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# THE CANADIAN MANUFACTURER

AND INDUSTRIAL WORLD

DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

Vol. 15.

TORONTO, OCTOBER 5, 1888.

No. 7.

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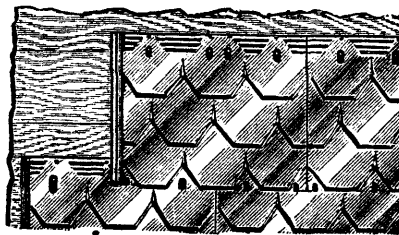
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SEE ADVERTISEMENT, PAGE 265.

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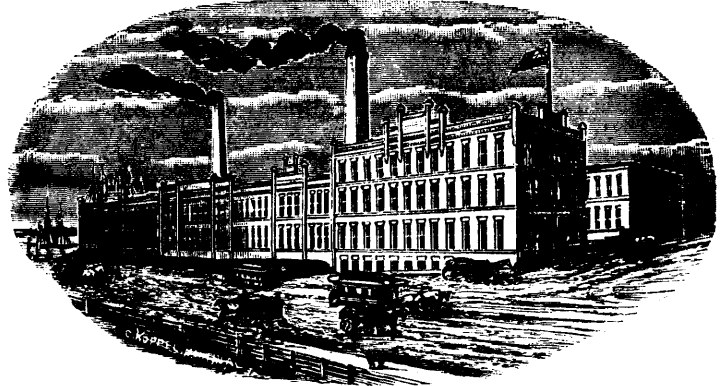


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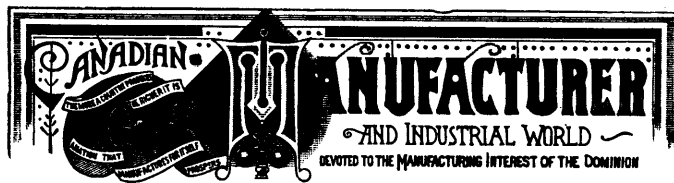
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6 Wellington Street West, Toronto.

## Captains of Canadian Industry.

"THE nation that manufactures for itself, prospers." In the CANADIAN MANUFACTURER of June 1 we began the publication of a series of illustrated biographical sketches of "Captains of Canadian Industry." It was an entirely new departure in journalism, either in this or in any other country; and the very excellent artotype portraits of leading Canadian manufacturers which have been displayed in each successive issue of this journal have made it valuable as a pictorial album which must of necessity become a part of the history of the Dominion. The publication of these portraits and the biographical sketches of their originals will be continued indefinitely; the object being that when the publication in this journal is finally discontinued, to assemble and reproduce them in book form, which arrangement will be all the more valuable in that the matter which is now being extended through many months in the CANADIAN MANUFACTURER will all be brought into the compass of one attractive and convenient volume. To assist our readers in keeping in mind the names of the "captains" of this grand army whose portraits have already been published, we reproduce them here. They are as follows:—

### PLATE I.—June 1.

W. H. Storey, Acton, Ont. Bennett Rosamond, Almonte, Ont.  
Samuel May, Toronto. George Booth, Toronto.

### PLATE II.—June 15.

Thomas Cowan, Galt, Ont. James Watson, Hamilton, Ont.  
R. W. Elliot, Toronto. John F. Ellis, Toronto.

### PLATE III.—July 6.

William Bell, Guelph, Ont. John R. Barber, Georgetown, Ont.  
John Bertram, Dundas, Ont. Wm. Chaplin, St. Catherines, Ont.

### PLATE IV.—July 20

William Doherty, Clinton, Ont. Alex. Gartshore, Hamilton, Ont.  
John Fensom, Toronto. Charles Raymond, Guelph, Ont.

### PLATE V.—August 3.

William Christie, Toronto. Henry Bickford, Dundas, Ont.  
Robert Mitchell, Montreal. James Hendrey, Peterboro, Ont.

### PLATE VI.—August 17.

John Abell, Toronto. George W. Sadler, Montreal.  
H. A. Massey, Toronto. John Taylor, Toronto.

### PLATE VII.—September 7.

James Crossen, Cobourg, Ont. Thomas G. Mason, Toronto.  
Vincent M. Risch, Toronto. Wellington Boulter, Picton, Ont.

### PLATE VIII.—September 21.

D. R. Van Allen, Chatham, Ont. C. E. Britton, Gananoque, Ont.  
Thomas Robertson, Toronto. James Hall, Brockville, Ont.

## CHARLES E. BRITTON.

MR. CHARLES E. BRITTON, of the firm of Cowan & Britton, Gananoque, Ont., proprietors of the Gananoque Nail and Hinge Works, was born in that town in 1842. As a boy his life was an even and uneventful current showing only such ripples as usually occur with strong, healthy boys with good appetite and unimpaired digestion—expeditions for the surreptitious obtaining of forbidden fruit; raids upon neighboring fruit orchards; playing "hookey" occasionally; the acquirement of some acquaintance with the three important educational R's and the regular absorption of three square meals every day. Later he was a clerk in his father's store in Gananoque; and in 1861, when less than twenty years of age, he went into business with Mr. D. C. Cowan, establishing the Gananoque Nail and Hinge Works for the manufacture of every description of nails, hinges, butts and similar iron hardware goods. These works are now among the most important in Canada, supplying as they do a very large proportion of the demands of the trade not only of Ontario, but of the Dominion. The business of these works has steadily increased ever since their establishment, and the capacity of them is sufficient to produce largely in excess of current demands. Mr. Cowan, who was senior member of the firm, died in 1885, since which time the business has been conducted entirely by Mr. Britton, he being sole proprietor, although the name of the concern has never been changed. Mr. Britton is a man of fine executive ability, as is apparent in his management of his works, which add so much to the value and importance of Gananoque.

Gananoque is a flourishing manufacturing town on the Gananoque river at its confluence with the St. Lawrence, and is also on the line of the Grand Trunk railway. Two dams across the river near the town afford an almost unlimited water power, which is utilized in a large number of manufacturing establishments, included in which are the Cowan & Britton nail and hinge works; several saw and grist mills; manufactories of woolen goods, iron castings, edge tools, machinery, agricultural implements, leather, organs, wooden ware, boots and shoes, etc. Being opposite the most beautiful part of the Lake of the Thousand Islands, celebrated for its scenic and sporting attractions, it is a favorite resort of tourists and pleasure-seekers. A special feature of these attractions is the facilities which are afforded tourists to view the beauties of the Thousand Islands by the excellent steamboat service supplied by the Alexandria Bay Steamboat Company in their fine new steamer "Island Wanderer." This company is composed largely of American capitalists, and Mr. Britton is Canadian director of it. This steamer is said to be the fastest and most popular

in those waters, and she covers a route specially her own, embracing about all the points of interest in that vicinity.

Mr. Britton entertains very decided views on all that appertains to the interest of Canada; and while he is not always in full accord with all the sentiments expressed in the *CANADIAN MANUFACTURER*, he recognizes the value of the service it is to Canadian manufacturers generally and warmly commends the zeal with which it is conducted. He is now in the prime of active useful manhood and in the enjoyment of a competence earned by his own exertions, and which, in his hospitality, he dispenses most royally.

#### D. R. VAN ALLEN.

DANIEL ROSS VAN ALLEN, president and manager of the Chatham Manufacturing Company, of Chatham, Ont., was born December 27, 1823, in the township of Burford, county of Oxford, Ontario. He is, as his name implies, of Dutch descent, and is of United Empire Loyalist stock, on both his father's and mother's sides. At the place and time of his birth his father was largely engaged in milling and mercantile business, but when the subject of this sketch was about five years of age, his father removed to his family homestead in Port Dover, engaging in farming operations there, and where young Daniel received such education as was afforded in the common schools of the place. In the winter of 1833 young Allen went to live with his uncle, Captain Henry Van Allen, in Chatham, who was engaged in mercantile business there, and with whom he served until 1838, when he commenced "padding his own canoe."

In 1831, this uncle, assisted by the late Duncan McGregor Esq., built in the town of Chatham the first steamboat that ever navigated the waters of the Upper Lakes under the British flag, and which Captain Van Allen commanded.

Young Allen found employment in clerking in various country stores in that part of the country from 1838 to 1845, in which latter year he was managing a store for a Chatham firm, at the point where the town of Dresden now is. He was impressed with the eligibility of the location as being desirable for the site of a town, and he thereupon purchased a lot of land there from the late Jared Lindsley, upon which he founded what is now the flourishing town of Dresden.

To give Dresden a start, Mr. Van Allen erected there and operated a large grain warehouse, a merchant's store and a hotel, in which business he was very successful until 1849, when, owing to heavy losses sustained in the stave business in which he was interested, he failed. Shortly after this event he returned to Chatham, where he again engaged in mercantile business; but he was again overtaken by financial disaster during the great revulsion in business in 1857-58. He then abandoned the idea of ever again engaging in mercantile pursuits, and embarked in the manufacture of hardwood lumber, in which occupation he has continued ever since with marked success. His motto, "A good reputation is better than capital," brought him through all his business difficulties with a not only untarnished but an exalted reputation.

In 1882, after the adoption by Canada of the National Policy, which he had for years advocated, Mr. Van Allen conceived the idea of forming a joint stock company for the

purpose of manufacturing farm wagons by machinery, after the style of some of the great wagon building concerns in the United States. In carrying out this idea he was eminently successful, and the Chatham Manufacturing Company of to-day, of which he is the head and moving spirit, is the result of his ambitious efforts. The enterprise has passed through some severe struggles, however, such as are incident to such undertakings, and now it is one of the most important and prosperous industrial works in the Dominion.

In 1862, Mr. Van Allen, at his own personal expense, exhibited at the great World's Fair, in London, England, a lot of planks of timber, which were each twelve feet long, four feet wide, and four inches thick, the varieties consisting of butternut, whitewood, sycamore, cherry, hard maple, black walnut, white ash, and white oak; a lot of logs from four to five feet in diameter, of sycamore, white ash, black walnut and white oak; and a large number of sections, with the bark on, of smaller trees, the whole being specimens of the principal valuable timbers found growing in Ontario, in the vicinity of Chatham. The highest prize awarded at that exhibition—a bronze medal—was bestowed upon Mr. Van Allen for this remarkable display. Mr. Van Allen afterwards presented these specimens of Canadian woods to the Canadian Commissioners, who caused them to be cut into suitable sizes and distributed among the museums of Europe.

Mr. Van Allen served the people of Chatham for many years as school trustee, councillor, deputy reeve, reeve, and for one year as mayor; and then it was he had the honor of receiving the then Governor-General, Lord Dufferin. He is a Conservative in politics, a strong advocate of the National Policy, and a staunch supporter of the Government. A large employer of labor, Mr. Van Allen's life is an active, busy and profitable one, and he is a "captain of industry," of which Canada is justly proud. There are but very few men in his section who have contributed as largely to its material prosperity as this man, and the prospects are that many more years of his useful life are in store for him.

#### THOMAS ROBERTSON.

MR. THOMAS ROBERTSON, senior member of the firm of Robertson Brothers, composed of Thomas and Alexander Robertson, manufacturing confectioners, Toronto, was born in Selkirkshire, Scotland, in 1838. He attended the common schools of his native place, but these did not afford him all the education he possesses, for he has been a close student of men and things all his life. In 1856, while yet only a youth, he came to Canada, settling in Toronto. His first venture in the manufacture of confectionery was in 1864, when, with his brother William, they established themselves at the corner of Yonge street and Trinity Square. The venture was a success which increased so rapidly that larger accommodations were required, and in 1870 the business was removed to Queen street east, the site of their present works, where they have been located ever since. The change from Yonge to Queen street gave what was then believed to be ample room to accommodate all the business that the firm were likely to do for many years, but the energy, close application to and thorough knowledge of the business that had characterized it

from the beginning, gave it continued and increasing prosperity, and additions have been made to the works from time to time, resulting in the present large and commodious factory.

Mr. Robertson was always possessed of great mechanical ingenuity, and constantly exercised it in the direction of inventing labor saving devices and conveniences in connection with his business. Finding no lozenge machine in the market which worked as efficiently as he desired, he invented and constructed one which answered his purpose better than any other that he had any knowledge of. It was a crude affair, but it was the germ which, through the indomitable determination of a man who would never surrender what he believed to be a valuable idea, developed finally into what is now without doubt the best lozenge making machine in existence. Automatic in its action, it rolled out the paste uniformly to the desired thickness; cut the lozenges into the desired shape; embossed in colors the mottoes and designs, and delivered them on to the trays ready for the drying room. But while the top and bottom of the lozenge was smooth, the edge was rough; and Mr. Robertson's aim then was to perfect his machine so that it would manufacture the article perfect in all respects; and in this his efforts were also successful; and he experienced the satisfaction that the successful inventor feels. His improved machine turned out lozenges embossed on both top and bottom in any desired artistic designs and mottoes, as smooth on both edge and sides as polished marble, and mottoes printed in colors on the polished edge. Doubtless the lozenges produced on this machine with their many suggestive mottoes, have been the means of encouraging advances from bashful lovers to even more bashful and diffident maidens, that have led the happy couples into matrimony. No doubt untold numbers of these happy people would thank Thomas Robertson for assisting them to express their love for each other when words refused to come to their lips, if they only knew the part he played in bringing them together, and his post office address.

Mr. Robertson obtained letters patent on this machine in Canada, United States and Great Britain; and Messrs. A. Slauson & Co., of New York City, and Messrs. Keiller & Sons, of London, England and Dundee, Scotland, have obtained rights to use it in their respective countries, Mr. Robertson reserving to himself and his firm all the Canadian rights. Messrs. Slauson & Co. are the largest manufacturers of lozenges in the United States, and Messrs. Keiller & Sons, in their combined London and Dundee works, are the largest manufacturers in their line in the world. The three concerns here named are the only parties in the world who make lozenges on the Robertson machine, and under the patents granted to the inventor.

Regarding this machine, it is interesting and exceedingly creditable to Canadian workmen to state that all of the apparatus being used by the manufacturers here alluded to, in New York, London, Dundee, and Toronto, were built in Toronto by Canadian mechanics.

#### JAMES HALL.

MR. JAMES HALL, senior member of Messrs. James Hall & Company, proprietors of the Ontario Glove Works, Brockville, Ont., is a native of Clackmannanshire, Scotland, and came to

Canada when but six years of age. During most of the time since then he has resided in Brockville, and is one of the most enterprising manufacturers of that place. In 1865 Mr. Hall established the business in which he is now engaged. Like most all similar undertakings, the beginning of this business was small, but Mr. Hall was fully acquainted with all the requirements of it, and its enlargement was only a matter of time. The works have been added to and enlarged from time to time until now they are among the largest of the kind in Canada. The buildings embraced in these works cover about 70,000 square feet of ground; are constructed of brick and stone, three stories high, and are thoroughly equipped with the latest and most improved machinery, including oil mills, tannery, finishing machines, etc. The products of the works include one hundred and fifty different sorts of gloves, including kid, buckskin, calf, California or "Napa" buck, patent moccasins, which are manufactured under a patent owned by the firm, etc. A new branch of business recently extensively engaged in by Messrs. Hall & Co. is the manufacture of shoe uppers. The works give employment to from eighty to a hundred hands.

Brockville is eligibly situated at the foot of the Lake of the Thousand Islands, and is celebrated for its numerous manufacturing industries, among which are, besides the Ontario Glove Works, foundries, machine shops, steam engine works, stove works, tanneries, lumber and flour mills, chemical works for the production of sulphuric acid, etc.

#### INSURANCE REFORM.

OUR esteemed contemporary, the *Budget*, is clamoring for reform on the part of fire insurance companies in their methods of doing business. It says:—"Fire insurance as at present carried on does not pay. Some of the companies make dividends in some years, and exceptionally well managed or fortunate companies have a favorable showing year after year. But the profession, as a whole, is in an unsatisfactory state, and the companies do not repair the waste in their assets made by losses and expenses. \* \* Insurance at present is like a vessel whose cargo has been badly arranged. She cannot make progress; she cannot resist so well the action of the sea, nor can she be made to obey her helm as she should."

This is exceedingly sad. These insurance companies ought to have philanthropists to sympathise with them, as they no doubt sympathise with one another. It is shocking to think that such eminently respectable and conservative concerns as these insurance companies are, should find themselves so unhappy. They take much pleasure in assembling in conventions and "resolutin'" extensively as to how their business should be conducted; and "resolutin'" other people's business out of existence as far as they have the ability—they certainly have the inclination—to do it, but the whining goes on and they are not happy.

Perhaps an infusion of new blood or the introduction of some good sensible brain matter would meet their emergency. Their "conservatism" is too antiquated. What might have answered in London or Glasgow a score or two of years ago, is scarcely the thing for Canada in these days. It is very noticeable that American representatives of many of the largest insurance companies in Great Britain are making money by

# F. E. DIXON & CO.

MANUFACTURERS OF

TO MILL OWNERS

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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pursuing a certain policy, while the Canadian representatives of the same companies are—under the influence of their old foggy conservatism—standing around grumbling because they can do no remunerative business. Why don't they catch on to the Yankee idea? In a letter now before us from a prominent Canadian concern who manufacture gasoline stoves, the assertion is made that they could place considerable business in the way of good insurance companies who would accept risks where vapor stoves are used without extra charge. This opposition to the use of vapor stoves has ceased in the United States, and the insurance companies there are making money by accepting such risks. Conservative Canadian companies refuse such risks and are losing money. The *Budget* should exert itself for reformation in this direction.

#### THE OLD, OLD STORY.

THE dispute between the journeymen plumbers and their Toronto employers, which had lasted just fourteen weeks, was finally settled a few days ago, those of the strikers who could find vacancies having returned to work. The demands made by the men and the concessions granted by the bosses were as follows:—The demand that the hours of work should be the same in city or country was receded from; the arrangement regarding working hours acceded to; pay for overtime on Saturday afternoons in warm weather months modified from "time and one-half" to "time and one-quarter," night work to be "time and one-half," and Sunday work to be "double time," acceded to; and that 27½ cents per hour be the minimum pay, modified to 25 cents per hour. The demands that no apprentice be allowed to do journey work until he had served three years at the trade, and that any alterations in the agreement should require three months notice from either party, were abandoned.

It is said that both sides are perfectly satisfied, and it is to be hoped they are. Originally 107 men went out on strike, and about six weeks before the adjustment of the difficulty about fifty steam fitters also quit work in sympathy with the plumbers, and as these latter had no grievance of their own, when the strike was declared "off" they returned to work on the same terms as before they struck, that is, those of them who could recover their jobs. A few of the plumbers obtained work while the strike was on, but the most of them were on strike pay, that is, they were supported by various labor organizations, without which they and their families would have suffered and perhaps starved. Meantime the bosses brought in an almost equal number of non-union workmen, and most of them who were at work at the time of the so-called compromise retained their jobs whether the late strikers obtained work or not. The strikers, we understand, were getting twenty-five cents or more per hour at the time they quit work, and as they were working fifty hours per week, they sacrificed not less than \$12.50 each per week; and as they were out fourteen weeks, they were certainly out not less than \$175 each, the entire sacrifice in wages to them being between \$17,000 and \$18,000; and this takes no account of the loss to the fifty sympathetic gas fitters.

A feature of the strike was the outrageous lawlessness on the part of the strikers that attended it. Under a systematic organization created for the purpose, they resorted to the most

rascally methods to prevent non-union men from taking their places, and to prevent the bosses from carrying on any work whatever. These foolish and misguided men thought it a good joke—no doubt they were told that it was—to waylay and murderously attack more honest men who were anxious to earn livings for themselves and families; to shout "scab" at honest men, while they themselves did not possess the least qualifications of decent men; and to incite riots on the streets whenever they saw the bosses endeavoring to procure other workmen. The pleadings of wives, anxious for the welfare of their families, and the crying of little ones for bread availed nothing with these men when the jawsmiths of their organizations urged that their "manhood" and "honor" were at stake, and would be sacrificed and ruined if they should do—what? Just what they did do a few days ago, and with which they are now "perfectly satisfied." They vindicated their "honor" by parading the streets in voluntary idleness while their families were suffering; they showed their "manhood" by indulging in acts of violence and in defying the law; they illustrated their desire to better their condition by refusing to earn probably twenty thousand dollars when they had the opportunity to do so; they did not hesitate to allow other laboring men to support them in their idleness, nor to allow other laboring men, even more silly than themselves, to also quit work through "sympathy" for them.

"Whom the gods destroy they first make mad."

But the jawsmiths are not suffering; their income is assured.

#### WHAT IS THE "BLUE LABEL" WORTH?

A FEW days ago a Toronto morning paper contained the following:—

The Cigarmakers' Union, at a meeting on Tuesday evening decided to issue a circular, which appeared on the streets yesterday morning. It deals with the blue label principally, announcing that the crisis is at hand, and that members of the union be requested to make it their duty to boom the blue label, so that it will be impossible for any one to place an order for "scab" cigars in any hotel or cigar shop in Toronto.

The Executive Committee has recently circulated among hotel and saloon keepers copies of the following agreement:

To whom it may concern: We, the undersigned retailers of cigars, etc., believing that the claim of the striking cigarmakers for an increase of wages is based on just and reasonable grounds, and desiring to give expression to our sympathy with them in their struggle, resolve and do hereby agree to place our future orders for the cigars manufactured and sold under the blue label of the International Cigarmakers' Union.

A large number of signatures have been appended to the circulars.

The Cigarmakers' Union seem to think that there is some peculiar and wonderful virtue in the blue label of the International Cigarmakers' Union, but is there? Regarding the value of this label as a trade mark, in which its virtue is supposed to lie, we quote the following from an American paper:—

Vice-Chancellor Vanfleet, of New Jersey, rendered a decision on July 24, which is of much interest as affirming the true legal status of a trade mark. The Cigarmakers' International Union have a label which they authorize any manufacturer of cigars employing members of their association to use on his packages or boxes. The label has been counterfeited, and suit was brought under the trade mark law against a manufacturer alleged to have used such labels. The defense was made that no cause of action was shown, and that the label was no trade mark. The court sustained the latter ground of defense. It

**GEO. F. HAWORTH & CO.**  
**T O R O N T O .**



**HIGHEST PREMIUMS RECEIVED WHEREVER EXHIBITED.**

- " Special Award," Highest Premium American Institute Fair..... New York, 1873.
- Award continued for " Maintained Superiority," 1873, '74, '75, '76, '77, '78, '79, '80, '81, '82 '83, '84 '85, '86.
- First Prize Medal, World's Exhibition..... Vienna, 1873.
- " " " Cincinnati Industrial Exposition..... Cincinnati, 1874.
- " " " Centennial Exhibition..... Philadelphia, 1876.
- " " " Leather Manufacturers' Exhibition..... Berlin, 1877.
- " " " Universal Exposition..... Paris, 1878.
- " " " Melbourne International Exhibition..... Melbourne, Australia, 1880.
- " " " Leather Manufacturers' Exposition..... Frankfort on the Main, 1881
- " " " International Cotton Exhibition..... Atlanta, Ga., 1881.
- " " " World's Industrial Exhibition..... New Orleans, La., 1885.

affirmed that a trade mark must have three distinct characteristics. It must be new as regards the article to which it is applied; it must be applied to some article of traffic; and the proprietor must put upon the market his article marked with the trade mark. No person can acquire right to a trade mark unless he puts merchandise or a vendible commodity on the market marked or distinguished by his particular trade mark. As the complainants had not shown that they ever placed the label upon their own goods, their complaint was without force. The court held that the mere adoption of a mark and a public declaration that the mark so adopted will be used to distinguish goods to be put on the market at a future time creates no right.

The decision of the New Jersey judge, which will be accepted as good law, is in strong contrast with the Wolfe case, recently before a magistrate's court in Hamilton. According to the report, Emmanuel Wolfe was arrested for unlawfully placing on boxes containing cigars an imitation of the blue label of the International Cigarmakers' Union which had been registered under the Trade Mark Act. When the case was called, counsel for the defendant announced that an understanding had been made between himself and counsel for the prosecution, under which the defendant desired to withdraw his plea of not guilty and submit to a fine of \$5, the defendant also signing an agreement binding himself not to use the said trade mark without the consent of the union, and that he would not use any imitation thereof.

Perhaps the counsel for the defendant saw his way clear to compromise the case in this manner, but it is to be regretted that an appeal was not taken to a higher court where the judgment would no doubt have been more in accordance with justice and law. The International Cigarmakers' Union are not manufacturers of cigars, therefore, according to Judge Vanfleet, they can not acquire any right to the blue label or any other trade mark; and if no right can thus be obtained the Hamilton compromise was wrong and vicious. Wolfe certainly committed no offence against the law by putting imitation blue labels on his cigars.

#### CARD BASKET.

DURING the continuance of the Toronto Exhibition the following named gentlemen visited the office of the CANADIAN MANUFACTURER in the Press Bureau building:—

Hon. John Carling, Minister of Agriculture, Ottawa; Hon. Mackenzie Bowell, Minister of Customs, Ottawa; John Cowan, Oshawa Malleable Iron Co., Oshawa; Donald C. Ridout, Toronto; J. E. Klotz, Preston; Wm. Stahlschmidt, Preston; T. G. Mason & V. M. Risch, Toronto; R. W. Elliot, Toronto; Walter H. Peiram, R. B. St. Young, Wilkinson Plow Co., Aurora; Messrs. Inglis & Hunter, Toronto; Fred. Doty, Toronto; Mr. Johnson, Ball Electric Light Co., Toronto; C. H. Waterous, jr., Brantford; Hugh McCulloch, Galt; Mr. Cant, Cant Bros. & Co., Galt; Messrs. Rogers & Barnard, Hart Emery Wheel Co., Hamilton; F. B. Polson, Toronto; Wm. Bell, Guelph; Thos. McDonald, Toronto; Geo. Booth, Toronto; Edward Gurney, Toronto; James Edwards, Toronto; J. S. Hamilton, Brantford; Mr. Sheridan, Pease Furnace Co., Toronto; Messrs. Clare & Holborn, Preston; Mr. Burns, Montreal; R. McDougal, Galt; Mr. Carruthers, Prescott; R. W. King, Georgetown; Mr. Merri-man, B. Greening & Co., Hamilton; Mr. Avis, Dovercourt

Twine Mills, Toronto; J. F. Ellis, Toronto; J. B. Carlile, Toronto; James Johnson, Ottawa; A. M. Burgess, Deputy Minister of the Interior, Ottawa; Mr. Schneider, Toronto; J. F. Walmsley, Woodstock; Jno. Perkins, Toronto; Geo. F. Bostwick, Toronto; F. E. Dixon, Toronto; F. J. Drake, Belleville; Messrs. West & McLean, J. & J. Taylor, Toronto; Jos. Lea, St. Thomas; Messrs. Dick & Ridout, Toronto; James Morrison, Toronto; Samuel May, Toronto; Thos. Cowan, Galt; Adam Warnock, Galt; B. J. Nash, London; R. McLaughlin, Oshawa; F. Crompton, Toronto; Ald. E. King Dodds, Toronto; Allan Bowman, Preston; W. K. McNaught, Toronto; A. E. Fish, Boston; Ald. Gillespie, Ald. Boustead, Ald. Frankland, Ald. Piper, Ald. Morrison, Toronto; Mr. Campbell of Campbell & Kay, Georgetown; W. C. Bunnell, Toronto; James Worthington, Ontario Bolt Co., Toronto; W. Doherty, Clinton; Mayor Bickford, Dundas; Dr. McMahan, M P P, Dundas; J. H. Bowman, Dundas; Thos. Goldie, Guelph; W. Boulter, Picton; Geo. Pattinson, Preston; J. Taylor, Toronto; Dan'l Lamb, Toronto; W. H. Storey, Acton; W. Christie, Toronto; H. Heintzman, Toronto.

#### 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.

#### EDITORIAL NOTES.

THE last issue of the CANADIAN MANUFACTURER was so overcrowded with other matter that the sketches relating to the "Captains of Canadian Industry," whose artotype portraits were then given, were omitted; but they are published in this issue. In our next issue portraits of other "Captains" and sketches of them will appear as usual.

"QUOTH Frankie to Grover one evening of late, as they sat in the parlor so cool, 'Dear Grover, I pray you the difference explain, 'twixt free trade and tariff on wool.' Said Grover to Frankie, 'The difference is this,' and he swelled to exorbitant size, 'the tariff puts wool on the workingmen's back, free trade pulls it over their eyes.'"

SINCE the close of the Industrial Exhibition we have heard so many exhibitors speak in kindly terms of the unvarying courtesy of Dr. A. E. Mackay, the Assistant-Secretary, that we are glad to be able to publish the fact in these columns. Mr. Mackay is deservedly popular, and all who are brought in contact with him can bear witness to his willingness to smooth away the countless little difficulties upon which he has adjudicated.

"It is easy to sneeze at 'infant manufactures,' and wonder when they will shed their milk teeth. The ignorant and the stupid will never consider that the great manufacturing establishments of Europe are the slow and steady growth, not of generations, but of centuries; that the broadcloth which you

# TO MANUFACTURERS !

A splendid opportunity to lease, with the privilege of purchasing on very favorable terms, one of the

## BEST EQUIPPED FACTORY BUILDINGS IN CANADA.



Having 33,000 feet of floor surface; well lighted; heated by direct steam; has highly economical steam plant, consisting of 150 horse-power Brown Automatic Cut-off Engine with two Horizontal Tubular Boilers of 80 horse-power each, with Heaters, Pumps, Injectors, etc., situated in one of the best manufacturing towns in Canada, and possessing valuable privileges from the town that can be transferred to the lessee or purchaser.

We solicit correspondence and inspection of the property, possession of which can be given at short notice. Address

THE CANADA SCREW CO.

HAMILTON, ONT.

buy for your coat is the result of 10,000 distinct, successive inventions and discoveries auxiliary to the combers', the dyers', the spinners', and the weavers' handicrafts. The babyhood of an elephant outlasts the average life of a dog. Rare excellence ripens slowly."—*Horace Greeley.*

THE Grit papers are constantly saying that pools and combinations and trusts are the direct results of our National Policy, and that were Free Trade to prevail, such things would disappear. There is no protective policy prevailing in Great Britain, and according to this process of reasoning, that country should be singularly free from pools, combines and trusts; yet there is a syndicate now in existence there formed for the avowed purpose of cornering salt, restricting its production, and enhancing its price. Salt is an article of prime necessity the world over, and its manufacture is one of the most ancient, as well as most important of British industries. Human nature is the same the world over.

WHEN the Canadian workman arises in the morning and pulls on a good suit of clothes, enjoys a hearty breakfast of bread and butter and beef and coffee and pastry, all of which are cheaper here than in any part of Europe, and his appetite is stimulated by nice clean china ware instead of the pewter plates of free trade times; and he fills his dinner bucket with good, substantial food, and returns at night to a comfortable home of his own; and his children, as they climb upon his knee tell him in their merry, prattling way what they have learned at free school; and after partaking of a good supper, he picks up the daily paper and posts himself upon the news of the day, then retires to a bed of ease and comfort, he thanks benign providence from the innermost recesses of his heart that he is permitted to pay even 20 per cent. more for everything he buys, so that he may earn 100 per cent. more than he could in any other country.

By reference to the full page illustration of the premises shown on page 239 of this issue, an accurate idea may be had of the property owned by the Canada Screw Company in the town of Dundas, Ont., which they are offering for lease or sale. Dundas is one of the most flourishing manufacturing towns in the Dominion, possessing a great many advantages, and all of those necessary to enable manufacturers to operate their works to the best possible advantage and with the greatest economy. It is connected by railroad with all commercial centres; has gas and a complete water system; telephone exchange, telegraph, etc., and local taxes are very moderate. The property offered for sale is quite extensive, well located buildings all in good condition, with steam plant, etc. The Canada Screw Company have outgrown these works and have erected much more extensive ones in Hamilton, hence their desire to sell or lease. Manufacturers seeking for advantageous locations would do well to investigate the merits of the Dundas property of the Canada Screw Company, whose address is at Hamilton, Ont.

THE dissolution of the Canadian oatmeal pool, and the threatened lowering of the price of Canadian oatmeal, has had the effect of alarming the manufacturers of oatmeal in the United States. The *American Miller* shows that no sooner had the

American pool got into good running order than it is threatened with demoralization by an influx of cheaper Canadian oatmeal; and that certain influences are at work in Washington seeking the removal of the duty of one-half cent per pound on foreign oatmeal, which, if accomplished, would doubtless have the effect of closing many American mills. It quotes a prominent member of the American pool as saying that no American mill would be able to grind oatmeal at a profit if the duty should be removed from the Canadian product. While our sympathies are not specially excited in behalf of American oatmeal millers, it is evident that they do not entertain corresponding views with Canadian anti-tariff newspapers and politicians, who contend that the Yankee duty is borne by Canadian producers. Our American friends seem to think that the boot is entirely on the other leg.

A FEW weeks ago an esteemed correspondent, "R. W. E.," in denouncing the use of gasoline, declared that, in his opinion, the article should be destroyed at the works where it is produced, so that no damage could possibly result from its use. Of course we combatted the arguments brought forward, showing that, as a fuel for gasoline stoves, it is not specially dangerous where proper precautions are observed, and that its use is particularly desirable as such fuel when the weather is warm, and the excessive heat from coal and wood burning stoves not only unpleasant but unhealthy. And now Edison, the inventor, comes forward as a champion of gasoline, as being "just the thing" with which to destroy yellow fever microbes. It is in the volatile quality of gasoline that its chief power lies to destroy the microbes, used in connection with certain chemicals. In fever stricken districts the appearance of frost is hailed as the harbinger of returning healthfulness; but Edison's plan is to produce a like condition through lowering of the temperature by the rapid evaporation of gasoline. He says that ten years ago he demonstrated that gasoline sprinkled on the ground produced a condition of cold sufficient to destroy the Colorado beetle, and that the germs of yellow fever may be killed in the same way. Under the circumstances, we hope that "R. W. E." will not now insist on having gasoline destroyed at the works where it is produced.

THE *Monetary Times*, in discussing the queer ideas of advertising entertained by some business men, dissents from the view that the daily press is the only way that advertisers can reach the masses of the people, as claimed by a correspondent in a daily paper. It says that there are those who will not advertise in a daily paper at all, taking the view that a single advertisement is lost in the columns of a great broadsheet. They prefer circulars and other devices more or less successful. "A much larger proportion, however," it says, "perceive that the columns of a journal which goes mainly to a certain class of readers is the place to put an advertisement that will catch the attention of those readers." It cites certain English and American trade papers in sustaining its contention; calls attention to their large proportion of advertising pages, and asks, "Does any one suppose that these hundreds and thousands of advertisers in such journals do not get reasonable value for their money? It would say little for their business shrewdness if they did not." Of course our contemporary is correct in its contention; and the large proportion of adver-

tising pages which is always a distinguishing feature of the CANADIAN MANUFACTURER is conclusive evidence that our advertising patrons believe that when they choose our pages for presenting their business to the public, they get reasonable value for their money. Advertising in this journal is a sound and likely method by which to reach a desirable class of persons.

THE Port Hope *Guide*, speaking of the beginning of work on Messrs. A. W. Morris & Bro.'s new cordage factory there, says:

"Hope deferred has made our heart sick many a time, and we are slow to realize the fact that there was a shadow of a shade of a chance to get any one to establish a factory in Port Hope, notwithstanding that we are as well situated for shipping facilities as any town or city in Canada. The tide has, however, turned, and we are in hopes that within another decade Port Hope will become noted far and wide as a manufacturing centre."

There is no newspaper published in Canada more senseless in its ravings against the N. P., and the party that maintains it, than the Port Hope *Guide*. In season and out of season; on all occasions and without occasion, it raves against that policy of the Government which makes it possible for Port Hope to "become noted far and wide as a manufacturing centre," and which has actually made scores of even less favored Canadian towns so celebrated. The *Guide* says truly that "Port Hope is as well situated for shipping facilities as any town or city in Canada;" but our contemporary ought to thank itself that its insane opposition to Protection, tending to suppress all manufacturing enterprises in Canada, has done all it could do to prevent cordage factories or any other sort of industrial works from locating there. If the better sense of the good people of Port Hope has returned to them, and they are showing an appreciation of the value of workshops and factories in their midst, and are doing what they can to induce capitalists to invest their money there, it is in spite of the influence of such papers as the Port Hope *Guide*.

The *Canadian Grocer* has taken another step forward in the path of its prosperity by increasing the size of its regular issue from sixteen to twenty pages. Its increasing business required it, and Mr. J. B. McLean is reaping the reward his knowledge and perseverance deserves. There is always remunerative patronage in store for just such journals as the *Grocer*.

*Wide Awake*, for October, is just as beautiful as the variegated leaves and foliage that are ablaze in their gorgeousness at this time on all our Canadian hills, and is as sparkling as the crystalized dews that are seen everywhere on our frosty mornings. The leaves and the frost are perfect in their beauty, and *Wide Awake* is quite as perfect in its beauty, and just the thing to place in the hands of all Canadian children who love and appreciate the pure and beautiful. There are just two months more in which to earn a Lothrop literary prize, concerning which we have heretofore given full information. D. Lothrop Company, publishers, Boston, Mass.

The *Dominion Illustrated* of last week completed just three months of its existence, and the youngster is growing in beauty and interest as its old age comes upon it. The success of this journal is such as gives pleasure to all Canadians, for it is in the most comprehensive sense of the word an educator of what Canada is; an illustrator of the natural scenery of our beautiful country, of the things that indicate the higher tastes and character of the people, and of the people themselves who make Canada great. All parents who desire that their children should be well informed concerning their country, should place *The Dominion Illustrated* within their reach. Messrs. G. E. Desbarats & Son, publishers, Montreal; Mr. George E. McRae, Western agent, Toronto.

## 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.

THE Birtle Milling Company, Birtle, Manitoba, will build a flour mill at that place.

THE town of Shelburne, Que., has passed a by-law appropriating \$12,000 for water works.

MESSRS. DUNSMUIR & SONS are building a large sawmill at Union Coal Mines, Comox, B.C.

MESSRS. J. & J. KERR's planing mill at Petrolea, Ont., was destroyed by fire September 18.

MR. McLAURIN, Brandon, Man., will build a grain elevator at Alexander Station, C.P.R.

THE Canada Jute Company, of Montreal, will increase its capital stock from \$50,000 to \$100,000.

MESSRS. FOSTER & BROS.' mills at Midland, Ont., were destroyed by fire Sept. 5. Loss about \$15,000.

THE town of Paris, Ontario, has voted a bonus of \$5,000 to Mr. F. Wylie to establish a wincey mill there.

THE St. John Cotton Company, St. John, N.B., will increase its working capital to the extent of \$50,000.

THE factory of the Ontario Wheel Company at Gananoque was destroyed by fire Sept. 30, causing a loss of \$25,000.

THE Reliance Electric Manufacturing Company, Waterford, Ont., has been incorporated with a capital stock of \$100,000.

THE Saint Hyacinthe Oil and Paint Company, St. Hyacinthe, Que., has been incorporated with a capital stock of \$25,000.

THE Portage Milling Co., Winnipeg, Man., will erect a grain elevator at Burnside, Man., and another at Griswold, Man.

MESSRS. GOLDIE & McCULLOCH, Galt, Ont., are supplying steam engine and boiler for Mr. Jacob Hilborn's mills at Blair, Ont.

THE R. Forbes Manufacturing Company, Hespele, Ont., have been placing considerable new machinery in their woolen mills.

THE Evans Brothers Piano and Manufacturing Company, of Ingersoll, Ont., has been incorporated with a capital stock of \$100,000.

MESSRS. LAUTENSCHLAGER & WEAVER, Berlin, Ont., have disposed of their button factory to Messrs. M. B. Shantz & Co., of that place.

MR. W. D. MATTHEWS, president of the Toronto Board of Trade, will build, equip and operate a grain elevator at West Toronto Junction.

CAIN's woodenware factory, at Newmarket, Ont., has recently shipped 140 dozen washboards to Halifax, N.S., and sixty dozen to Winnipeg, Man.

THE machine shop and sawmill of Mr. H. A. Calvin, at Garden Island near Kingston, Ont., were destroyed by fire September 24. Loss about \$20,000.

A LARGE new cotton mill will be built at St. Jerome, Que., where there is excellent water power. A company for that purpose is being formed in Montreal.

MR. JAMES McLAREN, of Buckingham, Que., has recently purchased a desirable mill site in Hull, Que., on which it is said he will erect a mammoth cotton mill.

THE Kincardine Bridge Company, Kincardine, Ont., have been awarded a contract for the erection of a steel highway bridge over the Grand river at Fergus, Ont.

MESSRS. W. BELL & Co., organ and piano manufacturers, Guelph, Ont., are placing an incandescent electric light plant in their factories at a cost of about \$5,000.

MR. W. E. STANLEY, a general merchant of Lucan, Ont., has sold 113 tons of binding twine during the current season, the manufacturer's price for which was \$28,250.

AN addition will be made to the premises of the Wm. Hamilton Manufacturing Company, in Peterboro'. It will be two stories high and cover a space of 166x34 feet.

RECENTLY, at the Hastings sawmills, Victoria, B.C., a stick of timber was cut which was 106 feet long and 24 inches square in the clear. The log produced 12,000 feet of lumber.

THE Nova Scotia sugar refinery is now lighted throughout by an electric light plant that cost but \$1,600. Heretofore they paid for illuminating gas on an average of \$2 500 per year.

MR. E. C. POPE, of Cleveland, Ohio, as will be seen in our advertising columns, is offering for sale a charcoal blast furnace in first class condition located in Huron county, Michigan.

MESSRS. WM. BELL & Co., Guelph, Ont., manufacturers of organs and pianos, are placing a sign on their factories 170 feet in length which can be read distinctly at the distance of a mile.

MESSRS. GOLDIE & McCULLOUGH, Galt, Ont., have recently shipped six car loads of machinery to parties in Toronto and Ottawa, and a 16-foot fly-wheel to the electric light works in Hamilton.

THERE seems to be no doubt that the natural gas well being sunk at Whitby, Ont., will prove a success. A good flow is already issuing from the well, but the exploration is being continued.

BETWEEN January 1 and September 1 of this year, the shipments of lumber from St. John, N.B., aggregated 114,000,000 feet against 82,000,000 feet during the corresponding period of last year.

THE Imperial Electric Light and Traction Company, of Montreal, have been incorporated with \$300,000 capital stock, with the object of purchasing, operating, and selling the Julien patents in Canada.

THE Sherbrooke, Que., Gas and Water Company are introducing a Strat seventy arc light plant for lighting the streets of that town. Stratford, Ont., has also recently purchased a Ball plant of similar size.

THE Port Ryerse Mills, at Port Ryerse, Ont., belonging to Messrs. Harris & Co., of London, and run by Messrs. W. H. Summerfeldt & Son, together with all the contents, were destroyed by fire Sept. 27th.

MESSRS. WM. JOHNSON & Co., Montreal, are offering to let a factory with water privileges located near Black's bridge, that city. The building is 60x60 feet, five flats, extra well lighted, and very strong.

IN Neepawa, Man., recently, an agricultural implement agent delivered in one day to farmers, 61 binders, 10 mowers, 11 horse rakes, and 22,000 pounds of twine, all of which was valued at \$17,000.

MR. WM. HAMILTON, of the Wm. Hamilton Manufacturing Co., of Peterboro, Ont., has lately made a tour of British Columbia, with the object of introducing the saw mill machinery of his company in that province.

MR. WM. BAIRD, managing director of the Mendelssohn Piano Company, Toronto, manufacturers of pianos, was for many years connected with Messrs. Heintzman & Co., the well-known Toronto piano-makers.

THE Corticelli Silk Company, St. Johns, Que., under the skillful management of Mr. W. H. Wiman, is fast developing into a large manufactory. It is a branch of the famous Nonotuck factory in the United States.—*St. Johns News*.

THE Kingston Cotton Mill Company have received orders from three houses in China which will take all the cotton their mill can make up to the 1st of January next, at prices in advance of the former, and which will pay well.

THE two foundries, Bricker & Co., and Merner & Co., of Waterloo, and the Elmira foundry, have all been amalgamated, and are now carrying on business under the name of "The Waterloo Manufacturing Company."—*Galt Reformer*.

L. N. VROOMAN, of Michigan, has leased the iron mine on the farm of Leonard Wager, near Tamworth, Ont., and commenced extensive operations. The ore is said to equal any found in Ontario, and of the quality required for Bessemer steel.

MR. L. SCHEPP, of New York, manufacturer of desiccated cocoon, is establishing a branch factory in Hamilton, Ont. The neces-

sary machinery has been placed, and it is expected that the goods will be in the market in October.

MESSRS. COULTHARD, SCOTT & Co's agricultural implement factory, and Mr. W. J. Hare's foundry, at Oshawa Ont., with the larger part of the machinery and material in the former, and all the contents of the latter, were destroyed by fire Sept. 3

MESSRS. George F. Haworth & Co., Toronto, inform us that, owing to the large amount of business they are doing they have been compelled to put into their leather belting factory on Jordan street another steam press in connection with their other machinery.

It is rumoured that the manufacture of Armington and Sims engines and Edison apparatus, together with that of Edison incandescent lamps, now located at Sherbrooke and Hamilton respectively, may eventually be amalgamated and concentrated in Montreal.

THE new Maxwell agricultural implement works at St. Mary's, Ont., which are to cost \$30,000, are being pushed as rapidly as possible. Mr. Maxwell expects to occupy these works in November, and to have them in full running order by the close of the year.

THE largest piece of phosphate of lime ever mined was on exhibition at the Cincinnati Exposition. It was taken out of the Sydenham mines and weighed nearly half a ton. Several pieces of mica, secured in the Kingston vicinity, were also on exhibition at Cincinnati.

THE citizens of Berlin, Ont., will vote—October 22—on a by-law to bonus Messrs. J. E. McGarvin & Co., of Acton, Ont., who propose to remove their trunk factory to Berlin, and occupy the now vacant Crompton corset factory building if the bonus is granted.

THE capital stock of the Nova Scotia Steel Company, Halifax, N.S., has been increased from \$310,000 to \$1,000,000, extending its undertaking so as to include the manufacture of steel and iron in all their branches, and articles consisting of iron or steel in whole or in part.

MR. HESTER V. HARDY (assignee of Peter Coss), Toronto, has been granted a patent on a clothes tong which consists essentially of two bars or sticks pivoted together with handles at one end, and corrugations or flutings at the other, for gripping and retaining the fabrics.

THE Thornbury Oil and Mining Company, which was formed in 1886 by seven of the business men of Thornbury Ont., has struck a very strong flow of natural gas about four miles from the town, and it is estimated that at least 2,000,000 cubic feet escape every twenty-four hours.

THE owners of the Syndicate gold mine, which is situated on the west bank of the Riviere du Lievre, about 6½ miles from the village of Buckingham, Que., have received very promising reports from Montreal about the examination of ore sent down. It shows a production of \$95 to the ton.

THE Westcott Chuck Company, Oneida, N.Y., have sent us their illustrated catalogue having reference to the Westcott chucks manufactured by them. Mention is made of two styles of mill chucks and five styles of lath chucks, all of which are made in sizes adapted to the wants of the trade.

THE town council of Woodstock, Ont., have granted free water and exemption from taxation for ten years to the Chance Railway Frog Manufacturing Company. This company was formed a short time ago by a Mr. Wilson, who holds the patent of the Chance frog. They will likely commence to build works at once.

MESSRS. McMAHON, BEGG & SHEA, St. Catharines, Ont., have been awarded the contract for building the Canada Atlantic Railway bridge over the St. Lawrence River, extending from Coteau Landing to Valleyfield, Quebec. The contract price is \$560,000, and the work will be pushed to completion as rapidly as possible.

F. M. STOWE, of Winneconne, has solved the problem of tempering brass. He has shown an edged tool that will cut a seasoned pine or hemlock knot without affecting the tool, and the various tests he has made proved it superior to steel for cutting purposes, as it takes altogether a finer edge.—*Milwaukee Sentinel*.

THE Waterloo Manufacturing Company, Waterloo, Quebec, has been incorporated with a capital stock of \$100,000, to carry on the business of manufacturing horse-powers, threshers, agricultural implements, and general foundry business. The business will be carried on in Elmira and Waterloo, with the head office at the latter place.

MR. JOHN GRADY, of Ashland, Wis., will build a saw mill at Vancouver, B.C., with capacity of 20,000 feet per day. The machinery will be built by the Wm. Hamilton Mfg Co., of Peterborough, Ont., and will cost in the neighborhood of \$14,000. It is Mr. Grady's intention to have the mill running before the end of the year.

THE Grand Lake coal fields of New Brunswick will soon be opened up to traffic. The coal in that region lies near the surface, and it is claimed can be mined and sent to market at a great profit. Notice is given of the formation of the Grand Lake Coal Company, the chief place of business of which will be Chipman. The capital stock will be \$200,000.

THE large mill now being erected at Grand Mere by the Laurentides Pulp Company will be in active operation in a couple of months and is expected to give employment to about one hundred and fifty hands. This mill is on the St. Maurice river, a few miles above the Shawenigan falls, and possesses an immense water power, only surpassed by that of Niagara.

THE Lake of the Woods Milling Company, whose head offices are at Montreal and whose immense new flouring mill is at Keewatin, Man., are asking for tenders for six or seven elevators of 25,000 bushels capacity each, and two of 40,000 bushels capacity each, all to be built on the line of the C.P.R. west of Winnipeg; also one of 325,000 bushels at the mill at Keewatin.

MR. HENRY PORTER, manufacturer of leather belting, Montreal calls attention to the fact that his works in that city extend from 432 to 442 Visitation street, and that the Toronto branch of his establishment is at 36 Front street east. Mr. Porter manufactures a first class article of leather belting, which is well known among millmen, factories, etc., throughout the Dominion.

MESSRS McLAUGHLIN BROS. Skaneateles Falls, N. Y., growers, merchants and exporters of American teasels, are successors to the business of Messrs J. McLaughlin's Sons. This is probably the oldest concern in the United States in this line of business, which was established many years ago by Mr. James McLaughlin. Mr. A. H. McKee, Montreal, is the Canadian agent for the sale of these goods.

MESSRS. THOMAS McDONALD & Co., Queen City Galvanizing Works, Toronto, speaking of the Shipes patent perfect fitting stove-pipe manufactured by them, say of it that it can be taken down after using and twenty-five lengths packed away in a small space of 18x9 inches. Every joint crimped and ready for use. No rivets required. Can be bought at same price as ordinary mis-fitting stove pipes. For sale by dealers everywhere.

MESSRS. A. BRODER & Co., of Morrisburg, have purchased a large tract of timber land close to the Alberni canal, and propose to at once commence the erection of a small saw mill preparatory to the construction of a larger one having a capacity of 100,000 feet per day. The firm of Broder & Co. is well known in Russell, Ontario, Mr Broder at one time representing that constituency in the Ontario legislature.—Victoria, B. C., *Colonist*.

MR. THOS OVENS will build a large machine and carriage shop at Westminster, B.C. It will have a frontage of 33, a depth of 66 feet, three stories high, and will be furnished with lathes, planers and a shaper, and all other machinery usually found in a machine shop. Blacksmithing will also be carried on as at present and carriage making will be added. If the increase in business warrants, a foundry will also be added to the establishment.

MESSRS. McMILLAN, KITTREDGE & Co., Petrolia, Ont., in our advertising pages call the attention of the trade to the water white "Bright Light" illuminating petroleum oil manufactured by them. They claim that this is the best illuminating oil manufactured in Canada, and they solicit trial orders. They are also manufacturers of "Sterling" machine, cylinder, and engine oils; also benzine and deodorized stove gasoline, seventy-two degrees gravity.

MR. F. W. SCHWENDIMAN, Drayton, Ont., appeals to Canadian manufacturers who are users of teasels to patronize home industry by purchasing those of Canadian growth. Mr. Schwendiman has had long experience in the raising of teasels and knows all about the business, and a guarantee of what he claims for his product consists in the fact that the Dominion Dyewood & Chemical Company, Toronto, are his agents, and are prepared to fill all orders for these Canadian teasels.

FIRE broke out in the woolen mills of Messrs. Branchemin & Co., at St. Jerome, near Montreal, September 8, which not only destroyed their works, but an adjoining lumber mill and furniture factory owned by Ald. Villeneuve, of Montreal; the sawmills of

Messrs. Chapleau & Gelders, and the furniture factory of Messrs. Smith & Co. Over one hundred hands were thrown out of employment, and the losses aggregated about \$60,000. It is understood that all these works will be rebuilt.

MR. MANSON CAMPBELL has shipped another carload of fanning mills to the Northwest, and in a few days will ship a similar quantity to the Massey Manufacturing Company at Montreal for the trade in the lower Province. This year the new machine has a bagging attachment occupying only fourteen inches square space on the floor, and will be found a great labor saver. It can readily be attached to any of the Canadian machines manufactured during the past four years.—Chatham, Ont., *Planet*.

SPEAKING of the manufacture and consumption of wooden wash-boards in the United States an agent of one of the largest factories there states that over 7,000,000 are sold yearly in the section lying between the Alleghany mountains and the Missouri river. One factory makes over a million, another 800,000, and another 700,000 wash-boards each, a year. Much of these goods is exported to foreign countries, and there is no good reason why Canada should not be a big producer and exporter of the article.

THE Windsor Foundry Company, Windsor, N.S., inform us that they are enjoying a very heavy trade in Ontario this season in their superior lines of Windsor stoves and ranges. Their works are being run to their utmost capacity, and they are pushed to fill orders. They have a branch warehouse and office on Melinda Street, Toronto, orders from all points in Ontario and the west being filled therefrom. These goods are really first-class in all respects, and deserve all the favor bestowed upon them.

A CHARTER has been applied for by leading lumbermen of Quebec Province and British Columbia for an extensive lumbering organization under the name of the Ross-MacLaren Lumber Company (limited), with a capital of \$500,000. It is said that the operations of the Company will be on the Fraser river, B.C., where it controls very extensive and valuable timber limits. The names of the provisional directors are: Hon. James G. Ross, of Quebec; James MacLaren, Ottawa, and Leonard G. Little, Montreal.

It is the intention of the Hamilton steamboat company to have a new steamer built for the Hamilton-Toronto route. She will be a side-wheeler, 250 feet in length (90 feet longer than the *Macassa*) and broad in proportion. The same firm who built the *Macassa* will build her. The new boat will take the place of the *Macassa* next summer on the regular route, and the *Macassa* will be held for excursions. One condition of the contract will be that the new steamer must have a speed of twenty miles an hour.

MR. R. S. SCHELL has had some private correspondence with the Woodburn, Sarven Wheel Co., Boston, Indianapolis, and St. Catharines, which is anxious to remove their Canadian branch to some better manufacturing centre than St. Kitts. Mr. Schell handed the correspondence to Ald. Read, and the matter will be laid before the City Council. What inducements will be necessary are not stated. The firm will employ an average of seventy-five men, and disburse \$35,000 to \$50,000 a year in wages.—Brantford, Ont., *Expositor*.

MESSRS. R. M. WANZER & Co., Hamilton, Ont., are manufacturing the "Sensible" Sad Iron, for laundry and domestic use, the peculiarity of which consists in the variety of shapes in which it is made, and the removable handle, which can be always kept cool. Owing to the variety of shapes and sizes it possesses great capacity for work; it has a griddle lifter attachment; is not liable to become broken, and when in position the handle will not shake. These irons are supplied in sets of uniform shape and size, or in broken sets, affording all the various shapes and sizes.

SALT has been extracted from the salt springs in this county for some years, but until now there has been no special effort made to prosecute this industry to any extent. J. S. Hickman and others, who own the springs, leased them to Mr. Leadbetter and others, who have set up necessary machinery for extracting the salt, and expect, when they have their preparations complete, to be able to turn out about 500 bushels per day. For dairy use the salt obtained from these springs is considered of first quality, as it contains a considerable percentage of saltpetre.—Amherst, N.S., *Sentinel*.

THE Maritime Chemical Pulp Company's Factory at Chatham, N.B., is a massive brick building, having two wings, and surmounted by a massive square tower. The structure and machinery cost in the vicinity of three-quarters of a million dollars and work will soon be commenced. A track will run from Snowball's mill yard to the pulp mill for the transportation of the edgings and other mill refuse, save sawdust. Mill edgings will be converted into pulp for



making paper. The Chemical Pulp Co., it is said, holds the patent of a German invention, and can produce newspaper pulp cheaply.

A COMPANY is being organized at Montreal to build an iron bridge between Longueuil and Montreal by way of St. Helen's Island, with its terminus at Point St. Charles. The bridge will have thirteen piers from the point to the island, and eight piers to Longueuil. The total length will be 4,490 yards, and the bridge will be used for railways, tramways, vehicles and foot passengers. Tolls will be paid, and the bridge will be open to all railway companies. The greater part of the capital required has been subscribed by American capitalists.

The new improved Gurney hot-water heater, manufactured by the E. & C. Gurney Company, Toronto, recently fully illustrated and described in these pages, and which made its debut before an admiring public at the recent Toronto Industrial Exhibition, as a result of that exhibit and the illustration and description in the pages of this journal, has suddenly found itself famous and much sought after by those who desire a first class apparatus for heating their residences. The heater was shown in full operation in the Gurney pavilion at the Exposition grounds and excited universal admiration.

THE Dominion Organ and Piano Company, Bowmanville, Ont., inform us that in addition to the instruments which they have recently manufactured for the Ontario Ladies' College at Whitby, Ont., they have since received a duplicate order for instruments for the same institution. The first consignment to the Whitby College included eight pianos and a large double bank organ, and the Dominion Organ and Piano Company flatter themselves that so important and valuable an order, followed so soon by a duplicate order, is a merited recognition of the unsurpassed excellence of their instruments.

MESSRS. COWAN & BRITTON, Gananoque, Ont., proprietors of the Gananoque Nail and Hinge Works, in an attractive card in our advertising pages inform the trade that they are prepared to make special patterns of nails, hinges or other articles made from iron from samples. The quality of their goods is always A 1, and their facilities for making such goods are unequalled. The specialties manufactured by them are strap and T hinges, screw hooks and hinges, wrought steel butts for builders and cabinetmakers, 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, etc.

SPEAKING of the industries of the town of Acton, Ont., the Newmarket *Era* says: "When it comes to manufactures Acton is well represented. The large four story brick glove factory of Messrs. W. H. Storey & Son stands at the head in the point of employment, from 150 to 200 hands being engaged on less than 335 lines of gloves and mits from the coarsest buckskin to the finest lady's kid, as well as 260 lines of moccasins. Then there is Messrs. J. E. McGarvin & Co's trunk factory, employing thirty-six hands: Messrs. Beardmore & Co's tannery, in which about the same number of men work and where something like \$20,000 to \$30,000 worth of hemlock bark alone is used every year in the manufacture of leather.

MESSRS. COLIN MCARTHUR & Co., proprietors of the Montreal Wall Paper Factory, Montreal, operate what is probably the most extensive works of the sort in Canada. Their factory building, which was formerly known as the Molson's College, is a substantial brick structure three stories in height, covering an area 225x35 feet. Their products consist of regular, metallic, and mica papers; their capacity of output of the first named being from 5,000 to 6,000 rolls of paper a day, each roll containing seven yards and 2,000 rolls of eight yards each of metallic papers, besides large quantities of extra fine papers manufactured entirely by hand-stamping. The works give employment to fifty skilled workmen, and the five printing machines are driven by a twenty-five horse-power steam engine.

THE refining of lubricating oils from salmon refuse, which was commenced some months ago by Discoteau & Defontaine on a small island near the mouth of the river, has been attended with much success. According to law the canneries are prohibited from throwing away the salmon refuse as long as a refinery is in working order and can use the refuse. In this way the refiners have an opportunity of securing material at a very small cost, and the only real expense is in extracting and refining the oil. So far this season 2,000 gallons have been refined, and 3,000 gallons more will be made before the season closes. Had the salmon run been good this year these figures would have been doubled or trebled. Two grades of oil are refined and both are admitted to be fine lubricators.—*Westminster (B.C.) Columbian.*

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**NEW BRUNSWICK FOUNDRY.**

**RAILWAY CAR WORKS, | PORTLAND ROLLING MILLS,**  
**PARADISE ROW. | STRAIT SHORE.**  
**PORTLAND, ST. JOHN, N.B.**

Railway Cars of all descriptions. Chilled Car Wheels, "Washburn Peerless" Steel Car Wheels. Car, Machine, Mill, Ship, and all kinds of Castings. Steam Engines, Mill and other Machinery. Nail-Plate, Bar Iron, Street and Mine Rails, Ships' Iron Knees, Hammered Car Axles, Shafting and Shapes.

**BRUSHES**

Paint, Whitewash, Kalsomine, Household Brushes—  
 Horse, Factory, Machine Brushes, etc., etc.  
 Corn Brooms and Whisks.

MANUFACTURED BY

T. S. SIMMS &amp; CO., - ST. JOHN, N.B.

**FOR SALE!****CHARCOAL BLAST FURNACE**

IN

HURON COUNTY, MICHIGAN.

IRON STACK. FIRST-CLASS CONDITION. EASILY REMOVED

Address,

**E. C. POPE,**

CLEVELAND, O.

MESSRS. F. E. Dixon & Co., Toronto, inform us that in July, 1873, now more than fifteen years ago, they made a 14-inch double leather driving belt for Messrs. Hastings & Peterkin's planing mill and sash factory, in Toronto, and that this belt has been in constant use driving the machinery of the whole factory ever since, and is still in perfectly good working order. They say that they do not profess to make leather belting that is absolutely better than that made by any other manufacturer in the whole world, but they do claim that they make quite as good belting, whether English, American or Canadian. They also say to those who may be in need of a really good driving belt, or any other belt, that their prices and the quality of their goods are all right, and that they guarantee entire satisfaction.

MESSRS. R. W. KING & Co., Georgetown, Ont., have sent us a pamphlet having reference to the King system of warming and ventilating buildings by steam, by the use of the King heating apparatus manufactured by them. The book contains a series of articles of a scientific character relating to the importance of having pure air in dwellings, public buildings, factories, etc.; methods of ventilation; economy of fuel; methods of constructing heating apparatus and plans for arranging the same, etc. The claims of the King system are fully set forth and the apparatus and its operation described in detail, and a number of testimonials are exhibited from parties who have the system in use, including Messrs. W. H. Storey & Son, glove manufacturers, Acton, Ont. This apparatus was shown at the recent Toronto Industrial Exhibition.

THE Preston Carriage Company, Preston, Ont., is a new concern recently incorporated with \$10,000 capital for the manufacture of carriages, sleighs, phaetons, buggies, cutters, etc. The company inform us that their new works, recently erected, embrace a main building 100x40 feet, three stories high, and an adjoining boiler and engine house 24x22 feet. On the ground floor of the main building are the offices, show-room and blacksmith shop; on the second floor the machine shop and woodworking department, and the third floor

is appropriated for painting, trimming and finishing. The company will employ about thirty hands, and will manufacture only first-class work. As was recently stated in these pages, the steam engine for these works was manufactured by Messrs. Cowan & Co., Galt, Ont.

THE Howell paper mill at the Chaudiere was opened on Tuesday, and from sawdust rough paper will be manufactured. The sawdust is taken from Bronson's mill and brought by carriers to the basement of the paper mill. Here it is put into a revolving wire screen which acts as a separator. From here the mash passes to a cylinder and has the appearance of thick starch. Pumps are employed to carry the material to the floor above, where it is ground and squeezed and sent to the top floor, where the manufacture is completed by being passed through a succession of rollers. The pulp is subsequently put through hot rollers, which gradually dry the paper and send it out ready for use. Mr. Howell thinks that when in full order, the mill can turn out six tons a day, and a better quality of paper will also be manufactured.—*Ottawa Citizen.*

MESSRS. A. MURCHEY & Co., Guelph, Ont., proprietors of the Guelph Malleable Iron Works, are making a specialty of manufacturing the Ney patent improved double-acting horse harpoon hay fork, or pitching machine, upon which they hold the Canadian patent, and Murchey's patent round pipe track, for operating the same. This hay fork is made either single or double, and is very effective. It is manufactured entirely of the best malleable iron and steel, every part of its construction being made in these works. It is made to be operated on a wood track, a double angle steel track, or on the Murchey double pipe track. The advantages claimed for this latter track are that it can be placed closer to the roof of a barn than other tracks which, with the short depth of car, allows the fork, when loaded, to pass through a very small space.

THE Dominion Safety Boiler Company, Montreal, of which Mr. J. F. Torrance, M.E., is manager, inform us that they have recently placed their Field-Stirling safety boilers in the works of the following concerns:—Canada Paper Company, Windsor Mills, Que.; Royal Electric Company (central station), Montreal; Dodge Wood Split Pulley Company, Toronto, and a repeat order for 400 horse-power for Messrs. A. W. Morris & Bros., Montreal, for their new cordage works at Port Hope, Ont. The company call attention to the fact of this repeat order, seeing that the Field-Stirling system which was recently introduced into Messrs. Morris & Bros.' Montreal works has been thoroughly tested there, and has given such entire satisfaction as to induce its introduction into the Port Hope works, which are now being built. This duplicate order is a most substantial guarantee that the manufacturers have faithfully kept their promise to build an apparatus where dry steam and great economy of fuel are the distinguishing characteristics.

MESSRS. I. MATHESON & Co.'s Boiler and Engine Works, one of the prominent institutions of New Glasgow, N.S., give employment to forty-five men, and make steel boilers and high-speed engines a specialty. They also manufacture gold mining machinery to a considerable extent. We saw a marine boiler all ready to ship, which measured over eleven feet in diameter. There was also another, built of 3/4 inch steel, made to carry upwards of 170 pounds of steam, in full working order. The engines and boilers made by this firm are admirably suited for all kinds of work for which such machinery is required. The engines are made with automatic governor in the balance wheel, and use the improved cylinder steam chest. Mr. Matheson built the boiler and engine for the steamer "Southport," Charlottetown, which have given such satisfaction. He is a practical man in every branch of his business, having mastered his trade with the great Napiers, on the Clyde.—*Summerside Journal.*

The most improved sanitary methods of caring for horses and saving the enormous amount of valuable fertilizing material that goes to waste in the ordinary stable was shown in the splendid exhibit of the B. G. Tisdale Co., of Brantford, Ont., at the recent Toronto Exhibition. They showed their improved iron-bound stalls, feed-boxes, hay-racks and other fittings, which go to make a complete and economic stable. The magic self-regulating feed-box attracted great attention, and having been before the public for a long term of years, is generally recognized as about the best article of the kind in use. Tisdale's perfect stable floor is built on a most sensible plan. It consists of wooden strips, having a perfectly level upper surface and resting on channel gutters below, which convey back to the main drain or to the reservoir, which all modern stables have, the fluids from the animals. This arrangement has commended itself to the judgment of all who have examined it, and to-day there are over 10,000 feet of this drainage in use in the city of Toronto. Hon. Frank Smith is considered an excellent judge both of horses and the means for their care, and he has authorized the adoption of the Tisdale system in his street car stables.

## Fenwick & Sclater,

43 and 44 Foundling St., Montreal.

MANUFACTURERS OF

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.

MONTEAL and TORONTO,

MANUFACTURERS' AGENTS FOR

Iron, Steel, Wire, Tinplate,

GALVANIZED IRON.

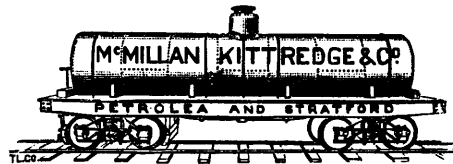
Special value in STEEL BARS, ANGLES, SHEETS, PLATES.

BUYERS ARE INVITED TO OBTAIN PRICES.

"JESSOP'S" STANDARD TOOL STEEL IN STORE.

## "BRIGHT LIGHT"

(WATER WHITE)



THE BEST ILLUMINATING

OIL

MANUFACTURED IN CANADA. SAMPLE ORDER SOLICITED.

Address MCMILLAN, KITTREDGE & CO.

Head Office, PETROLEA, ONT.

## The Wm. Hamilton M'f'g Co.

PETERBOROUGH, ONT.

MANUFACTURERS OF THE MOST MODERN

SAW MILL MACHINERY

ALLINGTON'S PATENT DOUBLE COLUMN BAND MILL, WITH ROLLER GUIDES.

SINGLE COLUMN BAND MILLS. WILKINS' PATENT COMPENSATING BALANCE GANG, NO FOUNDATIONS REQUIRED.

Circular Saw Mill, and everything required in first-class Saw Mills. Send for Circular.

THE W. F. Cochrane Roller Mill Supply Company have recently made some improvements upon their excellent roller mill machinery which will greatly increase its popularity and render it unequalled by any in the market. The rolls are connected by means of compressive couplings, thus allowing one belt to run twenty-eight rolls, instead of four, as formerly. The amount of power saved by this device is from one-quarter to one-third that required to run the same number of rolls before the improvement. The machines are now shipped in such shape as not to require the services of a millwright to start them. The company recently sent a pair of chilled rolls to the Nordyke & Marmon Company, Indianapolis, Ind. This firm has been accustomed to getting their rolls from Ansonia; but they pronounced the Dundas rolls the finest they ever had. One of the newly-improved machines is running very satisfactorily in Ingersoll, and two more are about completed. One is for V. Denne, Newmarket, and the other is for Dobson & Campbell, Beaverton. The machine shop, which is under the direction of Mr. Samuel R. Campbell, formerly with the John T. Noye Manufacturing Company, Buffalo, N. Y., has been improved, and some sixteen machines, made by the Canada Tool Works, have been put in.—*Dundas, Ont., Standard.*

THE McClary Mfg. Company, London, Ont., have sent us their 1888-89 illustrated price list of stoves, ranges, hot-air furnaces, stoneware, stamped, japanned, and pieced tinware etc., manufactured by them. Their "Grand Range" embodies something new and novel in the line of cooking apparatus, having two ovens, with the fire box in the centre. The smaller oven is equally as practical as the large and can be used for baking with as good results as any ordinary cook stove oven. In other ranges this is simply a warming closet, but in the "Grand" the fire extends entirely around it, thus giving the construction double capacity. Other cook stoves and ranges shown embrace every desirable style and variety, all of which are of the most desirable and substantial character. Among the heating stoves the "Red Cross" takes the lead, followed close by the "Famous Royal," which, we are told, graces with its beauty of design and excellent qualities over 15,000 Canadian homes. The lines of heating stoves manufactured by this company are also very large and varied, filling every want in that direction, whether long felt or recent. The "Famous" top return flue furnace shown and described, combines all desirable features requisite in making a powerful, quick and durable heater; and at the same time so simple in construction as to enable the makers to offer it at a moderate price. It is perfectly gas tight and embodies all modern requirements in such apparatus. The catalogue also illustrates and describes other lines of manufactures, to wit: Stamped ware, pieced tinware, copper, brass, and sheet iron ware, japanned ware, tinner's trimmings, milk can and dairy trimmings, wire goods, granite and enameled ware, ice cream freezers and refrigerators, oil stoves, registers, and a large variety of miscellaneous articles. The book contains 112 pp., and is a credit to the printers who got it up, a valuable feature of it being the marginal index by which the reader may instantly turn to any of the special departments indicated.

#### CREELMAN BROTHERS.

MESSRS. CREELMAN BROTHERS, of Georgetown, Ont., made their usual display at the recent Toronto Fair of knitting machinery made by them. The machines were shown in active operation, the attendants being kept busy showing how the work was done, and the different styles and kinds of work that could be done with them. The World's Star is made in six sizes, varying from the small plain machine for making infants' hose, etc., up to that for making toques, boys' suits, underclothing, etc. This is a round machine. The Lion machine in the flat or long style, is specially adapted for manufacturing cardigan jackets, scarfs, toques, cuffs, fancy work, etc. It is constructed on a new principle, rendering it wonderfully light running, rapid and reliable. These machines are made of the best material and workmanship, and competent teachers are sent to instruct manufacturers in the use of them.

#### J. B. ARMSTRONG MANUFACTURING COMPANY.

OUR readers are familiar with the name of the J. B. Armstrong Mfg. Co., Guelph, Ont., whose advertisement has for years appeared regularly in these pages, showing, as changed from time to time, some few of their leading specialties for carriage makers and users. Their revised catalogues, just issued, should be in the hands of every advanced carriage maker in Canada. It gives full particulars regarding their well-known standard goods and some new lines they are introducing this fall, samples of which were shown at Toronto's Industrial, Kingston's Provincial, London's Western, and Ottawa's

## 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, Velocipedes  
Cars, Jim Crows, Track Drills, Semaphores, Rail Cars,  
Double and Single Drum Hoists, etc., etc.

## 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.

We are also prepared to make special Nails or Hinges, or other articles made 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."

## CANADIAN TEAZELS.

PATRONIZE HOME INDUSTRY

Every user of Teazels should purchase those of  
Canadian Growth in preference to Foreign  
Importations.

ORDERS FILLED BY

F. W. SCHWENDIMAN, DRAYTON, ONT.

OR

THE DOMINION DYEWOOD & CHEMICAL CO  
TORONTO, ONT.

Central Fairs. It is not idle boasting to say that this firm's goods have taken front rank in all the markets in the world where introduced. Their share of Canadian business is large and constantly increasing. Their British agency has worked up a very considerable foreign trade for them, and Australian inquiry has grown to such proportions as to necessitate their opening a branch in Melbourne, Victoria, for the completion and distribution of their goods to the trade there, Mr. Armstrong being at present in Australia concluding arrangements for the same.

Without particularising we refer to their leading lines briefly. In buggy gears their patent steel reach and side bar connection give the great advantages of lightness, neat appearance and great strength. Their Defiance side bar gear is a special favorite wherever introduced. They bring out this fall a new side spring gear, the Common Sense, for a cheap saleable buggy. Body bolts direct to the side springs, giving low setting, short turning and lightness; and the shifting shackle hangers permit of altering to suit any width of body. Their Boss side spring gear has had a very large sale, and the Common Sense is got out with the idea of giving those preferring this style of gear one which they can depend on as a most satisfactory article at a low price. They make them in three sizes, and they are just the thing for delivery wagons for merchants, piano or organ agents, and everything in that line.

Their late improvements in their perfect single plate and perfect plate springs have met with ready appreciation by advanced and intelligent carriage makers. They are by far the best springs this company has yet produced, in every respect. They give the public the lightest spring, the neatest appearing spring, the easiest riding spring, and the only spring in the world, they say, that will ride easy with a light or full load. Prices on these are right to suit the times, and their advantages over the ordinary springs will be plainly apparent to every intelligent user on comparison. They have also introduced this fall their patent steel-heeled pole, improved steel neck-yoke and some other specialties, particulars regarding which are freely furnished by mail on receipt of inquiry. Their business is in the unfinished parts, their standing rule being to protect their customers, the carriage makers and hardware dealers, in every transaction entered into. Everybody wanting style, neatness, lightness, durability and completeness in vehicles of any and every kind, from the one man road-cart and two-wheeled gig to the jump-seat carriage, and 1,800 lb. carrying capacity democrat, should make it a point to see the Armstrong Company's goods, and ask their carriage makers for their improved specialties.

**CHATHAM MANUFACTURING COMPANY.**

The display of the Chatham Manufacturing Company, Chatham, Ont., was in the west end of the Carriage Building, and consisted of a number of specimens of fine and substantial work from the factory of that company. The lines of vehicles to which this company confine themselves include farm, light farm, one horse and freight wagons; farm and railway dump carts, log trucks, railway platform baggage trucks, bob sleighs, the patent Champion hay rack, etc. The wagons shown at the Exposition, and which were in all respects just like all that are sold from the company's works and agencies, showed the utmost care in selection of materials. precision of workmanship, and nicety of finish, and were much admired. The iron work was certainly as smooth and nicely finished as that on any elegant riding carriage on the grounds. The manufacture of the Government Standard Chatham Wagon was begun by this company about five or six years ago, when they erected works for the purpose of manufacturing farm wagons by machinery with a capacity of fifteen wagons per day. Regarding their facilities and advantages for manufacturing these wagons—the company are very large manufacturers of hardwood lumber and ship plank, having a band saw mill for sawing short logs, and a gang saw mill for sawing long timber. These mills cut from two to four million feet each annually. A great deal of this timber is white oak, white ash, hickory and rock elm, which is unsurpassed for wagon building; and it can be but conceded that in the matter of choice lumber the company have very great advantages in the manufacture of wagons. Whenever an extra good and tough log is hauled into the mill, it is sawn for the wagon works and piled out to dry. As to iron, being probably the largest consumers of certain special shapes in Canada, they have these specially and carefully made, and as they have their own foundry, they manufacture all their own castings from the best Scotch pig. Their arms patterns are altogether different from any used in Canada, the arms from them taking nearly the whole size of the axle at the shoulder, and are cast specially to receive the company's patent climax truss rod, which is applied to the axles of all their two-horse wagons, more than doubling the strength of an otherwise unusually strong axle. The boxes are made of clear balm,

**Leeds Foundry and Machine Works.**

**E. E. ABBOTT,**

MANUFACTURER OF

**Vertical Drills, Shears,**

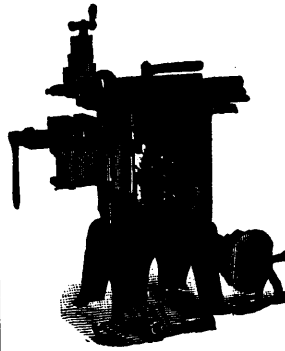
**IRON PLANERS,**

**Punching Presses, Rolls,**

**BOLT CUTTERS**

AND

**SPECIAL TOOLS FOR WORKING IRON AND WOOD.**



**GANANOQUE, - ONTARIO.**

**HENRY PORTER,**

MANUFACTURER OF

**LEATHER**

**BELTING**

**432 to 442 Visitation Street, Montreal, Que.**

AND

**36 FRONT STREET EAST, TORONTO.**

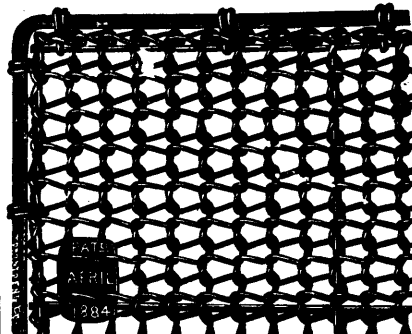
Mill owners will do well to write for estimates before placing their orders.

**VICTORIA WIRE MILLS**

ESTABLISHED 1869.

PATENT

**Reversible Steel Mat**



Having purchased from the Toronto Steel Wire Mat Co. their plant, stock and sole right to manufacture their celebrated mat in Canada, we offer the same for sale at the new reduced price list.

**B. GREENING & CO.**  
HAMILTON, ONT.

**TO MANUFACTURERS!  
FOR SALE**

A fine Manufacturing Premises within easy reach of Toronto, in one of the most pleasant towns in Canada. No cash money required. Will take mortgage for whole amount at five per cent. per annum interest. Buildings all new, and aggregate over 16,000 square feet of floor surface. New boiler and engine. Shafting will be sold if required. Excellent shipping facilities. Free of all municipal taxes for ten years. Other substantial privileges go with the property.

For further particulars apply to

**THE CANADIAN MANUFACTURER,**

**6 Wellington St. W., Toronto.**

or basswood, with heavy iron straps; the bottoms are seasoned tongued and grooved ash, and the whole beautifully painted. The woodwork of the gears and wheels is thoroughly saturated with boiling oil, which expels and makes it impervious to moisture, after which three coats of red lead are laid on; then the work is artistically striped and varnished with the best varnish that can be procured. The company's wagon works proper is a brick building equal to 270 feet long by 40 feet wide, and two stories high, besides other buildings, all of which give an aggregate floorage of about fifty thousand square feet. "If you want a wagon that has an honest, square, stand up look about it, that you can depend on during rain or shine, fit for market, mill or meeting, buy the celebrated Chatham Wagon."

#### NICHOLLS & HOWLAND.

Messrs. NICHOLLS & HOWLAND, Toronto, did not make a display at Canada's Great Fair this year, but a large number of the most attractive displays that arrested the attention of visitors there, and which contributed so much to the success of the enterprise, have been removed to the Permanent Exhibition of Manufactures, of which Messrs. Nicholls & Howland are proprietors. Of course there is a great difference between the two exhibitions. The grounds of the Great Fair cover over sixty acres of land, many of which are occupied by large and imposing buildings; and these, during the two weeks the fair is in operation, are filled with costly machines, machinery and manufactures of every sort and variety; and the accommodations are such that a hundred thousand people could move about and be comfortable there. Toronto's Great Fair is an institution that has come to stay. And so has Nicholls & Howland's Permanent Exhibition of Manufactures. It was established for that purpose, and it is quite as much an educational institution of Toronto as any other in it. While on a line somewhat similar to the Great Fair, an important difference is that while one is open for the reception of visitors only two weeks in the year, the other is open during business hours during every business day in the year—free to the public. The location of the Permanent Exhibition is most favorable for the purpose for which it was established. On Front street, opposite the Queen's Hotel, it is easy of access by the street cars from all quarters of the city, and but a few minutes walk from all the railroad depots and steamboat landings and the fashionable thoroughfares. The building is large—erected specially for the purpose, and an immense glass dome admits of an abundance of light on all the floors, while a steam engine on the premises drives the dynamo which generates the electricity for the one hundred and fifty incandescent lamps which so beautifully illuminate the place at night.

The Permanent Exhibition was opened to the public at the close of the Great Fair last year, and has therefore been in operation a little over a year. During that time more than a hundred different manufacturers have availed themselves of its advantages to place exhibits in it; and now that the Great Fair has closed, a large number of displays that were on exhibition there have been turned over to Messrs. Nicholls & Howland, who have placed them in their Permanent Exhibition.

Manufacturers all over the country are recognizing the fact that as Toronto is the chief centre of trade in Canada, and the principal distributing point for the great North West as well as for Ontario; and that as manufacturers and merchants from these sections always come to Toronto to make their purchases, they can well serve their interests by having displays of their machines, machinery, goods wares and merchandise just where they would be most likely to come under the observation of these purchasers. Everything about the place is arranged with a view to inducing people to patronize it. The building is large, airy, well lighted, warmed and ventilated. The displays are artistically arranged, and visitors can inspect each and every exhibit without trouble. "If you don't see what you want, ask for it." A corps of attentive, polite and well instructed attendants are always at hand to show and explain everything; and comfortable seats invite to repose. Built under the inspection of the fire underwriters, insurance rates are merely nominal, and the ever presence of the firm's watchmen guarantees security against burglars or intruders. The visitor to this Permanent Exhibition may there obtain a better idea of the diversity and extent of the manufacturing industries of Canada than by or in any other establishment in Canada, and there is no other similar establishment in the country.

Messrs. Nicholls & Howland are men who take great interest in this business, and seek to make their place attractive, and it is understood that these gentlemen purpose giving a series of band music entertainments and promenade concerts in their Exhibition Hall during the current month by the celebrated Hungarian Gypsy Band, who made such delicious music at the recent Exhibition.

## TO LET. TO MANUFACTURERS.

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

### WM. JOHNSON & CO.

14 St. John St., Montreal.

## To Manufacturers and Others

### THE ONTARIO INDUSTRIAL LOAN AND INVESTMENT CO.

Having now in course of erection a Large Building on the north side of Lombard Street, between Church and Victoria, are prepared to receive offers for the renting of the same, with or without steam power, in flats or portions to suit lessees.

The proximity of the location to the wholesale houses and all the railroads entering the city, makes it particularly suitable for light manufacturing purposes.

By applying at once alterations in the plans can be made to suit convenience of lessees.

For full particulars apply at office of the Company, 32 TORONTO ARCADE, TORONTO.

E. T. LIGHTBOURN,

Manager.

## 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.*

## CANADA BANK NOTE CO. (Ltd.)

MONTREAL.

W. C. SMILLIE, Pres't. HERMANN DRECHSEL, Vice-Pres't.  
EDW. B. PARKER, Sec'y-Treas.

**BANK NOTE PRINTERS,**

**LITHOGRAPHERS,**

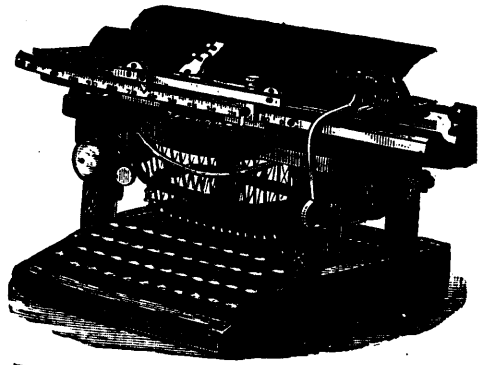
**ARTISTIC PRINTERS.**

RAILWAY MAPS.

GLOSSED LABELS

ARTOTYPE (PHOTO) PRINTING.

# Remington Standard Typewriter



AWARDED FIRST AND SECOND PRIZES

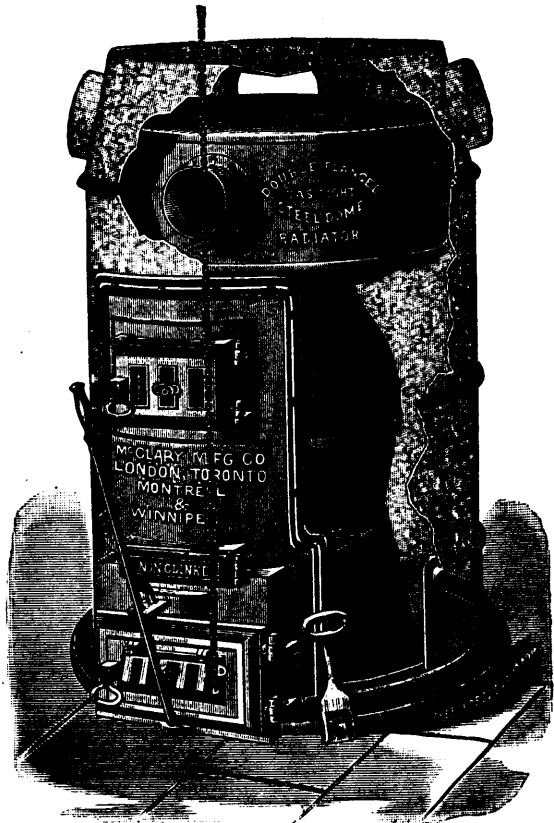
Gold & Silver Medal

BY  
**CANADIAN**  
Shorthand Society  
Aug. 13, '88.

Geo. Bengough,  
AGENT,  
36 KING ST. EAST  
TORONTO.

# FAMOUS TOP RETURN FLUE FURNACE.

IN THREE SIZES, FOR BRICK OR PORTABLE SETTING,



WITH EITHER CAST IRON OR STEEL RADIATOR.

Unequaled for economy of fuel, simplicity of construction ease of management and heating capacity.

# PATENT ADDING MACHINE

## A MATHEMATICAL MARVEL

Is not a toy but a practical article. Thousands in use. HUNDREDS OF TESTIMONIALS. By mail (charges prepaid) on receipt of price—ONE DOLLAR. Money returned if not satisfactory. Circular, testimonials, etc., for stamp. Agents wanted.

**WHITON MANF'G CO., - TORONTO.**

SOLE AGENTS FOR CANADA.  
BRANCH OFFICE—BUFFALO. N.Y.

By Royal



Letters Patent

# THE PERFECTION SMOKE CONSUMER

— AND —

# FUEL ECONOMIZER

FOR ALL HORIZONTAL BOILERS.

AT PRESENT BEING APPLIED TO FLUED BOILERS.

PRICE IN MONTREAL, \$100 PER FURNACE.

AT MONTREAL WATER WORKS; C. P. R., SHOPS; AND  
CANADIAN RUBBER WORKS.

BOILERS SET AND TRAVELS CONVERTED TO NEW SYSTEM.

CORRESPONDENCE INVITED.

**DOBSON & BRODIE,**

169 St. James St., Montreal.

NEW GEM

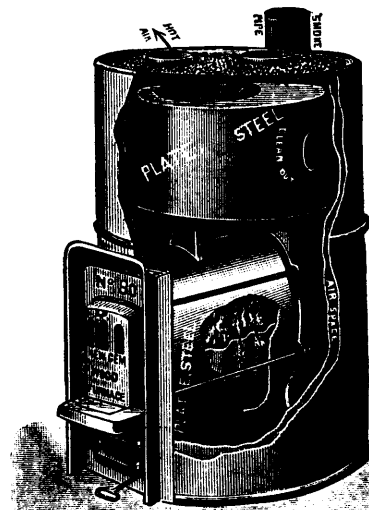
# Wood Furnace

Entirely new and of novel design.

A Powerful and Economical Heater.

Thoroughly tested. Specially adapted for medium sized dwellings.

**SURE TO SELL**



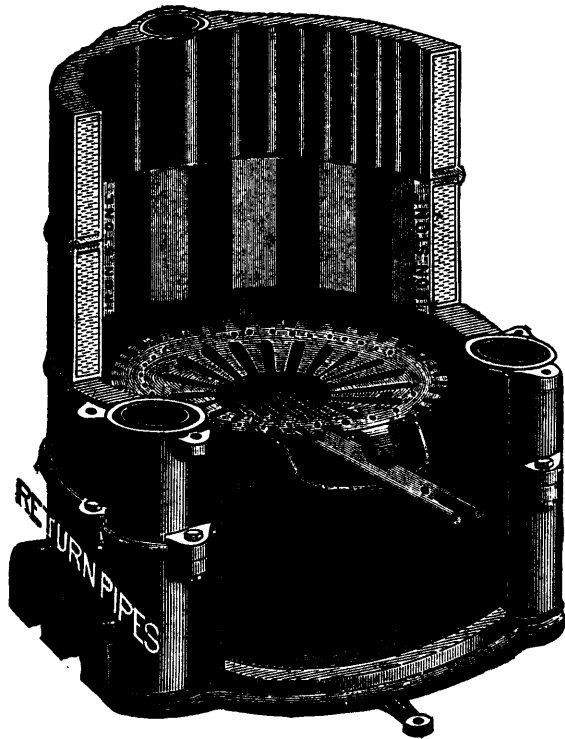
Any dealer who has not received our price list for 1888 will please advise us.

**McClary Mf'g Co.**

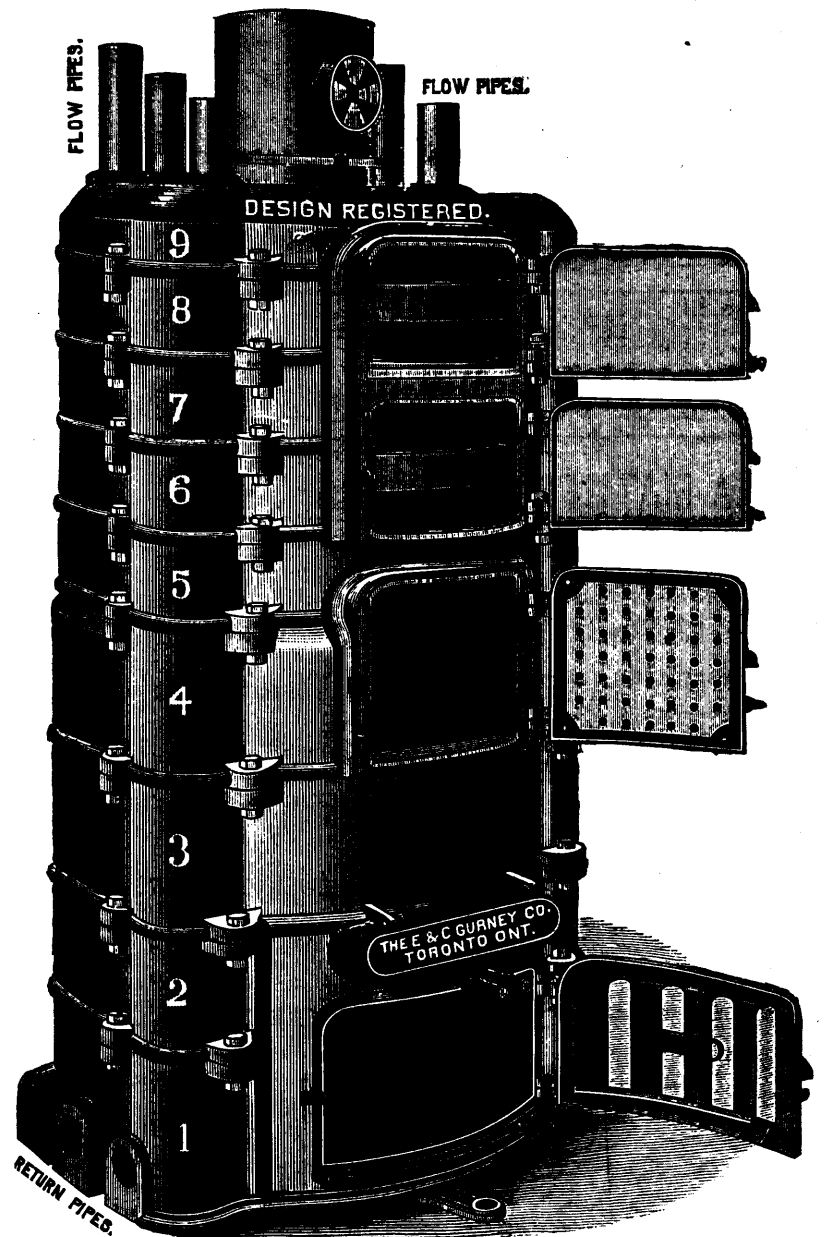
London, Toronto, Montreal and Winnipeg.

# New Improved Gurney Hot Water Heater.

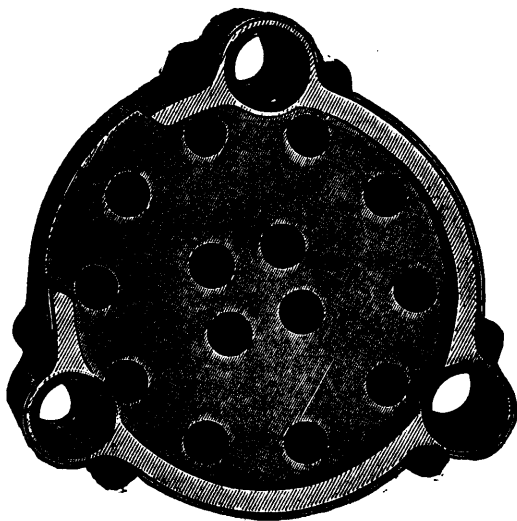
1888



Ash Pit, Grate, Fire Pot and Corrugated Section.



Front and Side View.



Top Radiator with Deflector.

**SECURING INCREASED ECONOMY, DURABILITY, UTILITY.**  
 SEE IT OR SEND FOR OUR CIRCULAR.

MANUFACTURED BY

# The E. & C. GURNEY CO.

TORONTO, WINNIPEG, HAMILTON, MONTREAL.

# BARREL TRUCK

FOR MOVING BARRELS WITH HEADS IN OR OUT.

WILL CARRY FROM 700 LB. BARRELS DOWN TO A NAIL KEG. (WILSON'S PATENT. 1887.)

These Trucks are now ready for the market. Nothing to equal them for the purpose designed. Send order early.

Read the following Testimonial for the first Truck purchased from the Inventor.

Office of THE MORSE SOAP CO'Y.

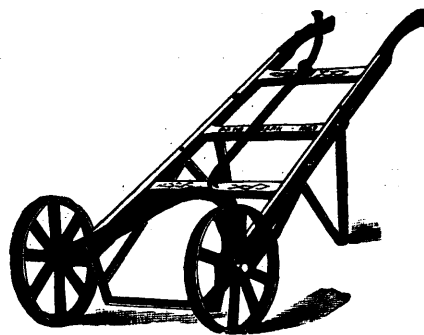
JOHN TAYLOR & Co., Proprietors.

TORONTO, April 25th, 1887.

We have pleasure in saying, that the Barrel Truck we bought from George Wilson, for moving liquids unheaded is quite a success, and has already saved us much labor and material, on account of its convenience.

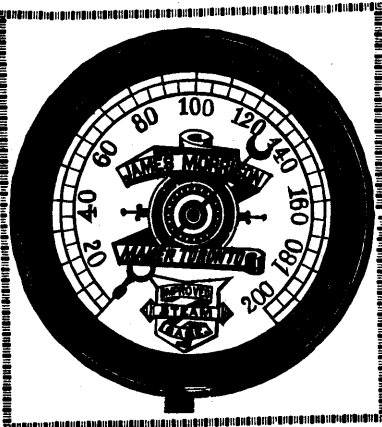
Respectfully,

[Signed], MORSE SOAP CO.



Manufactured only by GURNEYS & WARE SCALE COMPANY, HAMILTON, ONT.

Crown Water Closet.  
 Inodoro Water Closet.  
 Perfect Water Closet.  
 Denning's Valve Closet.  
 Demarest Valve Closet.  
 Alexander Valve Closet.  
 A full stock of Wash-basins,  
 Urinals, etc.  
 Also, complete stock of Wrought  
 Iron Pipe and Fittings.  
 Brass and Iron Valves.  
 Plumbers' and Steamfitters  
 Brass Work.  
 Rubber Hose, Belting, Pack-  
 ing, etc.  
 Sole Canadian representative of  
 the Celebrated Hancock In-  
 spirator.

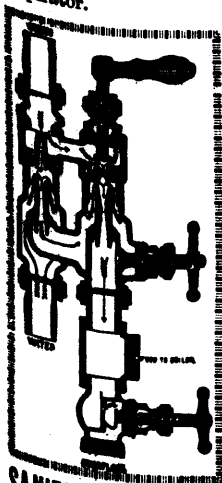


**JAMES MORRISON,**

IMPORTER AND MANUFACTURER  
 OF

Steamfitters' and  
 Plumbers' Supplies

75 & 77 ADELAIDE ST. WEST,  
 TORONTO.



SANITARY EARTHENWARE Now in Stock: Morrison's Washout Hoppe National Water Closet.

## PRESCOTT EMERY WHEEL CO.

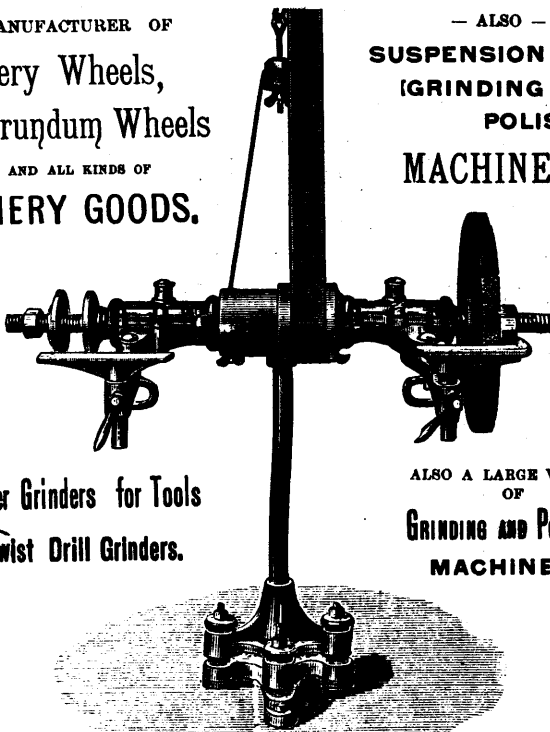
PRESCOTT, ONT.

MANUFACTURER OF  
 Emery Wheels,  
 Corundum Wheels  
 AND ALL KINDS OF  
 EMERY GOODS.

— ALSO —  
 SUSPENSION  
 GRINDING AND  
 POLISHING  
 MACHINERY

Water Grinders for Tools  
 Twist Drill Grinders.

ALSO A LARGE VARIETY  
 OF  
 GRINDING AND POLISHING  
 MACHINERY



Discounts and Price Lists on application.



# NEW BRUNSWICK CORDAGE WORKS,

**THOS. CONNOR & SONS,**

MANUFACTURERS OF ALL KINDS OF

**HEMP and MANILLA CORDAGE,**

**BINDER TWINE, ETC. ETC.**

**VESSELS' OUTFITS A SPECIALTY.**

BINDER TWINE,

MANILLA CORDAGE,

CLOTHES LINES,

LATH AND PALING TIES,

LOBSTER MARLINE,

RATLINE,

LANYARD ROPE

**PORTLAND, N.B.**

## To Manufacturers!

**THE LAND SECURITY COMPANY**

OF TORONTO

Offer for sale or to lease a number of very desirable sites suitable for manufacturing purposes, among which they mention one lot containing  $1\frac{1}{2}$  acres, and one lot containing  $1\frac{3}{4}$  acres on King Street west, on Subway, and on line of Grand Trunk. Toronto Grey & Bruce, and Canadian Pacific Railways. Also the contiguous property, containing about 3 acres, known as the Dominion Bridge Co's Works, having switches connecting with all the Railways entering Toronto. The Shops, Forges, Steam Power and Shafting are all in capital working order.

The Company have also lands where the main lines of the Grand Trunk (Northern) and Canadian Pacific Railways cross at Davenport. Switches are obtainable from either or both roads, and abundant space can be afforded for very extensive works; and for the erection of all dwellings that may be required by workmen.

Portions of these lands are in York Township whence suburban and street car services will give frequent access to the city.

**WM. I. MACKENZIE,**

Manager.

COMPANY'S OFFICES IN TORONTO,  
No. 7 VICTORIA STREET.

# Corliss Engines

**STATIONARY and MARINE ENGINES and BOILERS**

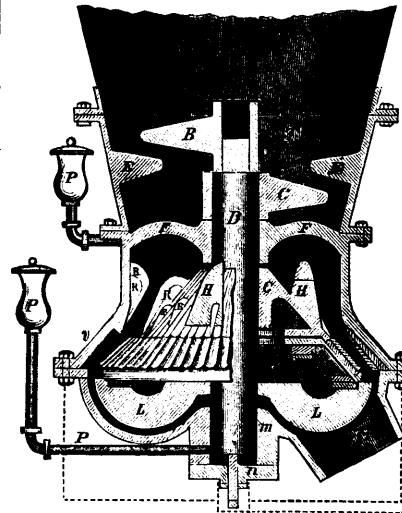
High Economy and Superior Work Guaranteed.

**FLOUR MILL MACHINERY,**  
CASE'S IMPROVED SYSTEM.

**CYCLONE DUST & SHAVINGS COLLECTORS.**

**INCLIS & HUNTER,**

**TORONTO.**



**Important to Tanners.**

**SEGMENT BARK MILL.**

For grinding any hard substance  
SUCH AS

Cement, Plaster, Bones, Barks,  
Ores, Paint, etc. It is also  
used to grind Liquorice  
and Sarsaparilla roots.  
Also as a Corn  
Breaker.

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 re-  
quired to drive it.

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

**PAXTON, TATE & CO.**  
PORT PERRY, ONT.

**Notice to Shippers to South America.**

**D. M. RENNIE,**

Formerly of this City, now in Buenos  
Ayres, South America,

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**Notice to Contractors.**

**SEALED TENDERS** addressed to the undersigned and endorsed "Tenders for the Sault Ste. Marie Canal," will be received at this office until the arrival of the eastern and western mails on **TUESDAY**, the 23rd day of October, next, for the formation and construction of a Canal on the Canadian side of the river, through the island of St. Mary.

The works will be let in two sections, one of which will embrace the formation of the canal through the island; the construction of locks, etc. The other, the deepening and widening of the channel-way at both ends of the canal, construction of piers, etc.

A map of the locality, together with plans and specifications of the works, can be seen at this office on and after **TUESDAY**, the 9th day of October, next, where printed forms of tender can also be obtained. A like class of information, relative to the works, can be seen at the office of the Local Officer in the Town of Sault Ste. Marie, Ont.

Intending contractors are requested to bear in mind that tenders will not be considered unless made strictly in accordance with the printed forms and be accompanied by a letter stating that the person or persons tendering have carefully examined the locality and the nature of the material found in the trial pits.

In the case of firms, there must be attached the actual signatures of the full name, the nature of the occupation and residence of each member of the same; and further, a *bank deposit receipt* for the sum of \$20,000 must accompany the tender for the canal and locks; and a *bank deposit receipt* for the sum of \$7,500 must accompany the tender for the deepening and widening of the channel way at both ends, piers, etc.

The respective *deposit receipts*—cheques will not be accepted—must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for the works, at the rates and on the terms stated in the offer submitted.

The deposit receipt thus sent in will be returned to the respective parties whose tenders are not accepted.

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

By order,

A. P. BRADLEY,

Secretary.

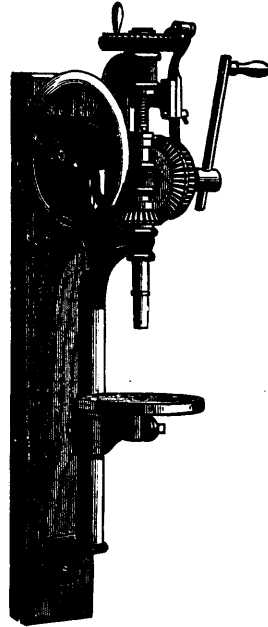
Department of Railways and Canals,  
Ottawa, 8th August, 1888.

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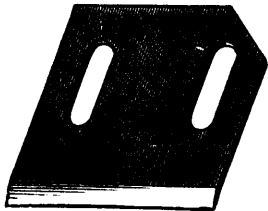
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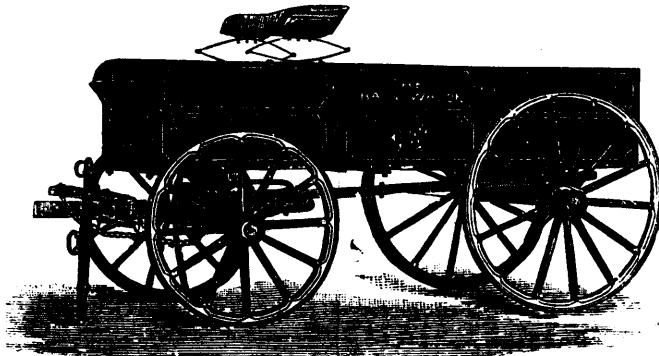
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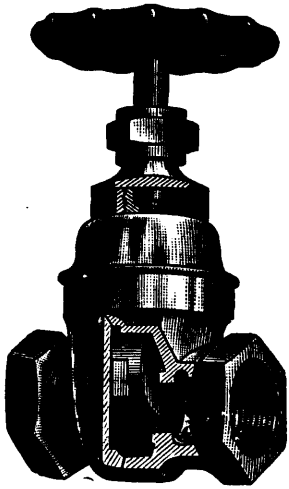
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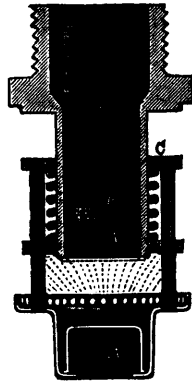
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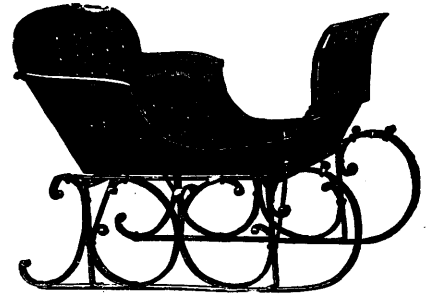
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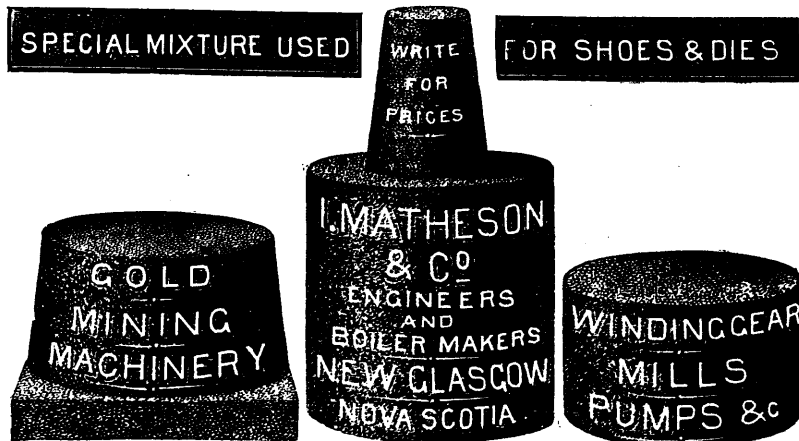
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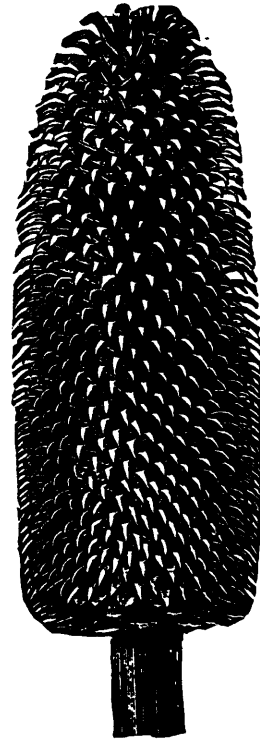
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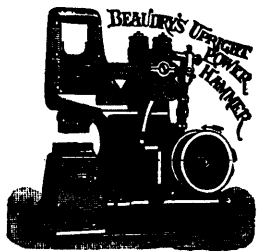
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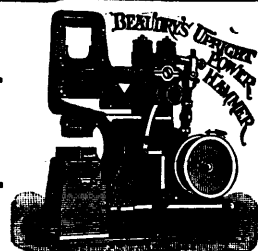
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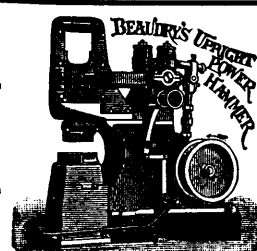
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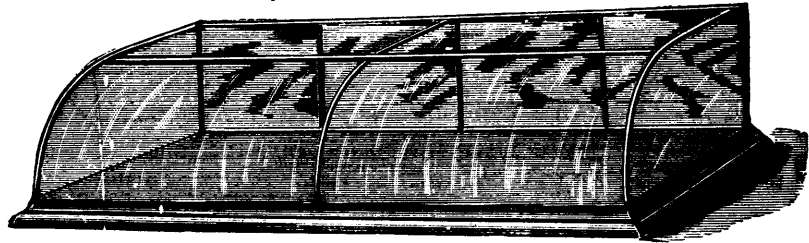
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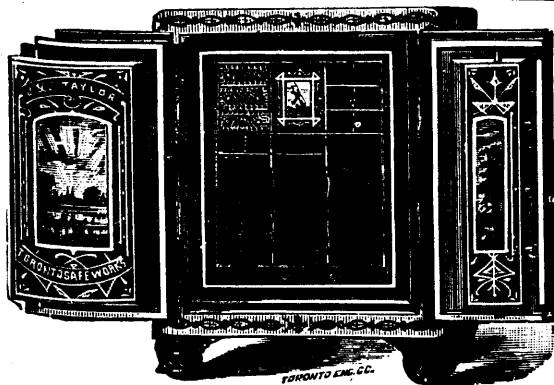
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The purpose of this cut is to illustrate the possibility of carrying power upwards to great heights by the patented **Dodge System of Power Transmission by Manilla Ropes and Grooved Wood Pulleys.** This system will make available many water powers now unutilized.



Every railroad which crosses a mountain divide avails itself of the precipitous sides of streams to find practicable grades to and from the summit levels. These streams often have considerable volume and rapid fall. The railroad is frequently at an elevation of several hundred feet above the water, with mountains behind, capable of furnishing inexhaustible supplies of raw material, mineral or vegetable.

Heretofore the utilization of such material near the place of supply has generally been impracticable because of the impossibility to transmit the power

of the stream up the mountain side to the neighborhood of the means for transportation. In such a case as that represented, however abundant may be the raw material, the cost of sending it down to the water level, and returning the manufactured article to the level of the rail road, might easily so handicap the product as to exclude it from the market.

The Dodge system, however, renders it possible to laugh at difficulties such as this. To this Transmission a few hundred feet more or less is of no moment. A rope suspended in the air will break near the upper support when the gross weight of the suspended portion exceeds the tensile strength of the rope. The tensile strength of Firmus rope, one inch in diameter, is 9000 lbs., i.e. it will break only when the suspended load amounts to 9000 lbs. The weight of 1000 feet Firmus rope having that diameter is 283 lbs., and therefore a vertical elevation of 1000 feet might be overcome without taxing the rope by its own weight more than a trifle over 3 per cent. of its strength, and as the general practice of Dodge Manufacturing Company is to limit the power transmitted to about 5 per cent. of the breaking strain, it is evident that even a thousand feet elevation would not raise the strain to the vicinity of the danger limit, and an elevation which would put all other modes of transmission out of the question would really not make a difference with this transmission worth noticing at all.

And while this rope transmission has the wonderful adaptability shown in the illustrations heretofore published, another powerful recommendation is its economy. Its first cost is a tithe of the cost of any other Transmission, and after being put to service there is no loss. By the patent system of Dodge Manufacturing Company, the rope runs *without slip*. This means a transmission of all the power of the motor, and from 20 to 50 per cent. more than can be secured by any other system of Transmission.

It is these qualities which impress every power user, and which have caused many large establishments to discard all other modes and adopt the Dodge system with Manilla Rope.

The Dodge Patent System of transmitting power by ropes is cheaper and superior to belts in many cases, such as where the driven shaft is at right angles to the driver, also where the drive is perpendicular, particularly when it is quartet twist and perpendicular; also where the driver and driven are close together; also for long drives, such as across a street, or a stream, etc.

For transmitting power from an engine to the line shaft this system is unequalled; steady all the time, not like a heavy belt, which is always more or less flapping, jerking and stretching, then slipping and losing power. It is safe to say that an engine hitched up by the Dodge Rope System will do 25 per cent. more work on the same consumption of fuel than the same engine would do with a belt. The advantages of connecting up large engines in this manner

cannot be too highly recommended. In the first place, the expense of leather is enormous—\$500 is no unusual sum for an engine of three or four hundred horse power, and the pulleys do not have to be very far between centres either; in the second place, the noise at high pressure is terrific, and is the worst feature about our otherwise best plants; thirdly, their weight is quite a factor; fourthly, they require attention that a rope does not; fifth, it requires a man in the business to put one on right, and sometimes they don't always do it right; sixth, any deviation out of line of the shafting affects the belt, while it has no effect on a rope.

The above points, to say nothing of the first cost, which would be about one thirtieth part of leather, are enough to banish the leather belt for main driving into everlasting oblivion, especially in the minds of those that have had experience with large leather belts.

The fact alone that by raising the tension wheel the engine can be turned around by hand for repair or adjustment, is enough to endorse it in the minds of those who have had to do a little pulling on a fly wheel, with the entire shop hitched on.

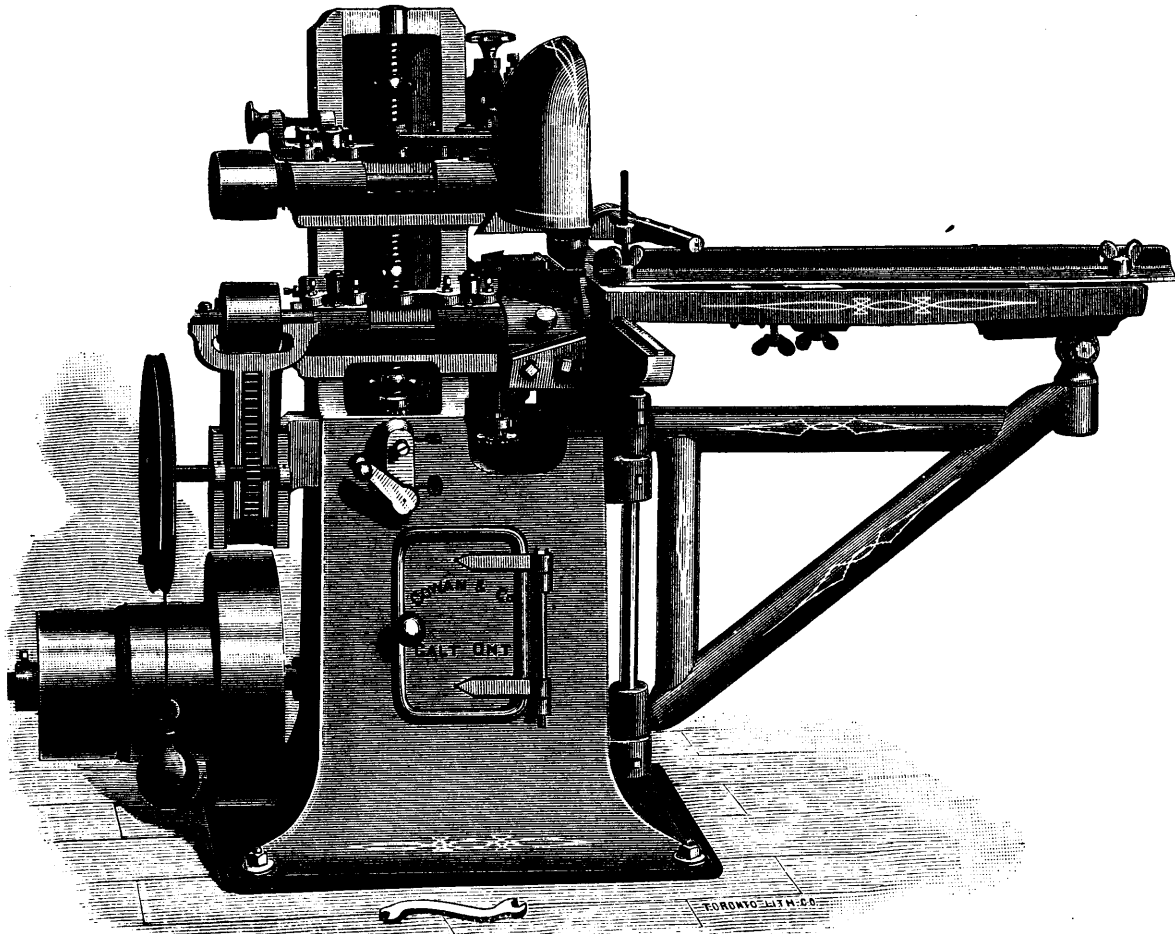
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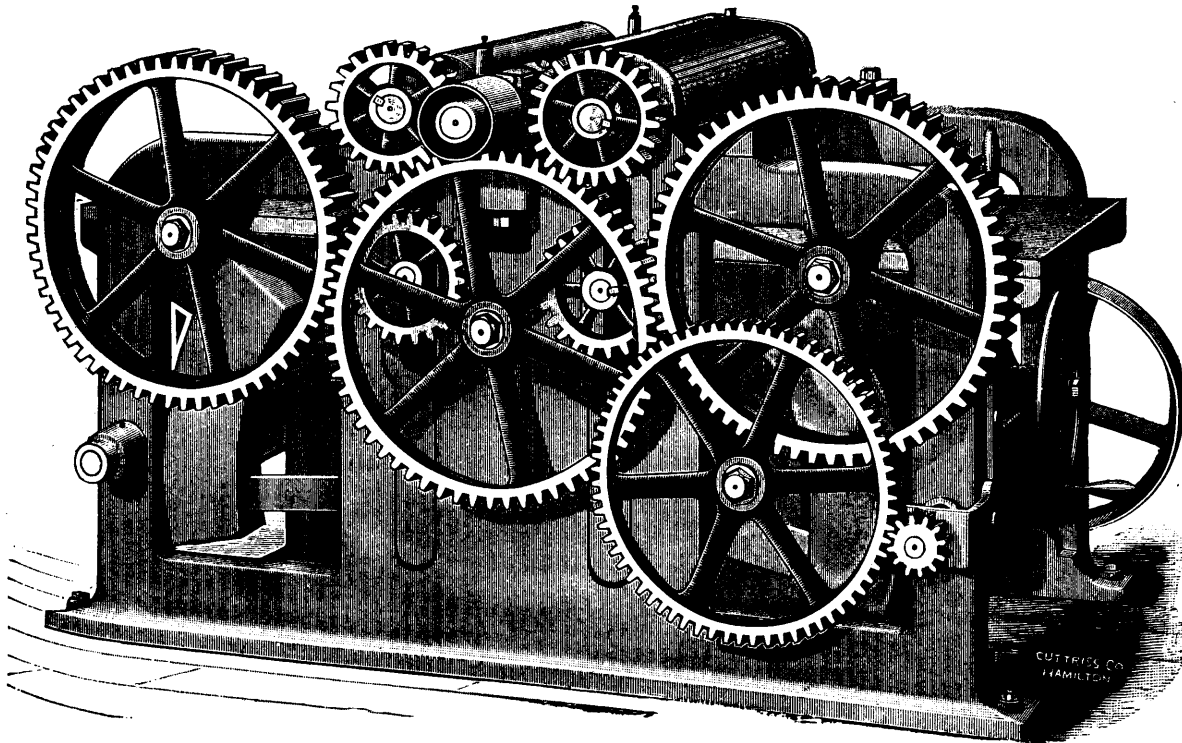
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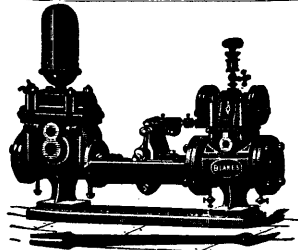
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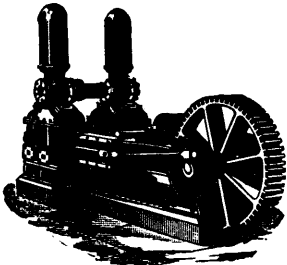
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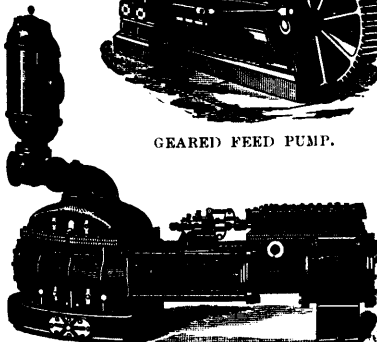
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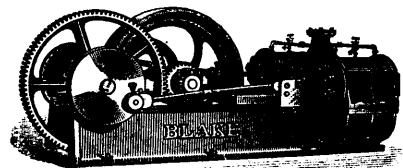


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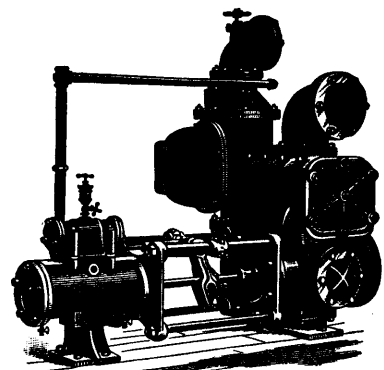
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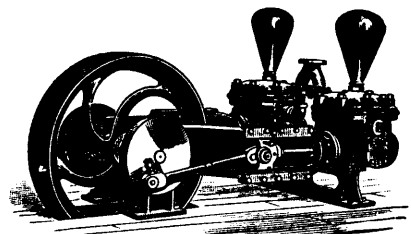
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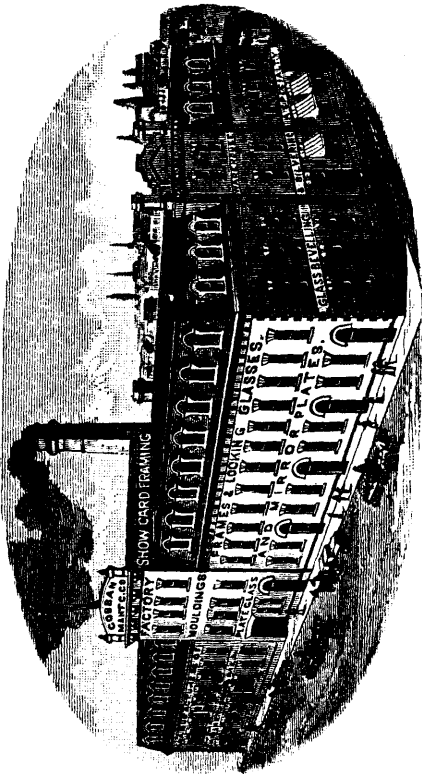
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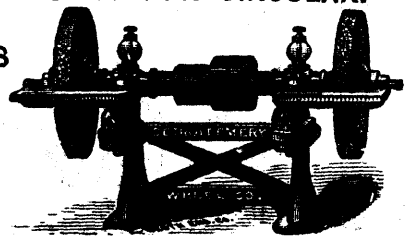
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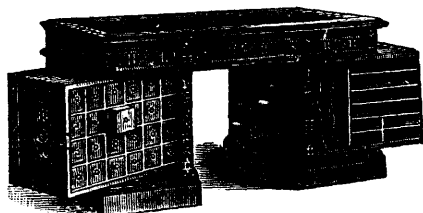


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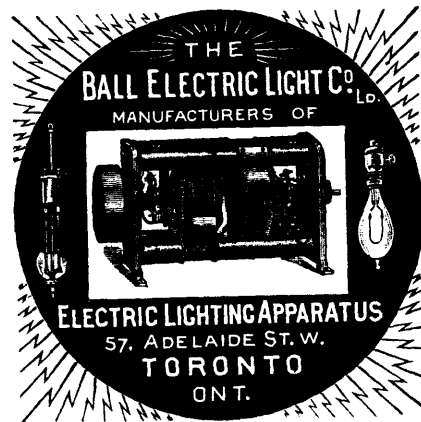
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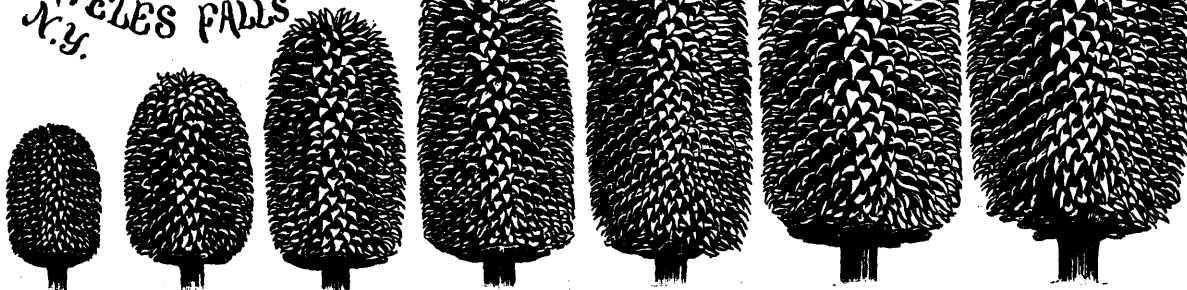
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