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THE CANADIAN MANUFACTURER

AND INDUSTRIAL WORLD

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VOL. 2.

TORONTO, MAY 4, 1883.

No. 10.

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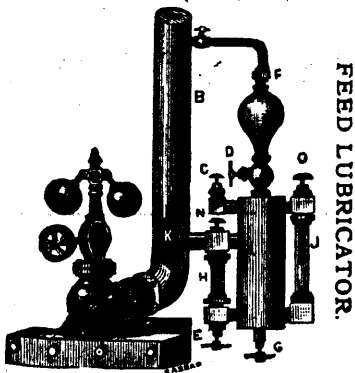
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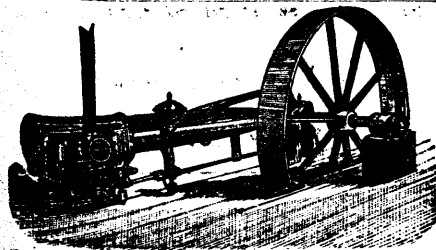
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VOL. II.

TORONTO, ONT., MAY 4, 1883.

No. 10

FACTORY LEGISLATION.

The Government must make a beginning with factory legislation, that is apparent enough. The growth of manufactures though the National Policy is what has made such legislation necessary: had there been no protection to speak of, our legislators would not have had to exercise their wisdom upon factory laws. The necessity for such laws is admitted, but we may easily damage some rising branches of manufacture by weighting them with too much legislation. And there are reasons why we should proceed cautiously. It might not be safe to assume that we have nothing to do but simply to copy certain factory acts now in force in England or the United States. In these countries manufactures are far older, stronger, and better established than with us; and consequently can stand an amount of interference that in Canada might do serious damage. This is really a point of great practical importance; and the more thoroughly we examine it, the greater will its importance appear. When conditions are more nearly equalized; when our Canadian textile industries have reached a development and attained a strength more nearly approaching what those of England and the United States have some time ago reached—then the same laws that are enforced there may be safe to try here. But, wonderful as the effects of the N. P. have been in four years, we submit that this is too short a space of time in which to build up our manufacturing interests to the strength and endurance of the gigantic concerns of Lancashire, Yorkshire, and the United States. It accords with reason and common sense to say that, in framing factory laws for Canada on models already in existence elsewhere, the different circumstances of this country should be carefully considered at every step taken.

With regard to one thing, the powers to be conferred on inspectors, probably more real practical interest attaches to that than to any other portion of the Act. To put the profitable conduct of a large business at the control of one official, or even more than one, is something not lightly to be attempted. At the Manufacturers' Association meeting on Friday last this was the point that, more than any other, drew forth the criticism of those present. It is easy to conceive of an inspector being a very well-meaning man; and at the same time insisting on changes which would cause great and really needless expense. With all respect to the gentlemen, as yet unappointed, who are to be made inspectors, it might still be in order to ask whether they are likely to understand all the

needs of a factory as well as those who are actually engaged in running it. Some requisites in the way of safety, sanitation, and convenience may be named in the act, and touching these the inspector's duty would simply be to see that the letter of the law was carried out. But to clothe the inspectors with arbitrary power to enforce important changes, dictated on their own judgment only, would be a standing danger to the successful prosecution of business. It seems clear that all changes involving much expense or annoyance to proprietors, and not specially mentioned in the statute, should be enforced only on report of the inspector, confirmed by the Governor-in-Council. This would be a salutary safeguard, and the knowledge that it existed would help to keep both proprietors and inspectors within bounds. The former would understand that if they opposed unreasonable objections against really necessary changes, a superior authority would promptly overrule them; while the latter would be equally aware that any excessive stretch of their powers would be promptly passed upon by the same tribunal.

With regard to hours of labor, some have thought it strange that they should be longer in the United States, where the workers are better paid, than in Europe, where they are worse paid. But the explanation is simple enough, after all. The large overplus of labor in Europe is closely connected with the shorter hours there, and is a principal cause of it. One of the very strongest arguments that helped to carry the ten hours' bill in England was this—that by reducing the number of hours, work would be created for many hands that before were idle. Say that in a certain town there were six thousand workers, but work for only five thousand, at long hours. Reduce the hours, and you thereby make work for the unemployed margin of a thousand; a most important and beneficial result, surely. This is what might easily have been found, and what has actually been found in Old England, many a time; and therefore a good reason for shortening the hours of labor. But in a new country like this the conditions may be very different, and in fact are so. The unemployed margin of skilled workers seldom exists here as it does there. This is the real reason why the hours are longer in American than in English factories.

This same fact—that of the existence of a large margin of unemployed labor—is the reason why, as we learn from Mr. Lukes' report, very few children are employed in German factories. The number of grown up people wanting work is always so large a marginal surplus that there is little occasion

for employing children. To employ children to any extent would cause grown people to be thrown out of employment. This is another difference between a new and an old country, which deserves to be considered.

On requisition to the Mayor of Toronto, made by representatives of the workmen's unions, and others, a meeting was called for Monday night last, at St. Andrew's Hall. The number of those who attended was not half that of the signers of the requisition; and no action was taken. This looks as if the Factory Bill now before Parliament was considered satisfactory from the workmen's point of view. If otherwise, we should surely have heard of it from this meeting. What suggestions the Ontario Manufacturers' Association has to make have been laid before the Government.

THE VALUE OF THE CANALS.

As railway amalgamation progresses in Canada, the value of the canals to the country becomes more and more apparent. Some points in this connection are noted by the *Hamilton Tribune*, in its report of recent interviews with citizens of St. Catharines who are interested in navigation matters. Comparing present prospects with times gone by, Captain Larkin says that railway competition makes the outlook a bad one just now. Last year's opening, he says, was poor, and the business very poor; this one promises to be equally poor if not poorer. The traffic of the Welland canal last year was much less than it has been for twenty years. St. Catharines was built upon its shipping interests. It had a large American trade, and most of the money made was brought there for supplies, ships, and paid to men as wages. One vessel in thirty days could earn as high as \$4,000. This was in '71 and '72, the palmy days of canal prosperity. Still, he looks hopefully forward to the future, notwithstanding. He says that when the canal system of Canada is completed to Montreal, our head of ocean navigation, the carrying capacity of our vessels will be so much enlarged we will be able to successfully compete with all the railroads. There are 12 feet of water in the new canal and 10 feet in the old one; two feet additional water would permit the passage of much larger vessels and consequently larger cargoes. Vessels that will carry double the cargo will do so at an expense not exceeding one-fourth the present amount. The through traffic is very little affected by the tariff, not enough to make its removal a point of contention.

Mr. Henry A. King, who is associated with Mr. James Norris in his extensive milling, commission, and shipping business, says that the Canadian tariff on grain and flour has really very little effect on the carrying trade, for the reason that American produce goes through in bond. The spring has been a backward one, and there are large quantities of grain stored at Chicago, and waiting transportation east. For the firm establishment of the lake and canal trade further improvements are necessary. The Canadian waterway must be improved; we should have an uninterrupted chain of navigable water of sufficient depth to take a vessel through from Chicago to Montreal without breaking cargo. Transferring causes great delays, so that vessels cannot compete with railways in point of time in passing from one point to another. The locks

of the Welland Canal are 275 feet long and 45 feet wide, those of the St. Lawrence, excepting the Lachine Canal, are only 200 feet long. It is in locks like these latter that delays occur. We need that the locks of all canals be made uniform in size, and also that the canals be deepened. Mr. King claims that St. Catharines ranks first amongst inland Canadian ports. Boats built there are most successful in braving the terrors of sailing on the canal, as no disasters have befallen any of them so far. Last season the *Persia*, a passenger steamer, made twenty-one round trips between there and Montreal without accident of any description. The trip is made in one week, and is said to be one of the most delightful of summer jaunts.

Mr. E. A. Smyth, the manager of the St. Catharines Street Railway, is engaged in enlarging lock No. 2 on the old Welland Canal, in order to let boats from the new canal up to his warehouse on the old stream. Mr. Smyth is much interested in the quarries about St. Catharines, which, he declares, have the finest red sandstone, blue limestone and cement stone in the country.

To all which let us add, that by the policy of low rates in summer and high rates in winter, the railways may for a time continue to make the inland shipping business unprofitable. But they will probably tire of this at last, and lake and canal will beat them in the long run. Seeing the enormous difference in cost between transportation by rail and water respectively, this is the result that we must look for. With some enlargement of the St. Lawrence canals, and further improvements in the size and build of vessels, the day of victory for our magnificent water route would be sensibly hastened. Again, the growth of trade with the North-west, and the fast approaching time of large shipments from the head of Lake Superior, must ere long have a wonderful effect in developing the shipping trade. The next thing to look out for will be to take care that the railway companies don't do as they have done in England—get hold of the canals.

THE SEASON OF STRIKES.

The strike season in the United States is now on. A considerable reduction having been made in the tobacco and cigar duties, the cigar-makers demand that part of it be handed over to them in the shape of increased wages. In New York some of the largest cigar-making concerns have given an advance, but at Richmond all the factories closed on the 1st inst., and the operatives are now out on strike. Several strikes in the building trades are also reported. All these strikes will probably come to an end by some means or another before long, but a more serious event is the turn-out of the coal miners in the Pittsburgh district, in resistance of a reduction of wages. The proprietors say they will see the mines idle until fall rather than pay more than three cents per bushel. Circumstances are greatly in their favor, owing to the decreased demand for iron, which of course means a decreased demand for coal too. The strike is, in fact, a relief to the mine owners, because it stops production just at the time when the slackness in the coal and iron business might otherwise have proved a serious trouble to them.

Last year, says an American contemporary, the iron manu-

facturers of the West formed an organization for the purpose of fighting strikes. Their unity last year brought victory. Had it not been for their association there would have been enough individual defections to have broken the manufacturers' opposition, and the workmen would have won as they had done every year before. In fact their easy victories filled them with confidence, and they came to believe that their demands would be necessarily complied with. Last year they demanded \$6 per ton, fought four months—and lost. Thus on account of the low tariff duties, the dull demand, the greater supply and low prices, they concluded to let the \$5.50 scale alone, but not so with the manufacturers. After their annual meeting held two weeks ago they resolved themselves into an association and considered the state of trade and the cost of labor, and after a thorough discussion of the question agreed upon a modification of the scale—a modification which had been requested frequently in former conferences with the workmen, but as often refused. It will be remembered that the workmen have advanced wages by successive strikes during the past fifteen years from \$4 per ton to \$5.50, and that the chief characteristic of the advance to this latter was and is that wages could not be reduced below \$5.50 per ton no matter how much below $2\frac{1}{2}c.$ per pound the price of iron might go. The manufacturers protested in vain against this unfair position of the Amalgamated Association, but having finally placed themselves on terms of equality with their workmen by means of their organization, they find themselves able to dictate terms, and have done so, these terms being that the price of puddling shall be \$5 per ton when iron is at $2\frac{1}{2}c.$ per pound, and that the price shall decline to \$4.50 as the selling price of bar iron may decline to $2c.$ per pound, which is the present selling price.

At St. John, New Brunswick, the ship laborers have been reviving memories of the time when threshing machines were burnt by farm laborers in England, because they took the work away from "the poor man." Last week they struck against the use of steam winches for loading deals, professedly on account of danger from accidents, but really because they feared that their own services might not be so indispensable as before.

In this section no strikes of much account have been reported as yet. There is the usual agitation of the spring season in the building trades, but the prospects are that the difficulties existing will be got over at an early day. On the whole, this is not a good year for strikes, and working men will be very badly advised if they "buck" against circumstances which themselves and their employers put together can but very slightly control.

THE TOBACCO TRADE TURNING A CORNER.

During some months past it has been charged against the Government that the announcement of reduced excise duties was causing a stagnation in the tobacco trade, to the great injury of those engaged in it. It never seems to have occurred to those making the charge that a temporary slackening of business in expectation of lower duties, as well as an increased movement in expectation of higher rates, are things that *must* happen, in any country, and under any government. Nor do they

seem to have reflected that no difference worth speaking of could result to the year's volume of trade, inasmuch as the business deferred during March or April would certainly have to come on in May, June, or July, as the case might be. The same complaints were made in the United States, and with as little reason. Just to show how the thing works, we quote the following American despatches of recent date:—

LYNCHBURG, May 1.—There is the greatest movement of manufactured tobacco ever recorded here. Sixty thousand dollars' worth of stamps have been issued, and eight hundred thousand pounds of tobacco shipped.

RICHMOND, Va., May 1.—The Collector of Internal Revenue has issued since midnight stamps, under the new law, for nearly two million pounds of manufactured tobacco, four millions of cigarettes, and a million cigars. The tax amounts to \$165,000. This is probably the largest amount of stamps issued during the time in any district in the country.

PETERSBURG, Va., May 1.—Four million pounds of tobacco were shipped from Petersburg to New England points to-day. A large quantity was also shipped to other places. The sales of tobacco and cigar stamps to-day aggregate \$33,000.

LOUISVILLE, May 1.—The Internal revenue collections to-day were the largest ever made, aggregating \$126,000.

WASHINGTON, May 1.—It is said that the tobacco goods ordered throughout the country for May delivery have been unprecedented in volume and variety, the purpose of dealers being to avail themselves as early as possible of the advantages of the reduction of the tax, which goes into effect to-day.

This should be a lesson to some people, who forget that revenue changes destined to have permanent good results must frequently be accompanied with more or less of temporary inconvenience. The most beneficial changes, even, would have to be indefinitely postponed, if we could not make up our minds to suffer some inconvenience in the process of getting them into operation.

IRON DOWN.

The very low prices to which iron has fallen in the United States make one of the most remarkable business features of the season. A New York despatch to the *St. Louis Age of Steel* says that the reduction of the Thomas Iron Company in its quotations on foundry iron to \$22 for No. 1 and \$20 for No. 2 has taken the trade by surprise, and there is a general fluttering in iron circles over the consequences likely to follow. Several of the stronger companies have taken similar action in order to protect themselves, and No. 1 is now quoted at \$22; No. 2 at \$20, and Gray Forge at \$19. These figures have been named in order it is said to drive out of the market a number of the smaller competitors, whose efforts to prolong their unnecessary existence only add to the threatening accumulation of stocks which must sooner or later result in disaster to the trade. This bold policy will protect the stronger and save the weaker from a worse fate. The blowing out of fifty-five blast furnaces since the opening of the year shows that the iron-making capacity is far in excess of requirements and that this policy must be practised until supply is brought nearer to demand. Bessemer iron is quoted at \$22, but no sales can be made. Buyers are ready to pay \$21.

It is probable that the movement above referred to is designed to frighten off British iron exporters, and to warn them

to keep off American ground, as much as to swamp small producers at home. Attempts to keep up the price under such circumstances are not hopeful. The failure was recently announced of a Pittsburgh firm, who bought 60,000 tons of pig iron at \$25, and held it against a decline to \$20, thus making a loss of \$300,000. Among the causes of this trouble in iron, the check in railway building is no doubt the chief. If railway men and capitalists think it for their interest to contract building operations, and to build this year only one mile of road as against two miles the year before, nobody can force them to keep expanding against their will. But it is railway expansion that more than anything else creates the demand for iron, and when the former slackens the latter must fall off too. There is absolutely no help for it. If the whole railway building of ten or twenty years were equally spread over the period, giving the same mileage or the same consumption of iron for each year, the demand would be steady and prices much the same. But that is not the way the thing works. It does not work evenly, but by alternate hot and cold fits. From the beginning of 1874 to the middle of 1879, during the time of depression, railway men would scarcely lay out money enough to keep their lines in fair running order. After that came a great "boom" in railway building, but now it seems as if railway men think they have gone far enough with the "boom," and must slacken up. There is this contingency to be considered, that present low prices may tempt some of them to go ahead now with enterprises which otherwise might have been postponed for years. But this is something that only time can develop either one way or the other.

WHERE PROTECTION SUCCEEDS.

On another page we print an article from the *Chicago Tribune*, relating to the effect of protection on the iron trade in the United States. The argument is, that protection is proved to have failed because under it the price of iron has gone down to figures at which there is little or no profit in its manufacture. Pig iron, which stood at \$26 in January, 1882, is now down to \$20. As a consequence, not only do the profits of furnace owners disappear, but workmen's wages must come down. The capacity of the furnaces to produce has gone beyond the country's capacity to consume. And protection is held to be a failure, because it does not suffice to keep iron up to high prices.

We copy also an article from the *Hamilton Times*, on the present low price of refined sugar, and the temporary shutting down of the St. Lawrence Company's refinery in consequence. Protection has led to over-production, refined sugar has become too cheap and the supply is too abundant, therefore, says the *Times*, protection is a failure. What has happened with sugar must happen also with cotton before long; the point of over-production will be reached, and some of the cotton mills started by the N.P. will have to be closed. We put these articles on record in our pages so that our subscribers may have, for future reference, the new and extraordinary free trade argument therein set forth. After all, it is not strictly a new argument, for we have heard it before; but never before did it get the prominence which is now given to it by free trade advocates.

The old argument against protection used to be that it made commodities scarce and dear; and that it was particularly op-

pressive to the poor, through forcing high prices for the necessities of life. To wheel around and say now that it is making commodities too abundant and cheap is a startlingly sharp turn; but the free traders are able to take it, we see. What they call the failure of protection is on the contrary the best proof that need be wanted of its success. The point raised is one that will doubtless be frequently debated in future, both here and in the United States, but meantime we simply state it and leave it for our readers to think over.

A QUESTION OF TIME.

The fuss and fury with which the Finance Minister's announcement of an advance in the duties on agricultural machinery, waggons, &c., was met in some quarters is already dying out. Winnipeg agents of American manufacturers are now advertising that, notwithstanding the ten per cent. more duty, they will continue to sell at the old prices. This being the case, who pays the increase of duty, the American exporter or the Canadian consumer? This conundrum should receive the immediate attention of Professor Sumner, of Massachusetts, also of Canadian philosophers holding free trade views.

As for the result to settlers in the North-west it is only a question of time, and of very short time too. Perhaps Canadian manufacturers were caught napping; they did expect a big demand from the great country beyond, but they had no idea it would come so quickly and with such a rush. Next year, we should expect, they will be fully ready to meet it, and even this year they may prove not to be so far behind as has been talked of.

One thing there is which must soon make a great difference in their favor. They will be able to send their shipments for this season by the cheap water route to Thunder Bay, thence by rail the rest of the way, thus avoiding the long and fearfully expensive route by Chicago and St. Paul. That alone ought to count for a great deal in the fight.

Against Canadian-made agricultural machinery for the North-west, the most plausible argument used is that our manufacturers do not understand making the specialties required for prairie farming, whereas the Americans have been making, improving, and perfecting such machines for a quarter of a century, and know all about it. We can concede to this argument all the force that is due to it, and still believe that all the improvements devised by American makers during twenty-five years can actually be mastered and copied by first-class Canadian establishments in one year, or two at the farthest. And we have an idea that this view of the matter will be endorsed by practical men.

RAILWAY MATTERS.

The past fortnight has been an exciting one for those who take special interest in railway matters. The news of the final rupture of the negotiations carried on in London for combined action on the part of the Grand Trunk and Canadian Pacific Railways, alluded to in our last, is confirmed. A bill authorizing the C. P. R. to lease in perpetuity the Credit

Valley, Ontario and Quebec, and Atlantic and North-western lines, has been passed by the House. This gives the Canadian Pacific, operating in connection with the Vanderbilt system of roads, a through connection between Chicago and Montreal. In the House Railway Committee, a bill allowing the Northern to lease and control the Northern, North-western, and Sault Ste. Marie line was thrown out, on the ground that sufficient notice had not been given of the amendments for that purpose.

The annual meeting of the Hamilton and North-western Railway Company was held at Hamilton on the 1st inst. On motion of Mr. Edward Martin, seconded by Mr. Adam Brown, the following gentlemen were elected directors for the ensuing year:—Messrs. John Stuart, John Proctor, W. Hendrie, Edward Gurney, Samuel Barker, M. Leggatt, Ald. Sir Thomas Dakin, London, Eng.; Chas. Bishop, London, Eng.; Jas. W. Barclay, M.P., Forfarshire, Scotland. At a meeting of the directors, held immediately after the general meeting, Mr. John Stuart was re-elected President, and Mr. John Proctor was re-elected Vice-President. Messrs. John Stuart, Ed. Gurney, W. Hendrie, and Samuel Barker were appointed members of the joint executive committee in Canada. Messrs. Dakin, Bischoff and Barclay were appointed members of the joint executive committee in London, Eng. At first it was rumoured that the result was a victory for the Grand Trunk party, but later accounts agree that in the new Board there is a controlling majority in favor of maintaining the independence of the road, and keeping friendly relations with both the Grand Trunk and the Canadian Pacific.

In Toronto the question of what to do with the Esplanade, in order to remedy present inconvenience and danger from overcrowded railway tracks and too many of them, is attracting a good deal of public attention. An attempt to settle the matter by negotiation between the Grand Trunk and the city authorities is in progress.

WHAT GOOD HAS IT DONE?

(From the Chicago Tribune.)

Stoppages of iron-mills, reductions of wages, strikes of workmen, heavy failures of iron manufacturers, and last and most significant, a drop to \$20 a ton of the price of pig-iron, which was \$26 in January, 1882, are the present features of the iron business. There would excite attention in any event, but there is one circumstance that makes them particularly noteworthy. This is, that the country has been taxing itself from garret to cellar, from the parlour to the kitchen, for twenty-two years in the most burdensome manner, to make the iron manufacturers a present of everlasting prosperity. The country was told that to give high wages to the iron-workers and stability to the manufacturers it must allow itself to be taxed on every ton of iron it used, whether made abroad or at home. Tax itself accordingly did, right heroically. And now the falling wages of the iron-workers and the wreckage of iron-mills raise the question, what good has the sacrifice done?

Not even the iron men claim that their distress is due to the recent paltry reductions in the tariff. The report recently issued by the American Iron & Steel Association states that the present difficulties began in 1882, and were attributable to a reaction from excessive railroad building, to political complications, and to over production. They reproach Congress for reducing the tax on iron, but do not give the lowering of

the duty any but a minor place among the causes of the present colapse.

A more signal instance of the failure of the prosperity-by-taxation theory to work in practice could not be found. All that was promised has failed of fulfilment. The country, it is true, has cheap iron, but it is the cheapness that flows from a ruinous over stimulation of our producing power. It is the cheapness of panic, not the cheapness of healthful competition and improved processes. It is a cheapness that is being used all over the country by the employers to cheapen labour. "We must," they are saying, "take less for our iron. You must take less for your labour." The iron tariff was to make wages high. We see it working before our very eyes to make them low.

"It is a pity we ever had protection," Mr. A. S. Hewitt, the great iron manufacturer, said in an interview the other day upon the decline in the price of iron. He continued:—The recent legislation in Congress on the tariff has had no effect whatever on the iron trade, and the iron trade is the thermometer of all trade in this country. The price of pig iron has been continually going down, and down, and down, but not in the open market. Only those who knew the inside prices could buy low. It has been bought low for three months. As to the cause of the decline, the capacity to produce pig iron has been increased beyond the capacity of consumption. All pig iron dealers are losing money. Our firm is losing money. The Thomas Iron Company is losing money. We are all selling out because we can't afford to hold it. The weak firms must go to the wall.

The weak firms, like the weak workingmen, must go to the wall. The great capitalists can always protect themselves. With past profits accumulated in their pockets they can look calmly on the temporary break in the flow of fresh profits. They can endure the loss of interest running against them. But the workingman must work or starve. His possibility of saving has been eaten up by the taxes he has had to pay one syndicate or another "to protect" them in manufacturing dear clothing, dear salt, dear coal, dear railroads. What might have been accumulated in his pockets has been by the tariff transferred to theirs. If the workingmen of this country recall the promises made to them for submitting to be taxed on everything "for protection," and look around them for the fruits of fulfilment, what satisfactory answer can they find to the question, What good has it done?

A REFINERY CLOSED

The Montreal Gazette says:

"The sugar market has been in a very unsatisfactory state during the past month, and values have ruled throughout in the buyers' favor, which the knowing ones have fully taken advantage of during the past few days, and the sales in the aggregate are variously estimated at from 10,000 to 12,000 barrels. Yellows are now quoted at 6½c. to 7⅞c., according to quality, the brighter grades being much in demand and wanted. Granulated is now firmly held at 8¾c., an offer of a trifle less being declined to-day for a 500 barrel lot, although it is said one of our refiners in the early part of the week let several lots quietly slide at less money. The market, however, closes strong with an upward tendency, and with the early approach of navigation and the small stocks said to be held by country dealers, we would not be surprised to see the low prices now ruling of short duration. The St. Lawrence Sugar Refining Company, we are led to understand, have closed their extensive factory owing to the exceedingly low prices the refined product is selling at by other refineries, their large staff of workmen being discharged a few days ago for an indefinite period."

The weakest begin to go to the wall. A large refinery

closed, the expensive machinery idle, and the large staff of workmen discharged for an indefinite period—all happening when the National Policy is barely four years old! The Tory journals have been boasting that competition supplies cheap sugar. Yes, for a time. But there is the loss of interest on the cost of that idle machinery; there are the men who were drawn from other employments and are now turned out in a body to look for other means of earning their bread, and as consumption overtakes the reduced supply, prices will again increase. The cheapness is like a snow-storm in May—here to-day and gone to-morrow. The loss on idle capital is a permanency. It is due to the stimulus of the N.P., which made refining extraordinarily profitable for a while. The workmen will have to look out for themselves. The framers of the tariff have no concern with their welfare, for there is no election pending. What has happened to the St. Lawrence sugar refinery will happen to the weaker cotton factories in their turn. Some of them would never have been built but for the N.P., which serves only to hoax capital into unprofitable avenues, and to set labor at employments which vanish in time of distress. The system of obtaining cheapness by the highway of bankruptcy has little to commend it.—*Hamilton Times*.

HOUSES WANTED.

It is pleasing to find such items as the following in our exchanges.

Brant Review:—We would again urge upon our townspeople the necessity of more dwelling houses of every description. During the last week parties have been compelled to leave Paris for Brantford, for no other reason than the want of house room. Others are contemplating moving their families to the same town very shortly. A number of families, at least five, are going to come to Paris this week, but where to put them is a puzzling question. Every one who can do so should put up a house. It would be a paying investment, as some houses in town are now paying about 20 per cent. on their original outlay.

St. Thomas Journal:—In view of the great demand at present existing in this city for dwelling houses, it would seem that a profitable opening for surplus capital could be found in erecting residences of a medium size, and which could be rented at a moderate rate. Good cottages containing seven to ten rooms, and renting at from eight to twelve dollars per month, are always in demand. Houses of a somewhat better class, renting for fifteen to eighteen dollars, are also urgently needed at present in St. Thomas. There is too great a tendency on the part of speculators to erect dwellings of such an expensive nature as to be beyond the means of artisans, and it is this class of our citizens who are now seeking homes. Let the building operations for this year be confined more to dwelling houses and less to stores, than has been the case the last few summers. There is a demand to be supplied in the one instance, but none in the other.

A canning establishment has been started in Bloomfield, Prince Edward County, Ont.

Messrs. A. Wren and Co., of Forest, Ont., have 400 of their improved fanning mills all ready for shipment to Manitoba.

A paper-pulp chimney, 50 feet high, has been erected in Breslau, Germany. It is chemically prepared to resist combustion.

The alterations and additions to the St. Boniface Soap Works, which have been going on for some time, are completed, and the works will be open for public inspection on Wednesday.—*Winnipeg Commercial*.

H. McKenzie & Sons have renovated their machine shop during the past week. A new floor has been laid down, a set of Emery wheels set up, and other improvements made, which will enable this well-known firm to keep pace with their fast increasing patronage.—*Petrolia Topic*.

INDUSTRIAL BOOK REVIEW.

See Advertisement of our Mechanical, Engineering and Industrial Book Department, on page .

Since this department was commenced, about six weeks since, we have had many orders for the works we advertised, in fact we had no idea that it would prove so popular in such a short space of time. Of course we have hundreds of books on our list, which we have not space to give particulars of, but can supply almost any mechanical, scientific and industrial book by having the particulars forwarded. Parties buying from us save about twenty per cent., as we pay freight and duty, none of this class of books being published in Canada. Below we give, in addition to those advertised on another page, a list of very cheap but very valuable little books, which we will supply at publishers' net prices:

PRACTICAL CARPENTRY. Hodgson. (Ready) \$1 00
 THE STEEL SQUARE, AND HOW TO USE IT. Hodgson.
 New Edition 1 00
 THE BUILDER'S GUIDE AND ESTIMATORS' PRICE
 BOOK. Hodgson 2 00
 THE WORKSHOP COMPANION: Wrinkles, Rules, Recipes,
 Processes, etc. 35
 GUIDE TO PRACTICAL DRAUGHTING. Pemberton... 1 00
 LECTURES IN A WORKSHOP. Pemberton..... 1 00
 INSTRUCTION IN THE ART OF WOOD ENGRAVING.
 Fuller 30
 CONSTRUCTION AND ERECTION OF LIGHTNING RODS.
 Phin 50
 WHAT TO DO AND HOW TO DO IT IN CASE OF ACCI-
 DENT 50
 RHYMES OF SCIENCE: Wise and Otherwise 50
 HOW TO USE THE MICROSCOPE. Phin 1 00
 PREPARATION AND USE OF CEMENT, GLUE, PASTE,
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 THE SLIDE RULE AND HOW TO USE IT..... 25
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 HINTS FOR PAINTERS, DECORATORS AND PAPER-
 HANGERS..... 25
 CONSTRUCTION, USE AND CARE OF DRAWING IN-
 STRUMENTS..... 25
 THE STEEL SQUARE. An abridgement of Hodgson's larger
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 NEW DESIGNS FOR FRET OR SCROLL SAWYERS..... 25
 THE AMATEUR'S HANDBOOK OF PRACTICAL INFOR-
 MATION. For the Workshop and Laboratory. Second
 Edition. Greatly Enlarged. Neatly Bound..... 15

This is a handy little book, containing just the information needed by Amateurs in the Workshop and Laboratory. Directions for making Alloys, Fusible Metals, Cements, Glues, etc.; and for Soldering, Brazing, Lacquering, Bronzing, Staining and Polishing Wood, Tempering Tools, Cutting and Working Glass, Varnishing, Silvering, Gilding, Preparing Skins, etc., etc. The New Edition contains extended directions for preparing Polishing Powders, Freezing Mixtures, Colored Lights for Tableaux, Solutions for rendering Ladies' Dresses Incombustible, etc. There has also been added a very large number of new and valuable receipts.
 The "Workshop Companion" contains everything that is in the Amateur's Handbook.

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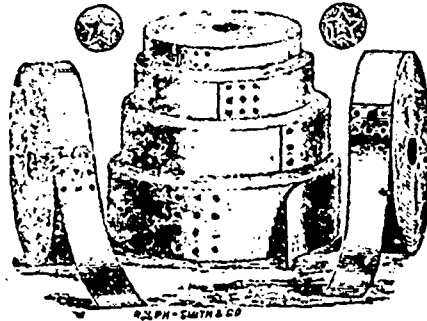
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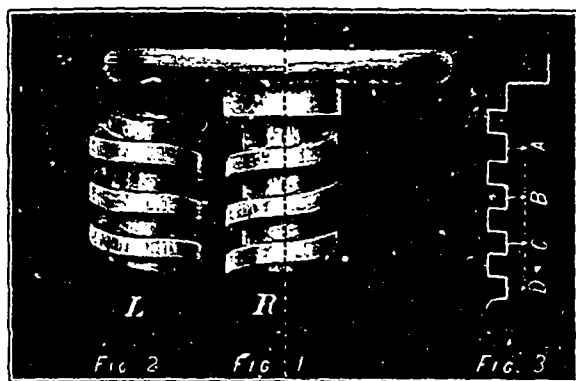
ELEMENTARY PAPERS FOR YOUNG MECHANICS

VI.—THE SCREW.

Motion of the Screw is a compound of rotation about a fixed axis, and translation along that axis. There must be a definite constant relation between these two components, that is, in any given screw of true form, any number of turns or revolutions will always cause the same amount of travel along the axis.

The screw is really an inclined plane wound around a circular cylinder. It may be traced around the inside of a circular hole, forming an *internal* Screw, such as is seen in a NUT; or it may be traced around the outside of a circular bar forming an *external* Screw, such as is seen on an ordinary BOLT. When the word Screw is used without any qualification it usually means an external screw.

The *PITCH* of a screw is the distance from one *thread* to another, measured parallel to the axis, such as from A to B, or B to C, or C to D, in fig. 3.



The *THREAD* is the projection of uniform section winding around the cylinder, and the *truth* or accuracy of a screw depends upon the uniformity of pitch of the thread.

Where a screw works in conjunction with a nut, it is essential that the pitch be uniform, and that the projection of the thread be similar both in the nut and in the screw.

External screws are sometimes made of a changing pitch, when no nut is used with them, as when the screw is used to convey, and at same time compress, some soft material, as sawdust, or peat. In these cases the soft material forms the nut, and adapts itself to whatever change of pitch there may be in the compressing screw. The compression is produced by gradually lessening the pitch of the screw, which is made to revolve in a hollow cylinder, which is just large enough in diameter to clear the projection of the screw thread. As the soft material enters the one end where the pitch is the greatest, one revolution of the screw draws in a larger bulk than is discharged at the other end where the pitch is least and the amount of compression is the result of the difference of pitch.

Steam-boat propellers are another example of a class of screws which work with a yielding material for the nut. In this case the water forms the nut. The threads are not wound around the circular cylinder, for more than merely a fraction of one revolution, and generally, two, three or four pieces are

put on at regular intervals. There is great variety in shaping these "blades," as they are called.

The first "propeller" used is said to have had several complete turns of a thread upon it, like a huge bolt. While trying the vessel, which had been moving but slowly through the water, it was stopped by something getting entangled about the screw, after which it suddenly started off at much greater velocity. Examination shewed that several pieces had been broken out of the screw thread, and further experiments resulted in the shape now used being adopted.

Ordinary screws are called right hand or left hand screws, depending upon the direction in which they must be turned in order to produce a forward motion. Right hand screws are commonly used, and left hand screws are only made for special purposes.

Right hand rotation is when the direction appears to be the same as that in which the sun seems to revolve to an observer who stands north of the equator.

The screw marked R, fig. 1. is an example of a right hand screw, and that marked L fig. 2. is an example of a left hand screw.

The success which has attended the introduction of the electric light into the Canada Cotton Company's mills, renders it very probable that an effort will be made to introduce it into several establishments in Ottawa, and possibly into the city lighting apparatus.—*Ottawa Citizen*

The Brampton by-law granting a loan of \$75,000 to the Haggert Brothers, agricultural machinery manufacturers, of that town, was carried on Monday by a vote of 253 to 65. The loan and interest are repayable in twenty equal annual instalments, the debentures to draw interest at six per cent. per annum, payable half-yearly. The large vote cast in favor of the by-law is strong evidence that the people of Brampton desire to encourage manufacturers and capitalists to locate in their midst, and to assist those already there.

Messrs. R. & G. Strickland, of Lakefield, Ont., are prepared to supply water power to any one desiring to establish a manufactory in that village. This is an offer worth considering by manufacturers, as the locality offers many advantages for a factory, being at the terminus of the Peterborough section of the Midland Railway, and at the foot of that portion of the Trent Valley Navigation, which is actually under construction at present, and which will afford cheap means of communication with a large extent of country. It is also at the head of the next section of the Trent Valley Navigation which is likely to be placed under construction, and that at no distant period. As to the power, there is a good head with a constant and abundant supply of water.

Mr. Samuel May, the well known billiard table manufacturer, of Toronto, has commenced to build very extensive additions to his factory, which when completed will more than double his facilities besides giving much greater conveniences for carrying on the various branches of this industry. The new building will be five stories high, and 30 ft. wide by 114 ft. in length. The first story will be of stone, the rest of brick. Mr. May has found his business increase so rapidly that if he would retain his customers the additions described above were a necessity. He is now giving employment to about thirty skilled mechanics, and expects to increase this force to the neighbourhood of a hundred when his new building is ready for occupation. His tables are fitted with the patent steel cushions, his own invention, and which proved to be very popular, being considered far in advance of the old style rubber cushion. We had the pleasure of seeing some handsome specimens of inlaid work, intended for the frames and legs of the better class of tables, that certainly do credit to the taste of the designers and the execution of the artisans employed on them. Mr. May is also agent for the large ivory house of Heintz Ad. Mayer, of Hamburg, and supplies the Dominion trade with piano and organ keys &c.

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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.

It is interesting to be informed that Arctic whalebone recently sold for £1,200 sterling per ton in London, while for Davis' Straits bone £1,400 per ton was asked.

A Montreal despatch to the *Mail* says:—"Another extensive home industry is on the tapis here by English and Canadian capitalists. It is the establishment of the first worsted manufactory in Canada. The matter is in the hands of experienced men in the trade, who intend shortly interviewing the Finance Minister to induce him to make some slight changes in the tariff, so as to give the company a fair chance to compete with outsiders." There is a mistake here, as the manufacture of worsted goods has been carried on for two years or more by the Rosamond Company, at Almonte. And more recently the Canada Worsted Company has started operations in Quebec.

The works of the Whitman & Barnes Manufacturing Company, elsewhere described, constitute good evidence of what

protection does for a country. This company, long established in the United States, used to supply all the mower and reaper factories in Canada with knives. Under the N.P. a Canadian firm started the manufacture at St. Catharines, and against it the American firm at once declared war. The end of it all was that, in order to get rid of the Canadian tariff, the latter bought out the former and set up their plant in St. Catharines. And the manufacture of knives to supply our reaper and mower firms, instead of being conducted in the States as before, is now transferred to Canadian soil.

The problem as to the accumulation and storage of motive power in the form of electrical force, which has been practically solved in Europe, is attracting much attention in the United States. Prof. Henry Morton, of the Stevens Institute of Technology, in New York, in an address delivered there a few days ago made the assertion, the truth of which he demonstrated by experiments, that by a very simple contrivance, and at a very slight expense, electricity as a motive power could be used economically, not merely to propel street cars, but to drive all sorts of machinery. He stated that the energy that might be stored in a box in size equivalent to a cubic foot was sufficient to drive a loaded street car from one end of that city to the other. If extensive practical application be ever made of this discovery, the joke about electricity superseding steam, while as yet the electric dynamo has to be indebted to the steam engine for its driving power, will lose its point. For water power would certainly offer the cheapest of all powers for transmutation into electric energy, and boxes containing it could be carried long distances. This new discovery opens up the prospect of an immense possible future of mechanical usefulness for the Falls of Niagara.

While we are debating the question of factory laws for Canada, the following, from the Manchester correspondence of the *Chicago Industrial World*, may be of interest:—The iron trade of Great Britain is already seriously overweighted with legislative enactments controlling its action, conceived for the most part by benevolent persons in the interest of workmen, but nevertheless handicapping ironmasters in their race with foreign competitors. Every session of Parliament witnesses some additional movement in the same direction. This session a bill has been introduced to provide for the examination of persons having charge of the working of steam boilers on land. At the monthly meeting of the Leeds Chamber of Commerce held last week the new bill was brought under consideration. An influential engineer present pointed out that if the bill was passed by Parliament it would make the cost of working steam boilers heavier. The movement was regarded as a serious Parliamentary interference with the freedom of trade and manufactures. The president of the Chamber said there seemed to be a general opinion that the bill was an objectionable one, and it was ultimately resolved to petition Parliament against the bill on the ground that it was an interference with the freedom of labor.

A most remarkable scene was witnessed in the House of Commons recently, when Sir John Macdonald's amended Land Act for the Northwest was introduced. An Opposition

paper says that the bill showed very careful preparation and met the unanimous approval of all the Manitoba members. The members of the Opposition found no fault with the provisions. The Premier explained very satisfactorily the nature of the measure. Claim jumping has been effectually dealt with by the bill. Among the amendments introduced it was proposed to provide that a settler could get a second homestead on the same conditions as the first and to extend the time within which a settler must enter on his homestead in such a way that a farmer who made his selection in the fall might not be compelled to settle in the winter. There were provisions to prevent jumping claims, and the issue of patents was to take place in one department only. The certificates of land agents shall have the endorsement of the lands board, or the commissioner at Winnipeg, and then it should have all the force and effect of a title. The details of land claims will be considered, not at Ottawa, as at present, but by a land board to be established in Winnipeg. Hereafter no claim to school lands shall prevail. The Government could not accede to the demand of the Government of Manitoba and hand over to the latter all such school lands in that province. The Government, as they disposed of the lands, will hand over the annual interest to the Province for educational purposes. It is very seldom, indeed, that any bill whatever, dealing with a question so important as that of Northwest land policy, is so well received by all parties. Some kind of a millenium is surely near at hand.

There is much excitement now among the ship labourers of Quebec and Montreal over the report that several steamship companies, the Allan company among the rest, are bringing men over from the old country to do their work on the wharves. This will be bad for those who have had the work before, and who will now be left idle. But the ship labourers, it must be added, in Quebec especially, are very overbearing and tyrannical in their ways, and the companies are not to be blamed for seeking some means of escape from their dictation.

Here is something which, if true, foreshadows an important change in the agriculture of some Western States, with possibly some effect on the grain trade in Canada:—A Western correspondent of the *New York Journal of Commerce* says:—“You may look for the largest acreage of oats to be put in this season that has been sown for many years. This arises from two facts—the one a scarcity of corn in Illinois and Iowa, and the other the use of the self grain binder relieving the farmer of all difficulty in procuring labour at harvest. There is very little corn ground ploughed or any planted north of the Ohio or east of the Missouri river. With the late backward spring corn ploughing will also be late. Farmers from Illinois and Iowa are still depending very largely for their seed corn on Nebraska, and it sells very readily at from \$1 to \$1.50 per bushel.”

The following should not be lost sight of:—The inter-provincial trade committee of the House of Commons has addressed to the Board of Trade a number of questions concerning the effect of the Intercolonial Railway upon the rate of freights, which would be had by the thorough utiliza-

tion of the St. Lawrence and lake water route, by means of a line of steamers between the Intercolonial terminus at Point Levis and Toronto and other ports.

Milling.

AMERICAN WHEAT AND ENGLISH MILLING.

The following, says *Bradstreet's*, is taken from a recent address of Mr. John Miller, before the Millers' Society of London: Granted that we have the wheats of every country in the world to choose from, we have not the first choice of the wheats of any country but our own. If there were no variation in quality this might be ground for our disparagement, but they are widely varied; and inasmuch as we have not the first choice we are placed at a great disadvantage. Neither have we the wheats of favored sections of any country to choose from. The major part of what we get from outward sources are those which have been rejected by native millers. For example, we don't get any of the famous hard spring wheats of Dakota, Montana, or Minnesota, vast cultivated territorial sections in the far north of the great American republic. Nor do we get any of that celebrated Scotch wheat grown in the rich alluvial soils in the Red River valleys of northern Minnesota, which alone can produce a surplus equal to nearly half our yearly requirements. No, we must not have these wheats. The 'cute Yankees know the importance of keeping them out of our hands, and have placed an insurmountable barrier between us and them. What do these mammoth edifices at Minnesota mean? Is this not the great centre of American milling enterprise, which says, thus far shall these wheats go, but no farther. It is the flour made from these wheats at Minneapolis and other river-side mills of less stature, but no less importance, which is being poured into our country, captivating the trade of our bakers and placing home manufacture at a discount—not because it is roller-made flour (not 10 per cent. of it is made by rollers), neither is it because it is more scientifically manufactured. It is simply because it is made from wheats possessing a stronger chemical constitution than any we can here obtain to form the basis of our flour. Again, if we investigate the resources of our other potent rival, viz., Hungary, in central Europe, and the mistress of the milling world—this our American cousins will admit, but we repeat it; for we have it from authenticated sources that the best productions of America are not equal to No. 3 Hungarian. And are we to believe that it is from a pecuniary consideration that they don't produce a higher standard in quality? We don't believe it. The ambition, impetus, and enterprise of the American miller would not stop short of unfurling their banner on the highest pinnacle of Hungarian exquisiteness, were it possible for dollars and science to make the wheat produce the necessary quality. Hungary then is, and will continue to be, the mistress of the milling world, because she has the best wheat in the world.

The proprietor, Mr. W. E. Trench, of the Chippewa grist mills is making extensive improvements in his mills. He is adding the very latest improved machinery, among it being one of Round's sectional roller mills. This will be the only mill in Canada that has this mill in, and it is highly spoken of by those who have used it. Besides, they have one of Stevens' double roller mill, and G. T. Smith's purifiers, dusters, etc. The proprietor has spared no pains in making these improvements—the cost of which will be about \$4,000—but he will have, without any doubt, one of the finest equipped grist mills in the Dominion.—*Welland Telegraph*.

Financial and Commercial.

TORONTO, Thursday, May 3rd, 1883.

About this time of the year a number of banks announce their half-yearly dividends, and the belief prevails that the figures will be good on the whole. The following semi-annual bank dividends have recently been declared:—

- Toronto—4 per cent. and 2 per cent. bonus.
- Merchants'—3½ per cent.
- Hamilton—3½ per cent.
- Quebec—3½ per cent.
- Exchange (quarterly)—2 per cent.

A greatly improved exhibit in Ontario is looked for. Imperial is well spoken of, it being rumoured that the coming statement will be something phenomenal, and that this bank will ere long have its fifty per cent. rest, like some others.

The following are the closing quotations on the Toronto Stock Exchange for Wednesday, May 2, compared with those of the same day two weeks before:—

BANKS.	April 18.		May 2.	
	Asked.	Bid.	Asked.	Bid.
Montreal	201½	201	201	200
do xd	198½	198	196½	196
Ontario	115½	114½	115½	115
Molsons	123½	123	123	123
Toronto	189½	189½	195½	195½
do xd	191	191	191	190½
Merchants'	125½	124½	125½	125
Commerce	134½	134½	135½	135½
Imperial	142½	142½	146	145½
Federal	160½	160	159	158½
do xd	156½	156	156½	156
Dominion	198½	198	198½	198½
Standard	116½	115½	116	115½
Hamilton	114	114	116½	116

MISCELLANEOUS.

British America	117½	115½	120	115
Western Assurance	147	145	148	148
Canada Life	300	300	300	300
Confederation Life Association	300	300	300	300
Consumers' Gas	146½	146½	147½	147½
Dominion Telegraph	90	89	89½	89½
Montreal Telegraph	104½	104	104	104
Lybster Cotton	75s.	74s.6d.	79s.3d	78s.6d
Globe Printing Co'y	194½	194	191	188½
N. W. L. Co.	194½	194	191	188½
Ontario and Qu'Appelle	194½	194	191	188½

The following are the closing quotations of the Montreal Stock Exchange for Wednesday, May 2, compared with those of the same day two weeks before:—

BANKS.	April 18.		May 2.	
	Asked.	Bid.	Asked.	Bid.
Montreal	202½	202	201	200½
do xd	199	198½	196½	196½
Ontario	115½	114½	115½	115
People's	81½	79	80½	80
Molsons	127	124	126	125
Toronto	189½	189	196	195
do xd	190½	190	190½	190½
Jacques Cartier	105	105	105	105
Merchants'	125½	125	126	125½
Quebec	125	125	126	125½
Union	85	85	85	85
Commerce	135	134½	136	135½
Exchange	152	147½	147½	147½
Federal	163	160	159½	159
do xd	157	157	157	156½

MISCELLANEOUS.

Canadian Pacific	61½	60	64	63½
North-West Land Co	75s.	74s.6d	79s.	78s.

	April 18.		May 2.	
	Asked.	Bid.	Asked.	Bid.
Montreal Telegraph	122	121½	125½	125
Dominion Telegraph	75	74½	78½	78
Richelieu and Ontario Nav.	145	143½	146	145
City Passenger Railway	168½	168	174	173½
Montreal Gas	168½	168	174	173½
Canada Cotton	91	91	100½	99
Dundas Cotton	91	91	100½	99
Ontario Investment	169	169	132	130
St. Paul M. & M.	169	169	132	130

In mercantile business generally an improvement is observable, and the stir of spring is making itself felt in many ways for the good of trade. Perhaps the only marked exception to this is to be noted in spring and summer dry goods, the demand for which has had a serious set-back from the long-continued cool weather. With regard to spring goods, it may be said that there can scarcely now be any season for them at all, because summer weather will be due ere winter weather has fairly departed. At Montreal a good season's shipping trade, both ocean and inland, is confidently looked for. In Toronto, also, the outlook is considered good on the whole, and a cheerful spirit prevails.

Wm. Wright, general dealer, of Flesherton, and M. C. Martin, in the same line, Martintown, are reported in difficulties.

Joseph E. Hamilton and Thomas & Co., both doing hat and cap business in Halifax, have assigned for the benefit of creditors.

In order to effect a settlement with creditors, Morgan Davies, wholesale tea dealer, of Bowmanville, has assigned in trust. He will likely arrange at 45 cents on the dollar.

P. Langlois, of Quebec city, is a young man who commenced in the cabinet-making business in 1881. His capital was limited, but he has worked into a fair line of credit—his liabilities being \$3,200 and assets about \$2,500

The creditors of Edmond Marchand, grocer, of St. Johns, Quebec, have agreed to accept 50 cents on the dollar. He commenced business in 1877, and has never been regarded as a good mark for credit. Liabilities about \$4,000.

D. McLure, tailor, and Mooney & Ernst, grocers, of Petrolia, are in difficulties. The former has given chattel mortgages to more than cover his stock, and the latter firm have called a meeting of creditors. They sustained a loss by fire recently.

John Scanlan & Co., hardware merchants, of Forest, had a meeting of creditors in London on the 27th of April. They show a surplus of \$2,500 over liabilities of \$3,000. Creditors agreed to give them an extension of 3, 6, and 9 months secured.

J. J. Broderick, dealer in gents' furnishings, Hamilton, has surprised the trade in his line. Although but two years in business he now fails, with liabilities of about \$12,000. Large expenses and over buying is the supposed cause of his present difficulties.

The Sheriff disposed of the stock of Charles E. Thorne & Co., of this city, at sixty cents on the dollar. He endeavored to compromise with creditors at twenty-five cents on the dollar, which was not accepted, and the result apparently is that preferred creditors are the only ones who will obtain anything from the estate.

E. Meeking, in the gents' furnishing business in this city, and formerly a partner in the firm Cooper & Meeking, has assigned in trust. It will be remembered that his partner Cooper claimed to have been abducted some months ago, and it is understood Meeking is of the opinion that the misdoings of his partner is the cause of his difficulties.

Morrison Bros., machinists, of this city, do not appear to have shared in the almost general prosperity in this line of business. Commencing with small means, they extended the business far beyond their capital, and the past six months their failure has been expected at any time. They have a nominal surplus, but their liabilities are upwards of \$50,000, and the estate is not expected to pay a large dividend.

Rupert Payne & McKay, gents' furnishings, Montreal, whose suspension was announced a few weeks ago, have assigned to Gault Bros. and Co., who are creditors for about \$20,000. The liabilities are about \$30,000 and assets nominally \$28,000. Creditors have been offered 66 2/3 cents on the dollar, which nearly all have agreed to accept. If the arrangement is completed McKay will go out and the other partners continue. The firm has been in business about 18 months.

Jno. F. Muir, of Jno. F. Muir & Co., manufacturers of furs, etc., of this city, executed an assignment on Friday last and has not been heard of since. McLean & Shaw of Montreal are in possession on a judgment of \$3,400, the total liabilities being about \$15,000, principally in Canada. This is the second failure within a few years, and while the trade have not considered him strong financially, they have looked upon his character, industry and knowledge of the business as a fair basis for credit. His disappearance causes surprise.

Legal.

An Exchange Seat is Property.

The New York *Produce Exchange Bulletin* says that, "An interesting decision has been rendered by Judge Freedman, in regard to Exchange memberships. It appears that in 1879 John H. Platt was appointed the Assignee in bankruptcy of Stanford P. Davidson and Edward R. Jones, who were Wall-street brokers. A seat in the Stock Exchange owned by the bankrupt partners was not handed over to the Assignee, but was retained by Jones on the ground that it was not property within the legal meaning of that term. Last spring the Court of Appeals decided that such a seat or right of membership is property. Assignee Platt recently began a suit in the Supreme Court to compel Jones to surrender the seat to him, that it might be sold and its proceeds applied to the liquidation of the debts of Davidson & Jones, which are now \$92,000. Judge Freedman rendered a decision in favor of Assignee Platt, ordering Jones to give up the seat.

Telegraph Company's Liability.

A telegraph company, by printed rules and regulations upon their blanks so as to be notice to the sender of a message, can limit its liability for delays and errors in transmitting and delivering messages, except when caused by misconduct, fraud or want of due care on the part of the company, its servants or agents. The mere fact that there was an error in the message as delivered, is not of itself sufficient proof of negligence to entitle a recovery. In unreported messages the company is only liable when, in addition to an error in the message as delivered, misconduct, fraud, or want of due care is shown upon the part of the company, its agents or servants. — *W. U. Tel. Co. vs. Catchpole, Texas Court of Appeals.*

Fire Insurance—A Contract of Indemnity only.

The doctrine that a contract of fire insurance is a contract of indemnity only, and that any claim by which the insured would receive more than his actual loss cannot be supported, was recently affirmed by the English Court of Appeal in the case of *Castellain vs. Preston*. The defendant insured his house and land with the company of which the plaintiff was chairman, and then agreed to sell it for a stated sum. Pending the negotiations for the sale a fire occurred, for which the company paid £300 upon their policy. No knowledge of the contract of sale was communicated to them, and they did not hear of it until it was discovered that the defendant had re-

ceived the agreed purchase money in full from his vendee. The company sued for the repayment of the £300 paid, with interest. In the court below it was held that as this was not a right of action it did not pass to the insurer under the doctrine of subrogation. The Court of Appeal reversed this decision of the court below, holding that the doctrine referred to had no such limitation as that suggested below, and that its effect was to place the insurer, after payment of the policy, in the shoes of the insured as regarded every right of the insured, whether in contract or in tort, and whether fulfilled or unfulfilled, provided that it would result in diminishing the loss insured against. From the application of this rule it followed that as the insurer had obtained from his vendee the whole of the purchase money as agreed for prior to the fire, he had no right to retain the policy money as well, and the plaintiff was therefore entitled to recover the money paid by the company.

Recommend or Guarantee—Claims upon Goods not Paid for.

Under date of April 11th the *Mail's* Montreal correspondent writes:—Some months since Messrs. Gault Bros., manufacturers and dry goods merchants, of this city, entered an action for heavy damages against Benning & Barsalou, a local firm of auctioneers which confines its attention to trade sales. The claim was a novel one here, having arisen out of the fact that the defendants introduced a merchant named Marcotte, carrying on business in the city, to the plaintiffs as worthy of credit to an extensive amount. Acting on their representations, the plaintiffs trusted the party in question for as much, if not more, than \$10,000 worth of goods. Before the notes matured for the purchase, Marcotte made a disastrous failure, and absconded to Chicago. His affairs were hopelessly mixed up and embarrassed, and his general creditors were defrauded out of nearly the whole amount of their claims. It turned out, however, that Benning & Barsalou were the only creditors who were secured, and this was accomplished by Marcotte handing them Gault Bros.' goods. The case was heard by Mr. Justice Loranger, who decided to-day against the plaintiffs on the first point, with regard to the misrepresentations about the defaulter's standing, on the ground of the warranty which the defendants gave not being in writing. The court reserved its judgment until evidence was produced of the allegation that the defendants had appropriated the goods sold on their recommendation to Marcotte.

"What are Sales by Retail?"

The question what are sales "at retail by retail dealers" was passed upon by Judge Acheson, of the United States District Court, at Pittsburgh, Pa., on March, 21st, in the case of the *United States vs. Jenkinson*. The defendant was arrested for the alleged violation of section 3,363 of the Revised Statutes, which provide that "No manufactured tobacco shall be sold or offered for sale unless put up in packages and stamped, except at retail by retail dealers from wooden packages stamped as provided." The defendant, it appeared, had sold a small quantity of tobacco, in violation, as the government alleged, of the provisions of this law; the government taking the ground that a sale of manufactured tobacco by one retail dealer to another to sell again was not retailing within the excepting clause of the statute. It was not shown that the defendant knew that it was the purchaser's intention to sell the tobacco again, nor that the purchaser had, in fact, sold the tobacco. Judge Acheson said that according to the common understanding the sale of four or five pounds from a bulk package was a sale at retail. It was none the less a sale at retail on the part of the vendor because the purchaser happened himself to be a dealer in tobacco. The retail dealer, he said, was under no obligation to inform himself as to the purposes of purchasers, and if they undertook to make an unlawful disposition of the goods they purchased they should be held to answer for their own acts. The court being of the opinion that the government had no case against the defendant, he was discharged.

Iron and Machinery.

INDUSTRIAL ENGLAND.

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

From the New York Tribune.

LYE WASTE, Worcestershire, March 5.

It has been truly said that of all places in which the hand-made nail trade is carried on this Lye Waste is one of the most quaintly typical. Some of the hovels which, as one of the local bards sings, the Lye Wasters used to "build like the martins with dirt" still stand, but most of the nailers' tenements are now loosely constructed one storey brick structures. The late Richard Rowe once said they were dropped down here, there, and everywhere, as if they had tumbled from the skies. Indeed a stranger loses himself in the narrow, miry thoroughfares that wind or zigzag between the houses, as he might lose himself in a nest of London courts. Waste Bank, Careless Green, Dark Lane, the Dock, are a few specimens of the local nomenclature. It is said that the last bull ever baited in England was baited on Lye Waste. "Girls used to work in its nail-shops half naked," says Mr. Rowe, "and most Lye Wasters went bare-legged and bare-footed." They never dreamt of getting married, and "whenever they prayed, 'twas for ale or strong beer." Things are not quite so bad as this at Lye now, but in a three days' walk through this country, during which trip I have visited Netherton, Bromsgrove, Gornal, Cradley, Blackheath, Old Swinfield, Old Hill, Rowley, Regis and Halesowen. I found that society is pretty generally "regulated" by "fourpenny" (the favorite ale of the vicinity), and I have seen sights that have made me seriously doubt if I was in a Christian land.

This region of country is located part in the County of Stafford and part in that of Worcester. The population of Dudley is about 47,000. The other places are not dignified into municipalities, but straggle along and are included in what are called the urban sanitary districts of West Bromwich, 57,000 inhabitants; Brierly Hill, 12,000; Bromsgrove, 8,000; Stourbridge, 10,000. There is no public spirit, no municipal pride. The district is badly drained; not lighted except by the flames of the furnaces and forges.

It is said that about 24,000 persons are engaged in this dismal district making nails and rivets. Though within seven miles of the great and prosperous city of Birmingham, no one seems to know or care about this army of men, women, young girls and children condemned to a life of wretched slavery. The district itself has aptly been described as a grimy chaos. Huge mounds of black and dirty-white rubbish, melancholy asses cropping the sparse, shrivelled herbage on the banks of worked outpits; stagnant pools, spreading like dead seas between the jumbled, natural and artificial hills; cinder-strewn meadows threaded by filthy footpaths ending at smutty stiles; high roads fringed with a dreary continuity of dingy red brick houses in the midst of which a yellow washed house looks almost as pure as a lily; small boys clustered on the roads, kicking and punching and bespattering their smaller feminine acquaintances; bigger ones loafing around the little dingy public houses; narrow ragged-hedged lanes, leading nowhither in particular, pitfalled with inky puddles through which unwashed, unshaven, heavy-booted men flounder and splash, with their hands in their coat-pockets and vicious looking dogs cowering at their heels; jaundiced canals crowded with lanky, black barges; sloping tramways, almost obliterated by gritty, viscous black mud; crossing and converging railways with roadside stations that look like recently emptied soot-warehouses; gibbeted black colliery wheels; dilapidated engine, houses and cottages sinking, on one side, into the undermined earth; dingy red and clay colored cones and domes; iron

works' furnaces, chimneys of all kinds, sending up smoke and flames. This is no exaggerated picture of what I saw in my walk, which began at Dudley, and thence, via Netherton, Rowley, Regis, Cradley, Stourbridge, through this dismal place and back to Halesowen.

The inhabitants of this desolate district are among the most industrious, and yet the most wretched, in England. They are engaged in making all kinds of nails, rivets and chains. The work is done in little "smithys" attached to the hovels in which the workers reside, and for which the usual rent seems to be about 2s. 4d. to 2s. 6d. a week, a trifle over fifty cents. These houses, as a rule, contain little or no furniture. They are filthy and wretched beyond description. What spare time the unhappy nailer's wife gets from nursing the baby and preparing the meagre meals, is spent at the smithy fire pounding away at the anvil until late at night. But the extra work that the woman does, combined with that of one child—say a girl of fourteen—will barely keep the family from starvation. For example: An expert nailer, working steadily from Monday morning to Friday night, can only make two and a half bundles of iron rods into nails, for which he gets 6s. 7½d. per bundle, or for his weeks' work, 16s. 8d., exactly \$4. Now, his wife, by working every moment of her spare time and late into the night—neglecting the wretched little children—can make a bundle of commoner nails, for which she is paid 3s. 1d., and the little half-starved, stunted girl of twelve, with her brown arms and steady, unerring aim, will hammer out half a bundle, 1s. 6½d. Total earning of an industrious and hard-working family, three at the forge, for the entire week:

	English Money.	United States Money.
Father.....	16s. 8d.	\$4 00
Mother.....	3s. 1d.	74
Daughter.....	1s. 7½d.	39
<hr/>		
Total gross earnings of the family per week.....	21s. 4½d.	\$5 13

But out of this pittance must come 3d. for carriage of iron from the "fogger's" and returning the nails, 1s. for the smithy fire and 3d. for the wear of tools. Net earning, \$4.77 per week—the united earnings of the three industrious, sober persons. I stood in the "foggers" shops of these nailing districts and saw the pale, emaciated women drag their weary limbs up the narrow black hills to the "gaffers," and eagerly watch the weighing of the heavy sacks of nails. The "foggers" do not "claim" that a woman, who has no family to attend to, and who goes to the forge every morning and works all day as a man, can make more than 8s. a week—less than two dollars. But the truth is they do not make anything like that amount.

"How many nails have you there?" I said to a pale-faced half-starved-looking woman, with a fresh-looking lass of sixteen at her side. The nails had just been turned into the "fogger's" scales.

"There should be forty-six pounds back," she replied. "They are a small nail, and it is a bundle of rods of sixty pounds made into nails."

"How much do you get for them?"

"Ten shillings, sir."

"How many days' steady work?" said I, taking up one of the well-shaped hob-nails.

"Six days, late and early, sir."

"Alone?"

"Oh, no," with a sickly smile, "the lass here has worked steady with me."

"How far do you have to bring those nails?"

"About six miles."

"And walk it?"

"Yes."

"What does your fire and the carriage and the wear of tools cost you a week?"

"At least a shilling."

"Then you and your daughter, working all day, six days in the week, at the anvil and the 'oliver,' make about nine shillings?" (\$2 16 a week.)

"That is all we can make, sir."

"How do you manage to live?"

"We don't live; we hardly exist. We rarely taste meat. I don't know what the poor folks in England are coming to. If they as work at other trades be like us, God help them, sir, I don't know what will become of us. A many of us have to go to the workhouae. So far I have not taken anything from them, but I may have to do it. Work is very slow here sometimes, and it's hard even to get what we do."

The most cruel part of this business is that young women should be allowed to work at what is called the "olivers," a heavy iron machine worked by means of two wooden treadles. At Halesowen I saw numbers of girls making large eight-inch bolts on these machines, and indeed they seemed to work with masculine firmness, and with far more vigor than the men. Mr. Ball, one of the largest nail-makers of the district, told me that hundreds of women were employed in the little "smithys" at the back of the houses in making these great bolts, and I visited seven or eight establishments, that might properly be classed as factories, thus employing women. Their earnings do not exceed \$1 25 a week.

In this way mothers, daughters and mere children toil and slave on from year to year—indeed, one man told me nails had been made here for over a century in this way. How they exist is a mystery to me. They live in hovels, they are poorly fed and poorly clad. They marry early, and several girls not over seventeen were pointed out to me as mothers of children two and three years of age. The men have an unmuscular look, most of them are "very pale and lean and leaden-eyed." The small nailers are not protected by the English Factory act, they work in their fathers' shops sometimes until late at night. The time to see the nailers at work is Friday night. The sharp din of the hammer on the anvil, and the dull rapid thud of the "oliver," as it flattened the heads of the nails and the spikes, still rings in my ears from last night. I can see the bright sparks from the forge, the red-hot nails clattering down to join their cooler brethren, the bending forms of the men, the women and the girls, little children creeping into the clattering, scintillating nail-shop for the sake of warmth, and every now and then the red flames from the forges illuminating the scene and making more distinct the weird forms of these shadowy creatures, doomed to a never-ending industrial treadmill.

In some cases I found mothers and three, and even four, daughters at the forge. In most of such instances, the father, I was told, spent his time in the public house, and the united earnings of the entire family would be less than \$5. Many of the nailers actually starve, and cases of the deepest scrow are not uncommon. "Misery," as *The London Standard* correspondent wrote, "so deep and dreadful that the most graphic pen can but faintly convey its depth of sorrow, are witnessed." Now that I have visited this region and walked through it and conversed with at least a hundred of these industrial slaves, I am ready to add my testimony to the facts contained in the letter written from Edinburgh, Christmas Day (No. 5). In reply to some Democratic members of Congress, who have proclaimed in the House of Representatives that the Edinburgh letter was "based on hearsay," I can simply say that I have not half told the misery of this district, and of a dozen other industrial districts in England, and that if anyone doubts the facts, I will gladly take them with me to any of the places I have visited for *The Tribune* and let them see with their own eyes. It is all very well to gloss these things over and keep them out of the newspapers, as they do in England, but the poor in England are day by day and year by year getting poorer. Not long ago a journalist of ability undertook to show the desperate condition of the working-classes here. I do not mean idle, worthless, good-for-nothing people, but just such industrious people as those described in this letter. He sent

the result of his inquiries to a Liberal journal, and the manager refused to publish the facts. He wrote:

"It is better not to call attention to such matters. It could do no good."

In this way they hope to tempt the United States to throw down its protective barriers, and, at the awful risk of bringing our own labor to this condition, give back to England the sixty millions of customers she has lost in so many important branches of industry.

It is time the truth about industrial England is told. *The London Standard* has dared to speak out on the condition of labor in the Black Country, and when that paper makes the following statement I can say that it actually accords with some of the horrible facts which have come within my observation during my stay in this dismal region.

"Women within a few days of their confinement have been known to work in the agony of exhaustion, in order to earn a few pence at the 'hearth'—not the 'hearth' of home, but the hearth of the 'forge'; they have been known to return to work in a day or two after childbirth, emaciated in constitution, weak and weary for the want of simple nourishment. Their children, ragged, and ill fed, have had to lead miserable and wretched lives, with no hope before them but a life of wickedness and vice."

Does any one in the United States fully realize how these poor creatures can live on the few shillings a week they receive? It has been truly said of the nailers that they bear privations with pathetic patience. I must say that in my walks among these poor men and women I was often struck with the truth of the above remark. At Halesowen, where I found so many young girls working the "olivers" and turning out heavy bolts, many of them were solacing themselves with songs. Some of these ballads, though destitute of rhyme, are full of reality. For example, the "Nailer's Lamentation" opens with some verses on the meagre pay, and then the nailer and his wife sit down "to help to cut it out." He says:

You know there is our coal and gleeds
For the house and the shop fire;
Likewise the mending of the tool
And charging of the iron.

My hammer and my steady, too,
Must be pared, if not steeled,
My bore and hardy must be done,
Or I cannot make good nails.

Alluding to household wants, he complains that:

The shoemaker he must be paid,
Or shoes we shall have none.

And again:

Our clothing has got very brae,
Over and underneath;
Our children want some things to wear,
They must not catch their death.

There's also butter and sugar too,
Tea, candles, soap and flour,
And there's no meat nor garden stuff
In such a house as our.

In conclusion, the poor fellow says:

Now what's twelve shillings to cut up
To pay so many things?
It would make a lawyer's head turn gray
To try to meet such ends.

It matters little to these poor fellows what the cost of clothing is, for they cannot get it. Taking the net earnings of the man, his wife, and his little daughter, which I have shown in the above tables was less than 19s., and here is what he can buy for it. The man and his wife sat down with me and gave the facts with great detail and care to "get it exactly right."

	s.	d.		s.	d.
Rent	2	4	Candles	3	
Coal	2		Flour	6	
Bread	4		Tobacco	6	
Bacon	3		Club	4	
Cheese	1	6	Clothing and boots and shoes, etc.	1	
Butter	1				
Potatoes		6			
Tea	1	6	Total	19s.	
Sugar		7			

And the above is fair wages, not only for the nailer, but for the laboring man in every section of England, without one exception—less than \$5 a week. A necessary housekeeping utensil, a pair of boots or a garment, as both the man and his wife assured me, meant total abstinence from meat for the week, while a doctor for a dying baby or sick wife is nothing short of a domestic calamity.

ROBERT P. PORTER.

THE ONTARIO ROLLING MILLS COMPANY'S AND THE AMERICAN NAIL COMPANY'S WORKS AT HAMILTON.

We take the following from the *Hamilton Tribune's* description of the above two important establishments, which are really under one management:—

In the rolling mill the material used in making this iron is what is called scrap, or cast-off iron, and is composed of old iron in every imaginable shape and form. In the yards one may see iron rails twisted into every conceivable shape, probably where some train had jumped the track and twisted the heavy rails like so much bell wire. Then there are pieces of old boilers, stoves, and many other articles, which, having outlived their usefulness in their former shapes, are brought to the mill to do duty again in some other form after being submitted to the ordeal of the "burning fiery furnace." In the yard a gang of men were busily engaged in rolling old rails up an inclined plane till they were brought into the ponderous clutches of a huge pair of shears, where they were cut into suitable lengths for the furnace. These lengths are then made into "piles," weighed, and given to the furnace men, who thrust them into the furnaces, out of which they soon again emerge all welded into a solid mass about three feet long and some four or five inches in diameter. These are, by means of a kind of suspended tongs, passed over to the men at the rollers, after passing through which they are moulded into the required shape of fish plate, nail plate or bar iron, as the case may be, some of the bars having to go through the different sized rollers many times before being completed. The smaller pieces of miscellaneous scrap iron are weighed into "charges" averaging about 180 lbs. each, and placed in separate furnaces, where they are rolled into balls, and passed through a couple of powerful machines until they assume the same shape as the "piles" above described, when they are known as crude iron. These have again to undergo a second "baptism of fire," which purges them of cinders and other impurities, after which they are handed over to the tender mercies of the rollers to be reduced to the desired shape. There are five auxiliary boilers in the mill, one being situated over each heating furnace. There are also in the mill two double scrap furnaces, one single scrap furnace and seven heating furnaces; yet, with all these, and a vast amount of machinery and appliances, the company are unable to meet the demands for their output. Five car loads of coal per day are required to meet the necessities of the mill, which of itself amounts to an immense sum yearly. All the nail-plate iron used in the nail factory is manufactured here and cut up into suitable lengths for the various sizes of nails.

Passing into the nail factory a busy scene was presented to the eye of the reporter. There some 35 machines are constantly at work, fed by so many men and boys, which turn out

many tons of nails daily, from the railway spike to the smallest sbringle-nail. These nail machines are a marvel of mechanical genius, and completely do away with the old-time method of hammering nails into shape on the anvil. As fast as the iron plates can be fed into the knives of the machines perfect nails are turned into the receptacles at the bottom. The smaller sizes of nails, after passing through the machines, are placed in a revolving cylinder in a furnace which gives them a bluish and finished appearance, and which is called the "bluer." The plates for the larger sizes of nails have to be placed in a furnace and reduced to a white heat before being fed into the machines, as the iron being so thick could not otherwise be cut into shape. Wrought iron nails are made in the same way as cut nails, the only difference being that after they come from the machines they are put in iron boxes and placed in a furnace for a couple of hours, subjected to an intense heat, which makes them tougher and less brittle. This furnace is fed by coal oil which is supplied by a pipe from a tank on the outside, and which engenders a tremendous heat. The company manufacture their own nail kegs, hundreds of which are required daily to hold the output of the machines. Two switches from the Grand Trunk enter the company's yards, one being for the use of cars conveying the "scrap" to the mills, and the other for taking away the finished iron and nails. One hundred and fifty men and boys are kept constantly employed in the rolling mills, and upwards of one hundred in the nail factory and cooper-shop. The rolling mill, being the only one of its kind in this province, is well worthy a visit, as showing to what uses apparently worthless iron can be put, and an hour can also be profitably spent in the nail factory, watching the working of the machines. The officers of the Company are: Mr. Charles E. Doolittle, vice-president; Mr. Charles S. Wilcox, secretary; Mr. S. J. Whitehead, superintendent of rolling mill; and Mr. Charles O. Jolley, superintendent of nail factory.

THE WHITMAN AND BARNES MANUFACTURING COMPANY.

(From the *Hamilton Tribune.*)

The morning air is clear and bracing about the hill on which St. Catharines climbs and winds. Driving across the side of the mountain we come to a pretty Swiss cottage perched upon a cliff, and sparkling with new paint and plate-glass windows. This is the office of the Whitman and Barnes Manufacturing Company, one of four large companies devoted to the making of mower knives, sections, reaper sickles, spring keys, and the like. The other establishments are at Akron, Ohio; Canton, Ohio; and Syracuse, N.Y. The cutter bars are made of malleable iron, the heels of wrought iron, and the knives of steel. The heel is the iron piece that is used to connect the knife and the wooden part of the mowing machine, by the Pitman rod. A knife consists of about twenty sections of steel, 3 by 3½ inches in size. These are punched out of sheet steel, straightened, beveled as to their edges, and then faced and ground. For tempering, the sections are held in quintuple tongs, five at a time, over a crucible of bubbling lead. When red hot they are plunged with a sizzling sound into a bath of brine, drawn forth and dropped into a coal scuttle. The men handle these bits of metal like solicitous French cooks preparing some precious patties for a gourmand. A drawing oven now receives them for toughening purposes. The emery polishing takes place next, followed by the oiling, and then the sections are ready to be rivetted to the steel rods. The edges are ground upon hooded grindstones, that are supplied with water from a hose. Mr. Wassmann told us that a stone measuring four feet in diameter lasted for grinding one week. The rapid wearing is partly due to the niches that are hacked in the surface of the stone to increase its sharpening power. The steel rod, with its sections ranged along its side like peas in a pod, is a knife. The

utter-bar is fitted with guards that come already cast, and protect and assist the knives in their work. The shops and mills are reached by descending flights of stairs to the level of the canal bank. Much of the power is supplied by water that comes over waste wiers, and is conveyed through a flume to the wheel-house. One hundred and fifty men are employed here, supplying the vast reaping machine shops of the United States and Canada. The firm does not keep a stock of goods on hand, being kept busy with orders from regular customers. Another reason for this is that, like women and men's clothing, the styles of patterns in sections are constantly changing, so that knives standing from one season to the next would be awfully antique in mode. Curious peculiarity of machinery, is it not? Now, an uninitiated eye would never detect the difference that truly is, for there is very little nonsense about machine-making folk.

The main building of the Spring Horse Shoe Company, at Stone Mills, near Picton, Ont., is well advanced.

Messrs Clare & Co., of Preston, are enlarging their capacity, and have lately put into their extensive foundry a 30 h. p. Corliss engine, made by Cowan & Co., of Galt.

The Canada wheel works of Merritton are owned by Messrs. E. H. Phelps and Co. Here are made spokes and bent stuff for wheels of all sizes, light and heavy wagons, sleigh runners, bob and long sleighs and perhaps toboggans. Forty men are employed steaming timber and bending it over forms.—*Hamilton Tribune.*

The Whiting Works of Oshawa are having the same old time in trying to fill their orders promptly. But the influx and daily incoming orders keep them in constant motion. It gives outsiders little idea of what is done at Cedar Dale when people say "the Cedar Dale Works." Every person, male and female, within miles of these works should see them.—*Vindicator.*

The prospects of the Canada Rolling Stock Company appear so excellent that Mr. Robert Marshall, its promoter, has felt justified in completing arrangements with the city for the lease of the site of the works. Judging from the correspondence in Mr. Marshall's possession, says the St. John, N.B., *Telegraph*, we expect at an early day to see this important enterprise in full blast.

Messrs Brayley & Dempster, of Hamilton, Ont., manufacturers of builders' and saddlery hardware, find business very brisk at present, with plenty of orders ahead. They are constantly adding new facilities and machinery, and have increased their output fully 200 per cent. since 1878. They are now replacing their old engine by a new automatic cut-off of increased power built by J. H. Kelley & Co.

Winnipeg papers of recent date contain the announcement of the purchase of another "Ronald" Steam Fire Engine by the municipal officials of the City of Winnipeg from the maker, Mr. J. D. Ronald, of Brussels, Ont. Last summer they bought one of the largest size Ronald made, which has given such universal satisfaction in its power and efficiency—called by the citizens "The Fire King"—that the city council have again ordered another from the same maker, which bespeaks well for our Canadian industries.

The Kentville, N. S., *Chronicle* says:—We had the pleasure of visiting the Edge Tool Manufactory, of Blenkhorn & Sons, at Canby, on Friday last. Our readers will remember that last November the whole establishment was burned to the ground. During the inclement winter that has just passed the Messrs. Blenkhorn have untiringly worked through cold and snow, and now have their factory rebuilt in a more convenient place and size than formerly. The building is 75 feet long and 36 feet wide, and is placed on piling over the water, to the southward of Bigelow's wharfyard. The Messrs. Blenkhorn, are in a far better position to manufacture than ever before. They have a good wharf in connection with the factory upon which they can land all their material right down at the door. The cheapness of this arrangement is especially felt in regard to coal, of which they of course use a large quantity.

Textiles.

THE MERRITTON COTTON MILLS.

The city of St. Catharines and the village of Merritton are imperceptibly merged into each other. If there is a dividing line no one pointed it out to us and we are skeptical about its existence. However, each town preserves its own individuality in the meantime, or rather each corporation pays its own indebtedness.

The Merritton Cotton Mill is a large building, four stories high, of red mountain stone, in which the machinery is being set. There will be fifteen thousand spindles, and with its commodious grounds, breezy site and thoroughly modernized, handsome building, it will be one of the finest mills in the Dominion. It will be opened about the first day of August, 1883, and will employ 350 operatives. Its manufactures will be plain domestic goods, sheeting and shirting, bags and warps and waddings. Mr. James Norris, of St. Catharines, is one of the chief promoters of the enterprise. The capital stock is \$300,000. The directors are Mr. Patrick Hughes, Toronto, President; Mr. Thomas Long, Collingwood, Vice President; Mr. Irving Walker, Mr. Thomas Lailey, Mr. Keeley, Mr. B. B. Hughes, of Toronto; Mr. E. H. Hunter of Durham, and Mr. King of St. Catharines. The machinery has been selected by Mr. Dolan, the manager, from eight of the principle makers in England and four in the United States. There will be wheels and shafts and pulleys from Bury, Oldham, Preston, Manchester, Accrington, Burnley, Lowell, Lewiston, Tewkesbury, North Chelmsford and other places. We wish the new factory abundant success, and ask for it exemption from all disaster.

THE LYBSTER COTTON MILLS.

The Lybster Cotton Company, Merritton, runs a mill of eleven thousand spindles and gives employment to 250 operatives. The factory is owned by Messrs. Gordon & McKay, of Toronto, with capital stock of \$250,000. It has stood the storms of twenty-two years. The output consists of a great variety of domestic goods and gray cottons.—*Hamilton Tribune.*

THE MAGOG PRINT WORKS.

Manufactures in the province of Quebec are still extending, and from the success they have already met with will no doubt continue to increase further. A large and influential meeting of capitalists was held in Montreal on Wednesday, April 25, to complete arrangements for a monster textile and print works at the village of Magog, where thirty thousand dollars have been already spent in erecting a dam for a constant water power. The capital of the company is one million dollars, of which one half has already been subscribed. The capacity of the mill will be sixty thousand spindles, and twelve hundred operatives will receive constant employment therein. It is estimated that it will turn out one and a half million dollars' worth of cotton goods annually. The water supply will be inexhaustible, being from Magog lake, and as the railway comes into the site there will be no difficulty in shipping the goods or getting the supplies of raw material. It is believed that this is only the beginning of great industrial enterprises in the neighborhood where an eminent English engineer has declared the water-power to be unsurpassed in the whole country. The following shareholders were elected to the directorate to-day:—W. Hobbs, president; George Thornton, M.P.P., vice-president; James Dakers, John Thornton, T. C. Keefer, C. C. Colby, M.P., Joel Leduc, J. H. Ward, A. T. Cross, and George R. Grant, directors.

An idea of the business done by the Campbellford Woollen Mills may be gathered from the fact that Mr. Ralph Purdy, the local agent of that establishment, passed through the customs goods to the value of \$36,000 within two weeks.—*Belleville Intelligencer*.

The first issue of bonds (25,000) of the St. John Cotton Company has been taken up at par. Another issue of the same, \$50,000, is now offered. The bonds carry six per cent. interest.

Owing to the boom occasioned in Magog, P.Q., by the prospective establishment of the print factory, property is said to be on the rise a *la* Manitoba style. It is said a house is not to be had in the village for "love or money."

The new woollen mill on Hunter-street, Peterborough, is rapidly approaching readiness for work. Nearly all of the machinery has arrived and been placed in position, and work is being done now to supply the motive power.

It is reported that Mr. Gibson, the New Brunswick lumberman and capitalist, intends this spring to commence the construction of a cotton factory at Marysville, York County. The mill will be driven by water power.

Factory Fires and Accidents.

The grist mill of Mr. O. Baldwin, at Dixville, also Mr. J. M. Chandler's butter tub factory, were totally consumed by fire on the 11th April, with their contents. Mr. Baldwin's loss is estimated at \$5,000 and Mr. Chandler's at \$1,000; the former had no insurance, and the latter only \$400 in the S. & S. Mutual. The Coaticook fire company went to their assistance and did good service.

TRENTON, Ont., April 26.—Yesterday a frightful accident occurred in Lyman Heaton's saw mill, about four miles from Wooler, a village in the seventh concession of Brighton. The mill caught fire from some unknown cause, and was filled with dense smoke. The engine was promptly stopped, and Mr. Stewart Heaton, a son of the proprietor, entered the mill to ascertain where the fire was, but being blinded by the smoke he slipped and fell with his neck across a large circular saw, which had not yet ceased to revolve. He was found about fifteen minutes afterwards with his head completely severed from his body. Little damage was done to the mill by the fire.

ESSEX CENTRE, ONT., April 17.—The saw and stave mill known as Hanlan Mills were burned yesterday, about one o'clock. The loss will not be less than twenty thousand dollars on the mill. There was also a great quantity of stock burned, including ready made staves and bolts—total loss about \$25,000. The fire originated in the boiler-room of the saw mill, and before it was discovered the place was enveloped in flames, making it impossible to save anything of importance. The loss is a sad blow to this place, as it throws about sixty men out of employment. No insurance on either mill or stock.

A fire was discovered at 4.30 the morning of the 10th instant, in a two-storey brick building in rear of No. 28 Colborne-street, Toronto, owned by Mr. Thomas Bryan, and occupied by Mr. Shepherd Hoyer as a machine shop. An alarm from box No. 87 brought six sections of the brigade to the scene, but in spite of the exertions of the firemen the building was completely gutted before the flames were subdued, and it was with great difficulty that the fire was kept from spreading to the adjoining building. Mr. Hoyer's loss on the machinery is about \$400, and Mr. Bryan's loss on the building will not amount to more than \$300. All the losses are covered by insurance in the Western. The fire is supposed to have originated from one of the forges, which had not been properly damped.

GODERICH, April 11.—A terrible disaster occurred here this morning, resulting in the total destruction of Hart's flouring mill and dam, better known as the Piper property. Fears had of late been entertained that considerable damage would result from the spring freshet when the thaw set in, but no one anticipated such

a destruction of property as occurred to-day. On Sunday last a small break was perceived in the dam, but no serious danger was apprehended by the owner of the mill. The ice some miles above the Maitland broke on Monday, and was hurried down the stream. During Monday night the volume of water in the river at this point swelled greatly, and by daybreak this morning the stream on the dam at Hart's mills became so great that the water forced its way through at both ends of the dam. Attention was drawn to the fact that the pier at the head of the mill-race was being carried away by the flood, and soon it was discovered that the foundations of the mill was being undermined by the force of the waters. Some thirty-nine bags of flour were taken from the mill, when it suddenly began to sway under the pressure of the waters. The building then heaved and toppled over into the stream and was carried down. The dam as well as the mill was carried away, and the water has in a number of instances undermined the banks of the stream, so that a number of heavy land slides have resulted. The brick dwelling of Mr. Hart, which is situated about fifty feet from the edge of the bank, is in danger, owing to the land slides. The mill was filled with grain and produce. The mill and dam cost about \$15,000. No insurance.

The Cochrane Manufacturing Company, St. Thomas, Ont., received two special lathes for self-binder work from the States recently.

Work is going on rapidly at the cartridge factory, Quebec, and large quantities are being packed for shipment to different parts of the Dominion.

The Bay of Quinte Wooden Ware Company has commenced operations.

A Brantford paper says:—Mr. William Gouling, Guelph, who has rented a site in the township for the manufacture of fertilizers, with his manager, arrived in the city yesterday. Their staff at present will be small, consisting of twelve men, besides five horses and carts which are to arrive from Guelph. This will be a great benefit to the city and vicinity, as they have now, in advance, orders for nearly two hundred tons of their fertilizing material, and in a sanitary view it will be of immense benefit to the city. We wish them every success in our midst.

We are informed that Messrs. Bible and Chisholm are erecting a new saw-mill at Stokes' Bay, which will be completed in a few weeks. They are putting in a powerful engine and first-class machinery, which will have a capacity of about 1,500 ties per day. The firm have a contract to supply the W., G. and B. division of the Grand Trunk with 160,000 ties. The settlers of the Peninsula will have no trouble to dispose of their cedar at good rates. At Bible and Chisholm's mill in the Township of Lindsay, on Tuesday, the 10th inst., 1,024 ties were sawn in the short space of ten hours, under the management of Mr. S. Lownsbury, the head-sawyer. The ties were all large ones, and no more than two were cut from the same stick. This is extraordinary work, as 500 is considered a day's cutting.—*Warton Echo*.

The proprietors, Messrs. Henderson and Armstrong, of the Welland grist mills, have, since the change in the management, made extensive improvements in the way of putting in the latest improved machinery, they having added the new process of the gradual system of reduction. Among the new machinery placed in the mills are the improved purifiers, Jonathan Mills' patent reduction, rolls, reels, stones, etc., all of which work very fine. One new feature is that flour and feed never heats while being ground. The proprietors have gone to a large expense in putting in this improved machinery, but they now have the satisfaction of knowing that they have one of the best equipped grist-mills in the Dominion. Before the change in the management, the senior partner, Mr. W. E. Henderson, had the mills stocked with machinery equal to any other in the county, but they are now far superior, the latest modern improvements for milling purposes being added. The improved purifiers were manufactured by the Consolidated Purifier Co., of Toronto, and the reduction machinery by the Chisholm Bros., of Chicago. These mills have been closed for the past month, making the improvements, and commenced business last week. The amount of work that has been done since opening is enormous, indicating a prosperous future in store for the proprietors.—*Welland Telegraph*.

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N.B.—Watch this page, as the different works will appear every month.

PROSPECTUS.

Canada Rolling Stock Comp'y.

Head Office:—Western Union Telegraph Building, corner Market Square and King Street, Saint John, New Brunswick, Canada.

The CANADA ROLLING STOCK COMPANY, capital \$80,000, in shares of one hundred dollars each, with power from time to time to increase to an amount not exceeding six hundred thousand dollars. The works of the Company to be located in Sidney Ward, in the City of Saint John, adjoining the deep water terminus of the Intercolonial Railway.

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.

Slack coal can be obtained at the Joggins Mines @ 80 cents a ton, and the freight by water to Saint John is from 75 cents to 85 cents, making the total cost from \$1.55 to \$1.65 for a ton of 2000 lbs. at the Company's Works. It is unnecessary to enlarge on the advantages which these rates will give the Company over all other works of the kind in Canada.

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.

The organization expenses are fixed at eight and one half per cent. Stock will be sold in blocks of not less than ten shares.

The Company will be managed by a board of either five or seven Directors, viz:—President, Vice-President, Managing Director and Treasurer; and either two or four other Directors, as shall be decided by the Stockholders. Three of these Directors shall form a quorum.

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,

ROBERT MARSHALL.

Address, ROBERT MARSHALL, St. John, N.B., Canada.

Lumber.

A Quebec despatch says:—The high water this spring is likely to assist lumbermen very materially in getting out their logs. Mr. J. B. Charleson, who has some 50,000 logs cut in the woods at Windsor Mills, received a telegram yesterday informing him that the river was overflowing its banks and telling him to bring up men. He accordingly left at once, taking up some forty men with him for the drive.

It is the intention of Mr. Fraser, of Almonte, to erect the largest mill in this section of the country (back of Kingston) at Cameron's bay, Calabogie lake. Mr. Mackle, of Ottawa, will also build a mill at Round lake, which is about three miles from Gildersleeve's Rest on the Kingston and Pembroke. 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. P. McLaren will bring about 100 cars of timber more to Kingston this year than he did last.

If anything could forcibly demonstrate the necessity for forest preservation and re-planting, it is the fact that the renewal of sleepers and laying of new tracks in the United States alone consume thirty millions of sleepers annually. No description of iron permanent way at present in use seems to be in favor with engineers, and those Colonies in which railway construction is being rapidly pushed on may well apply the lesson which the figures above quoted convey.

The *Lumberman's Gazette* says:—Maine has been noted for its lumbering ever since the state was known. An eastern man working in the pines is alluded to even at the present day, as "a State of Mainer," no matter what State he hails from. Maine is evidently not denuded of its timber, or is securing the benefit of a reafforesting. The *Maine Journal* says that something like 110,000,000 feet of logs had been cut and will be floated down the Kennebec river the ensuing summer.

THE LUMBER KING.—Last January, when Mr. Gibson took stock of his lumber at the various mills in St. John, he had a total quantity available for shipment of 40,000,000 feet. Besides that he had 10,000,000 feet of logs frozen up in the ice on the Nashwag River. This winter Mr. Gibson's cut, as estimated previously by the *News*, will reach a total of 26,000,000 feet. Add to this 10,000,000 feet cut on Grand Lake waters by Messrs. Tayley, which are under contract to the nabob of the Nashwag, and the total quantity of lumber, exclusive of possible purchases, that Mr. Gibson will control this year amounts to 86,000,000 feet.—*St. John, N. B., News, April 11.*

A Parry Sound despatch of recent date says:—Extensive preparations are being made for a good season's lumber business. The Parry Sound Lumber Co.'s water mill will be ready to start on Monday, the 9th; their steam mill is being entirely re-built, and when finished will be one of the finest mills on the Georgian bay. The Midland and North Shore Lumbering Company at Parry harbour are putting their mill in first-class order by the addition of new machinery and a large iron burner.

A remarkable material called "terra cotta lumber" has been recently brought to notice in England. It is composed of the top layer of fire-clay beds and sawdust exposed to heat and pressure. Slabs, bricks and boards of any shape may be molded from it, and it is capable of being cut by edged tools, pierced by nails, sawn and otherwise manufactured just as wood is. But the strangest feature about it is that it stands, without any apparent effect upon it, a more intense heat than fire-clay will bear, and for lining furnaces and other places of exposure to great heat it will be a valuable and almost inexpensive substitute for asbestos. Water seems to have no destructive influence upon it. Its weight is about that of an equal mass of cinders.

It is conceded, says an exchange, that the supply of good furniture woods in this country is practically inexhaustible, provided that ordinary attention be given to their preservation and economical use, and the furniture export trade may yet become an important American industry. If every man, east or west, who owns land, would make a point yearly to plant a stated number of young trees

which would answer for furniture woods, they would be preparing a mine of wealth for the future either for themselves or their children, as the term "inexhaustible," so far as timber for manufacturing purposes is concerned, is a meaningless phrase. This has had a too practical demonstration in Michigan, Wisconsin, Pennsylvania, New York and other states to admit of argument. Every tree planted on a farm is labor expended, which will repay the laborer with positive returns. There is not a highly cultivated farm in any of the older states, but would sell for a much higher price if it were well supplied with wood which would answer for furniture manufacturing.

A BOOM IN CEDAR.—Cedar land all over the country is looking up and becoming more valuable. The demand for cedar for paving and other purposes has increased its value enormously within a few years. This is not only true of Michigan and other Northern States, but is applicable to the South. A recent sale of two tracts of cedar timber land, in Wilson County, Tenn., shows which way the cedar trade is destined to go. These lands are exceptionally well timbered, but \$49.25 per acre for one and \$46.25 for the other, are conclusive evidences of a brisk demand for the cedar in the near future. This will, of course, enhance the value of manufactured cedar, besides giving an impetus in cedar land speculations. It will, therefore, says the *Lumberman's Gazette*, be the wise ones among the dealers who will buy all the stock they can get at present prices.

The Merchants' Bank of Canada put up for auction on April 24th, in the Grand Union Hotel, Ottawa, the following timber berths, viz., Nos. 23, 43, and 51 in the Nipissing district, the area of each berth being thirty square miles. The first offered were berths 43 and 51, Georgian Bay, both in one parcel. A number of bids were made, but the Bank authorities had no report on these berths and, consequently, could give no intelligent idea of their value and they were withdrawn. Berth 23, one of the most valuable limits now in the market, was next offered. It is situated on the Veuve River and crossed by the C. P. Railway. The berth is estimated to cut nearly 400,000 square feet of timber. \$25,000 was the first bid, and in a short time the sum of \$56,000 was reached. The auctioneer here announced that the Bank had withdrawn their reserve bid. No increase on this amount was offered, and the berth was knocked down to Mr. Thomas Birkett, of Ottawa, who represented Mr. Klock, lumberman, of Ayliner.

The Peterborough *Review* has the following from Lakefield:—Messrs. R. & G. Strickland have purchased from Messrs. Thompson Smith & Son their limits in the township of Rodout and Sherbourne. The timber and logs from these limits will come to Lakefield, their waters being tributary to the Otanabee River. These limits added to those previously in the possession of the firm will afford a supply to the Lakefield mills for many years to come. Messrs. Strickland have also purchased from Messrs. T. Smith & Son their large steam saw mill at Bradford, at which they purpose cutting the logs from the limits in Oakely and Hindon, which they purchased from the Dominion Bank the year before last, and on which they estimate that they have over 100,000,000 feet of lumber. This estimate does not include the Northwest quarter of Oakely, which Messrs. Strickland lately sold to Messrs. Thomson & Baker, of Hamilton, for \$30,000, on which it is estimated that there is about 30,000,000 feet of lumber, but which the firm sold on account of its not being tributary to the waters in connection with their mills. The capacity of the Bradford mill is 100,000 feet in twelve hours, and being situated on Northern Railway, about forty miles from Toronto, it will find a ready market there, not only for the lumber, but also for the slabs and other mill refuse for fuel. It is possible that the Midland Railway may see the advantage of making an extension from Atherly to Black River, so as to put themselves in a position to carry the lumber of the extensive limits in the district. If this were done, Messrs. Strickland would remove the mill from Bradford to the Black River.

Rankin says that there are certain appearances characteristic of good wood, to what class soever it belongs. In the same species of wood that specimen will in general be the strongest and most durable which has grown the slowest, as shown by the narrowness of the annular rings. The cellular tissue, as seen in the medullary rays (when visible), should be hard and compact. The vascular or fibrous tissues should adhere firmly to each other, and should show no wooliness at a freshly cut surface; nor should it

clog the teeth of the saw with loose fibres. If the wood is colored, darkness of color is in general a sign of strength and durability. The freshly cut surface of the wood should be firm and shining, and should have somewhat of a translucent appearance. In wood of a given species the heavier specimens are in general the stronger and the more lasting. Among resinous woods those having the least resin in their pores, and among non-resinous woods those which have least sap or gum in them, are in general the strongest and most lasting. Timber should be free from such blemishes as "clefts," or cracks radiating from the centre; "cup shakes," or cracks which partially separate one layer from another; "upsets," where the fibres have been crippled by compression; "wind galls," or wounds in a layer of wood, which have been covered and concealed by the growth of the subsequent layers over them; and hollow or spongy places in the centre or elsewhere, indicating the commencement of decay.—*Lumberman's Gazette.*

Mining.

Mr. J. H. Dwyer, of Ottawa, has sold his phosphate mine in Templeton to an American company for \$60,000.

Gallagher's gold mine at Isaac's Harbor, N. S., turned out in the last crush 50 tons of quartz which yielded 210 ounces of gold, valued at \$4,000.

Mr. A. W. Ross, M.P., recently received a telegram at Ottawa from Winnipeg, stating that a three pound brick of gold from the Consolidated mine had reached Winnipeg, and that another from the Argyre mine would arrive on Monday. There is great excitement in Winnipeg.

A private despatch received from Winnipeg announces that a three pound gold brick has arrived from the Winnipeg Consolidated Mine, and intense excitement prevails. One from the Argyre Mine will arrive on Monday. Both mills are working well and success is assured.—*Ottawa Citizen.*

An approximate estimate of the quantity of coal underlying one square mile at different points in the Northwest is given as follows: In the vicinity of the coal banks of the Belly river there is estimated to be 5,500,000 tons under a square mile; at Grassy Island, Bow river, over 5,000,000 tons; at Horse Shoe Bend, Bow river, 4,900,000 tons; while at Blackfoot Crossing it is estimated no fewer than 9,000,000 tons of workable coal underlie one square mile of land. This discovery should further enhance the future prospects of our Northwest.

The Gooderham correspondent of the Bobcaygeon *Independent* writes:—I hear it is very probable important work will soon be going on in our iron mines, towards their development, in consequence of the bonus offered by the Dominion Government whenever such operations begin. The beginning, then, will inaugurate a total change in the prospects of this part of Canada, when it is to be hoped (and there is little fear) that Pennsylvania on a small scale, which I have so long predicted, will be verified in fact.

Judge Truax, in the Superior Court, yesterday, vacated the order of arrest served on R. P. Rothwell, of No. 27 Park Place, in the suit brought against him by J. M. Tuttle, of Des Moines, Iowa. From the evidence it appears the transaction was simply a purchase of Canada Consolidated Gold Mining Company's stock, made through Rothwell, in a friendly way, promising to sell Tuttle's stock for him "at the first opportunity;" but not having been able to do so, and the stock being now unsaleable, Tuttle wanted Rothwell to buy his stock, and on his refusal, charged him with fraud in the transaction. The decision of the court, dismissing the case, is a complete vindication of Mr. Rothwell.—*New York Truth.*

The Mining Journal publishes an exhibit giving the names of all the Lake Superior mines and their output in 1882 and the market value thereof. The names of 75 mines are given, which produced 2,943,314 gross tons of iron ore of the value of \$24,237,116, and of three quartz that produced 12,626 gross tons of ore worth \$63,115, making the total ore and quartz output 2,955,937 gross tons of the value of \$24,300,281. The same paper also gives a state-

ment in gross tons of the aggregate product of the mines and furnaces in detail for each year since 1853, together with the value of the same, the aggregate being 20,585,757 tons of ore and 916,213 tons of pig iron of the value of \$164,836,895. Lake Superior ores are peculiarly fitted for the manufacture of Bessemer pig, and about one-third of all the pig iron manufactured in the United States is from these ores.

On the 18th of November, 1881, an agreement was entered into at Glasgow, between the Huntington Copper and Sulphur Company and William Vance, the latter binding himself to act as mining captain and sub-manager on behalf of the Company for a term of four years from date of agreement. Among other stipulations, it was agreed on the part of the Company to pay Vance a monthly salary of \$100, furnish him with free house and fuel, pay his passage to Canada and his return fare at the expiration of his engagement, and further to allow him a monthly bonus of two cents per unit upon all coppers in the ores delivered during the month. The Company having gone into liquidation, Vance was notified during the month of January last that his services were no more required, and he now sues the Company for \$6,028, amount alleged to be due him on the unexpired portion of his engagement. Messrs. Maclaren & Leet for plaintiff.

We are informed by those interested in the Mineral Vale, generally known as the Goodfellow Mine, situated in Alma, Albert Co., N.B., that they intend soon commencing operations. They expect to mine about 100 tons weekly, and to ship to the smelting works at Portland, Boston, or Swansea, Wales. The assays are said to give excellent results. Prof. Burwash's assay proved it to be worth over \$40 per ton. One result gave 10 per cent. silver, 9 per cent. copper, 11 per cent. lead and 5 dwts. of gold from over ten feet below the surface. When we consider that this is from ore that was frost-broken and subject to the filtering of ages, it gives promise of much greater value at lower depths. The vein is pronounced by Prof. Ells a true fissure vein. It is 20 feet wide, running N.W. and S.E., with an inclination at but a slight angle from the perpendicular. Abundant water power is right at the opening and will afford every facility for concentration. The promoters have secured in all 2,500 acres, which cover nearly all the indications of the several leads.—*St. John, N.B., Sun.*

The Belleville Ontario contains the following regarding the North Hastings mines:—Messrs. Stewart and Ganjot have been working the Miller hematite Mine, owned by Mrs. T. C. Wallbridge, for some time, and have met with much encouragement. About 1,000 tons have been mined already, and will be shipped to Cleveland via Belleville as soon as navigation opens. A shaft has been sunk about 70 feet, and at that depth there is forty feet of drifts in solid ore. The mine will be worked during the summer, and the above gentlemen hope to export a large quantity of ore. This mine is situated just sixty feet east of the old Wallbridge hematite mine, which has been worked for some time by the Bethlehem Iron Company. Nothing is being done in the latter mine at present, but it is proposed to resume operations shortly. There is still a vast quantity of ore in sight. The St. Charles specular mite has been worked a greater part of the winter, and over 300 tons have been taken out. The mine is now fairly developed, and those who are operating it feel encouraged with the good quality of ore they are working in. Our informant tells us that this is the finest and most valuable ore that has been found in Canada as yet. Mining operations will be resumed here during the summer.

THE PHOSPHATES TRADES.—To those interested in recent developments of the mineral resources of our country, a careful examination of the immense pile of apatite or phosphite of lime, now visible at Templeton or Buckingham stations on the line of the Canadian Pacific railway near Ottawa, will well repay the visitor. This line of trade, although only in operation for a very few years, has rapidly developed into one of great importance as far as the resources of this section of Canada are concerned. Capitalists are now coming in from various quarters and acquiring new fields for the working up of mines where this substance is to be obtained. It has been ascertained that a small distance from the Ottawa river to fully one hundred miles up towards the Pike-rock river, on both sides of the rivers Lievre, Blanche and Gatineau, there have been observed excellent indications of this mineral, and recent workings show it to be much more extensive than was previously supposed. This season alone, in the hands of a few operators, from eight to ten thousand tons will be exported to the

English market. The value of the mineral at present *in situ* is about \$20 per ton, which can be got out for from \$8 to \$8.10 per ton, and it is well known that it yields fully 85 per cent. of tribasic phosphate of lime. Its excellence as a fertilizer is now so thoroughly established in the home and foreign markets that the Ottawa valley is now looked forward to as a field in which there will be an immense development of mineral interests.—*Mail*.

That coal is abundant not only in the valley of the Souris river, but more or less throughout nearly every portion of the territories west of the 106th degree of longitude west of Greenwich, is now practically certain. In addition to what was done by the geographical branch of the department, extensive explorations, with a view to the discovery of coal, were undertaken by private individuals in the course of the past season, and the result has been to confirm all that was previously conjectured in regard to its abundance and great commercial value. The fact that 800 applications for coal locations, each of 320 acres, have been recorded in the department in the past twelve months, is an evidence of the extent to which public attention is directed to this valuable element in the industrial wealth of the Northwest. It has been thought expedient in the public interest to reserve from ordinary sale and settlement, and set apart for coal mining purposes, the Dominion lands in several townships at different points in the territories. These reserves, which will probably be enlarged and added to in the future, consist of tracts, varying in area, situated respectively near the sources of the Souris river, at Medicine Hat Coulee on the South Saskatchewan, east of Fort McLeod on the Belly river, and a tract on the Bow river between the eighteenth and twenty-second ranges of townships west of the fourth meridian. It is meditated, in accordance with the provisions of the regulations submitted for the approval of Parliament, to offer during the coming summer some portion of these lands for sale, so that due preparation may be made to furnish fuel to incoming settlers. The eastern slopes of the Rocky Mountains give promise of being almost, if not altogether, as valuable for deposits of the precious metals as their western slopes have proved to be. Numerous applications are being received for the privilege of exploring for and mining gold and silver, and regulations designed to encourage the prosecutions of these explorations and operations will be laid before Parliament, for approval, during its present session.—*Winnipeg Sun*.

The general public may not be aware of the fact that Enniskillen contains silver. But such is the case, a mine having been sunk many years ago on lot 4, 2nd con., about four miles west of Oil Springs. It was just after the excitement of '66 had cooled down in that celebrated oil town, that John Kelsey, a firm believer in spiritualism, came from Buffalo to this section, and after going into a trance located Mike Murphy's farm, lot 4, 2nd con., as the particular spot where the snow-like metal was lying in profusion, only awaiting the miner's pick to stir it up, and make the plucky speculators rich beyond all comprehension. In order to make the project look better in the eyes of Messrs. Andrew Elliott, sr. and H. B. B. Walker, two gentlemen whom Kelsey expected to take stock in the mine, he drove a stake in the middle of a field, covered it over so that it would be impossible for any one to find it, and then another medium, in the person of Mrs. Whitcomb, of Buffalo, was procured. She went into a trance, and immediately proceeded to the place where Kelsey had driven the stake. This convinced those interested in the scheme and a mining company was formed, consisting of Messrs. Elliott, Walker & Kelsey. Operations were commenced, and a hole 20 feet square was sunk to the rock. After blasting out a few feet of the rock, a "lead" was discovered and ore taken out that assayed from \$18 to \$25 a ton. The ore was found ten feet in the rock, the exact depth where Kelsey said it would be found. But misfortune overtook Kelsey, and while his enterprise was yet in its youth, his spirit was wafted to a better land where it is not necessary to have silver, in order to be happy. One day a large charge was put into the rock, a fuse lighted, and the miners retreated to a safe distance. The fuse not going off for some time, Kelsey went up to the hole to see what was the matter, and just as he leaned over the curbing, the blast exploded killing him almost instantly. His death struck a blow to silver mining in Lambton, from which it never recovered. The enterprise was abandoned, the mine caved in, the farm became the property of John Ratford, and the interest in the business died out. An old California miner, who worked in this mine, told the writer, that it was one of the best paying "leads" in Canada, and would have paid handsomely if work on it had been continued. Now, that the oil business is suffering

from a depression in prices, would it not be a grand scheme for some of Petrolea's wealthy capitalists to investigate this mine business, and if their investigations were satisfactory, invest their surplus coin in a mine, become bonanza kings, and grow indifferent to the ups and downs of the business that lights the world, but occasionally make man's pocket so light that the sheriff steals in and spreads darkness over all he owns.—*Petrolea Topic*.

The mills at the Chaudiere, Ottawa, are all now ready for work, and the mill owners are only waiting for the logs in the pond to be free of ice to set the saws in motion. There are plenty of logs on hand to keep them going until the drive up the river comes down



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C. BAILLAIRGE,
City Engineer, Quebec.

City Hall, Quebec,
13th April, 1883.

The large mill at St. Cathrines, near the Welland Railway station, owned and formerly occupied by S. R. Badgley, has been leased by a felt boot company. It is their intention to commence operations immediately.

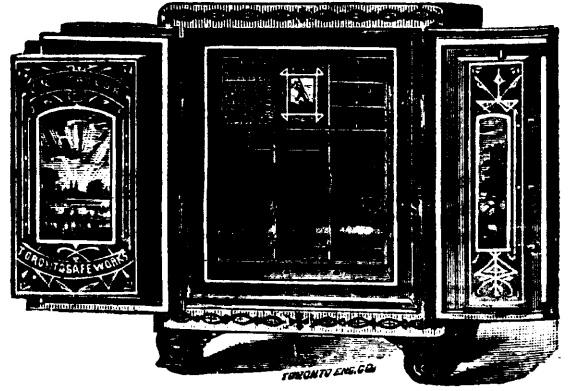
The Erie Preserving Company of St. Catharines has made arrangements to occupy the premises known as the novelty works. The secretary stated that \$6,000 worth of machinery has been shipped to that city to be used in their business; he has also made contracts for the produce of sixty acres of tomatoes, at twenty-five cents per bushel, and wants at least fifteen more. The Company intend to commence operations at once. In addition to the canning of vegetables and fruit it is intended to extend operations to condensing milk and preserving various kinds of meats and soups.

A correspondent of the *Globe*, writing from Winnipeg, says:— About two thousand people have gone West already this spring, and the city is filling up very fast. Rents are as high as ever, and the few houses "to let" are either poorly built or out of the way. I spent all day yesterday trying to get a seven-roomed house near the business centre for less than \$40 a month, but in vain. We need 2,000 more houses for the present population. Many people board out who would gladly keep house if they could only rent at reasonable figures, and the voice of the widower is heard in the streets.

The *Cowansville Observer* (Eastern Townships, P. Que.) says:— The Beet Root Sugar Company of Farnham, having found it quite possible to combine cane sugar refining during a portion of the year with the manufacture of the beet-root article, are at present engaged in adding new machinery, and altering portions of the old, so as to adapt their works to the prosecution of both industries. At the expiry of about a fortnight, it is expected the "Farnham Sugar Refinery" will be in full blast, giving work to some fifty additional hands to those already employed in the beet root department, and otherwise doing its share in the development of local enterprise.

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THIRTY THOUSAND
of our Safes have been distributed throughout the Dominion from
British Columbia and Manitoba to Newfoundland,
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Not one of them has proven a Failure.
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manufacturer on this Continent.

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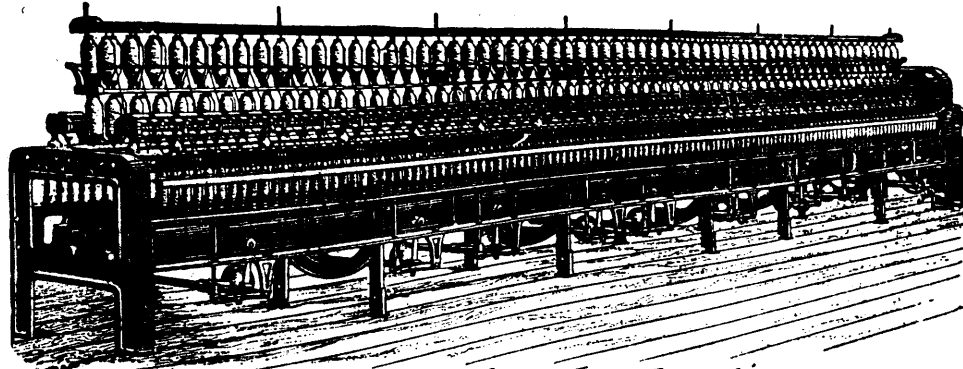
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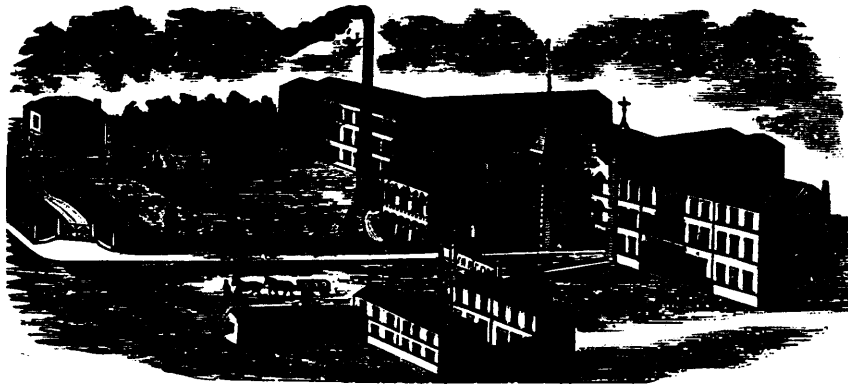
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Patent Burring Machines for Wool.
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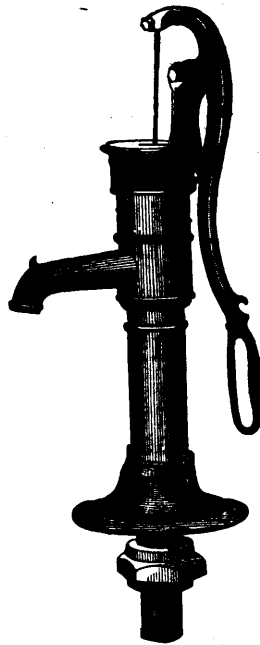
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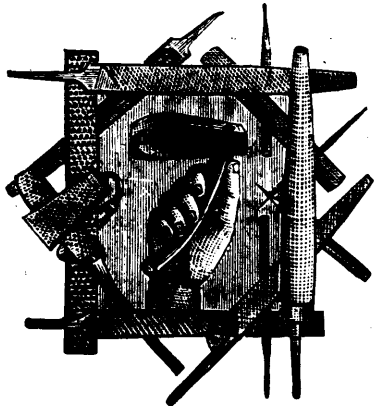
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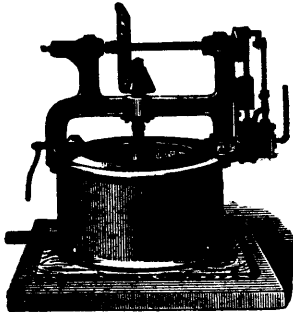
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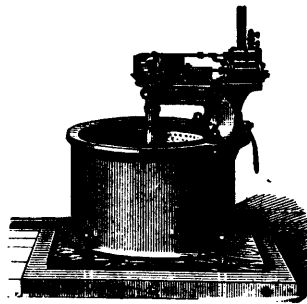
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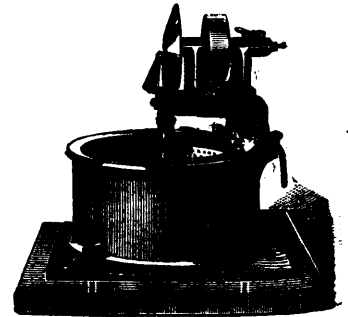
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For Silk Dyers, with vertical engine on the side and cone pulley friction.

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For Wool and Cotton Dyers, with direct acting steam engine.

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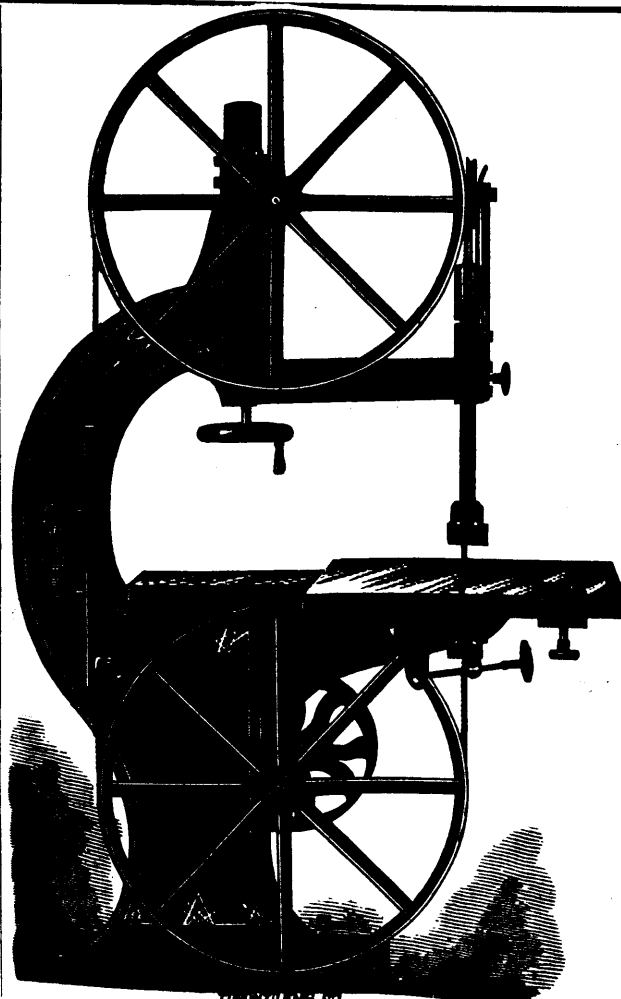
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Give particulars and price of any Machinery you have for sale.

J. McLAUGHLIN'S SONS,

GROWERS,

Merchants and Exporters of Assorted and Sized

American Teasels,

SKANEATELES, N. Y.

We respectfully call the attention of woollen manufacturers to an important addition we have made to our method of preparing Teasels for use. We have succeeded in perfecting a machine which automatically performs the work of grading Teasels into *perfect exact diameters*, making, instead of the *six* sizes of the old way of assorting, *thirty-six* perfect grades, beginning with the smallest, which is 61-64 of an inch in diameter, and is numbered 61, and so on in consecutive order, each number or grade increasing 1-64 of an inch in diameter, to number 96, which is 96-64 or 1 1-2 inches in thickness and is the thickest grade.

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.

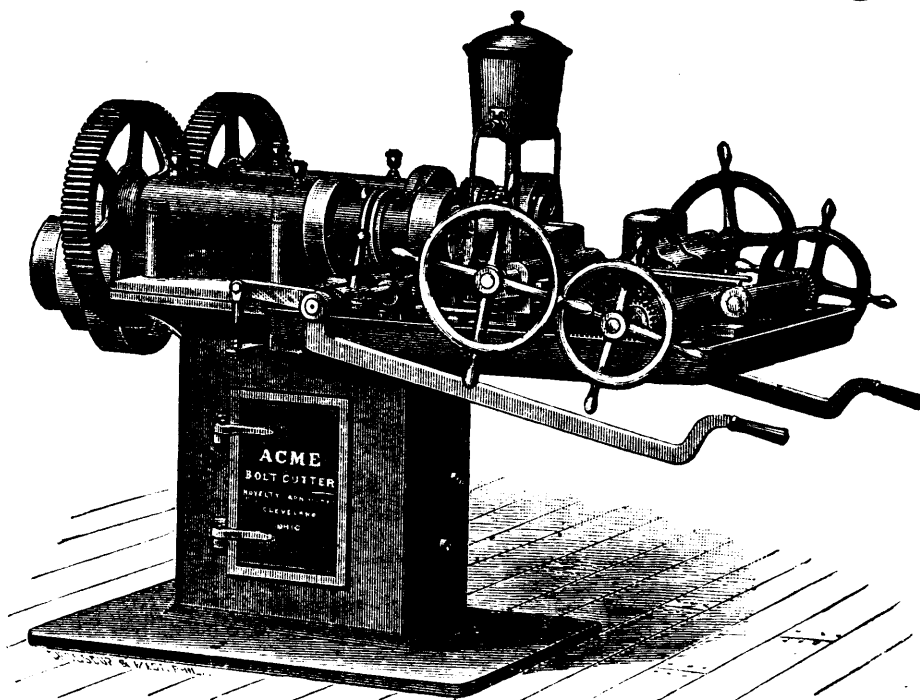
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Have been awarded "PRIZE MEDALS" for 1882—

At the TORONTO INDUSTRIAL EXHIBITION—
Four Silver Medals and Three Bronze.

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For their celebrated Beam Warps, Cotton Yarns, Carpet Warps,
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The smoothness and even finish of the goods, and brilliancy of colour,
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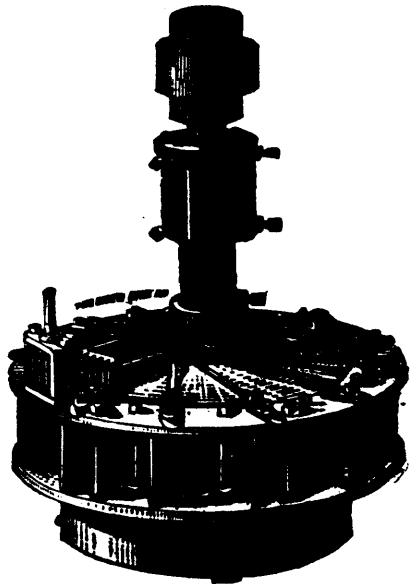
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The Stearns' Circular Saw Mills with Fractional Head Blocks and King of Dogs—this Mill is acknowledged in the United States and Canada to be superior to all others—also a very complete Circular Saw Mill with Iron Frame and cheaper Head Blocks for Small Mill. Saw Mill, Flour Mill, Paper Mill and Water Works Machinery a Specialty.

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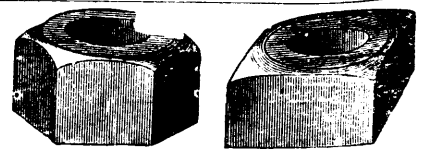
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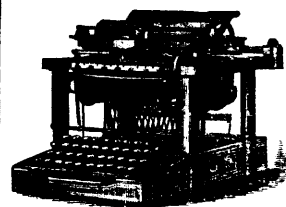
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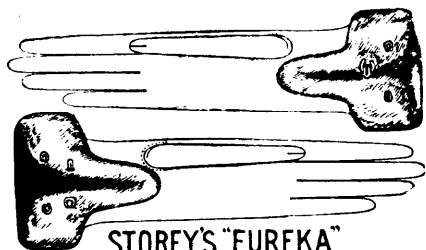
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Will outlast several Belts, costs less, and never needs repairs.

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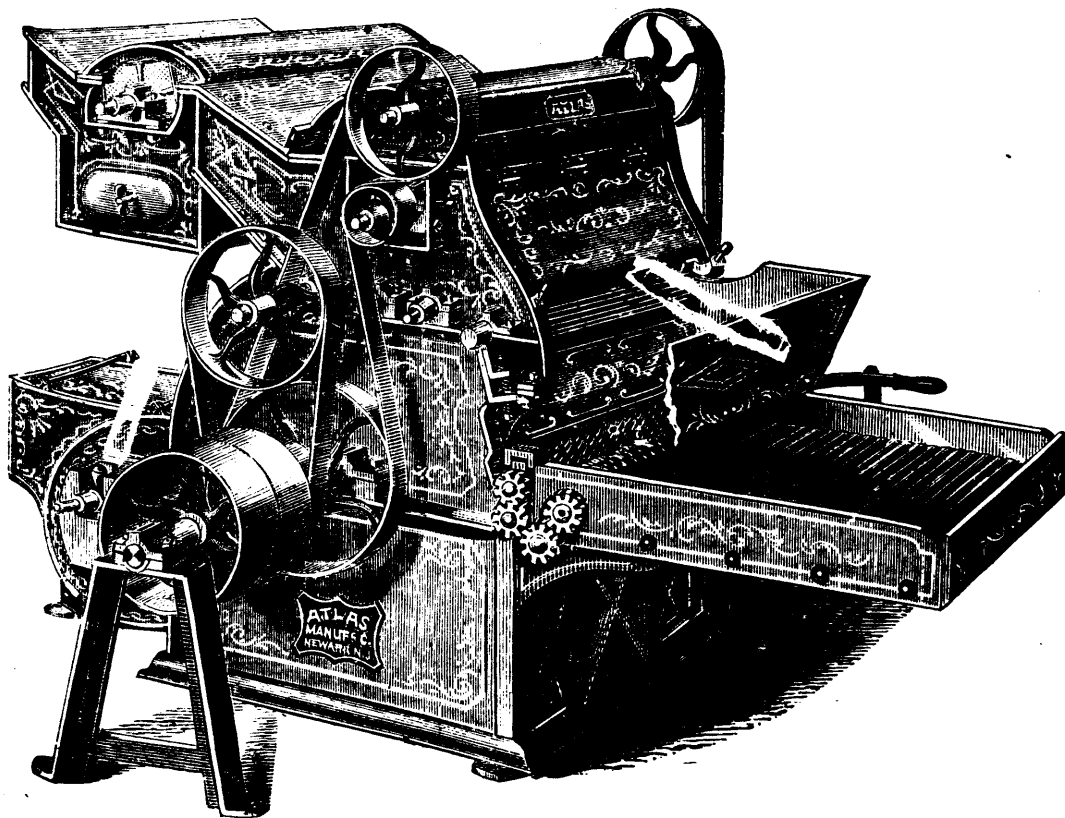
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For Picking, Burring and Dusting all grades of Wool. Recent Improvements, including a beater attached to the spout for the purpose of most thoroughly mixing and Cleaning the Wool without injury to the staple, make it superior to any other machine now in use.

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J. H. KILLEY & CO., Hamilton, Ont.—Manufacturer of economical, variable, cut-off, high pressure, and condensing engines. Improved boilers, portable engines for thrashing. Saw-mills, hydraulic and hoisting machinery.

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

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PHENIX FILE CO.—Hand-made files and rasps. No machines in our factory.—Fenwick & Sclater, Agents, Montreal. Anchor Brand.

G. OUTRAM & SON, Dominion File Works, Montreal.—Manufacturers of every description of files and rasps.

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FENWICK & SCLATER, Montreal.—Canvas hose, plain and rubber lined, for fire departments and factories.—Write us before purchasing elsewhere.

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JACOB ZINGSHEIM, Hamilton, Ont.—Manufacturer of ParLOUR and Bedroom Sets, Center Tables, &c.

Gas Engines.

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

Glove Manufacturers.

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

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S. & H. BORBRIDGE, Ottawa.—The largest saddle, harness, and trunk manufactory combined in Canada. Wholesale and retail. Offer the trade and the public generally the largest assortment of goods in their line in the Dominion at lowest prices.

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LEITCH & TURNBULL, Central Iron Works, cor. Rebecca and Hughson Streets, Hamilton, Ont.—Patent safety hand and power elevators.

Hubs, Spokes and Bent Goods.

F. W. HORE & SON, Hamilton, Ont.—Manufacturers of hubs, spokes, rims, shafts, poles, sleigh and cutter stuff, etc.

Iron Works.

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

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

McKECHNIE & BERTRAM, Dundas.—Machine tools and wood working machinery.

MONTREAL MALLEABLE IRON WORKS, St. George Street, Montreal.—Manufacturers of malleable iron, steam, and gas fittings.

THE OSHAWA MALLEABLE IRON CO., Oshawa, Ont.—Manufacturers of malleable iron castings; also patent screw wrenches.

SMITH'S FALLS MALLEABLE IRON WORKS, Smith's Falls, Ont.—Manufacturers to order of agricultural, carriage, and other malleable iron castings.

ST. THOMAS RIVET WORKS (Brent & Sherman).—Manufacturers of boiler, tank, and cooper rivets, plate nails, wrought spikes, cotter pins, spring keys, &c.

B. W. RICHARDS, Brockville, Ont.—Manufacturer of selected Norway iron and Lake Superior copper rivets and burs, kettle ears, &c.

COLBORNE FOUNDRY AND STEAM MILLS (J. C. Scripture & Bro.), Colborne, Ont.—Manufacturers of mill gearing and agricultural implements, and stoves of all kinds.

VICTORIA FOUNDRY (N. S. Blasdell & Co. Ottawa.—Engine and mill machinery of every description manufactured. General repairs done.

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J. MATHESON & CO., New Glasgow, N.S.—Manufacturers of engines, boilers, mill and mining machinery, iron masts, etc.

Inspirators and Ejectors.

THE HANCOCK INSPIRATOR CO., Montreal.—Manufacturers of inspirators, ejectors, and general jet apparatus.

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

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

OSHAWA KNITTING WORKS, Oshawa.—Manufacturers of cotton and woollen hosiery, Cardigan and ladies' jackets, scarfs, gaiters, carriage rugs, mens' and childrens' jersey shirts, &c.

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DOMINION BELT AND HOSE CO., Toronto.—Oak tanned belting, lace leather, etc

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SHEPARD & HOYER (late with J. Doty), 26 and 28 Colborne Street (in rear of the Ontario Electrotype Foundry), Toronto.—Machinists and Engineers. All kinds of machinery made and repaired. Jobbing promptly attended to.

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W. L. HALDIMAND & SON, Montreal, representing English manufacturers of iron, steel, metals and hardware. Cutlery, files, Tools, &c. Also twines, cotton main driving rope, mill bandings, &c.

McKENZIE & NOLAN, Montreal, Manufacturers' Agents, Customs Brokers. Samples of manufactured goods intended for sale in this market and correspondence solicited.

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E. JENCKES MANUFACTURING CO., Pawtucket, R. I.—Sole manufacturers of Hicks Improved U. S. Standard Ring Travellers. Belt hooks, gimlet pointed wire goods, spinning rings, cotton banding, twine, &c. Manufacturers' supplies. Leather belting and lace leather. Special agents for Jos. Noone's soles cloths.

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JOHN MCARTHUR & SON, Montreal.—Afford best value in pure olive and lard oils, also in all other leading lines of vegetable, animal, and mineral oils for factory use. Invite special attention to their celebrated crown diamond "engine" and "machinery" oils.

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R. BELL & Co., 96 and 98 Foundling Street, Montreal—Manufacturers of every description of paper boxes, paper bags, tea caddies, egg cases, &c.—Orders solicited.

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LINCOLN PAPER MILLS CO., Merriton Ont.—Manufacturers of every variety of paper paper bags and flour sacks.
WM. BARBER & BROS., Georgetown—Manufacturer of book and fine papers.

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H. STUBBENDORFF & CO., 132 St. James Street, Montreal.—Patents sold and disposed of. Special attention given to the introduction and sale of manufactured articles.

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Pot and Pearl Barley Mills.

JOHN QUARRIER, Corner Mary and Cannon Streets, Hamilton, Ont.

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R. H. SMITH & CO., St. Catharines.—Manufacturers of all kinds of saws, plastering trowels, straw knives, etc. Sole manufacturers for the Dominion of Canada of the celebrated "Simond's Saw."
SHURLY & DIETRICH, Galt, Ont.—Manufacturers of circular and cross-cut saws, plastering trowels, etc.

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C. WILSON & SON, 45 Esplanade Street East, Toronto.—Manufacturers of the Improved Wilson Scales. Designers to the Government. Received 29 first prizes, medal and Governor-General's grand diploma.

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

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B. GREENING & CO., Hamilton, Ont.—Manufacturers of wire ropes, cloth and general wire workers.
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The magnificent new Steamships of this Line are appointed to sail from Halifax, N.S. (on arrival of the mails), on the 14th of each month for St. Thomas, Porto Rico, W.I., and all ports in Brazil and River Plate. Splendid passenger accommodation.

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LACHINE CANAL.

NOTICE TO CONTRACTORS.

SEALED TENDERS, addressed to the undersigned, and endorsed "Tender for the Formation of Basins near St. Gabriel Locks," will be received at this office until the arrival of the Eastern and Western mails on WEDNESDAY, the SIXTH DAY OF JUNE next, for the formation of TWO SLIPS or BASINS, on the north side of the Lachine Canal, at Montreal.

A plan and specification of the work to be done can be seen at this office, and at the Lachine Canal Office, Montreal, on and after TUESDAY, the 22nd day of MAY next, at either of which places printed forms of tender can be obtained.

Contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms.

An accepted Bank cheque for the sum of \$2,000, must accompany each tender, which sum shall be forfeited, if the party tendering declines entering into contract for the works at the rates and on the terms stated in the offer submitted. The cheque thus sent in will be returned to the respective parties whose tenders are not accepted.

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

By order,

A. P. BRADLEY,

Secretary.

Dept. of Railways and Canals, Ottawa, 21st April, 1883.

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Will find it advantageous to use this route, as it is the quickest in point of time, and the rates are as low as by any other. Through freight is forwarded by FAST SPECIAL TRAINS; and the experience of the last two years has proved the Intercolonial route to be the quickest for European freight to and from all points in Canada and the Western States.

Through express trains run as follows;

GOING EAST.		GOING WEST.	
Leave Toronto 7.12 a.m.		Leave Halifax 2.45 p.m.	
“ Montreal 10.00 p.m.		“ St. John, N.B., 7.25 p.m.	
“ Quebec 8.10 a.m. next day.		“ Arrive Quebec 8.20 p.m. next day.	
Arrive St. John, N.B., 7.30 a.m., day after.		“ Montreal, 6.00 a.m. day after.	
“ Halifax 12.40 p.m., day after.		“ Toronto 10.52 p.m. day after.	

The Pullman cars which leave Montreal on Monday, Wednesday, and Friday run through to Halifax without change, and those which leave Montreal on Tuesday, Thursday and Saturday, run through to St. John, N.B., without change.

All information about the route, and also freight and passenger rates, will be given on application to

R. ARNOLD, Ticket Agent, Cor. King and Yonge Streets, 72 Yonge Street, and 20 York Street, Toronto.

R. B. MOODIE, Western Freight and Passenger Agent, 93 Rossin House Block, York-st., Toronto.

GEORGE TAYLOR, General Freight Agent, Moncton, N.B.

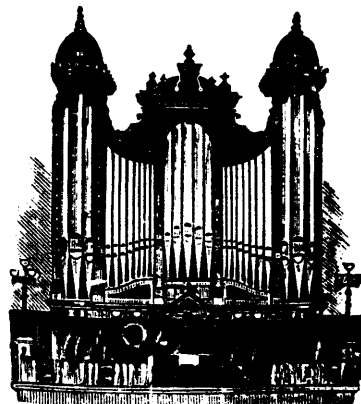
S. BUSBY, General Passenger and Ticket Agent, Moncton, N.B.

D. POTTINGER, Chief Superintendent, Moncton, N.B.

Railway Office, Moncton, N.B., Nov. 28, 1882.

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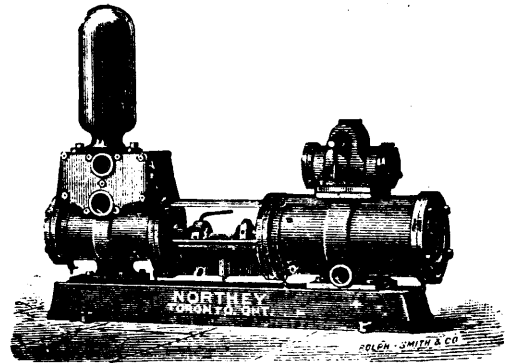
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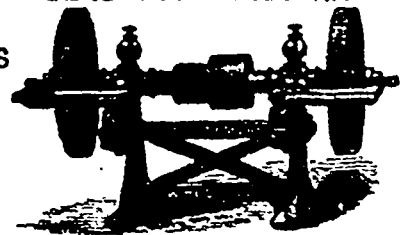
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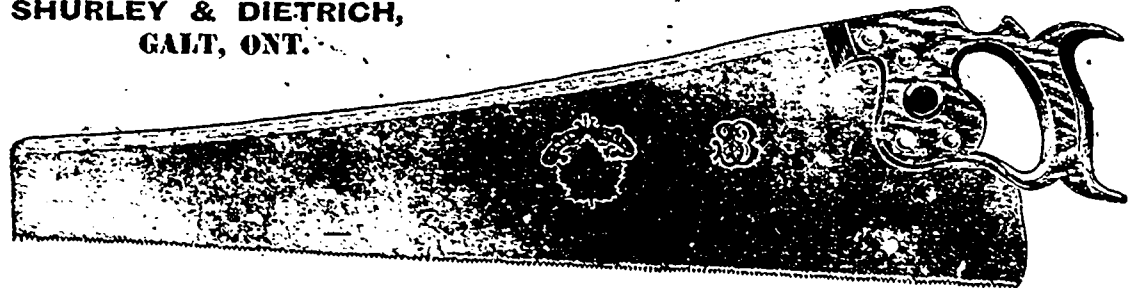
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