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THE CANADIAN MANUFACTURER AND INDUSTRIAL WORLD

DEVOTED TO HOME INDUSTRIES, COMMERCE, FINANCE, INSURANCE, RAILWAYS & MINING.

VOL. 2.

TORONTO, APRIL 20, 1883.

No. 9.

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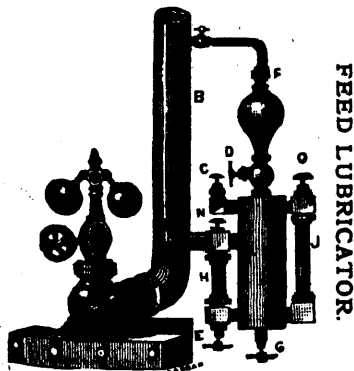
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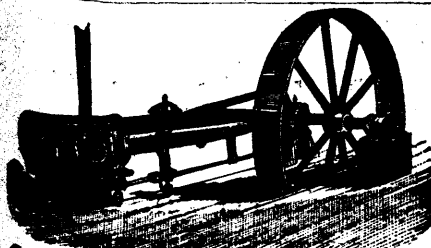
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THE CANADIAN MANUFACTURER

DEVOTED TO HOME INDUSTRIES, COMMERCE, FINANCE, INSURANCE, RAILWAYS & MINING.

AND INDUSTRIAL WORLD.

VOL. II.

TORONTO, ONT., APRIL 20, 1883.

No. 9

THE GREAT RAW MATERIAL PROBLEM.

In applying the principle of Protection to tariff details, we proceed in most cases on the broad general rule of putting duties on manufactured articles, while admitting the raw materials of manufactures free. What Protection aims at is to cause to be done at home, and by our own people, work that would otherwise be done abroad, and by foreigners. Raw materials imported give us the maximum of work for our own workers; wholly finished articles imported give us no work at all, there being nothing more to be done upon them; while, for the amount of work furnished, articles partly manufactured stand somewhere betwixt and between the two. Theoretically the rule is perfect and without a flaw; but a country's circumstances may be such that to carry it through all details of the tariff would create, not Protection of the country's labor, but discrimination against it and in favor of foreign labor. A great standing difficulty exists, and presents itself in many and various forms. The finished article of one trade is the raw material of another. Say that each particular trade must have its finished product protected by a duty, the free list will be a short one, indeed. Say, on the other hand, that each particular trade is to have its raw material free, then the tariff will be free list nearly altogether. Free traders have not been slow to seize upon this difficulty, and from it to argue that to carry out Protection is practically impossible. But theirs is and must be a very imperfect view of the matter, for we know as a fact that the alleged impossibility has actually been accomplished by some nations on the large scale, and with the clearest evidences of practical success. The plan most extensively adopted for meeting the difficulty is that of graduated Protection, say, for instance, raw material free; partly manufactured, ten per cent.; wholly manufactured, twenty or thirty per cent. But, widely applicable as the rule of graduated Protection is, there are still cases in which it would work very badly, and in fact would not suit the circumstances at all. And it may not be far from the truth to say that in the various iron trades there are more such cases, and more important ones, than in the whole wide range of all the other trades combined. It is in dealing with the iron trades that we have to encounter the most numerous and the most serious difficulties of the great raw material problem.

Upon one of these difficulties the Finance Minister has now fallen, in trying to deal with the article of pig iron. Four years ago a duty of two dollars per ton was placed upon this

article, which before had always been free in Canada. It is now proposed, while leaving the two dollars duty on imported pig, to give during three years to come a bonus of \$1.50 on all pig iron made at home, and of \$1.00 per ton for the three years next following. The proposed change is objected to in the following circular memorial, which bears date April 6, is signed by the Ontario Rolling Mills Company, Hamilton, and by Messrs. Scovil & Purdy, manufacturers of merchant bar iron, St. John, N. B., and has been sent to every member of the House of Commons:—

We call your attention to the proposed re-adjustment of the iron tariff, and beg to submit for your information that before Confederation the tariff on bar iron in Ontario was 20 per cent., with no duty on raw material, and that the tariff on bar iron under the N. P., is 17½ per cent., less \$1 to \$2 duty on scrap, etc., leaving a protection of about 12½ per cent. only, an inadequate amount to compete with foreign iron of general merchant sizes as used by the public. Under this policy only three Canadian mills attempted to compete with England, &c., in general merchant iron. Two of these mills use scrap iron exclusively, and the other one uses pig iron which it makes from ore. It is now proposed to give pig iron makers a bonus of \$1.50 per ton on all iron made for a certain time. This bonus is equal to nearly \$1.87 per ton on bar iron, as it will take nearly 1¼ tons of pig iron to make a ton of merchant bar iron, and it is intended to give this third concern the benefit of this to the exclusion of the other two, who have been as well endeavoring to meet the same unremunerative markets with the expectation and promise of tariff assistance as soon as the National Policy was, after consideration, accepted by the Canadian people in the last general elections. We ask you as legislators to see to it that this injustice is not done us, and to see that other establishments who have been endeavoring to compete with imported merchant bar receive an equivalent to a bonus as well as the makers of merchant bar iron made from pig metal, thus putting us all on the same footing. We would further call your attention to the fact that it is just as important to encourage and build up the manufacture of bar iron for general purposes as it is to encourage the manufacture of pig iron alone, as a very large part of the market for pig iron should be from these bar iron makers, and is everywhere else, and will be in Canada if you will see this matter righted and justice done.

We would also refer you to the tariffs of other countries to show that the more advanced an article is in the manufacture, "that is, that more labor is spent on it," the more should be the tariff, to be in proportion to the cost of the raw material. This will not be the case as it is now proposed with iron in Canada, as pig iron is to have a bonus of \$1.50 per ton with the present duty of \$2, equal to \$3.50 per ton in all. On, say a valuation of \$15, this would be equal to nearly 22 per cent., while bar iron, costing more than twice as much for actual labor spent, has only 17½ per cent. All bar makers outside

of furnace owners under the proposed tariff must go out of the business if you don't see this matter righted.

We trust you will see the injustice of the proposed adjustment, and amend the tariff clause to include a bonus or equivalent on "general merchant bar sizes of iron made from other raw material" than pig iron in Canada and competing in the same markets.

The \$2 per ton on imported pig has during four years' trial proved no inducement worth speaking of to the starting of furnaces in Canada. It is now thought that \$1.50 of a bonus on pig iron made in Canada may be inducement enough to give this industry a fresh start, and to cause it to advance all along the line, instead of being as at present confined to two places—Londonderry, N.S., and Three Rivers, P. Que. Evidently the Government is feeling its way forward, and the Minister of Finance would no doubt welcome any suggestion by which a harmony of interests could be established between the producers of pig iron from the ore, on one hand, and the makers of bar iron on the other. From the above memorial it appears that the Hamilton and St. John rolling mills use only scrap iron for raw material, while the Londonderry company first produces its own pig iron from the ore, and next from that makes bar iron. It further sells a considerable part of its output of pig iron for foundry purposes, so that it is in a position to profit both by the \$2 duty and the \$1.50 bonus. This the Hamilton and St. John companies consider unfair to them, as, though they use no pig iron, they have had to pay duty on imported scrap. Here we might remark that the two companies named have in their turn an advantage over nail works without rolling mills, somewhat similar to that which iron works combining both furnace and rolling mill have over those with the rolling mill only. There is a duty on nail plate iron, but as they make their own they do not pay it. Practically perhaps this does not amount to much, however, for most if not Canadian nail works now roll their own iron. And this obvious convenience and economy of manufacture is likely to spread. The Toronto Bolt Company will, as soon as the new buildings and plant are ready, roll all its own iron. Evidently there is or is going to be a good broad basis for a great extension of the rolling mill business to rest upon in Canada, which makes it all the more important that nothing the Government can fairly do to give full play to the country's natural tendency to expand in this direction should be left undone. Further, and here is a strong point for the rolling mill men—in the rolling of a ton of bar iron there has to be paid out for labor three times as much as for the production of a ton of pig iron from the ore.

Clearly there is ample room and verge enough for large expansions of the rolling-mill industry in Canada. It is easy to see, further, that the settlement of the North-west and the growth of population there must, ere long, double the Dominion market for iron of all kinds, bar iron included. An industry promising such importance is not to be trifled with; as we have already said, everything that the Government can fairly do should be done to promote it, to make Canada a country where iron is made as well as used, and, as nearly as possible, self-sustaining in this respect. On the other hand, the production of iron from the ore is, or ought to be, of equal importance. We have no complete National Policy, nor can we truly call ours a progressive country in the full and proper

meaning of the term, as long as the only use we can find for our vast treasures of iron ore is to ship them out of the country to feed American furnaces, and to make for our enterprising neighbors the wealth which we lack the wit to seize upon and work up for ourselves. Positively the Government of this great and growing country *must* do something towards wiping out this reproach, and adding to our sources of wealth that right arm of national strength, both industrial and political—the making of iron. It would be ungracious to find fault because the Minister of Finance did not feel sure enough of financial results and public opinion together to attempt four years ago the forward movement for which he appears to be bracing himself up to-day. Rather, let every true friend of the National Policy rally round him now that a further effort is to be made, and help to create a patriotic Canadian *modus vivendi* for the various iron-making interests, which, after all, may not be at bottom so much in conflict with each other as appears on the surface.

We know how the Americans solved the great raw material problem for the iron trades; though it may be a question whether we have courage enough, or whether public opinion in Canada be yet enlightened enough, to go and do likewise. They solved the problem by the bold and thorough-going plan of putting on sufficient duties along the whole scale, from top to bottom; \$7.00 per net ton on pig iron, \$20.00 on bar (on some kinds \$30.00), and \$25.00 on steel rails. Now, has the consequence been to make iron scarce and dear over the border? Most emphatically not; the United States now make more steel rails than England does, at a price only one-third of what it was when the manufacture commenced in America; while in that country of high Protection iron is so cheap that Canadian free traders growl and grumble because the N.P., as they say, hinders them from supplying these unfortunate Provinces with cheap iron from the United States!

One thing there is which might be done, that would act like the best guano and superphosphates on wheat land, in the way of helping the rolling mills we now have, and causing speedily the erection of many more. And that is, the putting of a good round export duty on scrap iron, sufficient to keep it all in the country. Scarcely anybody besides the railway companies would object, but, seeing the extraordinary privileges *they* now enjoy in the country, by sufferance of the Canadian people, they might well be glad to say nothing. Again, a sufficient export duty on iron ore would speedily stop the stream of wealth now pouring from certain back districts of ours into the States of New York and Ohio, and force the erection of furnaces on Canadian ground. But still it has to be asked: Has our Government courage enough, and is public opinion with us enlightened enough as yet, for this further step in the patriotic path of National Policy? Time will tell.

AGRICULTURAL DEPARTMENT REPORT.

Although the above report, which has just been issued, emanates from a Department which is called that of Agriculture, it yet contains much matter of interest to those who are engaged in manufactures, whether as employers or employed. We turn first to the figures relating to immigration, and find the

following comparisons of total arrivals, in the year named, of immigrant passengers and immigrant settlers, and also of the number remaining in Canada. The second column gives the total arrivals, and the third the number of those who declared their intention of remaining in the country:—

1874	80,022	not given
1878	40,032	29,807
1881	117,016	47,991
1882	193,150	112,458

We are at once struck with the great falling off in 1878, near to the close of the depression period, and the great advance subsequently, after the N. P. and the opening up of the North-west had begun to tell on the country's prospects. A great deal has been said about the influx of old country mechanics, who come here on assisted passages to take the work from Canadian mechanics; but the figures do not show that this has taken place to any great extent. We have the classification of arrivals at the port of Quebec only, which we suppose may fairly be taken as representing the whole, and we find that for the years named the trades and occupations of the adult steerage passengers landed at the port of Quebec were as follows:—

	1878.	1880.	1881.	1882.
Farmers	283	589	310	3,286
Laborers	2,839	10,184	13,890	16,620
Mechanics	897	903	330	1,420
Clerks and Traders...	26	54	12	17
Totals.....	4,045	11,730	14,542	21,352

The following statement, taken from the report, is of special importance from a business point of view:

CUSTOMS ARRIVALS—CASH VALUES.

The Customs arrivals in 1881 were 15,404. The Customs arrivals in 1882 were 30,554. The Minister calls attention to the fact that whilst in 1881 the number of Canadians reported in the Customs returns was 9,821, it last year reached 20,857, or more than double. The very large influx of settlers from the United States, the major part of whom were returned Canadians, is undoubtedly due to the prosperous times which have prevailed, the great stimulus which has been given to manufacturing industries, and the opening up of new lands in the North-west. The value of the personal effects of the 30,554 entered at the Customs houses as settlers' goods amounted in 1882 to \$925,612, against \$437,425 in 1881.

The value of cash and effects brought in by immigrants during the year is thus reported at the various agencies:—

Halifax.....	\$ 286,520
St. John.....	49,830
Montreal, via U. S. ports	245,600
Ottawa	24,800
Kingston	110,288
Toronto	1,020,230
Hamilton.....	123,141
Total	\$2,245,889

To the above figures should be added the amounts of money brought in in 1882 by other arrivals reported at Customs and not going through the agencies, viz:—

Reported at Agencies	\$2,245,889 00
Reported at Customs	925,612 59
In all.....	\$3,171,501 59

Besides this very large amount in money and property, a large amount unascertained, and which it is impossible to approximate, was brought into Manitoba. In addition there were the very considerable values in tools, implements, and effects.

Judging from the opinion expressed by bank managers and others conversant with exchange, the amount of money taken to Manitoba by intending settlers during 1882 was very considerable. It was stated by a banker that \$8,000,000 were on deposit in Winnipeg, which had been taken in for investment before the middle of the year. Taking the lowest calculation, half of the amount specified was brought in from abroad, and adding this to the cash and value of effects actually ascertained in the other provinces, the sum of \$7,171,502 would make a moderate estimate as new capital in 1882.

From the portion relating to census statistics the following items are taken. In 1871 in the four old provinces the population of cities and towns of over 5,000 inhabitants comprised 12.3 per cent. of the whole population. In 1881 the percentage of such city and town population in the four provinces was 15.7 per cent. of the whole.

In 1871 there were in Canada, as then constituted, 20 cities and towns of 5,000 inhabitants and over, with a total population of 430,043. In 1881 there were in Canada, as now constituted, 37 such cities, having a total population of 660,040.

The country's industries in 1871 and 1881 respectively, are thus compared:—

Capital invested.	1871.	1881.	Increase per cent.
The old Provinces	\$77,964,020	\$158,776,181	103.6
Manitoba, B.C., and the Territories.	—	4,440,666	—
Grand Total		\$165,302,623	

Prince Edward Island, not included in 1871, stands in 1881 for \$2,085,776. But in the increase per cent. this is not counted.

Value of Products	1871.	1881.	Increase per cent.
The old Provinces	\$221,617,773	\$299,740,112	35.2
Manitoba, B.C., and the Territories	—	6,535,748	—
Grand Total		\$309,676,078	

Prince Edward Island, not included in 1871, stands in 1881 for \$3,400,208. But this is not counted in the increase per cent.

The Report is on the whole a highly satisfactory exhibit, giving premonition by facts and figures of the great future in store for the Dominion.

THE CANADA ROLLING STOCK COMPANY.

Seventeen years ago, when the basis of Confederation was being laid down by statesmen representing the four Provinces, a reduction had to be made in the customs tariff of old Canada, as a concession to free-trade public opinion in Nova Scotia and New Brunswick. Another and perhaps a more potent reason was, the quiet unofficial dictation of the Imperial Government and the financial magnates of London together; but still the popular drift down by the sea in favor of free trade had a considerable share in forcing the change. It does not seem to have then occurred to people down there to reflect that they, with their abundance of coal and other conveniences for manufacturing, should have been the first in all British North America to establish protection for the purpose of building up home industries. Had these Provinces done this when Quebec and Ontario made their first attempt in 1858, they, instead of the latter, would have been headquar-

ters of protection and of manufactures in 1866, and not even the dictation of London, and Sheffield, and Manchester all together would have sufficed to force a change. By the backwardness of the Maritime Provinces in coming on to the right track, ten or twelve years of progress were lost to the Dominion.

But it is never too late to mend, and the Maritime Provinces, having once fairly got a taste of the benefits of the National Policy, are now entering upon the race with great vim and vigour. Looking at their superior advantages, we can imagine them wondering to-day what it was that hindered them from establishing manufactures by protection a quarter or a third of a century ago, before the thing had been agitated to any extent in either Quebec or Ontario. One of the latest signs of the times is the new enterprise of the Canada Rolling Stock Company, with its works at St. John, N.B., which bids fair to take a front rank among similar ventures in the Dominion. Particulars may be seen in the prospectus, which is published on another page. Mr. Marshall, speaking for the Company, shows that excellent steam and smith coal can be landed at the company's works at \$1.55 to \$1.80 per ton—the equivalent of which costs at similar works in the Upper Provinces \$6 to \$7 per ton. (These latter figures, quoted from the *St. John Sun*, are slightly exaggerated, but the substantial truth of a very great advantage over the west in respect of cheap coal still remains.) It is further pointed out that the market for rolling stock is not a matter of speculation. It exists and is a certainty. With 10,000 miles of railway in operation in the Dominion, and increasing at the rate of 1,000 miles a year, the works now in operation in Canada are wholly unable to supply the rolling stock, the Government and private companies being *compelled* to import locomotives and cars to an extent that should make Canadians ashamed of the existence of such a state of things. It is claimed that there is no city in Canada better situated for such a manufacturing company than Saint John, and there is no locality in Saint John with greater advantages than the site which has been secured for the Works of the Canada Rolling Stock Company. The site has a frontage of 440 feet on Sidney and Charlotte Streets, and a depth of 380 feet adjoining the Intercolonial Railway, and 400 feet adjoining the property of the estate of the late John Fisher, Esq. The grounds have an area of about four acres. The company will start with a capital of \$80,000 at the outset, shares being \$100 each, to be sold in blocks of ten shares each. Power is taken to increase to \$600,000. The first call of 25 per cent. is made payable June 1st, 1883, and 25 per cent. calls will be made at not less than every three months until the whole is paid in, those shareholders who anticipate the date of call being allowed interest at 6 per cent. per annum for such anticipated time. We wish the enterprise every success, and hope to hear of the works being in operation at an early day.

THE BANKRUPT LAW PROBLEM.

Elsewhere we copy a brief summary of the provisions of the new English bankruptcy bill, now before the Imperial Parliament. Concerning a recent debate upon the bill, the *Pall*

Mall Gazette says that it was "the best bankruptcy debate in Parliament for the last fifty years." There was, it is said, a discussion of principle in a style that was not dreamed of in 1869. The leading objects of a bankruptcy law, as affirmed by the Government in the debate, were two—the quick distribution of a bankrupt's assets among his creditors and the investigation of the bankrupt's conduct, in the public interest, with a view to the punishment of those who have been guilty of misconduct, and generally to make bankruptcy disagreeable and painful for the debtor. One outcome of the debate was to put to rout all who argued, first, against the officialism which a closer investigation into the conduct of bankrupts would necessitate; second, that bankruptcy is only an affair between debtor and creditor, and, third, that no bankruptcy law at all is necessary, debtors being sufficiently punished by being made permanently liable for debts. Should the Imperial Parliament succeed in passing a satisfactory law on this very difficult subject, it may encourage the Canadian Parliament to try again, in spite of discouraging experience heretofore. And perhaps the English measure may help materially to light us on our way.

NEW ENGLAND MILL OPERATIVES.

The following paragraph we find in a New York paper: "The history of New England manufacture, in the matter of a change of operatives, is beginning a new chapter that is not unlike some that have preceded it. The mills were at first filled by Yankee girls and boys, who found the work more profitable and congenial than farming. The males gradually became overseers, and the females retired almost altogether from the factories. The extension of our railroad system into Canada opened up a new source of labor supply, and at present the great majority of the mill hands are Canadians of French and Irish parentage. But the employers have now turned to a new field, and are importing largely from Europe."

We suppose by "mills" is meant the establishments devoted to textile manufacture, and if this is so the statement contains a mixture of truth and untruth. The first mill hands naturally were the young men and young women of Yankee birth. Sixty years ago, when cotton manufacture sprang into being in Lowell, the foreign born population was very small. With the growth of the industry in Lowell, Lawrence, Fall River and other places now largely interested in operations of this sort, there came a demand for hands which the available crop of Yankee boys and girls was not large enough to supply. Foreigners were introduced, it began to be considered unfashionable for an American boy or girl to learn a trade, and so gradually the latter drifted out of the business, but the "males" did not become overseers to any great extent. When a manufacturer wanted a really good overseer for a department he has commonly got him from Europe. Of course there are exceptions, but our early textile manufacture was not conducted in a way calculated to educate young workmen for responsible positions in the mills.

As to the remark that at the present time the great majority of the mill hands are Canadians of French and Irish parentage, we must offer an amendment to the effect that such is the case in some localities. Work people from England, Ireland and Scotland have long and in great numbers been employed in our great textile manufacturing cities, and it is nothing new for employers to import their labor from Europe.—*Boston Manufacturers' Gazette*.

Mechanics and Engineering.

ELEMENTARY PAPERS FOR YOUNG MECHANICS.

V.—THE INCLINED PLANE.

It is well known that the steeper a hill, the more difficult it is to push or pull a load up it, and that by lengthening out the slope, by means of a winding road, a mountain may be crossed which stands so high and so precipitous that it would be impossible to cross it by the shortest route.

These facts are illustrations of the mechanical principle involved in the "Inclined Plane."

The inclined plane is a flat surface inclined to the horizon, on which weights may be raised. The advantage of using it being that by a weight descending vertically a greater weight may be made to ascend the slope, or by the exertion of a force equal to a descending weight, the same result may be attained.

The contrivance does not increase the force, as a little consideration will make plain. In figure 5, the line ZY is the



inclined plane, and the XZ is the vertical line. It will be observed that the length of the line ZY is greater than the length of the line XZ, and ZY and XZ are virtually arms of a lever, so that the smaller weight moving a greater distance will overcome a heavier weight moving a shorter distance.

In figure 5, let W represent the weight to be raised the height XZ, by means of a weight P, which is connected to it by a cord passing over a pulley at A, above the point Z. When W is at Y, the foot of the incline, P is at Z, and when W reaches Z it will only have been raised a distance equal to XZ, while P will have fallen a distance equal to ZY. Leaving friction out of the count, $W \times XZ$ will be equal to $P \times ZY$.

This explains why it is that the more gradual the slope, the less the power required to raise the weight, but the longer the distance through which that power must be exerted.

In our illustration the power is supposed to act on the weight in a direction parallel to the inclined plane, and if the weight be 720 pounds, and the inclined plane 24 feet and the vertical height 4 feet, then the power $P = 720 \times 4 \div 24 = 120$. That is, 120 lbs. descending vertically would draw 720 lbs. up the slope. The length of the base line XY is proportional to another element, viz., the pressure of the weight on the inclined plane.

As ZXY is a right-angled triangle, the lengths of the lines may be readily determined when any two of them are known. As the square of ZY is equal to the sum of the squares of ZX and XY.

The three sides of the triangle are proportional as follows—
The inclined plane—to the weight: The height—to the power:
The base—to the pressure on the plane.

When the power is applied in any other direction, such a parallel to the base, or at some other angle, then the conditions are altered, and a difference in the proportion of the power to the weight arises.

When the power acts parallel to the base the sides of the triangle are proportioned as follows:—The base—to the weight: The height—to the power: The inclined plane—to the pressure on the plane.

The WEDGE is simply a double form of inclined plane, or two inclined planes with their bases joined.

The wedge is generally employed to separate bodies by force; the force being applied either by blows or by direct pressure on the back of the wedge, though sometimes it is applied to the point of the wedge by pulling.

The motion of the wedge when employed in separating two bodies must be in the direction from the point towards the back, and the power obtained is in direct proportion to the length of the wedge and inversely as the breadth.

That is, the smaller the angle at the point of the wedge, the less force will be required to be applied to the wedge to force it in.

The same principles which determine the proportions of an inclined plane apply to wedges, although it is usual that the inclined plane is fixed and stationary and the weight and force travel upon it, while a wedge is made to move.

In case of a direct steady pressure being applied to a wedge, it is required to find what weight may be lifted or what amount of resistance may be overcome. Rule—Multiply the power by the length of the wedge, and divide by the thickness; the quotient will be the weight.

The less power moving a greater distance overcomes a greater weight moving a less distance; which principle was found to be the foundation for rules regarding the lever, the inclined plane, and now, also, the wedge. All students of mechanics should endeavor to get this idea clearly fixed in their minds and act upon it in their daily work, as it will save them from many a mistake. It cannot be too strongly impressed upon their minds, that every effect must be the result of some adequate cause, and no machine or mechanical contrivance can produce or increase power.

The SCREW is another modification of the inclined plane, but we must reserve it for consideration in a distinct paper.

HOW TO USE EMERY WHEELS.

The following hints on how to use emery wheels are taken from the price list of the Hart Emery Wheel Company, Hamilton:—

Choose a Grinder proportioned to the Size of Wheels. (See our Price List of Grinders, pages 8 to 13.)

Always use Collars on Each Side of the Wheel. The diameter of the collar ought to be at least one-fourth that of the wheel.

Take as much care of the Grinder as you would of a Lathe, Planer or Drill.

See that the Wheels are True and Balanced before running them.

Keep the Wheels True. For large wheels a Diamond Tool is indispensable. The Emery Wheel Dresser will keep small wheels true, and will be found exceedingly useful to clean out particles of metal from the surface of any wheel. For further information about Dressers, see page 16.

Run the Wheels at the proper speed. Our price list and cards all contain a list of the proper number of revolutions of mandrel for all sizes of wheels. A rim speed of 5,000 to 5,500 feet per minute is by common consent decided to be the most effective.

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FREDERIC NICHOLLS,
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Editorial Notes.

The office of the **CANADIAN MANUFACTURER** has been removed to Room No. 5, Mechanics' Institute, corner of Church and Adelaide streets. One stair up, turn to the right.

Hat-making in the New York State prisons has been abolished by the Legislature; and among the hatters both masters and men are jubilant.

A circular from the Ontario Bureau of Industries has been issued by Mr. Blue, asking for information to be used in making up the first monthly report for the season, which it is desired to have ready by about the 10th of May.

A Winnipeg despatch says:—The City Council gave the fire limit by-law the six months' hoist last night (17th inst.). They are determined not to be bulldozed by insurance underwriters, who made no reduction in rates after the equipment of a paid fire brigade and water works, nor would they give assurance of a reduction even with the passage of the fire limit by-law now.

Among other important commercial law decisions reported in our legal columns will be found that of Mr. Justice Rainville, given at Montreal last week in the McCready-Seath case, which has created much interest in business circles there. We make note also of another decision at Montreal by Mr. Justice Jetté, on the question of compelling a bank manager to produce his bank books.

A remarkable feature in the butter market this spring is that prices of this article are higher in Canada than in the States. Western States butter has been brought in for consumption in Toronto, paying four cents duty. In Montreal stocks are low, even the inferior grades being scarce, a most unusual circumstance. Some short time ago Canadian holders unloaded pretty largely upon American operators, who were then eager buyers. The new butter will, however, soon begin to tell on the market.

The Dominion Government certainly did right in refusing to change the law, even to the small extent asked for, so as to permit the temporary warehousing of foreign whiskey in Canada, for the avowed purpose of defeating the American excise laws, for a time. And now Washington experts say that the American revenue will get the prompt payment of fifty million dollars by our refusal, that is, of course, if some other way of evading the law be not found to answer. At last accounts Bermuda had been selected by the whiskey operators as the favored spot, and a brisk business in shipping the extract of corn and rye to Bermuda and return was going on.

Concerning the Levett-Muller system of electric lighting, a trial of which was made recently at Mr. Perkins' Toronto Engine and Boiler Works, corner of Front and Princess-sts., under the direction of Mr. Hamburger, one of our daily contemporaries says:—This is the first display of these new lights made in Canada, and much interest was manifested in it. One of the interesting features about the lights shown last night was that different lights on the same wire could be extinguished or used at will by simply turning on the electricity as one would turn on gas when he wished to use it. These lights were small and gave a perfect, steady light. A larger light was also shown outside the factory.

Since our last issue it has been cabled from London that an arrangement had been made there between the Grand Trunk and the Canadian Pacific Railways, in virtue of which the war for some time carried on between these rival powers was to cease. But later accounts tell of a rupture of the bargain having occurred, owing to objections raised by the C. P. R. authorities in America. The *Globe's* London correspondent says that the trouble arose in connection with the question as to what was to be done with the Quebec and Ottawa Railway; but some people are of opinion that Vanderbilt, between whom and the Grand Trunk a bitter war is going on, has vetoed the arrangement, and that this is really where the "hidden hand" is to be looked for.

Here is an item of practical interest enough to be made special note of:—Some one in France has made an estimate of the average cost of living among the working classes in that country, and he finds that the expenditures of sixteen families, fairly representative of different orders of laboring people, varied from \$222 to \$600 per annum. House accommodation, as a rule, claimed 15 per cent. of the total expenditure, clothing 16 per cent., and food 61 per cent. 8 per cent. being reserved for miscellaneous purposes. In the matter of food he found that the highest expenditure registered was 72 per

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cent., and this item of expenditure was thus distributed ; 33 per cent. for bread, 14 per cent. for meat, 13 per cent. for milk, 24 per cent. for groceries, and 10 per cent. for miscellaneous aliments. The greatest expenditure upon bread in any individual case was 48 per cent.

No fewer than fourteen great exhibitions are in contemplation for the present year. Only two of these will be strictly universal, namely, those to be held at Amsterdam and Calcutta. The majority will be expositions of special arts and industries. Minerals and metallurgy will be shown at Madrid, opening May 1, and wines and agricultural products at Lisbon. Works of art will have two special displays, one at Munich and the other at Rome. An international exhibition of electric appliances will open at Vienna, Aug. 1. The world's fisheries will be represented in London. The Zurich fair will present products and manufactures, and St. Petersburg will revel in fruits and flowers. On our western continent, California will invite attention to San Diego's ter-centennial, and Venezuela follows suit with a similar commemoration at Caracas. And then there is the great Foreign Exhibition at Boston, which opens Sept. 1, to continue three months. There is yet another, the Chicago Railway Exhibition, in June.

Concerning the two following items, which we find in the *Mail's* Montreal correspondence, we should say that, while making a note of them, it may be as well to take them with several grains of allowance :—Cotton factories are multiplying here. Mr. Victor Hudon, who has already established two, and profitably, it is said, has severed his connection with them, and is now engaged in forming a company for a third at Hochelaga. Experienced men in the manufacture do not endorse the promoter's craze, as it is said there is enough it not to spare of this kind of factories for the present in Canada. It is judged that people will be cautious in making investments in new enterprises.—A great deal of French and Canadian capital was expended a few years ago in erecting beet-root sugar factories in this province. It turned out, however, a hopeless failure for those who were induced to invest their money in the enterprise. Mr. Senecal has lately bought one of these factories at Berthier, at a great sacrifice to the original dupes, and is about to open again under new conditions.

Glancing over items of American railway news we see frequent mention made now of the "West Shore Road," but probably very few Canadians know exactly where this road is located, or why it is called the "West Shore." Starting from New York, it runs up the *west side* of the Hudson river to Albany, and thence west to Buffalo, and is intended to compete with the Vanderbilt roads—the Hudson River and New York Central. The starting of this new enterprise, right alongside of Vanderbilt's strong and well-established New York system of roads, is justly considered one of the railway events of the day. The route is from Weehawken along the western Shore of the Hudson River to Athens and Albany, through the Mohawk Valley to Utica and thence to Syracuse, Rochester, and Buffalo.

Among our exchanges we are glad now to welcome a new one, the *Hamilton Evening Tribune*. It is a vigorous, spicy well-written sheet, full of news and interest, and up to the time. In politics it is independent, while taking a pronounced position as a temperance organ. Mr. J. T. Hawke, formerly of the *Globe*, is managing editor.

DUTIES ON DRY GOODS.

WINCEYS, DRESS GOODS, COSTUME CLOTHS, &c.

A DEPUTATION OF DRY GOODS MEN WAITS UPON THE FINANCE MINISTER—CHANGES ASKED FOR BY IMPORTERS.

The *Mail* has the following from its Ottawa correspondent under date of April 11 :—A large deputation, consisting of delegates from the Boards of Trade of Toronto and Montreal, representing more particularly the interests of dry goods importers, arrived in the city to-day on business of great importance to the trade. Their names are Messrs. F. Wyld, of Wyld, Brock & Co., T. Ogilvy, of Ogilvy & Co., J. W. Simpson, of Simpson & Robertson, P. H. Burton, of Caldecott, Burton & Co., G. McMurrich, of Bryce, McMurrich & Co., W. J. McMaster, of McMaster & Co., all of Toronto ; A. F. Gault, of Gault Bros., J. P. Cleghorn, of McKenzie & Co., Jas. Siessor, of Jas. Johnston & Co., W. Cassels, J. Hodgson, of Hodgson, Sumner & Co., J. A. Robertson, of Robertson, Robertson, Linton & Co., all of Montreal ; and J. W. Russel, of Ottawa.

An interview was obtained with the Minister of Customs on the subject of proposed changes in the duty on dry goods, the desire being to simplify the wording of the tariff, so that appraisers in small towns might have no difficulty whatever in determining the duty on articles which come before them. The trade urge that they have been largely frustrated by decisions which have been given by appraisers outside of large business centres, in consequence of the multifarious duties of those gentlemen. The views of the deputation were laid before Mr. Bowell, after which a committee, consisting of Messrs. Burton, Wyld, Cleghorn, and Gault, was appointed to wait on the Minister of Finance at his residence, where the subject was again discussed. At his request the deputation submitted their views in writing, suggesting that the following changes in the tariff should be made :—

Oilcloths.—It is suggested that to prevent irregularities, there should be no exception made in favor of any class as to the rate of duty, and that all pay a duty of 30 per cent.

Yarns.—Two-ply and other yarns, proposed to be made 15 per cent. *ad valorem* for manufacturers. It is suggested that to prevent irregularities, such as occurred in the sail duck question, no exception be made, and that all pay a duty of 20 per cent. and 7½c. per pound specific as at present, thus fostering the manufacturing of such yarns in the country.

Winceys.—Inasmuch as the Government does not wish to increase the duty on these goods, but merely to prevent irregularities, and seeing that the tariff, as at present arranged, is now well understood, it is recommended that the duty should continue as it is now, for all colored winceys, whether plain or twilled, such as are used for dress goods, and composed either wholly or three-fourths of cotton, namely 20 per cent. *ad valorem*.

Dress and Costume Cloths.—The department not wishing to increase the duty on fancy dress fabrics so long as those goods that can be used for shirtings or substituted for tweeds, coatings, or flannels, are subject to the rate of duty levied on cloths

or woollens of 20 per cent. *ad valorem* and 7½ cents per lb., suggest that the class read "Dress or costume cloths, not exceeding 25 inches in width, and not exceeding four ounces to the running yard, 20 per cent. *ad valorem* : and that dress or costume cloths exceeding 25 inches in width or exceeding four ounces to the running yard, 20 per cent. *ad valorem*, and 7½ cents per pound, providing that the following goods, now in special class and section, and paying 20 per cent. *ad valorem*, remain at that rate and duty, namely,—Cobourgs, baratheas, crapecloth, Henriettas, paramattas, Venetians, Victoria cords, damasks, reps, satteens, Italian cloths, lustres, alpacas, glaces, and cashmeres.

Bed Comforters and Quilts to pay 27½ per cent. if printed cottons are increased to 27½ per cent.

Printed Cottons.—The trade recommends a continuation of the present rate of duty, viz., 20 per cent. *ad valorem*, believing that the production of these in Canada at the present time is an undertaking that cannot be made to pay from the vast variety of patterns required; and if the proposed rate of duty, 27½ per cent., cannot be altered, that the time for its coming into force be extended to March 15, 1884.

Dyed Cottons.—That dyed satteen, jeans, cambrics, coutilles, silesias, casbans, &c., be 25 per cent., as they can be successfully and profitably made in this country under that rate of duty.

Bagging.—Under the former tariff allowed to be imported free for purpose of manufacturing, should not be exempted, as it leads to fraudulent importations and entries, as in the case of tent duck and canvas.

Hosiery.—The items to be transferred from section 49, now paying 20 per cent. and 7½ cents per lb., to section 50, to pay 25 per cent. and 10 cents per lb., along with clothing, to be woollen hose and socks only, which are now being made largely here by knitting machines. The following items to remain as in section 49, namely, shirts and drawers, jerseys, Cardigan jackets, polkas, ladies' clouds, scarfs, mufflers, bodices, infantees, sashes, mitts, garters, cuffs, shoulder shawls, and such goods known in the trade as fancy hosiery or knitting goods, 20 per cent. *ad valorem* and 7½ cents per lb., as at present.

The unanimous desire of the deputation is, if the Government make any changes, that simply *ad valorem* duties be levied in place of *ad valorem* and specific duties combined, as it would ensure uniformity in the rate of duty collected at all the ports. A reduction in duty on prints was asked for on the ground that a great variety of this article was demanded, and the imports are very large, Montreal alone last year bringing in 5,929,945 yards. It is questionable, however, whether any reduction will be made, as a manufactory for these goods is about to be started at Magog, P.Q.

TARIFF AMENDMENTS.

The following amendments to the tariff changes mentioned in the Budget Speech were announced by the Minister of Finance on Tuesday, 17th inst. :—

DRY GOODS.

Buckram.—The proposed duty of 10 per cent. on buckram is stricken out.

Cotton Duck.—The importer of cotton duck used for sails of ships or fishing boats is to be entitled to a drawback equal to the duty paid thereon, less five per cent. of the value of the article.

Dress or Costume Cloths.—Serges and similar fabrics under twenty-five inches wide, and weighing not over three and a half ounces per lineal yard, either or both, twenty per cent. *ad valorem*. Winceys to remain as they are in the present tariff.

Jeans, Coutilles Cambrics, Silesias, and Casbans.—The duty is to remain as at present, and not be subject to the duty of

27½ per cent. imposed on printed and dyed cottons after January 1st, 1884.

Oilcloths.—The item imposing a duty of 15 per cent. on oilcloths, or cloth enamelled, stamped, painted, printed, or similarly prepared, when imported by trunk or valise manufacturers for use in their factories, is struck out.

Fancy Yarns.—The item is also dropped proposing a duty of 20 per cent. on fancy yarns of wool or worsted in two or more plies, when the same are combined in different colors, and mohair yarns in white or in any color, when the same are imported by woollen manufacturers for their own use, in making fancy tweeds.

OTHER ARTICLES.

Agricultural Implements.—Mowing machines, self-binding harvesters, harvesters without binders, binding attachments, reapers, sulky and walking ploughs, and parts of the same, harrows, scythes, horse and hand hay rakes, garden rakes of any material, grain, seed drills, spades and shovels, hoes, hay-straw, manure, spading, and mining forks, and all similar articles, and parts thereof, thirty-five per cent. *ad valorem*. Portable machines, portable steam engines, threshers, and separators, horse powers, portable saw mills, and fanning mills, and parts thereof, thirty-five per cent. *ad valorem*.

Carriages.—Buggies of all kinds, farm waggons, and all other carriages not enumerated, railway freight and farm carts, pleasure carts or gigs, and similar vehicles, 35 per cent. *ad valorem*. Railway cars and sleighs, cutters, wheelbarrows and hand-carts, 30 per cent. *ad valorem*. Parts of carriages or other manufactured articles shall be charged with the same rate of duty, on a proportional valuation, as that chargeable upon the finished article.

Glove Leathers.—Viz., buck, deer, elk, and antelope, tanned or dressed, colored or not colored, 10 per cent. *ad valorem*.

Kid, Tanned or Dressed.—The proposed change to a duty of 15 per cent. on kid, tanned or dressed, and colored or not colored, is dropped.

Jellies and Jams.—To be five cents per pound, not six cents.

Vaseline in bulk.—To be four cents per pound, not five cents.

Files and Rasps.—Thirty-five per cent. instead of thirty per cent.

All Medicinal Preparations.—Whether chemical or otherwise, usually imported with the name of the manufacturer, shall have the true name of the manufacturer and the place where they are prepared permanently and legibly affixed to each parcel by stamp, label, or otherwise, and all medicinal preparations imported without such name so affixed shall be forfeited.

The *Mail's* despatch says :—It is satisfactory to find that in all the changes proposed the Minister of Finance is assured that the people of Canada will be supplied with as good an article as they can get from outside, and as cheap. Another satisfactory indication is, that in preparing the tariff changes the Minister has received information of the establishment of new manufactories here and there all over the land. The duty on agricultural implements and farm waggons is not to go into operation till the 1st of May, the object being to secure to the country a chance for the importation of these articles, if the manufacturers of Canada find themselves unable to meet the demand for the present season. After 10 o'clock, Mr. Colby spoke in favor of the duty of 27½ per cent. to be placed on printed or dyed cottons, except jeans, coutilles, silesias, and casbans, and explained that arrangements were in process of completion for the erection of a large factory employing a thousand or twelve hundred operatives to manufacture prints. This fact illustrates the progress manufacturers are making. A few years ago capitalists were afraid to venture their money in cotton mills. Time has proved the value to the country of the tariff, and now capitalists propose to invest a million and a half of dollars in a totally new enterprise for this country, making another step in advance.

American Correspondence.

TEXTILES AND THE IRON TRADES—LETTERS FROM NEW YORK, PHILADELPHIA BOSTON AND PITTSBURGH.

(From Our Own Correspondents.)

NEW YORK, April 18th, 1883.

The reports of the leading railways of the country indicate the continuance of the same favorable conditions that have surrounded railroad interests for several months. The improvement is to be noted particularly in the great north-west. The snow blockades have worked against them, but notwithstanding this the traffic for the past quarter has been very large, the increase being \$1,391,572. There is an immigration from the Eastern States to Iowa, Minnesota, Dakota and Montana, which point to these States as being the most desirable for men with energy and capital who desire to engage in wheat culture.

Investors are watching the railroad returns with great eagerness, as they afford more reliable indications of the tendency of the time than any other. Railroad building this year has been backward, the mileage thus far reported being 842, as against 1545 for same time last year.

The volume of business in iron and steel shows a moderate improvement, but it is far from what dealers expected. This is due to the declining tendency in prices and fear of over-supply. Real estate is advancing steadily in the city, and with improvements New York will give all competing centres a hard race in the struggle for commercial supremacy. The Railroad Commission is now engaged in investigating some of the alleged violations of the spirit of the law. The trunk line managers and the merchants are at sword's points and are unable to come to any sort of satisfactory terms. The two iron exchanges will unite in a short time. All the other exchanges are well attended, and the spirit of commercial enterprise which has marked New York as above all other cities is still alive. Immigration promises to be much larger than last year. The trunk lines agree upon the division of this patronage, so that there will be no cutting of rates.

Our information by cable from abroad as to iron and steel shows that less will come during the third quarter of the year than was expected when the tariff legislation was passed. The decline in cost of iron and price of labor will defeat the purposes of those who anticipated heavy importations.

PHILADELPHIA, April 18th.

The Pennsylvania iron trade has developed a little improvement, partly due to the low prices which have prevailed for a week past, and partly to the fact that stocks have declined to very low proportions in hands of consumers. Large sales of steel rails have just been closed at about \$38 to \$38.50. Numerous inquiries are in hand, and makers say that there is no difficulty in placing rails at \$38, but they do so only in extreme cases. The mills are pretty well supplied with orders, at least sufficient to carry them into the summer, and there will be no very active competition for a few weeks. The bar mills throughout the State are working on a moderate number of orders at \$2 to \$2 1-4 for refined iron, the lowest prices which have prevailed since 1878. There is a very active demand for pipe iron and pipe of all kinds and cast. The smaller

municipalities throughout the States are supplying themselves with gas and water facilities, and are able to tax themselves for these luxuries, and hence manufacturers of gas and water pipes are receiving a patronage which helps to stimulate the iron trade. The blast furnace industry is not in a very vigorous condition. Prices are weak and a further decline is not improbable. The American iron trade is now threatened with what it has long foreseen, namely, over-production, and hence there is considerable anxiety displayed as to how this danger can be averted, and the making of iron and steel maintained upon a remunerative basis. The demand for steel for agricultural purposes is improving, and with the rapid extension of the agricultural area the steel works will probably have a fair amount of business to do, and prices will be maintained about where they now are. Wages have declined in the east, and labor troubles are not probable. The coal trade is flourishing from the operators' standpoint, restriction is maintained and the supply is kept in proportion to the demand. A few new collieries are to be opened this season, and with an increasing western outlook the coal companies expect to have a year of prosperity and a production of over 30,000,000 tons.

BOSTON, April 18th, 1883.

Commercial and industrial reports from all leading centres indicate that the wave of prosperity which has been enjoyed for four years past will very likely continue at least one more. The prospects for large crops are very favorable, and the agricultural reports are of an encouraging character on both sides of the Mississippi. These facts go far to stimulate the confidence which is a necessary pre-requisite of commercial activity. The reports from the principal clearing houses show an improvement, the figures being for last week \$1,000,000,000, against \$835,000,000 in round numbers for the previous week, but a decrease of 13 per cent. as compared to same week last year, but it must be remembered that prices have weakened and values are near their legitimate basis.

Mining properties are well represented in this city, and investors are finding more encouragement from recent returns of newly developed properties. It is a mistake to suppose that capital is backward. The only trouble arises from the uncertainty as to the character of investments. Property of assured worth, under the control of men of known character, will easily command all the money necessary for its most thorough development.

The wool market is steady in all its branches, but prices continue in favor of buyers, who decline to purchase more than is required for weekly consumption. The figures given last week show that while the consumption is large it is mostly designed to carry consumers from week to week. The boot and shoe business is moving along with a great deal of steadiness. There is considerable complaint concerning low prices. In the leather trade manufacturers buy closely to wants. The India rubber market is exceedingly dull. More firmness is shown in the provision market than usual. In iron and steel there is very little new to report. The machine shops and textile establishments of the State are well supplied with orders, and especially from the south, where enterprise is at work and where capital is seeking more profitable employment than is afforded in the coming channels in this State.

PITTSBURGH, April 18th.

Our manufacturers held a meeting with the representatives of the Amalgamated Association on last Saturday, and after a four hours' discussion failed to arrive at any satisfactory terms. The workmen, as you will remember, inaugurated a strike last year for an advance from \$5.50 to \$6 per ton, but failed, and wages were continued at \$5.50. They now desire that the same rate of wages be continued, but the manufacturers are unwilling to do so, and assign as a reason for a reduction the following facts: First—tariff reductions increase competition. Second—the supply of iron is relatively greater than a year ago. Third—the demand has fallen off. Fourthly, and chiefly—the price of iron has declined from 2 1-2 to 2 per pound, and the employers desire that wages should therefore decline from \$5.50 to \$5 per ton. Another meeting will be held this week, and perhaps one or two others, but as the manufacturers are determined upon a reduction of ten to twenty per cent., and as the workmen will not agree to such a proposition, a restriction of output is probable. This is contemplated, in fact, by the manufacturers, and they are prepared for a restriction of output, either by a strike or otherwise. The ore companies still refuse to make terms with consumers, and prices of lake ore are quoted at \$8 at Cleveland. A number of furnaces are out of blast and will stay out. Bar iron is weak at 2, and is shaded to suit buyers when large orders are to be had. A good deal of plate iron is being made, but there is still a great deal of capacity awaiting employment. The coal miners are endeavoring to establish a board of arbitration by which strikes in future will be avoided, but their employers are not wise enough to meet them half way. The steel rail mills hereabouts are well supplied with orders at about \$40 per ton.

Railways and Shipping.

Captain Harbottle, of Hamilton, has been appointed Inspector of Hulls for Ontario, and Mr. Brunce, Point Levis, for Quebec.

From the 28th of March until the 4th of April thirty-seven car loads of merchandise, fifteen of lumber, fifteen of emigrants' movables, one of lime, and one of potatoes, were unloaded at Regina.

Recently a number of Russian Jews went west from Regina to clear the track. The captain of the gang, Mr. Kaufman, was with them. They worked well, and intend to take up land and become industrious citizens.

The Manitoba S. W. Railway was to have been opened to the boundary line on the 15th inst., and, as the Northern Pacific is in readiness to run regular trains over the line of the new route to be established, the South-Western will be the principal rail communication with the States.

The general passenger agents in Chicago at a meeting recently, resolved to discontinue the practice of allowing a commission or any other compensation to persons getting up excursions to points west. These trips are not a source of revenue, and the companies want them discontinued.

Operations have commenced by which, at a cost of \$1,250,000, New street station, Birmingham, Eng., will be converted into the largest railway depot in the world. It will cover a total area of 45,000 square yards, or over eleven acres, and will have three platforms, each 1,000 feet long.

The slipping of wheels on the rails has been a trouble, always, and a cause of excessive expenditure of fuel and wear and tear of engines. On a French railway it was discovered accidentally that the jet of steam from the cylinder cocks directed on the rail in front of the big wheel instantly stopped the slipping operation.

The *Morris Herald* says:—On Wednesday morning last General Manager Manvel, of the Northern Pacific Railway, accompanied by other officers of that road, passed over the South-Western on the way to Winnipeg. Their mission north is to interview the Canadian Pacific Railway authorities with reference to opening the line in full about the 16th April.

WINNIPEG, Man., April 9.—The construction of the western division of the Canadian Pacific Railway has been resumed. The company intend to complete the line to or near the summit of the Rocky Mountains, 960 miles west of Winnipeg, during the year, which will leave only 263 miles to complete the connection with the work now progressing rapidly from the Pacific coast eastward to Kamloops Lake, at present the end of the track.

The *Mail* of the 11th inst. says:—The Grand Trunk and Credit Valley railways have made preparations to receive and forward the anticipated large amount of freight and passengers during the coming months. Yesterday they despatched special trains through from Toronto to Winnipeg, at which place they are expected to arrive early Saturday morning. Freight rates on both roads have been considerably reduced, especially on household goods and live stock, and the advantages offered by the railways to emigrants are greater this season than ever before.

Chicago will be the great resort of railway men during the coming exposition. Among the conventions to be held in June are those of the associations of master mechanics, master car-builders, general superintendents, and street railway superintendents, while the civil engineers will make this their stopping place in going to and from Minneapolis. Probably no such gathering of railway men, engineers, manufacturers, dealers in railway appliances, inventors, and men of scientific tendencies was ever held as that which will be called out by the great exposition.

The *Gravenhurst Banner* says:—"We understand that Mr. Hickson, of the Grand Trunk, has decided to run a branch line to Gravenhurst with a view of getting a share of the large timber trade of this place. The intention of the company then seems to be to construct the chartered line of railway from Gravenhurst to Sault Ste. Marie and obtain the large Ontario grant, voted for this purpose some time ago. We think this information has come to us on the very best authority, and that a commencement of the work will be made in a short time. Every citizen will hail with delight the presence of the Grand Trunk here. Then it is equally certain that another line of railway will be built between Gravenhurst and Callendar on some point of the Canadian Pacific at Lake Nipissing. We anticipate that after all these lines will have a junctional terminus at Gravenhurst. Such a centre of railway distribution and such a concentration of railway transshipment and trade would be almost sufficient to build up a town of considerable size."

A Buffalo despatch says:—A special from St. Thomas conveys the gratifying intelligence that two construction trains began double-tracking the Canada Southern railway yesterday morning, (11th inst.), orders having been received to begin work and lay rails five miles each way from St. Thomas. One train began operations at St. Clair Junction and will work eastward, while the other proceeds westward from the Air Line crossing. Orders are that the work is to be completed as speedily as possible, but considerable difficulty is experienced in securing men. Instructions have also been given to construct eleven additional sidings on the western division, and when these are completed the road will virtually be double-tracked, as but comparatively few additional miles of steel will remain to be laid. This does not include the cut-off from Welland to Niagara branch, which will be intersected where passengers are now given a view of the cataract and rapids. When this piece of road is begun it will take but a very short time to build it, as there is no heavy grading to be done.

Financial and Commercial.

TORONTO, Thursday, April 19, 1883.

Bank shares have largely occupied the attention of the speculating fraternity during the past fortnight. The near approach of the time when the statement of the Bank of Montreal will be made and a dividend declared, has set both bulls and bears on the *qui vive*; and prophecies of a large dividend or a small one are circulated to put the market up or down, as the case may be. The course that may be taken by the leading bank of course excites all the more interest from the circumstance that it is likely to be more or less closely followed by the rest. Of late money has been more easily obtainable than before, on good security, but the demand for loans on collaterals has been comparatively slack. Both in Toronto and Montreal what is called a brokers' market prevails, the general public not contributing nearly as many adventurers, both able and willing, as was the case last year.

The following are the closing quotations on the Toronto Stock Exchange for Wednesday, April 18, compared with those of the same day two weeks before:—

BANKS	April 4.		April 18.	
	Asked.	Bid.	Asked.	Bid.
Montreal.....	200½	200	201½	201
do xd.....	.....	.....	198½	198
Ontario.....	112½	112½	115½	114½
Molson.....	.....	.....	123½	123½
Toronto.....	183½	183½	189½	189½
Merchants'.....	124	123½	125½	124½
Commerce.....	133½	133½	134½	134½
Imperial.....	140	139½	142½	142½
Federal.....	159	158½	160½	160
Domainion.....	201	200½	.....	.....
do xd.....	.....	.....	199½	198
Standard.....	114½	.....	116½	115½
Hamilton.....	114	.....	.....	114
MISCELLANEOUS.				
British America.....	.....	115	117½	115½
Western Assurance.....	150½	.....	147	145
Canada Life.....	.....	.....	.....	.....
Confederation Life Association..	.....	.....	300	.....
Consumers' Gas.....	.....	.....	.....	146½
Domainion Telegraph.....	.....	.....	90	.....
Montreal Telegraph.....	.....	.....	.....	.....
Lybeter Cotton.....	110	.....	104½	.....
Globe Printing Co'y.....	.....	.....	.....	.....
R. W. L. Co.....	63s. 6d	63s.	75s.	74s. 6d.
Ontario and Qu'Appelle.....	.....	194½	.....	194

The following are the closing quotations of the Montreal Stock Exchange for Wednesday, April 18, compared with those of the same day two weeks before:—

BANKS.	April 4.		April 18.	
	Asked.	Bid.	Asked.	Bid.
Montreal.....	200½	200½	202½	202
do xd.....	.....	.....	199	198½
Ontario.....	113	112½	115½	114½
People's.....	81	79	81½	79
Molson.....	125	120½	127	124
Toronto.....	184	183	189½	.....
Jacques Cartier.....	108½	105	.....	105
Merchants'.....	124	123½	125½	125
Quebec.....	.....	.....	.....	.....
Union.....	.....	.....	85	.....
Commerce.....	134	133½	135	134½
Exchange.....	155	149	152	147½
Federal.....	161	158	163	160
MISCELLANEOUS.				
Canadian Pacific.....	.....	.....	61½	60
North-West Land Co.....	63s.	62s. 6d.	75s.	74s. 6d

	April 4.		April 18.	
	Asked.	Bid.	Asked.	Bid.
Montreal Telegraph.....	120½	120	122	121½
Domainion Telegraph.....	.....	.....	.....	.....
Richelieu and Ontario Nav.....	71½	71	75	74½
City Passenger Railway.....	144½	143	145	143½
Montreal Gas.....	166	165½	168½	168
Canada Cotton.....	.....	.....	.....	.....
Dundas Cotton.....	90	88	91	.....
Ontario Investment.....	.....	.....	.....	.....
St. Paul M. & M.....	160	159½	169	.....

The advance in North-West Land shares continues the most remarkable feature in the stock market. On February 21st, shares with 80s. sterling paid up stood at 57s. asked and 55s. bid, in Toronto. On April 18th they stood at 75s. asked and 74s. 6d. bid. There has also been a great advance in St. Paul, Minneapolis and Manitoba Railway stock, which in Montreal stood at 134 asked and 133 bid on Feb. 21st, and at 169 asked on April 17th.

The bank statement for March 31st shows the following changes:—The cash reserves at the close of March were \$39,160,000 against \$38,892,000 at the close of February, an increase of \$268,000. The most important changes in the accounts, however, arise out of remittances of sterling in payment of fall importations. From this cause mainly, it is said, current discounts have increased \$1,823,000, and loans to commercial corporations increased \$128,000, making a total increment of nearly two million dollars. The overdue debts unsecured are up \$259,000, and these secured have increased \$31,000, as a consequence, it is to be inferred, of failures during the month, which were somewhat numerous. Loans on stocks and bonds have been contracted \$347,500. The condition of the foreign exchanges is hardly so favorable, but this result was to be expected in view of the heavy remittances made. The amount due to banks in the United States increased \$108,000, and those due from these agencies decreased \$300,000, making a net reduction of \$408,000 in the balance due. On the other hand, while the amount due to banks in Great Britain increased \$370,300, the amount due from these agencies increased \$366,700, so that the net balance was not materially disturbed. The *Montreal Gazette* says:—“The general deduction to be made from the statement is, therefore, that domestic trade has begun to vitalize with the approach of spring, as shown by the increase in circulation, while, on the other hand, large remittances in payment of importations have further enlarged the volume of discounts and reduced the balances due from abroad.”

The wholesale trade generally is quiet; with much expectation of a strong forward movement directly the season of summer activity has fairly opened. Accounts from Montreal are to the effect that a very large season's business, both in shipping and in trade generally, is confidently anticipated.

THE NEW ENGLISH BANKRUPTCY BILL.

A memorandum showing the general effect of the changes in the law proposed by the new Bankruptcy bill has been issued by the British Board of Trade. The memorandum bears out the outline of the bill which has already been published. One of the features of the bill is that every debtor against whom a receiving order is made is to be publicly examined in court as to his conduct, dealings, and property. The official

receiver is to take such part in the examination as the Board of Trade direct; the creditors may also put questions, and the debtor is to be bound to answer all questions which may be properly put to him.

For the acceptance of a composition or arrangement there must be a preliminary resolution by a majority in number and three-fourths in value, and a subsequent confirming resolution by the same majority, which must not be passed until the debtor's public examination is concluded, nor until there has been circulated among the creditors a notice stating the terms of the proposal, and a report of the official receiver thereon.

The Board of Trade are to appoint such registrars of county courts not having bankruptcy jurisdiction, high bailiffs, or other persons, as they think fit to be official receivers of debtors' estates. These receivers are to be attached to each court of bankruptcy, and will be officers of the court, but will act under the general authority of the Board of Trade. The duties of an official receiver are generally:

(1) To protect the interests of the general public by enquiring into, exposing and providing for the punishment of fraudulent or reckless trading and culpable extravagance.

(2) To protect the interests of the creditors at an early stage of the proceedings by obtaining and giving them the information, without which they are helpless, and which experience shows they are unable to obtain for themselves.

(3) To act as interim receiver of the bankrupt's estate pending the appointment of a trustee, and as manager when no special manager is appointed.

Every trustee is to have his accounts audited not less than twice in each year by the Board of Trade.

The Chinese ideas of bankruptcy differ from those of western nations. The recent periodical settlement brought to light an exceptional number of failures, but in the majority of cases 70 to 80 per cent. offered as a compromise, and the proposition appearing to the Oriental mind a clear case of attempted swindling, it was promptly rejected.

A correspondent of the *Globe*, writing from Winnipeg, says:—There have been one or two large and several small failures here this winter, and no wonder. If men would rush headlong into business in any other city in the world as they did in Winnipeg last summer, they would all go under. Besides, too many houses imported double the stock they needed last fall, for fear of another blockade this spring, which was very unwise. But 80 per cent. of the paper that matured on the 3rd of March was paid in the banks here after all, and in another month business will be rushing again.

The *Mail's* Montreal correspondent writes:—"It has been revealed here that in order to avoid his local creditors T. H. Hodgson, after his settlement with the Bank of Montreal on Thursday last (April 5), engaged a special train from the Grand Trunk and started for Rouse's Point, across the border. He and his brother stopped in a hotel there all night, both registering under the name of Holmes. The next morning the fugitives took their leave, and walked several miles to a station, where they took tickets for Ogdensburg, and from thence proceeded to Albany and New York. The train was delayed for some time at St. Lambert's after emerging from Victoria bridge, when the fallen merchant betrayed great excitement and nervousness, getting the conductor to lock the door of the car, so that no intruding bailiff or detectives could get in. Hodgson's friends were engaged in circulating reports here yesterday (9th inst.) that his brother would be here to settle all outstanding claims. The president of the bank to which he owes the largest amount assured your correspondent that up to the closing hour of the bank this afternoon no offer of any kind had been made. The defrauded and deceived bankers are resolved to break the conveyance of real estate to Hodgson's brother if there is law in the province to do it, unless they get their money." Another account says that Hodgson's brother bought the bank's claim against him out-and-out for 40 cents on the dollar; the amount paid over being \$60,000.

Thomas Hirst, a general dealer, of Allandale, has been sold out by sheriff.

Miss C. Coyne, milliner, of Chesterville, has compromised at 40c. on the dollar.

E. H. Stinson, a dry goods dealer in St. Andrews, N. B., is reported in difficulties.

The sheriff is in possession of the boot and shoe stock of W. H. Anthony, of Peterboro.

Wholesale hardware firm of C. C. Snowdon and Co., of Montreal, are offering their creditors 50c. on the dollar.

The stock of B. F. Lewis, grocer, of Napanee, has been sold out by sheriff, and that of Robert Brydon, of Newbury, brought 40c. on the dollar.

Allan Cameron, grocer, of Cardinal, Ont., is in financial difficulties, and is seeking accommodation from his creditors. He claims a surplus in stock and assets.

In the Standard Bank, Mr. W. F. Cowan has been appointed president and Mr. John Burns vice-president, and Mr. F. Wyld has been appointed to fill the vacant seat on the board.

W. S. Hart & Co., millers, of Goderich, who recently sustained a heavy loss by freshets, write that notwithstanding they will lose \$25,000 they will be able to satisfy their creditors in full.

The old established fanning mill manufacturers at Stratford—J. Weir & Son—have obtained an extension from creditors. They have been struggling for some time, and their present difficulties were expected.

The creditors of J. W. Quigg, general merchant, Parrsborough, N. S., representing liabilities of \$5,000, are endeavoring to discover where the assets of the estate have gone. Back stock and accounts are invisible.

J. P. Tobin, general merchant, of Cornwall, who has been doing a small business since 1879, is at present in difficulties. The little property he inherited from his father has been lost, and he is about \$1,000 behind.

The general store business at River David appears to be in a bad state. Two firms there—Normandin & Frere, and Elie Tauchette, are offering to compromise, the former at 45c. and the latter at 60c. on the dollar.

The liabilities of John D. Bauld, grocer and druggist, of River John, N.S., are \$4,000, in addition to \$1,800 short in the Post Office accounts. Attachments have been issued against the estate amounting to about \$2,000.

The old-established grocery firm of J. Sutherland & Co., Cobourg, are allowing their notes to be protested, and the Bank of Toronto have obtained a judgment against the firm for \$4,000, and an assignment is likely to be made.

On the 6th inst., a train of twenty-one (21) cars of Manitoba flour shipped by A. W. Ogilvie & Co. from Winnipeg on the 28th of March, arrived at Hochelaga, being the first shipment East by the Canadian Pacific & Vanderbilt Railways.

A number of Ontario firms have been victimized by the failure of Robert Baxter, furniture dealer, of Halifax, N.S. He has enjoyed a good reputation up to within a recent date, and judging from the extent of his liabilities, he has made good use of it.

At the adjourned annual meeting of the New York Graphic Company held on the 17th inst., the old board of directors was re-elected, with the same officers, viz.: Sir Francis Hincks, President; Mr. John Rankin, Vice-President; Mr. A. F. Riddell, Secretary-Treasurer, and Mr. A. H. Plimsoil, Auditor.

Douce & Miller, of Halifax, principal creditors of O'Connor & Co., dry goods merchants, of the same city, have settled with other creditors at less than 100c. on the dollar. The liabilities are stated at \$8,000, and assets about \$5,000, but valuation largely nominal, as the stock is old, and not in good condition.

The creditors of Alexander & Bryce, dealers in dry goods, Winnipeg, have agreed to an extension, and are satisfied that the position of the firm is a good one. They show a surplus of about \$50,000, but during the past winter they have had to carry a good many of their customers. They were formerly in business in Oshawa, and removed to Manitoba about two years ago.

In Manitoba, Scott & Paisley, dry goods merchants, of Brandon, have obtained an extension—C. W. Marlatt, general dealer, Oak River, has assigned in trust—The stock of Hanson & Tobias, of Turtle Mountain City, brought 30c. on the dollar, and that of Creighton & Cattanach, of Emerson, brought 40c. The last-named estate will pay very little to unsecured creditors.

W. A. Hawkins, of Colborne, is a practical shoemaker, and in that line made some money. About two years ago he added dry goods and groceries to his business, and his ambition appears to have been to carry as large a stock as any dealer in the town. He is now over-stocked and cannot meet his liabilities, and creditors are being asked for a settlement. The store and dwelling are both in the name of his wife.

At the Assize Court in London, the other day, Mr. Macdougall, the Crown counsel, said he had had before him certain depositions in the case against James F. and John A. Mahon, but owing to the state in which he found the case he did not propose at present allowing it to go before the grand jury. He would therefore ask his lordship to allow the defendants to go out on their own recognizances. The application was granted and recognizances taken.

Woodington, Arnold and Co. commenced in wholesale liquor business about a year ago. At that time Woodington was worth about \$10,000. Although the firm did a large business the partners did not agree very well, and the business was sold out to Arnold, Sinclair & Co., in Oct., '82, and creditors expected that they would not only be satisfied in full, but that Woodington's capital would be unimpaired. Losses by bad debts have caused a heavy shrinkage in the assets, and the late firm have assigned to John Osborne, of Montreal, for the benefit of creditors. W. F. Lewis & Co., Montreal, are principal creditors.

The plan for the Dartmouth sugar refinery is out, and is now attracting the attention of our city contractors. The refinery, if built according to plan, will be one of the finest on the continent, as the materials as projected are all of the best description. The company has not yet received any tender for the construction of the building.—*Halifax Herald.*

In a report concerning the operations in the Baku petroleum fields, on the Caspian Sea, British Consul Lovett writes that the sinking of the wells is accomplished by means of steam engines, most of them of English make. "American experiences," he adds, "hold good throughout the sinking and subsequent operations." Sometimes the wells are "gushers," and pour forth their output in great volume, while others vomit stones, sand, oil, etc. Occasionally the oil and gases take fire, "just as they do in the United States." In one instance alluded to by the consul the flames shot up into the air five hundred feet, and served as a beacon light to ships far out on the waters of the Caspian. The pumping machinery is mostly American, and the largest firm in the business, Nobel & Co., have also adopted the Pennsylvania pipe system. According to the consul, the American oil has a greater illuminating power in the proportion of five to three. He thinks, however, that the best form of burner for Russian oil has yet to be made, and recommends to the Birmingham lamp manufacturers that they devise a simple, strong and efficient lamp for the Oriental petroleum consumers, to take the place of "the trumpety German lamps," which are selling freely, and at a large profit, in Russia, Central Asia and the Levant. Perhaps, says *Bradstreet's*, American lamp manufacturers can take the hint as well.

Factory Fires and Accidents.

WROXETER, April 6.—This afternoon at 4.45 the oatmeal mill of Alexander Gibson was found to be on fire. By hard work the fire was confined to the kiln. The loss is not less than five hundred dollars; fully insured.

A young man named Smith, employed in the shipping department of the Canada Cotton Manufacturing Company's mills, Cornwall, had his left arm below the elbow and the thumb on the right hand taken off in the machinery last evening. The accident was caused by Smith thoughtlessly trying to extract a piece of waste from the main shaft.

One morning recently a lad named Benjamin Winfred lost his life through fooling in the James Smart Manufacturing Co.'s works, Belleville. Winfred was climbing up an unused belt attached to a swiftly revolving shaft, when his weight caused the belt to wind quickly around the shaft, and the boy's brains were dashed out, causing instant death. Deceased and other boys had frequently played in the same manner previously without injury.

A terrible disaster occurred recently at the new pulp mills now in course of erection by a Montreal company at La Tortue, eighty or ninety miles east of Montreal. The full particulars of the catastrophe have not been received, but so far as known are as follows:—About thirty men were engaged in drilling rocks beside the mill, the power being a patent drill driven by a boiler and steam cylinder. The former was quite new, having been constructed in one of the best shops here, and only put up a week before the accident, having been previously inspected and certified by the government officer. Everything seemed to go on well until the boiler exploded like a clap of thunder, blowing up the house it was in and scattering its timbers far and wide. Two men named Masson and Murphy are represented as killed on the spot and quite a number of others seriously scalded and burned.

MONTREAL, March 26.—The Williams Sewing Machine Factory, in St. Cuneconde, western suburbs of the city, was burned down late Saturday night. In being situated outside the city limits the water supply could not be had, and the labor of the fire brigade was of no service in stopping the conflagration, which raged till morning. The whole vast factory with its new and splendid machinery, was burned down, the portions of walls still standing being considered unsafe. The loss is estimated at between \$200,000 and \$300,000. The establishment is the largest of the kind in Canada, was built and equipped by the Company, of which the late Sir Hugh Allen was President, and in which position his son has succeeded him. Two hundred and fifty mechanics were employed, who will be idle until the new premises are re-built. There are insurances in all the principal English and Canadian offices to nearly cover the damage. The business was in a flourishing condition, and was paying large dividends to the shareholders. Origin of the fire unknown. Later:—The Williams Sewing Machine Company are pushing forward the rebuilding of their factory which was burned down on Saturday night. On Monday the contract was let to Mr. John Cowan, and Tuesday the bricks and mortar were on the ground and a number of men were at work removing the debris. It is expected that in three weeks everything will be ready for the machinery, all of which, except two or three special machines, has already been purchased, and some is on its road here. The Belmont Manufacturing Company's premises have been leased, and small engines are to be erected in the portions of the factory that have been saved, so that there will be no delay in turning out the machines. Most of the company's men will only lose one day's pay. March 28:—A remarkable exhibition of energy and enterprise has been given by the Williams Sewing Machine Company, of Montreal, whose premises were destroyed by fire on Saturday night, and whose Mechanical Superintendent is Mr. C. W. Davis, brother of Mr. Wm. Davis, of Belleville. During the progress of the fire the manager of the company, seeing that the whole of the machinery would be destroyed, telegraphed to the makers in the States instructing them to forward new machinery at once. The work of rebuilding was commenced on Tuesday, and the new building will be finished in about five weeks. Meantime a number of the workmen have been given employment in a shop which has been secured in Montreal, and whence machines will be shipped within three weeks. The remainder of the workmen have been temporarily removed to a large shop at Plattsburg, New York, where the Company manufacture for the United States market.

Iron and Machinery.

IRON MANUFACTURES.

PIG IRON AND CAR WHEEL WORKS TO BE ESTABLISHED AT HALIBURTON.

The Toronto *Mail* of the 13th inst. says:—Mr. Parry, of the firm of Parry & Mills, of Chicago, has been in Toronto during the past few days transacting business in connection with the works for the manufacture of pig iron which his firm is about to open in Canada. They have leased for twenty-one years on a royalty from Messrs. Shortiss, O'Brien, and others, the Snowden iron mine in the township of Snowden, county of Haliburton. A hot blast furnace of thirty-five ton capacity is being erected, and it is expected to be in readiness for smelting ore early in June. The furnace will be on the most approved principle, and the machinery of the best description. The charcoal to be used in the smelting will be burned on the spot, and about five or six thousand cords of hardwood have been got out during the winter for this purpose. The mining of the ore will be commenced almost immediately, and a large number of houses for the workmen are being built. The works at the start will employ about fifty or sixty men, and as the works expand this number will be very largely increased. It is also proposed to have in connection with the works a large establishment for the

MANUFACTURE OF CAR WHEELS,

for which purpose the iron of that locality is well adapted. It is expected that in this branch a large trade will be developed, because of the great mileage of railways in Canada. The fostering care of the government, which has lately granted a bonus of \$1.50 per ton for all pig iron manufactured in Canada during the next three years, it is expected will give the manufacture of pig iron such an impetus as will place the success of the business beyond question. The benefit to the country surrounding the location of the works will also be very great, as a convenient and steady market will be opened up for the disposal not only of all kinds of farm produce, but of cordwood, which will be converted into charcoal. The works are about six miles from Kinmount, from which point on the Victoria railway a branch line has been constructed. Mr. Mills is a Canadian, and Mr. Parry is a Welshman. Both gentlemen have had wide experience in mining in this country and Great Britain.

THE TORONTO BOLT WORKS.

In a description of the Toronto Bolt Works' site and vicinity the *World* says:—

In and around this splendid factory near the mouth of the Humber everything has the most life-like appearance, dozens of teams are continually walking back and forth, hauling away the dirt from the hill behind the works in their grading of the long siding which will be used by the Grand Trunk railway freight cars. Roads are being constructed, and grading, staking and laying out work seems to be the order of the day. As the passer-by stops to look at the many industrious men employed in their various capacities (like the busy bee improving each shining hour), it is not very hard to see that a large town will spring up upon the borders of Toronto, and that all the workmen must be provided with homes to live in. Driving along the beach of the noble lake one realizes how pleasant a residence in such a locality as this must be. The further back one walks on the bolt works' property the more the beauty of the location is enhanced by the splendid view of the surrounding county. Stretching out to the right as one looks at the lake can be seen the beautiful Humber winding its way into the back country, edged in by the forest of pines and oaks, a delightful resort in summer time, whilst to the left can be seen

Parkdale in all its beauty, and that part of Toronto showing the noble asylum, the exhibition buildings, the new agricultural works looming up bright and cheerfully, and upon which work is soon to be resumed. The Grand Trunk railway winding its way east and west with its puffing local train to Mimico, which plies past this property many times during the day, and the Grenadier pond, of which many a Toronto man and boy has sweet remembrances. Beyond the pond the eye settles upon High Park, the bone of contention as a park, and as to who should take care of it. Not long will this dispute last; the men who will soon be located near it are not the persons to fool away their time in long discussions. The public wants this property in good repair; the managers of the bolt and iron works want to see it in good repair, and they will see it so very soon, if there are any results to be obtained from vigorous pushing of this matter, once in hand. * * * To enjoy a view of the bolt works' size, walk down King street to the shore, and along the shore to the works; then make up your minds to invest and make money.

Chas. Norsworthy & Co., of St. Thomas, Ont., have received the contract from the contractor for all the iron work of the new C. S. R. shops.

The business has so increased in the Victoria Foundry, Lachute, Q., that they are obliged to work night and day, notwithstanding having recently engaged additional hands.

The Harte and Smith Stove Foundry Company, of Belleville, was organized recently, with John Harte, of Toronto, as president, and C. F. Smith, of Belleville, as vice-president. The company will at once proceed with the erection of buildings, for which tenders are asked.

Notwithstanding the short time since the Coulthard Works at Oshawa commenced operations, they are now shipping the remainder of 400 machines. Their seed drills are constructed with the latest improvement and the best material, and as this will be their test year we have no doubt that their efforts will be crowned with success.

Messrs. Shurly & Dietrich, the large saw manufacturers of Galt, Ont., have been making extensive additions to their works, and adding many new facilities. Their new office is one of the handsomest we have seen anywhere, and furnished in a most complete manner. The general office is a model of what every firm doing an extensive business should have, and the private room of the partners is furnished with elegance without being loud. The office is a two storey stone building, 32 x 48, and isolated from the works. This firm has also just completed a handsome stone building, 57 x 80, used as a hammering shop and storehouse, and it is laid out so as to give every convenience for the handling of their large stock of Saws, Plastering Trowels, etc. It is the intention of the firm to build during the coming summer on, but the main building will be from two to three hundred feet long by about fifty feet wide, making this establishment the largest of the kind in the Dominion.

The Safe Works of Messrs. J. & J. Taylor, which were recently partially destroyed by fire, are now nearly rebuilt, with additions which will fully double their capacity. They are still behind on their back orders, but with their improved facilities are rapidly regaining the ground lost in consequence of the temporary stoppage of their works. In a very short time they will employ three hundred men on Safe work alone, making this establishment by far the largest factory of the kind in Canada. At present they are filling a large order for Valparaiso, for a firm of hardware merchants there; and are about establishing European and Brazilian agencies. A fine piece of workmanship that has just been completed by them is a mammoth fire and burglar-proof jewellers' safe for Messrs. Woltz Bros. of this city. It has an inside burglar-proof lining of hardened steel two inches thick, and heavy burglar-proof doors fitted with patent rubber packing, to prevent powder being pumped in. We shall have further particulars of this "safe" concern to present to our readers at an early day.

Legal.

The McCready-Seath Case.

JUDGMENT IN THE SUPERIOR COURT—THE NOTES HELD TO BE FORGERIES—ACTION OF THE UNION BANK DISMISSED WITH COSTS.

(From the Montreal Witness.)

This morning (April 14) Judge Rainville gave judgment in the case of the Union Bank vs. Robert McCready. This case is very important, as it determines that a note pertaining to a list of notes may be false or not.

Mr. McCready and Mr. A. Seath had been doing business with each other for several years, and during 1881 and 1882 McCready gave several notes to Seath to the amount of nearly \$20,000. McCready and Seath did not wish the fact to be known, they did not say a word to their book-keepers nor enter it in their books. McCready's pretension was that on the 8th or 9th of May, 1882, he gave a note for a small amount of money. In June, difficulties arose between the two friends. McCready says he signed a note for \$620, and when it came due it amounted to \$2,620. The learned judge said it is possible that McCready signed for \$2,620 by mistake as nothing had proved the contrary. On the 4th Sept., 1882, in the afternoon, Seath went to McCready's store, and while he was there a messenger from the Molson's Bank came in and told McCready that they were asked to pay a note of \$2,620 in his name, and enquired if it was to be paid. Mr. Booth, McCready's book-keeper, went to the bank and gave notice to Mr. Nash that the note was not correct. Mr. Nash immediately went to McCready's, where he found Seath and asked him for a categorical answer whether the note was a forgery or not. McCready did not answer directly, but what he said sufficed to persuade Mr. Nash that the note was not genuine. It was stated that Seath admitted the forgery. McCready said that of all his notes only three were genuine. In this case the plaintiff had to make the whole proof, as the defendant had denied his signature. Seath and his book-keeper both swore that the note had been signed in their presence by McCready. Mr. Nash, the cashier of the bank, states that he received the notes *de bonne foi*, but after comparing the signatures his impression was that the note was a forgery, and McCready and Booth both swore that the note was a forgery. Booth saw his employer's signature hundreds of times, and three or four other witnesses spoke in the same way. The five notes claimed to be forged being compared with one another were entirely alike, while the three notes were slightly different, and their extreme likeness seemed to prove the forgery. And when the true and false notes are compared not one letter resembles the other. Dr. Baker-Edwards was examined and sworn; according to his experience, the notes must have been photographed. After the preceding remarks the learned judge came to the conclusion that the notes had been forged and that the Bank not having made the required proof the case was dismissed and plaintiff condemned to pay the costs. Mr. J. S. Hall for plaintiff, and Mr. A. H. Lunn for defendant.

(Mail's Montreal Correspondence.)

Mr. Justice Rainville gave judgment in the case of the Union Bank v. Robert McCready and Alexander Seath, which took up so much time lately in the Superior Court here, and from the revelations in connection therewith caused a good deal of excitement and astonishment in commercial circles. In the course of the action it came out that the defendant, McCready, had given a leather finding merchant here, named Alex. Seath, an immense number of accommodation notes, which the latter used in carrying on his business by discounting them in the Union and Molson's banks. Matters went on amicably between the friends for some years until last June, when the goodfellowship ceased from McCready finding a note

he gave for \$620 raised to \$2,620. The bank having taken proceedings to recover \$1,832 from McCready on a note endorsed by Seath, the drawer declared his signature to be a forgery. The court in giving judgment stated that McCready and his book-keeper, besides a number of experts, as well as independent merchants, had sworn to the forgery, whilst there was only Seath and his book-keeper to testify that they saw the defendant sign. The bank manager, the judge said, had also admitted, after examining the signature minutely, that he believed the note was a forgery. The judge went into all the evidence critically, and declared it was overwhelmingly in favor of the forgery. The only evidence against the proposition he said was that of Paul, Seath's book-keeper, but as so many notes had been signed before him the court thought he had merely made a mistake in this one. The judge finally declared, after dealing minutely with every aspect of the case, his conviction that the note was a deliberate forgery, and dismissed the case with costs against the bank. Alexander Seath, the endorser of the forged note, was tried at the last assizes for uttering the note, and the evidence submitted to the petit jury was the same as in the civil suit. Yet eleven of what are called intelligent jurors, many of whom probably could not write their name, were for acquitting him. The twelfth stood out for conviction, and is now in the good company of an enlightened and learned judge. A great many of the commercial disasters that have occurred here during the past few months have taken place from the reprehensible system of accommodation paper, as in this case. It has been shown that for quite a number of years Seath has been doing nothing but discounting this class of paper. From the senior partner in the firm of Perry & Cassels, he obtained unknown to Cassels nearly one hundred thousand dollars in this way, and from McCready an immense number of notes for large amounts; in one batch the amount was \$20,000. All these were discounted by banks in the city without question.

Question as to a Bank Manager being compelled to produce Books.

(Mail's Montreal Correspondence.)

Mr. Justice Jetté, in deciding the question whether the general manager of the Merchants' Bank could be compelled to produce his bank books before a commission sitting here and appointed by the High Court of Justice of Ontario, held that the Act 31 Vic. cap. 76, invoked by Mr. Atwater, the plaintiff's advocate, did not apply to evidence taken in cases pending before the Courts of the different provinces of the Dominion, but simply to those cases pending before the high courts of the other possessions of her Majesty or of a foreign country. He therefore said there was no power lodged in our provincial courts to compel a witness to answer questions or to force him to file or produce any documents or books under such circumstances. The order was to the commission to proceed according to law. This condition of the statutes is certainly rather anomalous, and seems to have been an oversight when the Act was passed through Parliament. There is no reason why the courts of a province of the Dominion should not be placed on an equality so far as their proceedings are concerned with those of other countries. Mr. Tait, Q.C. of Tait & Abbott, appeared for the bank. Judge Jetté's opinion is considered sound.

Board of Trade Rules.

The decision of the Supreme Court of Illinois has been made in favor of the manipulators of the July wheat corner. The Court holds that so long as the operatives move within the rules of the Board of Trade the Court cannot interfere. An attempt was made to enforce contracts coming out of the corner. Certain parties "laid down" on their contracts, and refused to pay, on the ground that the contracts were a species of gambling, and against the public welfare. The Court, however, decided that the decision of the Board of Trade calling for their fulfilment be respected. This decision will prevent a good many weak-kneed men pleading the baby act hereafter.

Textiles.

INDUSTRIAL ENGLAND.

BY ROBERT P. PORTER, MEMBER OF THE LATE AMERICAN TARIFF COMMISSION.

ENGLISH AND AMERICAN WOOLLEN FACTORIES COMPARED.

From the New York Tribune.

(Continued.)

The growth of the woollen industry of the United States dates from the close of the war. In 1860 the country produced but 60,000,000 pounds of wool and imported about 42,000,000 pounds, consuming annually about 100,000,000 pounds. Under a judicious tariff, the wool clip reached in 1881, 290,000,000 pounds, and the importation 68,000,000 pounds, making the total consumption probably 358,000,000 pounds. Now that the United States has embarked in this industry, it will not do to pause and suppose that the United States is strong enough to compete with England. It is easy to say the total product of the woollen factories has reached in value in 1880, \$267,000,000; that in consequence it is no longer an infant industry and needs no more protection.

What have I shown in this letter?

That we are competing with a country employing double the number of operatives with a less number of establishments;

That the mills in England are concentrated in a radius of twenty-two and a half miles;

That during America's second war with England, when Richard Cobden was picking up the rudiments of knowledge at the old grammar school at Midhurst, and a generation before the Manchester school carried the day in Parliament, England was exporting annually \$50,000,000 worth of woollen goods, while after sixty-five years of Free Trade she only exports \$92,000,000 worth!

And yet the British Free Trader and his echo in the United States talk of monopoly.

Wherein is the monopoly?

The official figures show that 648 worsted mills in England employ 131,830 hands, while in the United States I have shown that nearly 2,000 woollen mills, spreading their benefits throughout the broad land, following closely along the lines of agriculture, and building up thriving manufacturing cities in the West, employ but 86,504 operatives. Had it not been for this development in America, England would have maintained the American trade, and her exports of woollen goods to-day would have been \$360,000,000 instead of but \$42,000,000 more than it was in 1815. Wages in those times in England were good, and the British manufacturer really supposed that all the world was dependent on him for manufactured goods. A weaver in 1815 could earn 34s. 6d., or about \$8 50 a week, while to-day he is lucky to earn half of that amount. Of course I am aware that these high wages arose in part out of improvements in weaving. It was difficult to get weavers. But the profits of weaving soon increased the supply, and children were extensively taught to weave. In the cases of cotton and worsted, in which work is light, the labor of the parent was soon transferred to the child, but in cloth weaving, which is practically a man's work, the change was not so rapid, as the statistics already given show that the proportion of males in this latter branch of the trade is much greater than in the worsted division.

Next comes a comparison of wages in this industry. In the following table the average weekly earnings in the United States are taken from Mr. Carrol O. Wright's report for 1882, which I regard as the very best authority; while those for England were obtained by myself direct from the pay-rolls of manufacturers in Yorkshire:

Operatives.	AVERAGE WEEKLY EARNINGS.		
	U. S.	England.	Excess in U. S.
Wool sorters (men)	\$9 43	\$6 00	\$3 43
Washers and scourers (men)	8 84	5 75	3 09
Dyers (men)	7 81	5 75	2 06
Young persons	5 12	3 00	2 12
Carders (men)	8 12	5 00	3 12
Carders (women)	5 39	3 25	2 14
Carders (young persons)	4 53	2 50	2 03
Spinners (men)	9 05	5 00	4 05
Spinners (boys)	4 81	2 00	2 81
Spinners (women)	6 18	3 00	3 18
Spinners (young persons)	4 92	2 50	2 42
Weavers (men)	8 53	5 00	3 53
Weavers (women)	7 45	3 50	3 95
Giggers (men)	7 00	5 00	2 00
Shearers (men)	8 05	5 25	2 80
Mechanics (men)	13 43	7 50	5 93
Engineers (men)	11 07	7 50	3 57
Firemen	8 00	6 00	2 00
Watchmen	9 63	5 00	4 63
Laborers (men)	8 58	4 50	4 08

There is no general or market rate for foremen and overseers, their wages depending on skill, length of service with the particular mill, and varying considerably in different localities. I have selected for the above table the most important people about the mills. I have not sought to confuse the reader with a large tabulated statement, but I can vouch for what I have given, as they were obtained from the books of two different manufacturers, carefully compared and afterward substantially verified by conversations with each class of operatives. It is also safe to say they are above rather than below the real amount paid. I have no doubt that Mr. Wright's figures for Massachusetts are equally trustworthy, for I regard him as the most experienced and able statistician in this particular branch of inquiry in the United States. It will be seen that in some divisions of the woollen industry American manufacturers have to pay nearly double the amount paid for the same labor in England. I regret that Mr. Wright in his report makes no separate division of the worsted mills, so the following table cannot be compared with a similar mill in the United States:

WORSTED MANUFACTURE IN BRADFORD.

HOURS OF LABOR, 56 PER WEEK.

Wool-sorters (men)	\$7.50 to \$8.00
Machine wool-combers (men)	3.50 to 4.25
Dyers (men)	3.25 to 6.00
Overlookers (men)	7.00 to 8.00
Overlookers' assistants (men)	2.50 to 5.00
Spinners (women)	2.50 to 3.00
Spinners (boys)	2.25 to 2.75
Spinners (girls)	1.00 to 1.50
Weavers (men)	4.00 to 5.00
Weavers (women)	3.00 to 4.00
Reelers (women)	3.00 to 4.00
Drawers (women)	2.50 to 2.75
Packers (women)	4.00 to 5.00
Wool-washers (women)	4.00 to 4.50

The figures for the above table were also obtained from the counting-room books of a representative worsted mill, and, as in the above, the information thus obtained was corroborated by personal interviews with the operatives and with other manufacturers. In some cases it will be seen the difference in the earnings of the same class of operatives is considerable, but, as in the case of dyers and overlookers' assistants, the skill and aptitude of the hand, together with the time of service, differs more widely than in spinning and weaving, though even in these latter divisions of the work some girls are able to earn much more than others. Again, these figures err, if at all, on the right side, for some of the most trustworthy of Bradford's manufacturers assured me that young persons from

thirteen to eighteen years of age never earned more than 12s. (less than \$3) per week, and that they descended as low as 6s. (less than \$1.50) a week for fifty-six hours of steady, confining, dusty, tedious work, and that men varied in their earnings from 15s., 18s. to 20s. (from \$3.75 to \$5), but that the latter was exceptional, he said. And this with a family to maintain.

And so, toiling and sorrowing, with no future and little hope, contented to live and die in the shadow of these mighty factories, with little or no chance to better themselves, fixtures, in fact, around the mills, as the peasants were to the land in the feudal times, the English operatives slave on, while the mill-owner discusses in the club how he can produce an article a farthing cheaper per yard. The idea of cheapness pervades the whole kingdom. It is all some people seem to live for. There is no limit to it. The struggle for cheapness sometimes brings ruin to the mill-owner and starvation to the operatives. But for all that the struggle goes on. For example, when in Scotland in December, I travelled in some cases for less than a penny a mile first-class. In my opinion no one demands this; in fact the public has no right to demand it, for it means the degradation of labor. What is the result of Scotland's cheap railway travelling?

A strike—which has unfolded to the public what their so-called "demands for cheap travelling" mean—the suffering that their fellow-beings have undergone.

It is not a mere question, in Scotland, whether the men shall work fifty-six or fifty-seven hours a week; but it is whether they should be required to hang on to important duty till nature is so exhausted that they fall asleep clutching the handle of the critical levers, on the accurate moving of which the lives of hundreds of travellers depend. At one of the meetings of the men, this week, an engine-driver stated that in one week he worked ninety-six hours, his Thursday's spell lasting 23½ hours. A pointsman had 200 hours duty in a single fortnight. A goods guard for twenty consecutive days had 360 working hours, or an average of eighteen hours a day. These astonishing revelations might well make one pause, when advocating that cheapness is the only thing to be considered. Cheapness in railroading and cheapness in manufacturing means the exhaustion or the starvation of the laborers. It can be obtained in no other way. Free Trade may bring cheapness. It will not prevent the degradation of labor.

ROBERT P. PORTER.

The Newmarket Woollen Mills, which have been run lately by Messrs. Winans & Co., of Toronto, on a monthly lease from Dr. Russell, closed on Saturday night. This week the stock was shipped to Toronto.

The by-law to grant a loan to the woollen mill was carried all but unanimously on Monday, at Norwich, Ont., 149 votes being cast in favor and a lonesome four only against. A part of the machinery is now at the R. R. station awaiting removal to the factory.

There is the very best of authority for the statement that Mr. Gibson intends this spring to commence the construction of a cotton factory at Marysville, York County, N.B. A bridge will be built across the Nashwaak river just below the saw and grist mills, and the flat on the opposite bank of the river is the site chosen. The mill will be driven by water power.—*St. John N. B. News.*

To meet the demand for Dominion trade and export of bobbins, spools, skewers, &c., the business started here by Mr. Hambleton in August last, was put into the hands of the Lachute Bobbin Company the other day with a capital of \$10,000, all taken up by five local men, including Messrs. Hambleton and Young, both of whom are practical men of twenty-five years' experience in England and the United States. The existence in our midst of the spirit of enterprise is clearly proved by this undertaking.—*Lachute Watchman.*

The Valleyfield Cotton Mills, the *Toronto Mail* says, are turning out the following classes of goods, which have not previously

been manufactured in Canada:—Rolled and flat fold cambrics, permanent linings and pockets; sateen and corset jeans, and rolled and flat fold siliesias (beetled). The *Mail* adds the pleasing information that these goods are having an extensive sale among the merchants of Toronto and other points throughout the Dominion. This desire to encourage native industries which many of our merchants have manifested from the first is one of the most satisfactory features in the working out of the National Policy, and shows that it is really worthy of the name.

The by-law providing for granting a bonus of \$6,000 to J. O. Hutton & Co., to establish and carry on a woollen and knitting factory in this town was not carried. The Municipal Amendment Act of 1882, sec. 17, cap. 23, says:— "The assent shall be necessary of two-fifths of all ratepayers who were entitled to vote, as well as of a majority of the ratepayers voting on the by-law. . . . The clerk, in case of the majority of votes being in favor of the by-law, shall further certify whether or not, as far as shown by the voters' list and assessment roll, such majority appears to be two-fifths of all the voters who were entitled to vote on the by-law." The vote cast was 208 for and 25 against. Striking off 12 repeaters, this leaves 168, whereas 184 is necessary to carry the by-law.—*Brampton Conservator.*

The mills of the Hamilton Cotton Company are complete and perfect in every department. The Hamilton mill produces hosiery, yarn in colors, knitting yarn, carpet and beam warps; and their flying shuttles manufacture denims in all the leading colors, and "blue jeans," wearing of which in ample suits made the political fortune of a governor of Indiana, "Blue Jean Williams." The rooms are well lighted and ventilated, and the pretty factory girls who handle the artistic colors in yarns look hearty and happy. It is certainly the duty of every employer to make the conditions of the employees' labor as pleasant as possible.

Mr. James M. Young is the sprightly manager of the Hamilton Cotton Company's mills, and the affairs of this house are in a most prosperous condition. Mr. Hamilton Young is the Secretary and Mr. R. A. Lucas is President of the Board of Directors.—*Hamilton Tribune.*

The Manufacturing Committee of the Ottawa City Council have drawn up the following report for presentation to the Council:— "Having carefully considered the offer of the 'City of Ottawa Woollen and Blanket Manufacturing Company' to establish a large factory in the city, and knowing that such an establishment would bring a large trade here, which now finds its way elsewhere, and would give employment to a large number of our population, therefore the committee recommends the following:—First, that a lease be given said company of the cattle market for ninety-nine years, at a rental of \$100 per annum, and, second, that a bonus of \$20,000, with exemption from taxation for ten years, be granted said Company, the city of Ottawa to have the first mortgage on the property, building and machinery for ten years, as security for the successful operation of the same. Wm. Logan, of Renfrew, is the promoter of the company, and he has been promised strong support from the principal citizens. Operations will be commenced with about 70 hands, and the building will have a working capacity of 250 hands.

In our last issue we published a note clipped from one of our exchanges stating that a firm were selling large quantities of hosiery made on the machines manufactured by Wanzer & Pope. We did not notice in our hurry that the name of the machines should be the "Franz & Pope," manufactured by Messrs. Creelman Bros., of Georgetown, Ont., and owe them an apology for our error. Messrs. Creelman Bros., manufacture the "Franz & Pope," and the "World's Star" machines, which have more than a Dominion reputation. This firm, since the first of September last, have had a great run on all sizes of both their machines, and in order to keep pace with the demand, found it necessary to add some \$2,000 worth of new machinery. Among manufacturers of cotton and woollen hosiery no machine has succeeded in producing perfect seamless hose of the same quality, for the trade, as the "Franz & Pope." Manufacturers using 30 to 40 of these machines have built up a successful business of many years' standing, through the pure merits of the goods. Having competed, with triumphant success, in the wholesale market against foreign goods, and now controlling the market with pure seamless hose, "Franz & Pope" machine is equally well adapted to cotton hose, which make has been a failure in other machines. Many tons of cotton yarn are used annually on these machines for hosiery.

Lumber, Mining, and Milling.

Messrs. Cairns Bros. have purchased the Camlachie, Ont., grist mill, and will soon have the same in running order.

The sawing season has commenced in the Ottawa district. Some of the mills are cutting logs left over from last season.

The firm of Bedford Bros. & Co., Nelson, have purchased the grist and saw mills of Mountain City. They are making extensive improvements in the establishment.

Timber dealers have made a number of contracts with tug owners at Quebec for towing their rafts to market this season. The rates are reported as about the same as usual.

Work in the pineries at St. Paul, Minn., is practically suspended. The total cut of logs on the streams above there was 435,000,000 feet, or 50,000,000 in excess of any former year.

In England the high price of potatoes, which is more than double that of a year ago, has caused an increased consumption of flour, which is cheaper than the average of the last ten years.

The *Winnipeg Sun* gives an itemized statement of buildings to be erected in Winnipeg, aggregating in value \$3,955,900. It also appears that \$200,000 English capital is to be placed in North-West lumbering operations.

During the present session a new saw mill of large capacity will be erected at Round Lake, a short distance from Gildersleeve's Rest, on the line of the Kingston and Pembroke Railway, by Mr. William McKay, of this city.—*Ottawa Citizen*.

Thomas Ouillette, of Anderdon, has shipped from his mill at Colchester, three and one-half million feet of oak car stuff to the London Car Works, at London. He says the demand for that class of timber is greater than the supply.—*Journal, St. Thomas*.

Work is about to be commenced again by Dr. W. Goodfellow at the copper mine at Mineral Vale, Alma, N.B. The ore averages 12 per cent. copper and contains 5 dwis. gold, 4 ozs. silver and 20 lbs. lead to the ton. The mine is now capable of an output of about 100 tons per week.

Work about the Ottawa mills is brisk at present, and preparations for the summer's sawing are brisk. The supply of logs in the ponds is large, and when once in operation they will run night and day, as the contracts already made are large, and the demand for cut stuff decidedly brisk.

Hoops are selling for \$4 a thousand; West India staves, \$35 to \$45 a thousand; pipe staves, \$150 to \$180; elm staves, \$5 to \$6 a thousand; square timber, \$180 a thousand; white ash, hickory and oak lumber, \$14 to \$22 a thousand. The timber market was never better in this county, and the outlook is a bright one.—*Pictoria Topic*.

Negotiations conducted during the last few days between the Spring Hill Mining Company and the syndicate which bought the Spring Hill and Parrsboro Railway property, have resulted in an agreement to purchase the mines. The price is understood to be double the face value of the watered stock, or nearly \$1,000,000.—*Amherst Gazette*.

Mr. P. McLaren when in Kingston recently stated that the lumbering was about done for the season, and that his cut in the townships of Clarendon, Palmerston, Barrie, Olden, and Abinger has been very extensive—probably over 30,000,000 feet of lumber and 8,000 pieces of square timber. He has himself employed 350 men and 250 teams.

It is the intention of Mr. Frazer, of Almonte, to erect the largest mill in this section of the country, at Cameron's Bay, Calabogie Lake. Mr. Mackie, of Ottawa, will also build a mill at Round Lake, which is about three miles from Gildersleeve's Rest on the K. & P. These mills will be ready to run by next spring. The amount of timber that will find its way to Kingston will then be doubled.—*Kingston News*.

Miscellaneous.

FACTORY LAWS IN EUROPE.

MR. LUKES' REPORT.—WHAT HE FOUND IN ENGLAND, BELGIUM, AND GERMANY.

Some time ago Mr. Lukes, Factory Commissioner under the Dominion Government, was sent to Europe, and his colleague, Mr. Blackeby, to the United States, to enquire into and report upon factory legislation on both sides of the Atlantic respectively. Mr. Blackeby's report we gave recently, and now we make extracts from that of Mr. Lukes. His instructions, it appears, had regard to the Continent of Europe only, and did not take in England, but he nevertheless gives a few notes made in England, while waiting the arrival of Sir Alexander Galt. While in England he had the assistance of Mr. Inspector Oram, under sanction of the Chief Inspector of Factories for Great Britain:—

The motives which induced prior legislation on this matter in England are well known, viz.: That children who were continuously employed very long days might have the privilege of education; since which, with subsequent amendments and new rules, the British statesmen and people are proud in believing that they have the best factory regulations in the world. Including the Employers' Liability Act with the Factory Acts, the British workman is the best cared for of any laborer under the sun. Yet the chief Inspector of Factories is of opinion that some amendments or additions might be made to their regulations which should embrace a supervision of sanitary matters, and the guarding of machinery wherever used; not confining it to those places where children, young persons, or women are employed.

The above proposals receive confirmation by reference to the inspector's latest report, under "Accidents and deaths" through the use of machinery.

The places visited by your commissioner in company with Mr. Inspector Oram were taken promiscuously, and not after any advice or notice of our intentions, and as far as we could judge from appearances, the Act is fully observed in all those places.

Without detailing everything which passed under our observation, reference may be made to one or two factories which we inspected most carefully. These present features of interest to Canadian employers and their operatives, and also furnish important information to the Government.

At Leicester is one of the largest Berlin wool and yarn spinning establishments in the Kingdom, that of Messrs Thompson & Sons. Every part of this factory is in the most complete order from basement to attic, and is being worked in accordance with all the regulations of the Factory Act. Among other things strikingly observable were the lighting and cleanliness of this establishment. Lime-washing is liberally done, ventilation is plentiful, ample space is allowed for the machinery and hands, and the protection of machinery, and all sanitary and closet arrangements are of the most complete description.

The proprietor of this factory, having a farm five miles from Leicester, removes all closet accumulations and refuse of the establishment to the estate as a matter of economy, and with advantage both to the farm and to the factory.

This being an old establishment, very many of the operatives, both male and female, are far advanced in life, and have grown grey in the service. There is, therefore, much more than dutiful respect towards the master manifest in this factory, there being likewise mutual affection existing between master and servants. The reasons for this were not far to seek. In addition to the accommodation and good rules of the factory,

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The object of the CANADA ROLLING STOCK COMPANY is to carry on the manufacture of all kinds of passenger and freight cars, locomotives, manufactured articles of wood, iron and brass, and such other general business as may be incident to such a manufacturing company.

The field for the operations of such a company is a very wide one. There are now nearly ten thousand miles of Railways in Canada, and the mileage is increasing at the rate of more than one thousand miles a year. The works now established in Canada for the manufacture of Rolling Stock have never been able to supply the demands of the railways, and the result has been that both the Government roads and private companies have been obliged to import rolling stock. It is for the purpose of endeavouring to supply this large and increasing demand for rolling stock that the present Company has been organized.

There is no city in Canada better situated for such a manufacturing company than Saint John, and there is no locality in Saint John with greater advantages than the site which has been secured for the *Works* of the CANADA ROLLING STOCK COMPANY. The site has a frontage of 440 feet, on Sidney and Charlotte Streets and a depth of 380 feet adjoining the Intercolonial Railway, and 400 feet adjoining the property of the Estate of the late John Fisher, Esq. The grounds have an area of about four acres.

It adjoins the deep water terminus of the Intercolonial Railway and is connected with the wharf and railway by a convenient siding. In addition to this it possesses independent wharfage facilities, vessels being able to load and unload along the whole of the Charlotte Street front of say 440 feet, in front of the *Works* and only the width of the street from the Company's Warehouse. Thus, the most admirable facilities are afforded for the reception and discharge of heavy goods, such as the Company requires to handle.

No item is of more importance in such an establishment than cheap fuel, and this the Company will have. Coal can be brought from the Spring Hill and Joggins Mines, either by rail or water at a very cheap rate. Slack coal, such as the Company will use, can be purchased at the Spring Hill Mines for from 60 cents to 75 cents a ton of 2000 lbs., and brought by rail for about \$1.03 a ton, making the total cost landed at the *Works* from \$1.63 to \$1.78 per ton.

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The same statement is true with regard to the freight, either by water or by railway on all kinds of material, wood, iron and brass entering into the construction of Rolling Stock. Pitch Pine and Southern Oak can be landed, in specification sizes, at as low a price as Canada Oak, and all the advantages of the economical use of these superior materials obtained.

The machinery will be of the most modern character so has to facilitate and cheapen the work of construction and the location, now under consideration, of the several buildings, viz: Foundry, Machine Shop Planing Mill, Building Shops and Offices will be so arranged as to aid the operations and reduce the expenses to a minimum; these advantages together with the abundant supply of skilled labor ever to be had in the City of Saint John, for reasonably moderate remuneration, warrant the assurance that the profits realized are certain to be large.

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There will be a General Superintendent and Manager of Works appointed by the Directors, who shall not be a member of the Board. E. T. C. Knowles, Esq., Barrister-at-Law, Solicitor, and G. Earnest Fairweather, Esq., Architect, both of the City of Saint John.

The first call of twenty-five per cent. is made payable on or before the first day of June, A. D. 1883, and subsequent calls of twenty five per cent. will be made at periods of not less than three months each. Subscribers outside of the city may deposit to the credit of the CANADA ROLLING STOCK COMPANY in an incorporated Bank of the Dominion, which will be sufficient evidence of payment, and upon advice of such deposits, respectively, stock certificates will be in due course recorded, issued and delivered; provided always that stockholders, respectively making payment on account for subscribed stock, either in whole or in part, in anticipation of the time of call, shall be allowed interest at the rate of six per cent. per annum for such anticipated time.

In order to secure the location of the "Works" in the City of Saint John, a lease to the CANADA ROLLING STOCK COMPANY has been secured for 21 years from the 1st May, 1883, with the usual conditions, at the moderate rental of \$100 a year for the first three years and \$400 a year for subsequent years.

On behalf of the Company,

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the proprietor has not lost sight of the employees when the doors are closed, nor allowed them to seek refuge in comfortable houses, inns, or lodging-houses; but has considered their wants and conveniences as well as his own interests. He has erected substantial and well-arranged dwellings and cottages, and lets them at a very moderate rental to the operatives having families, the object being, no doubt, the securing of permanent occupancy and continuous employment. No children below fourteen years of age were employed here. The admirably sanitary arrangements were not confined to the factory, but were also extended to tenements and their surroundings. The proprietor informed your commissioner of his having strong pecuniary inducements offered him to establish a branch factory in Canada, which proposition he most seriously entertains.

In company with Mr. Inspector Oram, painting, bookbinding, lithographing, electroplating, tobacco, and other factories were visited, the whole of which were found to be conducted in the most orderly manner. No children under fourteen are employed in any of those places.

In some of the above-named establishments as many as from 500 to 2,000 hands were employed, and the provision and accommodation for meals were of a very suitable kind. A restaurant is opened (without any fermented liquors, of course) exclusively for the operatives. The charges for meals or luncheons are very moderate. A reading-room furnished with a good supply of literature is also provided.

Your commissioner also visited the large biscuit factory of Messrs. Peek, Frean & Co. This factory covers about four acres of ground, and employs about 2,000 hands, none of whom are under fourteen years of age. Here all the arrangements and sanitary provisions are of the highest class, affording accommodations such as might be advantageously copied by some of the city hotels. In addition to which the hands are disciplined for prompt and useful action in case of fire.

Notwithstanding the admirable management and most beneficial results derived from the factory regulations, Her Majesty's Chief Inspector's report shows that not less than 1,000 prosecutions are recorded for the year 1881 for violations and disregard of the Act, and that fines were imposed, with costs, varying from 2s. 6d. to £25; and in some instances, in case of refusal or inability to pay, imprisonment being the result. Also, that accidents numbering 7,599 were recorded, of which one-twentieth part were fatal.

The report, a copy of which is herewith presented to the Government, contains matter of great interest. Such consequences as are herein reported being found to exist in spite of stringent regulations, it is almost appalling to contemplate what may exist under less restrictions, or no regulations at all.

It may be mentioned, before concluding those observations made in England, that though the inspector and his officials are vested with great authority, they never dictate or command, in putting the Act in force, until a suggestion or a request has failed in accomplishing the object desired. That this question is a vital issue in England is incontestably manifest, not only by her statesmen in Parliament referring with pride to the Act as being one of the best on the statute book, but likewise when seeking the support and suffrages of the electorate they promise amendments and reforms, when necessary and practicable, in the interests of the mechanic and workingman.

It may also be stated that the inspectors pay much attention to any notices of infractions of the law, by whomsoever communicated, even if by anonymous correspondents, which is of very frequent occurrence. Thus full opportunity is given to the poorest operative to obtain justice without exposing himself to detection or any consequence that might follow.

Having received no specific instructions to institute inquiries in England in regard to this question, I hope the foregoing may not be considered superfluous, as in so doing the time while awaiting the arrival of Sir A. T. Galt has been profitably employed.

BELGIUM.

The High Commissioner having arrived from Canada, I speedily obtained the necessary papers to the British Ambassador at Brussels, informing him of the object of my visit; to which city I at once proceeded to observe and inquire into the factory question in Belgium.

On arriving at the capital an early call was made on Sir Saville Lumley, the British representative, who immediately communicated with the authorities on the nature and object of my visit to Belgium. After considerable delay, and not receiving any communication from the authorities, by the assistance of an interpreter, who could both read and speak German and French, as also the English language, I succeeded in visiting numerous factories in Brussels, at Liege, and at Verviers, the latter being the Manchester of the State.

I was informed that there were no laws in Belgium bearing directly on factory regulations; but that factories were for certain reasons divided into four classes distinguishing their nature and operations.

In erecting factories permission had to be obtained from civic or other authority to do so. After which there were no regulations as to age, condition, sex, or number of hands employed.

Being informed that education is somewhat compulsory, with the density of population, and very cheap adult labor, the necessity or desire for the employment of children extensively in factories does not exist. They were certainly not numerous in the places visited by your Commissioner.

Ventilation, sanitary arrangements, and necessary accommodation, and also protection of machinery, are about the same as in England or Germany. It cannot fairly be omitted that very much credit is due to the mechanical and laboring population of the country for their thrift, economy, and perseverance, whether from a personal, domestic, or manufacturing point of view. Your Commissioner made particular inquiries relative thereto. As to personal appearance, the lowest classes are clean, respectable, and respectful, and are all decently clothed. There are no beggars, and no children in the streets or lanes playing in school hours. Most of the field work is done by hand, or physical rather than implemental labor, a very large proportion of the light work particularly being done by women and children, while even the dogs are more profitably employed than barking at travellers or foolishly running after railway trains, as they do in some parts of the world; they are frequently seen harnessed to carts. In fact, everyone is found at work; personal, domestic, and manufacturing economy is carried to the utmost extent. No matter where the observation is made, whether regarding the persons, the houses and their surroundings, or the meat, fish, vegetable, or fruit and flower markets, in fact, nothing is wasted, but on the contrary, everything is utilized, even to animal droppings on the streets and the country highways.

The adaptation of the people here to circumstances is something wonderful, especially when it is remembered that nearly 5,000,000 of people are located in such a small area.

Brussels being notable for its lace works, some of its work places were visited. In those, a day's work is usually considered done from eight to eight, or nine to nine, with one and a half or two hours for meals and refreshments; or sometimes longer if the state of trade demands it.

There is no state or civic oversight of these establishments. A very large proportion of this kind of work is done at home in private houses, where some young children are employed. Also much is done at the convents by persons under the care of those establishments.

From Belgium Mr. Lukes went next to Germany, and makes the following notes on Aix-la-Chapelle, where there are woollen and iron works:—

Here the hours of labor commence at 6 a.m. From 7.30 to 8, coffee. Dinner from 12 to 1. Work until 4 p.m., when

30 minutes are again allowed for rest and refreshments, closing the usual day's work at 6 p.m., thus making a day of ten hours. No children under 14 years of age were employed in the above-named establishments. The employers are not favorable to half timers if it can be possibly avoided. Young people between 14 and 18 are restricted to 10 hours a day, after which no limits are imposed. The machinery is all very carefully guarded, and all modern appliances for extinguishing fires are made available.

At Berlin he obtained, through the British Ambassador there, an interview with the Chief Inspector of Factories, whose answers to questions put are given at length. The German Chief Inspector is a military man, and much of the information given relates to conscription and the educational system, both compulsory. Ten hours is the rule for a day's work in German factories. Insurance against loss of wages through being disabled by accident is adopted to a large extent. There are no half holidays on Saturdays. Very few "half timers" are employed, except on occasions when trade is unusually brisk. Labor being plentiful, there is little inducement to employ children. Children must attend school, and may not work more than half time, up to the time of their reaching sixteen years of age, after which they are open for full employment. At twenty the boy is counted a man, and leaves the factory or farm to be trained as a soldier.

The Chatham wagon company, of Winnipeg, are receiving 50 wagons per week from their factory at Chatham, Ont., and this supply will be regular every week during the summer.



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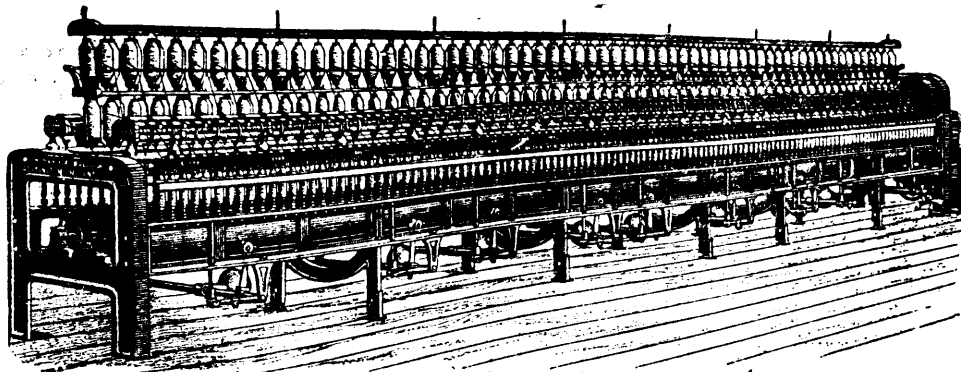
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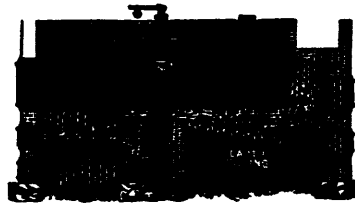
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The output of any manufacturing establishment is an indication of the extent of its business, and when one has been enabled to inspect and size up that of Mr. James St. Charles, here, he cannot but come to the conclusion that trade, in his line, is exceedingly brisk.

In his show rooms all classes of vehicles are presented for the examination of intending purchasers and admirers of what is neat and nice in four-wheeled rigs. There are light open and top buggies, attractive phaetons, tasty democrats and family carriages. All were made at this establishment, and the material used in their construction is the best that can be procured, while the workmanship of the blacksmith, woodworker and painter cannot be excelled.—*Belleville Intelligencer.*

Messrs McColl Brothers and Co., with their usual progressive-ness have recently added extensive additions to their works, and have otherwise increase their facilities very largely. This was an imperative step, their orders coming in so quickly that they found if they would retain the orders sent them improved facilities for filling them promptly were a *sine qua non*.

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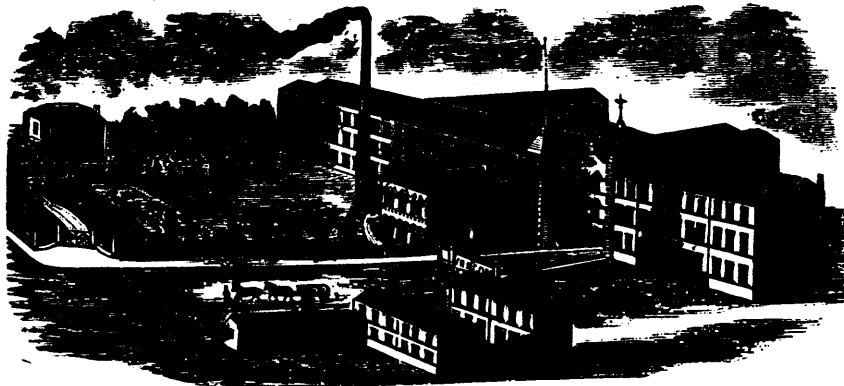
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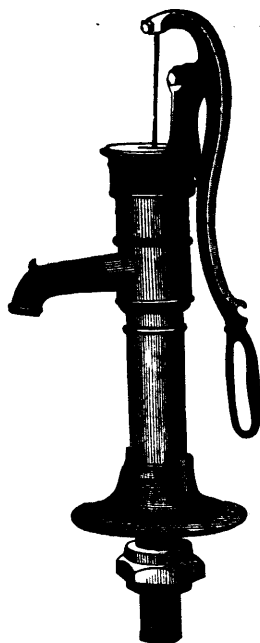
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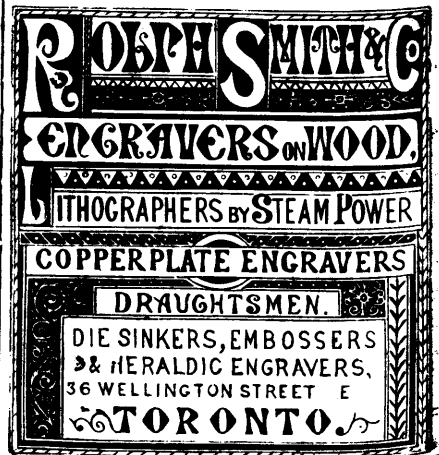
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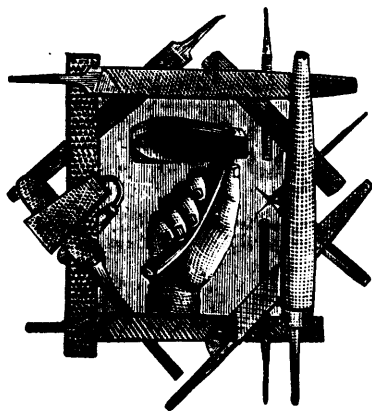
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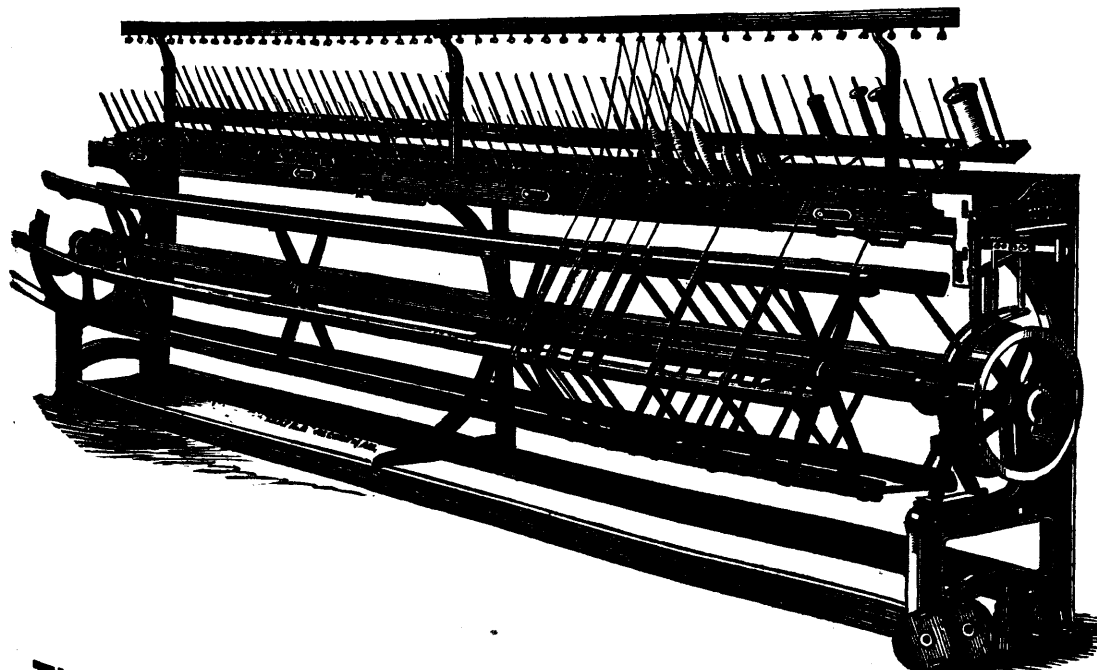
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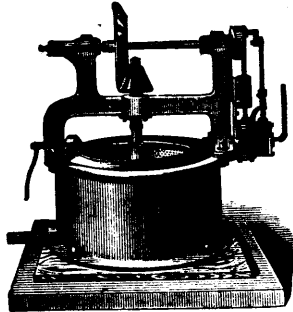
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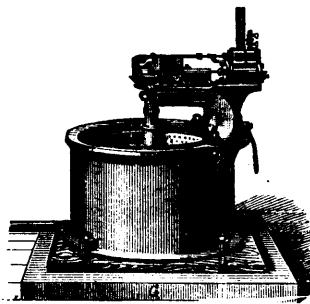
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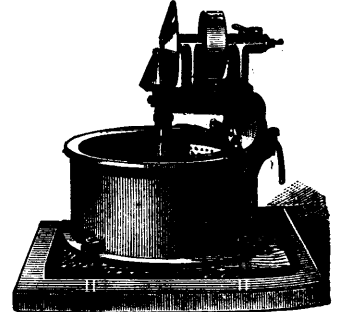
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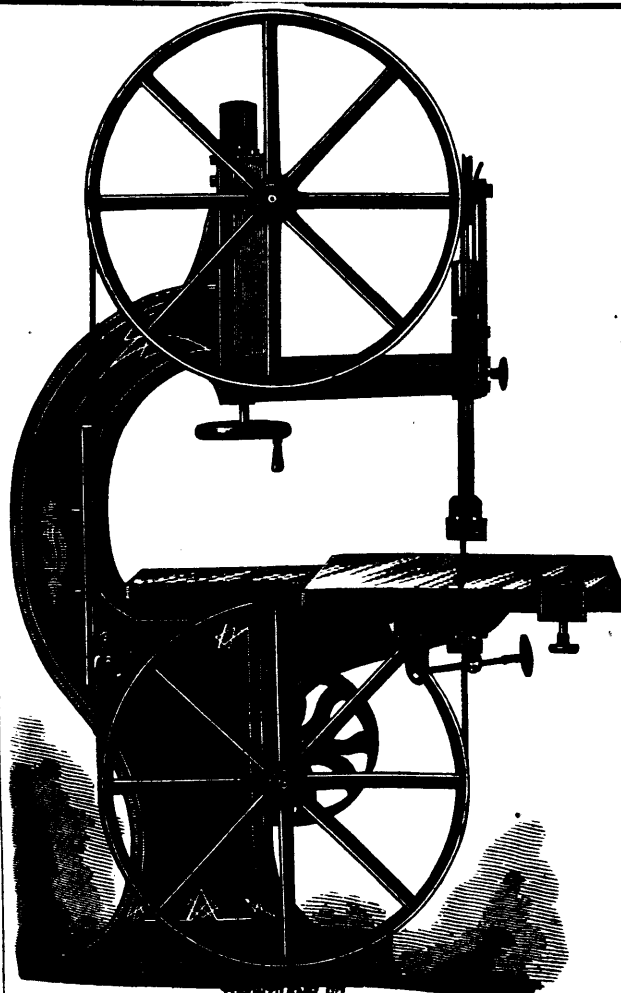
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We have had our attention repeatedly called to this subject, and it has been suggested by practical manufacturers, that having teasels agreeing as to thickness, while saving labor in placing upon the "gig," will require less experience in the "gigging" to avoid *streaked cloths*, and assure more uniform work generally.

The "gig" makers have, to some extent, obviated this difficulty, by making the "gig" cylinder "vibrate," which prevents teasels of uneven thickness striking the cloth every turn of the cylinder at the same point; but this has only been a makeshift, as zig-zag streaks are often traced upon the surface of faced goods finished upon a vibrating cylinder gig.

As teasels were assorted, viz: 1 to 1 1-2 inches, 1 1-4 to 1 3-4 inches, 1 1-2 to 2 inches, 1 3-4 to 2 1-4 inches, 2 to 2 1-2 inches, 2 1-2 to 3 inches, sized as to *length only*, streaks in goods more or less could not be prevented.

In the above classification teasels will be found of the *same diameter* in each of the six sizes, although differing in length. Such assorting is very faulty, as the *diameter* of the teasel should regulate its grade, and this is what our invention does. In some of the best regulated mills skilled labor is employed in selecting from such a diversity of sizes, those that will answer for the work to be performed, *accuracy* being out of the question, and more or less imperfections in the finishing are sure to follow even with the best of help and with the greatest care.

The saving made by using gauged teasels, both from rejected teasels on account of some being uncommonly thick or thin, and in the labor of selecting these suitable to set, is fully equal to their first cost, and an equal gain is made in the perfection of cloths, thus saving twice the cost of the teasels, besides having the satisfaction of making perfect goods, and no claims for damages or tender cloths.

Our teasels are neatly clipped, and the quality well graded, carefully hand packed with stems only 3 inches long. We shall sell them strictly gauged an exact diameter at the very lowest price in the market for the quality with 2 1-2 cents per pound additional to pay for extra labor in gauging them, and we trust you will appreciate our efforts in your behalf.

The great demand made upon us for our teasels sorted per an exact diameter, having rendered it necessary to meet a much larger demand than we could have reasonably anticipated, we have just completed an extension of our works, and secured an abundant water power to drive our sorting machinery, which doubles our capacity for business.

Parties desiring to order from us may therefore depend on having their orders executed with the same care as heretofore, and within reasonable time.

Reference to all the leading Canadian users.

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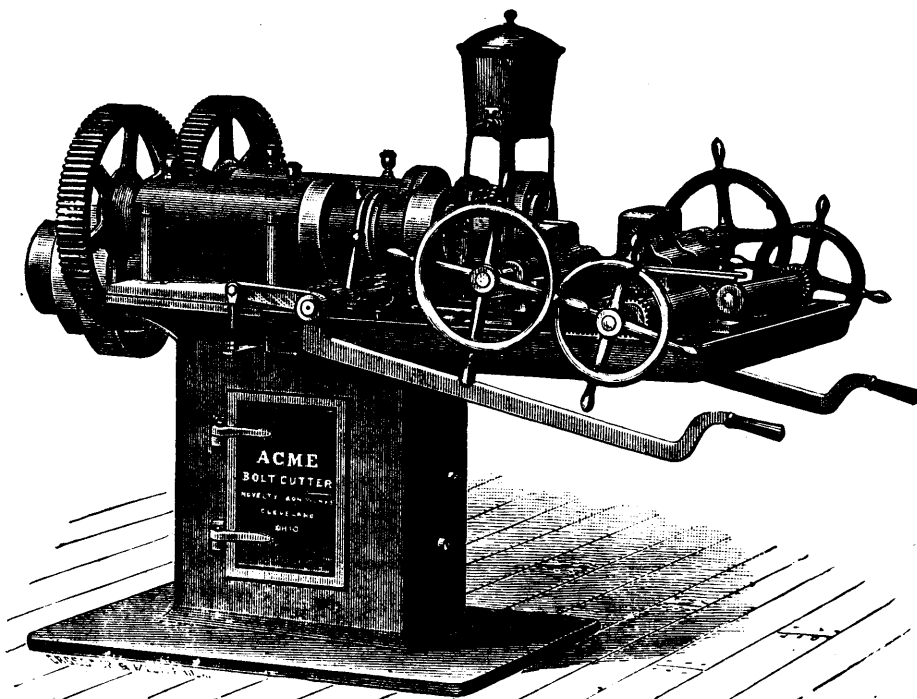
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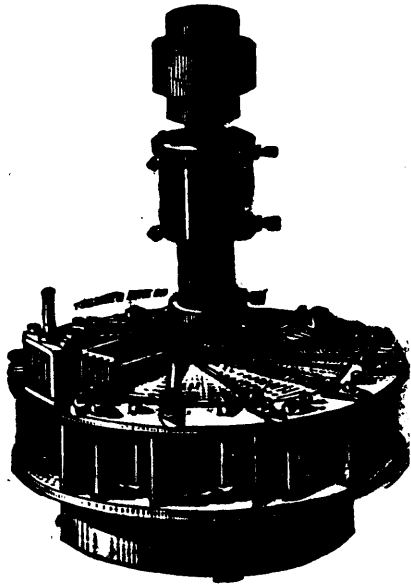
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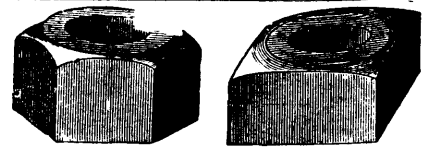
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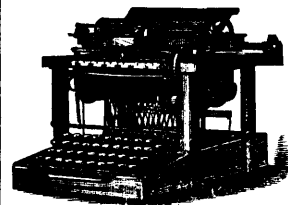
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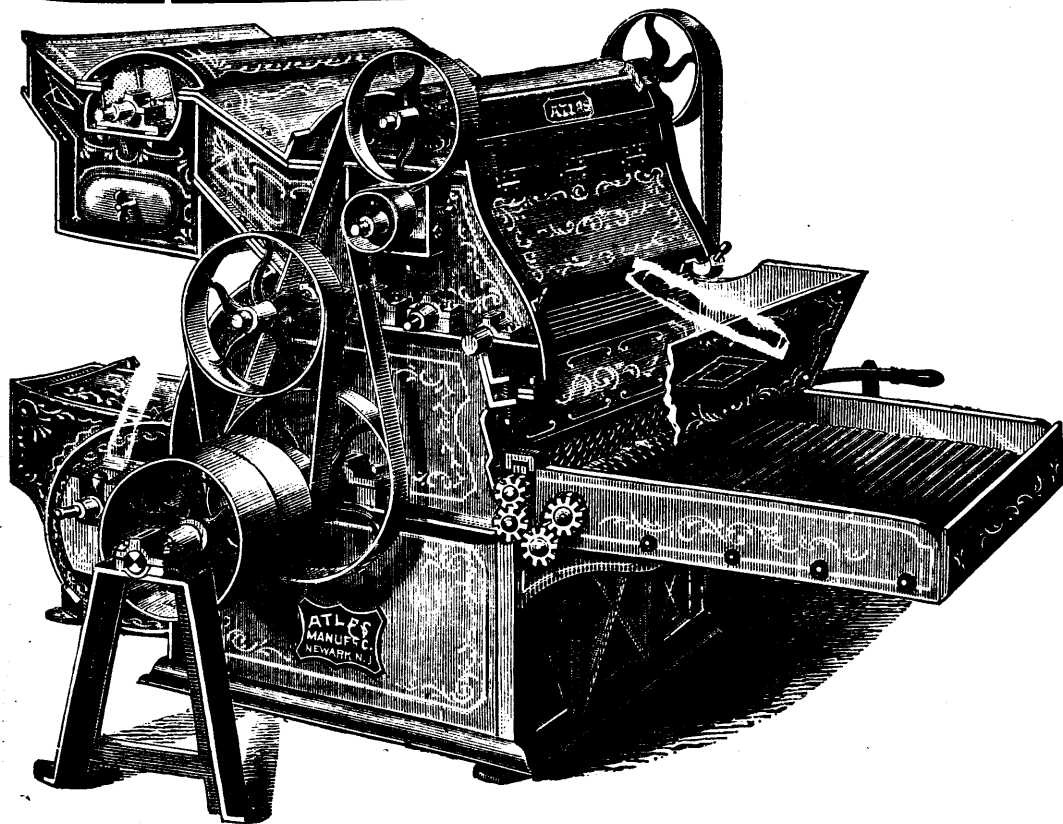
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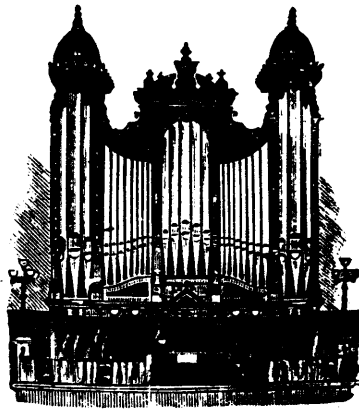
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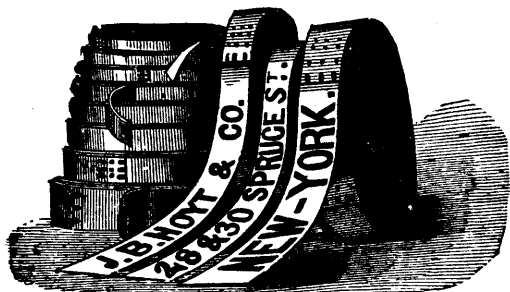
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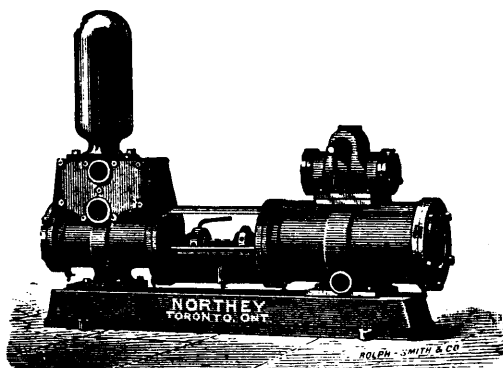
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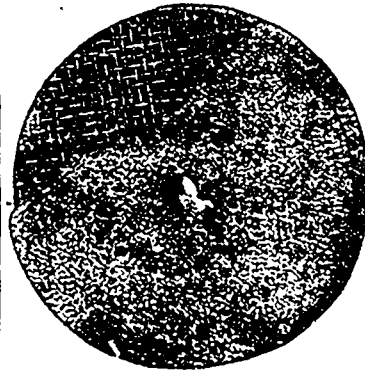
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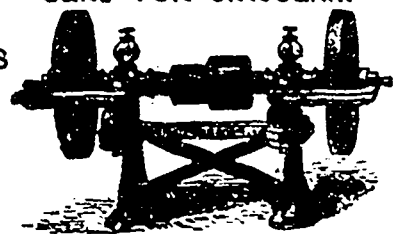
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