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AND INDUSTRIAL WORLD

DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

*THE MORE COUNTRY PRODUCES THE RICHER IT IS*

*NATION THAT MANUFACTURES FOR ITSELF PROSPERS*

Vol. 16. TORONTO, MARCH 1, 1889. No. 5.

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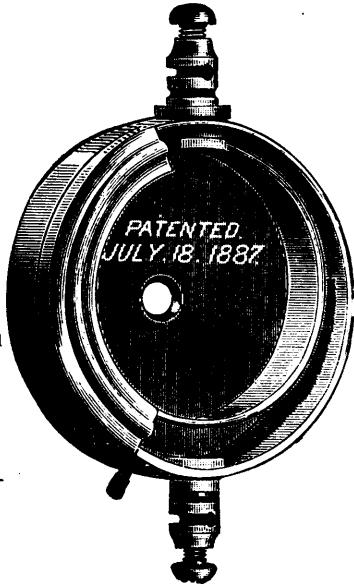
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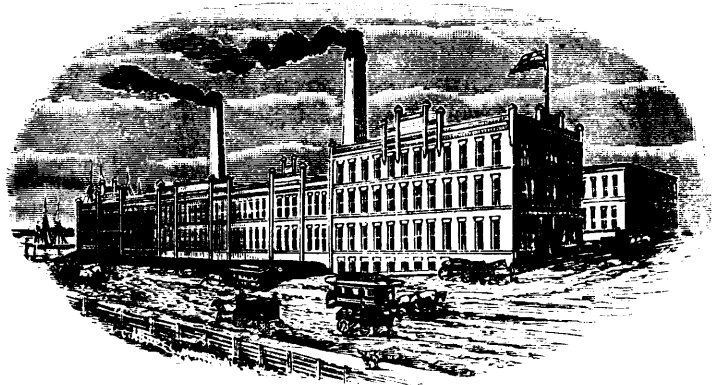
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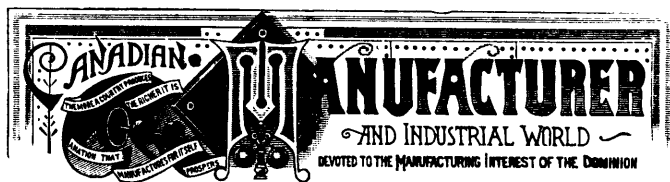
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MR. FREDERIC NICHOLLS is Secretary of  
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His Office is at the Publication Office of the  
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6 Wellington Street West, Toronto.

#### CANADIAN MANUFACTURERS' ASSOCIATION.

THE fourteenth annual meeting of the Canadian Manufacturers' Association will be held at their offices, 6 Wellington Street, West, this city, on Thursday, March 7, instant, commencing at the hour of 2.30 p. m. The proceedings will be of the usual routine character, such as the presentation of reports, election of officers, and a discussion of matters of general interest. In the evening the members and invited guests will enjoy their customary dinner at the Queen's Hotel.

#### THE WOOLEN MANUFACTURERS.

Recently a deputation of woolen goods manufacturers waited upon the Minister of Customs, at Ottawa, to urge an increase in the duty on imported woolen goods, whereupon and immediately a deputation of importers and jobbers of such goods waited upon the Minister to protest against any increase in the duty being made. The manufacturers represented that the shoddy cloth now imported is made so much lighter than was formerly the case that it is possible to undersell the home product, the duty remaining as it is. The importers favor the existing situation, and view with pleasure the fact that while the importations of foreign woolens are abnormally large, the woolen manufacturing industry in Canada is in a wretchedly depressed and distressed condition. The Government seem to be more inclined to please the importers by abstaining from raising the duty than to assist the manufacturers, some of whom think that it will be only a matter of time when their mills will be forced to shut down and the employes thrown out of work.

There seems to exist some misunderstanding between the manufacturers and importers and jobbers which, if not satis-

factorily arranged, will bring about a state of affairs that might be regretted later on. It is well known that the manufacturers labor under very great disadvantages in conducting their business, and the tariff matter is perhaps not the greatest. Under the most favorable circumstances, with the tariff standing as it now does, they are seriously handicapped by the greater cheapness of money and the very low price of labor to foreign manufacturers; but even this might be successfully battled against if a more favorable condition prevailed at home regarding the marketing of their products. As a rule the same men, or class of men, who import foreign woolens also handle the products of Canadian mills. The foreign goods are usually bought on short time, while by the prevailing unwise system of dating ahead the Canadian manufacturer rarely ever sees a dollar of the proceeds of the sale of his goods until a year or more after they have been shipped from his mill. It may be that this method of doing business is the result of too great anxiety to sell goods; but whatever the cause, it is certain that the jobbers who handle them, work the method unsparingly and unremittently to their own advantage, seemingly indifferent of the welfare of the manufacturers.

Of course this condition cannot last forever, nor should it: and in view of the fact that no relief seems probable through favorable legislation at the present session of Parliament, the manufacturers must adopt some scheme by which they may be saved from annihilation between the upper millstone of foreign competition, and the nether of adverse business methods and the hostility of importers. It is whispered, very gently of course, and *sub rosa*, that some action is in contemplation looking in this direction; the idea being for the manufacturers, avoiding the jobbers, to go directly to the trade and sell their goods. It is argued that this would effect several much to be desired things. It would save the profit that now goes to the jobber; it would bring the products of Canadian mills more prominently to the attention of Canadian buyers and consumers; it would "shake" the side-by-side competition with foreign goods, which are generally of inferior quality, and the suppression and keeping in the background of home-made goods when both sorts are held by the same jobber; it would release the manufacturer from thralldom to those who would rather see him sink than swim, and it would give him his money for his goods on just as short time as to the jobber when the sale is effected through him. It would be a new phase in Canadian mercantile life to see drummers from Canadian mills swarming all over Canada selling direct to dealers and without the intervention of the jobbers.

#### BUSCOMBE VS. TRADES UNION.

READERS of this journal have been kept posted regarding the outrageous tyranny practised by the Bricklayers' and Masons' Union, of Hamilton, against Buscombe, a non-union bricklayer of that city. The matter culminated last April when Buscombe caused the arrest of David R. Gibson, William Mitchell and William Littlejohn, members of the union, on a charge of conspiracy. The Grand Jury of the Hamilton court found a true bill against these men, and on their trial they were convicted of the offence and sentenced to terms of imprisonment as punishment therefor. The case was appealed to the Court of Queen's Bench, and a final hearing thereon was had

a few days ago, His Lordship, Chief Justice Armour, deciding that there had been no error in the lower court, and that the judgment of the Hamilton court must stand.

Following is a synopsis of the report in the case :—

The defendants William Mitchell, William Littlejohn and David R. Gibson were tried upon an indictment for unlawfully conspiring, combining, confederating and agreeing together to injure one Edward Buscombe in his trade of a bricklayer and mason, and to prevent him from carrying on his trade. Upon this indictment the jury found all three defendants guilty, and the Chairman of Sessions refused a motion to quash.

The questions of law referred to the court were whether the indictment should have been quashed on the ground that it was vague and uncertain, and did not sufficiently set out any charge on which the defendants ought to have been convicted of conspiracy; and whether, on the evidence, the defendants could have been lawfully convicted of conspiracy, notwithstanding R. S. C. ch. 173 sec. 13.

The defendants were members of the Bricklayers' and Masons' Union, No. 1, of Hamilton, and Buscombe was a bricklayer employed as a day laborer by the corporation of the city of Hamilton, and acting under the City Engineer as foreman in the construction of sewers. A man named Piggott had a contract with the corporation for the construction of a new City Hall; it was a private contract, and the city had no control over it except to see that it was performed. Buscombe was not in Piggott's employ, but in that of the city; he had at one time belonged to a union in Buffalo for about three weeks, when he ceased to be a member. The previous Fall the city was building a bell tower, and this union had withdrawn its members from work at the bell tower until Buscombe should be suspended from his employment by the city; and Buscombe was suspended under this pressure in order that the city might get on with the bell tower. At a meeting of the union held on the 19th of April, 1888, at which 40 or 50 members were present, the defendant Mitchell moved and the defendant Littlejohn seconded a resolution to the effect that no member of the union should be allowed, under the penalty of \$50, to work either on the new City Hall or any other city work until such time as Buscombe should be discharged from the corporation. The defendant Gibson spoke in favor of the resolution.

When the case was tried a couple of witnesses swore that the resolution was passed at a meeting of the union, and about twenty-one witnesses for the defence denied the statement. After the jury was out half an hour it returned with a verdict of guilty against all the defendants.

Chief Justice Armour, in giving judgment, first called attention to the irregular way in which the case was reserved—being to the Queen's Bench Divisional Court, instead of to the Justices of the Queen's Bench Division—and the Court being asked to say whether, on the evidence, the defendants were lawfully convicted, while the whole of the evidence was annexed to the case, instead of the material facts being made part of the case.

Dealing with the next point, he showed how R. S. C. ch. 174, sec. 259, provides for the reservation "of any question of law which arises on the trial," and said that although the sufficiency of an indictment had frequently been determined in arrest of judgment upon a case reserved, yet he had not found a decision where a case had been reserved as to the sufficiency of an indictment upon a motion to quash it.

The learned Chief Justice proceeded to the merits of the case, and spoke of the statute R. S. C., ch. 173, sec. 13, which provides that "in this section the expression 'trade combination' means any combination between masters and workmen, or other persons for regulating or altering the relations between any persons being masters or workman, or the conduct of any master or workman in or in respect of his business or employment, or contract of employment or service; and the expression 'act' includes a default, breach or omission. (2) No prosecution shall be maintainable against any person for

conspiracy to do any act or to cause any act to be done for the purposes of a trade combination, unless such act is an offence punishable by statute."

The Chief Justice said: "The members of this union were a combination of workmen, and as such they had the right under the first branch of this section to regulate or alter the relations between themselves as workmen, or the conduct of any one of themselves as such workmen, in or in respect of his business or employment, etc.

"But what these defendants and the other members of this union present at the meeting referred to conspired to do was not within any of the purposes of their combination permitted by law, nor was it even within the purposes of their constitution and rules.

"The constitution of all secret societies such as this union is professedly benevolent, but the use made of these societies by those who control them is frequently malevolent, and so it was in this case.

"The members of this union, actuated by malice against Buscombe, had the previous Fall deprived Buscombe of his employment by withdrawing their men from work upon the bell-tower. These defendants and the other members of the union, present at the meeting referred to, actuated by malice against Buscombe, conspired and agreed together to again deprive Buscombe of his employment and to injure him.

"The authorities leave me no room to doubt that the defendants in conspiring as they did to injure Buscombe, by depriving him of his employment, were guilty of an indictable misdemeanor, and I am clear that what they thus conspired to do was not for the purposes of their trade combination within the meaning of the statute.

"The evidence amply justified the conviction, and the conviction was right and must be affirmed.

"I refer to Reg. vs. Parnell, 13 Cox 508; and to Slate vs. Stewart, 59 Vermont, in which latter cases all the cases on the subject of such a conspiracy as this are referred to; and to Mogul S. S. Co. vs. McGregor, 21 Q. B. D. 544."

The other judges expressed their concurrence, Judge Falconbridge, however, somewhat doubting that the court had not power to entertain the question of sufficiency of the indictment in point of law.

### ELECTRIC LIGHTING.

As the question of electric lighting is at present a live issue in this city the following information from *Practical Electricity* of last month, may be considered of interest :—

"The decision of the United States Supreme Court in the case of the Bate Refrigerating Company against Geo. H. Hammond & Co., created a flurry in the stock of the Westinghouse Company on the Pittsburgh Exchange on the 24th inst, it being believed by some that the decision affects suits pending between the two electric companies. There was intense excitement in the Pittsburgh stock market. Westinghouse stock was beaten down \$2.50 per share. As soon as the market opened, holders were ready to sell, and 600 shares were dumped at once, and about half the amount sold was disposed of at \$35¾. The Westinghouse people claim that the scope of the decision has been exaggerated."

The *Engineering and Mining Journal* furnishes the following quotations of electric light stocks for the week ending January 26th, 1889 :

Stocks	Par Value	Market Price
Edison	\$100	\$195 to \$202
Edison Illuminating	100	96 98
Brush	100	80 95
Brush illuminating	100	85
United States	100	25 35
United States Illuminating	100	40 50
Daft	100	40 60
Consolidated	100	48 50

## EDITORIAL NOTES.

BUSCOMBE is on top.

THE law of the land is a greater power in Canada than Bricklayers' and Masons' Union No. 1, of Hamilton, Ont. Chief Justice Armour says so.

UNLAWFULLY conspiring, combining, confederating and agreeing together to injure an innocent man, is, in Canada, punishable by imprisonment. Chief Justice Armour says so.

Good British common sense; good British law and a good British judge decide that the liberty and rights of the good law-abiding citizen must and shall be respected. And for this God be praised.

AND now like a pack of kicked curs, the tyrants of the union who would cause an honest man to starve, droop their tails between their legs and go crouching to prison. Justice says they must go.

JUDGE Bradley of the New York Supreme Court has decided, in the case of the Cigarmakers' International Union vs. Fisher, that the members of the International Union may devise a trade-mark label to designate their labor, and that such a label is entitled to protection.

As a result of the recent interview of the Canadian book publishers with the Government, it has been decided to publish in the *Canada Gazette* weekly an announcement of the copyrights issued by the Department of Agriculture, and in this way customs collectors will be notified what works have been copyrighted.

AN interesting ruling was made by United States Circuit Judge Lacombe, at New York, in the case of Luckemeyer *et al. vs. Magone*. This was an action brought to recover excessive duty alleged to have been collected on an assignment of woolen goods. The goods contained from 1 to 4 per cent. of cotton in the warp, the cotton and wool being so mixed that the former could not be detected except by chemical analysis. The question was whether the goods should be classed as mixed goods paying a duty of 5c. per yard, or as all-wool dress goods paying duty of 9c. per yard, on the ground that "threads of other material" were mixed with the wool for the purpose of changing the classification. The judge instructed the jury that "threads of other material" as used in the tariff law meant "threads wholly of other material," and the jury gave a verdict for the plaintiff.

A FEW days ago a delegation of Ontario druggists presented a petition to the Provincial Legislative Assembly, affecting their business. It was in the shape of a bill which had been framed by the Druggists' Association, and which they desired to have enacted into a law. It asked that no one be allowed to engage in or take part in druggist business unless he is a qualified chemist and druggist. The bill was referred to the members of the medical profession in the house. They, however, after giving consideration to the measure, expressed the

opinion that it would prevent outside parties from putting capital into the drug business, and prevent thoroughly capable chemists and druggists with small capital from receiving the support of their friends in engaging in the business. These are the sort of men who want the earth. They should resolve themselves into an assembly of Knights of Labor.

A NEW application of the building association is in operation in both North and South Carolina. Instead of applying the funds which are raised by paying weekly or monthly dues, to the building of homes, they are used to build and equip factories. In Charlotte, N.C., two mills are now in operation both of which were built upon this plan, the assessments on the shares of one of them being at the rate of 50 cents per week each, and on the other 25 cents. At Rock Hill, South Carolina, and at several other points in that State, mills are being built on this plan. One of the Charlotte companies will have a capital stock when fully paid up of \$125,000, and the other about \$100,000. By this means men find themselves stockholders in manufacturing companies who, perhaps, would never have saved a dollar had it not been for the opportunity this plan afforded of putting by a few dollars each week.

THE United States produced last year 6,490,739 tons of pig iron, the largest quantity yet turned out. Of this, 598,789 tons were charcoal iron, an increase from 578,182 tons in 1887 and 459,557 tons in 1886. That the charcoal iron should have increased so rapidly in the States, ought to set our protectionists explaining why they have failed to set a charcoal iron industry going in Ontario.—*Globe*.

The duty upon charcoal iron imported into the United States is about fifty per cent. higher than upon charcoal iron imported into Canada. Nothing but high protection made it possible for the United States to rival Great Britain in the production of pig iron; and under a similar influence, Canada might and would become proportionately quite as great a producer of charcoal iron as the United States.

IT appears that in this enlightened country books are taxed more heavily than in any other country on earth. Our taxes are partly specific, partly ad valorem. The amount actually paid on all imports of books, dutiable and free together, was \$242,822 on \$1,220,641 of importations. This is twenty per cent. on the value. In the United States the tariff on books is twenty-five per cent., but more than a quarter of the imports come in free. The total American import of books is \$3,707,341, duty \$684,004, or only eighteen per cent. There is no other country than these two countries that has such heavy taxes on knowledge.—*Globe*.

And yet the same books that are published in Great Britain and sold at from two to three dollars each, are published in the United States and sold in Canada for twenty-five cents. If "there is no other country" than Canada and the United States "that has such heavy taxes on knowledge," there is certainly no other country where books are sold as cheap.

THE *Mail* publishes a list of articles regarding which application has been made to the Government to either increase the duty, or to take them from the free list and put them upon the dutiable list. It speaks of the manufacturers of these things as "unhealthy infants," and that "it was intended the pro-



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### And Manufacturers.

We do not profess to make the **VERY BEST BELTING IN THE WHOLE WORLD**, but we claim that we can make as good as any one else, whether English or American or Canadian. Here is one instance. We made a 14 inch Double Driving Belt for Messrs. Hastings & Peterkin's Planing Mill and Sash Factory on Bay Street, Toronto (now occupied by Mr. C. R. Peterkin), in July, 1873. This belt has been in constant use driving the machinery of the whole factory ever since, and is still good.

If you want a really good Driving Belt, or any other Belt, send to us and we will give you one which will give you thorough satisfaction. You will find both our prices and the quality of our goods all right.

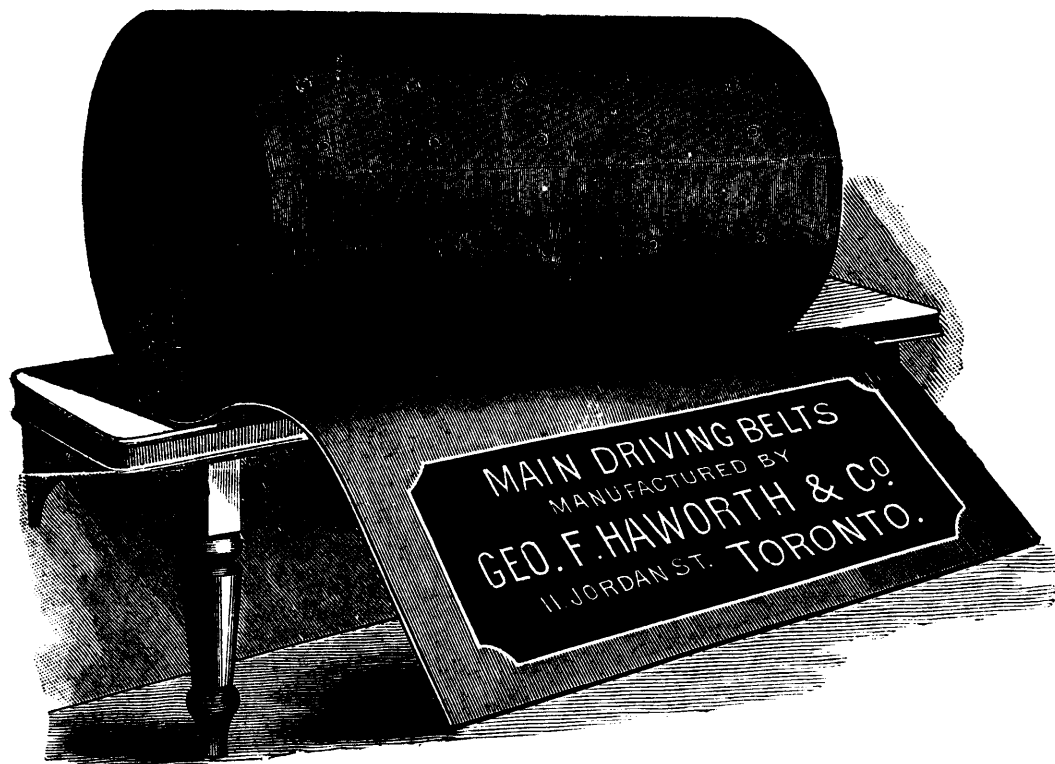
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protective tariff should act the part of wet nurse to these languishing babes, and nourish and strengthen them during the trying period of their infancy." We fail to see how articles on the free list could be brought into the category of "protected industries," for if they could be brought in duty free they certainly were not "protected." Some of the articles regarding which legislation is asked are: Wire ropes for ships, now free, to be made dutiable. When this article was put on the free list it was not manufactured in Canada, but there are now works in Canada where such rope is made, and therefore entitled to protection. To place a duty on rennet extract: This is a new industry and entitled to protection. To increase the duty on certain pluses used as linings for boots and shoes: This is to protect a new industry, not to "pamper" an old one. To place a duty on rubber clothing, now free: This article has never before been manufactured in Canada. To admit mining machinery free into British Columbia is not to "protect" the manufacture of such machinery in Canada; and to remove the export duty on logs is not to show any great favoritism to Canadian saw mills.

REPRESENTATIVE Baker, of Rochester, N. Y., has presented a bill in the United States House of Representatives, which aims to regulate commerce between that country and Canada. It is intended to be a retaliation measure, to punish Canada for arranging her tariff laws to suit herself; and the *Mail* and some other annexation papers publish the bill in full, and give lengthy editorial comments regarding it. There never was a more silly waste of printer's ink and paper than in publishing the stuff; and only those who desire to deceive and frighten credulous readers pretend to attach any importance to it. No matter how much anti-Canadians might desire to have the United States Congress commit such a foolish act as to pass such a law, they know, or ought to know, that the very importance of it would demand and receive more time for discussion than there were days intervening between the time the bill was offered and the close of Congress by limitation on March 4th.

THE Canadian Furniture Manufacturers' Association, which was organized at Guelph, Ont., January 11th, held an adjourned meeting in Galt, Ont., on February 12th, and again adjourned to meet in Toronto, March 5th. The meeting on February 12th was held with closed doors, but it is understood that among the more important matters discussed were that of closer discrimination in giving credits; shortening the time on credits, etc. Also regarding an effort to induce the railroads to allow more favorable transportation rates on the cheaper products of the factories. The by-laws of the Association are to be printed and distributed to the trade, who are to be requested to cooperate with the Association. An invitation is to be extended to all Canadian furniture manufacturers to be present at the March meeting in Toronto. Among the manufacturers present were Messrs. R. Darling, Harriston; T. C. Burr, Guelph; J. Hay, Woodstock; Jas. Whiting, Bowmanville; Thos. Bell, Wingham; M. T. Box, Seaforth;— Baird, Plattsville; Mr. Klippert, Waterloo; Wm. Snyder, Waterloo; E. F. R. Zoelner, Mount Forest; H. A. Simpson, Berlin; Guggisberg Bros., Preston; Mr. Ellis, Hault Mnfr. Co., Ingersoll.

A BILL has been introduced into the California Legislature appropriating a sufficient sum of money with which to purchase jute machinery and erect suitable buildings for the manufacture of jute goods at the California State prison at Folsom. It is argued in behalf of the scheme that a large saving can be made in the cost of production by utilizing the labor of the convicts; and the support of the farmers of the State is asked in urging the measure. There is a jute mill at Oakland, that State, in which a large amount of money is invested, and which produces an excellent article of goods, which is sold at only a small advance upon prime cost, these works giving employment to about four hundred hands. If the California humanitarians carry out their scheme to manufacture jute goods within the walls of the State prison, and by convict labor, no doubt the four hundred free hands at the Oakland factory will be discharged and the works become valueless. It is a repetition of the old, old, story—starve free labor, and make paupers and criminals of them for the sake of teaching manual trades to cut-throats and murderers, so that they may be useful citizens by and by. All the spokes of the wheel are alike.

*The American Manufacturer*, of Pittsburgh, Pa., tells of the arrival in that city of Mr. Edward James, of the Hope Iron and Tin Plate Company, of Tipton, England, who states that the tariff agitation in the United States over the tin plate industry had disturbed the trade in the old country to a great extent. He thought that in the event of the Senate Tariff Act becoming law the concern in which he was interested would be wound up, and his business in the United States was to select a place in which to begin the manufacture of tin plate. He states that in the event of the passage of the proposed Tariff Act, and the establishment of tin plate works in the United States, large numbers of the skilled workmen now employed in the business in Great Britain would seek employment in the new works on this side the water. Speaking of the industry, he said that there are at present 203 mills in Great Britain, where the plates and fine iron are manufactured, and twenty-two mills are idle. He did not care to be quoted on the number of men employed at these mills, but he believed that fully 100,000 are engaged. Most of these men would come to the United States for employment if the industry is shut off by the tariff.

A GRAND opportunity to secure a good billet is offered to Canadian railway men. The Parliament of Queensland recently passed an Act placing the whole construction, maintenance and management of railways under a board of three commissioners. The Government of that colony is desirous of receiving applications from gentlemen competent to fill the positions of chief commissioner, and one of the other commissioners. Full particulars are given in the *Canada Gazette* as to the nature of the duties required. The commissioners will hold office for seven years. The annual salary of the chief commissioner will be £3,000, and of the other commissioner, £1,500. The commissioners are not to engage, during their term of office, in any employment outside the duties of the position. The Government railways will be invested absolutely in the commissioners, and the expenditure of money for railways appropriated by Parliament is to be under their direction and control.

The subject of construction of new lines will form an important part of their duties, and they will also have to look after maintenance, inspection, alterations and repairs and temporary roadways. The Agent-General of Queensland, at London, Eng., will receive applications up to March 29th.

THE *Mail* speaks of the protected industries of Canada as a lot of "unhealthy infants," who are "continually crying for more nourishment," saying that "the older they become the louder their demands." It says that "during every session of Parliament for the past ten years the Government has been besieged by manufacturers asking for increases in the tariff, the number of such requests growing each year;" and that "this year the procession of manufacturers and others to the Mecca of the Canadian protectionist has been never ending." It then gives a list of articles in the duty upon which an increase has been asked, or in the case of which removal from the free list is desired. This list contains twenty items, but some of these should not be classed as manufactures, seeing that the reference is to small fruits, nursery stock, large fruits, vegetables, and collie dogs. The *Mail's* editorial is based on a letter of its Ottawa correspondent, in which is given a list of articles for changes of the tariff upon which the Government had been petitioned. This list as printed in the *Mail*, covers some forty six articles, and an examination of it shows that twenty of the applications were either for reductions in duty or to have dutiable articles placed upon the free list. The *Mail*, however, does not have the honesty to state this fact.

#### SPECIAL ADVERTISEMENTS.

TISDALE'S BRANTFORD IRON STABLE FITTINGS.—We lose no job we can figure upon. Catalogue sent free. The B. G. Tisdale Co., Brantford, Canada.

**KNITTING** **CREELMAN BROS.,** **MACHINES.**  
Georgetown, Ont

THE *Iron Trade Review*, Cleveland, Ohio, has sent us a chart in which is illustrated the Lake Superior iron ore production for the past thirty-three years. There are the Marquette, Vermillion, Menominee and Gogebic ranges, and the names of all the mines in these ranges are enumerated, and the output of them during the years mentioned, the figures for each mine being interesting and valuable for reference. The output of these mines during 1888 was over 5,000,000 tons, and the grand total output for the whole period over 40,000,000 tons.

*Hardware* is the latest and newest visitor to our exchange table. As its name indicates, it aspires to be "the organ of the wrought, cast, stamped, sheet and spun metal trades." It is got up in fine style and taste, indicating that its projectors have good ideas of what such an organ should be. It is published weekly in Toronto, by Mr. J. B. McLean, a gentleman of much experience. Welcome, brother, there is plenty of room—at the top.

*Comments on Canada*, by Charles Dudley Warner, accompanied by a striking portrait of the Right Hon. Sir John A. Macdonald, appears in *Harper's Magazine* for March, 1889. This article describes the topography, climate, system of government of the Dominion and of the provinces, and the political issues; and the author gives his views on the Canadian sentiment towards England; on the French Canadian element; on retaliation and commercial reciprocity, annexation and independence, and the future of the Dominion. Mr. Warner is an accurate and sympathetic observer, and his conclusions will doubtless command the attention which they deserve. This number also contains beautifully illustrated articles on the Institute of France; Vienna; Norway and its People; William M. Chase, Painter, etc. For sale by all book-sellers.

## Manufacturing.

This department of the "Canadian Manufacturer" is considered of special value to our readers because of the information contained therein. With a view to sustaining its interesting features, friends are invited to contribute any items of information coming to their knowledge regarding any Canadian manufacturing enterprises. Be concise and explicit. State facts clearly, giving correct name and address of person or firm alluded to, and nature of business.

MR. S. S. Clutton is to rebuild his woolen mill, recently burnt at Alymer, Ontario.

OVER \$3,000 have been subscribed in aid of the erection of a flour mill at Glenboro, Man.

MR. JOHN HUDSIN's shingle mill, at Feversham, Ont., was destroyed by fire, Feb. 7.

THE Flatt & Bradley Lumber Company, Hamilton, Ont., have been incorporated, with a capital stock of \$250,000.

MESSRS. WELSH, RITHEL & Co., Victoria, B.C., are connected with a sugar refinery about being built in that place.

THE foundry of Messrs. J. S. Bates & Son, at Smithville, Ont., was destroyed by fire Feb. 12th; loss, about \$4,000.

THE city council of Westminster, B.C., are considering the advisability of offering a bonus for a flour mill at that place.

THE Eau Claire Lumber Company, Calgary, Man., will build a flour mill at that place in connection with their lumber mills.

RIDGETOWN, Ont., is now illuminated with electric light, produced by the Reliance system, driven by a Leonard-Ball steam engine.

THE Hudson's Bay Company will complete the grist mill at Fort Ellice, Man., which was partly constructed a few years ago, but never completed.

THE Lincoln Paper Mill Company will erect a stone pulp mill in Merritton, Ont., between locks 7 and 8, in place of the one lately destroyed by fire.

THE Port Elgin Button Company, Port Elgin, Ont., will be incorporated with \$10,000 capital stock, for the purpose of manufacturing buttons.

THERE is some likelihood of a flour mill run by the water-power of the White Mud, being built at Arden, Manitoba.—*Portage, Manitoba Review*.

MR. THOMAS MCNEELY, Ladner's Landing, B.C., is endeavoring to raise a stock company for the purpose of manufacturing beet sugar at that place.

MESSRS. PERINE & Co., Doon, Ont., manufacturers of flax yarns, etc., have \$137,000 invested in their mills and business, and give employment to 160 hands.

THE Winnipeg, Man., Street Car Company are considering the advisability of running the street cars by either cable or electricity, in place of horses, as now used.

AN Edison electric light company, with a capital of \$250,000, is being formed in London, Ont. The company will confine its attention to the incandescent system.

MR. W. D. ATWELL is negotiating with eastern makers with the view of building a match and box factory at Norman, during the coming summer.—*Kewatin Hustler*.

THE Vancouver Street Railway Company, Vancouver, B.C., has been organized, with \$30,000 capital stock, and will build, equip and operate a street railway in that city.

THE McLaren Manufacturing Company, Montreal, has been incorporated, with \$100,000 capital stock, for the manufacture and sale of articles made from wood, metal, hair, etc.

THE Mudge Paper Clothing Company has been formed in Detroit, Mich., with \$75,000 capital stock, to manufacture clothing, bedding, etc., out of paper, by a new process.

THE Martin Manufacturing Company, Whitby, Ont., manufacturers of saddlery and other hardware, are doing a flourishing business in their new works. They employ sixty hands.

THE capital stock of the Johnson Magnetic Iron Paint Company, Montreal, has been increased from \$60,000 to \$200,000, and the name of the company changed to the William Johnson Company.

THE steam pump works of the Geo. F. Blake Manufacturing Company, Boston, Mass., were damaged by fire to the extent of about \$50,000, February 16. The works are again in full operation.

THE Letourneux Fils & Company, Montreal, have been incorporated, with \$100,000 capital stock, to carry on trade in iron, hardware, paints, oil, varnish and all other trades pertaining thereto.

MESSRS. J. Y. SHANTZ & SON, button manufacturers, whose Canadian works are at Berlin, Ont., suffered the loss of their American works in the big fire in Buffalo, N.Y., a month ago; loss, about \$18,000.

MR. ALEXANDER GIBSON, the big lumberman of New Brunswick, will associate with his sons and others, forming a stock company with \$3,000,000 capital, for the purpose of manufacturing lumber, cotton goods, woolen goods, etc.

THE item of \$67,000 for Intercolonial works at Moncton, N.B., which appeared in the estimates as brought down to Parliament, is for machine shop enlargement and improvement, and for the erection of a new round-house.

MR. M. T. BUCHANAN, Ingersoll, Ontario, is manufacturing a common-sense sheaf lifter, or hay fork, for which he claims the utmost excellence. It is made of steel and malleable iron, and his output is about 2,000 of them a year.

MR. JAMES ROSS, of Montreal, who built some of the most difficult sections of the Canadian Pacific railroad, has contracted with the Chilian Government to construct 700 miles of railway in that country, involving an outlay of \$22,000,000.

MESSRS. JOHN MORROW & Co., Ingersoll, Ontario, are manufacturers of standard cap and set screws, cylinder screws, machine studs, studs and rolls, screws for pianos, and every other kind of screws or nuts, cold pressed or case hardened.

THE Shumaker Manufacturing Company, of Silver Creek, N.Y., will establish branch works at St. Thomas, Ont., for the manufacture of flour milling machinery, giving employment to twenty-five hands, provided suitable inducements are offered.

S. W. VANLUVEN is around getting signatures to a petition addressed to the Minister of the Interior, asking for a bonus of \$1,500 to erect a custom grist mill at the South Branch, in the Prince Albert district, Saskatchewan.—*Winnipeg Commercial*.

THE Barnum Wire and Iron Works at Walkerville, Ontario, have just completed the large contract they had with the Government for the work on the public buildings in Ottawa. The staircase is tenflights in length and the longest in the Dominion.

MESSRS. MITCHELL & BUCKNALL are adding to the machinery in their mill at Millwood, Manitoba. They are adding four new sets of rolls, centrifugals, purifiers, shorts-dusters, etc. This will increase both the yield of flour per bushel and capacity of the mill.

A FIRST-CLASS flour mill will be erected at Cartwright, Man. A joint stock company is being organized for the purpose. Messrs. R. A. Sheppard, John Gimby, John Wallace, Geo. B. Wray, A. Davidson, T. S. Mennary and E. D. Coates will be the incorporators.

RECENTLY the New Glasgow Steel and Forge Company, New Glasgow, N.S., asked for bids from stockholders for \$25,200 reserved stock, and when the applications were opened it was found that \$80,000 worth of stock had been asked for. The stock is at a premium.

MESSRS. EBY, BLAIN & Co., Toronto, are talking of illuminating their establishment with electric light on what is known as the primary battery system. They are now testing this system, and will have control of it for the whole of Canada if it is as great a success as it is said to be.—*Toronto Grocer*.

MR. ALLAN BOWMAN, Preston, Ont., manufacturer of fine mouldings, etc., is having a lot of new and improved machinery made for his works by Messrs. Whitelaw & Co., of Woodstock, Ont. A description of Mr. Bowman's works and of the goods he manufactures was given in this journal in September last.

WE are informed that a large New Jersey smelting firm will erect a smelting and reducing plant here that will cost over one hundred thousand dollars, provided a railway is built to the mines and a bonus of \$5,000 a year, for five years, or a guarantee of 5,000 tons per annum for five years, be given them.—*Port Arthur Herald*.

MESSRS. EDMUND COLE, of Montreal, and James Crothers, of Bedford, Que., will establish a sewing machine factory at Terrebonne, Que., a bonus of \$25,000 having been voted by that town. The new concern will be known as the New Crown Sewing Machine Company, and will give employment to about seventy-five hands.

MESSRS. JAMES HARRIS & Co., of St. John, N.B., are building fifty flat cars for the I.C.R. and seventy-five flat cars, fifty-five box

cars and twenty cattle cars for the Quebec Central Railway. They are also converting thirty flat cars into box cars for the Temiscouata Railway. The capacity of their works is three box cars or four flat cars daily.

MR. A. E. WHITEHEAD, of Montreal, son of the late manager of the Hochelaga Cotton Co., is about to start a new cotton mill at Beauharnois. The mill will cost about \$100,000, and have a capacity of 250 looms. The building operations will be begun as soon as weather will permit. The new mill is to be engaged entirely on grey goods for the China trade.—*Journal of Fabrics*.

THE big natural gas well at Kingsville, Ont., recently alluded to in these pages, is attracting much attention. Mr. B. W. Hawes, of Toledo, Ohio, was at Kingsville a few days ago with the view of establishing a glass factory in the vicinity. He states the region affords an inexhaustible supply of suitable sand, and the natural gas is just what he will require in his manufacturing.

WE are requested to state that Messrs B. Greening & Co., proprietors of the Victoria wire mills, Hamilton, Ontario, have incorporated their business as a limited liability company, under the name of the B. Greening Wire Company, limited. The whole of the shares of the new company have been taken up by the late firm and management, and the management remains unchanged.

A SYNDICATE of Toronto gentlemen have secured control for Canada of all the Potter-Compton Company's electric inventions, and are organizing a stock company for supplying them throughout Canada. The Potter-Compton Company have their headquarters in New York City, and Mr. Compton, the general manager of it, was in Toronto a few days ago explaining the merits of these inventions.

MESSRS. ROBIN & SADLER, leather belting manufacturers, of Montreal and Toronto, have just completed another large driving belt for the works of the Royal Electric Company at Montreal, to be used on their new double engine. This belt, which is of double thickness, twenty-eight inches wide and 100 feet long, is another evidence of this firm's ability in their special line of manufacture.

MESSRS. DICK, RIDOUT & Co., Toronto, announce that they possess unsurpassed facilities for storing, handling and forwarding goods of all descriptions—merchandise, furniture, etc., bond or free. In their warehouses they have separate locked compartments for each lot of household goods and merchandise. There are three shipping exits, and every facility in connection with the business.

MESSRS. J. MURCHIE & SONS, of Edmundston, N.B., will take the rotary saw out of their mill and replace it with a gang. They will also light their mill with electric light, and will supply any parties in the village with it who may want it. They have recently built another mill adjoining their old one, and have put in five more shingle machines, and their output next summer will be largely increased.

AT the recent annual meeting of the Dominion Barb Wire Company, held in Montreal, it was reported that the capacity of the company's works had recently been nearly doubled. The competition in the trade by German manufacturers was complained of. Mr. F. Fairman was again chosen president and manager, Mr. James Cooper, vice-president, and Mr. James C. McCormick, secretary and treasurer.

THE Ames Holden Co., boot and shoe manufacturers, have bought out the Belmont shoe factory at Victoria, B.C. A short time ago the company bought out Heathorn's shoe factory at the same place. These were the two principal shoe factories of Victoria. It is claimed that the heavier grades of boots, such as are used by the miners and Indians of the Pacific coast, can be manufactured more cheaply at Victoria than at Montreal. Chinese labor is largely used.

THE J. B. Armstrong Manufacturing Company, Guelph, Ont., call attention to the Daisy gig, manufactured by them. This vehicle is a handy, light, low-setting and durable two-wheeler for business and pleasure purposes. The construction embodies a combination of the Armstrong, steel-heeled shaft, and tapered front and back mainspring, and provides best riding qualities free from horse motion. It is a neat and stylish vehicle, sold at a very reasonable price.

THE Globe Furniture Company, of Northville, Mich., manufacturers of church and school furniture, etc., will probably start a Canadian branch of their works at Windsor, Ont. They propose from the start to employ not fewer than 100 persons in supplying Canadian demands. The firm desires to secure the Canadian trade, and has concluded that it would be cheaper to manufacture in Canada than continue paying 35 per cent. duty on their foreign made articles.

MR. R. MCKECHNIE, of Dundas, has purchased from D. W. Clendenan four acres on Keele street, a little north of Carlton station, on the Grand Trunk railway, and proposes erecting a large foundry and tool factory. He is bound by agreement to commence building within three months, and the building is to be at least 250 feet long, by 80 feet wide, and two stories in height, and will employ about 200 hands. It is said that several other factories have been located recently, but negotiations are not finally closed as yet. —*Empire.*

MESSRS. GEO. ANDERSON and R. H. Coggon, engine drivers on the I. C. R., have invented a most ingenious stove, designed for camping out. It is made of sheet iron and is fastened together by bolts in such a way that in two minutes it can be folded together in a package that may be carried under the arm without the slightest inconvenience. The links of pipe are also of different sizes so that they may be carried one within the other. The stove was made by Mr. Rowe, of Moncton, and is now at his shop. For fishing and lumbering parties it will be just the thing and meet a long felt want. —*Halifax Critic.*

THE Barrington Wool Manufacturing Company, whose factory is at Barrington, N.S., was formed in 1881 for the purpose of manufacturing union and all wool homespun and yarns, but they do not make any shoddy goods. The main building is 50x30 feet, with dye house 30x25 feet, the machinery being driven by water-power. The machinery consists of two Crompton and one Knowles' looms, one set cards, spinning jack, 200 spindles, washing apparatus, dyeing apparatus, etc. This is said to be the only factory of this kind on the south shore of Nova Scotia between Cape Sable and Cape Canso.

FIRE did considerable damage in the works of Messrs. Peck, Benny & Co., Montreal, February 16th. Under date of February 18th the firm issued the following special notice, which explains the situation:—"We beg to notify our customers that the recent fire at our works will in no way interfere with the prompt shipment of all goods manufactured by us, the damage by fire being confined to our horse-nail factory, which we expect to have running in the course of two weeks, our rolling mills, cut nails, spike, tack, wire nail works and horse-shoe works being uninjured and running as usual."

THE attention of manufacturers and any who may be interested is requested to the advertisement, in another column, of Mr. John Livingstone, trustee of the Joseph Hall Machine Works, late of Oshawa, Ont., who offers for sale an important and valuable line of iron and wood working machinery, steam-engine, pump, portable engines, agricultural machinery, horse-powers, etc. These articles, which are offered at sacrifice prices, are to be seen in the Toronto Bridge Building, this city. Further information may be had from Mr. Livingstone, whose office is at 31 York Chambers, Toronto.

MESSRS. ADOLPH NATHAN, Otto W. Mysenburg and Siegfred M. Fischer, of Chicago; R. B. Angus, of Montreal, and E. B. Osler, of Toronto, are seeking incorporation as the Street Stable Car Company of Canada, with power to manufacture, sell or lease improved stock cars and apparatus for feeding, watering and loading cattle on cars; and the purchase and sale of patent rights for the manufacturing of such improved stock cars and apparatus for feeding, watering and loading cattle on cars, etc. Toronto is to be the headquarters of the new company, and the capital stock is placed at \$500,000.

MESSRS. NICHOLLS & HOWLAND, of the Permanent Exhibition, Toronto, announce that the handsome and durable fire escapes erected on the Walker House, Rossin House, Barber & Ellis, C. P. Reid & Co., A. Jardine & Co.'s, etc., etc., in this city, have been constructed according to specifications, as set forth in Batten's several patents. Messrs. Nicholls & Howland are the sole manufacturers of this class of fire escapes in Ontario; and, in addition to those instanced above, which have been already erected, they are filling orders for a number of other well-known hotels, including the Queen's and the York hotel.

THE main building of the furniture factory of Messrs. Broadfoot & Box, Seaforth, Ont., is of brick, 132x33 feet, and four stories high, with an adjoining building 114x45 feet. Power to drive the machinery is furnished by a sixty-five horse-power engine and an eighty horse-power boiler. The boiler room is brick, 30x45 feet, and an interesting machine here is one manufactured by Goldie & McCulloch for supplying hot air to the drying-kiln. The firm manufacture a general line of furniture, including parlor and bedroom suites, sideboards, secretaries, centre tables, and other articles of luxury and usefulness.

## HENRY PORTER,

MANUFACTURER OF

# LEATHER

# BELTING

432 to 442 Visitation Street, Montreal, Que.

AND  
36 FRONT STREET EAST, TORONTO.

Mill owners will do well to write for estimates before placing their orders.

## Standard Drain Pipe

I am prepared to supply in any desired quantities first-class **CANADIAN SALT GLAZED VITRIFIED FIRE CLAY DRAIN PIPE**, manufactured by the Standard Drain Pipe Company, of St. John's, Que.

ROBT. CARROLL, 66 Adelaide St. West,

Telephone No. 208 **TORONTO.**

## G. & J. BROWN M'FG CO.

(LIMITED),

BELLEVILLE, ONT.

Engineers, Machinists, Boiler Makers,

Foundrymen and Bridge Builders.

**RAILWAY and CONTRACTORS' SUPPLIES A SPECIALTY.**

Frogs, Diamond Crossings, Switches, Hand Cars, Lorries, Velocipede Cars, Jim Crows, Track Drills, Semaphores, Rail Cars, Double and Single Drum Hoists, etc., etc.

## MUNDERLOH & CO.

MONTREAL,

SOLE AGENTS FOR THE DOMINION

OF

Meyer's Watchman Control Clock.

REDUCED PREMIUMS ON FIRE INSURANCE  
SECURED BY USING THIS CLOCK.

Description and particulars on application.

Messrs. NEWLANDS & Co., Galt, Ont., are manufacturing a perfect imitation of buffalo robes, which are durable, warm and handsome. The pelt, or back of these goods, is of waterproof material, and lined with lambskin, which makes it superior to sealette or drugget. They are made in three sizes and two grades—extra heavy and medium weight. The Princess baby carriage rug is a specialty, also made by this firm. They are light, warm, elegant and produced in various bright shades, just the thing for children's sleighs, carriages and perambulators. Messrs. W. H. Storey & Son, manufacturers of gloves, mitts, etc., Acton, Ont., control the exclusive sale of these goods in Canada.

Messrs. BINGHAM & WEBBER, the popular job printers of Toronto, are in receipt of the following letter from Messrs. Frost & Wood, manufacturers of agricultural implements, Smith's Falls, Ont.: "We have received the parcel of 1000 catalogues and already the most of them have been mailed; and we have to express our satisfaction with the job done. The catalogues are admired by all who have seen them, and we are also pleased with your promptness in furnishing the job so soon after the final proofs were forwarded to you. Will forward copy for French circulars shortly." Messrs. Bingham and Webber inform us that at this time they have upwards of \$14,000 worth of catalogue work under contract.

THE J. B. ARMSTRONG Manufacturing Company, Guelph, Ont., received high honors at the recent Centennial International Exhibition, at Melbourne, Australia. In the special reports published in the Australian *Ironmonger*, just received, in the Carriage and Carriage-ware department, in "Springs," sub-department, this concern were awarded first prize, the report stating, "The jury recommend the superior excellence of these springs. The one-leaf spring is the best spring ever brought under their notice, and equal in strength to any ordinary five-leafed spring, being strong and elastic." The buggy, seat and gear, including axles, shown by this company, the jury declared were deserving of a second award.

FATHER LOUIS, of St. Jerome's College, Berlin, Ont., has received word from Rome that his Holiness, the Pope, selected for his own use, from the thousands of jubilee gifts sent him from all parts of the world, the magnificent office desk presented to him by St. Jerome's College. This piece of furniture was manufactured by Messrs. W. Stahlschmidt & Co., Preston, Ont., and was really a work of art. His Holiness certainly evinced good taste in the selection, and at the same time paid a deserved honor to an enter-

prising firm. In a recent letter from Australia to Messrs. Stahlschmidt & Co., there was a \$1,500 order; and a dozen of their rotary office desks have been sent for from England.

M. F. KALMBACK, of Minneapolis, is making arrangements to go into the fishing business on Lake Winnipeg. The fishing industry on the lake is becoming quite an important item in the trade of Manitoba. Many car lots of fish are exported from the country every week during the winter season. The whitefish are the favorite variety, and Lake Winnipeg whitefish are now quoted in such markets as Toronto, Chicago, St. Paul, and other eastern and southern cities. The fish are caught in the summer season, and stored in freezers until winter, when they are shipped east and south. Formerly the fishing was carried on in the winter, but changes in the close season were made, and now the fishing is done mostly in the summer.

MR. A. B. COWAN, of the firm of Cowan & Co., Galt, largest manufacturers of wood-working machinery, engines and boilers in Western Ontario, is in the city. Mr. Cowan was delayed a day at Banff by an accident to a freight train which blocked the passage of the express. The last visit Mr. Cowan made to the coast was on the only passenger train that ever met with an accident on the passage through the Rockies. He speaks in the highest terms of the Canadian Pacific Railway's way of doing business. He was delighted with Banff, and is more delighted with Vancouver. He was astonished at the progress made by Vancouver since his last trip out, and is a firm believer in the future greatness of the Terminal City. Mr. Cowan will be on the coast for a fortnight before returning east.—*Vancouver, B.C., News-Advertiser.*

AN Englishman touring through British Columbia sends a letter giving a great many interesting facts relative to the coal industry of Vancouver Island, to *The Chronicle* of Newcastle, England, the centre of the great coal industry of England. He refers to British Columbia as being possessed of almost boundless stores of coal, in the mining of which great progress has been made during the past few years. Statistics are given showing the amount of the coal output during the years 1887 and 1888 as compared with that of Nova Scotia and Pennsylvania, and which although manifestly small in comparison, are reported to be in a good position for more extensive business in the near future. In fact he predicts that the Vancouver coal supply will be the basis of a mighty Pacific trade that is only now in its inception.

# COWAN & BRITTON,

GANANOQUE, ONT.

MANUFACTURERS OF

Strap and T. Hinges, Screw Hooks and Hinges,  
Wrought Steel Butts for Builders and Cabinet  
Makers, Washers, Staples, Hooks, Hasps, Hay  
Carrier Hooks, Patent Hasp Locks, Bed  
Fasteners, Steel and Iron Cut Nails,  
Clout, Truck and Finishing Nails,  
Brads, Tacks and Shoe Nails.

are also prepared to make special Nails or Hinges, or other articles from iron from samples. The quality of our goods is always A. 1, and our facilities for making them are unequalled.

## FOR Cylinder, Machinery & Wool Oils

WRITE TO

**ROYAL OIL COMPANY,**  
1, 3 & 5 Sherbourne Street,  
TORONTO.

OUR MOTTO: "High Class Oils at Low Prices."

# SASKATCHEWAN BUFFALO ROBES.

NEWLANDS & CO., Galt, Ont.

Manufacture a perfect imitation of the Buffalo Skin; they are durable, warm and handsome. The pelt, or back, is water-proofed; are lined with a Lambskin that is superior to Sealett or Drugget. They are made in 3 sizes and 2 grades, extra heavy and medium weights. Now that the Bison is practically extinct, these Robes will be in large demand.

## THE PRINCESS BABY CARRIAGE RUG

Is a specialty also made by Newlands & Co. They are Light, Warm and Elegant. Are produced in various bright shades, and are just the thing for Children's Sleighs, Carriages and Perambulators.

Messrs. W. H. Storey & Son, manufacturers of Gloves, Mitts, Moccasins, etc., Acton, Ont., have the exclusive sale of these goods for Canada.

## FOR SALE FOR ACCOUNT OF THE JOSEPH HALL MACHINE WORKS.

Iron Turning Lathes, Jig Saw,  
Wood Turning Lathes, Sand-Bolt Machine,  
Upright Boring Machine, Emery Wheel Frame,  
Reaming Machine, Facing Machine,  
Horizontal Iron Boring Lathes, Punching Machine,  
Post Drilling Machine, Iron Column Drilling Machine,  
Gang Drilling Machine, Nut Tapping Machine,  
Cutting-off Machine, Set 40-in. Hand Rollers, 3½ dia.  
Travelling Crane and Cranes,

Horizontal Engine, with Lift Pump and Heater. Cylinder 18 in. x 36 in. stroke, fly-wheel 10 ft. in dia., in one casting.

New Model Vibrators, Portable Engines, Horse Powers

All for sale at sacrifice prices, and may be seen in the Toronto Bridge Building, Toronto.

JOHN LIVINGSTONE, Trustee.

31 York Chambers, Toronto.



THE Dominion Safety Boiler Company, Montreal, inform us that they are turning their business into a joint stock company with a paid up capital of \$100,000. We have heretofore taken occasion to mention the names of some of the larger and more prominent manufacturing establishments in Canada in which this company have placed these safety boilers, and we take pleasure in again calling attention to their business card on the inside of our front cover, in which they give some of the points of excellence which this steam raising apparatus possesses. They claim that these are the cheapest boilers in the market, considering the actual amount of water turned into dry steam in a given time with a given quantity of fuel, which, they say, is the only reliable test of the power of any boiler. The tubes of these boilers are tested up to 1,000 pounds per square inch, and the plates are tested at 60,000 pounds per square inch, and no cast-iron is used in their construction.

MESSRS. JOHN DAVIS & SON, manufacturers of enameled earthenware, milkpans, flower pots, hanging baskets, etc., Davisville, Que., inform us that the industry in which they are now engaged, was first established in York county, Ontario, in 1842, by Mr. John Davis, the senior partner of the present firm. His products then included only plain brown ware for dairy purposes. Since that time, however, and in their present works, they have greatly enlarged the line of their products, and also greatly improved in the manufacture of them, their enameled ware being glazed similar to the imported goods, and it is now far superior to any similar goods ever heretofore produced in this country. They inform us that their flower-pot trade is now the largest in the province. Their products are all made by the very best and most approved machinery and by the best skilled workmen, and their facilities for business are such that they are prepared to fill all orders with great promptness.

THE Dodge Wood Split Pulley Company, Toronto, have sent us a publication issued by the Dodge Manufacturing Company, Mishawaka, Indiana, in which is reproduced a large number of illustrations of the Dodge system of power transmission by manilla ropes. These illustrations are arranged in convenient form for reference, the publication alluded to being to meet a present demand from parties whose business requires transmission of power. The illus-

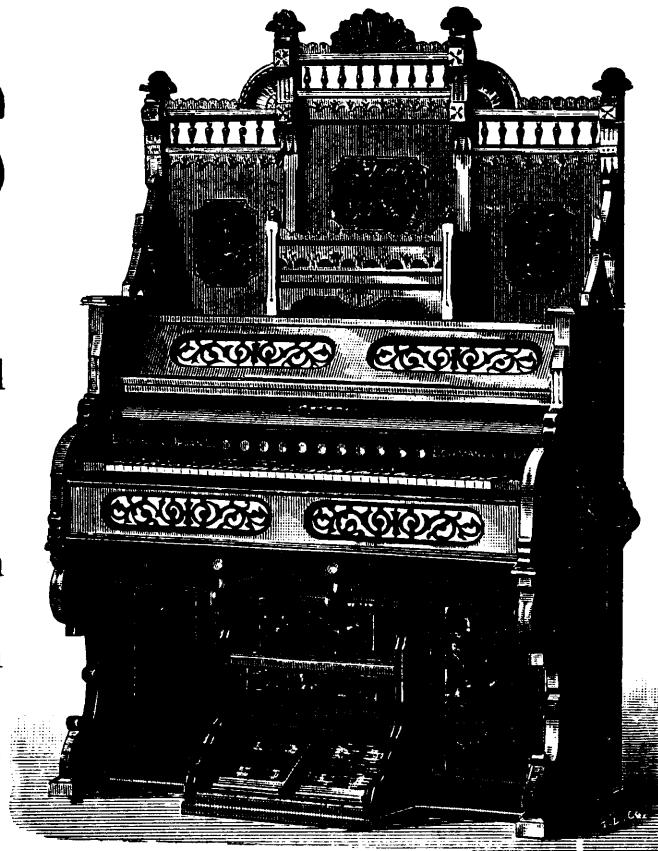
trations show some thirty different styles of transmission, being accommodated to almost every contingency that might exist between the source of power and the point at which it is to be used, and the accompanying text fully describes them. We are informed that these illustrations are soon to be re-prepared and published in a more perfect style as a special transmission circular, catalogue and price list. The Dodge Wood Split Pulley Company, Toronto, will take pleasure in sending illustrated and descriptive circular regarding this method of transmission on application.

MR. W. M. COOPER, of Messrs. Cooper & Cashmore, Toronto, has recently perfected and patented a military rifle, the principal feature of which is the loading mechanism, and in this it differs from all other magazine rifles inasmuch as the breech block, which takes up the recoil of the explosive, has almost no connection with the loading and firing mechanism. The breech is so strongly built that it will stand the strain of the most powerful explosive ever used in a rifle without any danger, and is so tight fitting and perfectly gas tight as to render it impervious to water or dust. The band and magazine are made of a single piece of steel, and so constructed as to render it strong enough to prevent the bending of the barrel if used in a bayonet charge, or of having the magazine rendered un-serviceable by a sword cut. It can also be arranged to be used with an attachable and detachable magazine for military purposes, and possesses the advantage of having its twenty-five cartridges situated directly in front of the trigger guard, thus preserving, under all conditions of firing, the equilibrium of the rifle. The calibre of a rifle shown is 32-100 inch. The cartridge which is of special pattern and construction, is of more than ordinary length. The operation of loading and firing is performed by a simple lever action similar to that of the Winchester or Martini-Henry, but having the advantage of a much shorter stroke. The rifle has also an automatic bayonet, which is so constructed as to slide up and down the magazine. The weapon is very simple in its working, and can be loaded at any angle, can be instantly changed from a repeater to a single shooter and vice versa, and is so simple in its construction that any person of ordinary intelligence can readily understand how to use it. Messrs. Cooper & Cashmore are now going solidly into the manufacture of these rifles at their premises on Balfour street.

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## PIANOS

Hold more Gold  
Medals from the  
World's Fairs than  
all other Canadian  
makes put together.



## ORGANS

Large stock now on  
hand at very low  
prices at the

**TORONTO**

**Temple Music**

**J. S. POWLEY & CO.**

**68 King Street.**



CLEVELAND is the centre of the vapor stove trade, and spring shipments have already begun. Orders have been coming in quite satisfactorily, ranging from small lots to one contract for 10,000 stoves. Of course, the quiet season has not been indicative of inactivity on the part of manufacturers. The strife for prestige in the way of improved appliances continues, and the new year is productive of several fresh features. Among others we quote the following: A double-end burner is now used—not a twin burner, but so arranged that either of the burners, or both of them, may be used. Stoves made on the vapor stove pattern, but adapted for the burning of natural gas, are rapidly coming into use, and several new designs have been brought out this season. Vapor stoves are now made with elevated cabinets, like those used on ranges, and in very handsome designs. A substantial folding step rest at the end has been introduced, enabling the purchaser to secure a three-burner stove no larger than a two-burner stove. Another new stove has cast iron legs and steel top, with three burners on the main top and a double burner on the end shelf, also with a device for preventing the leakage of vapor between the burners. Vapor burners for illuminating purposes are also made. These are of very ingenious construction and are provided with gasoline torches for lighting. Another new feature this year, introduced for the first time, is a device for insuring a motionless flame. A pneumatic vapor stove is introduced to the trade by another firm. Instead of the elevated tank, which renders a small stove top-heavy, the tank is placed on a shelf at the bottom of the stove. At the side of the tank is a rubber pump, operated like a plumber's gasoline stove, by the pressure of the hand, driving enough air into the tank with a few quick pressures to operate the stove for an hour or more. The tank cannot be filled while the vapor is burning, because, as soon as the tank is opened, the air is released from it, the pressure on the gasoline ceases, and the burners are extinguished. A simple one-valve burner is provided, which has a wooden handle, so that it will not get hot enough to burn the hand, even though a very short valve rod is used. A further peculiarity of this stove is that a bench is furnished with every one.—Cleveland, Ohio, *Iron Trade Review*.

THE firm of B. Greening & Co., Hamilton, Ontario, whose business card has been constantly in the pages of the CANADIAN MANUFACTURER for years, have resolved themselves into a joint stock company under the name of the B. Greening Wire Company. The officers of the new company are S. O. Greening, president and gen-

eral manager; John Maw, superintendent; Robert H. Merriman, secretary. These gentlemen, with Charles A. Herald, manager of the rope department, and Thomas Cockburn, of the ornamental branch, are the stock-holders. The other foremen of the works are Thomas Gaston and C. A. Plastow, of the weaving, and Robert Hobson, of the wood-working and window and door screens departments. It is the intention of the new company to add to the business the manufacture, from the rod, of all kinds of wire. Mr. Hills, the architect, is now engaged in making plans of the necessary buildings. The main building will be 100 feet by 50 feet, three stories high. This with the buildings for boiler, annealing furnaces, galvanizing plant, etc., will about take up the premises opposite their present works. Mr. Maw will shortly visit England to purchase some of the machinery, but the greater part will be constructed at home. It is a singular fact that the wire business has been hereditary in the Greening family for generations; in fact, they might justly claim to have originated the wire-drawing business in England, for during the reign of James I a Mr. Greening came over from Germany and started the manufacture of wire for pins and needles at Tintern Abbey on the Wye. It was from this place that Nathaniel Greening (grandfather of the president of the company) removed to Warrington and commenced the wire business in 1799. In the year 1807 Mr. Greening took John Rylands into partnership, under the style of N. Greening & Co., which continued until 1843, when a dissolution took place, Mr. Greening taking his sons into partnership, under the style of N. Greening & Sons, and the sons of John Rylands commenced under the style of Rylands Bros. Both of these concerns are still in business in a large way. In a late issue of the *Warrington Examiner* there was given a history of the rise and progress of the wire industry in Warrington. In reviewing the history of the various large concerns in the wire business in Warrington, it showed how they all took their rise from the original firm of N. Greening & Co., the promoters of the different concerns having served with either the Greenings or Rylands. It was with the firm of Greening and Rylands that the late Benjamin Greening served his apprenticeship to the wire-drawing business. Coming to Canada some thirty years ago, he commenced wire rope making and weaving, erecting machinery for drawing his own wire. From that time until the present the business has been of steady growth, until it now stands the largest business of the kind in the Dominion. In the year 1877 B. Greening died, and was succeeded by S. O. Greening, the president of the new company.

## Fenwick & Sclater,

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Cast Steel Files and Rasps, Anchor Brand.

Cotton Waste, white and colored.

Asbestos Cement for covering Steam Pipes and Boilers

Asbestos Piston and Joint Packing. Asbestos and Rubber Piston and Joint Packing. Plumbago Packing.

HOSE—Rubber, Canvas and Linen.

HOSE—Cotton, Rubber-Lined for Fire Brigades.

SELLING AGENTS FOR

Asbestos Packing Co., Boston; Boston and Lockport Block Co., Boston; American Cotton Waste Co.; Montreal Tent and Awning Co.; "Household" Fire Extinguisher Co.

## A. C. LESLIE & CO.

MONTREAL and TORONTO,

MANUFACTURERS' AGENTS FOR

Iron, Steel, Wire, Tinplate,

**GALVANIZED IRON.**

Special value in STEEL BARS, ANGLES, SHEETS, PLATES.

BUYERS ARE INVITED TO OBTAIN PRICES.

"JESSOP'S" STANDARD TOOL STEEL IN STORE.

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FACTORY, with water privilege, near Black's Bridge Montreal. Building 60 x 60, five flats, extra well lighted and very strong; rare opportunity for party wanting cheap power. Apply

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14 St. John St., Montreal.

## TO LET

Fine Manufacturing Premises in a central part of the City of Toronto, 100 x 100 feet, with Engine, Boiler, Shafting, Steam Heating, Gas and Water Pipes and other fixtures.

FOR PARTICULARS APPLY TO

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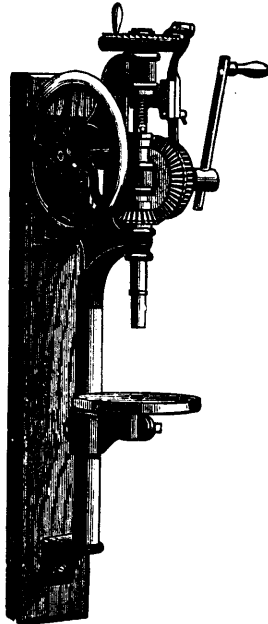
8 King St. East, Toronto.

# Butterfield & Co

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## UPRIGHT DRILLS



**FOOT VISES AND  
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**STOCKS, DIES AND TAPS**

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**PATRONIZE HOME INDUSTRY**

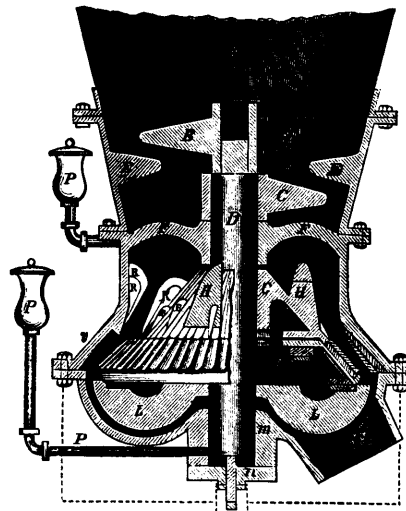
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**SEGMENT BARK MILL.**

For rinding any hard substance

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Cement, Plaster, Bones, Bats, Ores, Paint, etc. It is also used to grind Liquorice and Sarsaparilla roots.

Also as a Corn

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The Segments will retain their cutting edges longer than those of any other Mill, and when dull can be quickly and cheaply renewed.

It has the following good qualities, viz.:—Fast grinding; evenly prepared bark; is easily erected and small power required to drive it.

It works with ease in damp or frozen bark, and break-ages are prevented by safety coupling.

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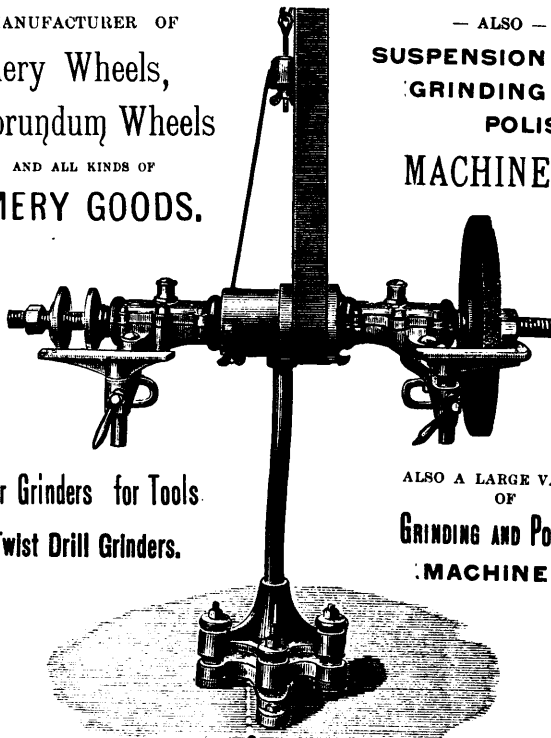
Emery Wheels,  
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**SUSPENSION  
GRINDING AND  
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Water Grinders for Tools

Twist Drill Grinders.

ALSO A LARGE VARIETY  
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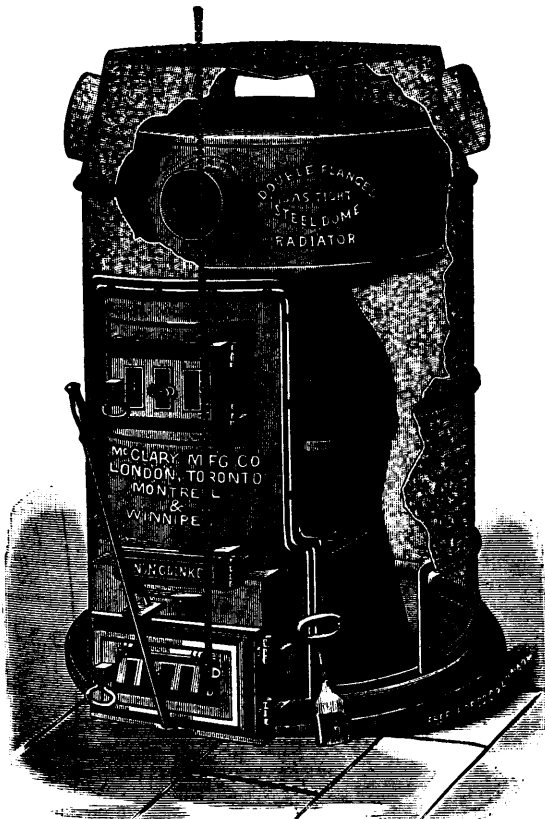
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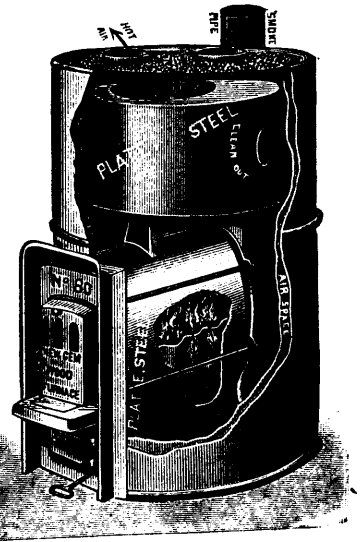
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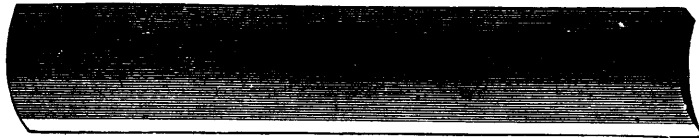
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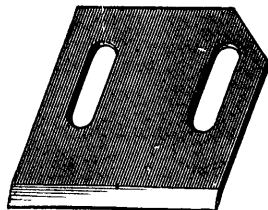
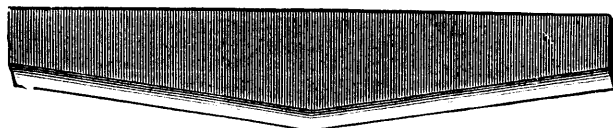
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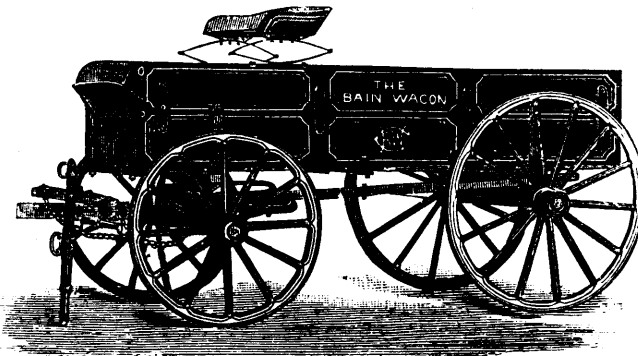
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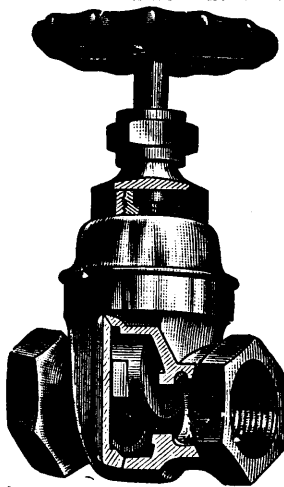
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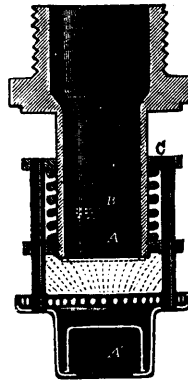
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Capacity, 400 Barrels per day. Warranted equal to any Hydraulic  
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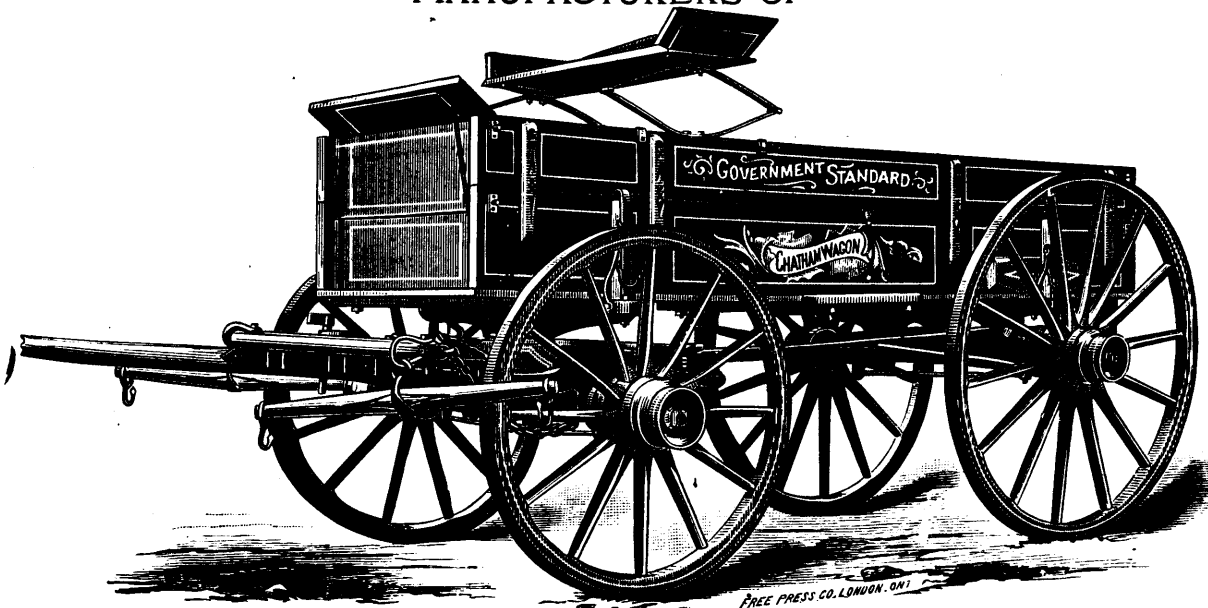
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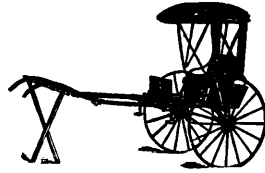
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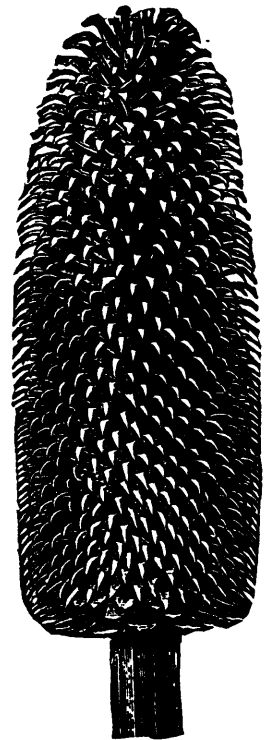
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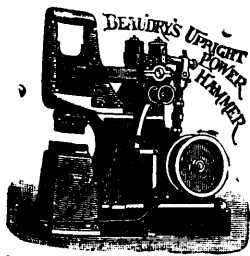
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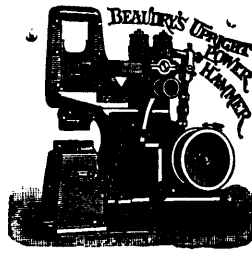
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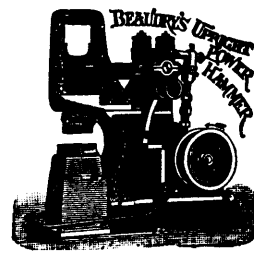
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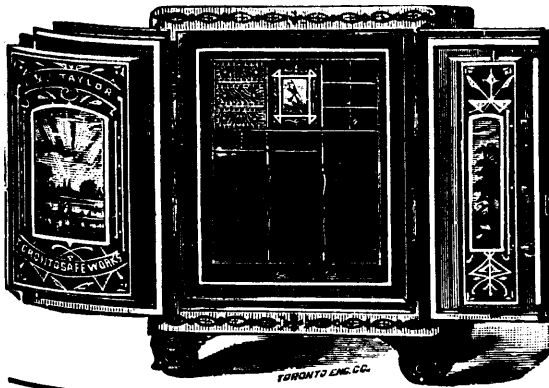


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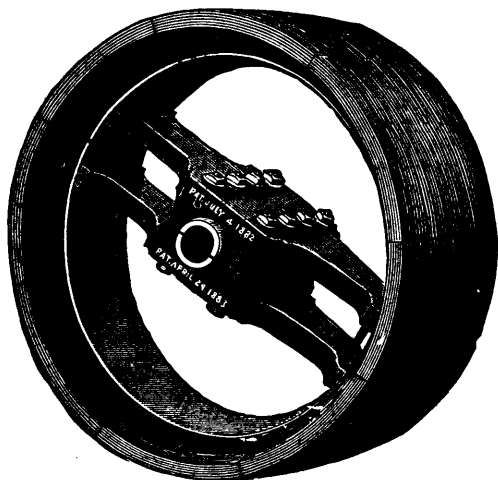
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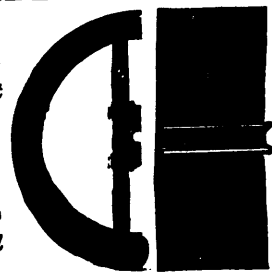
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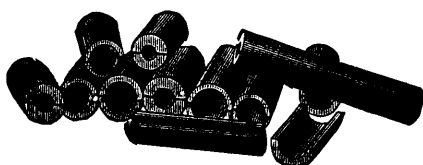
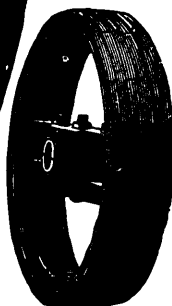
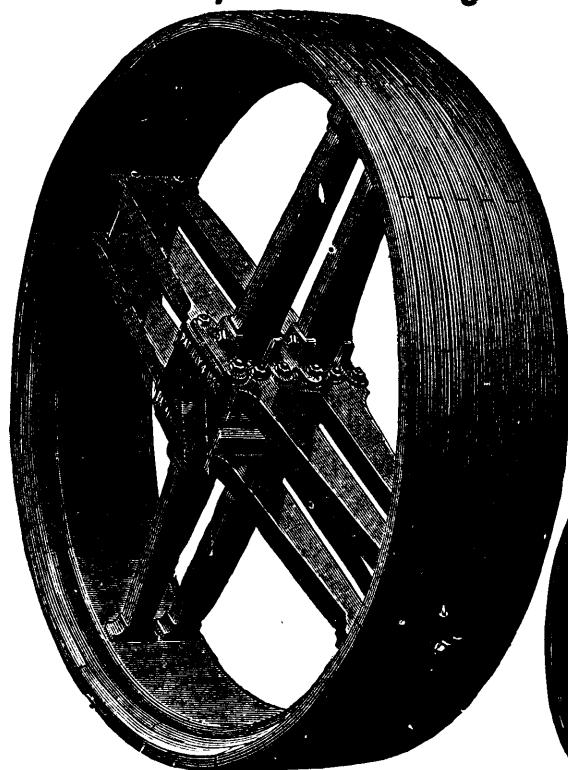
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**70 PER CENT. LIGHTER THAN CAST IRON**

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



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*Gentlemen:* You ask why we use the Dodge Patent Pulley. Answer because we consider them the cheapest, most convenient and satisfactory in all particulars.  
 Yours truly, S. R. STIMSON, General Manager.

OFFICE OF NEWTON WAGON CO., BATAVIA, ILL., Feb. 17, 1885.  
 C. L. RICE, AGENT, CHICAGO, ILL.  
*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 School Furniture Co.; M. & St. L. R. R. Minneapolis Harvester Works; Minneapolis School Furniture Co.; M. & St. L. R. R. Minneapolis; Willford & Northway; Washburn, Crosby & Co.; St. Paul Electric Light Co.; St. Paul Roller Mill Co.; Minneapolis Brick Co.; N. W. Mig. & Car Co., Stillwater, Minn., and very many others.

THE WORLD'S INDUSTRIAL AND COTTON CENTENNIAL EXPOSITION. NEW ORLEANS, March 19, 1885.  
 W. H. DODGE, PREST. 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.

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According to the best scientific authority it costs one horse power to keep in motion one ton of metal or weight; thus for every unnecessary 2,000 pounds weight on your line shaft, cost you one horse power. To maintain a horse power costs from \$25 to \$125 per year. Any manufacturer who will take the pains to investigate the unnecessary weight by Heavy Iron Pulleys, too tight belts, etc., will be surprised to find the enormous waste of power consumed in this manner. 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.

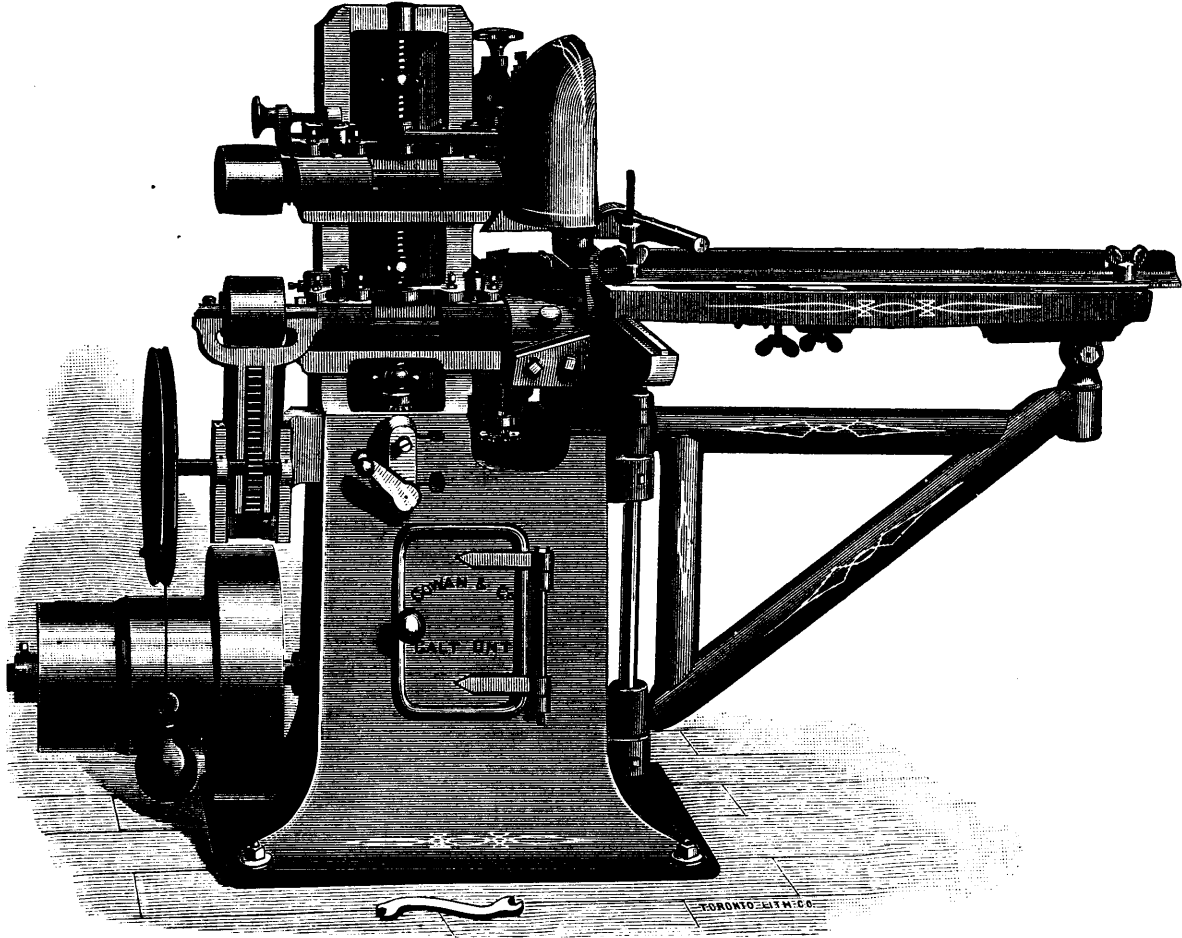
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**THE DODGE WOOD SPLIT PULLEY CO.,**

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**TAKE NOTICE:---Our List of Prices for the DODGE PATENT WOOD SPLIT-PULLEYS is for ALL SPLIT-PULLEYS.**  
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This is an entirely new style of Tenon Machine. The frame is cast in one piece, and the working parts stand solidly on a pedestal, avoiding all vibration.

The Cutter and Cope Heads are connected and are moved all together, or separately, as required. The Upper Head and Boxes also adjust horizontally to suit shoulder of tenon, the Cope Knives moving with the Heads to prevent re-adjustment.

A special feature in this machine is the Bed, or Carriage, which is at once light and strong. The outer end works on rollers and is moved very easily.

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This Machine is supplied with single or double Copes, as ordered, and for furniture work it is without Copes, and with an adjustable cut-off Saw.

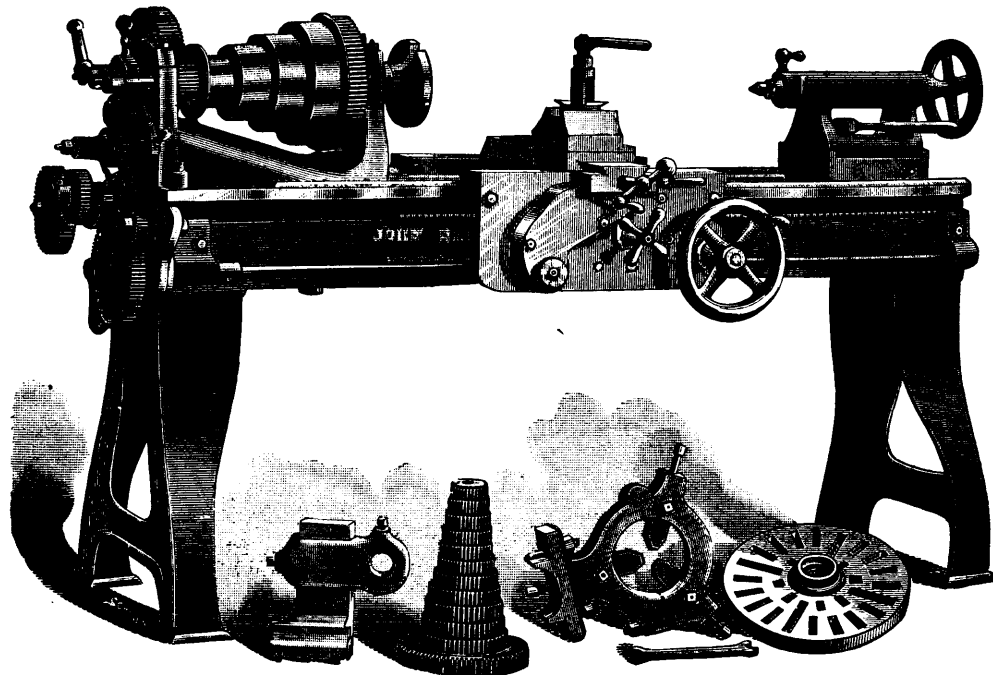
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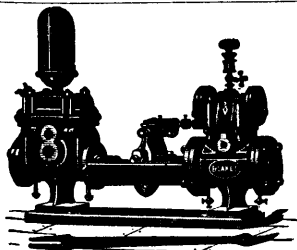
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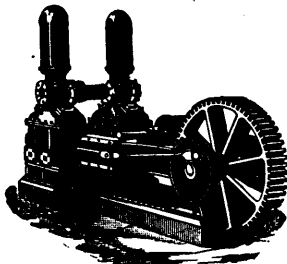
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- BOLT CUTTERS
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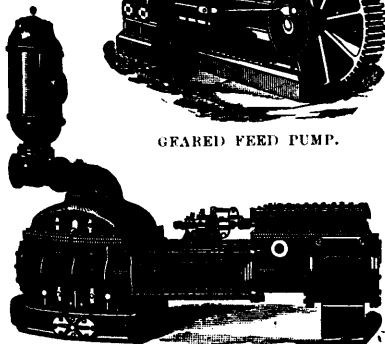
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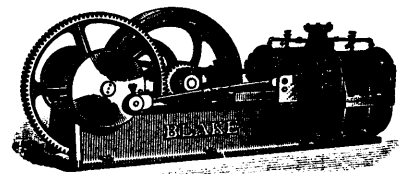


NEW YORK.

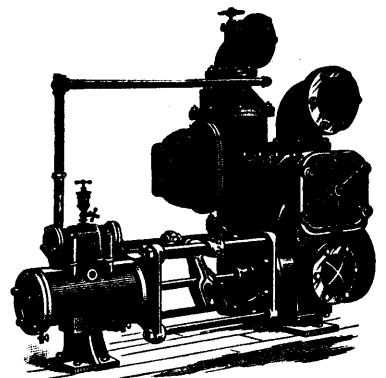
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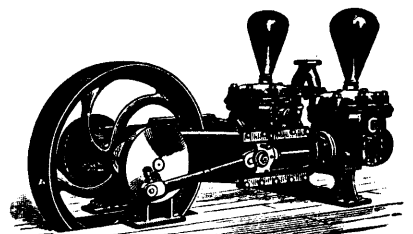
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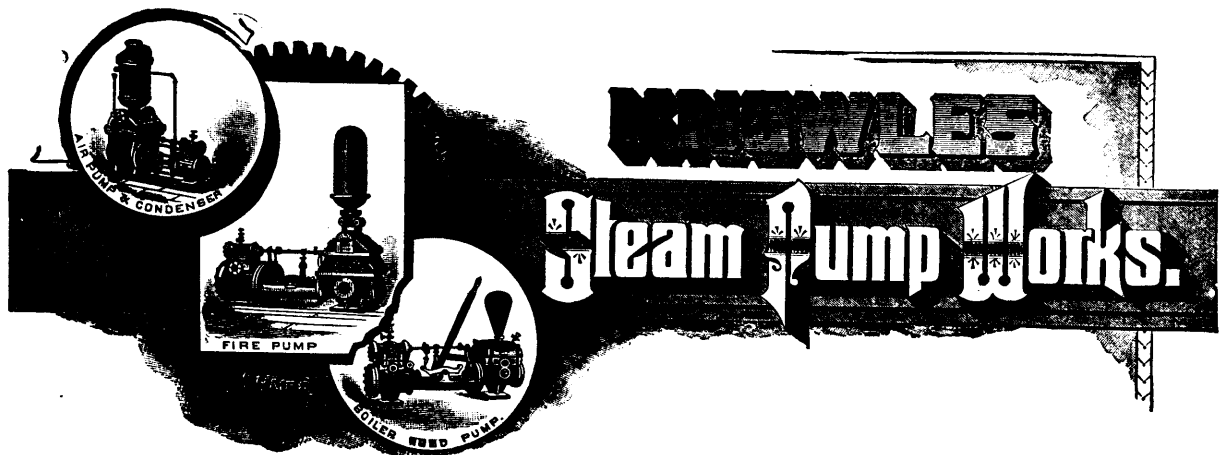
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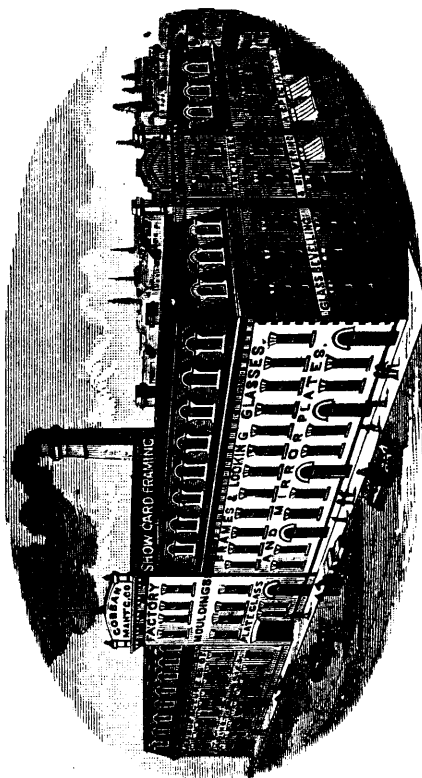
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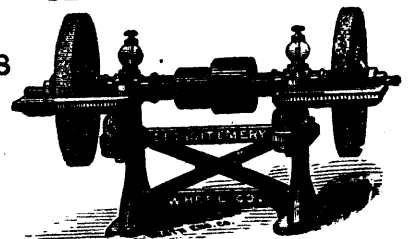
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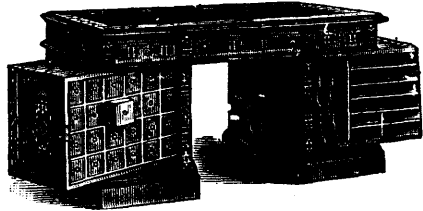


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