. Pattinson, Preston.
Daniel Lamb, Toronto.
Charles Riordan, Merriton.
George Booth, Toronto.
Isaac Waterman, London.
W. H. Storey, Acton.
Wm. Birkett, Dundas.
C. Shurley, Galt.
John Taylor, Toronto.
M. B. Perine, Doon.
Thomas McDonald, Toronto.
R. S. Hamlin, Oshawa.
B. Greening, Hamilton.
Geo. W. Sadler, Montreal.

J. F. Ellis, Toronto.
J. R. Barber, Georgetown.
John Fenson, Toronto.
Robert Mitchell, Montreal.
L. Côte, St. Hyacinthe.
H. N. Baird, Toronto.
John Elliott, Almonte.
Wm. Christie, Toronto.
J. B. Armstrong, Guelph.
C. Raymond, Guelph.
Murray A. Kerr, Hamilton.
W. F. Cowan, Oshawa.
J. S. Larke, Oshawa.
H. Heintzman, Toronto.
George Lang, Berlin.
F. Strange, Toronto.
D. R. Wilkie, Toronto.
P. Freyseng, Toronto.
F. Crompton, Toronto.
John McClary, London.
Carl Zeidler, Toronto.
C. A. Birge, Dundas.
Wm. Harty, Kingston.

W. G. A. Hemming, Toronto.

All Manufacturers are invited to become members of this Association. Full particulars will be furnished on application to the Secretary.

Editorial Notes.

WHAT the *Hamilton Spectator* and the *Toronto World* have to say on the sugar question will be found elsewhere in this issue. We hope to set forth still another view of it in our next.

PART of the Colonial and Indian Exhibition consists of showing the visitors how to make fish-cakes out of the celebrated boneless codfish from St. John, New Brunswick. The fish-cakes are afterwards served up at the six-penny dining room.

AMERICAN waggons now rattle over the pavements of Jerusalem, and their wheels resound where echoed the maled tread of the Crusader, so says one of our exchanges. Wonder how the rattle of Canadian waggons would sound in Asia Minor, at the Cape, and in Australia?

THE little manufacturing town of Lachute, on the Quebec side of the lower Ottawa, has progressed so much of late that another banking house is about to be established there. The *Watchman* says that there is business enough for two, to meet the increasing requirements of town and county.

THE customs receipts at the port of Montreal in August were \$735,405.91 as against \$628,777.15 in the corresponding months last year, showing an increase of \$106,628.76. In July, the first month of the current fiscal year, the increase over 1885 was \$139,000, making in the two months which have elapsed a gain of nearly a quarter of a million of dollars in the customs revenue collected at the port.

AT the request of Halifax flour merchants, the Dominion Government has decided to lower the rates of freight of flour coming to Halifax to the same rate given to St. John, viz., forty cents per barrel from Ontario milling centres; a rate much lower than via Boston. Hitherto, owing to lower rates of freight, a good deal of Ontario flour has been coming to Nova Scotia ports via Boston, and Halifax being unable to compete, has lost some trade. But now Halifax is more than on an equality with its rivals. It enjoys a positive advantage, and should make the most of it to extend its trade.

SAYS the *Kingston News*: The National Policy has, according to our Grit friends, been an abominable failure. Yet the number of factories in Canada, which was 843 in 1878, has risen in the following eight years to 2,150, the capital invested has risen from \$27,820,000 to \$76,923,000; and the value of products from \$39,963,000 to \$102,000,000. Jug-handled free trade would delight in having these factories on the other side of the line giving employment to American capital, and in seeing the men and women employed in them straying from their native land. And a jug-handled free-trader like Sir Richard Cartwright can see signs of the country going to the dogs while its industrial development is advancing by leaps and bounds.

UNDER the heading of "Pretty Good Security" the *Gleaner*, a New Brunswick paper, thus speaks up for its Province. "New Brunswick owes about a million and a half of dollars and owns some seven or eight million acres of crown lands. The debt is pretty well secured. Our crown lands would be cheap at a dollar an acre. If they were offered for sale at such a price purchasers would soon take every vacant acre. It is a poor acre of green land that is not worth a dollar. If a thousand feet of spruce logs were standing in an acre of mixed growth an unexperienced observer would notice them. Our province has a handsome asset in its crown lands, one that is every year becoming more valuable. And when very wise people tell you that about all the lumber in this country is cut, you can either set it down that they do not know what they are talking about or have some reason to mislead. There is lumber enough yet in this country to employ a great many men and a vast amount of capital. Some say that the future of our lumber trade will far exceed its past."

A NEW ZEALAND correspondent of the London *Ironmonger* thus explains why Yankee-made iron and steel goods are preferred to English-made: "There is no sentiment in business. We should prefer to do business with you, but you must not ask us to take badly-finished, old-fashioned goods, which, no matter how they satisfied our forefathers, will not do for us. Would you be surprised to hear that no carpenter in New Zealand will use from choice an English hammer, saw, brace or auger-bit? No buggy builder will use English coach-bolts if American ones can be obtained, even at ten per cent. more money than the English, because he can pick up a Yankee bolt and apply it immediately to his work, and with its nice square-cut thread there is less chance of nuts becoming loose. What is the case with the English bolt? He will search a gross over and find ever nut 'jammed' so hard that it has to be taken to a vice and there oiled and eased. This takes time, and as time is money he cannot be blamed for preferring the Yankee article. I shall not touch upon the American axe question more than to say that the loss of trade to England is through sending rubbish out at first; and, not caring to be gulled by our own kith and kin, who ought to have known better, we went elsewhere for what we wanted and got it." As Canadian manufactures are just the same as American, they should have the same advantage as the latter have in New Zealand and other colonial markets. What we must do is to push things.

OUR CARD BASKET.

THE following is a list of those who have favored us with a call since the date of our last issue:

Thomas Cowan, President Canadian Manufacturer Association, Galt; Alexander Woods, Agent General for the Dominion for Canada to Australia, A. W. Wright, Commercial Agent of the Dominion of Canada to Great Britain; J. B. Armstrong, President J. B. Armstrong, Manufacturing Co., manufacturers of carriage goods, Aph; F. Crompton, of the Crompton Corset Co., Toronto; E. J. Davis, tanner, King; Wm Cross, tanner, Barrie; W. D. Beardmore, tanner, Trent and Acton; Dr. Ferguson, M.P., Niagara Falls, Wm. Stahl-schmidt, of Wm. Stahl-schmidt & Co., manufacturers of office

furniture, Preston; James S. N. Dougall, of McArthur, Corn-cille & Co., paint and oil merchants, Montreal; John Living-stone, trustee estate Joseph Hall Works Co., Oshawa; George McAgly, representing Messrs. Pillow, Hersey & Co., hardware merchants, Montreal; Thomas Cautley, of the Nova Scotia Steel Co'y (Limited), New Glasgow, N. S.

BOOK NOTICES.

THE Chemical Dye Stuffs, Machinery, and Mill Supplies Directory Second Edition Price, One Dollar. Published by J. E. Palmer, 176 Broadway, New York.

This is a handy volume of 132 pages, with the matter well arranged for instant reference. Besides being a directory of names, it contains yarn tables, warp weight tables, card cloth-ing tables, illustration of cotton samples, and a scientific statement of the classification, combination, and description of colors, all which must be found useful to manufacturers of textiles. As such a book should be, this one is clearly printed and strongly bound.

PRACTICAL Directions for Softening Water, Making Soap, Wool Washing and Bleaching. Specially intended for Managers and Superintendents of Woollen and Worsted Factories, Dyers and Bleachers, Wool Washing Establish-ments, and large Steam Laundries. By W. J. Menzies. Printed and Published by McCorquodale & Company, Limited, London and Newton-le-Willows. Price Sixpence.

This is a little pocket manual of 34 pages, in which even old hands might come across hints of real practical value. It cer-tainly appears to have been written by one who knows.

SINCE Jan. 1 the receipts of wool at Boston have been 341,332 bales domestic and 74,804 bales foreign, against 361,557 bales domestic and 44,376 bales foreign for the corresponding period of 1885. This is a decrease of 20,225 bales domestic and an increase of 30,428 bales foreign.

THE St. Croix (N. B.) Cotton Mill Company have engaged a large number of weavers in Scotland, and on their arrival will resume full operations. The mill has been running of late with a reduced force. Accommodations have been arranged for the Scotch employees by remodelling the houses of the company, so that each may be occu-pied by four families.—*Calais Times*.

OVER the border the production of textile goods is now progress-ing at a greater rate than ever. Throughout New England nearly all mills and factories are running full time, and mills on half time are coming in full. Carpet manufacturers report an increasing demand for ingrain, tapestries and finest qualities. Orders for upholstery goods in silk and worsted, and for shawls and all kinds of knit goods, have been accumulating rapidly. Gingham manufac-turers report a heavy distribution and a steady influx of orders sufficient to keep all their mills running. All of the cloth mills are busy on winter and spring goods.

TAKING the knit goods industry as a whole, notwithstanding the summer's heat, the trade is in a healthy and to most manufacturers, satisfactory condition. There are exceptions, as in all other branches of industry, but the mills are all running, some of them overtime, to fill orders for certain lines of goods. It is an acknowledged fact that there is no surplus stock of these goods in the stores and com-mission houses of the country, or why place so many orders ahead of production? The extremely low prices of their products give more cause for complaint on the part of manufacturers than a lack of orders. The outlook now is better and the brighter day is beginning to dawn. The new fall styles of hosiery are quite attractive and the variety in fancies is very great. Jerseys and cloaks will be prominent as for several seasons, while wraps exquisite in style and quality, will command the attention of ladies and buyers of fine goods.—*Philadel-phia Industrial Review*.

Business Notes.

THE old established dry goods firm of McClung & Co., Bowmanville, has sold out.

THE shoe stock of Samuel Coll, Leamington, is to be sold by auction on the 8th inst.

CREDITORS of Summers & Co. of this city, have refused to grant a settlement and the stock to be closed out.

THE stock of Bond Bros. & Co., of Aurora, was offered for sale by auction, but the figure offered was such as led to its withdrawal.

THE chattel mortgage held on the stock and plant of D. Hogan, of Seaforth, was foreclosed. Unsecured creditors do not expect a dividend.

R. J. HILL taught school at Durham for several years, and in 1883 started a general store, which has not been profitable, and he has called his creditors together.

SOME years ago John Ferguson failed in the dry goods business at Gananoque and resumed in the name of his wife. She is now offering 40c. on the dollar on liabilities of \$7,500.

THE liabilities of J. L. Barber & Co., of Waterford, amount to \$7,500, of which \$5,000 is unsecured. The available assets are less than \$3,000. A compromise will likely be effected.

AN extension of time has been granted to J. Pittman & Co., of this city. The notes are spread over fifteen months and are unsecured. The liabilities amount to \$33,000.

JOSEPH WILLIAMS, the absconding Glen Williams miller, is still languishing in jail at Rochester. The liabilities amount to \$40,000, and assets \$25,000, which are in the hands of the Sheriff.

THE stock of R. H. Thompson, merchant tailor, Mount Forest, was sold at 60c. on the dollar. The liabilities amounted to \$3,000, and the assets \$2,200. The creditors are principally in London.

MRS. SHIBLEY, a Strathroy milliner, has assigned in trust owing \$3,200. Mrs. Gaukeo also in the same line of business at Berlin, is retiring from business having handed her estate over to creditors.

WHEN partners disagree it generally leads to one result. This is the experience of Sprague & Scarlett of Regina, who are allowing their notes to be protested and want an extension from creditors.

R. J. TYLER, a retired Methodist Minister, commenced a small grocery business at Arthur in 1883, but an assignment has been made to E. R. C. Clarkson of this city. The liabilities are less than \$1,000.

THE liabilities of I. H. Willoughby, of Trenton, are \$8,000, on \$4,000 of which he has effected a compromise at 33c. on the dollar cash. The balance of his liabilities are secured by his brother who is a physician at Colborne.

THE creditors of D. McQuarrie, general dealer, Dundalk, do not appear satisfied with the statement presented, and have arrested him, claiming that goods have been fraudulently removed. The liabilities amount to \$5,300, and assets \$4,000, of which \$2,000 is in accounts.

DONALD BETHUNE, general dealer, of Forest, assigned to H. E. Nelles, of London. The position of affairs is disappointing to creditors who expected a substantial dividend from the estate. The liabilities amounted to \$3,000 and the assets are less than half that amount.

THE partners in the Toronto Mucilage Manufacturing Company not agreeing led to a dissolution, the business being continued by G. P. Pyke, who claims that after going thoroughly into the affairs of the concern found that he could not pay more than 40c. on the dollar. The liabilities are \$8,000 and the assets \$5,300.

AT a special meeting of the Essex Centro Manufacturing Company, held recently, the stock holders decided to wind up the affairs of the concern. The President (John Milne) states the Company is perfectly solvent and will pay in full all their liabilities. The capital paid into the Company since March, 1880, is placed at \$47,000, the most of which will be absorbed.

WILLIAM HEAP, the President of Heap's Patent Dry Earth Closet Company, has resigned and gone to the United States. J. B. Taylor has been appointed President in his stead. The concern has lost money during the past year and they are unable to meet their bills. The liabilities are fully as large as their assets and the President states they will have to assign in trust.

IN August last Abraham Cohen, general dealer, Brightside, was burned out and only partially secured. He assigned in trust with liabilities of \$5,400, and actual assets of \$2,700. He had about \$3,000 of book debts, but as his books were destroyed the assignee has been unable to realize on them. A compromise at 45c. on the dollar cash has been arranged. Walker Bros. of Montreal are principal creditors.

WE again announce the failure of W. E. Paine of Petrolia. His name is known to the trade as an unsuccessful merchant, and some years ago we suggested that it would be well for the trade in Petrolia to have the business closed out. Compromises have been granted him several times on liabilities ranging from \$15,000 to \$30,000. This time his indebtedness amounts to \$16,000, largely to Montreal houses.

THE liabilities of L. Isaacs & Co., wholesale leaf tobacco dealers, of Montreal, will amount to nearly \$100,000. Accommodation paper to the extent of \$21,000 was obtained from H. B. Gardner of Brantford, which will ruin him, and about the same amount was obtained from J. E. Dunham & Co. of Toronto, \$7,500 of which is held by the Standard Bank at Brantford. It is stated that the balance of the paper was forced from Isaacs before he could discount it—and fearing criminal proceedings he absconded.

THE Gardner Sewing Machine Company of Hamilton, is being wound up under an order from the Court obtained at the instance of J. W. Murton. The liabilities are stated at \$25,000, chiefly to the Bank of Commerce, who hold a mortgage on the real estate and chattel mortgage on plant, machinery, etc. The assets are nominally a little in excess of the liabilities, but it is thought that unsecured creditors will receive no dividend. The Company was incorporated in 1871, and has undergone several changes. The original capital was \$50,000, which has been lost.

AMERICAN manufacturers of rubber goods are preparing for the most active season they have ever had.

A LARGE BELT.—Messrs. Robin & Sadler, Leather Belting Manufacturers, of Montreal and Toronto, are at present making the widest leather belt ever made in Canada. It is for The Royal Electric Company of Montreal, and is to be used at their lighting station at Montreal to transmit the power to dynamos used in lighting the city. The belt is 111 feet long, 38 inches wide, and double thickness.

THE Moncton Soap and Chemical Company have their new factory building on Mountain road well advanced. The frame is now up and the roof nearly finished. A large force is at work and it is expected to have the factory in operation the first of September. The factory is 30 by 60, two storeys. A large amount of new machinery has been purchased and the manufacture of soap and chemicals will be carried on extensively. The soaps will be principally fancy lines, by the new "cold" process, the old "settled" process, etc. Toilet soaps will be largely manufactured. Mr. Jos. Howard, who has had large experience in the business, will be the active manager. —*Moncton (N.B.) Times.*

F. E. DIXON & Co.

MANUFACTURERS OF

Patent Lap-Joint, Star Rivet

LEATHER BELTING

SOLE AGENTS FOR

PHOENIX BELT OIL

The Only Perfect Belt Dressing.



IT will make the leather more durable.

It will effectually prevent the slipping of the belt.

It does not affect the cement which holds the laps together.

It does not increase the stretching of the belt and thus render it narrower.

It makes the leather perfectly water-proof. Belts dressed with this oil can be and are run in places where the temperature reaches 160 to 175 degrees, while in the other extreme, we have endorsements from owners who run their belts in ice houses. Indoors or out, in any kind of weather, wet or dry, hot or cold; belts thoroughly dressed with Phoenix Oil will always run satisfactorily.

SEND FOR PRICE LIST AND CIRCULARS

And our Latest Pamphlet on Belting.

F. E. DIXON & CO.

70 KING STREET EAST,
TORONTO.

SEND FOR CATALOGUE and PRICES

The DODGE "INDEPENDENCE" WOOD SPLIT PULLEYS



WITH PATENT BUSHING SYSTEM

Best Belt Surface, Lightest, Strongest, Best Balanced, and Most Convenient Pulley in the World.

EVERY PULLEY A SPLIT PULLEY.

The hole in every pulley can be readily bushed to fit any sized shaft. Bushings furnished with each pulley. Guaranteed to give from

30 TO 60 PER CENT MORE POWER THAN ANY IRON PULLEY.

Strong enough for any power required. Made in any size and width, from twelve inches to sixteen feet diameter.

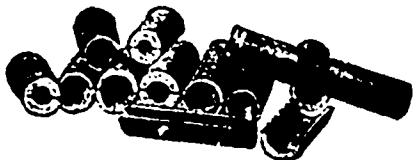
EVERY PULLEY WARRANTED.



We will furnish a Pulley for any service for 30 days free of charge, if it does not meet the warranty. If not as good as any other good Pulley, send for Catalogue, Price List & Guarantee

70 PER CENT. LIGHTER THAN CAST IRON

And 50 per cent. Lighter than Wrought Iron or Steel Pulleys.



READ THE FOLLOWING.

NORTHWESTERN MANUFACTURING & CAR COMPANY,
SHATTO & DENNIS, MINNEAPOLIS, MINN., STILLWATER, MINN., August 15, 1884.
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. RICE, AGENT, CHICAGO, ILL.
Office of Newton Wagon Co.,
BATAVIA, ILL., Feb. 17, 1885.
Dear Sir: Re:plying 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. Pratt & Co., Elevators; Northern Pacific Elevator Co.; The Pacific Elevator Co.; Minneapolis Harvester Works; Minneapolis School Furniture Co.; M. & St. J. R. 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.
SHATTO & DENNIS, MINNEAPOLIS, MINN.

W. H. DODGE, PRFST.
DODGE MFG. CO., MISHAWAKA, IND.
THE WORLD'S INDUSTRIAL AND COTTON CENTENNIAL EXPOSITION,
NEW ORLEANS, March 12, 1884.
Dear Sir: I have a number of your Patent Wood Split Pulleys in use here at the Worlds Fair and Cotton Centennial Exposition, driving Dynamis for Electric Lighting. They are doing heavy work, and are held up on 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 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 fastening; 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.
Yours very truly,
S. H. GILMAN,
Chief Consulting Engineer.

Waste of Power.

According to the best scientific authority it costs one horse power to keep in motion one ton of metal or weight; thus for every unnecessary 2,000 pounds weight on your line shaft, cost you one horse power. To maintain a horse power costs from \$2 to \$12 per year. Any manufacturer who will take the pains to investigate the unnecessary weight by Heavy Iron Pulleys, too tight belts, etc., will be surprised to find the enormous waste of power consumed in this manner. \$2,000 Dodge Patent Wood Split Pulleys now in use. Our capacity being now equal to 100 Pulleys per day, we shall hereafter keep in stock for immediate shipment all sizes.

Send for Illustrated Circular and Reference List.

THE DODGE WOOD SPLIT PULLEY CO.,

81 to 89 Adelaide Street, West, TORONTO, CANADA.

TAKE NOTICE:--Our List of Prices for the DODGE PATENT WOOD SPLIT PULLEYS is for ALL SPLIT-PULLEYS. We beg you will note this fact when comparing our List with others which are for SOLID RIM, and NOT for Pulleys in HALVES.

CANADIAN MANUFACTURES AT THE COLONIAL EXHIBITION.

The following paragraphs are taken from the continuous description in the *Canadian Gazette* (London, England) of productions of the Dominion shown at the Great Exhibition.

Passing up the court towards the north—beginning, that is, at the end adjoining the educational exhibits, one first meets the large stand of the Massey Manufacturing Company, of Toronto, where may be seen almost every variety of machine manufactured by the house. The silver and gold mounted rake is a prominent feature. The action of this "self-rake reaper" is somewhat peculiar. The teeth of each rake are raised as soon as the corn or hay comes upon the table, and when sufficient has accumulated, any one of the four rakes can be adjusted independently by a pedal lever, and the corn or hay be thus removed. On raising the lever the regular motion of the rake is restored. In the same way either end of the table can be raised at will. Binders and mowers of high finish are also shown, as well as a showboard of duplicate parts of the combined reaper and self binder. It will be remembered that at last year's Antwerp Universal Exhibition the Massey machines were highly spoken of when in open competition with those of foreign make. Messrs. McFarlane, Thomson & Anderson, of Fredericton, N.B., have exhibits of a mowing machine, horse-rake, and steel plough in prominent position. Messrs. John Elliott & Son, of London, Ontario, have a mower and self binder—a heavy but nice-looking machine—to which a gold medal has previously been awarded. Messrs. McKechnie & Bertram, of Dundas, Ontario, show one of the chief, and in some respects a singular, exhibit of iron and wood-working machinery and machine tools, making in all ten pieces. The mulling and wood-mortising machines are even declared to be ahead of anything in England, showing, as they do, thorough finish and the latest improvements. Somewhat similar wood-working machinery is exhibited by Messrs. Cowan & Co., of Galt, Ontario; Messrs. McGregor, Gourlay & Co., of the same city; and the William Hamilton Manufacturing Company, of Peterboro', Ontario. The implements of the last-named seem to be of excellent working capacity. Of biscuit machinery, Messrs. Robert Gardner and Son, of Montreal, show four pieces of good make. Messrs. Inghs & Hunter, of Toronto, have a 100-horse-power Corliss engine and a Westinghouse engine of 75-horse-power. Messrs. John Larmouth & Co., Montreal, exhibit a 2-horse-power threshing machine—a machine of many useful characteristics. The Cockshutt Plough Co., Limited, of Brantford, has a good collection of its specialities—ploughs of every kind, and suited to all modes of work. Some of these excellent machines may be seen on the agricultural trophy in the Central Gallery. Messrs. I. & S. Bessette, of Iberville, Quebec, have a threshing machine and treadmill, each of two horse power; Messrs. Stevens, Turner & Burns, of London, Ontario, a high-pressure engine and threshing machine; Messrs. Morris & Watts, of Brantford, two double-dresser threshing machines; Messrs. G. Wilkinson & Co., of Aurora, a fine silver-mounted iron plough, highly finished, and a number of other ploughs; Mr. George White, London, Ontario, a 12-horse-power treble engine threshing machine; Mr. John Abell, of Toronto, two stationary high-pressure engines and one compound engine, the latter constructed to burn straw and other fuel of that description. Other exhibitors in this section include Mr. David Ross, of Huntingdon; Messrs. William Moody & Sons, of Terrebonne, Quebec; Messrs. Boyd & Co., Huntingdon, Quebec; Mr. George Gilles, Gananoque, Ontario; Messrs. D. Sawyer & Co., of Hamilton; Messrs. Matthew Wilson & Co., of Huntingdon, Quebec; the North American Implement and General Manufacturing Company of London, Ontario; Mr. Manson Campbell, of Chatham; and Mr. W. Forsyth, of Peterboro'. The Watson Manufacturing Company of Ayr, Ontario, show a silver mounted hay rake, harvester, and mower. Messrs. J. O. Wisner, Son & Co., of Brantford, show, among other machines, a hay tedder

similar somewhat to that shown by Messrs Boyd & Co. It differs from the ordinary hay-maker in the fact that the forks do not revolve and thus throw the grass high into the air, but by means of jointed forks and a double crank action the hay is lifted and merely thrown to the rear at a low elevation. Last, but by no means least, are the exhibits of Messrs. A. Harris, Son & Co., of Brantford, a large collection of harvesting machinery, the excellence of which is testified to by half a century's experience, and by the fact that, like the Massey Company, and Messrs. Wisner, their works are run to their utmost capacity to supply their customers. The Harris steel twine binder is an admirable machine, light, simple, and smooth in mechanism. The self-raking reaper also on the stand is similar to that shown by the Massey Co. To the British agriculturist the whole collection may form a most valuable lesson. Mr. James Clarke is in charge, and is enabled, thanks to his intimate knowledge of the objects of his care, to do much to supplement the information conveyed by the machines themselves.

Coming to speak in detail of the machinery other than agricultural—in the Machinery Court it is found that there are some forty exhibitors. The displays of chief interest in this collection fall under the heads of biscuit machinery, boot and shoe machinery, and wood and iron machinery. In the first-named Messrs. Robert Gardner & Son, of Montreal, have the chief if not the only exhibit. Their display comprises four pieces—two biscuit machines, a mixing machine, and a kneeder, in addition to an engineer's lathe. Messrs. Gardner claim that their business is one of the largest and oldest in the same line in the Dominion, extending not only throughout the length of Canada, but also on occasion to parts of the United States and Europe. However this may be, the firm certainly show greater enterprise than any of their competitors in coming to London with a good representation of their machines. Of boot and shoe machinery the chief exhibit is made by Mr. B. J. Pettner, of Montreal, comprising the latest improvements such as allow of the manufacture of a perfectly seamless boot. Allied to this is the exhibit of shoe-counter machinery made by Mr. Robert White, also of Montreal. This counter, or stiffener as it may be more familiarly termed, is after the Kieffer patent style, requiring no handling or wetting, and fitting the last perfectly. It is said that the owner of this patent purposes establishing manufactories in England, France, and Germany.

Of iron and wood working machinery, the chief exhibit is shown by Messrs. McKechnie & Bertram, of Dundas, Ontario. It comprises ten pieces: including a moulding machine, cutting-off machine, bolt cutter, iron shaper, mulling machine, drilling machine, wood mortising machine, and hand saw as well as lathes and planers. Many of these machines, it will be noted, form a curious combination of British and American devices, yet with a distinct character of their own. It may be that in certain respects they have borrowed from the Mother Country some features not the most worthy of emulation, but on this point specialists seem to differ. That the machines should form the subject of criticism is a distinct point in their favor, while it must be noted that they are highly spoken of by many who are well qualified to judge. It is indeed from the fact that Canadian makers—and Messrs. McKechnie & Bertram among them—know fully the value of experience that they gain so important an advantage in many respects over British makers, who often fail to show an active intelligence in following up improvements suggested by the brains of another country. Messrs. McGregor, Gourlay & Co., of Galt, Ontario, have a small but satisfactory exhibit of iron machinery power for working wood, comprised in five pieces. Among these a steam mortising machine and hand saw are much to be commended. The former is simple in construction, automatic in motion, and an excellent machine for light mortising. The hand sawing machine is a novelty to English eyes in several respects. The build of the machine is light, and this may be thought by some a questionable advantage, but in arrangement it is a decided improvement upon English machines of the same class, while the workmanship is of considerable excellence. A pony planer

and variety planer shown by the same firm also indicate good design and work. Another collection of exhibits worthy of mention in this class is that shown by Messrs. Cowan & Co., of Galt, Ontario, embracing a gig-saw, a double-cope tenoning machine, a pony surface-planer, and a mortising machine. The tenoning machine takes, in some important feature, after the American pattern, and the American style is more or less traceable in other machines shown by this firm. The William Hamilton Manufacturing Company, of Peterboro' Ontario, show three pieces, one of Cove's patent automatic saw-sharpening machines for circulars and mill-wheels, by which results are obtainable which would be impossible with a hand-worked machine. A useful saw-bench for dressing and hammering mill saws is also shown. Mention must further be made of the massive 100-horse-power Corlis engine, shown by Messrs. Inglis & Hunter, of Toronto, as well as a 35-horse-power Westinghouse engine. The exhibit of the Ontario Pump Company of Toronto, to be found in the South Promenade, may also be mentioned under this head. It comprises a selection of Halladay's windmills and pumps, intended to supply water for drainage and irrigation purposes to villages, farms, etc. The design of these windmills includes many ingenious contrivances for the regulation of the speed of the mill and for other purposes, thus combining many of the advantages of steam-power with great economy in operation. Among other exhibits which hardly come under any other than the general head of machinery, is the propeller wheel shown by Messrs. William Kennedy & Sons, of Owen Sound. The wheel is a new invention in so far as its moveable blades are concerned. Propellers are, in general, of one piece, but in this exhibit the blades or arms can be adjusted, and even taken off, without destroying or injuring the rest of the wheel. Another interesting machine is that shown by Messrs. J. R. Woodburn & Co., of St. John, New Brunswick. It is a pulveriser of sugar and other friable substances, reducing them to an impalpable powder. This class of machine is used extensively in Canada, and is found to work satisfactorily.

Mr. Massey (of the Massey Manufacturing Company, Toronto), has been fortunate enough to find in the Marquis of Lorne a purchaser of one of his self-binders, which is to be shipped to Scotland. Mr. Massey has also taken an order for a number of self-binders and harvesters to be shipped to South America.

THE SUGAR QUESTION.

(Hamilton Spectator.)

THE sugar question is one not difficult to deal with.

In 1878 Canada imported 105,223,279 pounds of sugar. The duties paid aggregated \$2,515,655.84, or \$2.39 on each 100 pounds of sugar imported.

In 1885 Canada imported 181,717,786 pounds of sugar. The duties paid aggregated \$2,355,770.62, or \$1.29 per 100 pounds.

In 1885 the duty was lower than it was in 1878 by \$1.10 per 100 pounds.

In 1878 the cost of imported sugar with duty added was \$8.07 per 100 pounds. The average price of granulated sugar was \$12.50 per 100 pounds. The importers and grocers did not refine their sugar: they simply passed it through their hands and took \$4.43 profit for each 100 pounds handled.

In 1885, the cost of imported sugar with duty added was \$3.89 per 100 pounds. The average price of granulated was \$7 per 100 pounds. The importers refined nearly all the sugar imported, lost a good deal of it in the shape of dirt, and had \$3.11 per 100 pounds of profit on the quantity sold. If the dirt be deducted they probably had about \$2 per 100 pounds for refining and handling, while under the revenue tariff the importers were able to pocket \$4.43 per 100 pounds for simply handling.

The thing which interests consumers is that now they get 14

or 15 pounds of granulated sugar for a dollar, whereas under the revenue tariff they got 8 pounds for a dollar.

In the face of these facts Reform journals are not ashamed to tell their readers that the change in the sugar duties has injured them.

THE SUGAR QUESTION FAIRLY STATED.

(Toronto World.)

The *Globe* imagines that it hits the National Policy hard by reiterating the assertion that because of protection Canadians have to pay 7 cents per pound for sugar of the same quality as is sold in England for 4 cents. The truth of the matter is that the latter quotation is for a grade of sugar much below our 7 cent sugar, and we at once score out the figure 4 and put 5 in its place. This brings us to a comparison between 7 cents here and 5 cents there. Sugar is dearer in Canada because of protection, it is argued. We reply, No, but because our sugar duties have been imposed for revenue chiefly, and to a large extent in defiance of the very bottom principles of protection.

Turning to the Trade and Navigation Returns for the fiscal year 1884-85, we find the quantities, values, and amount of duties paid on sugar, molasses, etc., as under:

	QUANTITY.	VALUE.	DUTY
Sugar of all kinds, lbs.	200,011,541	\$5,100,478	\$2,544,920
Molasses, gallons. . . .	3,562,864	727,657	111,376
Confectionery and sugar candy, lbs	620,766	87,392	36,811
Totals.		\$5,915,527	\$2,693,107

The proportion of refined sugar, in the form of confectionery and candy, is so small that it does not much affect the calculation. Our duties are high enough to exclude foreign refined sugars, let that be admitted. Now note these facts. The duty of \$2,544,920, collected on \$5,100,478 worth of "sugar of all kinds," is fifty per cent on the value. The duty of \$2,693,107, collected on the total importation of \$5,915,527 worth, is forty-five per cent on the value.

Were the principle of protection thoroughly carried into practice, there would not be one cent of revenue collected on sugar. For, while all refining grades, raw sugars, melado, cane juice, and molasses would come in free, the duties on refined sugar in all forms would be simply prohibitory. It is not carrying out the protectionist principle, but in utter defiance of it, to impose duties of 45 or 50 per cent. on an article that we do not and cannot produce at home. To be consistent protectionists, we should do with sugar as we do with tea and coffee—admit it free.

All forms of sugar unrefined should be free, while the duties on refined sugar in all forms should be high enough to shut out the foreign article altogether. This would be genuine protection—the real Simon Pure. But the truth is that our alleged N. P. Dominion Government has been weak-kneed from the start on some main points, and has been too timorous to carry out to their logical consequences the principles it professed. But we must make allowances. It has to be stated that the old free trade delusion—the idea of "a tariff for revenue only,"—still has a certain hold on the public mind; and we may have to admit, after all, that Sir John and Sir Leonard may take credit for having gone as far as public opinion would allow them to go. The people need further education on this subject.

No wonder that, with a duty of 45 or 50 per cent. imposed on an article which in its raw state should be entirely free, sugar is somewhat dearer in Canada than it ought to be. Whenever we gain courage enough to take our stand on true protectionist ground, and to knock off that blundering impost of from two-and-a-half millions to three millions of dollars annually collected on sugar, then the article will be as cheap in Canada as in England.

From experiments it appears that a gas engine indicating ten horse power with coal gas would barely indicate a four horse power with hydrogen.

Iron and Machinery

MONTREAL TRADE REPORTS.

THE following are from the weekly reviews of trade in the *Gazette* and *Herald* respectively :-

IRON AND HARDWARE. (*Gazette*, August 26th.)

The iron market has a firmer tone, with evidences of improvement, although no quotable change has taken place. Private cables announce that the pig iron makers in Scotland have arrived at an agreement whereby production will be restricted. Particulars, however, have not been received. Outward freights, too, are firmer at 7s for pig for September shipment. Warrants are cabled 1d higher than a week ago at 39s 8d. In this market there has need a good steady business in most kinds of heavy goods, and there is now every reason to believe that the fall trade this year will be of full volume, if not positively active. Pig iron has ruled steady, with manufactured iron in fair request. There has been a steady business in tinplates and Canada plates at about quotations. Ingot tin in London has declined £1 7s 6d, but no change has been made in the market. Copper has continued easy and lead steady. Latest London cables are: Tin, spot £98 7s 6d; 3 months' futures, £99 7s 6d. Market firm G. O. B. Chili bars, £39 7s 6d; soft Spanish lead, £13. Best selected copper, £13; soft English lead, £13 5s; Silesian spelter, £13 17s 6d; Hallé's antimony, £30; tinplates, 13s 3d.

(*Herald*, August 28th.)

A cable received to-day from the other side reports an unlooked for firmness in pig iron, offers which our Montreal merchants considered fair not being accepted by the furnacemen. Notwithstanding the heavy stocks held on the other side those markets seem to have touched solid bottom.

Enquiries from Western Canada are now coming in much more freely, and our predictions that business would be active after the fall fairs are now about to be fully justified. Local prices are steady and maintained. In tinplates there has been some movement in round lots at full current rates, and further large sales are looked for in a week or ten days. Western buyers seem to realize that bottom has been touched for this class of goods. There has been some enquiry for bar iron. There is very little doing in Canada plates, although figures are still abnormally low. The movement in steel is light. In sheet hardware there has been a good, steady movement.

Scotch warrants are now down to 39s 4d, a decline of 4d from last week. We quote: -

Hematites	\$ 0 00	@ \$19 50
Coltness	16 00	@ 16 70
Langloan	15 75	@ 16 60
Shotts	15 75	@ 16 00
Calder	16 00	@ 16 25
Summerlee	15 75	@ 16 00
Gartsherrie	15 75	@ 16 00
Clyde	15 25	@ 15 50
Dalmellington	15 25	@ 15 50
Govan	15 25	@ 15 50
Eglington	15 25	@ 15 50
Bar Iron	1 60	@ 1 65
Sheets	2 25	@ 2 50
Plates	2 10	@ 2 50
Tin Plates, I. C., Charcoal	4 15	@ 4 30
Do, Cokes	3 60	@ 3 90
Canada Plates	2 25	@ 2 40
Ingot Tin, Straits'	0 00	@ 0 25
Do, L. and F.	0 00	@ 0 25
Ingot Copper	0 00	@ 9 13
Lead	0 00	@ 3 75
Do., Sheets	4 25	@ 4 50
Antimony	0 00	@ 0 12

TRADE NOTES.

(*Boston Manufacturers' Gazette*.)

A ROLLING-MILL owner says there are quite a number of car axle orders to be had, but at low figures. "If you raise your price one-sixteenth of a cent you lose the order," according to his experience.

THE New York *Commercial Bulletin* claims that Montana will show a reduction in monthly production of copper of 1,000,000 pounds and Arizona over 700,000 pounds for the last six months of 1886.

THE extreme low price of copper is having a very depressing effect on mining industries, and unless relief in the shape of an advance in prices comes soon, production and development in many sections will be brought to a stand-still.

IMPROVEMENT in railroad earnings is very generally a sure sign of an improvement in business. At present there is quite a marked increase in this direction, railroads in all sections showing a decided increase in earnings over last year.

BY the employment of new processes the manufacture of steel has become so cheap that it is rapidly taking the place of iron for most of the purposes for which iron has been used. There are now seven Bessemer steel plants in Pittsburg that make a grade of steel cheaper than iron.

ALL accounts agree in the general statement that more money is being expended for machinery and mechanical appliances than at any time in the history of the country, and manufacturers are already quietly anticipating stronger prices before winter. The railroad companies are heavy purchasers.

Pig tin is now controlled by a London speculative clique, who have it in their power to create an artificial depression. The result of this is that consumers now buy only what stock they must necessarily have at intervals. Pig lead also appears to be in the hands of manipulators, who contemplate a "deal" of some kind.

IRON report: The nail makers are realizing a very heavy demand, and two or three new nail factories are projected. All kinds of railway material are in active demand. Large contracts for locomotives have been placed within thirty days. The railroad demand is the strong feature of the iron market, and locomotive and car builders say that their prospects for the fall and winter were never better. Prices are very low, and there is no disposition to make any advance.

THE German iron and steel industries have been suffering recently so severely from English competition that a conference of German mine owners has been called, to be held from the 1st to the 5th of September proximo. German railway companies have been asked not to accept English tenders for metal to the prejudice of German iron producers. This struggle for supremacy in an important branch of productive industry between two great nations will be no child's play, and all the elements of dogged pertinacity characteristic of both nationalities will have full play before this sharp rivalry shall have a decisive close. Meanwhile, the American iron and steel manufacturers will look on with complacency, and pursue the even tenor of their way.

MR. R. M. MERCHANT, says *London Truth*, has perfected an engine in which the steam is returned to the boiler, and, so to say, used over and over again. The saving in coal thus to be effected, is calculated at eight per cent. Besides saving coal, this invention will upset a pet theory of the engineering fraternity, who have always considered this problem as impossible as perpetual motion. miscel

Textiles.

THE TURN HAS COME.

(*Boston Manufacturers' Gazette.*)

THE turn in the lane has come, and it is a long lane that has no turning. Two years ago, for instance, the mills at Lowell were shut down for a fortnight, and at Fall River they were silent for many weeks, and the output during July and August was reduced more than one-third. A year ago business was still worse. Shorter hours were worked, and the production during the year was considerably less than in the preceding one. In the autumn of last year there was a perceptible movement, indicating a coming improvement in trade. When the new year came in manufacturers made an advance of 2½ per cent. in brown and bleached goods over the prices ruling in January, 1885. The export business was extended, and gradually the output at the mills has increased until it may now be confidently said that production has once more reached its full standard in most factories. Prices, unfortunately, have not kept pace with increased production, and the profits are small, but any alteration in prices during the last twelve months has been in an upward direction. And what is true of the cotton interest is also true of other industrial interests, the iron interests especially, and the condition of general business is usually indicated by the position of the iron trade. There is a confidence in the future that the demand will continue for some time to come, and the general business situation will improve right along. A boom is not wanted, but a gradual healthful growth is the most essential factor to a substantial prosperity. If prices are not as remunerative as they have been, the natural and logical answer to this would seem to be, that after a period of depression no advance in prices can reasonably be expected until the demand for goods has caught up with the actual facilities for supply. Apropos of these observations, marked improvement in the various channels of business enterprise is noted by all the commercial journals and those which devote themselves mainly to productive interests. The *New York Commercial Bulletin* remarks: "The feeling of confidence is certainly everywhere growing, and though only a few lines have thus far felt the quickening current of business, in a few weeks it is believed the change will be noticed in every department of trade. There is hardly an unfavorable feature in the trade situation to-day. Money, it is true, is reported scarce and rates are hardening, but this is wholly of a local character, and does not reflect the condition of things South and West, where capital is now centred preparatory to moving the crops to tide-water. Certainly the confident predictions made earlier in the year have been verified by facts which have since transpired, and now only time stands in the way of a full realization."

MONTREAL TRADE REPORTS.

THE following paragraphs are from the latest weekly reviews of the Montreal markets, in the *Gazette* and *Herald* respectively:

DRY GOODS.

(*Gazette, Aug. 26, 1886.*)

The situation in dry goods has been without essentially new feature, but has a fairly active tone. The attention of the trade is still directed toward cotton goods, which are firmly held at the advance. Manufacturers advise the wholesale trade to place their orders at present prices, as a possibility of a further increase in cost, of white goods at least, is being considered, but whether it will come to pass is yet uncertain. At any rate prices are very firm. Woollen goods also have a firm undertone, which arises from the continued strength of the raw

material market, but no advance has been made on the cost of domestic goods so far. Trade during the week has been fairly active and of a satisfactory character, the distribution having been fully as large as counted on.

(*Herald, Aug. 28, 1886.*)

The subject of remittances is somewhat complicated. Our city retail trade has revived slightly as families are now returning from their seaside and summer resorts as the schools are about to re-open. The trade in the outlying districts of the city is unusually satisfactory. Our wholesale friends, we should judge, are satisfied with what they have done in the fall trade and with the prospects for the near future. Some one has told us that prices are firmer than in any one season for ten successive years past, that goods of all kinds are held firmly and higher prices are being paid in some lines for repeats. Blankets and such goods are now feeling the advance in the price of wool.

COTTONS AND WOOLENS.

There is no new feature in the market this week. The mills are all full of orders and prices are firm with an upward tendency. The prospects are good and a steady profitable business is now looked for. The advance in wool and the good demand prevailing for all classes of manufactures continue to assure better prices on all new contracts.

TEXTILE NOTES.

(*Kuhlow's German Trade Review.*)

BERLIN WOOLEN AND PLUSH MANUFACTURES.

These manufactures are on the whole very well situated at present. The summer business has, by reason of the tasteful character of the articles made here, given abundant work. The goods produced for the winter trade are similarly excellent, both in regard to design and price. Berlin manufactures are certainly able to claim that in execution and tastefulness they often surpass the best products of more renowned manufacturing towns, even though the latter cost more. The made-up dress goods industry has largely to thank the progress made by the stuff manufactures for the success which it has of late years experienced. But for the endeavours of the manufacturers to produce excellent goods at low prices this industry would never have secured its large export trade. The business in woollen and plush goods has already been a busy for several months, manufacturers being well employed both for home and abroad, but the trade with the United States has especially developed, as the export returns recently published in our columns will show. This branch has also made progress in that the production of cheap half woollen and cotton goods has fallen off the demand now being more for good qualities at moderate prices, the manufacture of which is the main part of the Berlin woollen and plush goods trade. According to extent of sales, the plush manufactures belong to the chief of this city. The manner of manufacturing the stuffs made here remains quite characteristic. Power looms are only used in isolated manufacturing factories, hand weaving appearing more advantageous in many cases. The manufacturer who introduces power looms for these manufactures must first make sure of keeping the costly plant in uninterrupted work. With hand looms the risk is not so great. When a manufacturer has no work in hand, as is often the case in winter, and cannot tell the goods which will be in demand next, he can let the looms stand still. Thus the manufacturer has no loss, for the looms do not belong to him, but to the weavers. It is clear that this mode of production is advantageous for the manufacturer. This is one of the reasons why the power loom has not been much introduced in Berlin. So long as house-weaving continues to be carried on as at present, power looms are not likely to make much headway except so far as they are indispensable for certain classes of goods.

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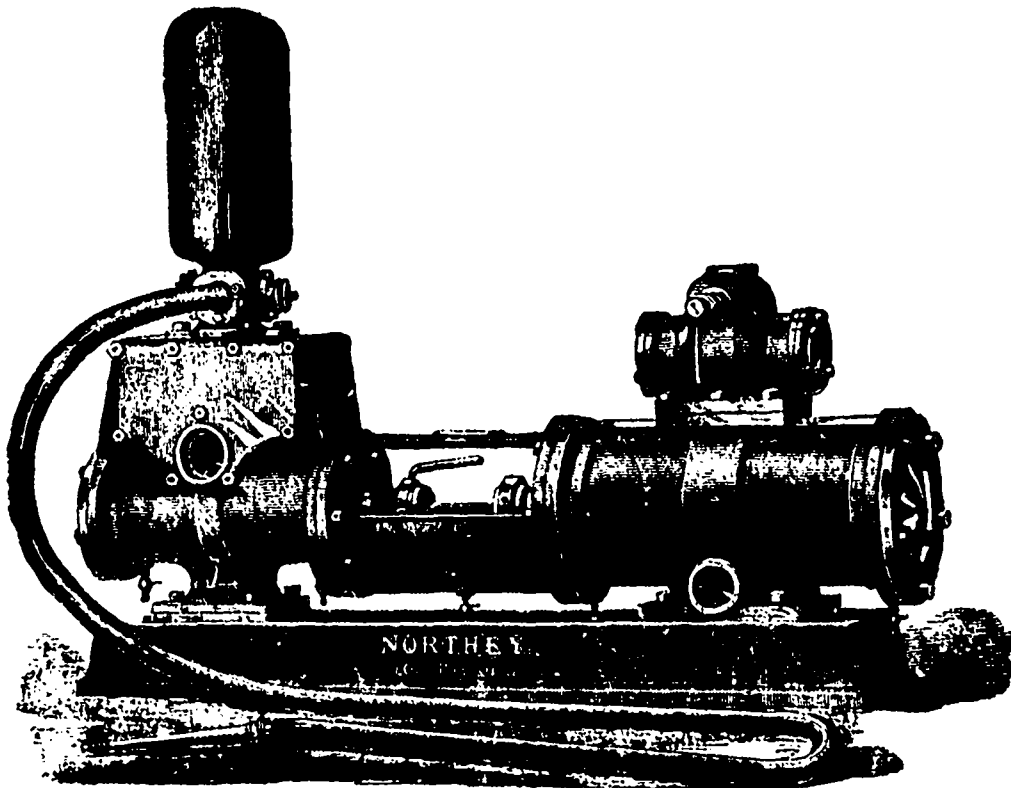
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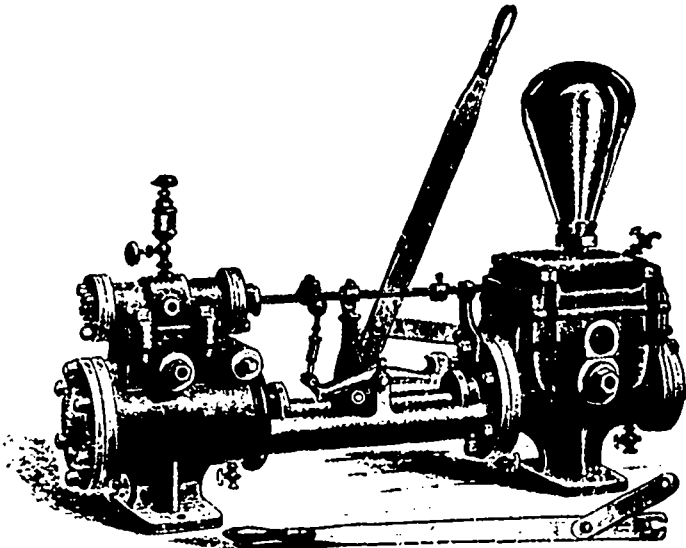
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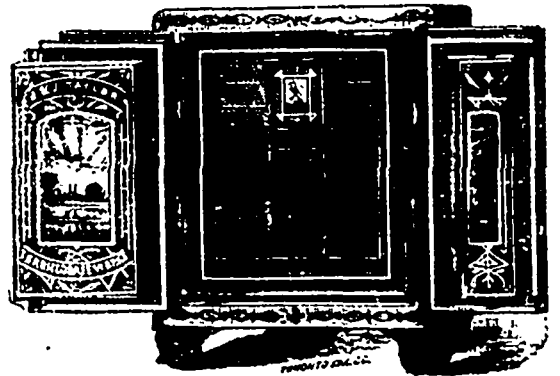
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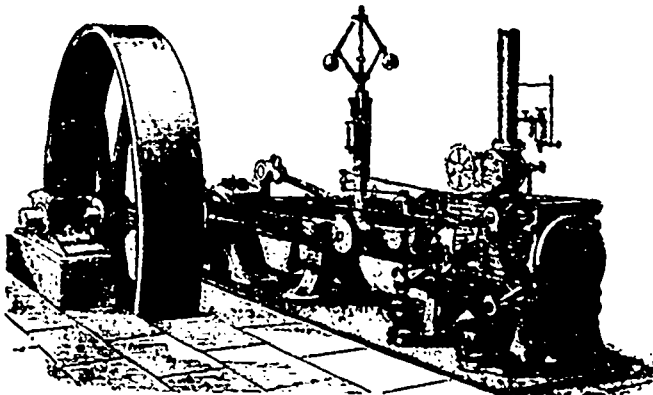
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Write for Circulars.

Milling.

MILLING NOTES.

(From the American Miller for August.)

THE railroads running out of Chicago uniformly disclaim all liability in their bills of lading for short weights in grain. There is a statute which expressly says that railroads shall receipt for the full amount of the grain received. There is a prospect that the railroad and warehouse commissioners will take hold of this matter.

It seems that St. Louis can show cases parallel with those recently quoted from Chicago, where shippers of corn from the far west were lucky in getting away with the bag, leaving the entire grist as toll to railroads and the other expenses. A grain shipper at Tecumseh, Neb., consigned corn to St. Louis, and received as the net proceeds fifty-three cents per carload. This brings us back to our original text: the United States produces too much corn, wheat, and oats, while it imports potatoes, barley, etc., in large quantities.

GOVERNMENT operations are often decidedly unbusinesslike. Last year the Department of Dakota advertised for 80,000 pounds of flour for use at Fort Meade. The Spearfish Milling Company put in a bid of \$2.10 per hundred delivered at the post. The commissary department accepted a bid of \$2 per hundred laid down at the depot in Minneapolis. It cost the Government \$1.15 per hundred to send this flour to Fort Meade, making its total cost laid down there \$3.25 per hundred. Desiring to bid again this year, the Spearfish parties thought best to lay the matter before the War Department, and Delegate Gifford called there about a week since and laid these facts before the secretary. The explanation given was that the Commissary Department purchases supplies and the Quartermaster's Department forwards them. The Commissary General, anxious to make a good showing for his department, of course accepted the lowest bid, which was the Minneapolis bid, although it made the flour \$1.15 dearer to the Government by the time it reached its destination. The War Department promised Mr. Gifford to give its attention to the matter this year, and that all should have a fair show.

THE case of the Germ Milling Co., of Glasgow, Scotland, against J. & H. Robinson, of Deptford, Eng., came to an end on July 3, thus closing one of the celebrated cases in milling patent litigation. The suit brought was based on a patent granted to Thos. Muir of the "Tradeston Mill," Glasgow, July 17, 1885, for the process of removing germ by the use of smooth rolls. The trial of the case developed some things that, to say the least, are notable. One was that the utility of Muir's invention was denied by the parties who were using it: that is, they claimed it was not a desirable thing to remove the germ from the flour. Another was that the plaintiffs were beaten on their own testimony. It was admitted by the plaintiff that Muir had used his invention six months prior to the granting of his patent, and on this showing the court held his patent to be void for want of novelty. There is no question that the Germ Milling Co. have resorted to what is known on this side as "bulldozing." They sold the right to use their process patent for what they could get: governing their price by the size of the miller's pocketbook or the size of his hump of combativeness. And while we have little doubt that Muir's patent was void for want of novelty, it hardly seems just treatment from the court to present the proof of its lack of novelty by citing the patentee's own action. The owner of a patent in Great Britain does not seem to have any particular right.

Lumber.

LUMBERING IN CANADA.

At the last session of the American Forestry Congress, held in Boston in September, 1885, J. K. Ward, of Montreal, Canada, gave an interesting account of lumbering in Canada, extracts from which we give herewith:

The different Provinces of the Dominion make the regulations and conditions on which the timber lands can be worked. In Ontario and Quebec vacant territory is usually sold by auction, say in blocks varying in size from one to fifty square miles, at prices ranging from \$2 to \$500 per mile. In addition to these, the lessee pays \$2 annual ground rent per mile, and also a stumpage on all timber cut on the territory occupied. Each Province has its tariff of prices. In Ontario, red and white pine are subject to 1½ cents per cubic foot. Other woods vary in price. Pine, basswood and cottonwood saw logs pay fifteen cents per 200 feet, board measure; walnut, oak and maple logs twenty five cents per 200 feet; hemlock, spruce and other woods ten cents per 200 feet; railway timber, knees and the like, fifteen per cent. *ad valorem*. In Quebec oak and walnut pay a duty of four cents per cubic foot; pine and other square timber two cents; pine saw logs average about \$1.25 per thousand feet; spruce and hemlock saw logs about sixty cents per thousand feet; railroad ties two cents each; all other woods, such as telegraph poles, spruce spars and shingle wood, etc., pay different prices.

All land owned by Ontario and Quebec is leased for lumbering purposes. Much of it is, however, of such poor quality that there is doubt if it will be of any value except for producing timber. Lands considered suitable for settlement are surveyed, and as fast as the lots are taken up by settlers and the government conditions complied with, that is, a house built and ten acres cleared on each 100 acres, the lot is taken out of the license, the government, however, reserving the price, except what the settler requires for his own use on the land.

New Brunswick contains a large quantity of spruce, tamarac, cedar, hemlock and hard wood. The pine for which this Province was once famous has mostly disappeared. The timber lands of this Province, about two-fifths of its area, are still vacant, and the out-put of lumber and timber of various sorts cannot be less than 300,000,000 feet per annum. The stumpage on spruce and pine logs is eight cents per thousand feet; on pine and hardwood timber eighty cents per ton; on railway ties two cents each. This is in addition to the prices paid for the right of cutting that may be realized at auction, the upset price being \$86 per square mile.

Nova Scotia contains a good deal of spruce, hemlock and hard wood. Much of the latter is exported. Manitoba and the Northwest are not reported to contain much timber. What there is is largely spruce and small pine, and not more than is required for home use. West of the Rocky Mountains, Canada contains vast quantities of valuable timber, the manufacture of which is rapidly increasing, to meet the wants of the Pacific coast and islands. Now that the Canadian Pacific Railway is nearly finished, much of the lumber will find its way East into the treeless prairies.

As to Canada's method of lumbering. When circumstances will permit, we pile or skid before the snow becomes too deep. When the snow is deep we draw direct from the stump to the lake or river. Our style of living in the shanty, and, in fact, the building itself, differs in various parts of the country. Until very recently, particularly in the lower St. Lawrence, the fare of the shantymen was very primitive, the commonest tea being quite a luxury, and the only variety in the bill of fare was that it consisted in pea-soup, bread, pork and beans for dinner, the same, with the addition of tea, for supper, and

either, less the pea-soup, for breakfast. On the St. Maurice for many years the living has been good and substantial, with comfortable shanties, provided with stove, tables and bunks, the cooking being usually done in an outside apartment. The shanty-man's condition, however, is improving with the times.

Our shanty-men, whether English or French, as a rule are as good axemen, as expert drivers and canoe-men as can be found in any country. Our people are well up in dam building, as well as in making slides and clearing away the rivers to facilitate driving. Our rivers, as a general thing being very precipitous and rapid, require extensive improvements, especially for the running of square timber.

The quantity of square timber made at present is much less than formerly. Some years ago there was not less than 18,000,000 cubic feet made in one year, while in 1884 there were only 5,000,000 or 6,000,000 feet, and in 1885 not more than 2,000,000 feet. There are many reasons for this change. Good pine timber is more difficult to get, while Southern pine is cheaper and better for some purposes. Again, the British consumer is finding out his folly in paying for and freighting slabs, sawdust and the poor lumber that is found in the heart of almost every stick of timber. The result is that the quantity of sawed pine exported has increased, giving more work to our mill men and others, as well as utilizing much valuable timber that would otherwise be left in the forest to rot or to make fuel to burn that still standing.

As to the manufacturing of lumber in the sawmills, it has until very recently been done by gate or gang saws, but of late years circulars have come largely into use. The prejudice against lumber sawed by them was so great that it could not be sold except at a lower price than that produced by gate saws.

This was occasioned by the want of skill on the part of the sawyer, and has been obviated to a great extent. The manufacturers, however, were more ambitious to see how much work could be done by a circular saw, rather than to know how well it could be done. Much valuable timber would be saved by working around a log, placing it properly in the carriage with regard to the seams to be found in almost every large pine log, and cutting parallel with the outside of a tapering log, instead of with the centre of it, thereby saving the good lumber found on the outside of most logs, and throwing away the poorer stuff found in the heart.

While not an alarmist as to our supply of pine timber, I cannot but consider the wanton waste of it a sin, when so much good lumber has been and is being thrown away. A mistake is made by our mill men in not having more sawing capacity than the fast mills now in use possess, sawing, as they do in twelve hours, 40,000 or 50,000 feet with one circular saw. Too much haste is required to do this when more money might be got out of the same logs by employing two sets of saws, with the necessary trimming machinery, and doing the work with less speed. It does seem as if the lumbermen of the past, as well as many of the present day, entertained the idea that the supply of pine in Canada was inexhaustible, and were anxious to get rid of it as quickly as possible. Now, as a means of making our timber hold out as long as possible, I am decidedly of the opinion that the United States Government should gratify its lumber manufacturers and stick to protection.

In conclusion, a few words on the question of the influence of forests on rainfall. In the absence of satisfactory statistics on this point, there can be no doubt as to the influence of forests in regulating the flow of water and preventing evaporation, thus lessening the danger arising from sudden and often destructive floods, the streams and glades serving as reservoirs in bringing about this result. In reference to the propagation of timber, the woods indigenous to our soil and climate require only space, of which we have plenty, and protection from fire and cattle, in order to be produced to almost any extent. In a few years lands apparently once abandoned because they have been exhausted grow a good crop of thrifty timber.

Mining.

NO COAL IN YORK STATE.

It has been recently reported that coal, oil and gas have been discovered in the vicinity of Albany. Were this true the ancient city would have a future, before which all the achievements of the past would be as nothing. But unfortunately there is very little foundation for the reports. Regarding coal, Prof. Hall, the State Geologist, says: "To one acquainted with the geological formation of the State of New York, the existence of any quantity of coal, beyond occasional deposits of lignite will be seen to be impossible. The rocks of New York State belong to the older series, below the carboniferous, with the exception of a volcanic break at the Palisades, and the alluvial formation of Long Island. The coal measures lap on, over our slates, limestones and sandstones, in Pennsylvania. If we would look for coal we must dig up, not down. Occasional bits of lignite are found in the Catskills and in other localities, but they are as specks of dust upon the surface, like the deposit of gold, of which so much is occasionally published.—*Coal Trade Journal.*"

OIL WON'T DO.

THE subject of reducing the cost of propelling the large Atlantic steamships to the least minimum has for some time occupied the attention of the managers of those lines. Experiments have been made with oil in that direction; but from Glasgow, according to the *Shipping World*, comes evidence of an unmistakable character that oil has been tried and found wanting. The managers of the Laird Line, after a long trial of oil on board one of their steamers, have decided, on purely economic grounds, to abandon altogether the use of oil as a fuel, having ascertained from practical tests extending over a considerable period that coal is the cheaper fuel of the two. Accordingly they have had the oil tanks taken out of their vessel, and have returned to the use of coal, notwithstanding the fact that the oil tanks and the apparatus for accomplishing complete combustion of oil cost a considerable sum of money. Although considerable ingenuity has been displayed, and several difficulties have been overcome, there is nothing in the latest apparatus and arrangements which have been adopted in southeastern Russia, where petroleum has been extensively used as fuel, which appears likely to expedite the adoption of liquid fuel in our mercantile marine. There is little probability of petroleum being sold in this country at a price which will enable it to take the place of coal.—*Manufacturers' Gazette.*

THE largest pumping engine in the world is used to pump water in Pennsylvania. In one minute it forces 20,000 gallons of water out of a mine to a height of 130 feet.

AT no time in the history of the mining town of Spring Hill, N.S., says the *Trades' Journal*, did the place present so bustling an appearance as now. In whatever direction the eye turns may be seen buildings in various stages of completion. No town in Nova Scotia is forging ahead at so rapid a rate. Many of the houses being erected are of handsome design.

It is said the wealth of British Columbia lies principally in her mines and fisheries. The Vancouver Island bituminous coal ranks in San Francisco with that of West Hartley. The coal measures on the island and mainland cover an area of about 30,000 square miles. In the Queen Charlotte islands, Anthracite in six-foot seams, comparing favorably with that from Pennsylvania, exists. In the Comox bituminous district the productive measures show ten seams of coal of a total thickness of nearly thirty feet. The output of British Columbia coal in 1871 was 29,000 tons, and in 1885, 357,000 tons, of which 276,000 tons were shipped to San Francisco and other American ports.

Miscellaneous.

AMERICAN PATENTS TO CANADIAN INVENTORS.

The following patents were granted to citizens of the Dominion of Canada, bearing date of August 31, 1886. Reported expressly for this paper by Lou's Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Goodson, J. W., Morrisburg, Ont., remedy for piles.	348,278
Kendall, I. N., Rockland, Ont., method of and device for turning down the points of saw teeth.	348,220
Millar, James, and G. Feeny, Amabel, Ont., boiler cleaner.	348,530
Presscott, T. H., Sackville, N. B., automatic fire alarm.	348,473
Warren, H. H., Cote St. Paul, Quebec, die for making hammers.	348,362

A NEW INDUSTRY IN CHATHAM.

(From the Planet.)

GRADUALLY there are being introduced the small industries which may become the nuclei for very much larger and more important ones. For several seasons Mr. Theodore Nelson has carried on a considerable trade in twisted marsh grass, which he ships in large quantities east for upholstering purposes. In this way Mr. Nelson has given employment to many in Dover township and other parts of the county, as well as, no doubt, making it somewhat remunerative to himself.

He has made another step as an experiment in this same direction, viz., the manufacture of mattresses. Mr. McNelly, recently foreman of the Batting Works, has charge of this, and we understand is turning out a first-class article, and for which there is good demand and which can be produced, of course, cheaper than is possible in the east. It is to be hoped that this little industry may become a large, flourishing and a permanent one.

WORK AND WAGES.

(Hamilton Spectator.)

BEFORE the adoption of the National Policy the average wages paid to agricultural laborers was about \$100 a year and board. In this neighborhood a single man was very glad to get a comfortable place at \$100 the year round, boarding with his employer. Mr. Blue, the secretary of the Ontario Bureau of Industries, reports that in 1885 the average wages, with board, paid in this province to agricultural laborers was \$160. Thus, assuming the board to be worth \$100, this class of operatives received 30 per cent higher wages in 1885 than in 1878. At the same time boots and shoes, clothing and other articles required by the men were reduced in price.

Returns from employers of 17,347 persons, male and female, old and young, skilled and unskilled, engaged in mechanical occupations, show their earnings to have averaged \$7.80. Males over 16 years of age averaged \$9.10 per week, the hours averaging nearly 59½. Males under 16 received \$2.88 per week of 50 hours; females over 16, \$4.35 per week of 58½ hours; and females under 16, \$2.55 per week of 57 hours. The figures, however, are of little value, for they do not separate skilled from unskilled workmen, nor tell us in what proportion skilled men were employed. We are told, however, that the average wage of blacksmiths was \$9.80 per week of 59¼ hours, or rather more than 16½ cents an hour; of woodworkers, \$9.93 per week of 59 hours, or rather less than 17 cents an hour; of machinists, \$10.15 per week of 59½ hours, or 17½ cents an hour; of moulders, \$11.69 per week of 59 hours, or 19½ cents an hour; and of painters, \$9.58 per week of 58 hours, or 16½

cents an hour. In each of these trades the average wage is higher than in 1884.

The total earnings of 1859 adults having families were \$801,137, and the total cost of living of these families was \$725,523. The average surplus of each family was \$56.35.

It appears that the Ontario workingman is not so badly off.

THE Gibson cotton factory has been running regularly all summer and has turned out large quantities of cotton, most of which has been shipped. Among the place to which shipments have been made are Montreal, Quebec, Halifax, St. John and St. Stephen.--*St. Croix (N.B.) Courier.*

THE silk industry is being rapidly transferred to the United States, to the consternation of all Europe. New silk mills are springing up in various parts of the Eastern section of the country, particularly in Pennsylvania. Within the limits of the city of Philadelphia alone we are told there are nearly one hundred mills spinning and weaving silk and silk-mixed goods. Plushes and velvets have recently been added, and there are two mills on dress goods, the most of the establishments making upholstery fabrics, curtains, turcomans, ribbons, fringes, brades and trimmings. The product of all these is very large and rapidly increasing, employing about 8,000 persons.

THE improvement in the demand for cottons, for home consumption and for export, during the past six months, is very noteworthy. There has been no important advance in prices (owing, we think, to the continued increase in the value of gold), but the mills have marketed their products with unusual freedom, and there are no evidences of that stagnation which existed one year ago. We would like to hear from those persons who have contended that there was over-production of these fabrics, an explanation as to how this increase of consumption to equality with production can be reconciled with that theory. If the market freely takes the product now, when more mills are in operation than a twelve-month ago, what ground is there for the doctrine of over-production? In fact, there never was anything the matter with the industry, excepting that people bought much less than they really needed.--*Philadelphia Textile Record.*



MILITIA

SEALED TENDERS, marked on the left hand corner of the envelope, "Tenders for Militia Clothing, Store Supplies and Necessaries," addressed to the Honorable the Minister of Militia and Defence, will be received up to noon of Monday, 6th September, 1886.

Printed forms of tenders, containing full particulars, may be obtained from the Department at Ottawa and at the following Militia Stores, where also sealed patterns of all articles may be seen, viz: The offices of the Superintendents of Stores at London, Toronto, Kingston, Montreal, Quebec, Halifax, N. S., and St. John, N. B.

No tender will be received unless made on printed forms furnished by the Department.

The material of all articles will be required to be of Canadian Manufacture and Canadian workmanship.

Each tender must be accompanied by an accepted Canadian bank cheque, for an amount equal to ten per cent of the total value of the articles tendered for, which will be forfeited if the party making the tender declines to sign a contract when called upon to do so, or if he fails to complete the same as contracted for. If the tender be not accepted the cheque will be returned.

C. EUG. PANET,

Colonel,
Deputy of the Minister of
Militia and Defence

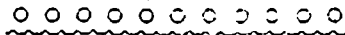
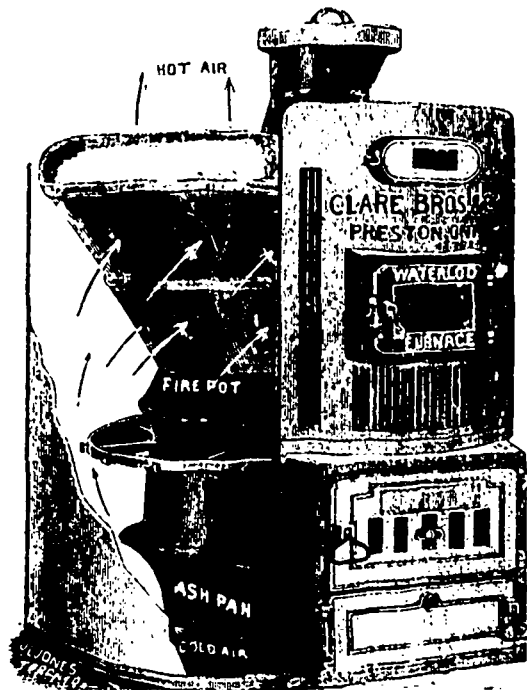
OTTAWA, 5th August, 1886.

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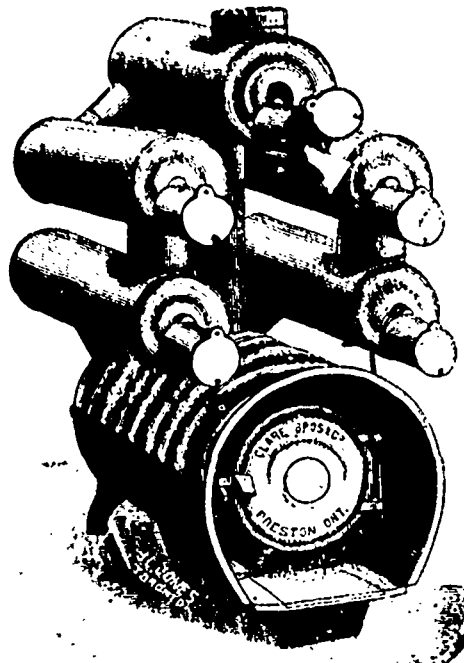
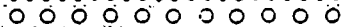
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This Furnace, made in six sizes, is unequalled for efficiency, economy, ease of management, durability. Is corrugated and made very heavy. The drums are of heavy sheet steel (with cast iron ends and collar connections), well riveted to, either, so as to prevent the leakage of gas and smoke from unequal expansion and contraction. It has been largely in use for several years, and has never failed to give the most perfect satisfaction to purchasers, thus differing and entirely superseding all other wood-burning Furnaces heretofore made. Farmers who have a surplus of wood waste for the market will find them a great relief from the vexation and annoyance of pulling down and setting up ordinary heating stoves and pipes, wood boxes, etc. We furnish the four larger sizes with either round doors, as shown on cut, or with extra large square doors.

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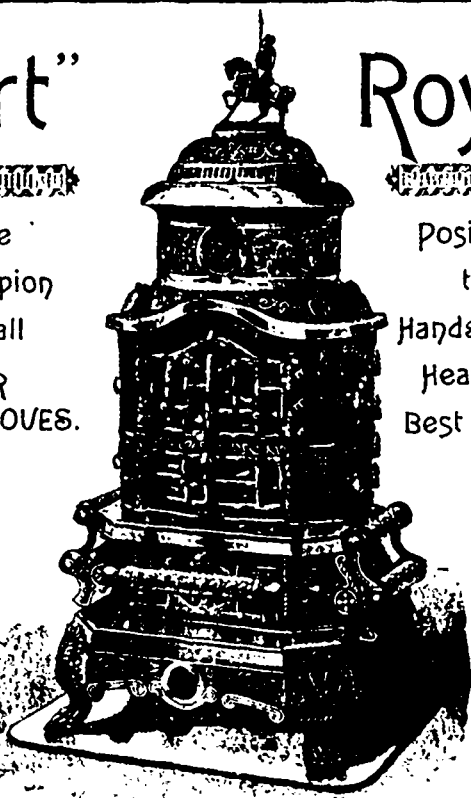
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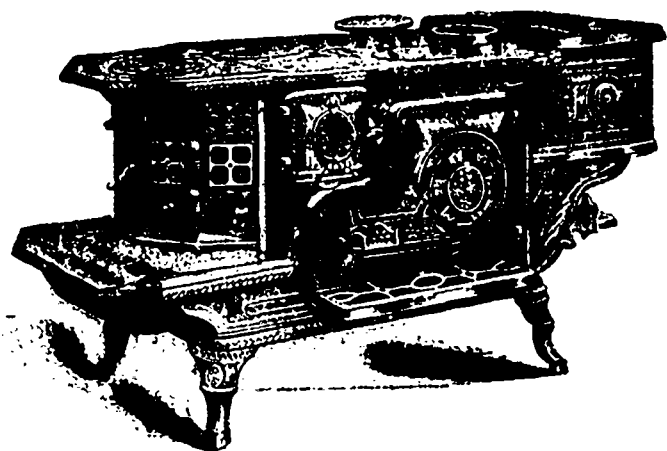
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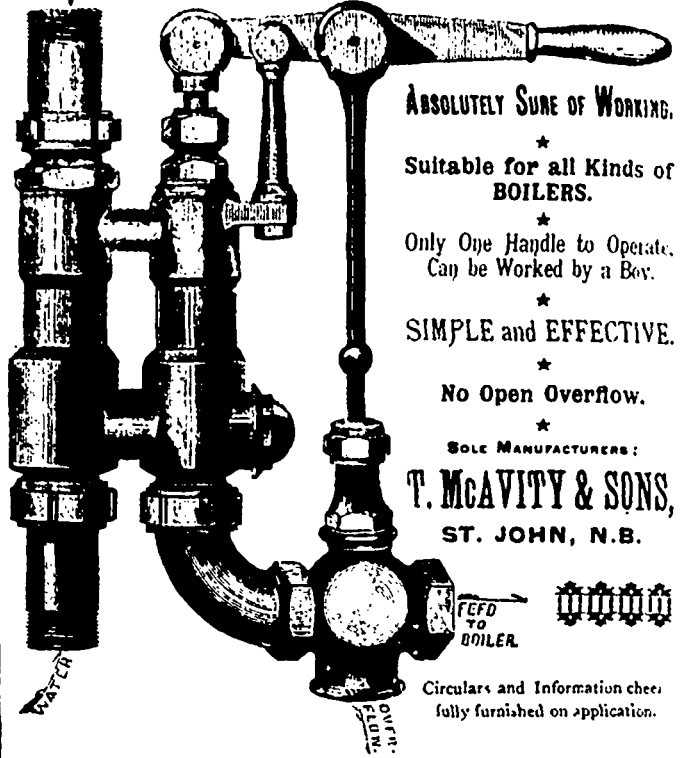
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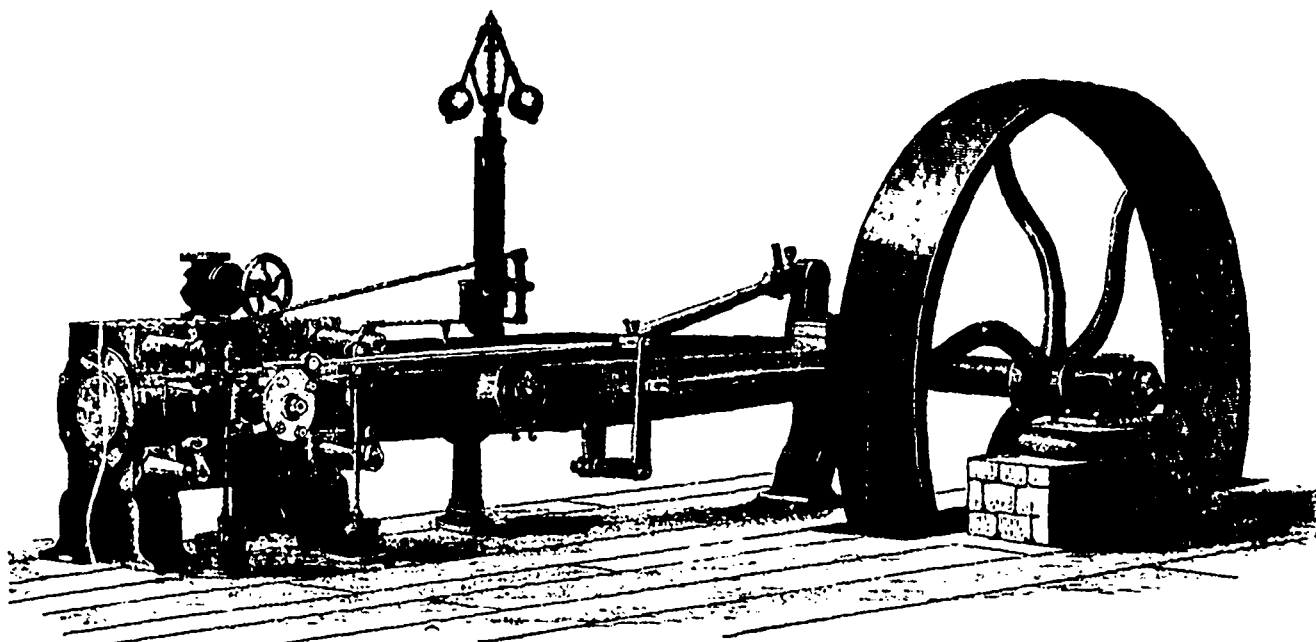
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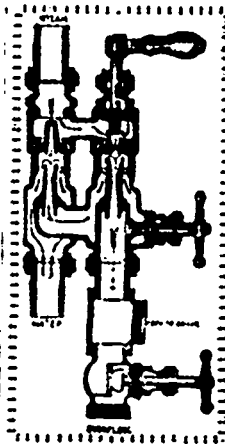
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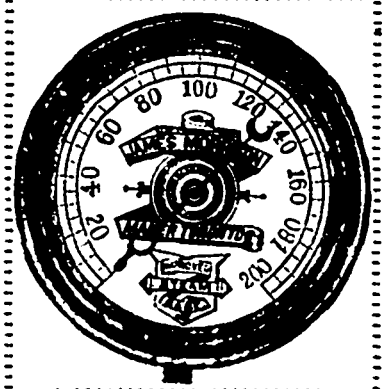
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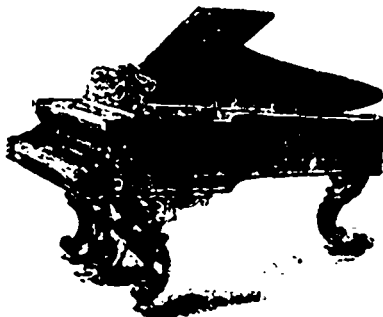
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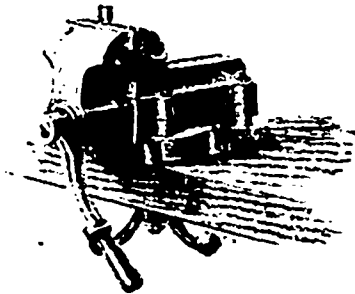
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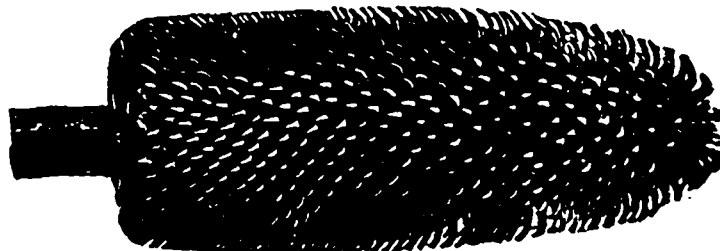
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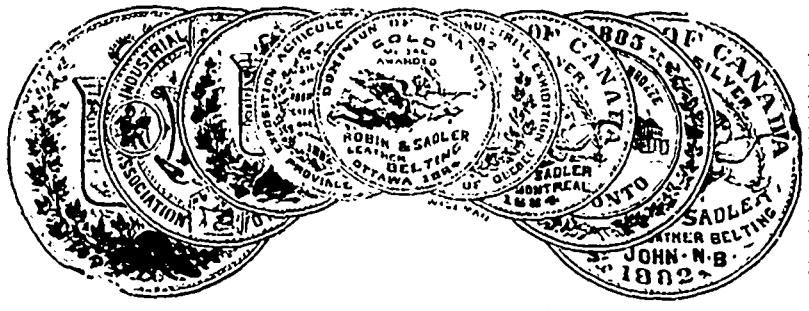
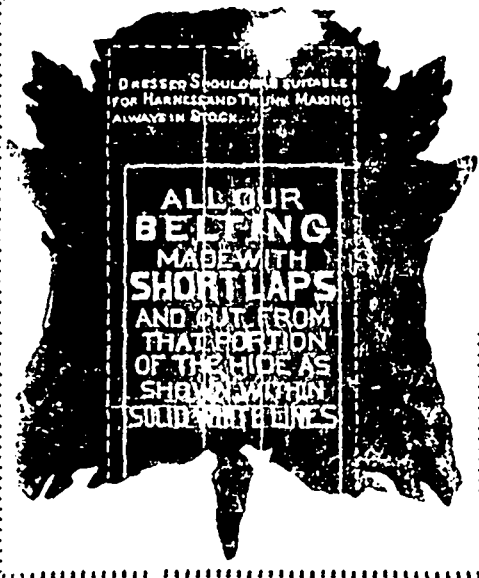


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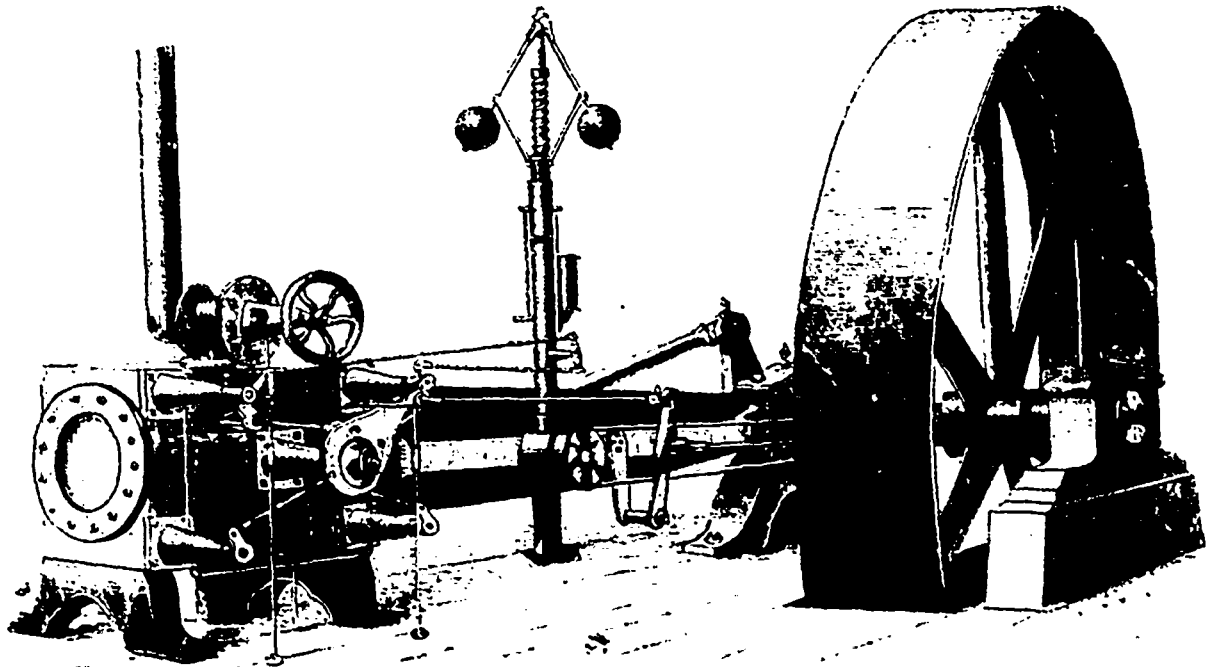
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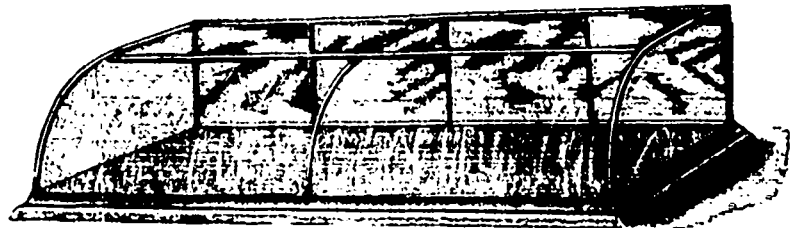
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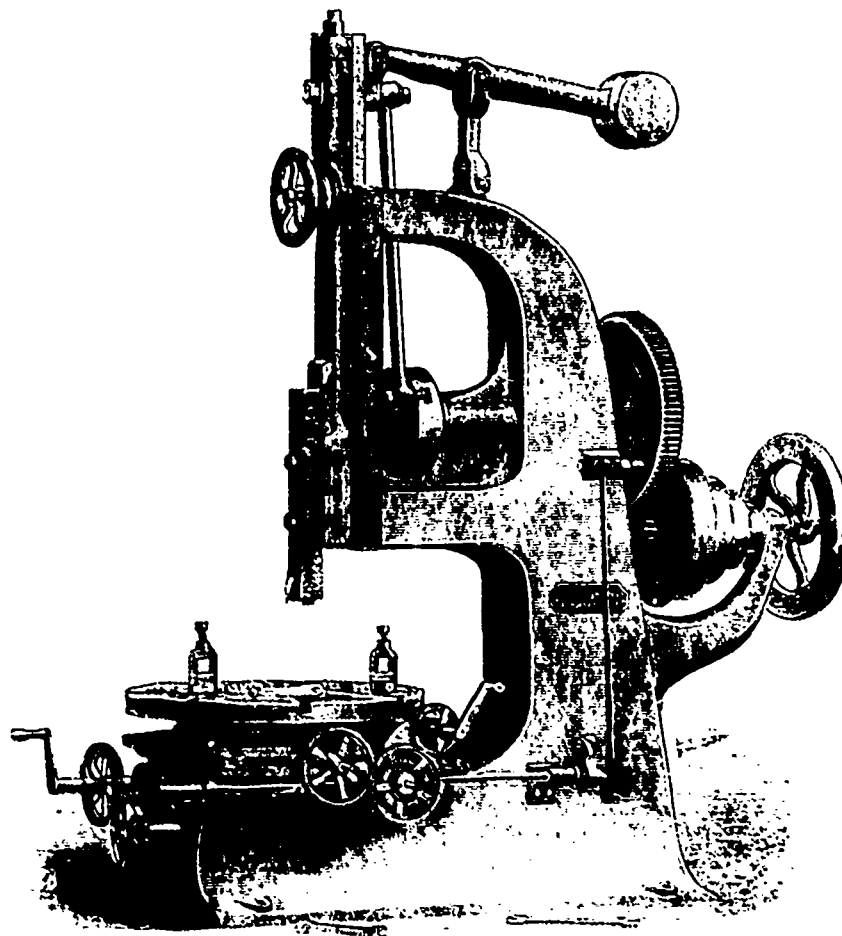
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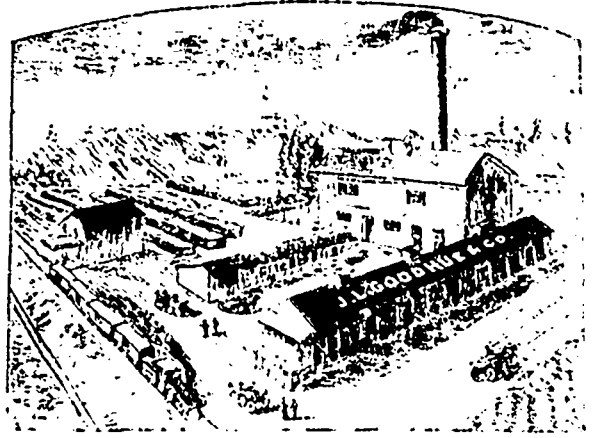
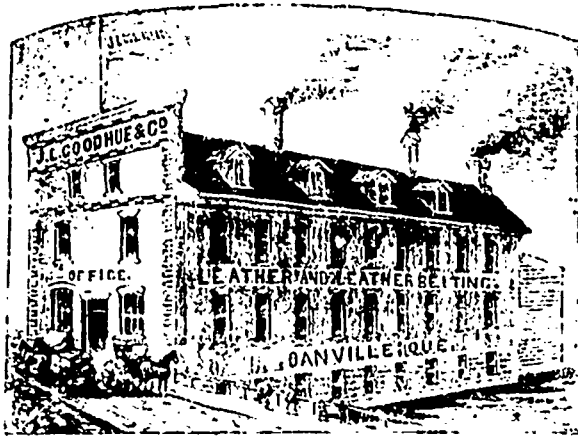
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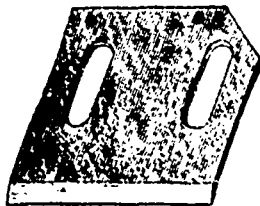


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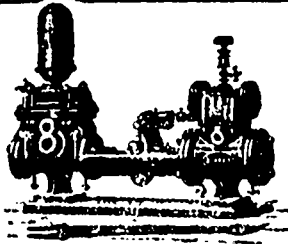
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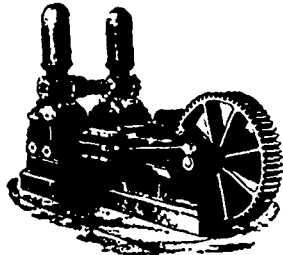
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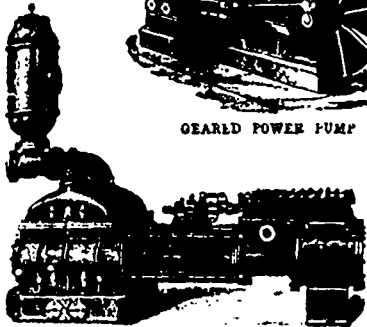
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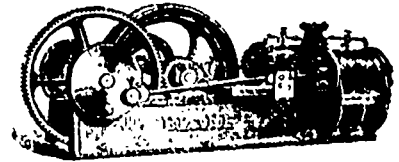
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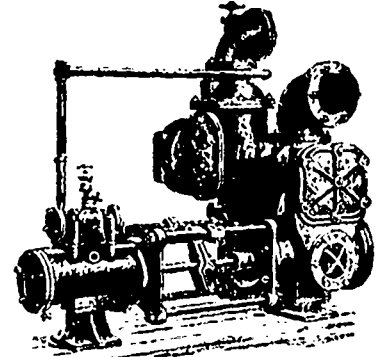
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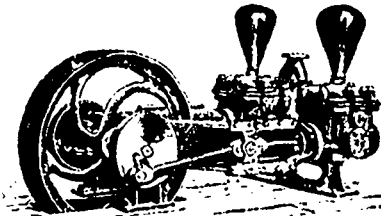
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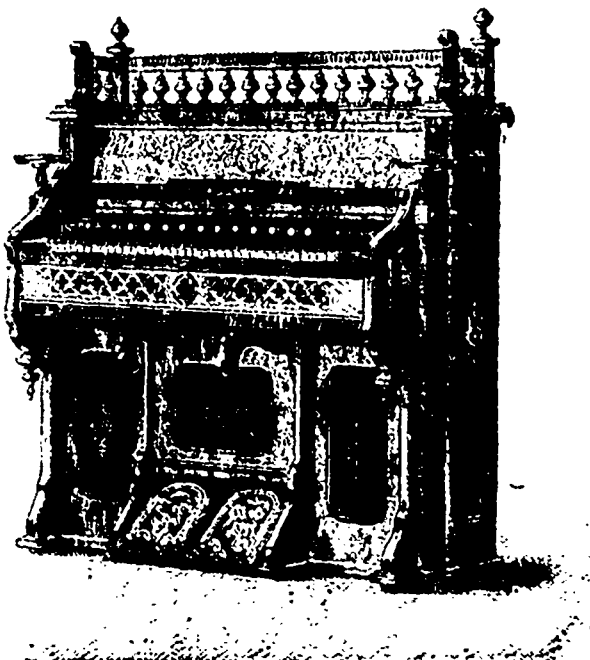


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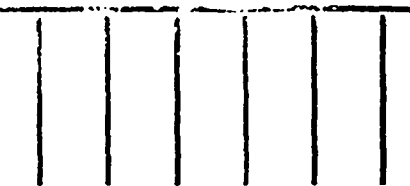
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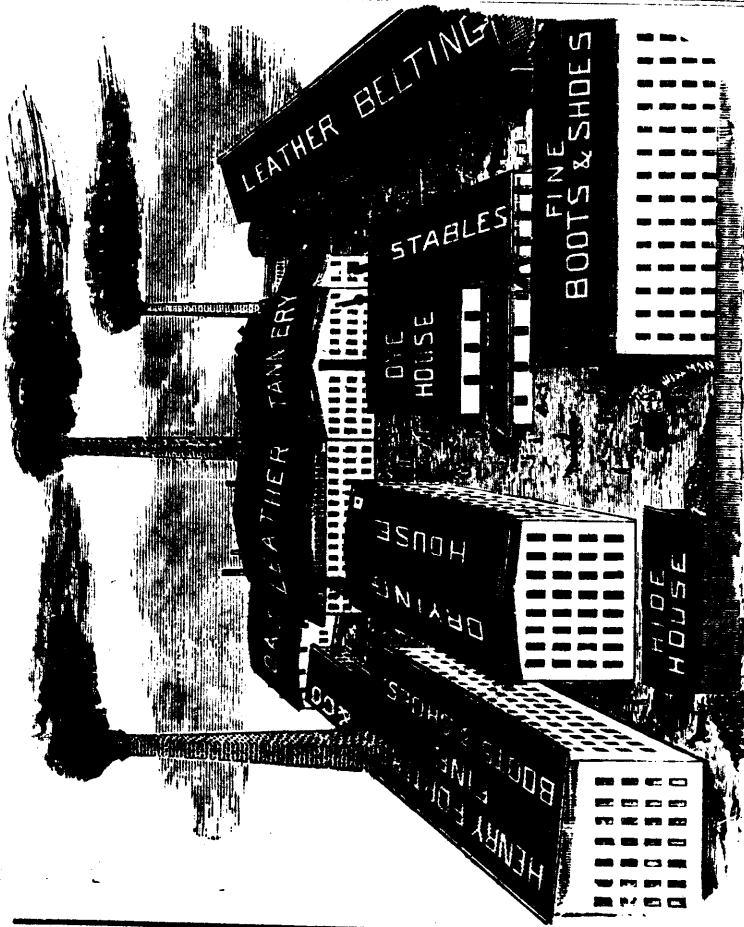
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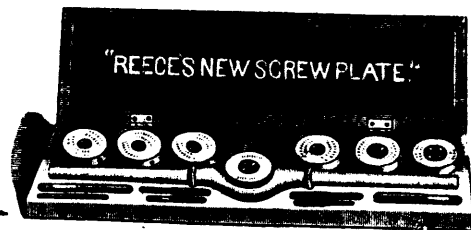
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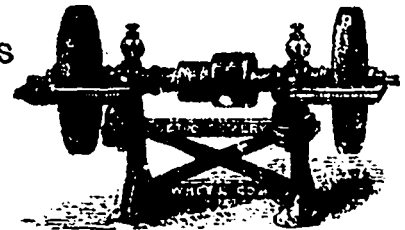
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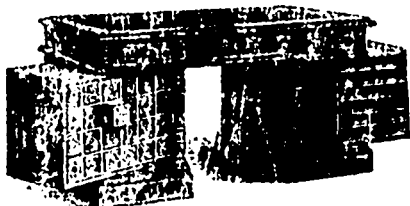
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