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# THE CANADIAN MANUFACTURER

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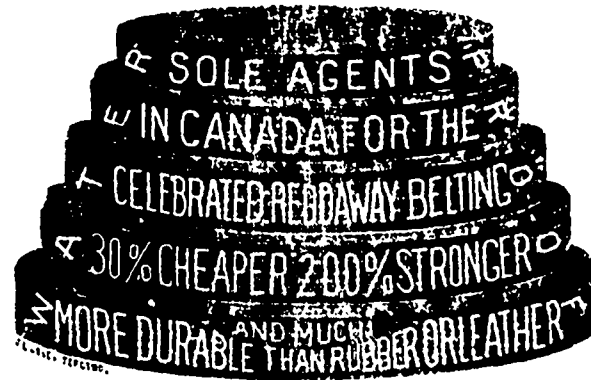
DEVOTED TO  
THE  
MANUFACTURING & MINING INDUSTRIES,  
OF THE  
DOMINION.

Vol. 5.

TORONTO, OCTOBER 8, 1886

No. 19.

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# THE CANADIAN MANUFACTURER

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MANUFACTURING & MINING INDUSTRIES,  
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→ DOMINION.

# INDUSTRIAL WORLD.

VOL. V.

TORONTO, ONT., OCTOBER 8, 1886.

No. 9.

## A PERMANENT EXHIBITION OF MANUFACTURES FOR TORONTO.

THE important position occupied by the city of Toronto as a great trade centre, and its almost marvellous increase of population, of manufacturing and mercantile establishments, of banks, corporate companies, literary and educational enterprises, etc., is now fully recognised by Canadians generally; and outside manufacturers who do more than a merely local business are one by one finding it necessary to make arrangements for some kind of business representation in the capital city of Ontario. Nor is the reason far to seek. The city is the centre of a vast railway system with ramifications in every direction, and, with present transportation facilities, merchants and buyers of every class can reach this city from the most distant parts of the Province in a day, while those residing within a radius of say a hundred miles, can leave their home in the early morning, devote the whole day to business, and return by an evening train.

But besides those who come to either buy or sell there are dozens of other errands which bring visitors to this city by train loads daily, and from every direction. If not specially on business bent, they come to attend a trade meeting, a political convention, a benevolent society demonstration, a synod, conference, or some kindred errand; but when once here are very likely to do business provided proper inducements are offered.

Having these facts in mind, and also remembering the heavy expense to which manufacturers must necessarily be subjected in carrying on a branch establishment in this city, for such indispensable items as salaries, rent, taxes, water rates, light, heat, &c., the idea of establishing a Permanent Exhibition in a central locality suggested itself to Mr. Frederic Nicholls, secretary of the Canadian Manufacturers' Association, and Mr. H. S. Howland, jr., of the well-known wholesale hardware firm of H. S. Howland, Sons, & Co. These gentlemen, after carefully feeling the way and gauging the prospects of success, have formed a partnership, and are now actively engaged in promoting this important enterprise, which will certainly become one of the leading attractions of Toronto. Their original intention was to lease a large warehouse and fit it up for the required purpose, but after a short preliminary canvas of manufacturers so much space was applied for, that it became necessary to provide a building specially designed to meet every requirement. All arrangements to this end are now completed, and by about the first of the New Year the many fine public and commercial structures of which Toronto now boasts will be supplemented

by the completion of the Permanent Exhibition of Manufactures.

The following brief description of the building has been furnished by the architects, Messrs. Gordon & Hellwell. The building 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 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 galleries of 14 ft., while the central portion, up to base of dome sky-light, 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 a 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 sky-light in centre. Access to the various floors will be by ample staircases and by a large elevator. The building will be heated by steam, and everything done to make it attractive and comfortable. The front elevation will be red pressed brick, with cut stone base, cornices, and trimmings; it will be divided into four bays or divisions, each containing large triplet windows, glazed with plate glass. The entrance door will be emphasized by pilasters and a stone entablature. The front will be ornamented with panels of terra cotta. The cornices at top will finish with pilasters and finials, while the central pediment will be surmounted by a flagstaff.

The promoters cite the following as some of the advantages likely to accrue to manufacturers exhibiting:—

1. The Exhibition will be open throughout the year, and will be free to all.

2. It will afford all the advantages of a Toronto branch establishment at a very moderate cost.

3. Exhibits will be seen by a large number 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 samples of ours at Permanent Exhibition of Manufactures." This will 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 endeavour will be made to establish a 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.

#### A TREMENDOUS POWER.

THE *Globe* has been inviting public attention here to the possibilities which the *London Spectator* sees in the new decision of China to adopt Western inventions for Chinese purposes. By building railways, arming her soldiers with the latest weapons, and drilling them on the European system, the Chinese Emperor may become a potentate to make the stoutest quake. The Marquis Tseng is about to go back to the Flowery Land to utilize his years of residence in Europe in carrying out the new policy of Peking. It is a policy of railways, Krupp cannon and breechloaders. The *Spectator* says:—

"At present, no doubt, their ruling idea is a purely defensive one; but it might be changed by circumstances, or the appearance of an Emperor with the old Tartar instinct of conquest, which once carried the race from Samarcand to Peking on the one side, and the Crimea on the other. China is passive now, but she might break out some day, and her outbreak might be a calamity worse for the human race than the barbarian onslaught on Rome. A power which can expend ten thousand men a week without feeling the loss, which has an aptitude to use mechanical appliances, and which is indifferent if it depopulates as it rolls on, is a terrible power to contemplate, more especially as once in motion it could only be checked by a slaughter which would demoralize mankind."

This, says the *Globe*, is a vision of civilization forcibly overwhelmed by barbarism; a vision very startling to the confidence of Europe and America, because it is scarcely more extravagant than the familiar dream that the Caucasian race will ultimately spread over and control the whole world. China has 400,000,000 people all speaking the same language, and therefore forming a solid nation. She might put into the field more men than the combined States of Europe, whose population hers outnumbers by fully 60,000,000. Her statesmen are becoming aware that congestion of population increases their difficulties, and they are not without longing to take in more land. "They are very ruthless," says the *Spectator*, "and think nothing of extirpation when extirpation is apparently the easiest course." The Chinese have a contempt for death that would make them very formidable antagonists if they were well disciplined and armed; and they prove themselves, in every quarter of the world, to possess an intelligence and business faculty that would soon enable them to utilize European inventions at the dictation of Peking.

In the last few lines the *Globe* unconsciously touches upon the nearest danger which the contemplated new development of China threatens to Europe, Australasia, and North America. It is not a war of sword and gun so much as *commercial war*

carried on against them by China that the continents just mentioned have to fear. Not Krupp cannon brought from Germany, but cotton and woollen machinery brought from England and the United States, and run by Chinese operatives, is what Lancashire and Massachusetts have to fear. The contingency of China as a warlike nation, drawing from a population of three or four hundred millions an army greater than all the armies of Europe combined, and supplied with the best improved rifles and artillery that Europe and America can produce—is no mere bugbear, but a serious possibility, as the *London Spectator* warns us. That danger may confront the civilized world some day, but the more immediate danger lies in the running of the best English and American machinery by Chinese cheap labor.

Let us imagine what might very easily be. We know that though the Chinese lack the faculty of inventing machinery, they are apt imitators of manual operations invented by others. The Hindoos have learned to run English cotton machinery, and we fancy the Chinese would rather beat them at this were the race between the two people begun in earnest. It is easy for free traders to say that Lancashire will never require protection against Chinese-made cotton goods, because the Chinese have not the skill necessary to compete. But they had better consider seriously the possibilities of cheap Chinese labor and English machinery combined.

It is neither of these singly, but the combination of the two, that makes the danger. In making gunpowder, the saltpetre is what gives it its explosive force. But, lacking the small proportion of sulphur and charcoal respectively which have to be added, there would be no explosion at all—at all events not in the sure and easy way in which it is now produced. The combination is the thing to look at, and study, and consider

#### BUSINESS AND WAR.

TIME and again have we heard rumours of war, when no war came to confirm the rumours. But just now the premonitions of a great war in Europe near at hand have a coherence and a *vraisemblance* seldom to be observed unless the thing itself is very nigh, even at the doors. Some of our most cautious and clear-headed critics of the situation have made up their minds that, if Russia and Austria manage to hold off from fighting this year, they will be at it next year without doubt. Already the great probability of war at an early day has become a factor powerfully influencing business.

So far such influence of the supposed probabilities keeps itself nearly altogether in high financial quarters, among money magnates who have special opportunities of gaining early and important information as to the positions and intentions of Governments. But this kind of information, for a time so select and so special in its scanty distribution, after a time percolates down and becomes more diffused. It does appear now as if both the information or belief as to impending war, and the disposition to act upon it, were already pretty well understood and pretty strongly felt by business men, in America as well as in Europe. And this must soon begin to tell conspicuously on business, unless something turn ere long to interpose, and to stay the catastrophe.

When a great war comes it does not affect all kinds of business alike. Nor do we offer the CANADIAN MANUFACTURER as

a *code mecum* or infallible hand-book, wherein any business man, in whatever line engaged, may find something specific for his own particular guidance. At this time, at all events, we go no further than to declare our conviction, first—that prevailing apprehensions of a great European war near at hand are well founded, and, next—that the effect on *business* must be something important, even at this distance. It is for our friends, each one for himself, to study the probabilities as they are likely to affect his own line of business or manufacture.

### THE RISING WOOL MARKET IN ENGLAND.

REFERRING to this season's wool sales in London, the *Times* of a recent date says:—

“Not for many years has the bidding in the Coleman street exchange been anything like so keen. The rooms were crowded with English and foreign buyers. Without going into details of the prices, it can be stated the sales of August show a rise of twenty per cent on June prices, and June sales closed with a rise of fifty per cent. on prices realized in February, when the wool market commenced to take an upward tendency, and there are no symptoms whatever toward weakness. The rise is in no way due to speculation, but is a healthy and permanent activity, giving every reason for the assurance of a general revival of trade.” The above extract is taken from a source, the honesty of which cannot be called in question. It is no doubt a very satisfactory state of affairs, and should be very encouraging to even housekeepers to know that good times are coming, even though they may have to pay \$1.70 for woollen material that to day may be bought for \$1 Society in general can stand a little share of better times, inasmuch as a downward tendency has had sway for some years past.”

### TRADE NOTES.

(*Boston Manufacturers' Gazette.*)

OLD rails continue to be the strongest article on the whole list of iron products.

THE announcement that Russian petroleum is successfully competing with the American article, and is sold for a lower price, will no doubt hasten our producers to devising some means to keep the American product in competition with the foreign article on its own ground.

A REVIEW of our exchanges shows an increase of business everywhere since the adjournment of Congress. It has increased fully twenty-five per cent. throughout the country. Another sure indication of growing business is the increased sales of postage stamps. The sales of postage stamps, envelopes, postal cards, etc., for August are reported 12.06 per cent., or \$142,686, greater than in the same month of 1885. Among the cities showing increases are: New York, 8.95 per cent, Chicago, 12.39, Philadelphia 14.3 and Boston 8.62.

It is believed that a bill will be introduced immediately on the assembling of Congress, providing for the issue of \$500,000,000, sixty-year, three per cent. bonds, to be used exclusively as a basis for bank circulation. Banks holding four per cent. bonds will be asked to surrender the same and substitute the new bonds, on which it is proposed to issue circulation up to the par value instead of ninety per cent., as

is now done on all classes of bonds. The amount of three per cent. bonds uncalled now held by the banks to secure circulation and public deposits aggregates \$67,500,000. The indications are that all of these will have been called in before the close of the present fiscal year.

In connection with the absorption of railway mortgages, it may be remarked that the redemption of the United States three per cents. by the Treasury is just now an important factor. Banks which have the 3s deposited with the bank department in Washington may either replace them with 4s or 4½s, or give up their circulation. Hence, so far as the 3s held by the banks are concerned, their redemption has no effect on railroad bonds; but it is to be remembered that considerable amounts of the 3s are held by estates and by individual investors, who lose no time in securing other modes of investment. Of late a good deal of money formerly invested in the 3s has found its way into good railroad mortgages, and the operation has perceptibly reduced the floating supply of the latter. With the prospects favorable for easier money later in the season, and with railroad earnings larger than for some time past, conservative dealers look for a still further appreciation in mortgage and income bonds.

### AN ENGLISH EXPERT ON CANADIAN WOOLLEN GOODS.

(*From the Canadian Gazette, London, England, Sept. 23rd, 1886.*)

PROFESSOR JOHN BEAUMONT of the Yorkshire College, Leeds, contributes to the current issue of the *Textile Manufacturer* an article on “The Woollen Manufactures of Canada in the Colonial and Indian Exhibition, London, 1886.” Professor Beaumont's position in the centre of one of the great woollen manufacturing districts of England certainly entitles him to speak with authority on this subject, and Canadian manufacturers will do well in their own interests to note carefully the criticisms he makes upon their productions. After pointing out the beneficial influence which must result to manufacturers themselves and Canada generally by the use of home-grown wool, the Professor goes on to say:—

“The woollen manufacturers in the Dominion have acted wisely in not attempting too much; generally speaking there is no display of fine, high-priced goods, but what is shown is a fabric made of pure, unadulterated wool—whether home or Australian stock—or a substantial middle and lower class article suitable for every day wear. The goods as a whole are creditably made, that is so far as one can judge from short lengths. They appear to be tolerably free from defects arising from bad or indifferent scribbling and spinning. But in making this remark we do not lose sight of the fact that the wool grown in Canada is almost universally of an open, loose character, possessing less felting property than fine Australian wools, and in consequence requiring less skill on the part of a mill overlooker: but even allowing these facts to have their due weight it is clear, from some of the mixture goods seen in such cases as those of the Paton Manufacturing Company, Sherbrooke, Quebec, and the Oxford Manufacturing Company, that there are foremen in Canada who, both in theory and practice, appear to understand how to scribble wool so as to produce an even regular mixture, and a fairly true thread.”

In summing up his remarks on the exhibits Professor Beaumont points out three particulars in which some of the Canadian productions seem to him defective:—First, in color; second, in mixing or blending of colours; and third, in originality and design. It must, of course, be remembered that the Professor looks at these goods with an eye experienced in, and perhaps unconsciously favorable to English productions. At the same time it must be said that some of his conclusions coincide with the opinions of other well qualified judges in regard to whom no such feelings could be urged.

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 AND INDUSTRIAL WORLD.

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

## Editorial Notes.

A GOOD deal of our space is this time devoted to Exhibitions—Canada's fine display at London, and the establishment of a permanent Industrial Exhibition of Canadian manufactures in Toronto—the latter soon to be a fact accomplished.

THE largest single cargo of grain that ever left Montreal was last week put on board the ss. "Brentford" by Messrs. George McBean & Co., comprising 104,000 bushels of wheat and peas. This transient steamer also takes out 10,000 feet of lumber for Messrs. Carbray & Routh, who are her agents at the commercial capital. She is a splendid new steel ship, fitted with the latest improvements for carrying dead freight.

WHAT we read (see other columns) of the attention bestowed by English experts on Canadian textile exhibits at the "Colinderies" is not wholly accounted for merely ordinary interest in what Canada is doing in this line. It strikes us that the gentlemen referred to have seen so much more from Canada than they expected to see that they want to get at the bottom facts with regard to how iron machinery is really working in this supposed wooden country.

THE event of the day in mining business is the published description of a vast deposit of copper ore, near to Sudbury, on the main line of the Canadian Pacific Railway. Under the head of "Mining" we copy an account of the new mines, as described by Mr. Blue, secretary of the Ontario Bureau of Industries, and printed in the *Globe*. It is not to the credit of our own country that valuable Canadian mines, such as these appear to be, have to depend upon American enterprise for their development.

THERE are, says the *Boston Manufacturers' Gazette*, four lines of treatment that are prominent in the discussions of the railroad question. One class, observes the *Philadelphia Record*, led by the railroad presidents, believes that great competitive forces are at work to bring about a solution of the problem, and that legislation will bring no results. Another class believes that the Government should own the railroads. Between these two extremes there are two classes, one that finds expression in the Reagan bill, which applies a mild but good corrective. It formulates the principle that a railroad company must not charge more for a short haul than for a longer haul, which includes the shorter and is in the same direction. It prohibits combinations that subject the public to the power of confederates, and it insists upon publicity of rates. The other class tends to paternalism by favoring the establishment of bureau government through a commission to enforce the law of the common carrier. It aims to strike a compromise between the positions taken by the railroad presidents and Mr. Reagan. It finds expression in the Cullom bill.

THE following, which is from an English paper (*Wool and Textile Fabrics*), may, we fancy be classed among things not generally known, in Canada, at all events: "In New South Wales the grape is as common as is the apple or pear in Kent

or Surrey, the soil and climate enabling the choicest kinds to be grown to perfection without difficulty; hence the cultivation of the grape is fast becoming a leading industry in the colony. There are districts of sufficient area, and combining the necessary conditions of soil, climate, and aspect to produce wine enough to supply the whole world. The vine was introduced by Mr. John Macarthur about 1820, and in 1831 Mr. Busby made a voyage to Europe, and brought out a valuable collection of plants from France and from the Rhine. This was really the parent stock of the vine in New South Wales. The yield of wine has averaged from 100 gallons to 700 gallons per acre, though certain kinds of grapes have produced over 1,000 gallons per acre. In 1885 the area of land devoted to grape cultivation was 5,247 acres, yielding 1,695 tons of grapes for table use, 555,470 gallons of wine, in addition to 3,893 gallons of brandy.

The *Canadian Gazette*, London, England, Sept. 23rd, 1886, says:—It will be remembered that when Lord Lansdowne recently visited the Machinery Court at the Exhibition, he expressed his appreciation of the excellence of many of the Canadian machines, and his intention to direct his bailiff to make an inspection of them with a view to purchases. This has since been done, and one of the self-binders of the Massey Manufacturing Co. has been bought for use on the Marquis's estates in this country. It may not, perhaps, be out of place to mention here that one of these self-binders has lately undergone trial at Edinburgh, Campbelltown, and elsewhere in Scotland. A local journal, speaking of one of these trials, both of which were successful, says:—"Altogether, although the test applied was of the severest character, the results of the trial were most satisfactory, and the agriculturists present expressed themselves highly gratified with the ease and completeness with which the machine performed its work." Messrs. John Elliot & Sons, of London, Ontario, have also recently sold two self-binders and a mower to Mr. Webb, of Newstead Abbey.

#### OUR CARD BASKET.

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

Sir Chas. Tupper, Fredericton, N.B.; H. A. Massey, of Messrs. the Massey Manufacturing Co., Toronto; W. H. Storey, of Messrs. W. H. Storey & Son, glove manufacturers, Acton; ---Firstbrook, of Messrs. Firstbrook Bros., box and case manufacturers, Toronto; P. J. McNally, of the Toronto Lead and Color Company, Toronto; Geo. Booth, of Messrs. Geo. Booth & Son, copper goods manufacturers, Toronto; H. S. Howland, jr., of Messrs. H. S. Howland & Sons, hardware merchants, Toronto; J. E. Keenleyside, of Messrs. the Dominion Baby Carriage Co., London, Ont.; R. McLean, secretary of the Canadian Board of Fire Underwriters, Toronto; Alexander Woods, Government Agent for Canada to Australia; John Laidlaw, Toronto; George McAgy, representing Messrs. Pillow, Hersey, & Co., hardware merchants, Montreal; James Hardman, representing Messrs. Robin & Sadler, leather belting manufacturers, Montreal.

#### BOOK NOTICES.

TORONTO "CALLED BACK" FROM 1886 TO 1850: Its wonderful Growth and Progress, especially as an Importing Centre, with the development of its Manufacturing Industries, and Reminiscences extending over the Four Decennial Periods from 1846 to 1886, including the introduction of the Bonding System through the United States, &c. By CONYNGHAM CRAWFORD TAYLOR, Her Majesty's Customs Toronto. Printed for the Author by William Briggs, 78 and 80 King Street East, 1886. Price \$1.50.

As the pioneers of Toronto's early days keep slipping away from amongst us, the more valuable do the records of the former time become, especially those contributed from personal recollection. In this handsome book of over 350 pages the author really gives us "Toronto Called Back" for the last forty years. He revives many memories which are of interest not merely to "old stagers" who remember the events narrated, but also to the younger generation, many of whom will read the book or most of its chapters as if they were news. It is embellished with many and fine engravings, with a new map of Toronto.

DIRECTORY TO THE IRON AND STEEL WORKS OF THE UNITED STATES.—Embracing the Blast Furnaces, Rolling Mills, Steel Works, Forges and Bloomeries in every State and Territory; also Lists of Wire Mills, Wire Nail Works, Car Axle Works, Car Wheel Works, Car Builders, Locomotive Works, Wrought Iron Pipe Works, and Cast Iron Pipe Works. Prepared and published by the American Iron and Steel Association. Corrected to July 15, 1886. Philadelphia: Published at No. 261 South Fourth Street.

This is a volume of some 200 odd pages, clearly printed and strongly bound, as such a book should be. As to the main point of all, its accuracy we fancy that the Association, of which Mr. James M. Swank is General Manager, will be good security on that score.

#### LEATHER BELTING, ETC.

MESSRS. ROBIN & SADLER, of Montreal, Que., and 129 Bay Street, Toronto, exhibited at Industrial Exhibition this year a very fine assortment of Leather Belting. On ground floor of main building they showed two large belts, one 111 feet in length and 38 inches in width, made expressly for the Royal Electric Light Co., of Montreal, the widest ever made in Canada, and another for A. W. Ogilvie's new roller flour mill—the "Royal," now building at Montreal, which is 235 feet long and 36 inches in width, the longest ever made in Canada. These belts are made of one solid piece in width, and are made from best oak-tanned leather. The exhibit was a notable one of its kind, and the judges evidently thought so, as they awarded them silver and bronze medals. There is a great demand for these goods throughout the country, and the firm have in its possession numerous testimonials which speak in the highest terms of their quality and durability.

In China old boiler tubes are turned into shovels. A Shanghai paper states that a novel branch of industry has recently sprung up at Chefoo. It is the manufacture of iron shovels from old boiler tubes. The old tubes are cut into short cylinders, just the length of the shovel, and then ripped open, flattened out and hammered into shape. Piles of these old boiler tubes may be seen everywhere in the back courts of the native Hongks. The prices vary from twenty-five to forty cents apiece. We think an old boiler tube would make a good Chinese shovel.



## Business Notes.

L. N. BERNATCHEZ, general dealer, St. Thomas, Que., has failed owing \$3,000. Assets nominally \$3,200.

THE sheriff has seized upon the goods of R. C. Walker of Elora. The preferred claims will absorb the estate.

THE liabilities of W. W. Ramsay, trader at Lower Steweecko, N.S., amount to \$3,000. The assets will not pay the preferred claims.

TWENTY-FIVE cents on the dollar is offered by M. Stern, fancy goods dealer of this city. The liabilities are \$2,800 and assets \$846.

THROUGH ill health, Forbes McHardy, wholesale grocer of this city, has decided to retire from business and the stock is advertised for sale.

J. L. BARBER & Co., furniture dealers at Waterford, not being able to effect a settlement with creditors the stock is to be sold by tender.

P. A. LABRIE, a Montreal dealer in gents' furnishings has abandoned his estate. The liabilities are \$3,000, with assets nominally the same.

THE liabilities of Joseph Guilmette, shoe dealer, Quebec, amount to \$2,600, with nominal assets of \$2,650. The stock has been sold and realized \$1,200.

THORNE & TURNBULL, general dealers, Digby, N.S., have assigned with liabilities of \$3,500. The assets are not likely to yield more than 10c. on the dollar.

THE International Tent and Awning Co., of Ottawa, are offering creditors 45c on the dollar cash or 50c. on time. The creditors have nearly all agreed to accept.

IN New Brunswick F. P. Bourgeois, general dealer, of St. Paul, has assigned, and Michael Corkery, leather dealer at St. John, has also handed his estate to creditors.

THE stock of J. W. Lamontague & Co., of Montreal, has been sold out by the assignee. The creditors are principally in Montreal, the liabilities amounting to \$7,569.

WARD & McMURCHY, manufacturers of woollens, of Arkell and Guelph, have compromised with creditors at 60c. on the dollar. The firm has dissolved partnership and the machinery is sold.

HARRY WINFIELD, the absconding fruit dealer, is anxious to return to the city and offers his creditors 50c. on the dollar. He owes about \$7,000 to city firms.

W. H. ADAMS, agricultural implement dealer at Arnprior, has assigned. He is involved through a millinery business which has been carried on by his wife.

A MEETING of creditors of A. J. Pece, picture dealer, Montreal, was held on the 27th inst., and an offer of compromise made. This is not his first failure. The business is one of the largest in his line in the city.

A. GINGRAS & Co., shirt manufacturers of Quebec, have failed with liabilities of about \$8,000, with nominal assets of about \$750. The wife of Gingras has a claim of \$4,000, and creditors will not receive anything from the estate.

JOSEPH GONCEZ, a wholesale fruit dealer in this city has surprised his creditors with a statement showing liabilities of \$7,000 and assets \$3,000. His difficulties have been hastened by some old claims which have been standing against him.

JULIUS URWITZ, the missing jeweller, has not been heard from. The sheriff has possession of the assets, which are small, and the liabilities will likely reach \$15,000. The failure is one of the worst that has taken place here for several years.

C. K. SMITH, a Waterford, tobacconist, has made way for the bailiff. Steele & McLogan, carriage makers at Stratford, are to be closed out by the assignee. W. A. McClymont in the same line of business at Wingham has assigned owing \$4,000.

JOHN BACON, the senior partner in the Cobban Manufacturing Company of this city, has retired from the firm. The business will be continued by Frank J. Phillips under the old style. The management for several years has been in the hands of Mr. Phillips.

WILEY A. T. CONSTANTINE, of Montreal, remained steady. His dry goods business prospered; but of late he returned to his old habits and creditors have closed him out. His liabilities will not exceed \$11,000, and his assets are \$14,500. The estate will pay 75c. on the dollar.

EARLY in 1886 T. Kelly, hardware dealer at Ottawa, was granted an extension of time from creditors. He has been unable to meet these notes and he has settled with creditors at 60c. on the dollar secured, extending over eight months. The liabilities are stated to be \$9,000 and assets \$6,400.

WHEN George H. Moody, shoe dealer of this city, gave a bill of sale on his household furniture creditors became uneasy, and Cooper & Smith, his principal creditors, insisted on an assignment. The liabilities amount to \$5,500 and assets nominally \$4,000, of which about \$1,000 is in real estate.

A FEW months ago Joseph Foster failed in the shoe manufacturing in Berlin. The stock was bought in by his wife, who has now given possession to the sheriff. The liabilities amount to \$3,000. Foster, who has been managing the business, could not possibly succeed without giving it more attention.

THOS. WINFIELD, jr., many years engaged in the wholesale fruit trade in this city, was one of the victims in the L. Isaacs & Co. frauds. He sustained a loss of \$2,500 through this connection, and he has been offering creditors 25c. on the dollar. Several writs have been issued against him, but there will be difficulty in finding assets of any moment. The total liabilities will likely amount to \$7,000.

GEORGE S. BIRREL holds an assignment from William Elliot, of Wingham. Elliot has been in general store business for many years, and was well regarded. Through giving credit too freely he has been hard up, and creditors on investigation found that his affairs were in a bad state and an assignment was urged. The liabilities amount to \$25,000 with nominal assets of \$18,000.

BULL & Co., of Thorold, held a meeting of creditors recently, and Wm. Bull presented a statement with a liabilities of \$5,121, and assets \$6,150. He offered to compromise at 85c. on the dollar unsecured, which offer was rejected. A settlement at 75c. on the dollar, secured, will likely be carried out. Bull failed in 1882 owing \$100,000, and again in December, 1883, with heavy liabilities.

THE old established grocery house of James Burns, of this city, has suspended payment, and creditors have been called together. Some years ago Mr. Burns was urged to place his affairs before his creditors, but he resolved to pay in full if possible, and for some time past it has been a constant struggle. His liabilities are light, and it is likely his creditors will accept what ever compromise he suggests and his difficulties have been well-known to those interested.

# F. E. DIXON & Co.

MANUFACTURERS OF

**Patent Lap-Joint, Star Rivet**

## LEATHER BELTING

SOLE AGENTS FOR

### PHOENIX BELT OIL

*The Only Perfect Belt Dressing.*



**I**T will make the leather more durable.  
 It will effectually prevent the slipping of the belt.  
 It does not affect the cement which holds the laps together.  
 It does not increase the stretching of the belt and thus render it narrower.  
 It makes the leather perfectly water-proof. Belts dressed with this oil can be and are run in places where the temperature reaches 160 to 175 degrees, while in the other extreme, we have endorsements from owners who run their belts in ice houses. Indoors or out, in any kind of weather, wet or dry, hot or cold, belts thoroughly dressed with Phoenix Oil will always run satisfactorily.

SEND FOR PRICE LIST AND CIRCULARS  
And our Latest Pamphlet on Belting.

# F. E. DIXON & CO.

70 KING STREET EAST,  
TORONTO.

FOR CATALOGUE AND PRICES

# The DODGE "INDEPENDENCE" WOOD SPLIT PULLEYS



**WITH PATENT BUSHING SYSTEM**  
*Best Belt Surface, Lightest, Strongest, Best Balanced, and Most Convenient Pulley in the World.*

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

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

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

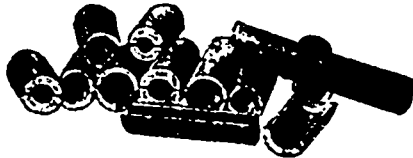
**EVERY PULLEY WARRANTED.**



*We will furnish a Pulley for any size for 30 days free of charge, if it does not meet the warranty. Prices as low as any other good Pulley. Send for Catalogue, Price List & Guarantee.*

## 70 PER CENT. LIGHTER THAN CAST IRON

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



### READ THE FOLLOWING.

**NORTHWESTERN MANUFACTURING & CAR COMPANY.**  
SHATTO & DENNIS, MINNEAPOLIS, MINN. STILLWATER, MINN., August 15, 1884.  
*Dear Sir:* 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. STINSON, General Manager.

**OFFICE OF NEWTON WAGON CO.,**  
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: Pillsbury & Hulbert Elevator Co., Minneapolis; F. M. Pratt & Co., Elevators; Northern Pacific Elevator Co.; The Pacific Elevator Co., Minneapolis; Harvester Works; Minneapolis School Furniture Co.; M. & St. L. R. P. Co.; Willford & Northway; Washburn, Crosby & Co.; St. Paul Electric Light Co.; St. Paul Roller Mill Co.; Minneapolis Brick Co.; N. W. Mfg. & Car Co., Stillwater, Minn., and very many others.  
SHATTO & DENNIS, MINNEAPOLIS, MINN.

**W. H. DODGE, PRES.**  
DODGE MFG. CO., MISHAWAKA, IND.  
*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,  
Chief Consulting Engineer.

### Waste of Power.

According to the best scientific authority it costs one horse power to keep in motion one ton of metal or weight; thus for every unnecessary 2,000 pounds weight on your line shaft, cost you one horse power. To maintain a horse power costs from \$2 to \$125 per year. Any manufacturer who will take the pains to investigate the unnecessary weight by Heavy Iron Pulleys, *raw tight belts, etc.*, will be surprised to find the enormous waste of power consumed in this manner. **60,000 Dodge Patent Wood Split Pulleys** now in use. Our capacity being now equal to 100 Pulleys per day, we shall hereafter keep in stock for immediate shipment all sizes.

*Send for Illustrated Circular and Reference List.*

## THE DODGE WOOD SPLIT PULLEY CO.,

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

**TAKE NOTICE:--Our List of Prices for the DODGE PATENT WOOD SPLIT PULLEYS is for ALL SPLIT-PULLEYS.**

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

Two furnaces... agreed... mated... the wo... ground... price... believe... employ... tors un... should... out a m...

The addition... have for... medium... steel, w...

Norw... furnaces... old furn... Vir, ma... charcoal

The in... hinds of... furnaces... capacity... of 2,600... decrease... the avera... to more... and treati... of the cha... maker-ar

The pe... being un... number of... 5,000 tons... posed of... very favor... The larger... part, and... dress are... business... it can not... and there... that of pro

It is not... that the m... increasing... the orders... business in... been Man... England ar... spring good... The output... daily capaci... over the co... We establi... cry; also in... hand labor... build style... or delicate... of your pr... styles of... busin...

# Iron and Machinery.

## HOW A STRIKE WAS AVERTED

Two months ago the workmen at the Lucy and Isabella furnaces demanded restoration of wages paid in 1884, an increase of 7½ per cent. above the present wages. Both sides agreed to arbitration, and ex-President Jarrett, of the Amalgamated Association, was appointed to look after the interests of the workmen. The employers had refused the increase on the ground that the price of iron had declined since 1884 and the price of ore advanced. The workmen were not inclined to believe this, but a committee was permitted to examine the employers' books and thus convince themselves. The arbitrators unanimously decided the demand for increase of wages should not be granted and the workmen have acquiesced without a murmur.—*St. Louis Age of Steel.*

THE manufacture of malleable nickel has been realized by the addition of 0.3 per cent. of phosphorous or manganese, and others have found that by adding one-tenth to one-third per cent. of magnesium it is practicable to weld the nickel thus obtained to iron and steel, roll it out in sheets and shape it into tubes, pipes, etc.

NOTWITHSTANDING the tendency in late years to build large furnaces, each of which will do the work of a dozen or a score of the old furnaces, there are still to be found running in Pennsylvania, Virginia and some other States small and old-fashioned cold-blast charcoal furnaces which make only five or six tons of pig iron daily.

THE business of making iron seem to be slowly slipping from the hands of iron makers in eastern Pennsylvania. The returns of iron furnaces in blast Sept. 1 show a decrease of 2,200 tons weekly in capacity; an increase in charcoal and bituminous iron, but a decrease of 3,600 tons in anthracite iron. Since the maximum, July 1, the decrease in weekly output has been 4,700 tons. For the first time the average weekly production for three months has been equivalent to more than 6,000,000 tons of pig iron yearly, sixty per cent. of the anthracite, 63.5 per cent. of the bituminous and forty-six per cent. of the charcoal furnaces being in blast. The longer headed iron makers are buying ore and iron properties in the south and west,

THE pig-iron trade continues active at strong prices, the demand being unusually good. The *Chicago Industrial World* reports a number of large sales, one of them being for an amount larger than 5,000 tons, while numerous lots of 500 to 2,500 tons have been disposed of. The aggregate amount of business for the week compares very favorably with that of any like period since the first of January. The larger foundries are using more iron than for many months past, and are pushed to their full capacity. The car-wheel foundries are crowded, and the jobbing foundries are picking up more business. While the demand seems all the time to be increasing, it can not be denied that there is an abundance of stock on hand, and there is no special reason why prices should go up excepting that of prospective consumption.

It is noted, apropos of the continued growing business activity, that the makers of textile machinery have been for some months increasing their volume of trade, and that within the past thirty days the orders have accumulated rapidly, and at this time there is more business in sight than there has been since the last manufacturing boom. Manufacturers of textile goods, both here and throughout New England are working to nearly their full capacity on winter and spring goods. The production of knitting machines is increasing. The output of one make is 2,500 machines per year, each with a daily capacity of six or seven dozen. The industry is being scattered over the country, and one of the leading makers is now absent in the West establishing the industry at several points. Knitting machinery is also in active demand in the south, but there is a scarcity of hand labor, as nearly all the arrivals from England are accustomed to old style machinery and know nothing about the manipulation of our delicate knitting machinery. All will be well in this direction provided the business is not overdone. The replacing of old styles of machinery with new styles is an important factor in the business.—*Philadelphia Paper.*

# Textiles.

## CANADIAN TEXTILES AT THE GREAT EXHIBITION.

(From the *Canadian Gazette, London, England, Aug. 26, 1886.*)

CANADIANS have come to England this year to learn as well as to teach. This is so in regard to many of the exhibits of the Canadian Section, though with none perhaps in so marked a sense as with the textile fabrics. Indeed, if those Canadian manufacturers and their representatives who are here only keep their eyes well open, and are wise enough to profit by their experience, the Exhibition will have a most beneficial influence in perfecting the systems in vogue in the manufacturing centres of the Dominion. No Canadian, for instance, can go carefully through the manufactories of Bradford, Saltaire, Leeds, and other northern districts, as many Canadians have recently done, without being struck with the immense facilities Englishmen have to aid them in their work. The establishments are to Canadian eyes on a scale of marvellous extent, the machinery used is of the highest excellence, and the operatives show no ordinary skill. Another startling feature of British as compared with Canadian manufactures is the separation in the Mother Country of the various operations that go to make up the complete fabric. In the Dominion one manufacturer will himself undertake the spinning, the carding, the combing, indeed all the necessary stages together in one establishment. The result is a loss of quality and money when compared with the English method of separate manufactories for the separate operations. This is of course a development which Canada would be unreasonable did she expect already to have attained to. Nevertheless, it will be wise if, in his endeavours to meet some part of the demand for fabrics in countries where the supply now comes chiefly from England, the Canadian manufacturer bears in mind the immense advantages of his competitor, that he may the better brace himself to home development. The skilled work of the operatives is a distinct feature in English factories which Canada cannot hope to obtain until a determined effort is made to supply technical education in the manufacturing centres of the Dominion. All through the north of England, in large towns and small, the technical school is found, in most cases mainly supported by the manufacturers themselves. Here Canadians may learn a lesson of incalculable importance. In these days of keen competition it is essential to success that operatives should have the best attainable knowledge of the various branches of manufactures; and as Canada's manufacturing interests extend, more attention must be paid to this vital phase of the question. It is very evident, therefore, that seeing the economy of production in England and the many other advantages which only come as one result of manufacturing development, Canada can hardly hope as yet to compete successfully with the Mother Country in many classes of goods. And yet not all. The general run of Canadian woollen goods cannot be expected at present to suit this market; but in Halifax, greys and some other tweeds such as those shown with several of the best exhibits, some business may be done with fair profits. Canadian blankets, also, if in the right hands, may be handled to a moderate extent. Cotton goods generally are not to be satisfactorily placed in England, though shaker flannels may suit a limited class, and bags, sail-canvas, and "ducks" are quite good enough to stand the test of competition.

But while it is an undoubted fact that Canadian manufacturers have much to learn in England, they have also some thing to teach. Few facts exemplified in the Canadian Section cause more astonishment to the English eye than the extent, variety, and general excellence of the fabrics shown by a country which was thought to be capable of nothing in the way

of the finer manufactures. Many of the tweeds are much admired for their make and design. Cotton goods are also highly spoken of by those thoroughly competent to judge. The educational effect of the textile fabric exhibits is thus excellent, and if for no other results Canadians will have every reason to congratulate themselves upon this department of their display. Coming to treat of the exhibits in detail, that of the Paton Manufacturing Company of Sherbrooke, Quebec, claims, both on account of position and excellence, a first attention. On the west side of one of the cross passages through the Central Gallery the Company has erected a handsome bronzed case, in which are arranged with much taste the excellent tweeds, rugs, plaids and military goods for which the house has long been held in high repute. As to the design and make of these goods, one cannot but speak in the highest terms; they are equal in many respects to the finest English manufactures, and clearly indicate what all Canadian manufacturers might, if they would, make of the natural material they have at hand. Another exhibit that deserves early attention is that of the silks of Messrs. Belding, Paul & Co., of Montreal, situated in the east approach to the Central Gallery. There can be no question that the beautiful colors of the silks and the admirable arrangement of the goods have, in conjunction with an excellent position in the Court, combined to make this exhibit one of the most attractive in its class. Many visitors have, from time to time, expressed their desire to purchase portions of the goods—requests which it is probably not possible to meet during the continuance of the Exhibition.

All the other textile fabric exhibits are arranged along the north and south walls of the Central Gallery. Beginning at the west end of the Gallery, one finds the first case devoted to the several manufacturers for whom Messrs. Cantlie, Ewan & Co., of Montreal, are acting. The woollen tweeds shown in this case by Messrs. Elliot & Co., of Almonte, are of good make. The underclothing of the Thorold Woollen Company is excellent, while the plain greys are of no mean order. A somewhat similar exhibit is made by Mr. William Thoburn, of Almonte, Ontario, and the Almonte Knitting Company, while the last portion of the case is occupied by the fancy flannels of Messrs. Adam, Lomas & Son, of Sherbrooke. In color and pattern these flannels would seem to bear many of the characteristics of the best English make. The second case is divided between Messrs. H. Shorey & Co., of Montreal, who show ready-made clothing; the Pike River Mills Company, of Notre Dame de Stanbridge, and the Granite Mills Company, of St. Hyacinthe, Quebec. The product of the Pike River Mills comprises knitted goods, made principally from Canadian-grown wool. With the Granite Mills Company knitted goods for children would seem to be a speciality. Their exhibits, like those of the Pike River Mills Company, are of average quality. The products of the Magog Textile and Print Company of Montreal occupy the next case. These are from the pioneer print works of Canada. The colors of the cottons are of a good variety, while the patterns are also commendable. In the next bay Messrs. Tooke Brothers, of Montreal, show a variety of shirts declared to be entirely made of Canadian material. Of an entirely different nature is the adjoining exhibit of Messrs. A. G. Van Egmond & Sons, of Seaford, Ontario. It consists of flannels and tweeds, not unlike Scotch goods in some respects and quite after local designs and colors—excellent fabrics, in so far as material is concerned, and in every way suited to the Germans and others in the neighbourhood of manufacture with whom sales are mostly made. In the same case the Crompton Corset Company, of Toronto, and the Yarmouth (Nova Scotia) Woollen Mills Company are also represented. The goods of the latter company embrace all the ordinary types of Canadian woollen tweed goods.

The next exhibit is that of the Canada Cotton Company, and it differs from those previously noticed in this important respect: it is uncovered, quite open to the touch and examination of the visitor. There is, of course, the danger

in making these open exhibits that the goods will rapidly deteriorate from exposure. And yet it is, we think, worth the risk; for the very exposure is an exacting test, and it speaks well if, as is the case with the Canada Cotton Company's goods, dust and contact with the air leave the colors untarnished. This exhibit embraces cotton tweeds in a variety of colors, as stout as they are pure in make. It may be, as has been said by some who have examined this and similar exhibits in the Canadian Section, that the goods are too "harsh" for the English market—in other words that the manufacturers in Canada have not sacrificed the strength and durability of the fabric for the sake of a soft face. This, however, is hardly to their discredit. On the south side of the gallery, the same Company has an exhibit of serviceable linings for tailors and shoemakers, gingham, jacquard work, colored flannels, grey tweeds and cotton blankets. The last named are of excellent make, indeed they are frequently classed as woollen goods by visitors. Above the exhibit of the Company is an interesting card sketch of both mills at Cornwall, woven on the Company's looms. Another open exhibit is that of the Ontario Cotton Mills Company of Hamilton. This Company has a speciality in plain "ducks," for which considerable inquiry has arisen from shipping houses here, chiefly for South American and West Indian trade. They are found to be well made and well colored, while the value has not been found fault with. The other goods shown by this Company are of a good class. The Oxford Manufacturing Company, Nova Scotia, occupies the next case. The tweeds, flannels, and blankets are of excellent durability, being made from the pure wool of sheep born and bred in Canada. They have, we believe, found some market here. The fancy tweeds are in a variety of colors, in many cases more useful than ornamental. The next exhibit is an open one made by the Dundas Cotton Mills Company, of Dundas, Ontario. That these fabrics are well made and sound in color is obvious. No less an authority than the President of the Leeds Technical College, on examining the goods last week, acknowledged that the dyes were of the very best, the true indigo, and that the make of the goods certainly placed them in the front rank. This fact is indeed borne witness to by the remarkable way in which, in spite of exposure since the opening of the Exhibition, almost every fabric has retained its full color. The whole of the exhibit has, it is understood, been bespoken, while further orders for some lines are being negotiated. The last case on the north side is jointly occupied by the goods of Mr. W. H. Fairall, of St. John, New Brunswick; the ready-made clothing of Messrs. Clayton & Sons, of Halifax; the knitted goods of the Penman Manufacturing Company, of Paris, and the excellently-made corsets of the Dominion Corset Weaving Company, of Quebec.

The south side of the Central Gallery is also occupied by many textile fabric exhibits. In the first case are to be found the excellent goods of Messrs. Slingsby & Son, of Bradford. The display might well have been larger, seeing the superiority of make shown in the blankets of Canadian wool. The Grand River Knitting Company of Paris, Ontario, show in the same case Smyrna Rugs and knitted goods; the Stormont Cotton Company, of Cornwall, a fair variety of gingham and colored check cottons of substantial character; and the Galt Knitting Company, a variety of woollen goods. Messrs. Gault Bros. & Co., of Montreal, have in the next space an open exhibit of a superior class of tweeds, cottons and fancy flannels, excellent in fabric as well as style. Messrs. Mills & Hutchison, of Montreal, also have an open exhibit of tweeds and mixtures of silk and wool, all good in style. Adjoining is the case of Messrs. William Parks & Son, Limited, of St. John, New Brunswick. This must be given a leading place in its class of exhibits. The knitting cottons and yarns, checked shirtings, galatea stripes and cotton tweeds, all show more or less excellence of design. It might indeed have been to the advantage of the Exhibition had Messrs. Parks sent a larger exhibit than they have. The next case is occupied jointly by Messrs. Moorehouse, Dodds, & Co., of Glen Tay, Ontario, who show tweeds and prints, the

St. Croix Cotton Mills Company, of New Brunswick; the Trent Valley Company, of Campbellville, Ontario; and Mr. Alexander Gibson, of Marysville, New Brunswick. Mr. Gibson is popularly known as the "Lumber King" of New Brunswick. His exhibit consists of samples of cloth from his cotton mills at Marysville. Adjoining is the open exhibit of the Rosamond Woollen Company of Almonte, Ontario. The woollen cloths and tweeds of this company more resemble English style than most of the other exhibits in the Canadian Section. Indeed they would seem to be better adapted to English tastes, and it is perhaps due to this fact that some inquiry has arisen for them. In the next case the Montreal Cotton Company shows a variety of linings and twills of various kinds, most of which are a good color and substance. From the Corriveau Silk Mills of Montreal, a small collection of silk goods is shown. They clearly indicate the great advance that has been made in this particular line in Canada during recent years, an advance in which the Corriveau Silk Mills have taken a leading place. The exhibit has naturally attracted much attention, and we understand that some inquiries have also arisen with regard to it. The rest of the case is occupied by further exhibits from the mills of the Grand River Knitting Company, who show some excellent rugs, not unlike the Axminster style.

It will be seen from these notes that the whole of the textile fabrics in the Exhibition form a most interesting collection, and speak well for the industrial advancement that has been made in Canada during the last few years. Visitors to the Court will find Mr. S. C. Stevenson, of Montreal, who has been placed by the Executive Commissioner in charge of this department, ready to furnish every possible information in regard to the display. Advantage may also be taken of the presence of Mr. R. J. Dunstan, who, while representing the Dundas Cotton Company, is able and always kind enough to assist in disseminating information in regard to this important branch of Canadian manufactures.

Among the incidents of the week of special interest from a commercial standpoint must be noted the visit of Professor John Beaumont of the Yorkshire College. It is understood that Professor Beaumont, who has been much interested in the textile industry in Canada, proposes to prepare an article upon the woollen exhibits from Canada for the *Textile Manufacturer*. Mr. G. A. Jeffries, a large manufacturer in Leeds, has also made a careful inspection of the exhibits of textile fabrics in the Canadian Section during the week. Mr. R. A. Gupta, of Bombay, has been seeking information with a view to establishing an agency for the sale of Canadian goods in Bombay. A member of the Cape of Good Hope Commission has similarly examined carefully the contents of the Canadian Section with a view to the extension of trade between the Cape and Canada. Full particulars were of course supplied to all these gentlemen regarding the various exhibits.

A new textile product is coming out, made of merino wool, at present manufactured only on the coast of Sardinia. It is peculiarly soft in texture, and so durable that a shawl costing about \$12 can be worn in all kinds of weather for years. It is called bisso or golden wool. Textile manufacturers, who have been experimenting with jute, assert that it is capable of more extended and artistic applications than are yet known, since it can be made nearly as fine as silk.

The Apolda Hosiery Manufacturing industry has not for a long time been so busy as at present. A considerable part of the spring commissions have not yet been discharged, while the after-orders have been accumulating. There is a great want of workpeople of both sexes. The unexpectedly rapid increase of wool yarn prices may, with the pressing demand for goods, have a great influence on trade. *Kuhlau's German Trade Review*.

The English mint now buys bronze metal for coinage in bars ready for rolling, that arrangement being more profitable than the former practice of buying the materials for the manufacture of bronze separately.

## Lumber.

### CANADA'S EXPORT DUTY ON LOGS

THE United States commercial agent at Ottawa, in the course of an exhaustive report to the Secretary of State upon the lumber industry of Canada, says that while the increased export duty upon saw-logs is published as being from \$1 to \$2 per 1000 feet, board measure, it is evidently intended that when the exports become developed the duty shall be further increased to \$3, under the discretionary power vested in the Governor-General, which rate, it is supposed, will be prohibitory. "It is an indisputable fact," he says, "that this tariff will also be further increased if it shall become necessary to find the prohibitory point. For while the Government makes no objection to Americans owning the timber, it is fixed in its determination that the Dominion shall have the resultant benefits arising from the manufacture."

### THE SHINGLE TRADE.

ONE hundred and two thousand shingles have been shipped from Puget Sound to Port Moody for shipment across the Canadian Pacific to the east. The Vancouver *News* says: "This is only the beginning of a future great trade between the Pacific and Atlantic coasts. Cedar grows here in abundance, and the shingles cut from the lumber are the most substantial in the world, tests having proved that, placed on tops of buildings, they can withstand the rain and tempests beating down upon them for forty years. The shingles will not rot; the action of the weather wears them away, but decay never attacks them. Our eastern friends speak highly of the shingles turned out on this coast, and the first shipment of them over the C.P.R. is the beginning of an immense trade."

FIRES, lumbering, tanning, wood pulp mills, charcoal, iron smelting, railroad building, all draw on the forest growth, and these are legitimate demands. Fires are the great causes of destruction of forests. In 1880, if the report presented by Prof. C. S. Sargent is reliable, the area burned over in the United States was 10,250,000 acres, and the value of property destroyed \$25,462,250. In the State of New York, according to the same authority, 149,491 acres were burned over, with a loss of something like \$1,250,000. The largest number of these fires of any one class were traced to farmers clearing land and allowing brush their fires to communicate with the forest. Locomotives are set down among the list of causes, as having set fire to woods 508 times, hunters 628 times, malice 262 times, clearing land 1,152 times.

MRS. GAUFEL, millner of Berlin, has handed over her business to creditors and the stock is to be sold. She owes \$2,500 and has a stock of \$1,500.

A very striking illustration of the improvement in the industries of the United States is in the case of the railway-car shops. These are not only fully employed, but are actually over-run with work. All the leading railroads of the country have for some time past been placing liberal orders for new cars, and they cannot begin to get them as fast as they would like in order to accommodate the constantly increasing traffic. Many railway officials report every wheel in motion and say that they never knew cars to be so scarce as at present. The Pennsylvania Company alone has ordered 6,000 new cars. The Western roads engaged in building extensions are likewise ordering a large number of cars, and there is scarcely a prominent shop that is not behind in its deliveries. The locomotive builders also feel the change in the general condition of affairs, and they too have an increased amount of work on hand. The steel-rail manufacturers are still working on orders placed in the past, and have several times had to increase the limit of production agreed upon early in the year.

# Milling.

## CANADIAN GRAIN AT THE EXHIBITION.

The *Canadian Gazette*, London, England, Sept. 23rd, 1886, has these notes:

Mr. Proctor Baker, of Bristol, who, it will be remembered, was recently appointed by the Royal Commission to report upon the agricultural features of the Exhibition, was last week engaged for two days in an exhaustive examination of the Canadian cereal exhibits. Mr. Baker went carefully over each class of grain by Provinces, taking samples of each and inquiring fully into the conditions of farming in each Province.

A prominent London grain merchant also visited the Canadian Agricultural Court during the past week, and obtained full information as to the grain and flour trades of the North-West. This gentleman estimates that there will, this year, be required for the British market as much as 141,000,000 bushels of wheat from abroad. Seeing this large demand and the growing importance of the North West as a grain producing country, he is now about to visit the North West to extend to Winnipeg the business connections already formed in Eastern Canada.

Another London corn merchant writes as follows: "After spending many hours in the Canadian Court, I consider very great praise is due to our Canadian brothers for these exhibits. There are samples of cereals on display that I am sure we cannot cope with in England. At the close of the Exhibition I should very much like any samples of grain for disposal at their value—blue and white peas, oats, &c. My intention is to hand them to certain of my friends and senders who are farmers, and to try them on different kinds of soil and to report the result."

## A MILLERS' ASSOCIATION.

The millers of Huron, Bruce, Grey, Perth, and North Wellington, held a meeting in the Town Hall of Listowel, on the 24th ult., when a local association was formed and the following officers were elected: John C. Hays, Listowel, President; Noah Wenger, Ayrton, Vice-President; Wm. B. Hutton, Wingham, Secretary-Treasurer. After considerable discussion it was unanimously agreed to abide by a uniform scale, then submitted, for the exchanging of grists; also to purchase wheat according to its tested value. For example, if wheat tests 60 lbs., then the current market price is to be paid; if 61, one cent per bushel above; 62, two cents; 63, three cents above; and if below standard then to pay less in proportion. This plan is considered fair and equitable for both miller and farmer. The man who cleans his grain well and grows a good sample will be encouraged and remunerated. It will, it is hoped, abolish the unjust and bad practice hitherto followed by too many buyers of not looking at the sample. It was resolved to publish circulars showing the exchange table, also the purchase scale, and that one copy be sent to every miller and grain merchant in the counties mentioned. All millers present pledged themselves not to purchase grain, either from farmer or merchant, except according to its test value.

## THE WHEAT AND CORN CROP OF 1886.

It is now possible to make a very close calculation as to the wheat and corn crops of 1886. The report of the Agricultural Department, issued on Sept. 10th, shows a better yield of spring wheat than had been anticipated. The general average is 84, and the average yield from 11 to 11½ bushels per acre;

the yield of winter wheat was 12½ bushels per acre. On this basis we have:

SPRING WHEAT.			
Year.	Acres.	Bushels.	Average Per Acre.
1884.....	11,130,177	156,475,000	14.
1885.....	12,040,703	145,257,000	12.6
1886.....	12,030,000	132,300,000	11.00

or, if the yield reaches 11½ bushels per acre, as the department estimates as possible, the total spring wheat will be 138,300,000 bushels. Of winter wheat the yield was:

WINTER WHEAT.			
Year.	Acres.	Bushels.	Average Per Acre.
1884.....	28,345,708	356,290,000	12.5
1885.....	22,148,543	211,845,000	9.5
1886.....	24,727,087	309,088,000	12.5

Thus, while there is a decrease of from 7,000,000 to 13,000,000 bushels in spring wheat as compared with last year, there is an increase of 97,200,000 bushels in winter wheat. In other words, our total wheat crop this year is between 441,000,000 and 447,000,000 bushels against 357,000,000 bushels last year.

The condition of the crop has declined to 77, and the crop is 19 per cent. worse than last year. On the basis of the same acreage, this would indicate a yield of 1,569,000,000 bushels; but as the acreage is 2,000,000 acres greater than last year, this would give a crop of a little over 1,600,000,000 bushels. The acreage and yield of corn for several years have been as follows:

Year.	Acreage.	Crop, Bus.
1880.....	62,317,842	1,717,431,513
1881.....	64,262,025	1,194,916,000
1882.....	65,659,546	1,617,025,100
1883.....	68,301,889	1,551,066,895
1884.....	69,583,780	1,795,528,432
1885.....	73,130,150	1,936,176,000
1886.....	75,000.00	*1,600,000,000

\*About.

While the crop is thus about 300,000,000 bushels short of the enormous yield of last year, it must be remembered that there is an unusually large surplus of old stock on hand, which will partly counterbalance this falling off. *Baltimore Journal of Commerce.*

RECENTLY a grain receiver in Chicago forwarded to a shipper in Nebraska just five cents per bushel as his share on a consignment of corn. Transportation and elevator charges virtually confiscated the corn.

CONCERNING the competition in India, in the wheat trade, it should be borne in mind that with a full crop India is only able to export about one-seventh of her production, whereas the United States can export more than three times that proportion of her crop. The Indian population is very large, and still very poor. In a country located as India is, local failures of crops, involving famines, must still be expected, and these would have the sudden effect of extinguishing a large percentage of the exports of wheat. Again, the soil and climate of India are adapted for the production of a greater variety of products than the Western States of America will yield, hence there is less temptation in India to run solely into wheat cultivation when it will not prove profitable. *American Cultivator.*

THE manufacture of solid carbonic-acid gas has become a settled industry in Berlin. It is put up in small cylinders, and if kept under pressure will last some time—that is, a cylinder one and one-half inches in diameter and two inches long will take five hours to melt away into gas.

❖ Permanent ❖

# Exhibition of **M**anufactures.

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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 92ft. by a depth of 105ft. 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 14ft., while the central portion, up to base of dome skylight, will be 29ft. 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 23ft. 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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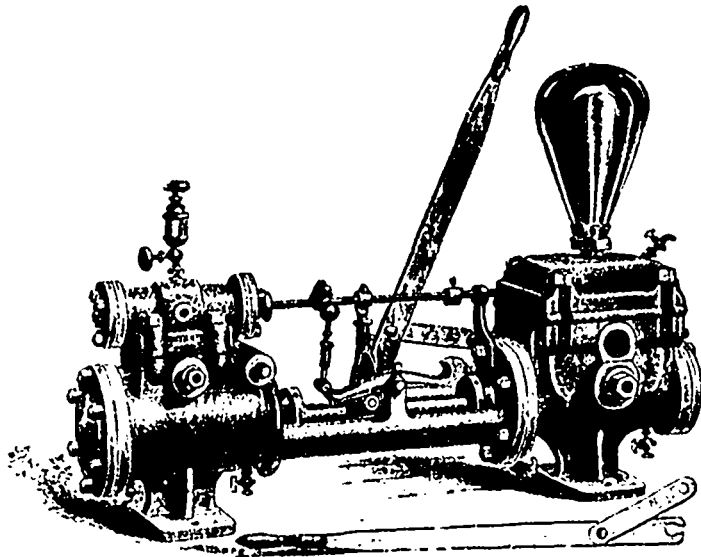
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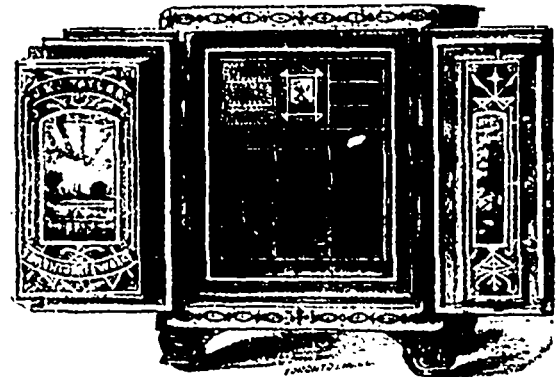
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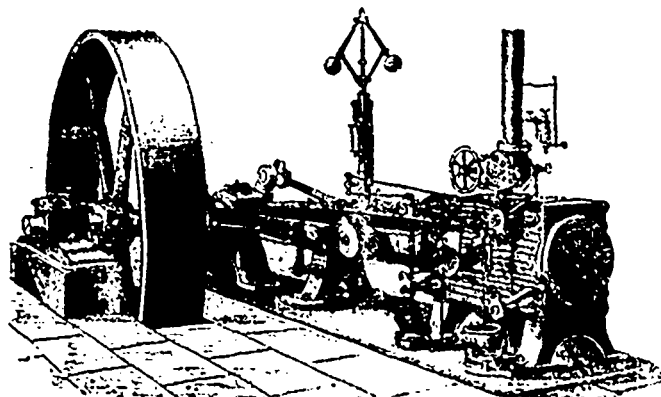
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# Mining.

## ONTARIO'S COPPER MINES

### VALUABLE DEPOSITS AT SUDBURY AND VICINITY.

"Yes; I have been collecting information about mines and mining in the silver region of Lake Superior," said Mr. A. Blue, secretary of the Ontario Bureau of Industries and Agriculture, in answer to inquiry by a *Globe* reporter, "and I returned by railway along the North Shore. I was two days at Sudbury, and spent the time visiting the several mines and gathering information about them. The mines are of great extent; they are certainly very promising, but hardly so extensive as would appear by the account of Bonanza McKay. It is quite true that the ridge is five miles in length, but there are a number of barren stretches in which there is no indication of copper. The lode is at no point 1,500 feet in width, and as to its depth nobody knows. That can only be determined by mining or boring. No boring has been attempted, and so far the mining is quarrying simply. The main lode extends from lot five, in the first concession of Blezard, known as Stobie, or Mineral Hill Mine, south westward to lot two, in the twelfth concession of McKim, known as Copper Cliff Mine. Another ridge lode begins with the Murray property on lot 11, concession fifth of McKim, about five miles from Sudbury, where it is crossed by the main line of the Canadian Pacific Railway.

### THE FIRST DISCOVERY OF COPPER

in the region was made at this point during the construction of the railway. This deposit extends southward and eastward until it joins the main lode of Copper Cliff, and on it are the McConnell and Fly Lake mines. Some prospecting work has been done on all these properties, but the only real work is at Copper Cliff. The Mineral Hill mine was discovered by W. Stobie in August, 1885. It is about four miles northeast of Sudbury, and is reached by a rough road cut through the burnt woods. The mine is about 600 feet in length, from 300 to 500 feet in width, and about 40 feet above the level. An opening has been made from the foot to the top of the hill on its south-east side, and a shaft has been sunk to the depth of a few feet, revealing good ore. The ore consists of copper pyrites and strings of galena, and can be worked as easily as an open quarry. The back of the ridge is granite, and the copper does not appear to extend beyond its crown. Following this ridge to the south-westward about half a mile we come to the Exposed Hills locations, on lots six and seven, in the sixth concession of McKim, the total length of which is one and a quarter miles. These are composed of eight hills running along the north-west side of the north branch of Sudbury Creek. A well defined outcrop begins with a breadth of twenty feet, widening and rising until at the most southerly of the hills it is at least 100 feet above the valley on either side, and 500 feet in width. Some blasting has been done on both claims to obtain minerals for assays, the results of which are regarded as very satisfactory. This lode appears to lie between Laurentian rocks on the eastern side and Huronian on the western, and from its situation it may be very economically worked.

### A LINE OF RAILWAY

is being surveyed from the main line of the C.P.R. northward, and is intended to serve both the Exposed Hills and the Mineral Hill mine. The Murray mine, which is the property of Thomas Murray, M.P.P., of Pembroke, is about 100 feet in width, where the railway crosses it, and shows ore over its whole extent. The deposit is regarded as rich, but no effort has been made to develop it yet. What is known as the McConnell mine is on the same ridge. Two shafts have been

sunk here, revealing ore of good quality. Further eastward on the same ridge is Fly Lake mine, on lot one, concession three of Snider. It was discovered in November, 1884, by Mr. Thomas Flood, who is now Crown Lands Agent at Sudbury. Mr. Flood disposed of his interest to W. B. McAllister, of Pembroke, who began developing it in June, 1885. Two shafts were sunk, one ten and the other thirteen feet in depth, and the show was so rich that he succeeded in disposing of the whole of his property, about 1,800 acres, to the Canada Copper Company for \$13,000. The mine has been further developed by the Company, but work has stopped for the present, pending the construction of a short line of railway to connect with the Spanish River branch of the C.P.R. As already stated, this lode joins the main one on the north half of lot twelve, second concession of McKim, and here mining was being

### VIGOROUSLY CARRIED ON

at the time of my visit. Until recently this was known as the Butte mine, but the name has been changed to Copper Cliff. It was discovered by Messrs. Metcalfe and McAllister, of Pembroke, in May, 1885, but they have disposed of it to the Canada Copper Company. It is an elbow shaped ridge, with a general trend of south west and north-east, and, like the Mineral Hill mine about one half of the ridge is granite. Its total length is about 600 feet, and the height 10 to 50 feet. The eastern slope of the hill is covered with several feet of sand and gravel. Work was commenced near the eastern end, and an opening made about seventy feet in width. A large quantity of ore has been taken out, and now awaits sorting and shipment. Operations are being carried forward vigorously by the Company, and over seventy men are employed in the works. A railway track has been constructed from the mine to the Algoma branch of the C.P.R., a distance of one mile, and it is proposed to extend the road north-westward to the Fly Lake and McConnell mines, a total distance of two and a half miles. Unlike the famous mines on the south shore of Lake Superior, the Sudbury lodes show no native copper, but from the greater economy with which they can be worked there is scarcely a doubt that they

### WILL PROVE TO BE VERY VALUABLE.

The Canada Copper Company is composed of wealthy capitalists in the State of Ohio, the leading man of which is Mr. Ritchie, President of the Ontario Central Railway. They have already acquired the Copper Cliff, Fly Lake, McConnell and Mineral Hill mines, and one of the Exposed Hills locations. I understand that as soon as the railways are built all their mines will be open and work upon them prosecuted vigorously. At present the ore has to be shipped to New Jersey for smelting, but it is not unlikely that in a short time one or more furnaces will be erected in the vicinity of the mines. Lot seven of the Exposed Hills is in the hands of private parties, and I was informed that some Boston capitalists, who examined it a few days ago, made an offer of \$10,000 for it. But it is held at a much higher figure. Several other deposits of copper have been discovered within a circuit of ten miles of Sudbury, and the whole region is being hunted over by bands of explorers." *Toronto Globe.*

From the report of the Royal Commission appointed to inquire into the condition of the coal miners of Mons, a district of Belgium, it appears that the maximum earnings of a coal hewer, or, as we would term him in this country a miner, are 60 francs a month, say, roughly, \$12. It was learned from some of the witnesses that appeared before this commission that girls 16, 17 and 18 years of age are kept at work under ground in the mines of this district from 16 to 18 hours a day. For this exhausting labor they receive from 1 1/2 to 2 francs, or from 30 to 40 cents a day. It would appear from this report that all of the shocking stories as to the brutalizing and demoralizing influence of the labor of women and girls underground in the mines brought out in the investigations in England some years since are being repeated in Belgium.

## Miscellaneous.

### AMERICAN PATENTS TO CANADIAN INVENTORS

The following patents were granted to citizens of the Dominion of Canada, bearing date of September 28, 1886. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Frechette, Isaie, and C. L. Girard, St. Hyacinthe, Que, car axle lubricator. (Reissue.).....	10,767
Harris, John, and J. Lucas, Brantford, Ont., harvester-binder.....	349,994
Morgan, Charles, Bridgewater, N.S., carriage-seat..	350,072
Stone, J. H., Hamilton, Ont., tubular lantern.....	349,763

### EXHIBITION NOTES.

(From the Canadian Gazette, London, England, Aug. 26, 1886.)

SOME inquiries have recently been made in the Canadian Section with a view to trade in Canadian agricultural and other products with France. These inquirers have been placed in correspondence with merchants and shippers in the various Provinces of the Dominion, and seeing that direct communication is already established between Canada and Havre, it is thought that some business may be done in this direction.

OTHER specialists who visited the Canadian Section last week were Professor Beaumont, Professor of Textile Industries in the Yorkshire College, Leeds, with whom was Mr. Thomas Etchells, a large manufacturer of Huddersfield. Both gentlemen carefully examined and expressed themselves much pleased with the excellence of many of the Canadian fabrics. It is their intention, we believe, to prepare a report on the subject.

We quoted some little time since a resolution which we were informed, on what might under the circumstances have been thought good authority, had been passed by the Commercial Exchange urging the Imperial Government to grant a subsidy to a line of steamships between Canada and Australia. The Secretary of the Exchange, referring to this subject, writes to us as follows:--

"This resolution, after considerable debate, was voted down, it being the sense of the meeting that while such a subsidy would be agreeable to all, yet the wording of the resolution proffered a suggestion to the Imperial Government, which was thought to be entirely beyond our province and not connected with the objects for which the Exhibition Commercial Exchange was inaugurated."

THE mineral exhibits would seem to be arousing considerable inquiry among visitors generally to the Canadian Section. The specimens of iron ores, manganese ores, asbestos, soap-stone, graphites, and granites have attracted particular attention, and there have arisen several offers to buy largely if satisfactory quotations can be obtained. In all such cases inquirers are put into direct communication with the Canadian producers. One gentleman, who has carefully examined the iron ores recently, is about to leave for British Columbia to erect, at considerable cost, works for smelting purposes. Mr. Sugg, of the Vincent Works, Westminster, a member of the well-known firm of gas engineers, has also recently been placed in communication with the miners of soap-stone in the Eastern Townships of Canada. Large quantities of this material are at present imported by Messrs. Sugg from Germany for use in their works, and it is hoped that an article of as good, if not better, quality may be obtained from Canada at favorable prices. Other inquiries have related to Canadian ochres, and

many samples of this mineral have been furnished for experimental purposes and for report to the Geological Survey.

(From the same, Sept. 9).

THE vice-chairman and secretary of the proposed exhibition at the Salt Springs, Shipley, Yorkshire, paid a visit of some duration to the Canadian Section on Wednesday last. These gentlemen are, it is understood, anxious to secure the cooperation of the Dominion for their exhibition, and they are, we believe, about to place their views fully before the Canadian Government for consideration.

A VERY satisfactory trial of Canadian agricultural machinery exhibited by Messrs John Elliot and Co. of London (Ontario) took place at Hitchin on the 29th ult. by Messrs. Burlingham, Innes & Paternoster, of the Exchange Iron Works at Hitchin, who have written to Messrs. Elliot & Co. as to the excellence of the machinery. The crop cut on the occasion, with the exception of a few bare places, averaged from thirty-five to forty bushels per acre. Two horses in each case were used, and Messrs. Burlingham, Innes & Paternoster state that the machinery went as easily with two as other machinery did with three horses. Altogether about six acres were cut in five and a half hours.

### YANKEES MAKE GOOD CLOTH.

THIS is a busy season with certain merchants down town in the dry-goods district. It is the time of the year when the samples of Spring and Summer goods begin to come to town from the mills in Massachusetts and Connecticut. A dealer told a reporter the other day something about the trade in American-made woollen goods:--

"Fifteen or twenty years ago," he said, "there was no demand worth speaking about for American goods of the finer grades for men's wear. The big manufacturing tailors and especially the tailors who make clothing for club-men, would not look at the American goods. They said our makes would bag at the knees, lose their colors, and in a variety of other ways disappoint their purchasers. The customers of the tailors had always believed that English goods were the best, and in that the customer talked by the card, at that time. There were Anglomaniacs then as now, and the talk of these Anglomaniacs about the inferiority of American products finally aroused the pride of the American manufacturer. We had the wool and the machinery and the tariff to back us; why shouldn't we make just as good goods as were produced in England?"

"American mills have to follow the foreign in the matter of styles or patterns, but the best expert in the country is unable to tell whether a piece of cloth is American or British from an examination of it. The best looms in the world are made in Massachusetts, and the best weavers are employed in the mills, where the highest wages in the world for the work are paid. If there is any difference between the best American product and the best foreign, it is in favor of the American, and all the manufacturers are coming to see it. The foreign manufacturer is beginning to cut the quality of his goods, in fact, in order to meet our prices, and some of the high-priced tailors are beginning to get suspicious of imported goods. The American manufacturer cannot yet compete in price without the aid of a tariff; but the time when he can do even that may come, though I hope not if with it would have to come the low wages paid to foreign operatives."--N. Y. Sun.

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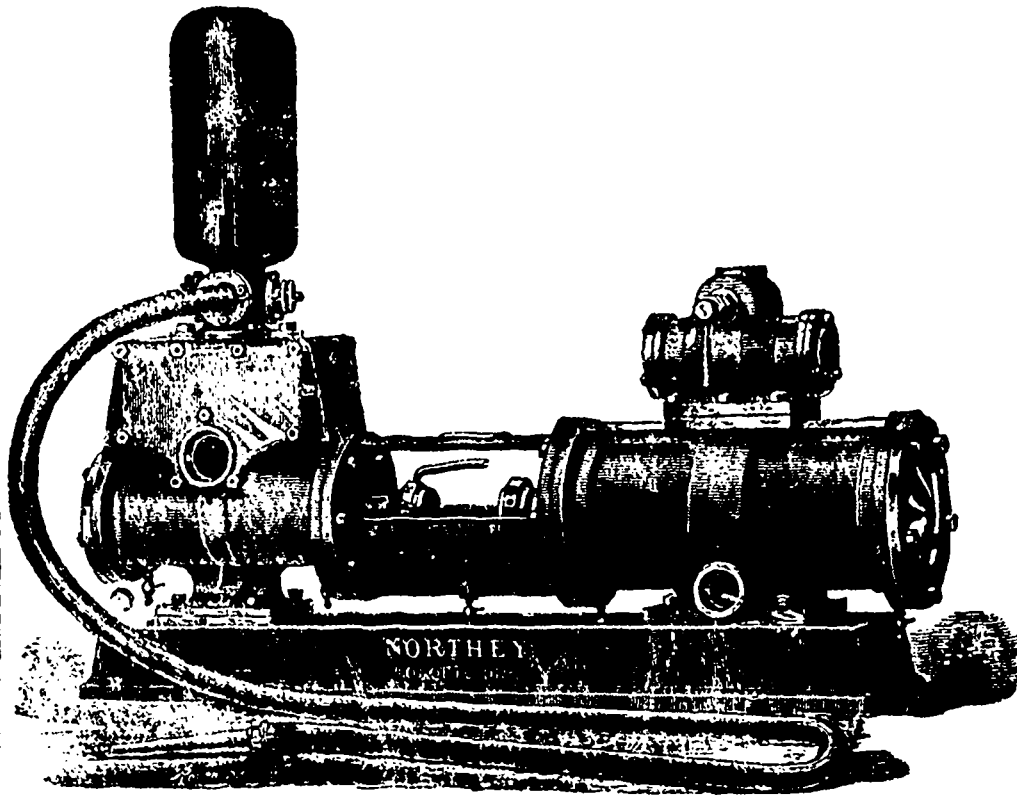
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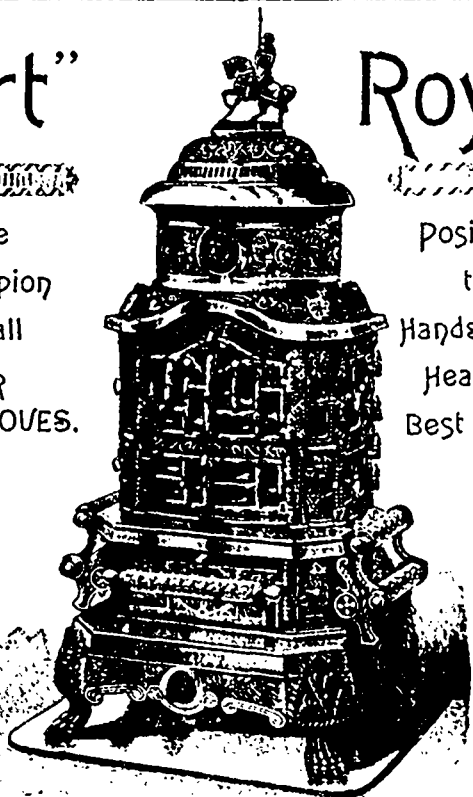
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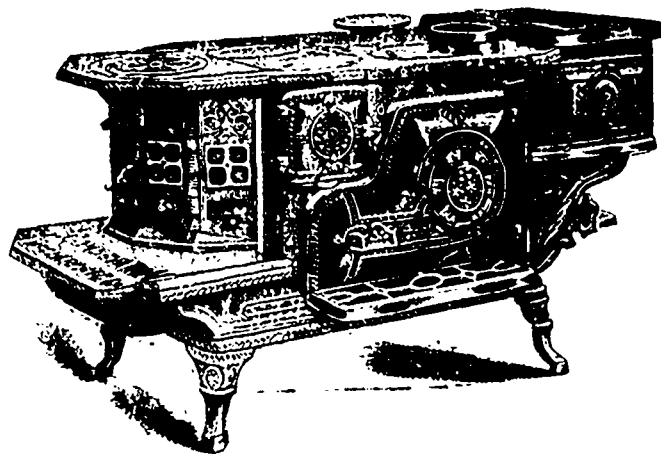
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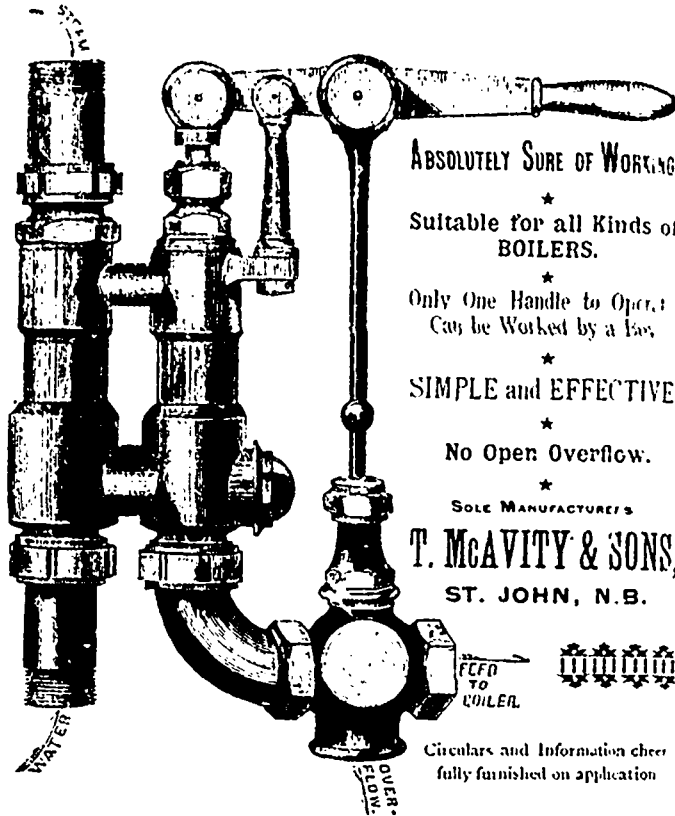
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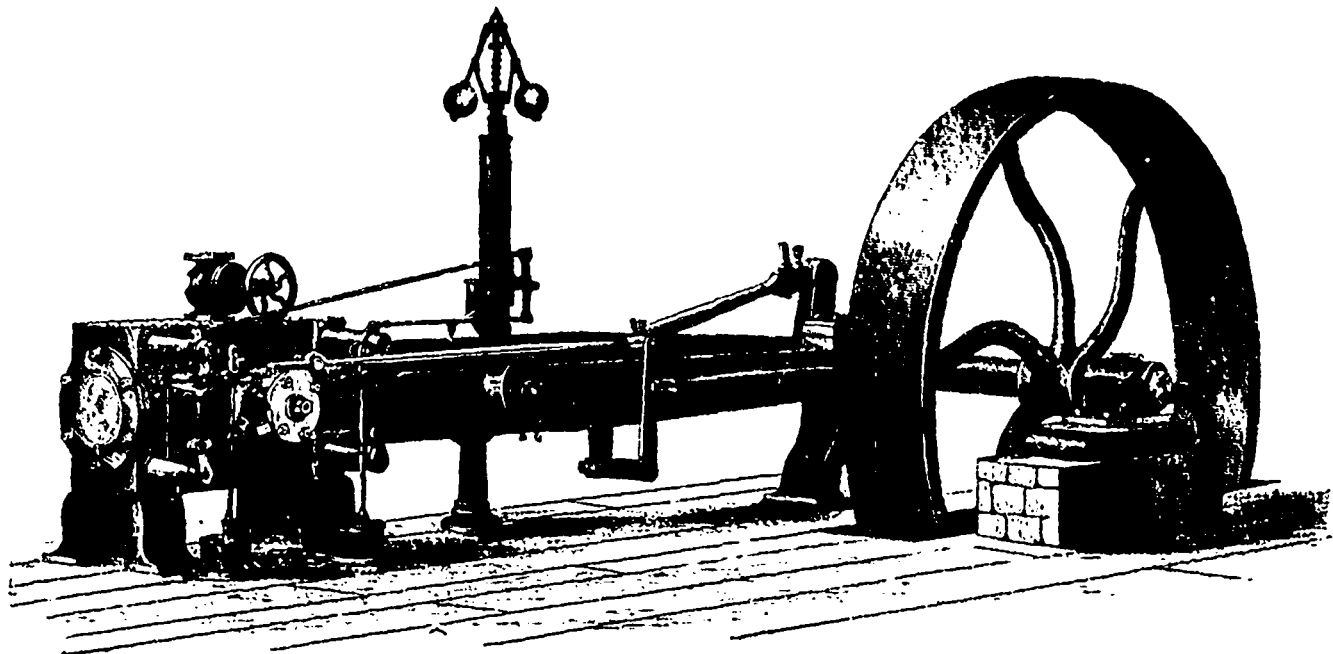
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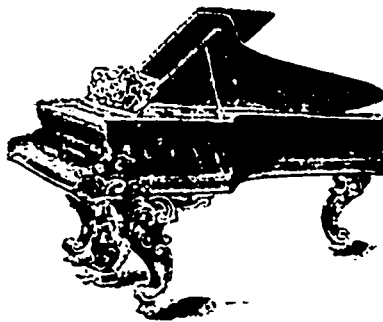
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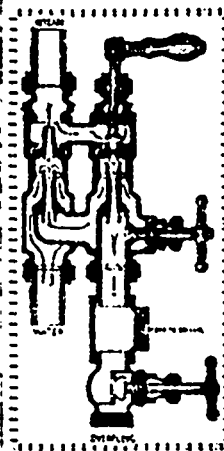
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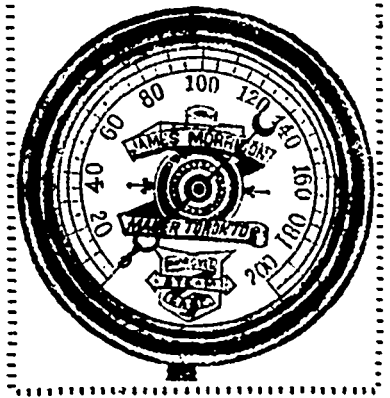
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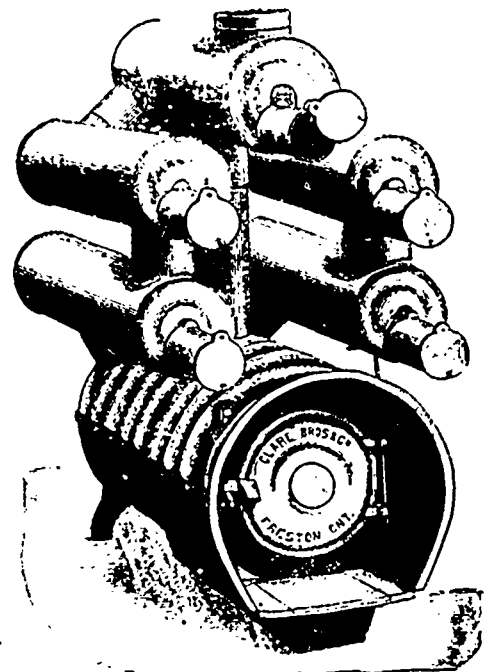
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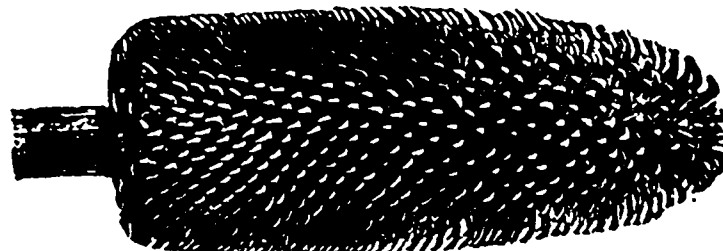
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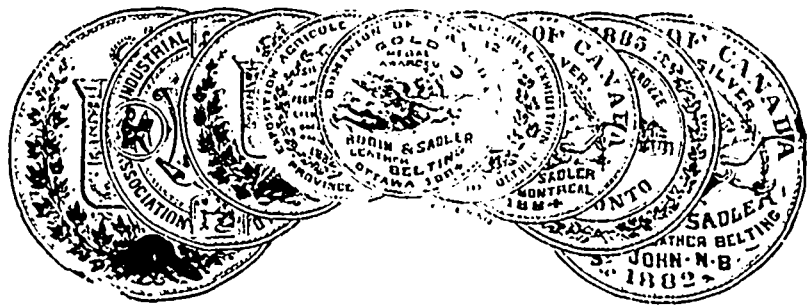
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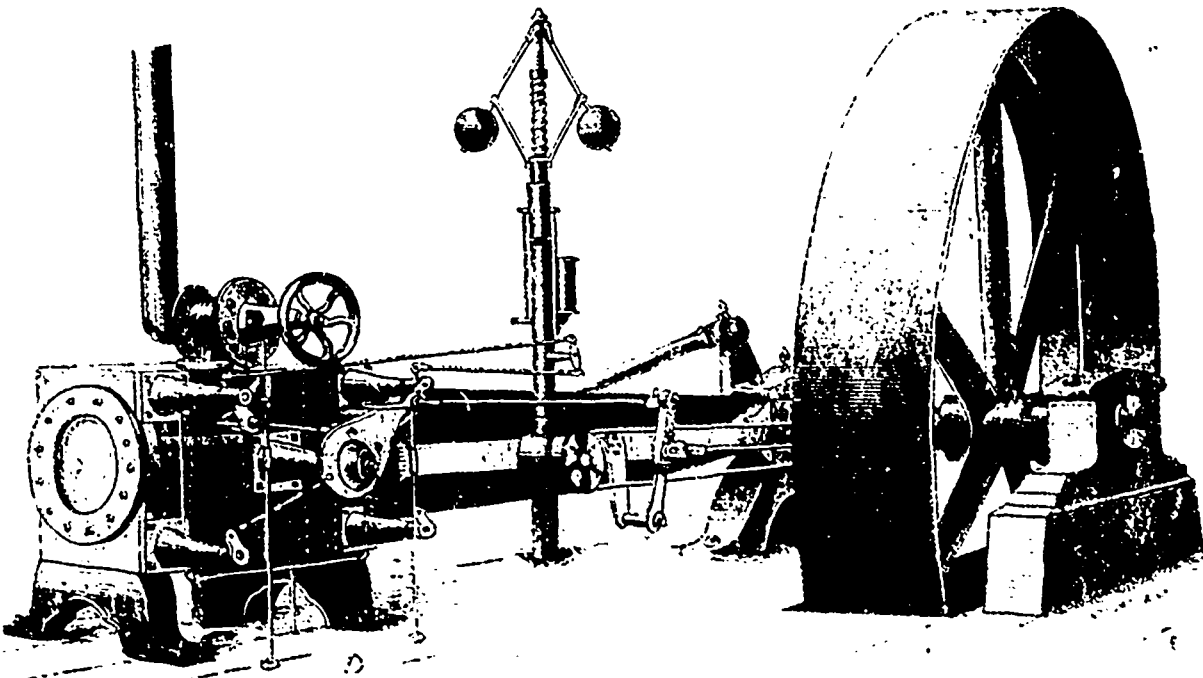
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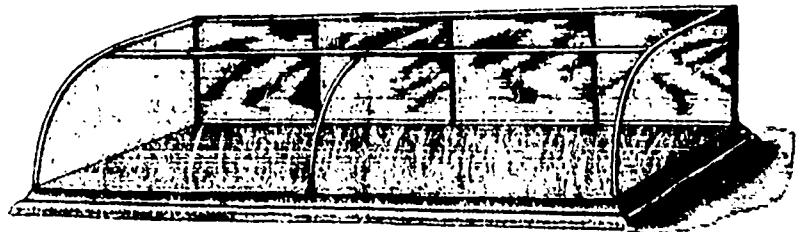
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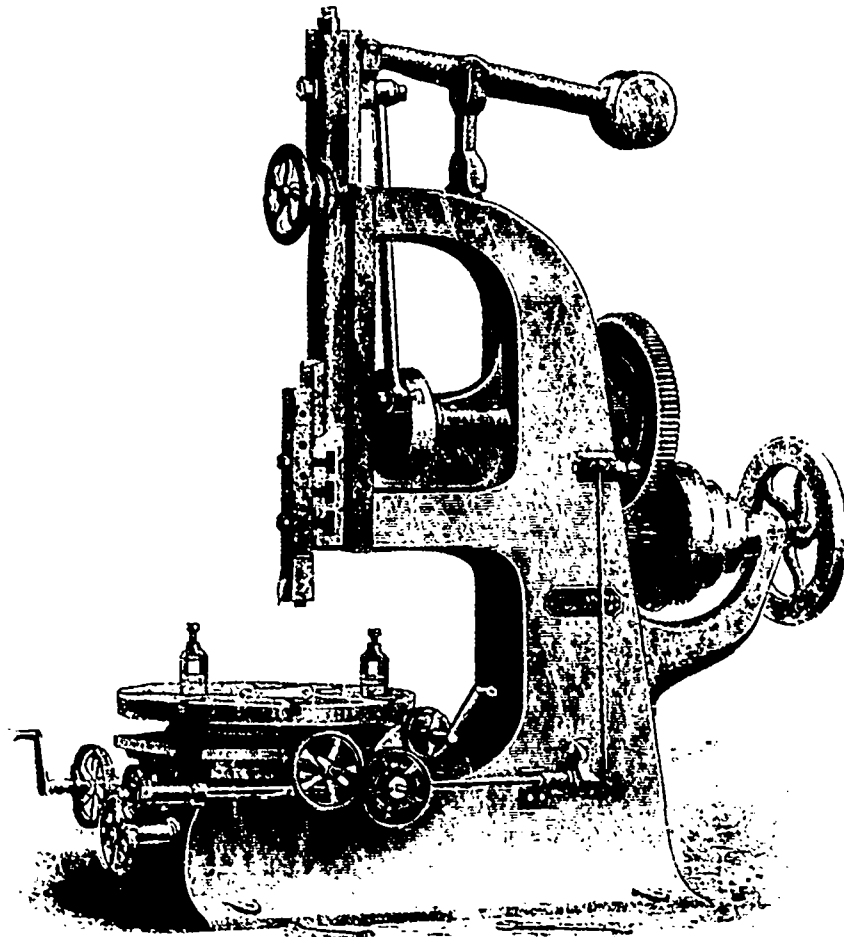
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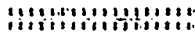
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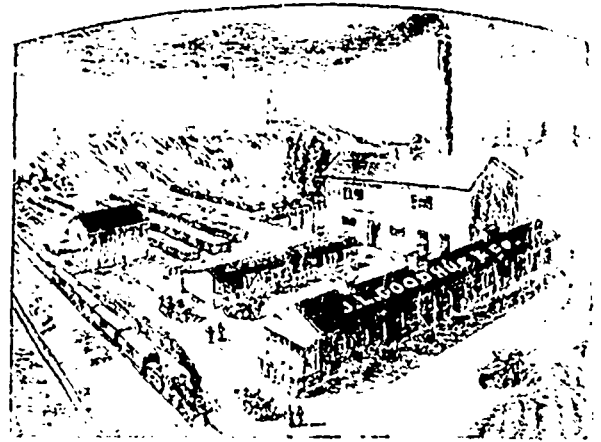
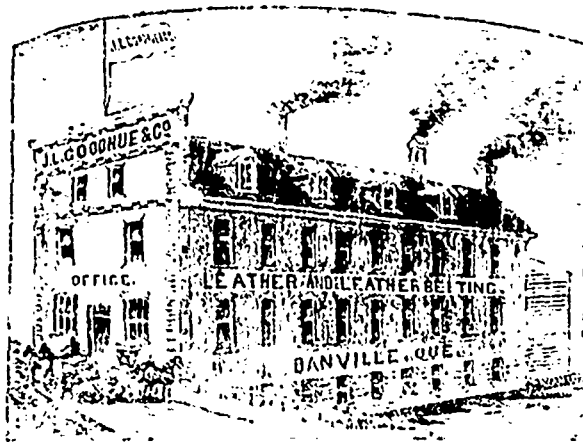
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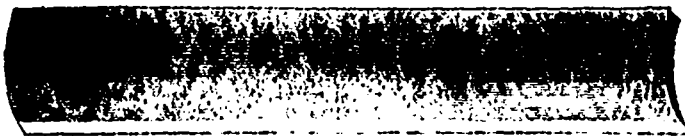
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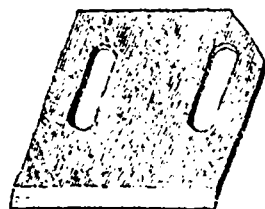
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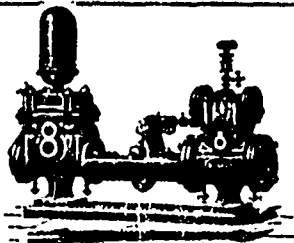
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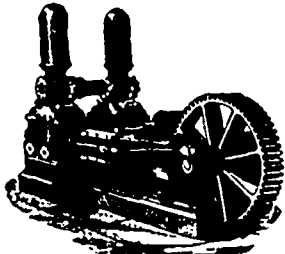
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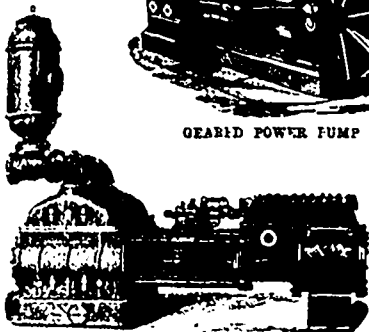
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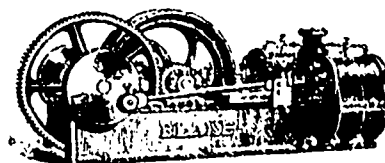
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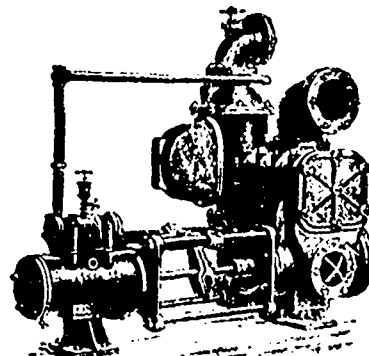
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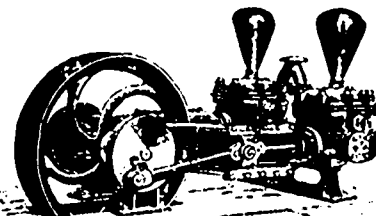
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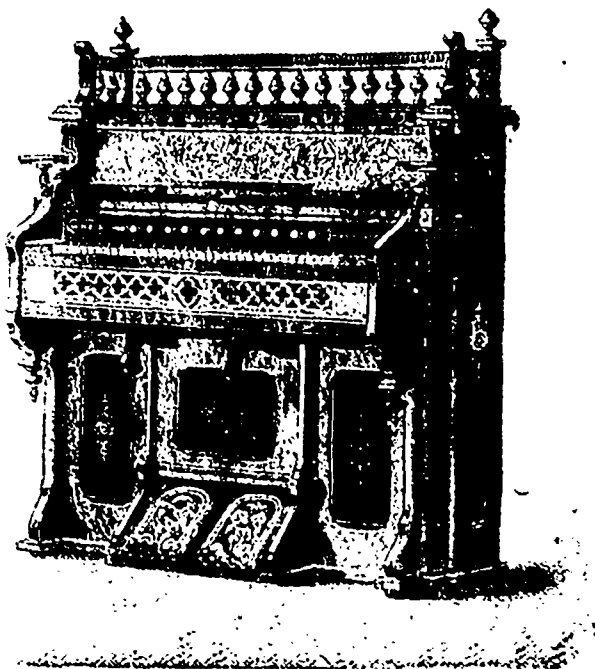


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PERFECT THREADS AT ONE CUT.

## Reece's New Screw Plates.



CUT SHOWING SIZE C COMPLETE IN BOX

Size C cuts  $\frac{1}{4}$ , 5-16,  $\frac{1}{2}$ , 7-16,  $\frac{3}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$  inch.  
Price, complete, \$20.

SIZE A, SAME STYLE.

Cuts  $\frac{1}{4}$ , 5-16,  $\frac{1}{2}$ , 7-16 and  $\frac{3}{4}$  inch.  
Price, complete, \$15.

SIZE B, SAME STYLE.

Cuts  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$  and 1 inch.  
Price, complete, \$21.

SIZE D, SAME STYLE.

Cuts  $\frac{3}{8}$ , 7-16,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 and 1 inch.  
Price, complete, \$25.

SIZE E, SAME STYLE.

Cuts  $\frac{1}{4}$ , 5-16,  $\frac{3}{8}$ , 7-16,  $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $\frac{1}{2}$  and 1 inch.  
Price, complete in box, \$20.

ALL OTHER DIES AT CORRESPONDING PRICES.

We furnish Collet and Die same as used in our Reece's  
New Screw Plate, to fit stocks B, D and large C stock,  
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Screw Plate.

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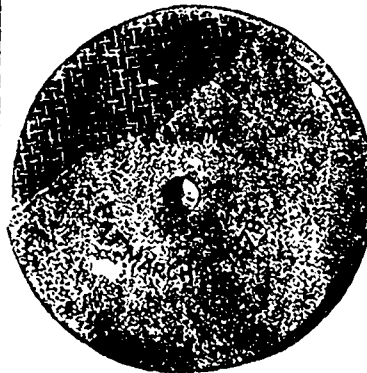
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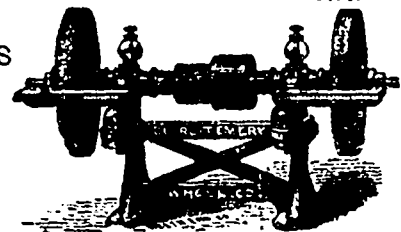


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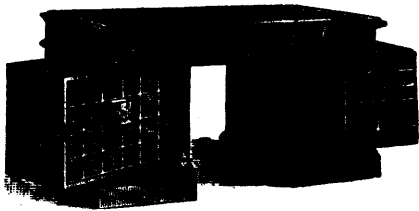


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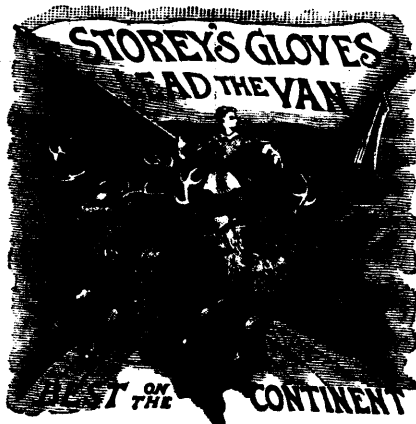
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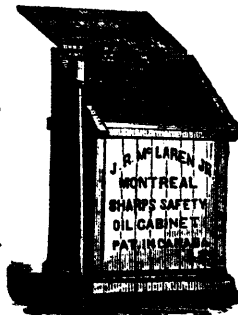
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