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THE CANADIAN MANUFACTURER

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

INDUSTRIAL WORLD.

Vol. 5.

TORONTO, DECEMBER 17, 1886.

No. 22

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THE CANADIAN MANUFACTURER

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AND THE INDUSTRIAL WORLD.

VOL. V.

TORONTO, ONT., DECEMBER 17, 1886.

No. 24.

MR BLAKE ON PROTECTION AND FREE TRADE.

Eight years and three months ago a considerable majority of the people of Canada declared themselves to be in favor of a National Policy of Protection, not only for Home Manufactures, but for Home Production generally. Mr. Alexander Mackenzie, the former leader of the Reform party, has been a pronounced Free Trader all his life, and his views on the trade question have never been matter of doubt or dispute with anybody. Ever since Mr. Blake became leader the public have felt greatly interested to know what his views are on the same question; but somehow or other the same certainty has never been obtained as with regard to Mr. Mackenzie. It was not considered extraordinary that Mr. Blake, being a lawyer, should speak mostly on questions political and constitutional, rather than on questions economical, leaving the latter to be dealt with by an ex-Minister of Finance, Sir Richard Cartwright. At all events it is a fact that he spoke very little on questions of the latter kind, and it is another fact that even since 1878 much uncertainty as to what his views on commercial policy were, has prevailed. The most definite statement the public have yet had from him was made on the occasion of the great meeting of his supporters which was held in Toronto some weeks ago. What he said then has already appeared in our columns, having been taken from the *Globe's* full report: but let us repeat. He said:

"I desire to refer very briefly to the attitude of the Liberal party upon the question of the tariff. It has been grossly misrepresented. In 1882 I stated my views upon that subject in the most formal manner, by means of the address I issued to the electors of West Durham as a manifesto to the country: by the principles then laid down I stand, abide, I said.

"You know well that I do not approve of needless restrictions on our liberty of exchanging what we have for what we want, and do not see that any substantial application of the restrictive principle has been or can be, made in favor of the great interests of the mechanic, the laborer, the farmer, the lumberman, the shipbuilder, or the fisherman. But you know also that I have fully recognized the fact that we are obliged to raise yearly a great sum, made greater by the obligations imposed on us by this Government, and that we must continue to provide this yearly sum mainly by import duties, laid to a great extent on goods similar to those which can be manufactured here; and that it results as a necessary incident of our settled fiscal system, that there must be a large, and as I believe, in the view of moderate protectionists, an ample advantage to the home manufacturer.

"Our adversaries wish to present to you an issue as between the present tariff and absolute Free Trade.

"That is not the true issue

"Free Trade is, as I have repeatedly explained, for us impossible, and the issue is whether the present tariff is perfect, or defective and unjust.

"I believe it to be in some important respects defective and unjust.

We expressed our views last session in four motions, which declare that articles of such prime necessity as fuel and breadstuffs should be free; that the sugar duties should be so adjusted as to relieve the consumer from some part of the enormous extra price he is now liable to pay to a few refiners; that the exorbitant and unequal duties on the lower grades of cottons and woollens should be so changed as to make them fairer to the masses, who now pay on the cheapest goods taxes about twice as great in proportion as those which the rich pay on the finest goods; and that the duties on such materials as iron, which is in universal use, should be reduced, so as to enable the home manufacturer, to whom it is a raw material, to produce a cheaper article for the benefit of his home consumer and the encouragement of his foreign trade.

"I believe that by changes of the character I have indicated monopoly and extravagant prices would be checked, a greater measure of fair play and justice to all classes would be secured, and the burden of taxation would be better adjusted to the capacity of the people who are to pay. Depend upon it, a day will come when by sharp and bitter experience we shall learn the truth, and many who even now applaud will then condemn these particular incidents of the tariff."

Mr. Blake's repetition is of more importance than his original utterance, and that for a reason which is universally recognized. To re-affirm a thing, after an interval of time with its changes and events has passed, is to imply that your views have not changed on the matter in question, and that these views of yours are even more decided now than they were before. Mr. Blake gives us to understand that his mind is made up on the question of Protection or Free Trade, and has been for some years back. He admits absolute Free Trade to be impossible, but he wants a reform of the tariff. And his allusion to "four motions" pressed in the House by his party in 1882, implies that the party was with him then, and is with him still. Both leader and party, therefore, are responsible for the position assumed.

First, the coal tax and the bread tax, so called. As to the former our reply is that the price of coal to Canadian consumers would not fall five cents per ton were coal made free to-morrow. The price of coal is fixed by the great American coal-carrying railway companies, and they actually favor Canada at the expense of their own people, in order to hold the Canadian trade, which they deem to be of great and yearly-increasing value. These companies fix, not merely the price at which they will sell to wholesale buyers, but also the price at which it must be sold to retail buyers on both sides of the border. Then the alleged coal-tax does not touch the farmers at all, a point that is never alluded to in Free Trade speeches.

Mr. Blake and his friends say in one breath that the "bread-

tax" raises the price of the poor man's loaf, and in the next that it does not give the farmer a cent more for his wheat. Until they reconcile these two contradictory statements they scarcely deserve a civil answer. But, even supposing the "poor man's loaf" argument to have had some force years ago, it surely has none now, when our surplus of wheat exported is on the eve of such an enormous expansion as the settlement of the great North-west is sure to give it. The Liverpool price must rule this market--so say Mr. Blake's lieutenants in the House, also the *Globe*. How then can the price here be raised by any duty that we may impose?

When to the old European and American production of refined sugar a *new* Canadian production of the same article is added, the tendency is to make the article cheaper, not dearer. Increase of supply certainly operates to lower prices, not to raise them. But if the principle of Protection were *thoroughly* carried out as regards sugar, there would not be a cent of revenue from that article at all. Refining or low grades would be admitted free, while on refined sugar the duties would be prohibitory. But revenue necessities forbid, so we are told by those who ought to know. Dare Mr. Blake say that if he were in power he could do without any revenue at all from sugar, as they do in England?

A country just beginning to create home manufactures must begin with the coarser fabrics, and progress toward the production of finer goods as best it can. But it is a huge blunder to suppose that the consumer always pays all the duty. Here is a case in point. The American duties on cloths for men's wear are about *three times* the Canadian duties. And yet a suit of clothes of ordinary quality can to-day be purchased in Buffalo or Detroit as cheaply as in Toronto. Both the American cities named do a large business in selling clothing to Canadian customers.

What Canada needs for her prosperity is not that the duties on iron should be reduced, but that they should be raised instead, so as to cause iron to be *made* as well as used in Canada. The way to cheap iron at home is to put high duties on iron imported: as witness the experience of the United States. There, most indubitably, the effect of high duties on foreign iron has been to make iron phenomenally cheap.

However, Mr. Blake and his friends have made this much pretty plain, that their strategy is to kill the National Policy by inches. The Canadian people are not likely to give them the chance.

OUR CARD BASKET.

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

A. L. Jarvis, Private Secretary to Minister of Agriculture, Ottawa, Jno. Bertram, of Messrs. Bertram & Sons, manufacturers of machinery, Dundas. A. W. Wright, Toronto, Wm. Christie, of Messrs. Christie, Brown & Co., biscuit manufacturers, Toronto; Robert Simpson, of the "Labor Reformer," Toronto; Wm. Bell, of the Wm. Bell Organ Co., Guelph. O. Wilby, of the Weston Woollen Mills Co., Weston; A. H. Leith, Toronto, S. T. Stevenson, Secretary Permanent Colonial Exhibition Committee, Montreal; Mr. Kalber, of Messrs. Kalber & Wordell, Amsterdam, Holland, Mr. Inglis, Boston, R. W. Elliot, of Messrs. R. W. Elliot & Co., wholesale druggists, Toronto; Mr. Alphonse Bonn, of Messrs. Cuyas & Bonn, New York City.

FAST TURKEY-RED UPON COTTON.

This is the title of an article which we find in *Wool and Textile Fabrics*, and which we copy in full in our present issue. It originally appeared in a French technical journal of dyeing and coloring--*Teinturier Pratique*--to which it is credited.

Might it be possible to make the production of a fast Turkey red upon cotton a successful industry in Canada, and that on a pretty large scale? We presume not to answer the question, but we think it quite within our scope and limits to invite the attention of Canadian cotton manufacturers to the process elsewhere detailed. That the process aforesaid is deemed worthy of attention in England is shown by the prominence given to the French writer's account of it by so responsible and well informed a journal as *Wool and Textile Fabrics*.

Can alizarine be made to stick and to hold its brilliancy upon cotton, in our climate, as well as in France, or Lancashire, or Lanarkshire? There is probably no *natural* reason why it should not. But there may be other reasons which forbid, in the meantime, at all events. The necessary skill may not be here, it may even be impossible to bring it here, and to keep it. Or we may not have a market large enough to make the attempt an inviting one. These contingencies we must leave to practical men amongst us to consider. Certain we are, however, that *if* we could produce in Canada a real Turkey-red upon cotton, at once fast and brilliant, the home market for the article would advance "by leaps and bounds."

We believe we are correct in saying that putting Turkey red upon cotton has never yet been attempted in Canada. If any of our friends know otherwise, we will thank them for the information to set us right on the point. We have even heard it said that there is no production of genuine Turkey red upon cotton in all the United States; and on this point, too, we would be pleased to have reliable information.

It will be admitted that none of our more important manufactures stands so much in need of *diversification* as the cotton trade. In this trade the need of variety is immediate, and urgent, and pressing. Why, therefore, should not our practical men give due consideration to every new and improved process, which seems to hint that things which we could not do some years ago we might do now, if we tried? The Athenians of old were wont to spend much of their time seeking to see or to hear of some new thing. The objects of their search were frequently lost in dreams and mists, but in seeking for new things Canadian manufacturers would have more practical aims, and might attain more practical results.

But, some may say, the thing has never been done in Canada before, and why should we bother ourselves about it now? Well, many things there are which we have started to do within the last few years, and which we are now doing with considerable success, which we did not do before Canada's commercial revolution of 1879. Since that time we have built the Pacific Railway, for instance, and, have proved that cotton manufacturing is an industry at least as natural to Eastern Canada as it is to the Eastern States near by. It is by taking hold of new things and *making them go* that a nation progresses. "It winna go," said somebody to a Yorkshire machinist and inventor, who was fighting the battle of rough and ready genius against the contrary crooks and twists of a difficult undertaking. "But it maun go," said the determined Yorkshireman, and go it did before he had done with it. All which is respectfully submitted.

THE VICTORIAN TARIFF.

For the following, originally taken from the *British Australasian*, we are indebted to *Wool and Textile Fabrics*, a London journal. It may be observed that, as far as woollen cloths and made-up clothing are concerned, the new Victorian tariff comes very near to that adopted by Old Canada in 1858—20 per cent. on the former and 25 per cent. on the latter.

But it was the misfortune of Ontario and Quebec, and of the other Provinces too, that in 1866 our statesmen were wheedled into "going back" on the sound policy of 1858. Following that blunder, it took us thirteen years to recover our wits sufficiently to get on the right road again. The Australians will be likely to profit by the lesson which Canada gathered in the dear school of experience.

FIRST SCHEDULE.

The following duties shall on and after the 21st day of July, 1886, be charged on the following articles on importations in Victoria, whether by land or sea:

Woollen piece goods being vestings, trouserings, coatings, and shirtings containing wool, broadcloths, witneys, naps, flannels, mantle cloths, cloakings, and ulsterings, 20 per centum *ad valorem*.

Bags and sacks (except corn, flour, gunnies, and sugar mats), 6d. per dozen.

Woolpacks, 3s. per dozen.

Articles of apparel, whether wholly or partly made up (except hosiery and all articles of apparel, whether wholly or partly made up from woollen piece goods, being vestings, trouserings, coatings, and shirtings containing wool, broadcloths, witneys, naps, flannels, mantle cloths, cloakings, and ulsterings), aprons, breeches, coats, capes, cloaks, costumes, collars, cuffs, sleeves and sets, crinolines, camisoles, dresses, furs (made up), frocks, fronts, infants' hoods, and hats, infants' awathes and bibs, jackets, knickerbockers, suits or portions of suits, leggings, mantles, muslin and net scarves, night-dresses, pants, pelisses, petticoats, pinafores, ruffles, robes, shirts of all kinds, skirts, stays, shawls, trousers, tunics, vests, wristbands, men's, women's and children's underclothing, ties, scarves, neckerchiefs, and all articles used for the like purpose, 25 per centum *ad valorem*.

Articles of wearing apparel, whether wholly or partly made up from woollen piece goods, being vestings, trouserings, coatings, and shirtings containing wool, broadcloths, witneys, naps, flannels, mantle cloths, cloakings, and ulsterings (except hosiery, the duty of 20 per centum on which is unaltered), 30 per centum *ad valorem*.

In lieu of the duty of Customs now chargeable on the following articles, the following duty shall, on and after the 29th day of July, 1886, be charged thereon on importation into Victoria whether by land or sea:

Twine (except sewing or seaming of hemp, cotton, or flax), 2½d. per lb.

SECOND SCHEDULE.

On and after the 21st day of July, 1886, the several articles hereinafter mentioned shall be exempt from the payment of duties of Customs on importation into Victoria, whether by land or sea:

Bags and sacks. Corn and flour, gunnies, and sugar mats.

Galvanized machine-made wire netting.

Centrifugal cream separators.

On and after the 29th day of July, 1886, the several articles hereinafter mentioned shall be exempt from the payment of duties of Customs on importation into Victoria, whether by land or sea:

Bags and sacks.—Bran and chaff.

A FLURRY ON THE NEW YORK STOCK EXCHANGE.

At the opening of the New York Stock Exchange Wednesday morning there was a scene, one of the wildest ever witnessed there, it is said. The entire floor was covered with knots of excited brokers, yelling like as many Indians at a war-dance. Prices dropped with such rapidity as to demoralize the brokers who had buying orders. In the nick of time, apparently, buying orders came in by cable from London for heavy blocks of stocks, and this helped to sustain the Granger and Trunk line securities. Recently, it is said, the bulls engineered a big advance, which hurt the bears pretty badly, and the latter felt bound to have revenge. So they got up *their* big combination, and trust companies controlled by their friends started the break by calling in loans on stocks.

Now, this may turn out to have been but the flurry of a day, and things may be reported all serene again ere the close of the present week. But the public may as well take warning that speculation on the New York Stock Exchange—or in the stocks which are there handled—is attended with special danger these days. We must take a very broad view of the situation, if we would understand what it all means. In the first place, a considerable boom in business generally has been "on" for now several months. The boom has had and still has a good, solid foundation to rest upon, in the form of greatly improved demand for commodities, increased production, expansion of traffic earnings, and a stiffening of prices. Next the policy of the Treasury Department at Washington has been such as to encourage inflation of the currency, so some people say. This, however, is denied by others; and we do not lay much stress on the point, though it will not do to leave it wholly out of sight. Further, whatever differences of opinion there may be as to the Government's policy, the fact that of late gold has been pouring in from Europe is not disputed at all; and that would of course encourage speculators for a rise in stocks. Then the large grain movement of the season, and the solid, material improvement in the carrying traffic generally, must have been a potent factor in booming up railway stocks and securities in particular. These are the influences that have for some months back favored a general rise in stocks.

But what potent influences can be named as having mainly caused the tumble of yesterday? At present we note just one of them, but that, be it understood, is of the first magnitude—something that not merely invites attention, but commands it. The near prospect of thorough-going coercive railway legislation at Washington is the lion in the path—or, let us say, the Big Bear—that has started up before the affrighted bulls. There is now before Congress the Reagan Inter-state Commerce Bill, which has been described as a measure against capitalists, and in favor of the balance of mankind. Already, although Congress has not been many days in session, it has been agreed upon by the Conference Committee of both Houses. And here is a condensed sketch of its details.

The bill sets forth that it shall be unlawful for any common carrier, subject to the provisions of the act, to enter into any contract, agreement, or combination with any other common carrier or carriers, for the pooling of freights of different and competing railroads, or to divide between them the proceeds of the earnings of such railroads, or any portion thereof. The railroads must advertise the rates of fare and freight charges, and must adhere to them. No advance of rates can be made

without ten days' notice, but reductions of rates can be made at any time without notice. The bill provides that complainants are entitled to recover their attorney's fees. The violation of the provisions of the Act will result in a fine of \$5,000. Five salaried commissioners are to be appointed, who must be disinterested parties having no connection with the management of railroads or any securities thereof. Should this bill become a law it will, so it is believed, largely increase the number of non-dividend paying stocks in the market, as all railroads will be prohibited from making the alliances which are the basis of existing pooling operations.

Members who have to keep accounts with the Granger vote in the West, or with the Labor vote anywhere in the Union, will oppose this bill at the peril of their congressional existence. The popular demand for efficient railway legislation has been greatly strengthening of late, and Congress dare not say "nay" to it. Recently there was an important decision in the courts to the effect that *no State* has power to regulate commerce between States. This is held to imply that if no State has such power, the Parliament of the nation certainly has; and Mr. Reagan, defeated before, is now confident that this time his bill will go through.

To adapt the language of the meteorologists to the financial situation—the present looks like the opening of a storm-period as far as railway stocks and securities are concerned. A period of great waves, of high pressure and low pressure alternately—a time of rapid and surprising fluctuations. And, let us add—a good time for the general public to let speculation in New York Stock Exchange commodities severely alone. *Toronto World*.

A BARREL OF FLOUR FOR A DAY'S WORK.

(*American Miller*.)

Our St. Louis contemporary is much disturbed over the statement of Abram S. Hewitt, that "for the first time in the history of this country the day's wages of a mechanic will buy a barrel of flour." Our contemporary demands, "And does Mr. Hewitt know that in making such a declaration wholly at variance with the actual facts, untruthful and unjustifiable in every sense, he aligns himself with unprincipled demagogues and assumes responsibility for the discontent so prevalent in the laboring classes?" Evidently our contemporary is not posted as to the wages of mechanics, or else as to the price of flour. "Pigsticking" is not a fine art, by any means, and yet there is not one of the workmen at the stock yards in this city (Chicago), above the grade of laborer (whose causeless strike our contemporary justified by misrepresentation of facts), who cannot buy a barrel of flour with his day's wages. Flour is quoted at from \$2 to \$4.60 per barrel, up through the various grades. The wages at the stock yards range from \$1.60 per day for laborers to \$4.50 per day, the average being over \$3.00. Mr. Hewitt was correct in his general statement, however much he may have been at fault in citing it as a reason why mechanics should be content. The cheapening of products is not the best thing in the world for the laboring classes, as a whole, and they understand that fact quite as well as other people.

RAILWAY AND COAL POOLS IN PENNSYLVANIA.

THE following, which we take from the *Chicago Railway Review*, should direct public attention to one of the most important law cases now pending, either in Canada or the United States:

Attorney General Cassidy has filed bills in equity against the anthracite coal combination and the trunk line pool, and asked that preliminary injunctions be granted, suggesting that they be made returnable in ten days. The defendants in the trunk line pool are the Grand Trunk, New York Central, West Shore, Lackawanna, Pennsylvania Railroad, Baltimore and Ohio, Lehigh Valley, Reading; and Geo. De B. Keim, Stephen A. Caldwell and Austin Corbin, receivers Allegheny Valley; and John Scott and Wm. H. Barnes, receivers, Buffalo, New York and Philadelphia; and G. Clinton Gardner, receiver, Cincinnati, Washington and Baltimore; New York, Pennsylvania and Ohio; Pennsylvania Company; Philadelphia, Wilmington and Baltimore; Pittsburgh, Cincinnati and St. Louis; Michigan Southern; Michigan Central; New York, Chicago and St. Louis; Pittsburgh, Ft. Wayne and Chicago; and the Pittsburgh and Lake Erie Railroad Companies. The attorney general sets forth the different pooling contracts and agreements made by the several companies, defendants, and prays that they be restrained from consummating the contract.

In the anthracite coal combination bill the defendants are the Philadelphia and Reading Railroad Company; the Philadelphia and Reading Coal and Iron Company; Stephen A. Caldwell, Geo. De B. Keim and Austin Corbin, receivers, Lehigh Valley, Delaware, Lackawanna and Western; Delaware and Hudson Canal Company; Pennsylvania Railroad; Pennsylvania Coal Company; New York, Lake Erie and Western; Lehigh Coal and Navigation Company; Lehigh Valley Coal Company; Susquehanna Coal Company, the Mineral Railroad and Mining Company, the Summit Branch Railroad Company, and the Lykens Valley Coal Company.

Attorney General Cassidy claims that the combinations of the trunk lines and coal companies are detrimental to the welfare of the States, and prays the court to declare them unlawful. Judge Simonton fixed December 21st as the day for argument on the preliminary injunction.

THE IRON INDUSTRY.

THE *Montreal Star* says that on the night of Friday last Dr. Sterry Hunt delivered a lecture at McGill College on the Iron Industry, this being one of a course of lectures to the Engineering class, Professor Bovey in the chair. The room was crowded with students and others who had come to hear the learned doctor discourse. The lecture was most interesting and instructive, beginning with a short statement showing the great importance of this industry to any country, followed by a brief history of the manufacture of iron, the different qualities and properties of cast iron, wrought iron, and steel, and how they are made, explaining the process of manufacture of Bessemer and Siemens-Martin steel, and showing the revolution which the substitution of these cheap steels in the place of iron had made in the carrying trade and industries of the world.

The lecturer continued with some remarks on the different variety of iron ores, fuels and flux, showing the enormous quantities there are in Canada, but which at present are not turned to profitable account, and concluded with the statement that the iron industry of Canada would probably be centred in Nova Scotia, the natural conditions there being most favorable, rich iron ores and limestone being in close proximity to the coal fields in some specially favoured localities, only a very few miles apart, and having both rail and water transportation at hand. He trusted that our iron industry would soon flourish.

The lecturer, on taking his seat, was warmly applauded, and the meeting terminated with a hearty vote of thanks to the eminent scientist.

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 AND INDUSTRIAL WORLD.

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Editorial Notes.

A MERRY CHRISTMAS AND A HAPPY NEW YEAR TO ALL!

THE Chicago Times (Democrat) says: -Mr. Henry George is said to have agreed to assist in the election of the labor ticket in Chicago next spring. Mr. George will find that his land theories do not prevail to any extent in a city whose wealth is largely based on the rapid advance in the price of corner lots.

THE Secretary of the Treasury has pointed out to the House among other things that the cost of a consular invoice abroad, for any merchandise amounting to more than \$50, is equivalent to an addition to the tariff tax of 5 per cent ad valorem. Therein, says the New York Tribune, lies a fair argument in favor of putting United States consuls on salaries or of reorganizing the free system.

AMERICAN Protectionists are not asleep these days, it may be certified. During the year 1886, and ending with the close of the late Congressional campaign, the Industrial League (No. 261 South Fourth street, Philadelphia) printed and distributed 304,500 copies of tariff tracts and cards. And the Iron Trade Review (Cleveland) understands, that the League will continue this important work the coming winter.

ON the importance of Museums of Commerce and Manufactures see what is said by the English correspondent of the American Manufacturer, which we copy in our "Iron and Machinery" department. A strong movement in favor of such Museums has set in, and the Imperial Government lends its powerful aid. All which should encourage Canada to go ahead with this new and promising auxiliary to the success of home manufactures.

IT is stated that 7,000 miles of railroad have been built in the United States during the present year, or more than twice as many as were built in 1885. The increase consists almost altogether in extensions by old corporations that have the money to pay for them, a condition of things that prevailed to a far less extent during the last era of railroad building. The danger of overdoing the business is not wholly lacking, however, so says the New York World.

THE Globe of Monday says that an advance in the prices of teas is likely to take place. A New York syndicate has been formed, and within the week a very large quantity has been bought up. The chief aim of the speculators is to control Amoy and Formosa Oolong, which are scarce and comparatively low in price. In China the markets are strong and advancing. The receipts of black teas, it is stated, will be very much reduced this year, and green also will be much less.

Wool and Textile Fabrics (an English journal) says: Business here (Chemnitz) is quiet, although the hosiery manufacturers are somewhat more employed in consequence of commissions having been received from the United States, and prices in

this department rule firm. This agrees with what we quote under our heading of "Textiles" from *Kuhlow's German Trade Review*. German hosiery manufacturers appear to count a good deal on the American trade; and no doubt the great strike in the knitting mills of Eastern New York has been a windfall to them.

On another page will be found a circular issued by "The Canada Land Law Amendment Association," to the land owners and other Electors of Ontario. The subject of the circular is of interest to the public generally, to manufacturers as well as to other classes, we fancy. And let us say, further, that the perpetuation of cumbersome and antiquated land laws is certainly calculated to spread and to promote the dangerous doctrines of Henry George. If we would check the spread of these doctrines we had better make our land laws as simple and convenient as possible.

In the course of an article in the new *Scribner's Magazine*, Gen. Francis A. Walker says:—It is not my purpose to discuss protection as a scheme for accomplishing its professed object. Indeed, I should have had occasion to bestow upon it but a single word, merely to characterize it as a socialist measure, were it not for the conviction that the forces of the age are tending strongly in this direction. In my judgment we are on the eve of a great protectionist agitation. And the demand for the so-called protection of native industry is to be a popular one in a degree never before known.

A DISPATCH from Franklin, Pa., says: "The Standard Oil company decided at a meeting held in New York to erect a new refinery in this city. Work will be commenced at once. The works will be located northwest of the Eclipse works, and will be larger than the Eclipse, which employs four hundred men. A fund of \$250,000 was voted to commence building. The work will be pushed as fast as possible, and it is expected to have things in shape before May 1st next. The indications are that this move means the moving of the Standard Cleveland refineries to Franklin, where the company owns the natural gas plant."

This is what Henry Clews, one of the great New York bankers, said just after the recent election of Mayor in that city:—"Revolutions never go backward. The sixty-seven thousand votes cast for George are a revelation, the handwriting of which is written on the wall in enduring ink. A similar uprising which it represents occurred a few years ago in California, the result of which was to drive all the fabulously rich men from there, together with their great wealth, to New York for safety, and here they are now sumptuously surrounded; but since Tuesday's result they and others are not feeling as comfortable at their homes as they did."

L. A. CHIPMAN & Co., Halifax, N. S., publish a circular in which they say:—"We have to complain that the Grand Trunk and Canada Pacific have advanced freights ten cents since the 1st of October, whilst no advance had taken place on American lines leading out to Boston, thus giving Boston fifteen

cents advantage over Halifax and St. John, taking into account the rebate allowed, thus thwarting our chances of recovering the Canadian trade from Boston houses. The Millers' Association should use their influence with the railway chiefs in Maritime trade interests. Trade fairly active. Prospects will be encouraging if railway freights on flour, fish and coal are kept at rates to ensure exchange traffic between East and West.

From American experience Canadians may take hints. A letter from East Saginaw, in the *Detroit News*, tells of far-reaching changes in the lumber trade of that part of Michigan. By the help of favorable through freight rates the lumber is now to a great degree assorted at Saginaw and Bay City, and shipped direct to any part of the country by rail. According to the writer in the *News*, this branch of the industry "has prospered beyond all expectations." Again: "The result is that the same business in Detroit and Toledo is comparatively dead, the low freights enabling Saginaw shippers to go beyond and undersell them in the markets which were formerly theirs." It is now proposed to so extend the secondary lumber industries at Saginaw that the sash, door and blind business will be largely concentrated there.

THE *Iron Industry Gazette* (Buffalo) gives the following as "statistics that explain poverty." According to the official statistics of the United States for 1885 the money spent during the year amounted to \$3,482,500,000. The expenditures were divided about as follows: Home and foreign missions, \$5,500,000; public education, \$85,000,000; sugar and molasses, \$155,000,000; boots and shoes, \$196,000,000; cotton goods, \$210,000,000; sawed lumber, \$233,000,000; iron and steel, \$290,000,000; meat, \$303,000,000; bread, \$505,000,000; tobacco, \$600,000,000; liquor of all kinds, \$900,000,000. These figures explain nearly all the poverty in the States to-day. A nation that wastes \$1,500,000,000 on two items like tobacco and alcohol certainly must expect to number among its citizens a great many paupers. Look at the list. The waste on tobacco and alcohol is more than the amount spent on the other enumerated articles. Comment is left for the reader.

SAYS an American paper:—"Paris has the reputation of being the best built city in the world as regards fire-proof construction, and the small annual loss from fire seems to corroborate the statement. The fact is that Paris is the best protected city in Europe, if not in the world. Her fire brigade contains 1,743 men, or nearly three times as many as London employs, and as a result most of the fires occurring in the city are extinguished before much damage is done. The losses of 1885 were only a trifle over one million dollars, of which three-fourths were covered by insurance. It pays to maintain an efficient fire-service, and the wonder is that other cities are not convinced of the fact." To which let us add a suggestion:—Why should not a certain number—or proportion—of the employees in every factory be regularly drilled to act as a fire brigade? This might be found a valuable plan for factories situated in small places, where there are no regular and efficient means of fighting fire.

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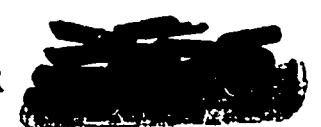
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 SHATTO & DENNIS, MINNEAPOLIS, MINN. STILLWATER, MINN., August 13, 1884. }
Gentlemen: You ask why we use the Dodge Patent Pulley. I answer because }
 we consider them the cheapest, most convenient and satisfactory in all particulars. }
 Yours truly, S. R. STIMSON, General Manager.

O. FLEM OF NEWTON WAGON CO., }
 C. L. RICE, AGENT, CHICAGO, ILL. BATAVIA, ILL., Feb. 17, 1885. }
Dear Sir: Replying to your favor, will say that after using the Dodge Wood }
 Split Pulley for a year or more we are satisfied they are a good thing, if not the best }
 Pulley made, and shall use them hereafter in preference to any other we know of. }
 Yours truly, NEWTON WAGON CO.

We have sold these pulleys for one year, and they have been put to every kind of }
 service, and their popularity is wonderful. We refer to the following users for proof }
 of the above statements: Fallsbury & Hulbert Elevator Co., Minneapolis; R. M. }
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 St. Paul Roller Mill Co.; Minneapolis Brick Co.; N. W. Mfg. & Car Co., Stillwater, }
 Minn., and very many others. SHATTO & DENNIS, MINNEAPOLIS, MINN.

THE WORLD'S INDUSTRIAL AND COTTON }
 W. H. DODGE, PRES. CENTENNIAL EXPOSITION, }
 DODGE MFG. CO., MISHAWAKA, IND. NEW ORLEANS, March 19, 1885. }
Dear Sir: I have a number of your Patent Wood Split Pulleys in use here at }
 the Worlds Fair and Cotton Centennial Exposition, driving Dynamos for Electric }
 Lighting. They are doing heavy work, and are held upon the shaft by the compression }
 of wood on iron. They hold firmly, and do not slip. I have watched with a }
 great deal of interest the many Pulleys of your make running at this Exposition; and }
 I think them the best Pulley I have ever seen. I believe them to possess the following }
 points of merit over any other Pulley: All Pulleys being split or in halves: best }
 belt surface; best shaft fastening; best method of utilizing Pulleys to shafts of different }
 sizes; best balance; lightest on the shaft; strong, and I believe durable. I }
 heartily recommend them. Yours very truly, }
 S. H. GILMAN, }
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According to the best scientific authority it costs one horse power to keep in motion }
 one ton of metal or weight; thus for every unnecessary 2,000 pounds weight on }
 your line shaft, cost you one horse power. To maintain a horse power costs from \$25 }
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 weight by Heavy Iron Pulleys, too tight belts, etc., will be surprised to find }
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TAKE NOTICE:—Our List of Prices for the DODGE PATENT WOOD SPLIT PULLEYS is for ALL SPLIT-PULLEYS.

We beg you will note this fact when comparing our List with others which are for SOLID RIM, and NOT for Pulleys in HALVES.

Business Notes.

S. W. SHERWOOD & Co., commission agents, St. John, N.B., have assigned.

WARNER & Co., of Orillia, who have failed several times, have closed out their stock by auction.

S. J. TOW, shoe dealer, of this city, owes \$4,000 and cannot pay. He has assigned to E. R. C. Clarkson.

THE failure of W. H. DAVIS, shoe dealer, of this city, has been caused by the suspension of Charlesworth & Co.

THE chattel mortgage held upon the grocery stock of James Dalgleish has been foreclosed and the stock is for sale.

CREDITORS have received 50 cents on the dollar from Allan McLennan, shoe dealer, Guelph, in full for their claims.

AN assignment has been made by W. H. DAVIS, a city shoe dealer. His stock amounts to \$900 and the liabilities \$2,000.

MRS. M. M. HUNTINGTON, fancy goods dealer, of this city, is reported to have left, leaving several hundred dollars liabilities.

JOSHUA RORDANS, an old established law stationer in this city, has made way for the sheriff. He has been struggling for many years.

ESTATE of Adam Darling, of Montreal, has been closed out by auction. The "International Hoop Skirt Company," of the same city, has assigned.

S. H. SHAW, St. Thomas, saloon keeper, has made an assignment. A short time ago he sold his household furniture and there is very little for creditors.

G. S. TURNER, of St. Thomas, dealer in shoes, has not been able to effect a compromise, and the stock is to be sold. The liabilities foot up to \$4,000.

SEVERAL Toronto houses are heavily interested in the failure of W. T. HARRIS, jeweller, Winnipeg. The exact amount of the liabilities are not known, but they are heavy.

M. A. TRAVERS, wife of Wm. Travers, commenced grocery business in Dresden in July last. After losing a few hundred dollars, she has assigned in trust to the sheriff.

THE sheriff is in possession of the tailoring establishment of James Hunter, of this city. The stock is to be sold on an execution in favor of McMaster, Darling & Co., for \$400.

THE failure of D. & J. Maguire, ship owners, Quebec, is one of the largest that has occurred in that city for many years. The firm is an old established one, and the liabilities are very heavy.

THE stock and machinery of the Sharp & McKimmon estate was sold on the 15th inst. The stock brought 60 cents on the dollar and the machinery 20 cents on the dollar. The creditors will not receive more than 4 cents on the dollar.

THE stock and machinery belonging to the estate of Charlesworth & Co., of this city, were sold at auction this week and brought 72 cents on the dollar. The purchase was made in the interest of W. E. Hamilton, who intends continuing the business.

THE creditors of Hugh Finlayson & Co., tanners, Paris, have consented to a compromise at 50 cents on the dollar. The liabilities amount to about \$12,000 and the assets are nominally the same. The firm has used every effort to pay in full, but found it impossible.

JAMES WICKINS, an eccentric character who has been carrying on in this city a livery and boarding stable, 10 cent lodging house, roller skating rink, bakery, refreshment rooms, general store, and pleasure resort, has assigned in trust. His liabilities, including mortgages, are about \$7,300. He claims that he has property which cost him \$17,000 but it is evident this is considerably above what it will realize.

CURRENT NOTES.

(Boston Manufacturers' Gazette.)

It is said thirty members of the newly elected Connecticut Legislature are Knights of Labor.

ALL the knitting mills at Canajoharie, N.Y., are starting up with non-union help. The impression prevails that the Knights are defeated.

THE purchases of wool in Australia on American account this autumn are remarkably small, and the importations from all quarters promise to be very much less than last year. This will make a better demand at higher prices for the domestic clip.

AS the various strikes finally come to an end and the men go back to work, we cannot avoid the thought that the money and time wasted in such causeless and fruitless struggles would build and maintain several hospitals for the poor, or educate many a lad who now lives in ignorance.

ALTHOUGH England produces 170,000,000 tons of coal in a year, the liquid fuel question is attracting widespread interest, and the principle of heating by radiation is being adopted wherever it is found practicable. Civil and mining engineers recognize the fact that raw fuel will gradually disappear, and that fuel in a higher form will be adopted as fast as economic modifications of existing steam-producing appliances can be adopted.

FRENCH manufacturers regard with keen interest the proposed changes in the industrial life of Belgium. The new bill now before the Legislative Chamber prohibits night work for women and children, and forbids the employment of children under twelve years of age. The bill further provides that no boy or girl under the age of sixteen be kept at work longer than twelve hours a day. This modification of the conditions of labor must occasion an increase in the cost of production, and render Belgian competition, for a time at least, less formidable.

SOME one has suggested a comparison of King George's land theories to the action of that early Hebrew statesman named Joseph, who in the court of Pharaoh succeeded, by sharp practice and taking advantage of the people's necessities, in getting possession of all the land of Egypt for his master. But Joseph never pretended that this absorption of all the land by the state, compelling its former owners to pay rent for it, would prove a popular benefit. The history of Egypt for 4,000 years has not shown that nationalization of land worked well, and the effects of Egypt's example is rather a warning than an invitation to imitate it.

FREE trade finds no foothold even in Chili, which begins to turn her back upon this theoretic fallacy. Almost from the start her great land owners have controlled the government and frowned upon any policy which might foster any other forms of wealth. However, it seems recently to have occurred to them that it was very poor policy to send their wool clip around the world to be spun and woven, and then to take their pay in English cloth and shoddy. They have also come to the conclusion that more cloth would be obtained in exchange for the wool if it were to be spun and woven at home. It is true nothing is yet said of the enactment of a protective tariff, yet the government has withdrawn its patronage from the agents of foreign houses, resolving to clothe its troops only in native woollens. This tends in but one direction in the long run. It may be some little time before Chili commits herself fully to the protective policy, but it will assuredly prevail before many years.

A BRIGHT FINANCIAL HORIZON.

But two bright spots remain on our financial horizon. This deficit practically includes all the heavy expenditure incurred in the North-west, except the increased annual cost of the mounted police, and, consequently, removes that abnormal item finally from the list of expenditure; and, in addition, we have the cheering intelligence that the surplus of revenue for the first four months of the present fiscal year is already nearly three millions, and should the present favourable circumstances continue, the existing deficit will be entirely wiped out, large as it is, by the surplus accruing on the 30th June next.

Should this prove to be the case, and every indication as yet points out that it will, now that the expenditure of our first war has been paid off, we may look forward to the return of the revenue and expenditure to their normal channels. For the last few years the revenue has usually exceeded the expenditure, and, in the face of better business prospects, increased railroad facilities, and the steady influx of foreign capital to assist in developing our natural resources, it seems perfectly rational to predict that such will be the natural order of things in the future. The financial period through which the country has gone has been a trying one, but it has emerged satisfactorily, and probably at no time has Canadian credit stood so high in the financial markets of the world as at the present. — *Montreal Journal of Commerce.*

FOOD FOR THOUGHT.

BY JOHN MORLEY.

I THINK one of the most satisfactory tests as regards the driving qualities of a belt over a wood or iron pulley, was made at the J. A. McKinnon Machinery Company's store, 22 Warren Street, New York, recently.

An upright engine was used, on which was placed for a driver an iron pulley, 42" diameter, 10" face, driving on to a Dodge Wood Split Pulley 20" diameter, of the same face as the iron pulley.

On this driven shaft was placed a Dodge Wood Split Pulley, 54" diameter, which became a driver for an electric light dynamo.

The test consisted in blocking the engine driving pulley with a bar, and taking hold of the driving belt on the dynamo, keeping the same in motion, together with the engine drive belt (which was strained up taut); but the belt slipped round the large iron pulley, while it hugged the small wood pulley, without a perceptible slip at this point.

There was at least 70 per cent. more belt surface in contact with the iron pulley than with the wood, which makes a practical demonstration of the fact that a wood pulley will drive from 40 to 60 per cent. more machinery, with the same tension of belt, than iron with like tension.

I will add that the iron pulley was in prime condition as to face for belt drive.

This remarkable test is attracting a great deal of attention, and it is well worth an investigation. Mr. McKinnon will at all times be happy to demonstrate this experiment to those interested.

Such experiments effectually settle the fact that the use of iron pulleys must soon become a thing of the past, and that wood pulleys are as certain to take their place in all first-class manufactories.

The Dodge Manufacturing Co., of Mishawaka, Indiana, have been awarded the contract for equipping, throughout, the new carriage factory of the Studebaker Bros. Manufacturing Co., located on Michigan Avenue, Chicago, Ill., with their patent independent wood split pulleys. They will also put in one of the Dodge rope transmission systems, to carry power from the basement to the eighth floor. It will require over one hundred pulleys for the new factory. As this will be the model carriage

repository and factory of the world, it speaks well for the merits of the Dodge wood split pulleys and their rope transmission system. The Studebaker Brothers have also had large numbers of these pulleys in use at their South Bend (Indiana) works for a number of years.

A COMPARISON OF WAGES.

(From *The Chicago Inter-Ocean.*)

Among the public documents which congressmen are scattering with a frank hand is *Consular Reports of Labor in Foreign Countries*. It is to be regretted that every Knight of Labor could not have a copy. Many a long winter evening could be spent profitably in the perusal of this exceedingly valuable publication. Each of its three volumes contains a storehouse of industrial information, showing with especial fullness the wages paid different workmen in different localities. Each "section" or guild should certainly have a copy. We give below a table gleaned from an elaborate series of tables, the wages given being weekly:

	England and Wales.	Ger- many.	Aus- tria.	New York.	Chi- cago.
Bricklayers	\$7.56	\$4.21	\$3.55	\$20.00	\$24.00
Hodcarriers	4.94	2.29	2.08	11.00	10.50
Masons	7.68	4.07	3.73	18.00	24.00
Carpenters	7.66	4.11	5.10	14.00	16.50
Brickmakers	7.00	7.00	6.20	10.00	17.40
Butchers	5.50	3.32	3.50	8.00	16.50
Cigarmakers	6.97	3.63	3.00	11.15	18.00
Coopers	7.50	3.97	3.64	12.00	12.00
Street railways	6.09	3.44	3.68	11.00	13.50
Printers	7.17	4.85	13.00	18.00
Laborers	4.70	3.11	3.00	9.00	10.50

It will be seen that English rates are much higher than German, but beggarly as compared with New York, which is not up to the Chicago average. The Chicago bricklayers are paid more than three times as much as the London bricklayers, masons three times as much, butchers three times, and, in fine, all along the line the advancement is prodigious. The difference in mode of living is as great as that in wages, the humblest Chicago laborer being able to indulge daily in luxuries which the European workman enjoys only on holidays. The American wage-worker has only to couple sobriety with common sense to find life richly laden with the legitimate fruits of industry.

SOME one says, "A crammed brain is seldom a fresh one." Never were truer words spoken. People who do nothing but store their minds with facts and the ideas of others are apt to have very few ideas of their own, and those that they do evolve are generally flat and stale. "Reading makes a full man," it is true, but there is such a thing as being too full. There is no room left for the imagination, no time left for thinking, that process of digestion which prepares the mind's food for assimilation. The idea that reading is the one thing needful to improve the mind has obtained much too strong a hold, and a habit of individual and independent thinking is too much neglected. People who do their own thinking, and freely say what they think, whether with tongue or pen, are the really valuable members of society, after all.

WITH salt at 66 cents a barrel and a large stock in the hands of the Michigan Salt Association, there is as much eagerness as ever displayed in searching for new fields and sinking new wells. The solid salt rock has been struck at a convenient depth at Port Huron. Cheboygan people are about to invest some money in the search for brine, and at Manistee and other towns on the western side of Michigan additional wells are being sunk. Thirty-four salt wells have also been put down in Wyoming county, New York, this year. Cheap salt is to be the rule in this country hereafter, if our statesman will permit the development of our native resources. — *Lumberman's Gazette.*

Iron and Machinery.

COMMERCIAL MUSEUMS IN ENGLAND.

We find the following in the English correspondence of the *American Manufacturer* (Pittsburg, Pa.)

One of the earliest Chambers of Commerce to take action in the formation of Commercial Museums at home is the Chamber in this town, and they have determined to avail themselves of the friendly aid offered by Government. They have just communicated with Earl Iddesleigh asking that instructions may be given to the British Consul at Madrid to procure a full collection of the locks in common use in Spain, other than those of English manufacture. The Wolverhampton Chamber desire that the prices at which the goods are bought from manufacturers may be attached. The Birmingham edge tool manufacturers are paying attention to the samples of Chinese tools which, as I last week noted, have been forwarded for their inspection by the Earl of Iddesleigh, the Secretary of State for Foreign Affairs, who has obtained them direct from Shanghai and Tientsin through the British Consuls. The selling prices are attached and their equivalent in cents is as follows: From Shanghai: A shovel shaped spade blade, fairly made, 62 cents; a trowel with wooden handle, both very rough, 6 cents; a small sickle, 25 cents; two hoe-shaped picks—the larger 68 cents, and the smaller 32 cents; a four-pronged hoe, 68 cents; hoe with curved blade 27 cents; two hatched heads—one 47 cents, the other 32 cents. From Tientsin there are the following articles: A plough coulter, 9 cents; a square spade blade, thin and roughly made, 20½ cents; a large square hoe, with moveable iron handle, 6½ cents; a trowel, very rough, 12 cents; a bill or hatchet head, 20½ cents; three razors at 8 cents, 9 cents and 9½ cents; a medium sized pick, 20½ cents; a large road pick-head of English form but very rough. There would seem to be no possible difficulty in the way of Birmingham and Sheffield edge tool makers supplying tools of superior quality at less than these prices, but the main difficulty which presents itself is how best to get them before the consumers.

We take the following from the *St. John, N.B. Sun*:—Home-made machinery is now exported from British Columbia to China. Messrs. Wilson Bros., of the Vancouver foundry have just shipped to Port Townsend, for transportation to China, on the bark *Southern Chief*, a pair of high pressure stern-wheel engines 90 horse power, and the necessary wrought iron work and connections. This machinery is to be put into a steamer, now building in China, to ply upon one of the large rivers of that empire. The largest engine in the world passed through Bismarek, Dakota, the other night *en route* to the Cascade division of the Northern Pacific road. The engine has been built expressly for use by the Northern Pacific on the Cascade Mountains, and without coal or water weighs eighty two tons. When in running order she will weigh ninety tons. She has ten drive wheels and will draw all the track will hold on the steepest grades.

BRITISH IRON TRADE.

"AFTER the long and wearying time of depression experienced in the iron trade," says the *London Statist*, "it is refreshing to find some signs of revival, which, it is hoped, will develop into another period of renewed activity such as has been witnessed (at considerable intervals) in the past history of the trade. It may be remembered that about twelve months ago there were evidences of an improved feeling in the English iron trade. This was caused by the news of improvement in America, but this better feeling soon passed away, and was succeeded by even a deeper depression and lower

prices. There being no revival of demand, it was found the quantity of pig iron produced in this country was considerably in excess of consumption, and prices having fallen to a figure that was quite unremunerative, steps were taken to reduce the output. The result of this movement has been very satisfactory.

THE GREATEST REDUCTION

has been in the Scotch and Middlesboro' districts, but the movement has been pretty general throughout the country. Since January 1st no fewer than 60 furnaces have gone out of blast, the number blowing being now 360, against 420 at beginning of the year, 40 out of these 60 having been extinguished since June 1st. The following figures show the reduction in the make of pig iron during the last five years:—

	1886	1885	1884	1883	1882
Estimated					
Tons.	6,750,000	7,250,657	7,528,966	8,190,224	8,193,287

"This contraction of the make was followed by a reduction of stocks and this led to the improvement which has lately been witnessed. Scotch pig iron warrants, which fell as low as 38s. during the year, advanced to 43s. and No. 3 to 33s. From these figures there has been a little reaction on a realization of profits, but the market is steady, with a more healthy feeling than has been experienced for a long time past.

HAVE PRICES TOUCHED BOTTOM?

"If it should happen that the depression of the last five years has at last exhausted itself, and that prices have touched bottom, we are likely to see a repetition in some measure of the revival which has always followed upon periods of depression. We have profited to a very considerable extent by the improved condition of matters in America. Although we have not been able to send them any very great quantity of manufactured iron, we have sent them very considerable quantities of hematite pig iron, steel blooms and billets for their steel rail trade, and considerable quantities of scrap and other old iron to be worked up in their rolling mills. The following figures of exports for ten months will show this:—

	1886	1885	1884
Pig iron tons	256,414	88,828	140,780
Steel unwrought	44,351	8,414	23,772
Old for re-manufacture	68,232	10,416	11,677

SCRAP IRON IN DEMAND.

The *Iron Trade Review*, (Cleveland) says:—The local scrap iron market is in a very encouraging condition. Stocks are moving very freely, and buyers are much more easily found than sellers. Prices on all grades are firm at advanced figures. Car wheels are in good demand, and supplies are apparently considerably short, and prices are higher. Sales are reported as high as \$19.50 here, and a gentleman tells us that he was refused car wheels, delivery in Detroit on an offer of \$20 per ton. A commission man assured us that while he had no wheels to offer he had little doubt that anybody holding wheels would part with them at \$18.75 @ \$19.00, but they are evidently not readily found at any price. The demand for old rails seems to increase rather than otherwise, and they are by no means plenty, although there are some offering; \$26 is said to be a very fair quotation, and sales have been made at that figure. Some sellers are holding for more money.

The Excelsior Gaslight Company, of New York, offer to put in the gas holder for the city of Philadelphia a "pure, brilliant, non-smoking gas of as high as thirty candle power," at a cost of from 20 to 25 cents per 1,000 feet, depending upon the price paid for fuel and labor. It is also proposed to make an experimental test under conditions that would be peculiarly favorable to the city. The plant for the new process would be constructed at the expense of the company, and if not satisfactory to consumers would be removed without expense to the city. To adapt the works to the new process would not cost \$100,000 including everything.

Textiles.

TEXTILES IN GERMANY.

Of the two following paragraphs, the former is from *Kuhlow's German Trade Review*, Berlin, Nov. 17th; and the latter from the same journal, Nov. 24th. The italics are our own: we direct attention to the importance of American purchases of German goods:

THE CHEMNITZ WOVEN GOODS TRADE.

The hosiery business is brisker owing to the arrival of many buyers, especially from the *United States*, who have given considerable commissions. Prices are as a consequence very firm. The qualities made of simple yarns are largely bought because of their cheapness, while a good deal is sold in medium fine 2-fold 30 goods.—Commissions come to hand here and there in gloves, but this branch is not so busy as the above. A general improvement cannot be reported. Only a few manufactories are fully employed. More life has been infused in the petinet goods branch, manufacturers having enough to do and having no need to work to stock any longer. For the German and French trade there is plenty doing in pure silk goods, but the work is not easy, requiring great skill and accuracy. The inquiry for the very expensive goods is limited.—There is quietness in the tricot stuff branch, and the competition of Berlin is very perceptible. It is to the disadvantage of the Chemnitz trade that less wages are paid in Berlin; nevertheless Chemnitz manufacturers are not disposed to make any reduction in the present rates, which are not by any means excessive.

THE SAXON TEXTILE INDUSTRIES.

These industries have on the whole been very satisfactorily circumstanced during the last few weeks. A considerable increase has taken place in the exports to the *United States* and prices have also experienced an improvement. Spinning, weaving, dyeing, wool-printing, and finishing works have all had good employment, while the Apolda knitting industry has been very busy. Greiz and Gera combed wool weaving works have been compelled to give part of their commissions to surrounding places, so great has been their extent. The Vogtland embroidery and hand weaving industries also report satisfactory employment. The hosiery trade has kept very brisk of late owing in part to the presence of foreign buyers. The exports to North America have especially been large. The glove trade can scarcely report better circumstances, the sale being slack and prices very low. The machine embroidery trade is looking up, Plauen embroiderers being kept particularly busy by American commissions. Complaints of low prices are, however, universal. It is predicted by those who profess to understand the ins and outs of fashion that laces will, with beads, play an important role next summer as trimming for ladies' dress. It is to be hoped that the prophecy will prove correct. The furniture stuff, curtain, and carpet industries of the Chemnitz district have revived somewhat. Formerly the fine jute yarn used was obtained from England, but a manufactory of fine yarns has been established at Brandenburg, and thus some orders which used to go to England remain at home. The Zwickau sailcloth manufactory is unable to report good sales, as the shipping trade is very depressed so far as sailing vessels are concerned.

FAST TURKEY RED UPON COTTON.

(Wool and Textile Fabrics.)

We to-day present to the reader a simple process of dyeing a fast Turkey red upon cotton yarn. We emphasize the word simple, because this process, while giving fast colors (that is which fully resist both the action of soap and of chlorine

water) of a remarkable brilliancy, works far more rapidly than those ordinarily employed at present. The pigment employed is artificial alizarine. The artificial alizarine of commerce is a yellowish liquid, of 20 per cent. concentration. This liquid when left to stand for a few hours separates into two parts; in colorless fluid and in an opaque powder of a dirty yellow color, which precipitates. It is essential, therefore, before using this pigment, to mix it well together by shaking the bottles in which it is inclosed. Alizarine is soluble in hot water, and, in common with madder, it contains three different coloring principles:—1. Pure alizarine, which, in dyeing gives a violet or bluish red. 2. Anthrapurpurine, which imparts the blood red. 3. Flavopurpurine, which produces the yellowish reds. The different commercial brands are based upon the greater or smaller percentage of any one of these three principles.

Turkey red dyeing comprises different operations, such as boiling off, oiling, steaming, aluming, dyeing proper, and brightening. The object of boiling off is to scour the cotton of fatty matter and any impurities it may contain. It is permitted to boil for three or four hours, under a pressure of two atmospheres, in specially adapted boilers with soda lye of 2° B. When the yarn has been boiled well it is withdrawn from the boiler, drained, and cooled, after which it is carefully washed in running water. It is then dried, either in open air or in hot chambers. The oiling is then proceeded with.

The Oiling.—This is the most important operation in Turkey red dyeing, because it imparts the fastness and the brilliancy of the color. Thanks to a special preparation of oils of the Badische Anilin und Soda Fabrik, this is very simple. The bath is composed of one part Turkey red oil and fifteen parts water. The mixture, which must be cold, is well stirred, after which the yarn is entered and handled for one-quarter hour. It is then wrung, and dried for about twelve hours in a drying chamber, the temperature of which is maintained at 70° C. (158° Fahrenheit.) One single passage in this oil bath is not sufficient, and the operation is repeated from two to seven times, according to the shade of red desired. The oftener the yarn is submitted to this operation, the greater is the beauty and fastness of the color. It is indispensable to dry the cotton after every passage. The oil baths must be preserved, as they can always be used for future operations.

The Steaming.—The object of this operation is for the purpose of scouring the cotton, that is, of withdrawing the portion or oil which has not become fixed upon the fibre. The operation is performed in boilers similar to those employed for boiling off. They are filled with a proper amount of water, the yarn is then entered, left to boil under the pressure of one and one-half or two atmospheres, for one-half hour. It is withdrawn, drained, and cooled, after which it is washed in running water. It is now ready to be alumed.

For ordinary red, it is not necessary to steam after the first oil bath; the yarn may be passed in the alum bath immediately after drying. This alum bath is prepared by dissolving in 100 litres (105 $\frac{7}{10}$ quarts) of hot water, 5 kilograms (11 lb.) of very pure alum. When dissolved 1 kilogram, 800 grams (4 lbs.) of crystal soda are added. The yarn is entered and left in this for from 6 to 12 hours, after which it is withdrawn and wrung. It is then passed for 10 to 15 minutes in a bath containing 9 to 13 lbs. of chalk for each 100 litres water, and heated to 50° C. (122° Fahrenheit). The yarn, after having been washed in running water, is now ready for the process of dyeing.

The alum bath can be replaced by an acetate of alumina bath of from 6° to 8° B., and is composed of equal parts of alum and acetate of lead. The yarn is then wrung, dried in a drying chamber of 60° C. (140° Fahrenheit), and the subsequent treatment is as above specified. We next come to the actual Turkey red dyeing.

For 100 kilograms (220 $\frac{1}{2}$ lbs.) yarn, prepare a dye bath, in the necessary quantity of water of 10 kilograms (22 lbs.) of 20 per cent. alizarine; 6 kilograms (13 lbs. 3 $\frac{1}{2}$ ozs.) Turkey red

❖ Permanent ❖

Exhibition of Manufactures.

Toronto.

NICHOLLS & HOWLAND, PROPRIETORS.

THE undersigned are now prepared to receive applications for space in the PERMANENT EXHIBITION OF MANUFACTURES.

A special building is being erected for us and is expected to be ready for occupation by January next. The structure, which is to be a very handsome one, will have a frontage of 92 ft. by a depth of 105 ft. and will contain the following accommodation:--

A lofty, well-lit basement, having large doors opening on a lane at back, at such a level as to facilitate the handling of heavy weights: the ground or main floor a few steps above the level of Front street, with a height of ceiling under the galleries of 14 ft., while the central portion, up to base of dome skylight, will be 29 ft. high. On this floor, in the north-east corner, immediately adjoining the entrance vestibule, will be the general and private offices of the management, and adjoining them a number of small private offices or consulting rooms for the use of exhibitors, besides comfortable lavatory and sanitary appliances. A gallery floor 23 ft. wide will extend around the four sides of the building, and will be used for exhibiting the lighter classes of manufactures. A special feature of the building will be the good lighting, for in addition to the rows of large windows in front and rear, there will be a large dome skylight in the centre. Access to the various floors will be by ample staircases, and by a large elevator. The building will be heated by steam.

It will be located on Front street (nearly opposite the Queen's Hotel), convenient for both boats and railways, for shipping and for visitors.

Some of the advantages likely to accrue to manufacturers exhibiting may be briefly summed up as follows:

1. The Exhibition will be free to all and open throughout the year.
2. It will afford all the advantages of a Toronto branch establishment at a very moderate cost.
3. Exhibits will be seen by large numbers of business men who would not be apt to visit a private branch office unless on special business.
4. The Exhibition will be extensively advertised and made very attractive, and as almost every variety of machinery and manufactured goods will be on view under the same roof, it will certainly become an important mercantile exchange.
5. Competent salesmen will be in charge for the purpose of explaining the merits of each exhibit to interested visitors.
6. Exhibitors can have printed on their office stationery "When in Toronto call and see sample of our goods at PERMANENT EXHIBITION OF MANUFACTURES." This may afford prospective purchasers an opportunity of personally inspecting goods, who would not be apt to visit outside towns for that purpose.
7. Exhibitors can appoint us selling agents, or can have their own representatives in charge. In the former case, every endeavor will be made to establish profitable trade.
8. Machinery can be shown in motion, as shafting and power will be provided.
9. Office accommodation will be provided for the convenience of exhibitors and their agents.

Further information will be promptly furnished.

❖

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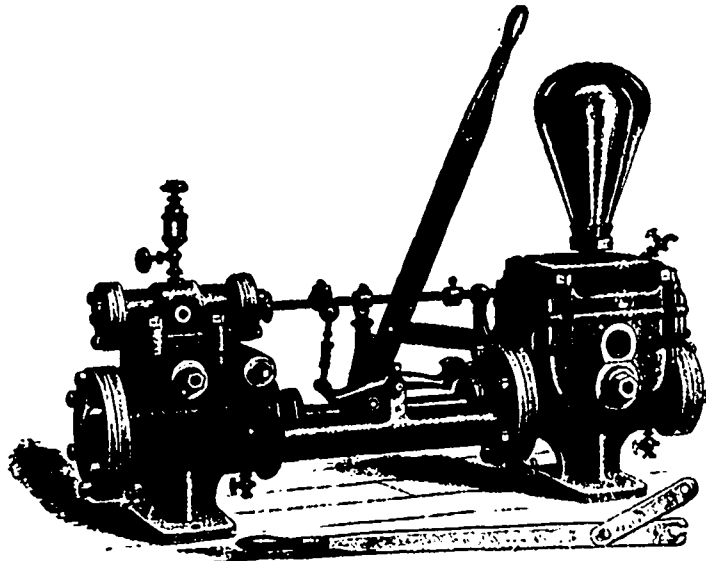
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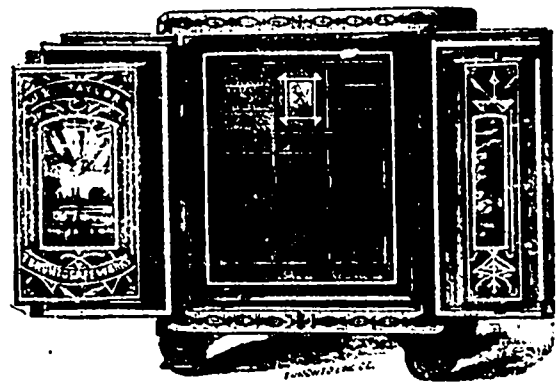
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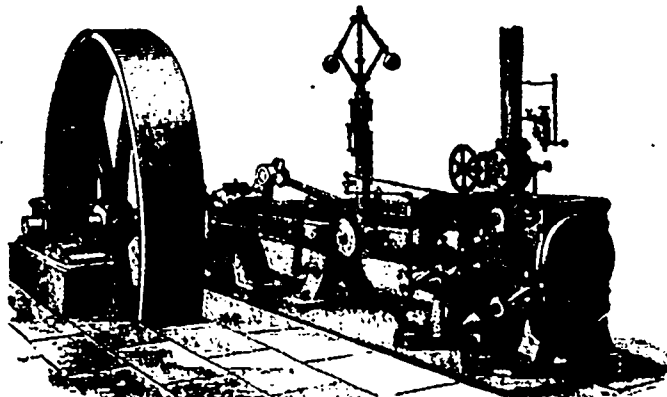
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**STEEL BOILERS
OF BEST
CONSTRUCTION.**

Write for Circulars.

oil; 600 grams (21½ ozs.) tannin. The proportions given are for a medium red.

The yarn is entered in the bath, handled in it for one-quarter hour without heating, after which the temperature is gradually raised up to 35° C. (95 Fahrenheit) during the second one-quarter hour, up to 50° C. (122 Fahrenheit) during the third, and up to 65° C. (149 Fahrenheit) during the fourth. At this degree of temperature the bath is completely "exhausted," that is it becomes colourless; but the heat is maintained for one-quarter or one-half hour longer, in order to fix well the colouring matter upon the yarn. Rather better results are obtained by leaving the cotton yarn in the bath for a longer period and at a higher temperature. We expressly recommend dyeing in the cold during the first one-quarter hour to avoid the sudden running up of the alizarine, which would produce an uneven colour.

The yarn is then withdrawn from the dye bath, left to dry and cool, and rinsed in running water. It is then dried and passed in a new oil bath composed of 1 part Turkey red oil and 15 parts water. The yarn is moved in cold for one-quarter hour, wrung, and dried for 12 hours in the stove at 60° to 70° C. (140 to 158 Fahrenheit); then, so as to fix the oil upon the fibre, it is again steamed for one-half hour, as stated above. Next follows—

The Brightening. — In dyeing ordinary reds upon cotton yarn, a new oil bath, after dyeing, can be dispensed with, when immediately after dyeing the yarn is rinsed, dried, and steamed for one-half hour. A bath of ordinary soap heated to 85° or 90° C. (185 to 191 Fahrenheit) suffices for these colours. For dyeing the yarn yellowish red, a mixture of 85 parts alizarine (I. D.) and 15 parts alizarine V 2 a (bluish) is advantageously employed.

By mixing these two brands in proper proportions all the shades desired are produced.

The brightening is for the purpose of giving brilliancy to the color, which on being withdrawn from the dye bath, is of a brown red color, without any vividness. For this purpose, the yarn is placed into boilers similar to those used in the boiling-off operation, and into which the following mixture, proportioned for 100 kilograms cotton yarn, is introduced: 1,200 liters (317 gallons) water, as free from lime as possible; 100 to 400 grams (3½ to 14½ ounces) of carbonate of soda (calcined soda); 4,500 grams (10 lbs.) white Marseilles soap; 100 grams (3½ ounces) of tin salt. The boilers are closed air tight, and kept at a boil for 3 or 4 hours under 1½ to 2 atmospheric pressure; the yarn is then lifted, drained, and after cooling down, "whizzed," and dried.

The quantity of soda carbonate to be added to the water is very variable; its purpose being to precipitate the lime, its proportion is to be graded according to the calcium contained in the water. The carbonate of soda is first added to the water, and only after it is well dissolved, and has operated upon the water, the soap and tin salt are added. Solution may be accelerated by heating the water.

It is preferable, although not indispensable, to carry out the brightening process under pressure, and an open tub may be used as well. In this the brightening bath for 100 kilograms of yarn is prepared to 2,000 litres, (528 gallons) water, 1 to 2 kilograms (2 lbs. 3½ ozs. to 4 lbs. 6½ ozs.) carbonate of soda, 7½ kilograms (16 lbs. 8½ ozs.) white Marseilles soap, and 120 grams (4½ ozs.) tin salt. The temperature is gradually raised to 85° C. (185 Fahrenheit), and at this maintained for three quarters of an hour.

In place of tin salt, bran may be used for the brightening in the closed boiler, as well as for the ordinary soap bath. Equally bright tones are obtained by this manner of brightening.—C. E. M. in *Teinturier Pratique*.

Wool is cheaper in America than in any European centre. Prices must be equalized by and by, which will mean an advance in prices in this country.

WOOL SUPPLY IN THE ARGENTINE REPUBLIC.

CONSUL BARKER, of Buenos Ayres, reports that the wool season of 1885-86 in the Argentine Republic already exhibits a large deficit in the returns for the previous year. The reports of this season from October 1st to July 15th are 281,000 bales against 315,000 for last year. The apparent shortage in the wool clip is about 30,000 bales. The deficit is in reality, however, much larger than this, as every year heretofore there has been an average balance of 20,000 bales carried from one clip to the next, while this season there is no stock whatever on hand; so that the actual deficit is upwards of 50,000 bales, equal to upwards of 30,000,000 pounds. The prospect for the approaching wool clip (1886-87) is thought to be still more unpromising. The winter has been very severe on the flocks. The next clip, it is predicted, will be 75,000 bales, or 45,000,000 pounds, below that of 1884-85.

SOAP FROM WOOL GREASE.

(Bradstreet's)

FRENCH chemists are said to have solved the problem of the utilization of the heretofore waste grease from scoured wools by using it to make soap. The fat having been heated to the melting point absorbs certain compounds of sulphur, to the extent of retaining in a fixed state one hundred times its volume of sulphurated hydrogen. When the fat is allowed to cool it is found to be soap. The combination of substances destroys the unpleasant odor of each, the mixture being fine and homogeneous. In the report of Consul Williams, at Rouen, giving these particulars, it is stated that manufactured soap of this kind has already become a commercial product in France. It is not a toilet soap, but so cheap that it is likely to displace soaps based on soda for many important uses, "particularly in vine culture and horticulture as a defence against the insects that prey upon plants."

ALL the factories in Augusta, Ga., are to start up now, after a strike in the Augusta Mill of over three months and a lockout in the others of over two months. By the agreement between the Southern Manufacturers' Association and James A. Wright, representing the executive committee of the Knights of Labor, the pass system and petty tyrannies complained of are to be abolished. No former employee will be deprived of work on account of his connection with the Knights of Labor. All future difficulties will be settled by the arbitration of a committee to be composed of two mill presidents and two employees, and in case they do not agree the committee to select an umpire, employees to continue work pending adjustment; and in the case of the discharge of an employee for cause, the position or machine of such employee is not to be boycotted.

A DISCOVERY that may lead to important practical results has been made by Walter Hempil, a German experimenter, in the observation that the quantity of electricity furnished by a machine increases considerably when the latter works in an atmosphere of compressed air.

THERE are several new houses in New York city that are only fifteen feet wide. A large and pleasant entrance hall, with a fireplace and ornamental staircase, occupies the whole width of the house and extends twenty-two feet back. The kitchen is in the rear, and the parlor and dining-room on the second storey.

A BERLIN (Germany) mechanic has invented a handy appliance for detecting leakage of gas from house pipes. It consists of a small pipe bent twice at right angles and connected with the service before and after the main cock. A small glass bulb partly filled with a mixture of glycerine and water is placed on this pipe. A tube dips into the liquid in the bulb, and is so arranged that any gas passing through the small pipe bubbles through the liquid. The bulb is also provided with cocks at its inlet and outlet. If these latter are opened and the main cock closed and the burners shut off, any bubbles in the liquid show a leakage of gas in the pipes or fixtures beyond.

Milling.

END OF THE MINNEAPOLIS MILLERS' UNION.

(*American Miller for December.*)

A DISPATCH from Minneapolis announces that the Millers' Union comes to an end on December 1st. It will be remembered that the Millers' Association expired by limitation of its charter on September 1st. The millers, however, agreed to continue their organization for three months, as an experiment, which, after trial they have definitely abandoned.

When the Millers' Association was formed several years ago, there was a real need of organized efforts to secure wheat for the mills. The huge mills multiplied faster than the tributary wheat country was settling up. Those great mills had an insatiable appetite, which had to be fed. For a long time it was an undeniable benefit, both to the millers and the producers. Of late years, however, Dakota and Minnesota have filled up with surprising rapidity. Both last year and this year, the actual production of wheat was much larger than given by the Agricultural Department's reports. This year it is said, on pretty good authority, that the crop of the hard wheat country was at least a hundred million bushels. The Minneapolis millers claim that last year the association was an actual detriment to them, as they paid more for wheat than they could really afford to. Be that as it may, there is now no need of "skirmishing" for wheat. Prominent millers think that if wheat raising continues in the North-west on the present scale, they can get their wheat cheaper, as individuals, than they can purchase as an association. The claim is true that the old association paid more for wheat than it was worth to ship to other points; but this was largely due to the action of the railroads. It was not so much of the Millers' Association that the farmers complained, but of the discrimination in its favor by the roads.

It is said that some of the smaller millers in Minneapolis are averse to giving up the Union. Most of the large mills have ample facilities in the way of lines of elevators, to supply themselves steadily. Union with the big millers helped the smaller ones; while in the future the latter must take their chances of a supply, which will not, this year, be a difficult matter.

A MICHIGAN miller who still runs a stone mill, and has a good custom business, writes us (*American Miller*) that he has been somewhat surprised to find that he has kept his trade so well in competition with his roller neighbors. He says that many of his customers are surprised to find that he has no rolls; so we infer that they give preference to his flour not from prejudice but from choice. The matter is not at all surprising to us. Our correspondent is a good stone miller, and probably some of his roller competitors do not understand how to manipulate their plants to advantage. There is no magic in rolls to conjure quality; but there is magic in the miller, whether he uses stones or rolls as his wand.

It is admitted that our wheat of the last crop is a superb article, which fact commends it to the attention of buyers. But they will not want much of it if they can obtain bread on much cheaper terms elsewhere. It is quite possible that the change in the situation will be seized upon by the speculators as a reason for advancing prices, and that they will be put up to a point so high as to drive European buyers to other markets. This has been done before, and with a result that ought to prevent a repetition. It will be well for the trade to remember that a fair price is best in the end for the seller as well as the buyer. - *Chicago Tribune.*

MARSHALL & Co., twine and thread manufacturers, of Leeds and Shrewsbury, England, have decided to close their works in that country and remove to the United States. They will supply their English trade from the United States.

Lumber.

LUMBER MILLIONAIRES.

WE put together, in order of date, the two following items, which are from different numbers of the *Lumberman's Gazette* (Bay City, Michigan):

Francis Palms, an extensive owner of Michigan pine lands, died at his residence in Detroit, November 24th, aged 76 years. He was born in Antwerp, Belgium, and came to Detroit in 1833. His estate is valued at \$7,000,000 to \$8,000,000, and was accumulated to a large extent by early investments in timber and mineral lands in Michigan and Wisconsin. He owned a large amount of business property in Detroit and was interested to some extent in mines and railroads in the upper peninsula.

"How many millionaires are there among the lumbermen of the Saginaw valley?" we asked a well informed man. "You will be surprised," he said, "when I tell you that I do not know a resident land owner or lumberman in the Saginaw valley that is worth a million of dollars. There are some sixty-five saw mills with their appendages on the river. The owners ought all to be rich, or nearly all, yet probably not over a dozen of them are so. A part of the balance are comfortably off, the remainder are poor to bankruptcy. There are quite a number who will reach from one hundred thousand to eight hundred thousand dollars." Our informant accounted for the failure of so many lumber manufacturers to get rich by ascribing it to the manner in which buyers have been favored by the inspectors. The buyers and inspectors have made the money, he says.

RE-SAWING.

THIS re-sawing business is getting to be a great thing. A New York correspondent of a prominent lumber journal writes: Machinery men who are constantly devising labor-saving and product-increasing machines will soon have to stand a heap of cussing from the lumber dealers who have heretofore sold box-makers one and one-fourth inch stuff. The box manufacturers have all along bought one and one-fourth inch pine to re-saw into one-half inch, and as experiments with re-sawing machines using thin saws have proved entirely successful, it has been found that Canada pine boards sawed plump inch, as is the custom, can be re-sawed and produce lumber fully as thick as formerly obtained from one and one-fourth inch stock re-sawed on an old style machine. It is also claimed that Michigan pine boards can be re-sawed and produce stock 7-16ths inches in thickness, which for many purposes is thick enough. An investment of say \$1,000 in a thin re-sawing machine will more than save its cost in a year in any ordinary box factory.

THE men who skimmed the cream of the pine forests of Michigan, harvesting the cork pine of the Cass river and the Port Huron district, the pioneers of the lumber industry, will be amused at the wager between Ike Bearinger and Pat O'Donnell of Saginaw. The bet is that Bearinger will put in 1,000,000 feet of logs this winter that will run more than 15 per cent. to uppers and the forfeit is a suit of clothes. Bearinger states his ability to put in 1,000,000 that will run 23 per cent to uppers. In the early days 23 to 25 per cent of uppers was a common thing, and the wager on 15 per cent illustrates the decadence of the Saginaw forests. Five to seven per cent. is about the regular result. - *Lumberman's Gazette.*

A CORRESPONDENT of the *Montreal Witness* writes:—"It argues well for Morrisburg, as a business place, that Mr. Denesha is building another large cold-storage warehouse at the Grand Trunk Railway station. Captain Paquette, of Ogdensburg, is superintending its erection."

ADDRESS OF THE CANADA LAND LAW AMENDMENT ASSOCIATION TO THE LAND OWNERS AND OTHER ELECTORS OF ONTARIO.

THIS association, composed chiefly of land owners, was formed to introduce the Torrens System of land transfer into Canada. Its members have no interests other than those of all owners of real estate. Mainly through its efforts that system has been introduced into, and is now the recognized system of transferring land in Manitoba, Assiniboia, Alberta, Saskatchewan, in fact in all that immense territory extending from Rat Portage to the Rocky Mountains, and it is also in operation in the County of York and City of Toronto in Ontario. It is in operation in other important colonies. It has very largely reduced the cost of land transfer in these colonies. Ownership of land is absolutely certain. Suits about titles are unknown.

The present system of land transfer entails a needless cost of at least a half million of dollars annually on the land owners of Ontario for which they receive no benefit whatever.

This association advocates the sweeping away of the last vestige of the Feudal System. Why should the laws relating to entails, springing and shifting uses, contingent remainders and other relics of a barbarous age, be still in force in Ontario?

Why should the Province continue any longer to be saddled with a system of land transfer which costs the owners of land so large an annual outlay?

Why should the virgin soil of the Algoma, Thunder Bay, Rainy River, Nipissing and Temiscaming districts, be saddled with an effete system which in a few years it will take thousands of dollars to be relieved from?

Electors, will you insist on your representative supporting the introduction of a better system? It is a matter of real vital importance to everyone who now holds or expects to hold real estate, because the present system entails such an unnecessary expense and delay as well as risk on all transactions in which land is concerned.

This association strongly urges upon you to press upon the attention of all candidates the importance of giving their support to the extension of the Torrens System of land transfer to the whole of the Province.

(1) Because that system has been found to be of great advantage to the land owners of Australia, where it has been in operation ever twenty years; and the advantage it has conferred on them it will also confer on you.

(2) Because it will give to you and to your heirs after you certainty of title.

(3) Because it will do away with long deeds and longer bills of cost.

(4) Because it will prevent the possibility of defects being found in the titles to your lands possibly after years of peaceful possession.

(5) Because it will enable you to sell and transfer your land as easily as if it were registered bonds or bank stock.

(6) Because it will largely increase the saleable value of all lands brought under its operation.

(7) Because it will reduce the cost of all transactions in land at least 50%, and thereby greatly facilitate the acquisition of freehold homes by the working classes.

Do not be led away by the following and other side-issues raised by interested parties:

(1) That the agitation has been got up for the benefit of money-lending institutions, which is false. It is the borrowers' and not the companies' interests which will be benefitted. The adoption of the system advocated by this association, by the unanimous vote of the Parliament of Canada and of the Legislature of Manitoba, should be a sufficient answer to this charge.

(2) The cry of centralization is also baseless, as the transfers and sales of land will continue to be carried on in the localities in which the property is situated, as it is now.

GEO. S. HOLMSTED,
Cor. Secretary.

J. HERBERT MASON,
President.

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THE PROGRESS OF INDIAN MANUFACTURES.

(London Economist.)

SCATTERED throughout the official report by Mr. J. E. O'Connor upon the trade of India in 1885-6 are some occasional notes upon the progress of Indian manufactures, which it may be of interest to collate. The most important Indian manufacture is that of cotton goods, and that has developed with great rapidity. In 1876 there were 47 mills in operation, and in the year 1885-6 the number of mills was 86, the number of spindles and of looms having increased in the interval by 92 per cent. and 77 per cent. respectively. And the increase in the export of Indian cotton goods has been very much greater. In 1876 there were exported 7,927,009 lbs. of cotton yarn, and 15,344,000 yards of cotton piece goods, while in 1885-6 the shipments amounted to 78,242,000 lbs. of yarn and 51,577,000 yards of cloth. This branch of industry would, however, appear to have been pushed forward with too great rapidity for we are told that during the half-year ending April last, 35 out of the 53 mills in Bombay paid no dividend, and the average dividend for the whole 53 mills was but little more than 1 per cent. Latterly there has been an improvement, and the mills are now said to be doing very well, but the immediate effect of this has been to stimulate competition, and it is stated that new mills are to be started at Delhi and Agra. A considerable export trade is also done in jute manufactures, more especially gunny bags, Lower Bengal being the centre of the industry, but the report as to this branch of trade is not satisfactory. There were exported last year 19,000,000 fewer gunny bags than in 1884-5, the reason given for the decline being that the shipments in the earlier year were excessive, while as to the present position, the report is, that the working power of the mills has, in the last two years, been increased by numerous additional spindles, and they have been able to produce more bags than the state of trade warranted or required, with the result that they have large stocks, pay no dividends, and have now, by agreement among themselves, gone on short time until February next, while one of them has shut up altogether, and gone into liquidation. Of woollen goods, the exports in later years have declined largely, but this is due to special causes, and "the wool-weaving industry of India," we are told, "has not only not fallen off, but has much expanded. It has taken a different direction, however. As in cotton weaving, so in wool weaving; the hand-loom has given way to machinery, and the woollen mills, though few in number yet, are developing what promises to be eventually a considerable industry India, manufacture of goods suited for use by the people of in the An export market may follow in due course."

HERE is the kind of a statement we like to see: "According to *The Analyst*, the macaroni made in New York, Philadelphia and Chicago is composed of the poorest, cheapest Western flour, colored and doctored with vile coloring and chemical agents to give it a red golden hue. It resembles the genuine article only in appearance. Instead of keeping fresh for years at breaks and becomes moldy and green. The best macaroni is made at Naples, Italy. It can be cooked in hundreds and one writer says in five thousand different ways, and is a very rich and delicious food. Genuine macaroni, as served at the Italian restaurants in New York, is a most enticing dish, very different from that prepared in the ordinary way." The "genuine" macaroni, the Naples-made macaroni, is manufactured with a disregard to cleanliness and decency that is shocking to more northern nations: and a visit to Naples has cured many a tourist of all desire to eat that delectable product of sunny Italy. English and American macaroni is at least prepared in a cleanly manner; and one of the earliest manufacturers of macaroni in America, himself an Italian, said the trouble with the American article was in the cook not in the quality. But then it sounds smart to belittle everything that is made at home. No Italian macaroni in ours if you please.

GERMAN HOURS OF LABOR.

(From the Chicago News.)

Now that the hours-of-labor question is given such prominence in the United States politico-economic field, it will be of interest to know what these hours are in other countries. The reports of the German inspectors of factories for 1885 have just been issued. Classifying the returns, it is found that most factories work ten or eleven hours daily, with at least six full days in the week. Those working ten hours form a large majority of the whole, not reckoning overtime. In Dusseldorf the time is from eleven to fourteen hours. In Bavaria eleven to twelve. In corn mills and bakeries the hours run up as high as twelve to seventeen, or from seventy-four to seventy seven hours per week! In some glass-polishing works the men work six days in the week without interruption, and only on Sundays get a proper sleep. In the Feldberg villages the nail-makers and wire-drawers, and in the Westerland the potters, begin work in the summer at four or five, and in winter at six, continuing till eight at night. With such hours as these it is matter for wonder that there are not even more socialists in Germany than the government is already called to deal with.

THE GLASS-MAKERS' COMBINATION.

At the late meeting of the representatives of the Flint and Lime Glass Protective Associations (eastern and western) a combination was formed. It is said of the association as now formed: Out of 57 establishments in the United States 51 signed, the three undersigned firms assuring the association they will sign in the January meeting. This is important, in that the summer shut-down will not be universal, and "all terms and discounts will be the same in the east and west." The cuts heretofore made by the associations "proved disastrous" to the industry, and the action taken "will hereafter settle all trouble that has existed."

AMERICAN PATENTS TO CANADIAN INVENTORS.

The following patents were granted to citizens of the Dominion of Canada, bearing date December 7th, 1886. Reported expressly for this paper by Louis Bagger & Co. Mechanical Experts and Solicitors of Patents, Washington, D. C.:-

Burkholder, W. H., Thedford, Ont., car-coupling	354,041
Rathbun, E. W., Deseronto, Ont., automatic apparatus for carbonizing sawdust and production of gas.....	353,966

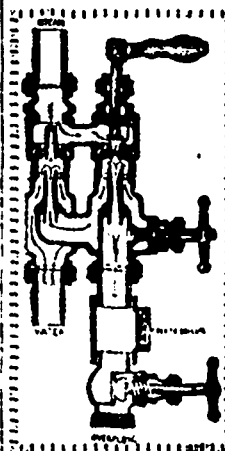
D. MORRICE, SONS & CO.,
 General Merchants, etc.,
MONTREAL & TORONTO.
HOCHELAGA COTTONS.
 Brown Cottons and Sheetings, Bleached Sheetings, Canton Flannels, Yarns, Bags, Ducks, etc.
ST. CROIX COTTON MILL.
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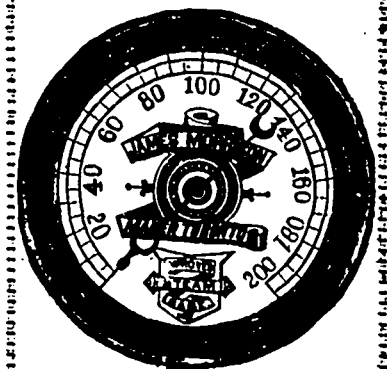
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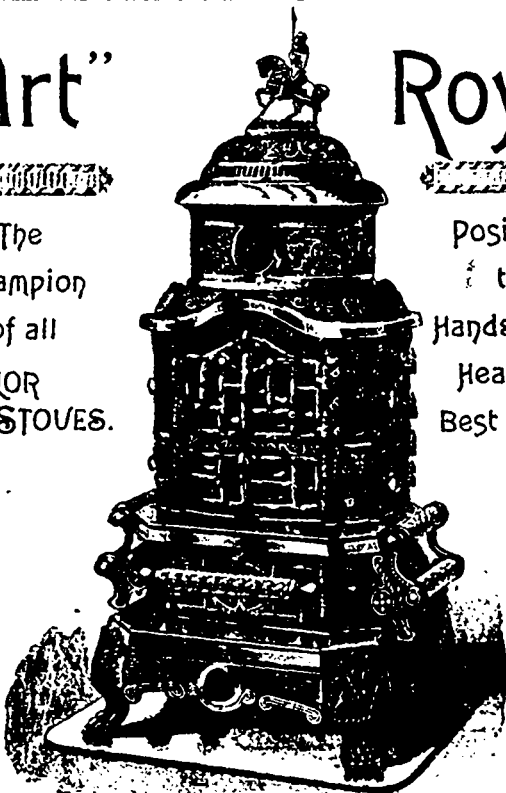
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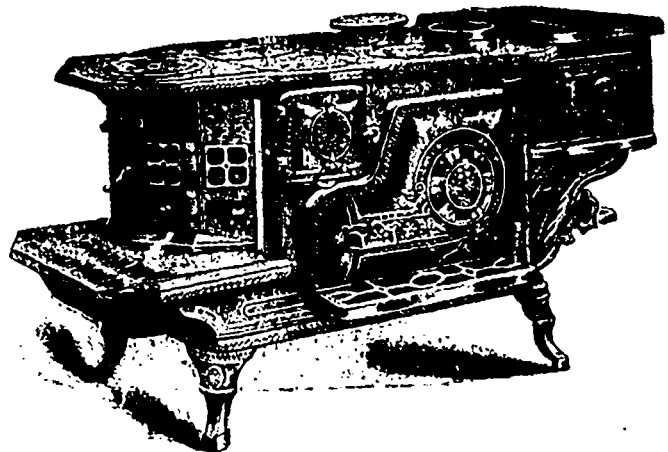
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Yours truly,

J. H. BROCK (of CARRUTHERS & BROCK).

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TWO SIZES WITH OVEN. No. 40, No. 50.

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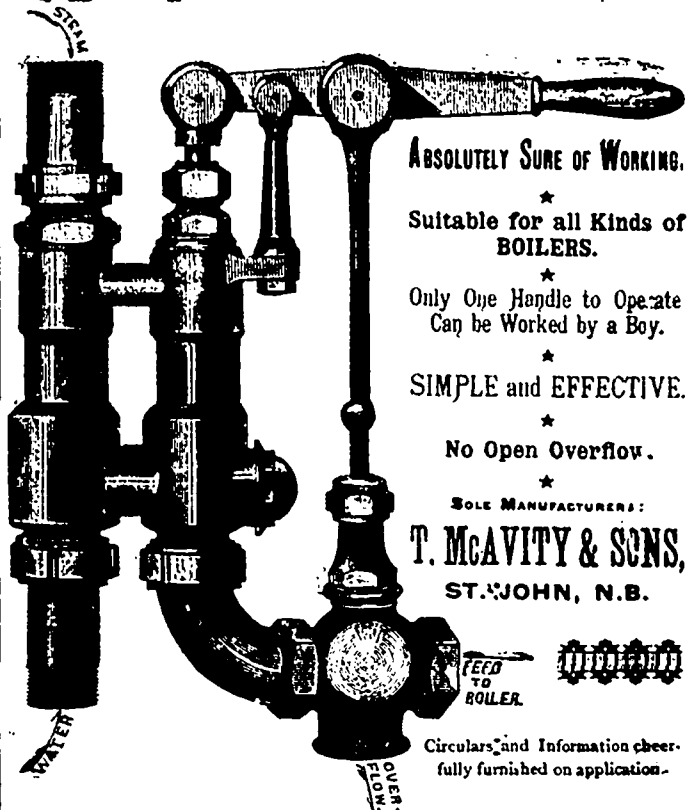
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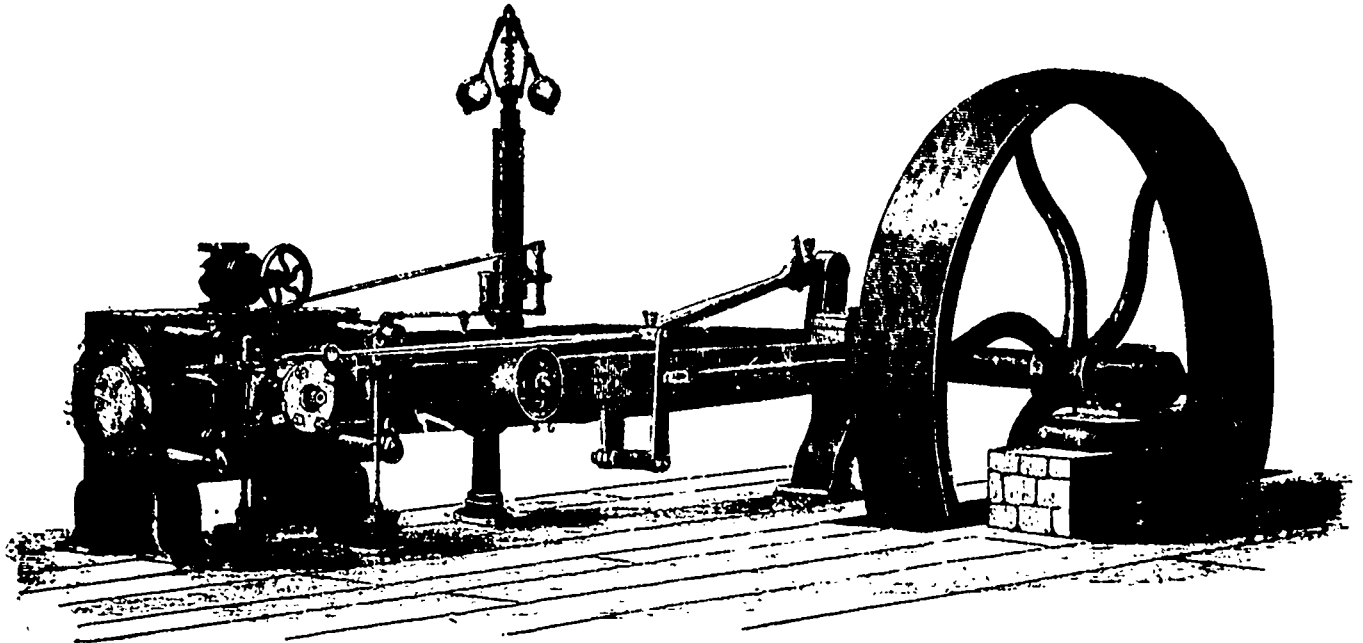
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3rd—No parts of the regulating medium enter the steam chest and thereby be out of sight of the engineer, and subject to the corrosive action of steam and the oil used for lubricating the valves and piston.

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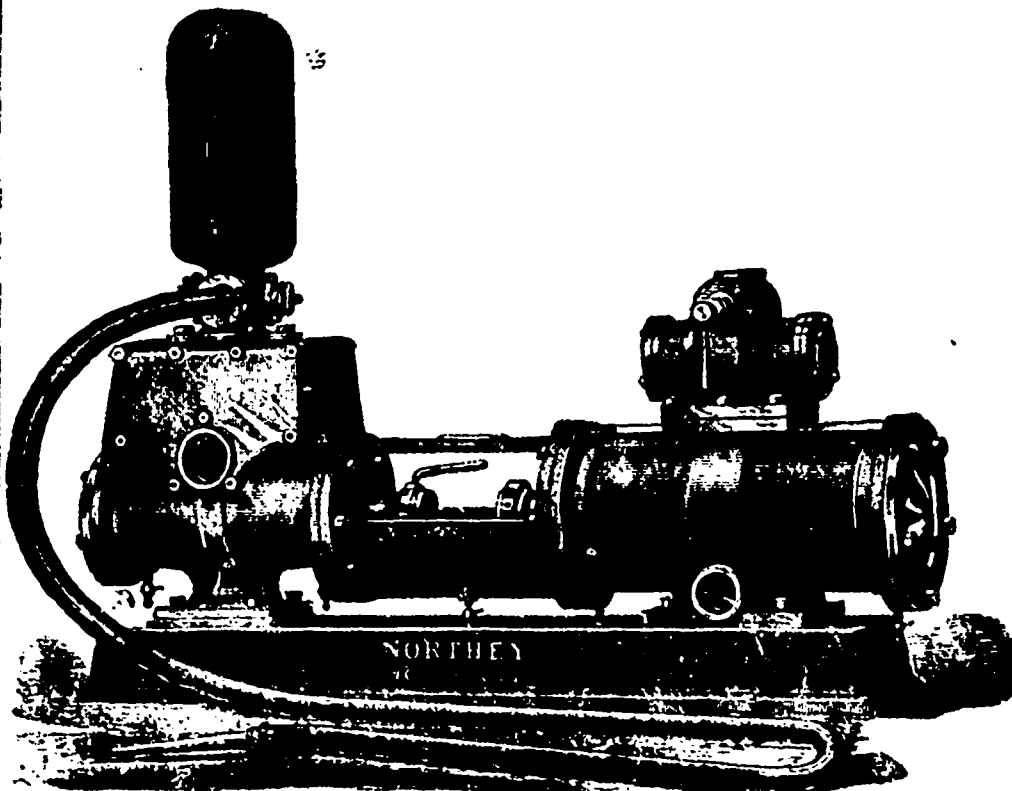
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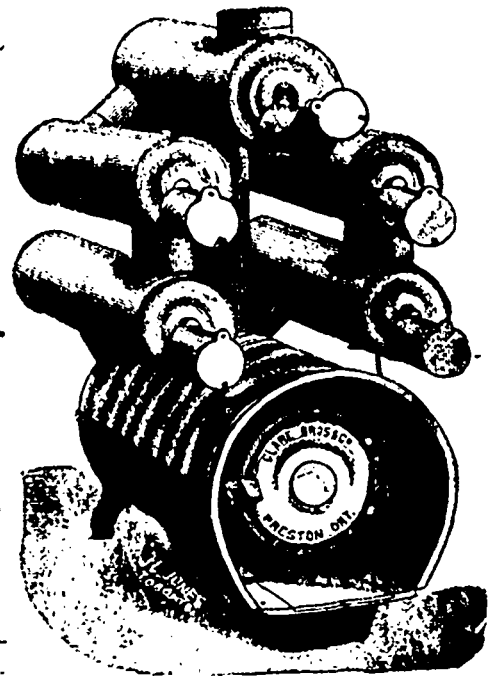
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This Furnace, made in six sizes, is unequalled for efficiency, economy, ease of management, durability. Is corrugated and made very heavy. The Drums are of heavy sheet steel (with cast iron ends and collar connections), well riveted together, so as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

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Dissolution of Co-Partnership

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That the partnership heretofore existing between the undersigned, under the name, style and firm of McKECHNIE & BERTRAM, Manufacturers of Machine Tools and Wood Working Machinery, at the Canada Tool Works, in the Town of Dundas, in the Dominion of Canada, was, on the 1st day of the present month, November, DISSOLVED by mutual agreement.

All debts due to the late firm are to be paid to Mr. John Bertram, who is to pay all debts and liabilities of the same, and to perform all contracts entered into, and fill all orders heretofore received by the said firm.

Dated at Dundas, Ont., this 21th day of November A.D., 1886.

R. McKECHNIE,
JOHN BERTRAM.

Witness:
H. H. Robertson, as to signature of R. McKechnie.

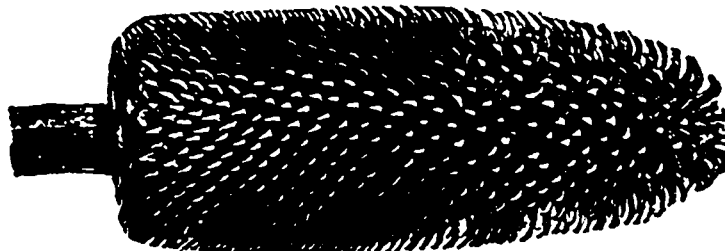
J. V. Teetzal, as to signature of John Bertram.

WITH REFERENCE TO THE ABOVE, we the undersigned, beg to notify the numerous patrons of the late firm of McKechnie & Bertram, and the public generally, that we have entered into co-partnership under the name and firm of John Bertram and Sons for the purpose of continuing the business of the late firm, at the premises heretofore occupied by them, at the town of Dundas, and are prepared to FILL ORDERS ON SHORTEST NOTICE for all kinds of Machine Tools and Wood Working Machinery.

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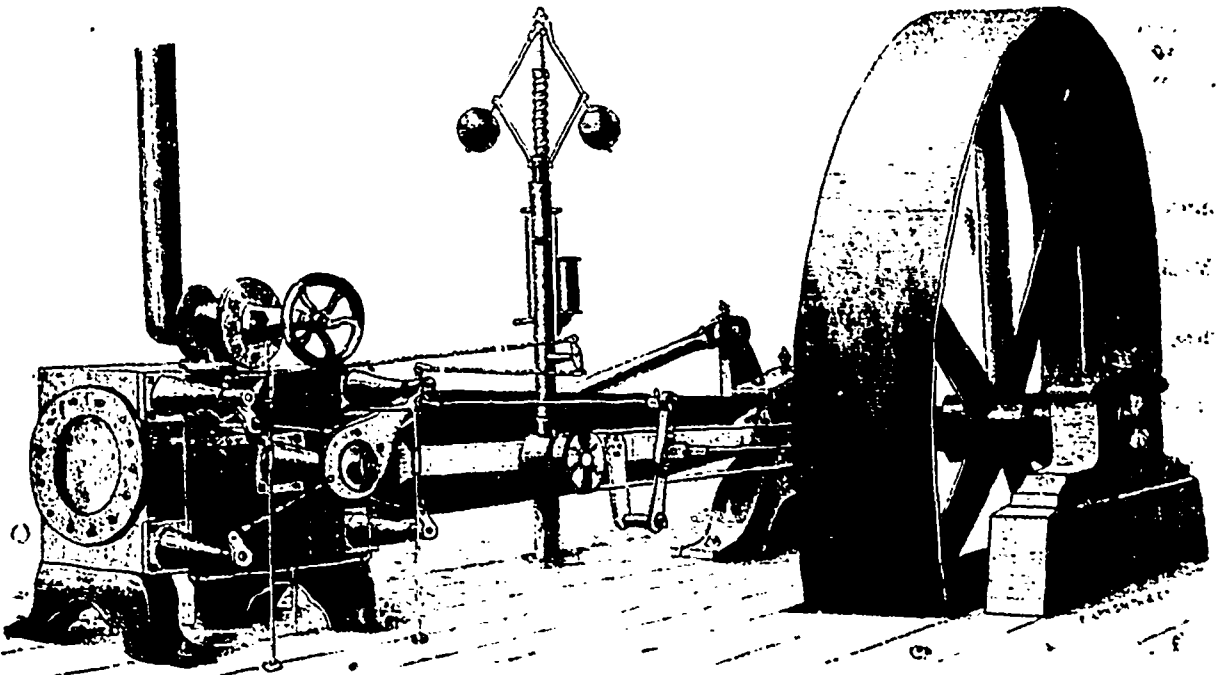
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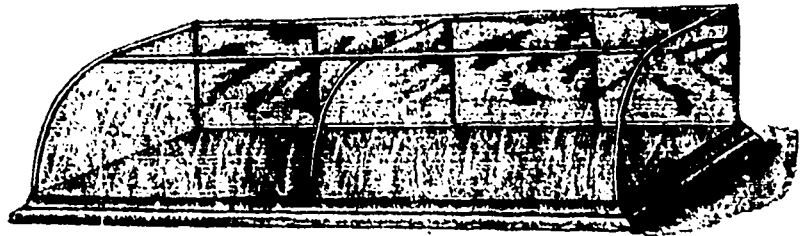
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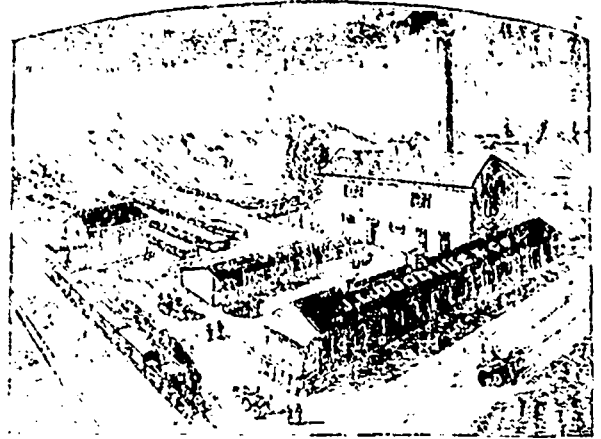
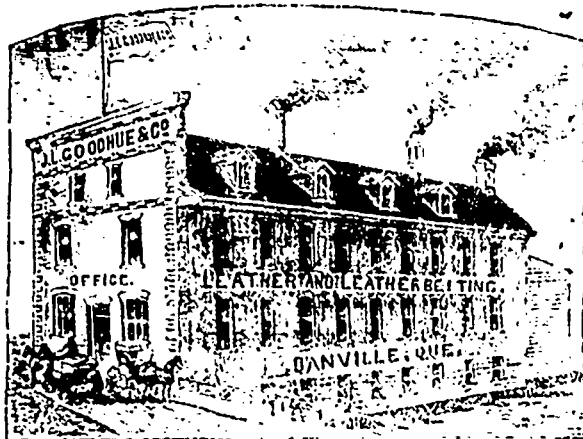
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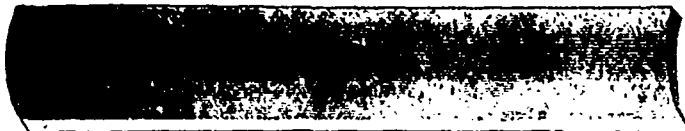


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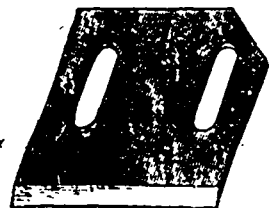


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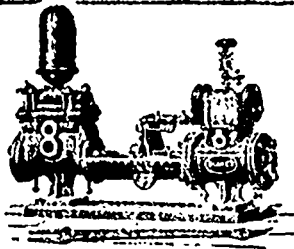
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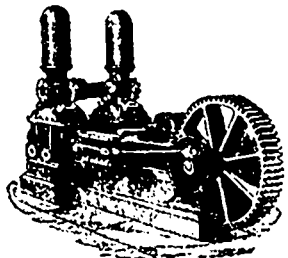
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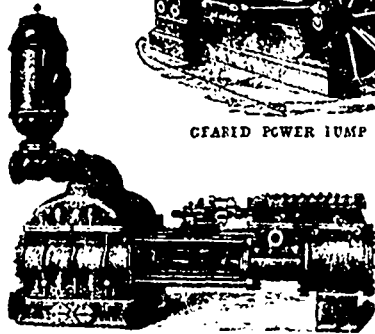
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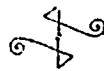


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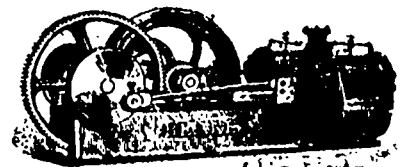
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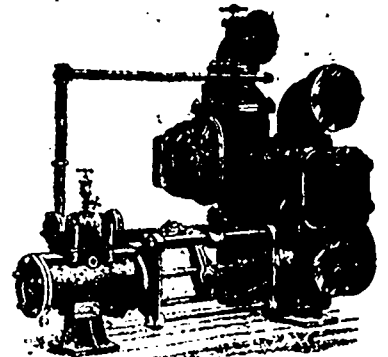
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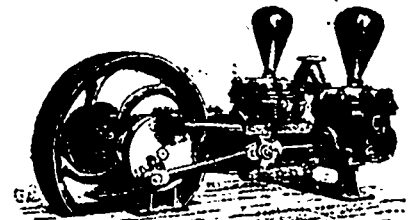
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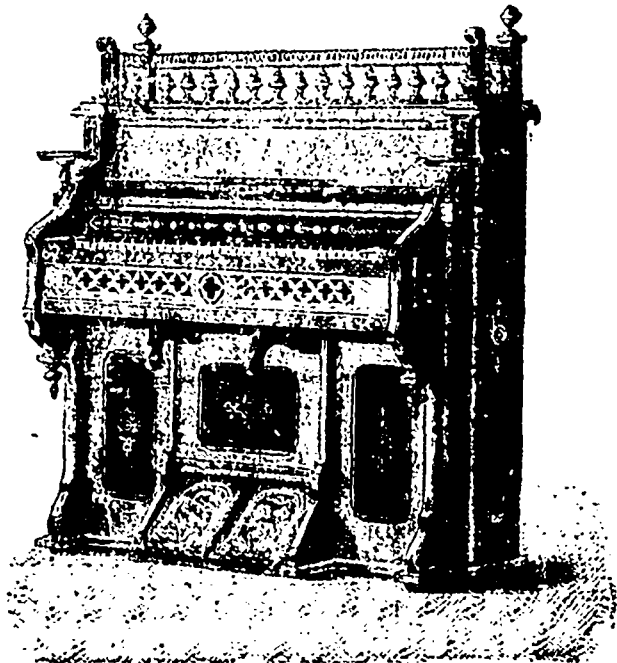


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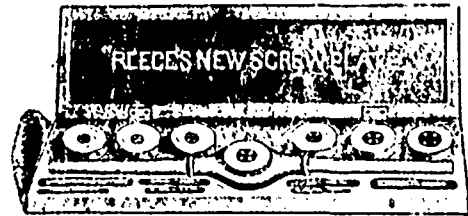
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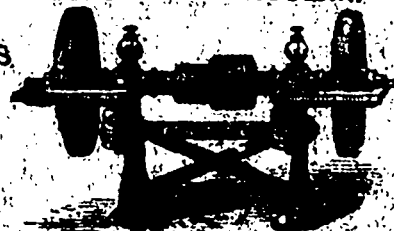


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