

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/  
Couverture de couleur

Covers damaged/  
Couverture endommagée

Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée

Cover title missing/  
Le titre de couverture manque

Coloured maps/  
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur

Bound with other material/  
Relié avec d'autres documents

Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Additional comments: /  
Commentaires supplémentaires:

Coloured pages/  
Pages de couleur

Pages damaged/  
Pages endommagées

Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Pages detached/  
Pages détachées

Showthrough/  
Transparence

Quality of print varies/  
Qualité inégale de l'impression

Continuous pagination/  
Pagination continue

Includes index(es)/  
Comprend un (des) index

Title on header taken from: /  
Le titre de l'en-tête provient:

Title page of issue/  
Page de titre de la livraison

Caption of issue/  
Titre de départ de la livraison

Masthead/  
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# THE CANADIAN MANUFACTURER

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

# AND INDUSTRIAL WORLD.

Vol. 13.

TORONTO, OCTOBER 7, 1887.

No. 7.

Established  
1856.

The J. C. McLAREN BELTING CO. Successors to the  
Late J. C. McLAREN.

## OAK TANNED LEATHER BELTING.

CARD CLOTHING.

LOOM REEDS and HARNESS.

292 & 294 ST. JAMES ST. MONTREAL.

"Old Dyewood Warehouse"

Established 1838.

Theo. H. Eaton & Son,

Windsor, Ont. : Detroit, Mich.

IMPORTERS OF

ANILINE COLORS,

DYE WOODS.

DYEING DRUGS, CHEMICALS, Etc.

MANUFACTURERS OF

GLAUBER SALTS AND EXTRACT INDIGO.

SOLE AGENTS IN THE UNITED STATES AND CANADA  
FOR THE "CROWN ANILINE DYES."

THE

Gutta Percha & Rubber

MANUFACTURING COMPANY,  
OF TORONTO.

WAREHOUSE

YONGE STREET, TORONTO.

The largest manufacturers in the world of  
Vulcanized India Rubber Goods for mechanical  
purposes.

Rubber Belting from 1 to 72 inches wide.

Hose for conducting, suction and steam.

Packing, Cloth Insertion and pure.

Tubing, of all kinds.

Rubber, Linen, and Cotton Fire Hose.

Leather Belting, Extra heavy American  
Oak Tanned.

A full Stock always on hand.

Write for Price Lists and Discounts.

TO MANUFACTURERS!

W. R. BROCK & CO.

Are always open to buy and pay spot cash for  
lines "TO CLEAR OUT STOCK" in the  
following Canadian productions:

**COTTON GOODS**—Grey and White Cottons, Grain  
Bags, Warps, Yarns, Checked Shirtings, Gingham,  
Tickings, Denims and Cottonsades.

**WOOLLEN GOODS**—Tweeds, Blankets, Flannels,  
Stoffes, Union Goods.

**KNITTED GOODS**—Hosiery and Underwear.

**WOOLLEN YARNS.**

We also keep in stock MANUFACTURERS' TRIMMINGS,  
which we supply at special Prices.

Special Drives in above lines now in stock at interest-  
ing prices.

W. R. BROCK & CO.

Cor. of Wellington & Bay Streets,

TORONTO.

Imperial Bank of Canada.

Head Office - Toronto.

H. S. HOWLAND, President. | T. R. MERRITT,  
Vice-President. | D. R. WILKIE, Cashier.

Capital Paid-up - \$1,500,000  
Rest - \$550,000

Purchases Municipal Debentures.  
Issues Drafts on its Branches and Agencies in the  
North-West.

Transfers Moneys by Telegram to Winnipeg and  
Brandon.

Agents in London,  
LLOYD, BARNETT & BOSANQUET'S BANK  
(Limited).

62 LOMBARD STREET,  
with whom moneys for transmission from Great Britain to  
Ontario and the North-West may be deposited.

A general Banking Business transacted.

John Bertram & Sons,

CANADA TOOL WORKS!

Dundas, Ont.

SEE ADVERTISEMENT, PAGE 244.

J. C. DIXON & BROS.

WORSTED SPINNERS,  
DUNDAS, Ont.

MANUFACTURERS OF  
FINGERING, KNITTING,  
and all descriptions of  
WORSTED YARNS.

**PATENTS**

PROCURER in Canada, the United States and all foreign countries, Caveats, Trade-Marks, Copyrights, Assignments, and all Documents relating to Patents, prepared on the shortest notice. All information pertaining to Patents cheerfully given on application. ENGINEERS, Patent Attorneys, and Experts in all Patent Cases.

**DONALD C. RIDOUT & CO.**  
ESTABLISHED 1857  
22 KING ST. EAST  
TORONTO

**The Canadian Bank of Commerce.**

HEAD OFFICE, . . . TORONTO.

Paid up Capital, . . . . . \$6,000,000.  
Res. . . . . 560,000.

**DIRECTORS.**

HENRY W. DARLING Esq., *President.*  
GEORGE A. COX, Esq., *Vice-President.*  
Jas. Crathern, Esq., W. B. Hamilton, Esq.,  
Wm. Gooderham, Esq., John I. Davidson, Esq.,  
Matthew Leggat, Esq., George Taylor, Esq.,  
Hon. Wm. McMaster, Hon. S. C. Wood.

D. E. WALKER, GENERAL MANAGER.  
J. H. PLUMMER, ASST. GEN. MANAGER.  
WILLIAM GRAY, INSPECTOR.

New York—J. H. Goadby & Alex. Laird, Agents.  
BRANCHES.

Ayr,	Guelph,	St. Catharines,
Barrie,	Hamilton,	Sarnia,
Belleville,	Jarvis,	Seaforth,
Berlin,	London,	Simcoe,
Blenheim,	Montreal,	Stratford,
Brantford,	Norwich,	Strathroy,
Chatham,	Orangeville,	Therold,
Collingwood,	Ottawa,	Toronto,
Dundas,	Parkhill,	Walkerton,
Dunnville,	Paris,	Windsor,
Galt,	Peterboro,	Woodstock,
Goderich,		

Commercial credits issued for use in Europe, the East and West Indies, China, Japan and South America.

Sterling and American Exchange bought and sold. Collections made on the most favorable terms. Interest allowed on deposits.

**BANKERS.**

New York—The American Exchange National Bank.  
Chicago—American Exchange National Bank,  
London, England—The Bank of Scotland.

**Largest Manufacturers of STEEL and BRASS STAMPS in Canada.**

**PRITCHARD & ANDREWS**

**OTTAWA, ONTARIO.**

**Rubber Stamps, Stencils, Seals, &c.**

**SEND FOR PRICES.**

**DOMINION DYEWOOD & CHEMICAL CO.**

SOLE MANUFACTURERS OF

The Celebrated Yorkshire Scouring and Fulling Soaps,  
Neutral Cotton Seed Oil Soaps,  
Pure Lard Oils specially adapted for the Woollen Trade.

IMPORTERS OF

Indigo, Cochineal, Cudbear,  
Indigo Ext., Cutch, Archil,  
Madder, Dyewoods,  
Dyewood Extracts and all Dyeing Drugs,

**ANILINE DYES, ALL COLORS.**

SPECIALTIES ARE

Imperial Blue, Fast Seal Brown,  
Fast Acid Brown, Brilliant Scarlets,  
Azo. Green, Fast Cardinals,  
Fast Acid Garnet.

Office: 77 FRONT ST. E. **TORONTO.** Works: Don Station.

**McARTHUR, CORNEILLE & CO.**

(Successors to JOHN McARTHUR & SON)

310 to 316 St. Paul Street,

and

147 to 151 Commissioners Street,

**MONTREAL,**

offer at closest prices

**PURE OLIVE OIL.**

**WINTER-PRESSED LARD OIL,**

**EXTRA FINE SPINDLE OIL,**

and a full assortment of other

**LUBRICATING OILS.**

Also

**CHEMICALS,**

**DYESTUFFS,**

**DYEWOODS,**

**EXTRACTS,**

&c. &c. &c.

Are Sole Agents in Canada for

**SOCIETE ANONYME**

DES

**MATIERES COLORANTES ET**

**PRODUITS CHIMIQUES,**

DE ST. DENIS,

Successors to

**A. POIRRIER AND G. D'ALSACE,**

**PARIS,**

Manufacturers of

**ANILINE DYES,**

**ARCHIL**

**CUDBEAR.**

&c. &c. &c.

Prize Medal, London Universal Exhibition, 1862.

Gold Medal, Paris Universal Exhibition, 1867.

Grand Diploma of Honor, Vienna Universal Exhibition, 1873.

Medal and Diploma, with Highest Commendations, Philadelphia Centennial Exhibition, 1876.

Maintain large stock, replete with all the new and improved colors. Will be pleased to furnish quotations with samples and directions for use.

**D. MORRICE, SONS & CO.**

Manufacturers' Agents,

**MONTREAL & TORONTO.**

**HOHELAGA COTTONS.**

Brown Cottons and Sheetings, Bleached Sheetings, Canton Flannels, Yarns, Bags, Ducks, etc.

**ST. OROU COTTON MILL.**

Tickings, Denims, Apron Checks, Fine Family Checks, Gingham, Wide Sheetings, Fine Brown Cottons, etc.

**ST. ANNE SPINNING CO. (Hochelaga)**  
Heavy Brown Cottons and Sheetings.

*Tweeds, Knitted Goods, Flannels, Shawls, Woollen Yarns, Blankets, etc.*

*The Wholesale Trade only Supplied*

**New York Dyewood, Extract and Chemical Co.**

MANUFACTURE HIGH GRADE.

**CURED CHIP LOGWOOD FOR WOOL DYEING.**

OFFICE:

**55 BEEKMAN ST., N.Y.**

WORKS, BROOKLYN.

**MIDDLETON & MEREDITH, MONTREAL.**

**CHEMICALS AND DYE STUFFS.**

Sal Soda, Soda Ash, Bleaching Powder, Caustic Soda, Bi-Carb. Soda, Chlorate of Potash, etc., etc.

Extracts Indigo, Sumac, Fustic, etc., Gambier, Cutch, Sumac, etc., Acids,

**ANILINE DYES,**

Brooke, Simpson & Spiller's. Full Assortment on hand.

**PHOSPHOR BRONZE, SILICATE CLOTH**

**PILLOW, HERSEY & CO.,**

Manufacturers of every description of Cut Nails, Tacks, Brads, Railway and Pressed Spikes, Horse Shoes, Carriage, Tire and other Belts, Coach Screws, Hot Pressed and Forged Nuts, Felloe Plates, Lining and Saddle Nails, Tufting Buttons, &c., &c.

The Hardware Trade, Shoe and Leather Finding Dealers, and Boot and Shoe Manufacturers, will find the Largest and Best Assortment and Greatest Variety of above Goods always in stock, and can rely on orders being rapidly executed, our facilities for doing so being unequalled.

OFFICE, 91 St. Peter St. Montreal.

**DOMINION Card Clothing Works, York St., Dundas.**

**W. R. GRAY & SONS, PROPRIETORS,**

MANUFACTURE EVERY DESCRIPTION OF

Card Clothing and Woolen Mill Supplies.

# THE CANADIAN MANUFACTURER

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

## INDUSTRIAL WORLD.

VOL. XIII.

TORONTO, ONT., OCTOBER 7, 1887.

No. 7. ■

### A GOOD BUSINESS OPENING--VAPOR STOVES.

As editorial under the above caption was published in the August 5th last issue of this journal. We showed that while it was but a few years ago that vapor stoves were first brought into use in the United States, the growth of the manufacture of the article had increased until now such stoves may be bought at retail anywhere in that country for from five to fifteen dollars each. We also alluded to the fact that the climate of Canada is very similar to that of Northern portions of the United States, and that there are several months in the year when the heat in Canadian kitchens, where coal and wood stoves are used, is quite as oppressive and disagreeable as it would be in the United States under similar circumstances. We stated that all American kitchens are now equipped with vapor stoves while none are to be found in Canadian kitchens.

It is rather remarkable that this state of things should exist, and it is strange that neither Canadian nor American business enterprise has not before now established the manufacture of vapor stoves in Canada. The people here, with the exception of those who may have travelled in the United States and observed them there, do not know what vapor stoves are. While in the United States there are a score of concerns that are devoted entirely to the production of the article; and while of late years a great many of the manufacturers of coal and wood stoves carry full lines of vapor stoves, and have their names emblazoned conspicuously upon them; we are not aware that even the first vapor stove has yet been made in Canada, nor that any manufacturer or dealer has ever placed the article in stock or attempted in any way to introduce it on the Canadian market. At a recent meeting of the American manufacturers of vapor stoves, held in Cleveland, O., it was reported that over one hundred thousand vapor stoves had been sold in that country during the previous year, valued at about \$2,000,000; that the value of patterns, tools and machinery employed in their manufacture was about \$240,000; and that the value of stocks of stoves on hand was about the same amount. A similar condition of the trade in Canada would imply an investment in the business of about \$20,000 and a yearly sale of more than 8,000 stoves, valued at more than \$160,000.

By which it will be seen that here is a large and valuable field for manufacturing this line of goods, and that it is absolutely and entirely barren of occupation.

The manufacture of vapor stoves in the United States has increased so rapidly, and there are so many producers of the article, that a consolidation of their different interests is about being effected, the objects sought by the combination being, first, to control all patents affecting their construction,

and thereby limit production; second, to aggregate under one management all the skill employed in the various existing factories, and thus produce a more perfect stove, if possible, than has yet been made; and third, to reduce expenses both of manufacturing and selling, reducing the price to consumers without cutting down the margin of profit for the manufacturer. The Consolidated Vapor Stove Company own the patents essential in the manufacture of vapor stoves, and it is proposed that the new Consolidated Company purchase these patents, and thus hold the power to prevent other than their licensees from engaging in the manufacture of the article. The consolidation includes all the licensees of the Consolidated Vapor Stove Company, to wit, about every manufacturer in the United States, stock in the new company being assigned to them upon the basis of the value of their respective plants; for stock on hand and for good will, a part of the plan including the closing of all the factories except a few of those most favorably located, and the establishment of distributing warehouses in important trade centres.

It is likely that Canadian patents have been granted on many of the inventions and improvements essential in the construction of vapor stoves, but the Canadian law requires that the patented article shall be manufactured in the Dominion, and this vast vapor stove monopoly in the United States cannot prevent the production of Canadian vapor stoves, even if they desired to do so. A demand could easily be created in Canada for vapor stoves, and a market that would consume \$160,000 or more worth of them yearly ought not to go long barren of so useful an article.

### FACTS VS. FANCIES.

A FEW days ago the *Toronto Mail* printed the views of Mr. W. S. Cain, a member of the Imperial House of Commons, and a large iron master of Barrow-in-Furness, who had recently visited a couple of Canadian cities, upon the effects of our iron duties. Mr. Cain is reported as having said that "The new Canadian iron duties, although extremely heavy, will not be sufficient to create any important rolling mills within the Dominion. The first result of the duty on finished iron will be to drive the iron trade into the hands of a few capitalist dealers, squeezing out the small dealers and importers. Canada will continue to buy from England in increasing quantities at an increased price, and if any capitalist is fool enough to start extensive works in the Dominion, he will end in a first class collapse." The *Mail's* sensational head lines over the article states that "The Canadian iron duties will fail to create any important rolling mills in the Dominion."

But the irony of events, even as they are recorded in the *Mail* shows that both Mr. Cain, the British iron master, and the *Mail*, itself as a prognosticator of things that won't happen, are in error, for in the same issue of that paper it prints a telegram from Montreal to the effect that Messrs. Nettlefold and Steer, of Birmingham, England, had been making overtures to the Montreal authorities for the erection of extensive iron mills in that city, the only thing holding the scheme in abeyance seeming to be in obtaining satisfactory terms from the city authorities regarding the matter of taxation; and it contained a half column account of a meeting that been held here in Toronto on the previous day by the mayor of the city and a number of gentlemen who are large local consumers of iron who want and will have an extensive iron rolling mill in Toronto.

The Nettlefold's, of Birmingham, England, are large consumers of iron, and as manufacturers of hardware their name is known and their reputation established throughout the world. They are "capitalists" even according to Mr. Cain's definition of the word, and if they should see proper to establish large iron mills in Canada, as it seems they propose doing, it is not at all likely that the enterprize will end in a first class collapse. Neither is it probable that such a fate would await the Toronto rolling mill project, especially when such experienced heads and able financiers as have the matter in hand stand behind it. The opinion and money of such men as Mr. H. A. Massey, of the Massey Manufacturing Company; Mr. Ostrander, of Cleveland, Ohio; Mr. T. D. Beddoe, of the Hamilton, Iron Forging Company; Mr. James Worthington, of the Ontario Bolt Company, and many others are a guarantee of success, even against the carping and ill will of all the newspapers in Canada, which profess to believe that Commercial Union with the United States is our only salvation.

Mr. Cain, of Barrow-in-Furness, England, may not be aware of the fact that there are rolling mills and iron works already in existence in Canada, although, as the *Mail* says, he has recently visited Montreal and Quebec, but the *Mail* should not stultify itself nor deceive its readers by concealing its knowledge of the existence of quite a large number of such establishments, scattered all the way from Nova Scotia to Ontario—from St. John to Hamilton. If it doesn't know of the existence of these rolling mills, what it doesn't know regarding Canadian manufacturing industries would fill a great many books.

### THE LABOR CONGRESS.

THE third annual session of the Canadian Trades and Labor Congress opened in Hamilton September 27th and was in session three days. It was a good representative assembly of the more intelligent portion of the laboring classes of the country, and much of the business transacted was of a practical and beneficial character. Of course there were many delegates present who made themselves conspicuous by their much speaking to impracticable resolutions, in which respect they resembled many in other deliberative bodies. Many of the resolutions that were passed foreshadowed legislation that should be had by both the Dominion and Provincial governments, and which, if enacted into laws, would be of great

benefit not only to the laboring classes but to manufacturers and the community generally.

Among the resolutions which if crystalized into laws would probably result in much good were those which call upon the government to pass laws compelling all vessels to carry competent crews; to make it compulsory to have hulls and rigging properly inspected by competent men; to prevent the overloading of vessels; that armed and uniformed private police, or detectives, be declared illegal; that all railway companies be compelled to block all frogs, and make such other necessary improvements as will protect the lives of employees and passengers, and that the neglect to do so be considered a criminal offence; for the encouragement of night schools; that the allowances now granted by provincial legislatures to universities and colleges be transferred to the public schools for the purpose of further promoting their efficiency and providing pupils with books free of charge; against the monopolizing of public lands by corporations and speculators; against all prison labor when it may be brought into competition with free labor; that the government shall not sell the services of convicts to contractors unless in such manner and at such prices that unfair competition with free labor will not result; that it be required that some distinguishing mark be placed upon all prison-made goods; that no property be exempt from taxation; against assisted emigration to this country; that landlords be placed on the same footing with other creditors, and that all engineers, or those having charge of steam engines be required to pass an examination, and their competency certified to before being allowed to take charge of any such engines.

These resolutions all point in the direction of needed legislation, and it is to be hoped that the wishes of the delegates and of labor organizations generally in these matters may be realized.

We would have been very glad to have recorded the fact that the congress had not done or attempted a great deal of pernicious work. But the anarchistic socialist was there, and mouthing jawsmiths, talking against time, occupied the attention of the congress to the exclusion of more profitable discussion.

A resolution was unanimously passed which embodied the fundamental principles of the Henry George theory regarding the ownership of land, the mover expressing the opinion that no man should have any more land than he could work by his individual exertions. This was a bad case of jawsmith. An entirely impracticable resolution was passed demanding that the patent laws should be so changed that when a patent is granted a royalty price should be fixed, upon the payment of which any person should be allowed to manufacture the patented article. The government would have the right to abolish all patent laws if it so desired, but once having granted a patent to an invention, such patent becomes his individual personal property, and the government would not have any right to compel him to sell the whole or any part of it any more than it would to compel him to sell his horse or cow against his will. A resolution asking that the public instruction of youths be enlarged so as to include the establishment of institutions adapted to instruction in the mechanical arts was objected to on the ground that it would flood the labor market with too many skilled mechanics, and thus depreciate the value

of the labor of those already skilled. This, as will be observed, is the very worse kind of aristocracy, the desire being to keep the many in ignorance for the exclusive benefit of the few. A resolution deprecating the "spoils system," and demanding that "all employes of the government be hired on their respective merits," was exceedingly inconsistent. Labor organizations when dealing with private individuals employing labor insist that employes be not "hired on their respective merits," but taken on compulsion on terms that give the same wages to slouches and jacklegs as are given to the best mechanics. But consistency is not insisted on nor observed on such occasions. A protest was entered against government employes being allowed to work for private individuals because their doing so would be "competing in the labor market" is another blow at poor men who would supplement their income by doing odd jobs in spare hours.

Considering the almost innumerable demands the congress made upon the government to intervene in almost every possible transaction that can occur between employes and their enemies and oppressors, the employers, one might suppose that they were no more competent to manage even the commonest affairs of every day life than a parcel of suckling children. Their ideas of manhood seem rather to lean in the direction of revolution, anarchy, and nihilism. The working men as a class are all right, and if they would discern between the brainy men among them, whose advice is good and should be followed, and the jawsmiths who force themselves upon their attention, and who try to create the belief that braying is argument, they would be much more likely to obtain the reforms they need.

#### NEWBURGH, ONT.

THE fire which devastated the town of Newburgh, Ont. just a month ago did not spare a single place of business except the few factories located there. Newburgh is situated on the Napanee river, seven miles north-east of the town of Napanee. Just above the town the river divides into two streams, which are again united just below the town. There is also a canal extending along one side of the island. The Napanee river at this place affords a most valuable aggregation of water power, and there are no fewer than sixteen good water privileges available. One and a half miles further up stream is a saw mill, a grist mill, and Thompson's paper mill. In Newburgh is another paper mill; and less than two miles down stream is still another paper mill, owned by the Napanee Paper Mills Company. Several of the best of the water privileges here alluded to are now offered for sale at very low prices. One, at the lower end of the island, has three large stone buildings standing upon it, and it possesses all the water power in both branches of the river. The Napanee, Tamworth and Quebec Railway, controlled by the Rathbun Company, of Deseronto, passes within a few yards of the river and quite through the town of Newburgh, and connects with the Grand Trunk Road at that place. Ultimately this road will also connect with the Canadian Pacific Road. Already many new buildings are being erected in the town, and, Phoenix like, it is rapidly arising from its ashes. We have given this brief sketch of Newburgh and its surroundings with a view to bringing its

advantages as a manufacturing point to the attention of those proposing investments in that direction. The local authorities and the people generally are prepared to offer the most liberal terms to any who may desire to avail themselves of the fine natural and other advantages of the place.

#### JUSTICE VS. TYRANNY.

A CASE growing out of the labor troubles in New York last Spring was decided in Judge Barrett's court in that city last week which brings into strong contrast the ethics of justice as against the ethics of tyranny. Judge Barrett's decision fixes a distinct and well defined limit to the rights of organized labor, and sets forth the character of the offence in law when those rights are overstepped. The facts of the case are that the workmen in a shoe factory were ordered out because the firm refused to discharge a trusted and competent foreman who was not a knight; and that a non-union foreman had discharged a workman who was a knight, for dishonesty, the firm refusing to take back the dishonest knight and discharge the non-union foreman on the demand of the Knights of Labor. In this latter case the firm, after having their factory closed for a month, gave in and informed their old foreman that he would have to go. The man then obtained a job in Baltimore, but was driven from there also, and has been out of employment ever since. The firm first alluded to, representing the shoe manufacturers of the city generally, caused the arrest of the committee of knights who had interfered with their business, and these were all placed under bonds for their appearance at court except their chief, who preferred to go to prison where he remained long enough for his lawyers to institute habeas corpus proceedings, upon which the test case just decided by Judge Barrett was based. His lawyers urged on his behalf that the law justified all that the knights had done when it exempted strikes from the list of misdemeanors. The Judge, however, took an opposite view, and stated that the law applied only to strikes for wages, and that the offence charged was not of this description. He said that if what the knights claimed was tenable, labor organizations rather than the courts would be the judges of violations of the law, and there would be danger of their using the law, as they had attempted to do in this case, as a cloak to cover their vindictive designs. It was not the intent of legislation to turn an engine of protection into one of oppression. The offence in this case was intended not only as an injury to trade, but as a preventive against the exercise of his lawful calling by a citizen, and that the offence complained of was an unlawful conspiracy.

The case of Buscombe in Hamilton is an almost exact parallel, for according to the decision of the New York Judge the man Gibson and the balance of the committee of the Labor Union, of which he was chief spokesman, who went before the authorities and demanded the discharge of Buscombe, were guilty of conspiracy, and should be treated as conspirators. The law clearly acknowledges the right of workmen to strike and quit work when they see proper, but it does not countenance or permit the strikers or any acting for them to conspire to drive other workmen from their occupation merely because they are obnoxious to them.

## LOCOMOTIVE ENGINEERS.

A UNION meeting of the Brotherhood of Locomotive Engineers was held in Boston, Mass., a few days ago for the purpose of expounding the principles of the order and inducing those outside of it to join. Grand Chief Engineer Arthur spoke of the beneficial features of the order and how it aimed to organize the men for mutual protection, and to obtain for the roads better men and a higher standard of work. It aimed, he said, to secure sobriety among its members above all things, and, although it did not claim to be, was about as good a temperance society as there was in existence. Many a man had been stopped in his downward career by its influences, kept in his position, and made a sober man. In regard to its insurance department he urged every brother to avail himself of its opportunities. The brotherhood had already paid out \$2,159,000 to widows and orphans. In regard to the business feature of the order he said that although at first regarded with distrust by railway managers it was now approved by them, and he had not met one in ten years who seriously opposed it. On every road where the brotherhood is organized there was a Grievance Committee to which all the grievances of the men were made known. It ought to be composed of cool-headed men and those longest in the service of the road and known to the officials. It was the duty of this committee to lay a grievance, if it was considered a just one, before the officials of the road, starting with the lowest and taking it in turn, if not redressed, from one to the next highest, until the General Manager was reached. If he failed to settle the difficulty the Grand Chief Engineer was sent for, and he seldom failed to bring about an amicable adjustment. Strikes were to be discouraged, for there were no cases when the parties could be brought together that a settlement could not be agreed upon. In closing he urged the brothers to be honest, be just and be true to their employers and they would not fail to secure suitable recognition.

THE *Hamilton Evening Times* of September 28th says editorially that "Mr. Cain, of England, has just reported that there is no likelihood of the latest tariff changes causing the establishment of smelting works in Canada." If this information is based upon a special cablegram to the *Toronto Mail*, published on the morning of that day, as is evidently the fact, the *Times* mendaciously perverts the text and meaning of the *Mail's* report of what Mr. Cain actually said. According to the *Mail* Mr. Cain said that "The Canadian iron duties will not be sufficient to create any important rolling mills within the L. minion;" and "If any capitalist is fool enough to start extensive works in the Dominion he will end in a first-class collapse." No reference whatever was made to "the establishment of smelting works," the contention being as to rolling mills. Mr. Cain is probably an ignoramus regarding the existing iron manufacturing plant in Canada, but the *Times* cannot plead such an excuse, for, in the editorial from which we have quoted, it speaks of the rolling mills that it knows exist in its own city. Its desire was to have an ungenerous fling at an interest that gives employment to large capital and a great number of skilled workmen in Hamilton and elsewhere in Canada; and to enable it to do so, and to express the hope that no smelting

works might be established in Canada, "if the result would be to fleece consumers as unmercifully as they appear to be fleeced in the other connection," meaning by the rolling mill people, felt compelled to pervert Mr. Cain's language. The success of a cause must be very doubtful indeed when it depends upon falsehood and mendacity for support.

THE commercial unionists, tariff annihilationists, anarchists, and labor reformers had a joyful reunion in Hamilton last week. In addition to the transactions had by the Labor Congress, there was a demonstration at the Fair Grounds, at which a speaker kindly informed the audience that they need have no fear of dynamite or anything of that sort, the evident impression on his mind being that the average citizen, in view of recent events, might reasonably connect the demonstration with such bomb-throwing as last year in Chicago sent a number of officers of the law into eternity. The speaker said that it was proposed to bring about many desired reforms by constitutional means, but that the millenium could not be looked for until the present land laws were abolished. Another speaker, a jewsmith by profession and an importation from a foreign country, informed his hearers that the wage system is murdering more people than all that strikes and agitations could ever do, and that those who upheld the present system favored murder. He didn't explain how strikes and agitations murder people, nor how those who give employment to labor are murderers or "favor murder." He also stated that the banker is a worse robber than any fakir; that "a huge system of robbery is found in protective tariffs;" and that he is in favor of Commercial Union. Referring to the forthcoming execution of the Chicago anarchists, this foreigner informed his Canadian audience that these men were no worse than those who deal in the necessaries of life for a profit, as though all kinds of merchandise are not "necessaries of life," and that it is perfectly fair and legitimate to deal in them for profit. The nihilistic utterances of this man went unrebuked, even when he denounced the courts which tried, convicted and condemned the Chicago anarchists as being under the influence of capitalists and hostile to labor.

THE *Industrial News*, the labor organ at Winnipeg, has ceased to exist. It has joined the long caravan. Sic transit.

WE are informed that about the 1st of January next Messrs Geo. F. Haworth & Co. will have in operation, in Toronto, one of the best appointed leather belt factories in Canada.

THE *Trader*, of Toronto, with its September number entered upon the ninth year of its existence. *The Trader* is one of our most valued and sprightly contemporaries, and we congratulate it upon its longevity and success. It is regarded as a truthful and correct exponent of the jewelry trade of the Dominion, and the high plane of journalism upon which it is planted, and the excellence of its mechanical get up commend it to the craft.

IT appears that the recent criticisms of the Bethlehem Iron Company in connection with their Government gun and armor contracts had really no foundation in fact. Instead of the work being done ostensibly by the company named but in reality by a French firm, Schneider & Co., who have temporarily transferred their plant and workmen to American soil, the fact is, no portion of the Creusot plant, or capital, or muscle will be used in the manufacture of armor-plate and gun forgings at Bethlehem. An arrangement was made for such aid, if needed, but the work will be done entirely in this country and by American capital and labor.—*Cleveland Iron Trade Review*.

◇ THE ◇  
**Canadian Manufacturer.**

Published on the first and third Friday of each month, by the  
 CANADIAN MANUFACTURER PUBLISHING Co., (Limited).  
 6 WELLINGTON STREET WEST, - - TORONTO.

ANNUAL SUBSCRIPTION, in Advance \$2.00.  
 CARD OF ADVERTISING RATES SENT ON APPLICATION.

FREDERIC NICHOLLS, *Editor.*

J. J. CASSIDEY, *Managing Editor.*

ED. D. McCORMICK, *Secretary.*

This Journal has won for itself an acknowledged position amongst Trade Journals and is recognized as the representative industrial paper of Canada. All the various industries of the country are represented in its columns, and it has been for years the fearless and consistent advocate of those reforms which were indispensable to the success of the Manufacturers. It now reaches nearly every mill and factory in the Dominion, and its influence is constantly increasing.  
 As a medium for advertisements of machinery, steam appliances, mill and factory supplies, etc., it is unequalled, and our rates will be furnished on application.  
 Communications from Manufacturers, Exporters, and others, are respectfully invited.

**OFFICERS OF CANADIAN MANUFACTURERS' ASSOCIATION.**

*President:*

THOS. COWAN, Galt.

*First Vice-President:*

W. H. STOREY, Acton.

*Second Vice-President:*

SAMUEL MAY, Toronto.

*Treasurer:*

GEORGE BOOTH, Toronto.

*General Secretary:*

FREDERIC NICHOLLS (6 Wellington Street West), Toronto.

*Executive Committee:*

R. W. Elliott, Toronto.  
 E. Gurney, Jr., Toronto.  
 James Watson, Hamilton.  
 Wm. Bell, Guelph.  
 Joseph Simpson, Toronto.  
 J. A. Pillow, Montreal.  
 A. Warnock, Galt.  
 W. Millichamp, Toronto.  
 B. Rosamond, Almonte.  
 Geo. Pattinson, Preston.  
 Daniel Lamb, Toronto.  
 Isaac Waterman, London.  
 C. Shurley, Galt.  
 John Taylor, Toronto.  
 M. B. Perine, Doon.  
 Thomas McDonald, Toronto.  
 B. Greening, Hamilton.  
 Geo. W. Sadler, Montreal.  
 J. F. Ellis, Toronto.  
 J. R. Barber, Georgetown.  
 John Fensom, Toronto.  
 Robert Mitchell, Montreal.  
 H. N. Baird, Toronto.  
 H. Bickford, Dundas.

Frank J. Phillips, Toronto.  
 John Elliott, Almonte.  
 Wm. Christie, Toronto.  
 J. B. Armstrong, Guelph.  
 C. Raymond, Guelph.  
 W. F. Cowan, Oshawa.  
 J. S. Larke, Oshawa.  
 H. Heintzman, Toronto.  
 George Lang, Berlin.  
 D. R. Wilkie, Toronto.  
 P. Freyseng, Toronto.  
 F. Crompton, Toronto.  
 Carl Zeidler, Toronto.  
 C. A. Birge, Dundas.  
 Wm. Harty, Kingston.  
 W. G. A. Hemming, Toronto.  
 W. K. McNaught, Toronto.  
 Charles Boeckh, Toronto.  
 T. D. Craig, M.P.P., Port Hope.  
 Wm. Chaplin, St. Catharines.  
 H. E. Clark, M.P.P., Toronto.  
 L. Côte, St. Hyacinthe.  
 W. H. Cross, Barrie.  
 E. J. Davis, King.

*Representatives to Industrial Exhibition Association.*

R. W. Elliott, George Booth, Daniel Lamb, Samuel May,  
 Frederic Nicholls.

## Editorial Notes.

MR. FREDERIC NICHOLLS is Secretary of  
 The Canadian Manufacturers' Association,  
 The Woolen Manufacturers' Association, and  
 The Tanners' Association.  
 His Office is at the Publication Office of  
 THE CANADIAN MANUFACTURER,  
 6 Wellington Street West, Toronto.

Any association of manufacturers who may desire to hold meetings for organization or other purposes, are invited to avail themselves of the meeting room adjoining the office of the CANADIAN MANUFACTURER.

THE Cordage Manufacturers' Association of Canada held their regular annual meeting at St. Lawrence Hall, Montreal, September 27th and 28th.

It is wired from London that the Canadian Pacific Railroad Company will have built immediately for their Pacific Ocean mail service three steamers which will have an average speed of fifteen knots an hour, and capable of attaining eighteen knots.

In the recent month contest in Hamilton, according to the *Spectator*, the speed and staying qualities of the contesting jawsmiths were awarded as follows: first to Lansing, Michigan; second to Toronto, and third to Hamilton. The *Spectator* must be prejudiced against Toronto.

MR. THOMAS COWAN, president of the Canadian Manufacturer's Association, and the business head of the Galt (Ont.) Engine and Machine Works, has been appointed postmaster at Galt. No better choice could have been made, and the people of Galt are to be congratulated upon the happy selection.

A WINNIPEG merchant has received enquiries from a large brewing concern in England who want a million bushels of Canadian barley. Now, as there is no duty on barley entering England, and as one English brewer alone wants a million bushels of it, why shouldn't Canada send its barley to the English market?

THE Mayor of Argonia, Kansas, gave birth to a fine boy a few days ago, which is said to be the first instance known in the history of the world where the mayor of a town has made such a record. Speaking of this our knowledgeable contemporary the *St. John Globe* informs its readers that "The mayor of Argonia is a woman." Wonderful! A man wouldn't do such a thing.

It is said that Sam Small, the evangelist, has consented to meet a Toronto labor orator in debate upon the question whether the average Knights of Labor are what Mr. Small said they were in a sermon recently preached in this city. The struggle will be between two master workmen of Jawsmith Assembly, and will exemplify the black gum *versus* streak lightning phenomena.

ON DIT—that a gentleman who is a partner of Mr. Joseph Chamberlain, and interested with him in the manufacture of screws in Birmingham, England, was recently in Toronto inspecting the facilities offered by this city for the establishment of a Canadian branch of the Birmingham factory. The gentle-



man alluded to has been examining the available sites in Montreal, and it has been announced that a site at Hochelaga, near that city has been or will likely be chosen.

QUITE an "interesting" reply has been received by a Sheffield (England) manufacturer from his agent in Canada, from whom he made inquiries as to the condition of the file trade in the Dominion. The suggestive answer is. "The demand for files here is not nearly so great latterly, as the native article is rapidly superseding the imported one. Under the new tariff manufacturers import their steel free of duty, while imported files pay 35 per cent. This brings them in too dear, except for special favorite brands."

THOSE who pretend to be journalists, or who aspire to attain the proud distinction of being editors of respectable journals should bear in mind a few salient facts. They should remember that abuse is not argument; all attempts to display a profound acquaintance with things with which they are not familiar, and efforts to depreciate the knowledge, ability, and sincerity of others, reflect upon themselves and place them in very unenviable light, and that no man can be a blackguard and a gentleman at the same time.

The benighted people of Toronto are cordially invited to come to Hamilton that they may see what a genuine agricultural, horticultural, pomological, mechanical, artistic, and equestrian exhibition is like. It is quite different from an aggregation of penny-grab side-shows.—*Hamilton Times*.

WHY don't "the benighted people" of Hamilton patronize their own multi-named exhibition? The newspapers of that town tells of bare walls and vacant spaces painful to behold. Perhaps the *Times* will attribute the circumstances either to Sir John or the N.P.—perhaps both. The Toronto exhibition was quite different from the Hamilton aggregation.

SIXTY-THREE salt manufacturing companies—eleven in Pennsylvania, nine in New York, thirty in Michigan, and thirteen in Ohio, have pooled their business and formed themselves into a mammoth concern to be known as the National Salt Union. The object of the combination is said to be mutual protection and to regulate prices. If any outsider should attempt to sell salt in the United States he is to be incontinently squelched. This reminds us of the Hamilton combination known as the Labor Union and its threat to put a stop to all bricklaying work in that city unless a poor laboring man there named Buscombe was discharged from his job working on sewers.

THE Peterboro' Town Council have appointed a committee to report upon the best means of advertising the town as an industrial and manufacturing centre. This is sense. If Peterboro' is adapted to manufacturing, judicious advertising will not fail to bring its reward. The resolution should be followed up by a vote of censure upon the N.P.—*Toronto Globe*. It is an exhibition of "sense" to advertise the town as an industrial and manufacturing centre, but what sense, pray, would be exhibited in passing a "vote of censure" upon the policy which has resulted in making the town the industrial and manufacturing center that it is? The suggestion of the *Globe* will not be accepted.

It is inconsistent in the Anti-Poverty party who claim that all the land is the inalienable birthright of the people, to desire to sequester and appropriate those portions of the land that are already built upon and occupied when they can have all the land that they could possibly and reasonably want simply by going to the public domains in the far west and accepting homesteads from the government. But this would involve personal labor and inconvenience to them, and that is just what they don't want. Their orators, editors and journalists tell their dupes that they must have a division of all the wealth that is in sight, and that these divisions must be of frequent occurrence. But none of them desire any "birth-right" that involves personal labor.

THE belt manufacturers of the United States met in convention a few days ago in the city of New York. The object of the meeting was to ascertain what could be done in order to improve the condition of the belt trade, and whether better prices could be obtained. The movement was inaugurated by such leading houses as Fayerweather & Ladew, Jewell Belting Co., Page Belting Co., James Davis Belt Co., I. B. Williams & Son, Weatherhead, Thompson & Co., H. L. Furbrother & Co., New York Leather Belting Co., Alexander Bros., and Charles A. Schieren & Co. The general notice to the trade was signed by the above prominent firms, which are the largest in this line in the country. It is claimed that a necessity existed demanding some action to raise the status of prices and to enable the manufacturers to produce goods without loss.

MR. A. P. MACDONALD, of Toronto, the contractor who built the Tay Canal, which was completed last week, in a speech made at Perth, Ont., at a banquet tendered him by the citizens there over the event, said that the canal would certainly be a paying concern if it was extended eight miles to Christie's Lake. It was estimated that some 25,000,000 tons of the best iron ore in the Dominion was in the immediate neighborhood of that lake, and that its shipment would furnish remunerative business for the canal. Touching upon the question of Commercial Union, Mr. Macdonald said that in his opinion if it were to come about there would not be a single Canadian engaged in manufacturing five years after. All the manufacturing would be in the hands of Americans. Commercial Union would mean that the American people would rule us, and Canadians would become hewers of wood and drawers of water for the Americans.

ON June 25th last the Barrow-in-Furness Board of Trade transmitted a memorial to the British Colonial office in which the memorialists showed that as the Canadian government intended to increase the import duties on iron and steel they were of the opinion that doing so would prove highly detrimental to the iron and steel trade of Great Britain, and would materially affect the town of Barrow-in-Furness and the districts which are largely dependent on the iron and steel industry. A few days ago the *Toronto Mail* published the views of a Mr. Cain, M.P. for Barrow-in-Furness in which he expressed the opinion that the Canadian tariff would not lead to the establishment of any iron works in this country, and that

any capitalist fool enough to start any such would "end in a first-class collapse." The collapsing may be on the part of Mr. Cain and his Barrow-in-Furness iron and steel works, but certainly not of any such works in Canada.

A COUPLE of weeks ago, on the day on which the largest and most formidable iron clad war ship in the British navy was launched, a successful test of Lieutenant Zalinski's new dynamite gun was made at Fort Lafayette, in New York harbor. The test was made in the presence of the Secretary of the Navy and other United States officials and officers, and representatives of the Norwegian, Spanish, French, Danish, Swedish and Japanese governments. The target was an eighty-ton schooner, anchored at a distance of one and one fifth miles from the firing point, and when the exhibition was finished she was reduced to slivers that floated away on the tide. The gun used was 60 feet long, of 8-inch bore, carrying a projectile containing 50 pounds of dynamite, with an initial force of 600 pounds to the square inch. Six shots were fired, two of which struck the vessel, tearing her all to pieces. Lieut. Zalinski was congratulated by Secretary Whitney. Another gun is being constructed, which will hurl 600 pounds of dynamite at a charge.

THE Trades and Labor Congress in session in Hamilton last week adopted Mr. Jury's resolution in favor of the adoption of the George system of taxation, and the Hamilton *Times* champions the doctrine. The George system of taxation involves the abolition of all custom duties upon imports, whether imposed for protection or revenue, and the collection of public revenues by a tax on land values. The *Times* says that the speeches made in support contained no mystification on the subject; that all present understood what the resolution meant; that it was adopted unanimously, and that the workingmen are not going to be any longer fooled by the present methods of collecting revenues. Likes to the like. We are now prepared to see the *Times* denouncing the courts of Illinois anent the conviction and sentence of the bomb-throwing Anarchists. Speaking of the passage of this resolution the *Spectator* says:—"And so the Labor Congress has decided that Canada shall have the Georgian system of taxation. Of course this decision is not final: it will have to be confirmed by Parliament before Georgeism becomes the law of the land. As there are several people in this country who do not like the system, it is to be hoped that the labor people will not use their 'brute majority' in the legislative houses to force the new law into operation at once."

THERE is a legend current in some parts of the United States that a Fool Killer, named Jesse Jones, visits the country at stated intervals and kills off all the fools to be found. It is a big contract he has on hand, and we presume that he doesn't have time to do much except to attend strictly to his business. It is evident that he has not visited Canada recently, for we find the following in the Port Hope *Guide*:—

"A sewing machine factory at Fergus, after standing idle for a long period, has at last been sold—building and machinery included—for the paltry sum of \$2,500. It will be used as a storehouse for eggs, intended for shipment to the United States market. Thus while the manufacture of sewing machines in Canada decreases, facilities for the extension of

the egg trade are on the increase. No thanks to the men who, by the imposition of unnecessarily high taxes, have handicapped both industries."

An old proverb saith that "Fools build houses and wise men live in them," which may be modified so as to apply to some who embark in the manufacture of sewing machines. But it is not a fact that "the manufacture of sewing machines in Canada decreases," and it is not true that the imposition of tariff duties handicaps either the manufacture of sewing machines or "the extension of the egg trade." Eggs are not affected by any tariff duty whatever.

AN important meeting was held in Toronto last week by a number of local consumers of finished iron, and others interested in the iron trade, who propose to establish rolling mills in this city. Among those present were Messrs. H. A. Massey, of the Massey Manufacturing Company; John Ostrander, a capitalist, of Cleveland, O.; Thos. D. Beddoe, of the Hamilton Iron Forging Co., Hamilton; J. M. Loeser, of the Toronto Mill Stock and Metal Co., James Worthington, of the Ontario Bolt Works, Toronto, J. Aikenhead, of Aikenhead & Crombie; Leo Frankel, of Messrs. Frankel Bros.; John Forster and Mayor Howland. Mr. Worthington was chairman of the meeting, and Mr. Loeser secretary. It was stated that the city would give a long lease at a nominal rent of any land possessed by the corporation for the purpose of establishing the mills; and that the total cost of erecting mills with capacity to produce sixty tons of finished iron per day would be about \$66,000. Upon a suggestion being made that there were rolling mills enough in Canada to supply all current demands for iron, and that the proposed works might encounter serious opposition, Mr. Massey said that he, for one, was determined to see such a mill in operation in this city—that there was no doubt that under the existing duties on iron and steel a rolling mill here would be a profitable investment. Such goods could be manufactured here cheaper than they could be imported. Mr. Worthington said, "We are bound to have a mill in Toronto." A committee was appointed to gather all necessary information relating to the scheme, to report to a subsequent meeting to be held at an early day.

MR. JAMES F. HOBART, of Boston, Mass., has assumed the editorial management of the *Manufacturer's Gazette*, of that city. Mr. Hobart is well known as a writer on mechanical and kindred subjects, and his accession to the editorial chair of our contemporary cannot fail to hold it in the front rank of trade journalism, where it has long been conspicuous.

REGARDING the Central Fair recently held in Hamilton, the *Spectator* of that city says: One thing that specially strikes the visitor is the display of manufactured goods of descriptions new to Canada. On every hand surprise is felt that this, that or the other article is of home production. Advocates of the National Policy will find many arguments at the fair.

MR. CHARLES FRANCIS ADAMS, in a letter to the Brotherhood of Locomotive Engineers, suggests that in the case of railroad employees there should be, after a term of probation, an entrance into a permanent service, in which there should be regular promotion and stated increase of pay as the period of service increases, and a pension upon disability or superannuation.

STRIKES in the shoe trade during the last year have cost in wages from \$5,000,000 to \$6,000,000. Nearly half this sum is said to have been lost in the five months' strike in Worcester county, Mass. The Wilmington strike of morocco workers lasted seven months and cost \$225,000. The strike at Salem and Peabody, Mass., entailed a loss of \$3,000,000 in wages. Lesser strikes bringing up the total.—*Shoe and Leather Reporter*.

PEOPLE who don't know what a toboggan slide is can get a pretty accurate idea by dropping a banana skin at the head of the stairs and then stepping on it.

LAST year Pennsylvania produced 73,000,000 tons of coal, valued at \$93,000,000. This exceeds the value of all the gold and silver mined in the United States.

FIFTY THOUSAND tons of soot are taken from the chimneys of London annually. It is valued at two hundred thousand dollars, and is used for fertilizing purposes.

A LARGE quantity of wild strawberry leaves are gathered annually in Uxbridge township and shipped to Toronto, where they are used in the manufacture of a medicine known as extract of wild strawberry.—*Oshawa Vindicator*.

THE *Galt Reporter*, remarking upon the many resolutions passed by the Labor Congress recently in session at Hamilton, says: "Of all those who were present, we doubt if there is one who takes his coat off once a month unless when he goes to bed."

PRESTON claim to have 514 people working in its factories, which is an excellent showing for the size of the place. Any one who can remember the condition of Preston twenty-five years ago can have some idea of what the National Policy and factories will do for a place.—*Berlin News*.

BANGOR, Maine, has a new enterprise. Every mill on the river wastes great quantities of saw-dust. It has not been available for shipping because of its bulk. Now a hydraulic press has been invented to press the saw-dust and reduce its bulk some 75 per cent. and in this shape it can be easily handled.

THE number of patents issued by the Department of Agriculture during the month of September was 147, as compared with 226 in the corresponding period of last year. The receipts in Patent office fees last month reached \$6,358. In the same time last year they were only \$5,793. The increase is attributable to activity in the registration of trade marks and designs.

SIR I. LOWTHIAN BELL, in a speech recently delivered, reports that the Hon. C. A. Parsons, of the firm of Clark, Chapman & Parsons, of Gateshead, has succeeded in constructing an exceedingly ingenious engine driven by steam, which, it is said, with a very moderate consumption of coal, makes 10,000 revolutions in the minute, and can work up to the astounding speed of 30,000 revolutions.

A WET silk handkerchief tied over the eyes and nose will make breathing possible in the midst of much smoke, and a blanket wetted and wrapped around the body will enable a person to pass through a sheet of flame in comparative safety. Should a lady's dress catch fire, let the wearer at once lie down; rolling may extinguish the fire, but if not, anything, woolen preferred, wrapped tightly around will effect the desired purpose.

A CANADIAN journal has taken a vote among its readers on the question of annexation to the United States. Out of nearly a thousand answers over seven hundred oppose the step while only about two hundred favor it. Votes taken on this side of the line would probably give similar results. Unt decisive majorities in both countries favor it a union is quite out of the question. It is an issue of years, of generations.—*Philadelphia North American*.

It is estimated that there are 5,000,000 or more farmers in the United States who own their own farms. During last year 9,000,000 acres of public lands were taken up by homestead entries, and there are many millions more to be taken up. We wonder if Mr. Powderly and Mr. George can convert this vast "anti-poverty" army to their way of doing things? The "walking delegate" is losing his hold on the working rank and file; they think it is time he got back to honest work.

A SYNDICATE of Detroit capitalists has been formed for the purpose of supplying stored electricity for house-lighting, and a practical demonstration has shown that the battery it is proposed to use will operate twenty-six sixteen-candle power lamps for twenty-four hours, and show at the end of that time no visible diminution of power upon the ampere. It is believed at the end of that time that sufficient energy to light twelve lamps for five hours will remain. The expectation is that one charging of the battery will light the average house for a week.

"TELEANTOGRAPH" is the name of a new electrical instrument which may become of great importance in the commercial world. By this device a *fac simile* of a written message can be sent to any distance, the exact copy being reproduced at the other end of the line the moment of its sending. For sending orders in financial and commercial transactions the desirability of such a means of trans-

mission can readily be seen by any business man. Prof. Elisha Gray, of telephone fame, and who learned the carpenter trade in Brownsville, Pa., just before the war, is the inventor.

THE gas produced by a new process, which has been in use at the saw works of Henry Disston's Sons, Tacony, Pa., gives promise of being a strong competitor with natural gas. A company has been organized in Philadelphia to buy out one of the gas companies which is now supplying that city, for the purpose of furnishing the new gas for manufacturing and heating purposes. If the claims of the company prove to be well founded the process must lead to great changes in many industries, as the gas can be furnished at less than one-half the cost of coal gas.—*Stores and Hardware*.

THERE are a dozen or more men in this country whose million number more than a score. Of these we are not able to recall one who made his money by running a factory or by the "wholesale robbery of the people through the device of a protective tariff" not one. The big millionaires made their piles by stock speculations, operating in transportation lines, dealing in foreign wares, or in general commerce. This single fact is a sufficient answer to all the rubbish that is uttered about the "robber barons," "taxing the many to enrich the few," etc.—*Chicago Inter-Ocean*.

AT Auburn, Maine, is a novelty in the shape of a steam wagon, having all the appearance of a common Concord wagon, with the exception that a part of the boiler and its covering will show above the body of the wagon. All the motive power is concealed under the flooring. The power is furnished by two small engines of about three-horse power; the boiler is made from iron pipe in spiral form; the wagon body contains two seats, easily holding three each. A small tank for holding water is placed in the forward end of the body in a place especially adapted for it, and a small bunker for coal on the side and end.

It is a matter for local congratulation that Philadelphia, the second city in the country, makes so poor a showing for the adherents of Henry George. The gospel of land community which he teaches, finds few supporters in a public largely composed of property owners. The building association systems, which have been so firmly rooted in Philadelphia for half a century, have provided our thrifty mechanics with the means of acquiring their own homes, and the theories of the Georgites have no allurements for those who possess homes. The homeless and the houseless are the material with which to rear the system of vagabondage *par excel lence*.—*Philadelphia Industrial Review*.

THE interstate law is placing the United States Pacific railways at a disadvantage, compared with the Canadian Pacific. The Canadian line has prepared a schedule of passenger and freight rates from eastern frontier stations to the United States Pacific coasts, which is much lower than the southern railways can adopt. Passengers can go from New York to Montreal and thence to San Francisco, cheaper than by United States lines from New York to San Francisco. The long and short haul clauses make it impossible for the losing lines to cut rates, and they have the fun of seeing goods and persons carried from United States Atlantic ports to their Pacific coast over Canadian territory.

A WORKMAN in Savoni & Co.'s candy factory, in San Francisco, recently failed to put in his appearance at his work, and the proprietors, to prevent delay, substituted another man in his place, whereupon his "helpers" refused to work and were discharged. This led to a strike being ordered by the Candy Makers' Union, and now Savoni & Co. are filling their factory with non-union labor. A few days ago the moulders in the Michigan Malleable Iron Works, at Detroit, struck against the taking in of a new apprentice and the works were closed. The men afterwards called on the superintendent and offered to resume work if the boy was discharged. The offer was declined, and now the works are being operated with non-union men.

THE new Tay bridge at Dundee, Scotland, built to replace that destroyed in 1879, was begun in 1882, and formally opened for travel in June of this year, during the Queen's Jubilee. The following figures will give some idea of its wonderful dimensions: It is 3,450 yards in length, and consists of 85 spans, the longest of which measure 227 feet, resting upon piers formed of six massive iron columns, which in turn rest upon concrete and masonry made impervious to water. Its height above the water is 77 feet in the centre, 66 feet at the southern and 16 feet at the northern or Fife terminus. The flooring is of steel, heavily ballasted, and the sides are braced to withstand a lateral wind pressure of 56 pounds to the square foot. Nineteen thousand tons of iron, 3,500 tons of steel, 2,500 tons of cast iron, 10,000,000 bricks and 70,000 tons of concrete were used in its construction.

# F. E. DIXON & Co.

MANUFACTURERS OF

**Patent Lap-Joint, Star Rivet**

## Leather Belting

SOLE AGENTS FOR

### PHOENIX BELT OIL

*The Only Perfect Belt Dressing.*



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

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

# F. E. DIXON & CO.

70 KING STREET EAST,  
TORONTO.

Our readers all know that the Illustrated London News is the finest paper of the kind in the world, and is constantly presenting its readers with beautiful illustrations of many of the most important and interesting events that transpire in all countries. Published in London at a high price, it is entirely duplicated in its American edition published in New York, the price of which is only \$4 a year, or ten cents a copy, to be had at all bookstores and news stands, and thus within the reach of all. It should be in every family.

WHETHER the capital execution of criminals is or is not a measure necessary for the defense of the community may be an open question: with regard to the barbarousness of the method of doing mal-factors to death by strangulation, there can be but one opinion. It is indeed a brutal, and in very many instances a bungling performance. "Scientific Methods of Capital Execution," a treatise by J. Mount Bleyer, M.D., published by J. Fitzgerald, 24 East 4th street, New York, shows how a capital sentence may be executed "decently and in order," and without shocking the humane sentiments of the community, by invoking the aid of electricity, or by the administration of sundry chemical agents, as morphia, prussic acid, chloroform, etc.

THE Canadian patent law enacts that the importation into Canada of goods protected by a Canadian patent, after the expiration of one year from its date, shall void the patent. The Commissioner of Patents, however, has power to grant, upon petition filed before the expiration of the year, further time, not exceeding one year, within which to import the goods. It is the practice of the office to grant not more than six months at a time. The law also requires that Canadian patents must be put in operation within two years of their date on pain of voiding the grant, but it empowers the Commissioner of Patents to extend the time upon petition filed before the expiration of the two years. This privilege is used somewhat extensively, a year being generally granted upon one petition.

THE increase of duty on linen collars, cuffs and shirt fronts affects more the American than the English imports. In 1881 our imports of these goods were \$70,431, of which \$53,840 were from the States, the greater part of the balance being from England. The imports remained steady for three or four years, being in 1884, \$80,721, of which \$49,923 were from the States; but in 1886 they increased to \$123,943, of which \$80,331 were American goods. The importations are chiefly in the better grades of goods. In increasing the duty on shirts, Sir Charles Tupper said he had two objects, one is to prevent undervaluation, and the other is to prevent the market being over-borne by prison-labour, the products of which are brought in from the United States. The shirt duty also chiefly affects the importation of the dearer class of American goods. *Canadian Journal of Fabrics.*

THE Rev. Samuel Small has written a letter of explanation which he ought to explain. He says that while in Toronto he denounced only professional labor reformers, but who are they? Here he stops short. How are we to distinguish the "thug" and the "jawsmith" from the "honest advocate of labor?" Mr. Small evades the point by talking about what he might have said instead of what he ought to have said, or did say. You can generally judge the size of a man by the size of the hole he crawls out of. In this case the hole is small. Toronto has no further use for the Reverend Samuel Small. —*Toronto World.* Mr. Small made his denunciations of labor jawsmiths previous to the recent labor congress held in Hamilton, from which it is clearly to be seen that he is a prophet. He evidently aimed his remarks at the participants in the mouth tournaments which occurred there.

THE convict contract labor system of New York, abolished by statute in 1883, has gone out of existence. The benefit it was hoped free labor would gain is not apparent, however, for the prison authorities at Sing Sing have purchased the plants of the manufacturers of shoes and will keep 400 convicts busy turning out foot gear, which will be sold at prices below the cost of production where free labor is employed. Four hundred convicts have been employed in the manufacture of stoves on State account, and the number is soon to be increased to 500. Just where outside or free labor is to profit by the change it is difficult to discover, for the State capital employed does not seek a return on the investment, and consequently will undersell the productions of private capital. The making of State capital a rival of private capital is a result not anticipated by the advocates of the abolition of the convict contract labor system. —*Industrial Gazette.*

AT the present time there are more 140,000 miles of main track of railroads in constant use in the United States. Their gross earnings this year will amount to \$800,000,000. In the present calendar year they will carry 400,000,000 passengers and move at least 500,000,000 tons of freight. The entire capital stock and funded debt

of these railroads equal, if they do not exceed, \$7,750,000,000. This represents an amount which the human mind cannot adequately comprehend. It is far larger than the national debt of any of the great nations of the world. That of France is \$1,500,000 less than this, while it is larger than the debt of Great Britain and Russia together, and more than seven times the interest bearing portion of the indebtedness of the United States. In 1880 the railroads composed over one-ninth of the aggregate wealth of the entire country. The value of the railroad interests to-day is undoubtedly one-eighth as great as that of all the property in the country, real and personal combined.

MR. WM. H. FROST, proprietor of the Smith's Falls Malleable Iron Works, Smith's Falls, Ont., has sent us his 1887 illustrated catalogue No. 5, of malleable iron carriage and wagon hardware manufactured by him. Among the articles illustrated and described are axle yokes and couplings, axle nuts, back stay irons, body loops, bolster plates, breeching hooks, buggy wrenches, carriage steps, centre irons, check and other loops, cover irons, felloe plates, fifth wheels, ferrules, hammer straps, harrow clips, hold backs, lathe dogs, milk can handles, neck yoke trimmings, pail ears, pole tips and yokes, row locks and sockets, seat fasteners, braces, handles, etc., side bar shackles, etc., shaft loops and tips, sleigh steps and knees, spring washers, ties and plates, bar plates, clips, etc., stay chain hooks, stake rings, cleats, etc., stove lid lifters, tack hammers, tail board hinges, nuts and washers, thumb nuts and bolts, thresher legs, whiffle-tree trimmings, wagon irons, wear irons, whip sockets, etc. In presenting this catalogue Mr. Frost calls attention to the large and important additions made to his list since his last issue in carriage and other hardware. He informs us that he carries a large and complete stock of castings, and that he can fill all orders with promptness.

THE Hamilton Cotton Company, Hamilton, Ont., made a fine display at the recent exhibition in that city, the most noticeable portion of which was the immense collection of webbing of all kinds, used for all imaginable purposes, and manufactured in every color and almost every shade of color. This line of manufactures is a specialty with this company, which, it is claimed, is the only one in the Dominion which makes this extensive line of goods. In the collection exhibited are boat webs, skirt tape, belting webs, blanket binding, halter webs, girth webs, druggists' twine and cotton twine of all kinds, ball knitting yarns, carpet warp both gray and colored, and all classes of hose yarns. Webbing is to be seen here varying in width from half an inch to eighteen inches, in the manufacture of which machinery of extremely intricate nature and unusually costly is necessary. Within the past year the company has put up extensive additions; but the fact that it has to supply the whole domestic market has entailed upon the company the necessity of still further enlarging its mills. At present it is supplying orders from the trade in every part of the Dominion, and there are a greater number of orders in hands at present than can be filled. The company were awarded five first prizes and two diplomas for their exhibit.

THE making of featherbone is a new American industry which has been inaugurated at Three Oaks, Mich. This article is made from the quills of turkeys and geese, and is intended to take the place of whalebone. The quill goes through several processes before it is finished and in shape to be used as stays in ladies' dresses. It is run through the stripping machine and stripped of its plumage, then run through the splitting machine, which splits the quill in two, lengthwise, then it is put through a machine which takes out the pith. It is then run through a machine which cuts it into fine shreds. Then several of these shreds are wound together by a machine which makes a strong cord. Four of these cords are sewed together by another machine which makes it a flat featherbone and ready for use. It can be made in all colors, according to the color of the thread used, and is claimed to be much superior to whalebone or steel, as it is more pliable, will not rust or corrode, and one can sew through it. The machinery used in the manufacture of this article is very novel and was invented specially for the purpose. Although the business is in its infancy, the company employ 160 hands, mostly girls, and are rapidly increasing their number. It is the inventor's intention to make the manufacture of corsets one of the special departments of the factory, as the featherbone can be used to greater advantage over other materials in their manufacture.

IT is forty-one years since Sir Robert Peel carried through the English Parliament a bill which committed the nation to the principle of Free Trade. Two considerations moved the House of Commons to follow the Tory premier in this step, which was a turning of his back upon the professions of his previous career. The first was Mr Cobden's assurance that England's example was the strength of the Protectionist policy, and that her adoption of Free Trade would

overthrow the tariffs of the world. As this would change the course of the world's commerce in England's favor, and would enable her to dispose of infinite quantities of Manchester cottons and Sheffield hardware, it was thought worth the venture. And for a time it seemed likely that the prediction would be fulfilled. First America, then France and Germany, did follow the English precedent, greatly to England's advantage. But in the longer run the current has turned in the other direction. A wave of Protectionist sentiment began to sweep round the world, as the *London Times* expressed it. One country after another followed the American example of 1861, rather than that of England in 1846. And now the strength of the Protectionist policy is the support given it by a nation more numerous, more wealthy, more progressive than England,—a nation of which Mr. Gladstone says, "They are passing us at an easy canter." It is nearly ten years since the greatest of continental statesmen, the Chancellor Bismarck, declared that the success of America converted him from Free Trade to Protection.—*The American*.

MESSRS. D. & W. HENDERSON & Co. launched from their yard at Meadowside, Partick, on Thursday, a steel screw steamer built by them for Messrs. James and Alexander Allan, owners of the Allan Line of Atlantic steamers. The vessel, which has been built in the highest class at Lloyd's, is constructed of Siemens-Martin steel, made by the Steel Company of Scotland. She is 330 feet long, 48 feet 9 inches broad, and 28 feet 3 inches deep, the gross register tonnage being about 3,000 tons. Engines of the triple-expansion type will be fitted on board, the indicated horse power of these being 1,400. The high pressure cylinder is 22½ inches in diameter, the intermediate 36 inches, and the low pressure 61 inches, the stroke being 41 inches. Steam will be supplied from two double-ended multitubular boilers of Siemens-Martin steel, working at a pressure of 160 lb. to the square inch. While intended for cargo-carrying in the River Plate section of Messrs. Allan's service, the vessel has been built to meet the requirements of the Board of Trade for passenger steamers, and can, if required, accommodate over 600 third-class passengers 'tween decks, and twenty first-class passengers in a cabin in the after part of the ship. As the vessel left the ways, Mrs. R. S. Allan, wife of Mr. Allan, of Messrs. George Smith & Sons, Glasgow, named her the *Rosarian*. Messrs. Henderson, it may be added, are building another Allan liner, similar in every respect to the *Rosarian* and to be named the *Monte Falcato*. These two vessels, with the two *Monarch* liners recently purchased by Messrs. Allan, make an addition of 15,000 tons to the Allan Line of steamers. *Liverpool Shipping Telegraph*, Sept. 17.

We have advice of a change, on 1st October, of the firm name, James Lockhart & Co., Canadian dry goods commission merchants, of Toronto, to Lockhart, Millicamp & Co. This firm, through their headquarters at Toronto, and branches at Montreal, Halifax and Winnipeg, are particularly well equipped for reaching the wholesale trade of the Dominion, and have gradually established a large trade in all classes of Canadian woolen manufactures. Among other mills they handle the products of A. W. Brodie, Peterborough, fine grey, fancy, and scarlet and white Saxony flannels; Phillips & Berry's Lambton mills, Lambton, flannels and hosiery yarns; Waterloo Woolen Manufacturing Company, Waterloo, tweeds; Galt Knitting Company, Galt, shirts and drawers, etc.; Standard Woolen Mills Company, Toronto, shirts and drawers, cardigans, fine blankets and blanket suitings; Thorold Knitting Company, Thorold, knitted underwear and top-shirts; Star Hosiery Company, Georgetown, hosiery; David Graham, Inglewood, scarlet shirts and drawers, and at Clinton, etofes, tweeds and blankets; A. & J. Clark, Bullock's Corners, druggets, tweeds and fancy rugs; A. Dobson & Sons, Cannington, yarns and blankets; B. A. Booth & Co., Odessa, yarns; Slingsby & Sons, Brantford; Dan. Kitchen, Canning; T. R. Foster, Thornbury; R. J. Duxbury, Erin; Walker & Cunningham, Alliston; and George Upton, Alliston; the last named six all on blankets; McMurchy & Hillis, Huttonville, socks and yarns; John Russell & Co., Stewarton, Scotland, Scotch bonnets and caps; J. J. Field, Tavisbock, tweeds and etofes; Merriton Knitting Company, Merriton, knitted goods, Knights of Labor coats, etc.

Mr. ROBERT BARBER, one of the three recently appointed inspectors under the Ontario Factory's Act, speaking of his recent official visit to the Almonte, Ont., factories, said: "Rosamond, of Almonte, has certainly one of the best regulated and largest woolen factory industries I have seen in Canada. Everything is remarkably well arranged in this work. By drawing attention to this fact I do not mean by any means to disparage any of the others, but it heads and shoulders away above the rest. Three hundred and fifty hands are employed in this mill of whom two hundred are females, and there seems to exist a very cordial feeling between the employers and the employed. Besides Rosamond, there is James Wylie's woolen mill that employs 24 hands; Elliott & Co., employing 150,

of whom 90 are women and girls; John Baird & Co., with 37 hands; Almonte Knitting Company, with 55; Gilbert Cameron, 15, and Wm. Thoburn, 25. We examined all these busy hives of industry very carefully, and shall suggest many improvements. Although we found means of exit in case of fire, still in some cases we do not consider them adequate. Nearly all have appliances for quenching fires, but the act directs that when workers are employed any higher in a factory building than the second story, fire escapes must be established. Another thing we will ask a reformation in and that is the water closet management, which must be separate and wholly apart." Regarding the industrial establishments at Cornwall, Ont., Mr. Barber said that the place "is a busy hive of industry, and is a thorough manufacturing town. Everybody looks the busy bee down there, and nobody can mistake that they have struck a manufacturing centre when they run across Cornwall. A great deal of capital is centered there, and you can get some idea of the work done when I tell you that the Canada Cotton Company employ 700 hands; the Cornwall Manufacturing Company (woolen), 225, of whom 140 are females; the Stormont Cotton Company employ 510, and Mr. Hodge's flour mill, 14. Putting these all together you see that it makes quite a population in itself. We looked through all these pretty carefully, but of course as this is the preliminary inspection not as keenly as we will in the future. I must say, however, that the owners have taken very ample precautions on behalf of their employees, to ensure safety both sanitarily and from damage of machinery, but still there is room for improvement, but these improvements I am sure, will only need be pointed out to the owners to have them done. The act is stringent, but it will not be arbitrary, for when we spoke of where an improvement might be made, the owners readily acquiesced in our suggestions."

#### SHERBROOKE AS AN IRON CENTRE.

MR. JAMES DUNSMUIR, of Sherbrooke, Que., in setting forth the claims of that town as an iron manufacturing centre, says:

"In England, where coal and iron are supposed to lie side by side in inexhaustible supply, there is imported from Spain alone, more ore than is required to make all the steel made in England.

"In the United States, which possesses coal and iron in abundance, and where, by heavy protection, they have built up an enormous iron trade, they had no such advantages as we have in Canada, because the ores of Wisconsin, Marquette and the Lake Superior, are carried 800 and 1,000 miles to the manufacturing centres, such as Pittsburg, etc., while the ores of Canada are bought and imported, with a duty of 75 cents per ton, being transported in some cases 600 and even 800 miles.

"In France, which possesses coal and iron ore, they import from other countries about 40 per cent. of all the ores used. In Belgium where iron is made, I believe more cheaply than anywhere else, they import nearly all their ore from Germany and Spain.

"To many Canadians these facts will be rather startling and should compel them to inquire into this iron question, which is the foundation of the prosperity of all great nations. If then England, Belgium, France and the United States are compelled to import such enormous quantities of ores, in most cases at least 1,000 miles, what a position then does Canada not possess? When ore from the north west of the Province of Quebec is imported into Cleveland, and bought as high as \$6.50 per ton, including duty, surely Sherbrooke, with its abundance of ore and limestone, with coal laid down at less than \$4, can successfully produce it on iron. To convince the most sceptical that it is so, I would like next to quote some extracts from published reports of some of the mining experts, who are held in high repute in the domain of Uncle Sam. In reporting on the Belvidere iron mining property of this section, E. L. Bartlett, chemist for the State of Maine, says: I have assayed a sample of ore from the Belvidere Iron Mine, which is very fine metallic iron, 63 per cent. Experiments with small quantities by crucible fusion, using Dunsell limestone as a flux, proves that the ore melts readily, forming a perfect slag, and yielding fine metallic iron. Smelted with charcoal, an iron could be produced which would most undoubtedly be of fine quality and command the highest market price."

His conclusion drawn from these facts, are that with ore and limestone in abundance, coal near at hand, and an enormous amount of charcoal for the making transport facilities by a system of railways that cannot be excelled anywhere material advantages for cheap and inexpensive production, and a market which consumes an equivalent of 750,000 tons of pig iron per year (excluding rails), requiring the production of 2,000,000 tons of ore, Sherbrooke should be to Canada what Pittsburg and Chattanooga are to the United States.

# Manufacturing.

THE CANADIAN MANUFACTURER.

Send \$2.00 and receive it twice a month, postage paid, for one year.

THE contract price of the iron bridge now building for the Niagara Central Railway at Thorold is \$33,090.

THE Hudson Bay Company, a few days ago, made a shipment of nearly \$250,000 worth of furs from Winnipeg to Montreal.

THE capital stock of the Gananoque Carriage Company, Gananoque, Ont., has been increased from \$50,000 to \$100,000.

THE Galt coal mine at Lethbridge, N.W.T., is working night and day, four hundred tons of coal being turned out every twenty-four hours.

MESSRS. HESS BROS., Listowel, Ont., have been granted a bonus of \$15,000 to enable them to carry on the manufacture of furniture in that town.

AT the recent Quebec Exhibition the Oshawa Stove Company, Oshawa, Ont., were awarded two medals and diploma for their display of stoves.

MR. W. C. MACDONALD, Montreal, is building a bonded warehouse in connection with his tobacco factory, which cover an area of 400 by 300 feet.

R. W. KING & CO., Georgetown, have just put in steam heating fixtures throughout Messrs. Moore & McFarvin's trunk and satchel factory at Acton.

MESSRS. LOMAS & CO., Sherbrooke, Que., have received an order from the Dominion Militia Department for 19,000 yards of flannel for the volunteers.

MESSRS. P. W. ELLIS & CO., Toronto, manufacturing jewelers, have recently been making extensive alterations and improvements in their establishment.

THE large trunk factory of Messrs. Geo. Barrington & Sons, Montreal, was partly destroyed by fire last week, the damage being estimated at about \$50,000.

MESSRS. WORKMAN & WATT, Brantford, Ont., recently burnt a kiln of brick which they claim was the largest ever burned in Canada. It contained 820,000 brick.

THE Kellogg Varnish Company, Woodstock, Ont., is a new concern just going into business at that place. They will manufacture varnishes, Japans, stains, etc.

THE assignees of the Knights of Labor Biscuit Works, at Chatham, Ont., have sold a large portion of the machinery to Toronto purchasers, who will plant it in this city.

THE Le Gay Heel Company of Canada, in connection with the Le Gay Company, Boston, Mass., will erect works in Montreal, and operate with a capital of \$125,000.

THE Clapperton Thread Company, Oldham, Eng., have secured a suitable location in Montreal and will transfer their machinery and hands from the old works to the new.

MR. JOHN McKELLAR, formerly of the Gurney Works, Dundas, Ont., has secured from Ingersoll Town Council a bonus of \$4,000 to buy and run the Russell foundry at that place.

ALEXANDRIA, Ont., wants a woolen mill, and it is said that there is no such concern within thirty-six miles. Mr. Angus McLeod, of that town, has a suitable building for such a purpose.

A BLOCK of granite recently taken out of the quarry of Mr. Alex. Taylor, St. Stephen, N.B., and now on exhibition there, is 60 feet long, 12 feet thick and 9 feet wide, or 6,480 cubic feet.

IT is said that two English gentlemen connected with "Nettle fold's, Limited," a large screw manufactory in Birmingham, contemplate the erection of an extensive screw factory in Canada.

MACKAY, FEE & O'CONNOR, who own a mica mine near Mattawa, are negotiating with an American firm with a view to selling. If a sale cannot be effected they will work the mine themselves.

THE Lansdowne Piano Company, Toronto, made a fine display at the recent Exhibition of the various styles of pianos manufactured by them, and every instrument they had on view was sold.

THE Lake of the Woods Milling Company's lumber mills, at Kewatin, are to be lighted with Edison's incandescent electric lights, the plant to be furnished by Mr. A. J. Lawson, of Montreal.

THE efforts recently made to induce the Peterborough (Ont.) Locomotive Company to remove their works to Port Hope, Ont., have fallen through, and the company will continue business in Peterborough.

STEPS are being taken for the formation of a joint stock company at Prince Albert, Saskatchewan Territory, for fitting up and carrying on a flour mill in the building lately erected by Mr. Thomas McKay.

MESSRS. BEAUDREAU, THOMPSON & MATHESON, Rat Portage, Man., are erecting a shingle manufactory on Clear Water Bay 60 by 30 feet. They expect to be in operation in October and will run all winter.

MR. SAMUEL J. LAUGHLIN, foreman of the organ factory of Messrs. W. Bell & Co., Guelph, Ont., has invented a machine for cutting organ pipe tops, the construction of which displays much ingenuity.

THE Bedford Mining Company, of Kingston, Ont., has been incorporated with a capital of \$250,000 for the purpose of mining iron ore in Bedford and elsewhere. Sir Richard Cartwright is one of the incorporators.

MESSRS. B. F. BELL and Alexander Bremner, Tilsonburg, Ont., have formed a co-partnership, under the name of Bell & Co., for the purpose of carrying on the Tilsonburg tannery which they have recently purchased.

MR. GEO. E. HENDERSON, Belleville, Ont., has recently discovered an extensive deposit of what is said to be brown ochre near that town. It is of fine tint and pure quality, and is estimated to be worth at least \$20 per ton.

THE Hamilton Brass Manufacturing Company has been incorporated at Hamilton, Ont., with a capital stock of \$3,000; and the Hamilton Manufacturing Company (limited), at the same place, with a capital stock of \$70,000.

MESSRS. DIXON & WHEELER, Paris, Ont., have secured the necessary power for their needle works from Messrs. Brown & Co., proprietors of the nut works at that place. This guarantees the continuance of the needle works at Paris.

THE woolen mill at New Westminster, B.C., is expected to be ready for operations in about ten or twelve days. It would have been running before this time, had not the proprietors been disappointed in getting their spools and bobbins.

MR. MURDOCK MCKENZIE, Guelph, Ont., was awarded a diploma at the recent Toronto Exhibition for best display of horse-shoes. Mr. McKenzie secured first prize from the Association in 1884 and also in 1885, and took the bronze medal in 1886.

THE Williams, Greene & Rome Company, Toronto, are erecting an additional factory beside their present establishment, in Berlin, Ont., for the manufacture of shirt collars, cuffs, etc. The new building will be 80 by 40 feet, three stories high.

THE Cumberland Coal and Railway Company are building an extensive range of wharves at Whitehall Creek, Parrsboro, N.S., for coal and lumber business. There will be, when completed, 1,000 feet of additional wharfage front. The cost is about \$20,000.

THE John Doty Engine Company, Toronto, who made such a fine display of steam engines at the recent Exhibition, are meeting with great demand for their high speed engines for electric lighting purposes. These engines are in high favor for the use indicated.

MESSRS. TODD & HEAR have purchased the Mulvey brewery at Fort Rouge, Winnipeg, and are now busily engaged overhauling the premises. Mr. Hear has gone to the States to purchase new machinery. The firm expects to start operations in a few weeks.

MR. S. STEPHENSON, proprietor of the Planet newspaper, Chatham, Ont., has just opened a large factory in Windsor for the manufacture of all kinds of pasteboard boxes. Thus it is that our glorious N.P. enables even newspaper men to become pampered manufacturers.

THE Central Iron and Bridge Works, Peterborough, Ont., recently constructed an iron bridge to be placed at Millbrook. It has 40 foot span with 20 foot roadway and 5 foot sidewalk, and after it was delivered at the location was erected and ready for use in less than ten hours.

THE Bennett Manufacturing Company's works, at London, Ont., have been taken over by Mr. Edward Thomson, of Scotland, but will remain under the management of Mr. R. W. Bennett. The city authorities will continue the same privileges to the concern as heretofore enjoyed.

SOME excitement is reported over a very valuable deposit of crystallized phosphate which has been discovered at Noshousing station, on the line of the C.P.R., about fifteen miles east of North Bay. It is the opinion of mining experts that the deposit contains 90 per cent. of phosphate.

MR. THOMAS DALY, Upper Wakefield, Ottawa county, who recently purchased the land, has discovered a very rich iron mine upon his farm for which he has been offered \$25,000 by New York capitalists. He thinks the mine is worth big money, and is holding for a better offer.

THE Seattle Coal and Iron Company, of Victoria, B.C., has increased its capital stock from \$2,000,000 to \$5,000,000. The company will buy and develop mines along the line of the Seattle, Lake Shore and Eastern Railway, in the Cascade Mountains, about thirty miles from Victoria.

THE mammoth leather belts shown at the recent Toronto Exhibition by Messrs. F. E. Dixon & Co., 70 King Street East, Toronto, were manufactured specially for the new works of the Toronto Electric Light Company. The largest of these belts is 36 inches wide and over 100 feet long.

TWO new seams of valuable coal which have been discovered at Westville, near Picton, N.S., one eight feet and the other ten feet thick. The output of coal from this district is rapidly increasing, a great deal of the coal going to Montreal. Three large steam colliers are plying in this trade.

MR. WM. RUSSELL, Guelph, Ont., recently the proprietor of the Guelph Novelty Works, has bought the plant of the Gardner Sewing Machine Company, Hamilton, and will remove it to Guelph, where he will engage in the manufacture of sewing machines and novelties on an extensive scale.

THE Hamilton Brass Manufacturing Company, Hamilton, Ont., under the management of Mr. T. J. Carroll, is being run fifteen hours a day to fill orders. They manufacture all kinds of brass valves, oil cups, plumbers' and steamfitters' supplies, brass window fixtures, cornices, picture rods, etc.

A CHAIN made of half-inch copper rods is on exhibition at the St. Louis Exposition which was made by an Illinois blacksmith, who says that the secret of his work is in the flux used in welding. The welding of copper has long been a lost art which seems to have been re-discovered by this village blacksmith.

HARVESTING operations were somewhat retarded by the scarcity of binding twine. The quantity laid in by the dealers was estimated as likely to meet the demand, but the extraordinary heaviness of the crops called for more than a usual quantity to the acre of grain.—*Saskatchewan Herald*.

THE annual meeting of the shareholders of the Weston Woolen Manufacturing Company was held in the company's office in Weston, Ont., Sept. 5. The result of the business of the past year was found to be very satisfactory indeed, and a dividend of 8 per cent. was declared, payable October 1.

A CONSIGNMENT of snow shoes for horses have been received at Halifax, N.S., from England, which are described as being about the size and shape of a shallow basket. The bottom part is made of plaited alder branches, over which are set two stays or handles between which the hoof is fastened.

COLD BROOK Rolling Mills Company are cutting 200 tons of spikes for the I.C.R., and are also cutting all the spikes required for use on the New Brunswick road. The company has just received an order for 15 tons of spikes for the Joggins road and 25 tons for the Caraquet.—*St. John (N.B.) Sun*.

MR. CROSSEN, of the Cobourg Car Works; Mr. Robertson, representing Harris & Co., of the St. John Car Works; and Mr. Muir, representing the London Car Works, were in Ottawa a few days ago looking after a Government contract for a number of flat and box cars for use on the Intercolonial Railway.

THE Montreal Cotton Company have recently paid a dividend of 2 per cent., making the third dividend since February last. This company is doing well, being next on the list to the Hochelaga Cotton Company, who are paying 2½ per cent. quarterly. The Canada Cotton Company is paying a dividend of 1½ per cent.

MR. MCKELVIE, who is one of the promoters of the new iron foundry and machine shops in Vancouver, left for the east yesterday to buy machinery and plant for the establishment. It is the intention to erect works costing in the neighborhood of \$15,000 at first, and add to them as required.—*Vancouver (B.C.) News*.

MESSRS. STEELE & SON, Greensville, Ont., are in correspondence with parties at Medicine Hat, N.W.T., with a view to starting a two set woolen mill at that place. Inducements have been offered Messrs. Steele & Son to establish such a concern at New Westminster, B.C., but their preferences are for Medicine Hat.

FIVE water power saw mills, with an aggregate capacity of 640,000 feet daily, were burned lately in Minneapolis, Minn. The mills were old timers, but were in working order at the time of the fire. From 1,000 to 1,500 men were thrown out of employment. The loss is placed at \$202,000. About 70,000,000 feet of logs were on hand.

THE Brantford Vinegar, Broom and Brush Company has been incorporated at Brantford, Ont., with a capital stock of \$20,000, for the manufacture of the lines indicated by the name. The incorporators are Messrs. Wm. T. Wickham, James B. Holt, Chas. Whitney, William Ismond, Stephen Smith, William Edwards and J. Henry Belfry.

THE St. John (N.B.) lime kilns are producing an average of over 1,400 barrels of lime per day, employing about 175 hands. The production will be much larger next year. These lime kilns are fast supplanting the product of the kilns of Rockland, Maine, the consumption being chiefly in the cities of Boston, New York and Philadelphia.

THE Hemming Brothers Company, Toronto, manufactured the casket in which is placed the instantaneous photographic views of the Toronto Jubilee celebration, held last May, intended for presentation to Queen Victoria. The casket is made of finest silk plush, mounted with gold trimmings, and is an elegant specimen of artistic workmanship.

THE sewing machine factory of Messrs. R. M. Wanzer & Co., Hamilton, Ont., is, we understand, the only establishment of that sort in operation in that city. A few years ago there were five such factories in operation there. One plant, that of the Gardner Sewing Machine Company, has recently been sold for removal to Guelph, Ont.

MESSRS. ELLIOTT & Co., Baird & Co., and Metcalf Bros., Almonte, Ont., have jointly built a new dam above the falls near their mills, which will materially improve their water power. Mr. Wm. Thorburn of that place is about closing down his flannel mill which has not been running to its full capacity for some time, in order to improve his water power.

MESSRS. COWAN & Co., proprietors of the Galt Foundry, Galt, Ont., made a shipment a few days ago of an elegant Harris-Corliss automatic cut off steam engine to Messrs. McDougall & Son, Halifax, N.S. We are informed that this concern enjoy a very large and growing trade with the Maritime Provinces, especially for their wood-working machinery.

MISS NELLIE CAVERS, of Guelph, Ont., a young lady only fifteen years old, is stenographer and type writer in the office of Messrs. W. Bell & Co., organ manufacturers in that city. On the type writer Miss Cavers averages 140 words per minute, reaching a rate of 160 words in special lines of work, and the stenographic work is equally quick and accurate.

MESSRS. R. EHRHART & SON, Moncton, N.B., platers in gold, silver, etc., have the plating department in Mr. D. A. Duffy's hardware manufacturing establishment in that city, and do the plating work of the concern. They also do a large amount of work for the Moncton, Sackville and other stove foundries, railways, etc. The works are lighted by electricity.

THE Canada Screw Company's new works at Hamilton, Ont., are fast being completed. The factory is two stories high, one building covering an area of 304 by 75 feet, and another 235 by 45 feet, the engine room being 50 by 35 feet. Over 1,000,000 brick have been used in the construction of these buildings, and it will require some 40,000 brick to set the boilers.

THE experiments with the shells manufactured in the Government factory at Quebec have been so satisfactory that henceforth the establishment will be entrusted with the task of supplying all Canadian batteries. Projectiles for breach-loading guns will continue to be obtained from England, but there are only three of those weapons in use in Canada at present.



THE attention of capitalists seeking profitable investments is directed to the advertisement of Mr. John Livingstone, trustee of the Joseph Hall Machine Works, at Oshawa, Ont. These works are admirably equipped for doing a large agricultural implement, general machinery or car works business, and the property will be sold en bloc or in parts to suit purchasers.

THE Dodge Wood Split Pulley Company, Toronto, who recently sent specimens of their pulleys to Australia for exhibition, are in receipt of numerous enquiries from that country regarding them, and also from parties in San Francisco, California. The article finds much favor in Sydney and other Australian markets, and a good trade is being worked up for them there.

A GREAT iron swing bridge for the Niagara Central Railway, at Thorold, is under construction by the Hamilton Bridge and Tool Company, Hamilton, Ont. The bridge is nearly completed and most of the material is already on the ground. It is 307 feet long, and will be the second in length in Canada. The bridge at Burlington piers, the product of the same works, is 371 feet long.

THE J. C. McLaren Belting Company, Montreal, successors to the late J. C. McLaren, manufacturers of leather belting, etc., occupy a most prominent position in the CANADIAN MANUFACTURER in calling attention to the oak-tanned leather belting, card clothing, loom reeds and harness, etc., manufactured by them. Their place of business in Montreal is at 292-294 St. James street.

IN the efforts of Port Hope, Ont., to induce the Peterborough Lock Works Company to remove their plant to Port Hope, a bonus of \$20,000 was offered. Port Hope's anxiety to secure the Lock Works is justified by the fact that the pay roll of the works amounts to a monthly sum of about \$3,000, and that next year the works, wherever they are located, will pay out about \$50,000 in wages alone.

THE quantity of coal contained in the Grand Lake coal beds in New Brunswick is estimated at 150,000,000 tons. Grand Lake coal has been used for a number of years as fuel in dwellings and to some extent for industrial purposes, but mining on a large scale has never been attempted at any place in the Province. An analysis of the Grand Lake coal showed but five per cent of ash, although the sulphur in it was high.

MESSRS. MAW & McFARLANE, Dundas, Ont., inform us that they are enjoying a large demand for the drop hammers manufactured by them. These hammers are made in sizes to suit all requirements, and in all establishments where much forging is to be done they are indispensable. They also manufacture lifters, die sinkers, presses, etc., and do all kinds of iron founding and engineers' and machinists' work.

THE J. B. Armstrong Manufacturing Company, Guelph, Ont., are anticipating the necessities of the approaching winter by offering a jump seat cutter as a four-passenger sleigh. It is changeable to four different positions instantly and conveniently, is neat, strong and complete, and just the thing for small families wanting a general service cutter. Carriage makers and others furnished with descriptive circulars on application.

THE Nova Scotia Steel Company, of New Glasgow, reports profits of \$16,957 for the past year. As the capital invested is about \$250,000, this is something over six per cent. Two thirds of this profit was appropriated to repay the losses in previous years. A coal mine strike largely affected operations and made it necessary to close down a part of the works, otherwise the year would have been a still more prosperous one.

It has been decided to re-open the beet root sugar factory at Berthier, Que., and a new company has been formed with a capital of \$300,000. Mr. Wilfred Skarfe, of Montreal, who has been for some time connected with the St. Lawrence Sugar Refinery, will be the manager of the new company. A committee has been appointed to see the farmers in the county of Berthier so as to secure the necessary quantity of beet root, and it is expected that the factory will be in full operation by next summer.

THE Canadian Fish, Oil and Guano Company, recently chartered by the Quebec Government with capital stock of \$200,000, are authorized to acquire fishing grounds and other landed property, and to enter into and carry on fisheries, the business of fish oil and guano manufacture; to build factories for the same; to manufacture lumber, work mines, build piers, and to acquire any vessels necessary to carry on said business.

THE Canadian Pacific Railway Company have staked out the plot for a new 600-foot slip at Owen Sound, also have arranged for the construction of an enormous grain elevator at the same place, to

have capacity to hold 1,250,000 bushels of grain. The elevator will have two legs, and will be equipped with the best and most approved machinery. It is expected that the elevator will be finished in time to accommodate the spring trade.

THE Cobban Manufacturing Company, whose factory and head office is at Toronto, with branch at 455 St. Paul Street, Montreal, are calling attention of the trade to some of the specialties manufactured by them. Included in these are mantels, over mantels and mirrors, in finest hard woods; mouldings, picture frames and looking glasses; British, French, German and shocks mirror plates, etc. They make a specialty of plate glass bevelling and silvering.

ONE of the best spinners in the St. John cotton mill arrived here a few weeks ago bringing his large family. Their passage out was paid by the company. The immigrant left Lancashire with seven pence in his pocket and reached St. John with one penny. Yesterday he was briskly stepping about tending his mules, while the older members of the family were employed elsewhere about the mill. The pay roll of the family amounted to \$21 last week.—*St. John (N.B.) Sun.*

MESSRS. MACLACHLAN & SON have just completed for Messrs. Harris & Co.'s rolling mill, three boilers, five feet in diameter and twenty-six feet in length, with two flues in each, twenty inches in diameter. These boilers have been tested to 170 pounds, cold water pressure. The same firm have also manufactured a return tubular for the rolling mill. Since the first of March most of the men employed by MacLachlan & Son have been engaged on work for Messrs. Harris & Co.—*St. John (N.B.) Sun.*

THE tannery of Messrs. Porter & Savage, situated on Visitation street, Montreal, was totally destroyed by fire Sept. 10, and their shoe factory adjoining the same was partially destroyed, the loss being about \$74,000, well covered by insurance. We are informed by Messrs. Porter & Savage that they have already commenced rebuilding their tannery, and expect to have it in operation again in a few days. Their belt factory, beam house and offices were not damaged, and they are filling orders as usual.

WE recently alluded to the fact that Mr. W. J. Bell, the manager of the London, Eng. branch of Messrs. W. Bell & Co., organ manufacturers, Guelph, Ont., was on this side the Atlantic and was to have been married in Omaha, Neb., on Sept. 1 to a daughter of General Lowe, of that city. We also mentioned that Mr. Bell would proceed to Sydney, New South Wales, for the purpose of establishing agencies for the sale of Bell organs in Australia. Mr. Bell and his wife sailed from San Francisco September 23, on their trip to the Southern Hemisphere.

THE Westminster Woolen Manufacturing Company, Westminster, B.C., have just completed their new mill and put it in operation. The building is 60 by 40 feet, three stories high, and is well equipped for the manufacture of blankets, flannels, tweeds, yarns and woolen goods generally. The capital stock of the company is \$16,000, the principal shareholders being Messrs. James Punch, John Jennings and John Paris. The Provincial Government of British Columbia gave a bonus of \$3,000 towards the erection of the mill and the city of Westminster \$1,000.

WITHIN the past few days there has left one or other of Galt railway stations a shipment of axes, etc., by Linton, Lake & Co., to British Columbia, a large shipment from the Victoria Wheel Company, to Sydney, New South Wales, several safes from the Safe Works of Giddie & McCulloch to Montreal, large engine to a point in the North-West; besides mill and other smaller machinery to every part of Ontario and sister provinces. This will give an idea of the wide field occupied by Galt manufacturers.—*Galt Reporter.*

MESSRS. MILLER BROS. & MITCHELL, Montreal, are calling the attention of the trade to the Beaudry upright cushioned power hammer, of which they are the sole manufacturers in Canada. This hammer is of entirely new design, does not vibrate, requires no helper, is always ready for use, does not chill the work, and delivers a perfectly square blow. The stroke can be changed easily and quickly, will give one blow or more as required, either light or heavy, and can be run cheaply and with very little power. It is claimed for it that it is the least complicated and most efficient power hammer made.

ST. JOHN, N.B., is again stirred up to the importance of having a dry dock. In 1882 the local Government passed an Act providing a subsidy of \$50,000 for such a dock, and in the same year the Dominion Government passed an Act providing for a subsidy of two per cent. for twenty years on the cost of construction, the subsidy

not to exceed \$10,000 a year. The company formed to build the dock are desirous that the Government should make them a loan of \$200,000 at four per cent. interest, holding a first lien on the land, dock and revenues as security. It is estimated that the dock will cost about \$300,000.

THE Dominion Lubricating Company, Moncton, N.B., have erected a building on the premises of Mr. D. A. Duffy, of that town, adjoining his hardware works, and are manufacturing lubricating oil and a wagon grease which they intend putting on the market in quantities at once. These articles are made by a patent process, and the materials used and methods of making are a secret. The lubricator is in use on several Canadian railways and is doing all the makers claim for it. A test on the Canadian Pacific has been satisfactory. The company claim that their goods will revolutionize the lubricating business in Canada.

Mr. S. S. MOYER, Berlin, Ont., has begun the manufacture of a patented toy savings bank—his own invention. It is described as being constructed on a religious basis, the principal object being to encourage children in the study of the Bible. Those who have examined it agree that it is a very desirable thing to have in a family, and it is suggested that all Sunday school teachers who aspire to become bank cashiers or presidents, supply themselves with Mr. Moyer's patent savings bank and study the religious basis on which it is constructed. Mr. Moyer expects to be able to supply the trade in time for the holidays.

THE recent annual meeting of the stockholders of the Moncton Sugar Refining Company, Moncton, N.B., re-elected the old board of directors, who elected the following officers.—J. L. Harris, president; J. A. Humphrey, vice-president; C. P. Harris, treasurer, John McKenzie, secretary. The statements submitted showed profits for the refinery year (which closed on the 1st of August) of upward of \$12,000, with a supplementary statement showing profits since the close of the refinery year to date amounting to some \$8,000 more. The showing was regarded as satisfactory and the outlook for the future very hopeful.

MESSRS. COLGAN BROS., proprietors of Mount Forest Tannery, Mount Forest, Ont., have recently been making some important improvements in their works. They have introduced a rack and hide shifter of their own invention, which effects a great saving of time. The rack fits into the vat, and upon it is hung the hides. When it is necessary to change the hides into another vat the rack is lifted out and hooked to a wheeled carrier traversing an overhead track, and in this way carried to and deposited in the vat in which the hides are to be placed. Their output is now about fifty hides per week, which will soon be increased to a hundred.

We must have a twine factory in Manitoba, in order to protect the farmers. Any capitalist wanting to invest his money could not find a better investment. Plenty of local men have figured out cost and profit and say that twine can be manufactured in Manitoba and sold at two-thirds the price it is now sold at and still leave a large profit. If a factory were started it would create a market for flax, which at present is wasted, and also encourage the growth, and give a larger supply of flax seed to the oil factories, for which purposes there is already a good market. Farmers would then be able to procure the much-coveted oil cake for fattening stock.—*Rapid City (Man.) Spectator.*

MESSRS. E. P. ALLIS & Co., Milwaukee, Wis., are at present building a Grant engine for the Warren Manufacturing Company, of Warren, R.I. It will be operated upon an entirely new principle in that country, and will have about 2,000 horse-power. The engine is called a quadruple compound condensing engine. It has four cylinders, each of 6-foot stroke, and respectively 24 inches, 36 inches, 52½ inches, and 64½ inches in diameter. The drive wheel is a monster. It is 32 feet in diameter, and 9 feet and 3 inches face. There are 43 grooves on the face or circumference of the wheel, in which a similar number of ropes, 1½ of an inch thick, will run as a driving belt. There will be a belt tower, and a certain number of ropes will drive direct to the main pulley shaft on each floor.

Mr. JOHN CONNOR, of the New Brunswick Cordage Works, St. John, N.B., reports that the manufacture of cordage by his company is in a flourishing condition. Trade is constantly increasing and developing large proportions, its growth being coincident with that of the western parts of the Dominion. Canada this year has required from this concern 3,000 tons of binding twine alone against 2,200 tons last year. This season the people of Dakota came over the line into Manitoba, and purchased all the available twine at cheaper rates than the article could be bought in the States. Over two-thirds of the company's output goes outside of New Brunswick.

The wheat regions of Canada supply a market that now more than compensates for the loss caused by the decline in shipbuilding, and these are capable of indefinite development.

Mr. H. R. ROBERTSON, who is building the big timber raft at the Joggins, N.B., says that he will launch it in November. This raft is 560 feet long, being 160 feet longer than the one previously built by him, and which he failed to put afloat. All the material from the old fabric is placed in the new one, besides 8,000 additional sticks. Pitch pine launchways, 1,040 feet in length, have been laid, and everything is being got in readiness for letting the Leviathan slide into the water. Should the launch be effected successfully, another raft will be started immediately, Mr. Robertson having signed a contract with a New York firm to that effect. At the present time thirty eight men are employed piling up timber on the raft. The biggest day's work they have done was when 480 sticks were raised from the ground and put in position.

RECENTLY the trustees of the Beaudry estate, in Montreal, the Reverend Father A. L. Senteime and the Hon. L. A. Jette, had erected at the corner of St. Catherine and Urtane Streets, that city, an extensive wood working establishment, planing mills, etc., the entire outfit of machinery being specially manufactured for the establishment by Messrs. Cowan & Co., Galt, Ont. The works were completed and put in operation in July last. The occasion of the starting up was very interesting. Father Senteime, who is a natural mechanical genius and always takes great pleasure in machinery in motion, and who is a student in mechanical arts, was present, and personally and with his own hands, was the first man to operate each and every machine, and handled his work like an expert. He pronounced every thing "all right," and the works have been in successful operation ever since.

ONE of the events of the season for American anglers is the annual casting tournament, which is usually held in Central Park, New York, in October. Provincial sportsmen will feel some interest in the approaching tournament from the fact that one of the salmon rods to compete in that tournament is from the hands of our local maker, Mr. Dalzell. The rod has just been completed, and all who have seen it have expressed their admiration of it. It is sixteen feet in length, composed of alternate strips of lancewood and greenhart, between which is inserted a fine silk ribbon. This gives the rod elasticity and strength. The finish is all that any angler would desire. An extra centre piece and two spare tips accompany the rod, which has been made to the order of a member of the Restigouche Salmon Club, who resides in New York. Mr. Dalzell has orders for three more such rods.—*St. John (N. B.) Globe.*

MESSRS. JAMES HARRIS & Co., Moncton, N.B., are building a combination passenger and baggage car, and two box cars for the Joggins road; four 40 feet baggage cars for the New Brunswick road, also have an order from the company for 100 flat cars. A shed has been erected in the yards for building snow plows, the work being superintended by Mr. Russell, the inventor of the Eagle and Elevator wing plows. The first of an order for three Eagle plows for the Intercolonial Railway is now being carried out. Orders are in for three Eagle and one Wing Elevator, plows for the New Brunswick Railway. An order has been received for three 40 ton plows for the Canada Pacific Railway. The plows are built with beams of solid white oak 12 inches square, the sides having 3 feet 10 inches of solid deadwood thoroughly bolted, all other parts of the plows being built in like massive proportions.—*Moncton Telegraph.*

MESSRS. A. O. ROUQUE AND ROBERT BARBER, inspectors under the Ontario Factories Act, have been making a tour of the eastern division of the Province. In reply to a reporter Mr. Barber said that he found Cornwall a hive of industry and a thorough manufacturing town. "Everything looks the busy bee down there," continued Mr. Barber, "and nobody can mistake the idea that they have struck a manufacturing centre when they run across Cornwall. A great deal of capital is centred there, and you can get some idea of the amount of work done when I tell you that the Canada Cotton Company employs 700 hands; the Cornwall Manufacturing Company (woolen) 225, of whom 140 are females; the Stormont Cotton Company employs 510, and Mr. Hodge's flour mill, 14. Putting these all together you see that it makes quite a population in itself. And yet the local Grit paper is continually claiming that the National Policy is ruining the country in general and Cornwall in particular. Cornwall is a reflection of the prosperity which characterizes Canada from one end to the other.—*Glengarrion.*

SOME weeks ago it was announced in this journal that Mr. D. A. Duffy, of Moncton, N.B., had become the proprietor of the hardware works in that city, which went into liquidation some four years ago. These works, which are known as the Moncton Brass and Iron

Hardware Works, are now in full and successful operation. The buildings consist of a brick factory, about 160 by 40, three stories high, a boiler house and brass moulding shop, also of brick, and iron moulding and lacquering shops of wood. All these buildings have been repaired where necessary, the wooden buildings whitewashed, and the brick buildings are receiving coats of paint. Mr. Duffy purchased with the property all the valuable patterns and a large lot of partially manufactured goods, consisting of iron and brass hinges, door-knobs, latches, etc., which are now being finished. The work of casting in brass and iron has also been commenced. The machinery consists of an engine, about 90 horse power, lathes, drills, dies, finishers, etc., in the factory, and a full complement of the necessary appliances in the moulding and lacquering departments. The factory is in charge of Mr. Charles J. Harris.

The rolling mills on the Straight Shore and at Cold Brook are now running at full capacity, and not a few orders remain to be filled. To meet the demands upon them Messrs. James Harris & Co. are providing additional facilities with which they hope to be able to fill orders without delay. The firm has now in course of erection a new bar mill, covering a space 100x60 feet on the north east end of the present mill on the Straight Shore. This mill is to be fitted with the latest improved machinery, consisting of a train of two-inch chilled bar rolls, the latter to be either secured in Pittsburgh or England. Three steel boilers each 26 feet long and 5 feet in diameter, having two flues, each 26 feet in diameter, are being built by Messrs. McLaughlin & Sons. The boilers weigh eight tons each and are said to be the finest piece of work turned out of the builders' establishment. Two compound engines, 250 horse power each, are also in course of construction. Two of the engines are to be placed in the old mill, and the other boiler and engine will be fitted up in the new quarters.—*St. John (N.B.) Globe*

THE Akron (O.) *Beacon*, of September 8th, contains a seven column account of the annual meeting in that city of the Whitman & Barnes Manufacturing Company. There were present gentlemen from Boston, Mass.; Syracuse, N.Y.; Cincinnati, O.; Chicago, Ill.; Kansas City, Mo.; St. Catharines, Ont.; and Canton and Akron, O., representing different branches of the company established in those places. Mr. George Barnes of Syracuse, the honored chairman and head of the company, presided at the meeting. Mr. Barnes was born in Kent County, England, in 1827, and went to and settled in Syracuse when he was sixteen years of age. In 1868 he began the manufacture of mowing machine knives, and from this developed the Whitman & Barnes Manufacturing Company, with branches in the many cities above enumerated. Mr. Samuel Collinson, managing director of the St. Catharines branch, was born in Sheffield, Eng., in 1825, and has been a worker in steel all his life. Mr. R. H. Dixon, superintendent of the works at Canton, O., was born in Carleton County, Ont., learned the mill wright trade in Peterborough, and assumed his present position in 1886.

RECENTLY Messrs. Charles Page and Louis Goulliand were granted patents in Canada, the United States, England, France, and other European countries for their improvement in railway axles. This improvement is described as consisting of a cast-steel sleeve about

one and a half inches greater in diameter than that of the axle, which, by means of cogs on both axle and sleeve, is made to revolve once in every three revolutions of the wheel, thereby greatly lessening the friction. A lubricant consisting of black oil and plum bago is placed within the sleeve, which, by its revolution, continuously applies the lubricant where it will do the most good. To fit the sleeve to axles hitherto used, only a slight and inexpensive change has to be made in the box, so that whenever the merits of the improvement are recognized, its application is a matter requiring but little time or labor. It is claimed that by the use of this improvement a saving of nine-tenths of the expense for lubricants is effected, and that a great saving in labor results, whereas ordinarily car wheels have to be oiled daily, while with the improvement cars have been run hundreds of miles a day for a week without a second oiling of the axles. Again, it is claimed that with the improvement a train of cars can be put in motion with half the power ordinarily required. Messrs. Page & Goulliand have sold their right in the invention to the Union Bearing and Lubricating Company, with a capital of \$1,000,000, which has its head office at Portland, Me., with branches at Montreal and several European capitals. The officers are: Hon. G. A. Ouimet, president; Hon. G. M. Fortier, vice-president; Jackson Rae, treasurer; Hon. G. A. Ouimet, Hon. G. M. Fortier, Jackson Rae, Charles Page and Louis Goulliand, directors; Louis Guilliand, manager. This improvement is now in use on the Canadian Pacific, Grand Trunk, New Brunswick, and Quebec Central Railways, of Canada, and the Boston & Albany, New England, Boston & Maine, New York Central, Pennsylvania and Chicago and Alton Railways, of the United States.

## SUPERINTENDENTS COTTON, WOOL AND WORSTED MILLS.

The Third edition of "THE RED BOOK" is ready. Get a copy of it and save money in buying your supplies. It places you in direct communication with first hands, thereby securing the advantages to be gained by competitive prices. Anything from a Ring Traveler to a Loom, Acetic Acid to Zinc Dust, Yarns of all kinds, Shoddy, Flocks, Cotton Buyers, Wool, New Devices, and Steam Appliances—in fact, everything needed for Cotton, Woolen and Worsted Mills, classified and indexed, compact and reliable. It also contains Yarn Tables, Cotton and Wool Products, and amounts used each year from 1841 to date by Northern and Southern Mills, Exports, Statistics, Receipts and information of considerable value to mill men. Sent post-paid on receipt of price in cash or stamps (U.S. or Canadian)

ONE DOLLAR, Cloth. FIFTY CENTS, Paper.

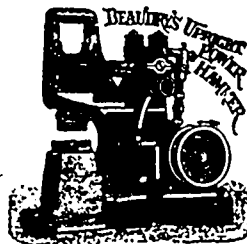
ADDRESS—

J. E. PALMER, Publisher,

176 BROADWAY, NEW YORK



SIMPLE,  
PRACTICAL,  
LOW PRICED.



ENTIRELY,  
NEW  
DESIGN.



## BEAUDRY UPRIGHT CUSHIONED POWER HAMMER.

Does not vibrate.  
Requires no helper.  
Always ready for use.  
Does not chill the work.

Gives a perfectly square blow.  
Has open space between the dies.  
The stroke can be changed easily and quickly.

Will give one blow or more as required, light or heavy.  
Can be run cheaply and with very little power.

The anvil is entirely separate from the frame.  
It is the least complicated and most efficient power hammer in the world.

SEND FOR PRICE LIST.

MILLER BROS. & MITCHELL, Sole Makers for Canada, MONTREAL.

# THE PERMANENT EXHIBITION Of Manufactures, and Commercial Exchange,

63, 65, 67, 69 FRONT STREET WEST (OPP. QUEEN'S HOTEL).  
NICHOLLS & HOWLAND, TORONTO.

## We invite attention to the following particulars :

Under the pressure of keen competition, economy in the manufacture of goods has been a constant source of study, and in most establishments every avenue of waste has been closed, and every perfected method of production has been adopted.

It is far different with the *distribution of goods*, and it is the very necessary economy in this direction that we have in view, as it matters not how cheaply goods may be manufactured if the expense of selling them is so great as to swallow up most of the margin of estimated profit.

A number of outside firms now have, and many more are finding out the necessity of having, a branch office in this city. In many cases such offices are located on a side street, and are visited only by those who go there purposely on business bent. In maintaining such an office expense has to be incurred for salaries, rent, light, heat, caretaking, telephone, etc., etc., and no matter how the expense of each item is curtailed, the annual cost is bound to be a large one.

It is our object to afford a practical arrangement whereby this unavoidable expenditure may be largely reduced, while at the same time the benefits sought to be attained will be very much greater. For a moderate rental we offer every advantage of a private branch office, with the additional advantage of being represented in a trade centre or "commercial exchange," where an exhibitor's goods will be seen by thousands of business men throughout the year. To an appreciable extent our Exhibition will change the existing order of things, as in many instances the customer will visit the agent instead of the agent having to hunt up the customer.

The Permanent Exhibition will be open, free to the public, every week day.

Extensive advertising will keep the exhibition and its advantages fresh in the minds of the people.

Power and shafting is provided for exhibitors who may wish to show machinery in operation.

Instructed attendants will be in charge for the purpose of explaining the merits of each exhibit to interested visitors.

It is designed to supply the long-felt want of a central exchange, wherein goods can be kept on show for the inspection of the thousands who come up month after month to this commercial metropolis.

It is also in contemplation to provide, for the convenience of outside manufacturers, and for city merchants and brokers, suitable accommodation for meeting and transacting business, and which may be designated as a "CHAMBER OF COMMERCE," or "TRADE EXCHANGE." For example, a manufacturer whose works are located in an outside town, but who makes periodical business trips to Toronto, can advertise on his office stationery that either himself or representative may always be found, between stated hours on certain days, at the Permanent Exhibition. Other particulars, such as accommodation for trade sales, etc., will be made public at a later date.

## DIRECTORY OF EXHIBITORS :

The following firms are already represented in the Permanent Exhibition. Their manufactures have a deservedly high reputation, and are recommended to the notice of intending purchasers of any of the respective lines in the following list. Prices, terms, discounts, etc., may be obtained from the several firms direct, or from Messrs. Nicholls & Howland, Permanent Exhibition of Manufactures :

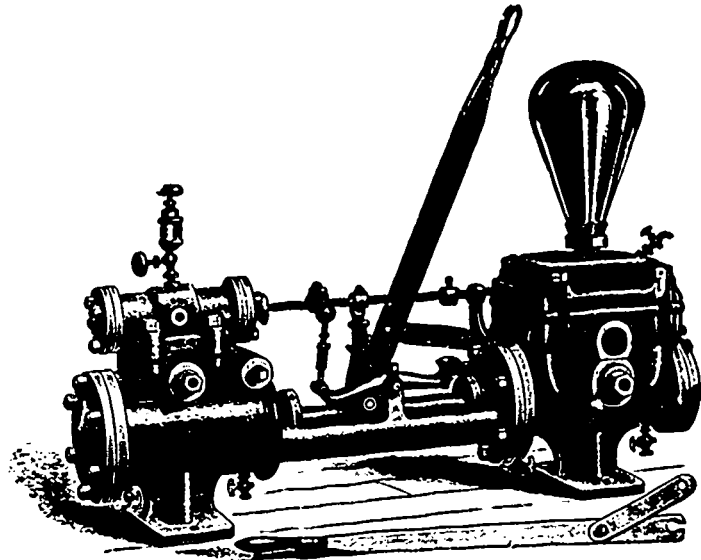
- |  |   |
|--|---|
| Armstrong, J. B., Manufacturing Co., Guelph, Carriage Materials.                         | Hart Emery Wheel Co., Hamilton, Ont., Emery Wheels and Emery Wheel Machinery.                           |
| Armstrong, J. A. & Co., Guelph, Ont., Carpets.   | Hay, Peter, Galt, Ont., Machine Knives.   |
| Automatic Refrigerator Co., Ottawa, Ont., Haurahan's Patent Automatic Refrigerators.     | Hearle, J. G., Montreal, Que., Toilet Soaps and Perfumery.  |
| Barnum, The Wire and Iron Works, Windsor, Ont., Wire Goods of all descriptions.          | Howland, H. S. Sons & Co., Toronto, Ont., Hardware Specialties.   |
| Railing, Cresting, Fencing, etc., etc.   | Howland, H. S., Kleinburg, Ont., Flour.   |
| Barber & Ellis Co., The, Toronto, Ont., Manufacturing and Wholesale Stationers.          | Hemming Bros., Toronto, Ont., Fancy Plush Goods and Jewellers' Cases.                                   |
| Account Books, Office Sundries, etc.   | Herman, J. W. Toronto, Boiler Water Purifier.   |
| Bertram, John & Sons, Dundas, Ont., Iron and Wood Working Machinery.                     | Ingersoll Door Guard Co., Ingersoll, Ont., Patent Door Guards.  |
| Blake, George F., Manufacturing Co., Boston, Mass., Steam Power Pumping Machinery.       | Ireland, F. C. & Sons, Lachute, Que., Breakfast Cereals.  |
| Boeckh, Charles & Sons, Toronto, Ont., Brooms, Brushes, Woodenware, etc.                 | Ives, H. R. & Co., Montreal P.Q., Fencing, Cresting, Stoves and Hardware Novelties.                     |
| Breithaupt & Co., Berlin, Ont., Leather.   | Jardine, A. & Co., Toronto, Ont., Coffee, Spices, and Pure Gold Baking Powder.                          |
| Brush, George, Eagle Foundry, Montreal, P.Q., Blake Stone Crusher.                       | John Batten, Pittsburg, Pa., Automatic Fire Escape.   |
| Clare Bros. & Co., Preston, Ont., Stoves and Furnaces.                                   | Kerr Bros., Walkerville, Ont., Water Steam and Gas Valves of Improved Pattern.                          |
| Cowan & Co., Galt, Ont., Wood Working Machinery, Engines and Boilers.                    | King, R. W. & Co., Georgetown, Ont., Power Knitting Machinery.  |
| Creelman Bros., Georgetown, Ont., World's Star Knitting Machinery.                       | Leslie, James, Montreal, Que., Woolen and Cotton Mill Supplies.   |
| Crompton Corset Co., Toronto and Berlin, Ont., Corsets.                                  | McCaskill, D. A. & Co., Montreal, Que., Varieties and Japans.   |
| Canadian Harness Co., Toronto, Harness.  | Miller Bros. & Mitchell, Montreal, Que., Beards' Steam Power Hammer.                                    |
| Dalley, F. F. & Co., Hamilton, Ont., Extracts, Essences, Backing, and Grocers' Sundries. | Munderloh & Co., Montreal, Que., Watchmen's Clocks.   |
| Dominion Baby Carriage Co., London, Ont., Baby Carriages and Rattan Furniture.           | Morris, A. W. & Bro., Montreal, Que., Cordage and Binder Twine.   |
| Donald Produce Co., Norwich, Ont., Evaporated Fruits.                                    | Morrison James, Toronto, Steamfitters' and Plumbers' Supplies.  |
| Doty Engine Co., Toronto, Ont., Engines, Boilers, etc.                                   | McLaren, The J. C. Bolting Co., Montreal, Mill Supplies.  |
| Dominion Barb Wire Co., Montreal, P.Q., Barb Wire.                                       | Northey & Co., Toronto, Ont., Steam Pumping Machinery.  |
| Dovercourt Twine Mills, Toronto, Ont., Twines and Cordage.                               | Northumberland Paper Co., Campbellford, Ont., Straw Board and Tarred Paper.                             |
| Dominion Starch Works, Walkerville, Ont., Corn Starch and Laundry Starch.                | Ontario Bolt Co., Toronto, Ont., Bolts, Nuts, Spikes, etc.  |
| Dominion Show Case Co., Toronto, Show Cases.   | Oshawa, Stove Co., Oshawa, Ont., Cooking and Heating Stoves.  |
| Ellis & Kelghley, Toronto, Ont., Coffees, Spices.  | Pepper, T. & Co., Guelph, Ont., Carriage and Wagon Axles.   |
| Elliot & Co., Toronto, Ont., Manufacturing and Wholesale Chemists and Druggists.         | Pillow, Hervey & Co., Montreal, Que. (Geo A. MacAgy, Western representative), Nails, Tacks, Bolts, etc. |
| Ellis, P. W. & Co., Toronto, Manufacturing and Wholesale Jewellers.                      | Ramsay & Son, Montreal, Que., Plate and Stained Glass, Paints, Oils, etc.                               |
| Fenwick & Selater, Montreal, Que., Files and Mill Supplies.                              | Robin & Sadler, Montreal, Que., and Toronto, Ont., Leather Belting and Lace Leather.                    |
| Finch, W. S. Toronto, Wood Preservative.   | Rumpel, Geo., Berlin, Ont., Felt Boots and Shoes.   |
| Gate City Stone Filter Co., New York, Water Filters.                                     | Simpson & Co., Berlin, Ont., Furniture.   |
| Globe Tobacco Co., Windsor, Ont., and Detroit, Mich., Tobaccos.                          | Smith, R. H. & Co., St. Catharines, Ont., every description of Saws.                                    |
| Goodhue & Co., Danville, Que., Leather Belting and Lace Leather.                         | Stahschmidt & Co., Preston, Ont., Office Desks, Chairs, School Furniture, etc.                          |
| Grand & Toy, Toronto, Ont., Tucker Automatic Letter and Document Files.                  | Storey, W. H., & Son, Acton, Ont., Gloves.  |
| Grand River Knitting Mills, Co., Paris, Ont., Smyrna Rugs and Knit Goods.                | Toronto Rubber Co., Toronto, Belting, Fire Hoses, Etc.  |
| Grape Sugar Refining Co., Walkerville, Ont., Syrups and Glucoses.                        | Toronto Novelty Manufacturing Co., Toronto, Ont., Ironing Boards.                                       |
| Gray & Sons, Chatham, Carriages and Sleighs.   | Teller, Rothwell & Co., Montreal, Stove Polish and Laundry Blue.  |
| Gillett, E. W., Toronto, Chicago, Yeast and Baking Powder.                               | Watts, A. & Co., Brantford, Ont., Household Soaps.  |
| Hamilton Industrial Works Co., Hamilton, Ont., Wringers, Mangles, etc.                   | Warren, H. R., representing Meriden Britannia Co., Hamilton.  |

IN CONNECTION WITH OUR PERMANENT EXHIBITION WE HAVE EXCELLENT  
STORAGE—LIGHT, DRY, CLEAN.

Our facilities for receiving and shipping are unsurpassed, and we invite inspection or correspondence.

**KNOWLES STEAM PUMP WORKS,**  
 —BUILDERS OF—  
**STEAM PUMPING MACHINERY IN EVERY VARIETY**

**BOILER  
 FEED,  
 FIRE  
 and  
 TANK  
 PUMPS**



Simple and Duplex  
**PUMPING  
 ENGINE**  
 for  
 TOWN and CITY  
**SUPPLY.**

For Particulars, Address **44 Washington St., BOSTON.** **93 Liberty St., NEW YORK.**  
 —SEND FOR ILLUSTRATED CATALOGUE—

*To Users of Glue.*

**W**E are manufacturing a reliable GLUE, and can supply a limited number of consumers only. We guarantee our glues to be made from selected stock, and to be of the same uniform quality. Glues not as represented, or not proving satisfactory, returnable at our expense.

**JAMES HAY & CO.**  
 WOODSTOCK, ONT.

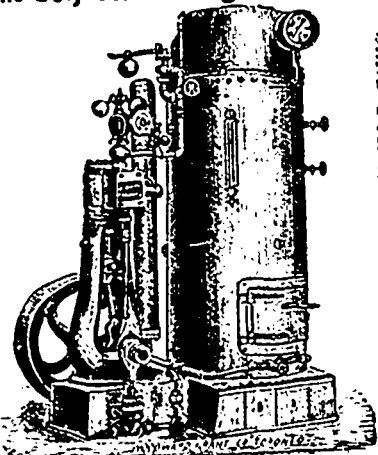
**ARMSTRONG'S BUGGY AND CARRIAGE GEAR.**

The "Defiance"

**T**HIS GEAR meets the demand of the Driving Public for low-riding Buggies, and combines with this, lightness, durability, and great ease of motion. By the use of improved machinery and manufacturing in large quantities, we are enabled to make prices MODERATE. Send for our descriptive circular.

**J. B. ARMSTRONG MFG. CO. (Ld.), Guelph, Ont.**

**The Doty Vertical Engine and Boiler.**



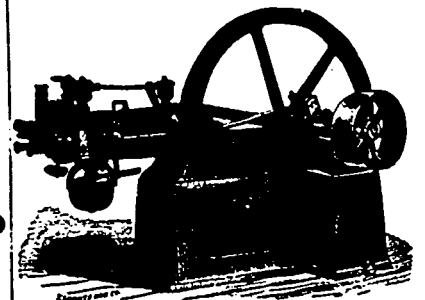
SEND FOR REDUCED PRICE LIST.

**JOHN DOTY  
 ENGINE CO.**

In sizes from 3 to 10 H.P. Specially adapted to places where 3 to 10 H.P. is required. Simple, safe and durable.

No. 2 Bathurst Street.  
**TORONTO, ONT.**

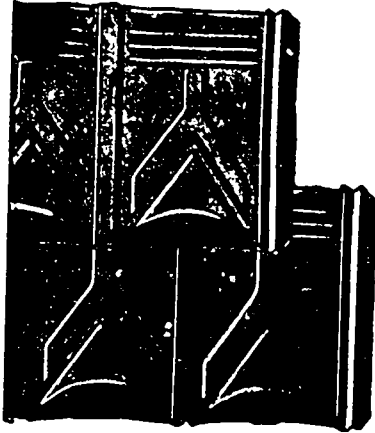
THE  
**Otto Silent Gas Engine.**



In sizes from 2 to 7 H.P. Most convenient power in the market.

SEND FOR CIRCULAR.

# WALTERS' PATENT METALLIC SHINGLES



They make the Most Durable Metal Roof known.  
 They make the Cheapest Metal Roof known.  
 They are Attractive in Appearance.  
 They Lessen your Insurance.  
 They are one-third the weight of wood.  
 They are one-ninth the weight of slate.  
 They can be put on by ordinary workmen.  
 A good roof is as important as a good foundation.

Send for circulars and references. Sole Manufacturers in Canada.

**McDONALD, KEMP & CO.**

Cor. RIVER AND GERRARD STREETS, - - TORONTO, ONT.

# WM. LAURIE & CO. MANUFACTURERS OF SPOOLS AND BOBBINS

OF ALL SIZES AND PATTERNS,

FOR COTTON AND LINES THREAD, MACHINE TWIST, SEWING SILK, AND FOR COTTON, WOOLEN AND SILK MANUFACTURERS.

*LOUISEVILLE, P.Q.*

We respectfully solicit your patronage and guarantee our work to be first-class.

## ST. CATHARINES SAW WORKS.

**R. H. SMITH & CO.,**

ST. CATHARINES, ONT.,

Sole Proprietors, in Canada, of the

**"Simonds" Saws**

**AT GREATLY REDUCED PRICES**



All our Goods are manufactured by the "Simonds" process. Our Circular Saws are unequalled. We manufacture the Genuine Hand, Lance Tooth, Diamond, New Improved Champion, and all other kinds of Cross-Cut Saws. Our Hand Saws are the best in the market, and as cheap as the cheapest. Ask your Hardware Dealer for the St. Catharines make of Saws.

THE LARGEST SAW WORKS IN THE DOMINION.

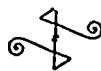
# Geo. F. Blake Manufacturing Co.,

BUILDERS OF

SINGLE AND DUPLEX

Steam and Power

## Pumping Machinery



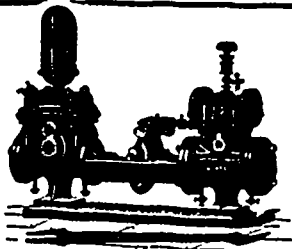
**BOSTON,**

44 WASHINGTON STREET.

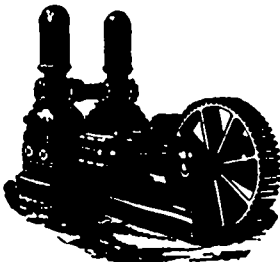
\* **NEW YORK,**

93 LIBERTY STREET.

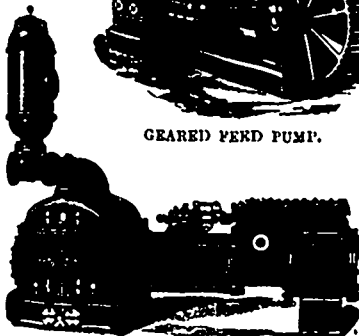
SEND FOR ILLUSTRATED CATALOGUE.



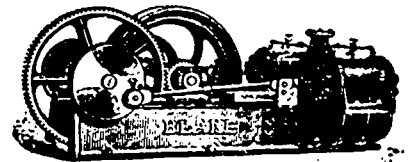
BOILER FEED PUMP.



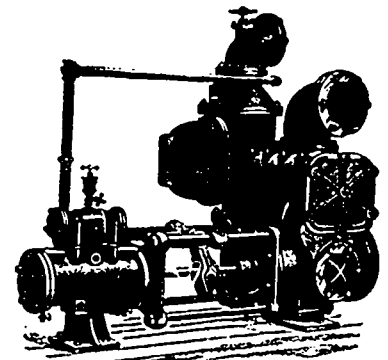
GEARED FEED PUMP.



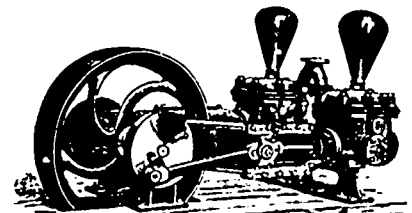
DUPLEX COMPOUND ENGINE.



AIR COMPRESSOR.



AIR PUMP AND CONDENSOR.



BELT PUMP.

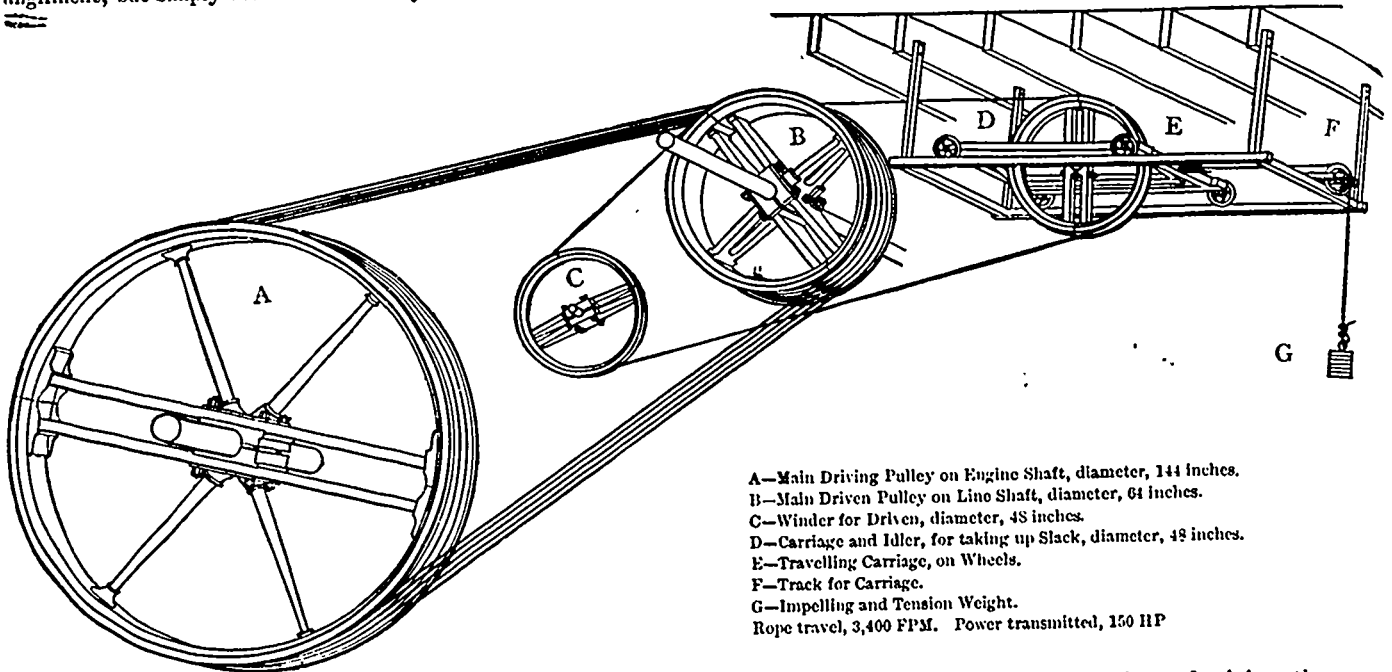
## THE TRANSMISSION OF POWER BY ROPES AND THE DODGE PATENT WOOD PULLEYS.

The great advantage of Wood over Iron as a material for belt pulleys (or drums) to transmit power economically, has induced the DODGE WOOD SPLIT PULLEY CO., of Toronto, to introduce grooved hard wood pulleys for the special purpose of transmitting power by ropes (manilla tallow laid), and in this connection Mr. Dodge has taken out Canadian Letters Patent for a system of applying the ropes, adjusting the pulleys, and taking up slack, that is giving the most unqualified satisfaction.

This 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 with the driver, also where the drive is perpendicular, particularly when it is quarter 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. We have put up a number of the Dodge Patent Rope transmissions during the past year, all of which are in most successful and satisfactory operation, as certified by the testimonials published in our catalogue of well-known manufacturers who have them in use. Parties who are in want of anything in this line, or who are interested in the efficient and economical transmission of power, are cordially invited to call at our works, 81-89 A. DELAIDE STREET WEST, Toronto, and see the ropes and wood pulleys in operation, as we are driving our whole factory by this system.

WITH OUR SYSTEM OF MANILLA ROPE TRANSMISSION is overcome the objection to Wiro Rope (because of crystallizing) and gearing, (because of loss of friction) and shafting (because of the liability to get out of alignment, hence loss of power by friction), and a separate engine plant (because of its great expense); on the contrary, with the Manilla Rope System, under the Dodge patents, the power is transmitted with the same efficiency as though the shafts were close together, there being no loss of power by excessive tension, or bad alignment, but simply the friction of the journals to overcome at the carriers, which have a strain of weight of the rope to carry.



A—Main Driving Pulley on Engine Shaft, diameter, 144 inches.  
 B—Main Driven Pulley on Line Shaft, diameter, 64 inches.  
 C—Winder for Driven, diameter, 48 inches.  
 D—Carriage and Idler, for taking up Slack, diameter, 49 inches.  
 E—Travelling Carriage, on Wheels.  
 F—Track for Carriage.  
 G—Impelling and Tension Weight.  
 Rope travel, 3,400 FPM. Power transmitted, 150 HP

The illustration, as shown above, is one of peculiar construction, and represents an engine transmission of power by a manilla rope, under the Dodge system of patents, and is shown as in actual use at the works of the Dodge Mfg. Co., at Mishawaka, Ind.

The system herewith illustrated and described is one of great interest to all consumers of power. Inasmuch as it takes the place of expensive gearing and broad belts, the advantages to be thus derived may be thus summarized:

To transmit the same power with a rope *versus* a like power with a wide belt, first, requires much narrower faced pulleys; consequently, much less expensive; 2nd, the interest on the money invested in a belt will more than supply the rope, saying nothing about the wear and tear; 3rd, better power, from the fact that all sliding of the belt is overcome, and the rope gear becomes as positive as the cog gear.

The transmission consists of a series of wood split pulleys, and ordinary manilla rope (tallow laid).

The engine used is an automatic, and the size of the cylinder is 18x40, making 90 RPM, and transmits 150 HP., the driver, A, and driven, B, have each several grooves, in which are wound the ropes, the number of wraps being used, as in previous cases, to gain surface in contact, for adhesion of the rope. The winder, C, in this case, is simply used to convey the rope to the slack carriage, to prevent obstruction. This, together with the carriage pulley, D, are each single grooved. The

device for taking care of the slack, and giving the proper tension to the rope, is shown at E, with the impelling weight at G. The slack side of the rope is paid directly from the driver to the carriage, E, which, it will be seen, takes in and pays out slack as it occurs, and acts also for a tension on the rope. The weight at G may be increased or decreased with the power.

This apparatus was erected and started December 2, 1884, and has been running constantly since, with same splice, and transmitting an average of 150 HP.

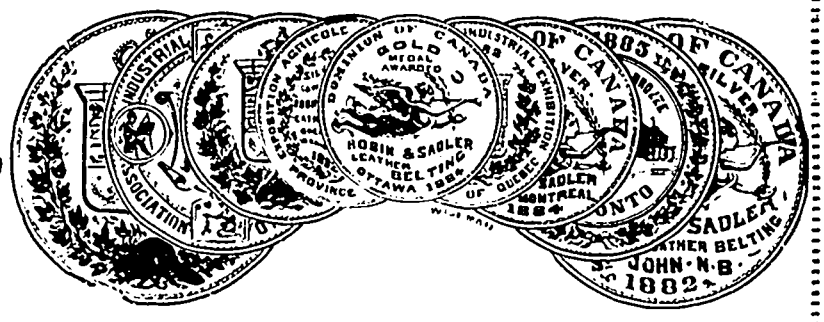
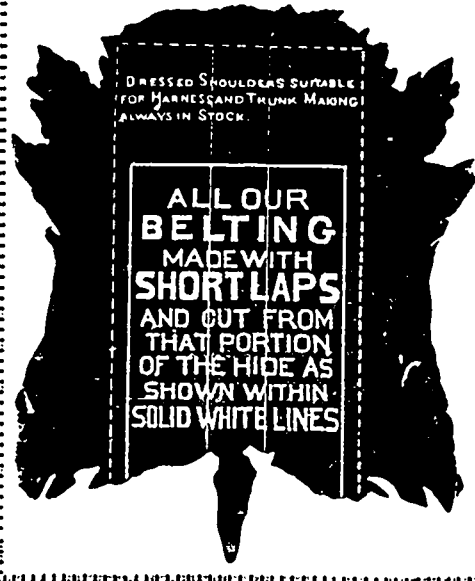
The rope shows no signs of wear, and looks as though it would last for years to come.

The rope is an ordinary one-inch diameter manilla, and travels at a velocity of 3,420 FPM.

We make the following summary:

Velocity of rope, 3,420 FPM. Transmits, as above, 150 HP. (indicated). The tension on the rope is, therefore,  $\frac{3300 \times 150}{330} = 1,408 + 106$  pounds (one-half the weight in the weight-box) = 1,608 pounds; which is the strain on the rope. There being five pulling wraps of rope, hence the strain would be divided five times =  $\frac{1,608}{5} = 321.6$  lbs. strain on the rope = 33 per cent. of the breaking strain of the rope; it being estimated as safe to use 10 per cent. of the breaking strain of the rope.

[The breaking strain of a one-inch manilla rope is 9,000 pounds.]—Power and Transmission Journal.



**ROBIN & SADLER,**

MANUFACTURERS OF

**Leather Belting**

SEND FOR PRICE LISTS AND DISCOUNTS.

**MONTREAL, 2518, 2520, 2522, Notre Dame St.**  
 TELEPHONE 110 B.

**TORONTO, 129 Bay St.**  
 TELEPHONE 1101.

Mill Owners in the West will find it to their advantage to order their BELTING from our Toronto House.

We guarantee their orders well and promptly filled, for we keep on hand all sizes from 2 to 16 inch, **SINGLE AND DOUBLE**; also: Lace Leather, Belt Hooks, Belt Punches, etc., etc.

*Nova Scotia Steel Co., Limited,*

NEW GLASGOW, NOVA SCOTIA,  
 (Only Steel Works in Canada),

MANUFACTURERS OF

**Hammered and Rolled Steel**

MADE BY THE  
**SIEMENS-MARTIN (OPEN HEARTH) PROCESS.**

ROUND MACHINERY STEEL for Shafting, Spindles, etc. MILD STEEL for Rivets, Bolts Thresher Teeth, and many purposes where Norway Iron is now used.

SPECIAL SECTION PLOW BEAMS, MILD STEEL CENTRE AND SOLID MOULD BOARDS,  
 COULTER STEEL HARROW DISCS,  
 AGRICULTURAL STEEL CUT TO PATTERN, SPRING, SLEIGH SHOE, TYRE, TOE CALK AND CROSS BAR STEEL,  
 STEEL NAIL PLATE.

□□ *Binder Bars, Z and other Special Sections.*

STEEL MOWER BARS.

Particular attention given to the manufacture of Rake, Cultivator and Harrow Teeth, and other Agricultural Spring Steel Forgings.



# Important to Capitalists.

## FOR SALE. The Joseph Hall Machine Works, OSHAWA,

Covering 140,000 superficial feet, with main buildings, brick, 2½ and 3 stories high, substantially built, and all the Machinery, Tools, Dies, Patterns and Plant therein that originally cost over \$200,000.  
Also for sale

**THRESHING MACHINES,  
OSHAWA MOWERS,  
PORTABLE ENGINES,  
HORSE-POWERS,  
WATER WHEELS,**  
Machines in Process of Manufacture,  
Parts of Machines for Repairs,  
and Unsold Stock,  
The whole valued at over \$50,000.

The Works are admirably equipped for doing a large agricultural implement, general machinery, or car works business.

I will sell the whole *en bloc* at a low price or in parts to suit purchasers, on liberal terms of payment.

**JOHN LIVINGSTONE,**  
Trustee.



## Notice to Contractors. SAULT SAINTE MARIE CANAL.

CONTRACTORS intending to tender for works of construction of the canal proposed to be formed on the Canadian side of the Sainte Mary's River, are hereby informed that tenders will be received about **January next**, and that the most favorable time to examine the locality will be between the present time and the early part of November next.

When plans, specifications and other documents are prepared, due notice will be given. Contractors will then have an opportunity of examining them and be furnished with blank forms of tender, etc.

By order,  
**A. P. BRADLEY,**  
Secretary.  
Department of Railways and Canals, }  
Ottawa, 24th August, 1887.

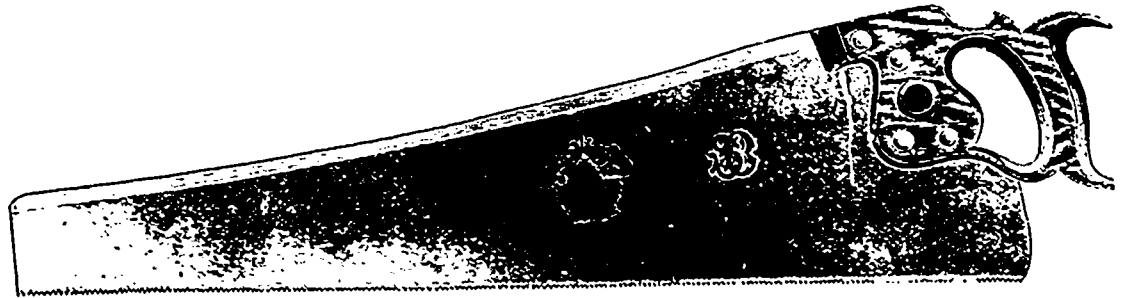
## Maw & McFarlane DUNDAS, ONT.

**IRON FOUNDERS, ENGINEERS AND MACHINISTS,**  
MANUFACTURERS OF

## Drop Hammers, LIFTERS, DIE SINKERS AND PRESSES.

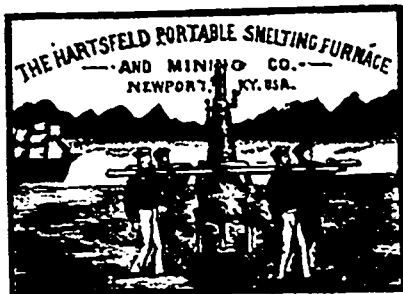
ALL CORRESPONDENCE SOLICITED.

## SHURLY & DIETRICH, Galt, Ont.



MANUFACTURERS OF SAWS OF ALL KINDS.  
LARGEST SAW MANUFACTURERS IN CANADA.

SOLE PROPRIETORS OF THE SECRET CHEMICAL PROCESS OF TEMPERING  
OUR SILVER STEEL SAWS ARE UNQUALLED.



MANUFACTURERS & DEALERS IN  
**MINING and SMELTING  
MACHINERY.**

Engines, Boilers, Shafting  
Pulleys, Blowers,  
Pumps, Portable Tramways and  
Turn-Tables, Diamond Rock  
Drills, Air Compressors  
Electric Gold and Silver Mills,  
Electric Amalgamating  
Table and Plates.

Desulphurating, Roasting and Smelting Appliances.

W. T. Garratt & Co., San Francisco, Cal.; F. A. Huntington, City of Mexico; Mellvain & Spiegel, Cincinnati, O., Manufacturers on Royalty. C. Canover, 372 Arapahoe Street, Denver, Colorado, Agent.  
Send Stamp for Illustrated Catalogue. Mention "The Canadian Manufacturer," and it will be mailed to you FREE.

**The Hartsfeld Portable Smelting Furnace and Mining Co.**

Lock Box 515 Reduction Works, 90 92 & 94 Thornton St., Newport, Ky.

## GALT FILE WORKS.

F. Parkin, Galt, Ont.

Manufacturer of all kinds of Files and Rasps.

Equal to the Jowitt File.

All Work Guaranteed.

Recutting of all Description.

Send Postal for Terms and Discounts.

**AUSTRALIA—IMPORTANT TO MANUFACTURERS.**

Established 1878.

# ALBERT S. MANDERS & CO.,

**THE AUSTRALIAN COMMISSION HOUSE.**

Head Office, 30 Collins Street, MELBOURNE, also at King Street, SYDNEY, and King William Street, ADELAIDE.

Agency Wanted for First-Class Goods. Samples should be sent with Lowest Prices to our Head Office.

NOTE.—We are the Only Firm that have a Branch House in the three Leading Colonies.

LONDON, 11 Mansion House, Chambers, 10 Queen Victoria St., E.C. NEW YORK, Mayo & Watson, Australasian Office, 22 & 23 State St. CANADA, Nicholls & Howland, 63 Front St. West, Toronto.

## THE INTERCOLONIAL RAILWAY OF CANADA.

*The Royal Mail Passenger and Freight  
Route between Canada and  
Great Britain,*

AND

Direct Route between the West and all points on the Lower St. Lawrence and Baie de Chaleur, also New Brunswick, Nova Scotia, Prince Edward's Island, Cape Breton, Newfoundland, Bermuda and Jamaica.

New and elegant Buffet Sleeping and Day Cars run on Through Express Trains.

Passengers for Great Britain or the Continent by leaving Toronto per 8.30 a.m. train Thursday, will join outward Mail Steamer at Halifax a.m. Saturday.

Superior Elevator, Warehouse and Dock accommodation at Halifax for shipment of grain and general merchandise.

Years of experience have proved the Intercolonial, in connection with Steamship lines to and from London, Liverpool and Glasgow to Halifax, to be the quickest Freight route between Canada and Great Britain.

Information as to Passenger and Freight Rates can be had on application to

**ROBERT B. MOODIE,**

Western Freight and Passenger Agent, 33 Rossin House Block, York Street, TORONTO.

**D. POTTINGER,**

Chief Superintendent

Railway Office,  
Moncton, N.B., Nov. 22nd, 1886.

Patent Double Tongue and Groove  
Fire-Proof Safes.

**J. & J. TAYLOR**

STEEL PLATE UNDER LOCK TO PREVENT DRILLING.

DRY AIR CHAMBER TO PREVENT DAMPNESS.

HEAD OFFICE AND MANUFACTORY:  
117, 119  
FRONT STREET EAST,  
TORONTO.

**JAMES LESLIE**  
MANUFACTURER OF  
MACHINE CARD CLOTHING AND LOOM REEDS.

LEATHER BELTING  
LACE  
LEATHER ROSE  
COTTON AND WOLLEN MILL SUPPLIES

COTTON LOOM HARNESS AND WIRE HEDDLES  
OFFICE AND FACTORY  
JUNCTION OF CRAIG AND ST. ANTOINE STREETS.  
MONTREAL.

ESTABLISHED 1825.

# IMPORTANT

The J. A. CONVERSE

## Ordage and Plaster Works

A. W. MORRIS & BRO., PROPRIETORS.

MONTREAL, QUE.



Standard Goods,  
Prompt Delivery,  
Liberal Terms,  
Low Prices.

THE highest and most conclusive proof of the superiority of the goods we manufacture is established by the fact that our competitors when endeavoring to dispose of their productions, invariably guarantee the quality equal to ours.

A. W. MORRIS & BRO.

ALEX. W. MORRIS.

CHAS. B. MORRIS.

## Parks' Cotton Manufactures

Awarded the Only "Gold Medal" Given at the Toronto Exhibition of 1885, for Cotton Goods.

Fancy Wove Shirtings.

FAST COLORS, - - FULL WEIGHTS.  
Quality always Equal to Samples sent out.

### COTTONADES.

Our celebrated line of Lansdowne Tweeds, the best value, for least cost, of any made in Canada.

### BALL KNITTING COTTONS.

Better Spun, Twisted, Bleached and Dyed than any other in the Market. For Sale by all Wholesale Houses.

No Goods Genuine Without Our Name Upon Them.

NO PRIVATE BRANDS.

WILLIAM PARKS & SON (Limited),

ST. JOHN, N.B.

AGENTS :

Wm. Hewett, Toronto;  
Duncan Bell, Montreal;  
Bedard, Girard & Co., Quebec.

## FOLDING AND EXTENSION

Iron and Steel

# Gates and Guards

(PATENTED JUNE 8th, 1882.)

FOR Banks, Vaults, Elevators, Public Buildings, Asylums, Factories, Houses, Driveways, Stores, Theatres, Stables, Baggage, Express, Postal and Sleeping Cars, Express and Delivery Wagons, Windows, Doors, &c.

REGISTERED

THE

## Ontario Folding Iron Gate and Guard Co.

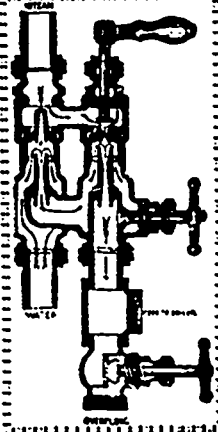
★

OFFICE AND MANUFACTORY :

THE FENSOM ELEVATOR WORKS,

34, 36 AND 38 DUKE ST., TORONTO

Correspondence solicited and Illustrated Catalogues furnished on application.



## JAMES MORRISON,

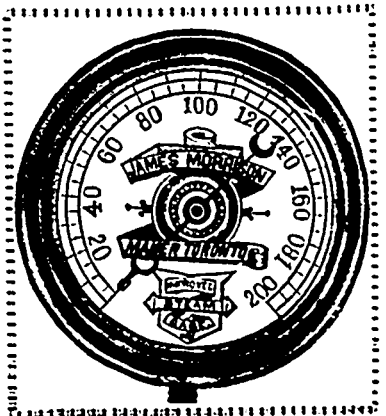
IMPORTER AND MANUFACTURER OF

Steamfitters' and Plumbers' Supplies

75 & 77 ADELAIDE ST. WEST, TORONTO.

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

Crown Water Closet.  
Inodoro Water Closet.  
Perfect Water Closet.  
Jenning's Valve Closet.  
Demarest Valve Closet.  
Alexander Valve Closet.  
A full stock of Washbasins, Urinals, etc.  
Also, complete stock of Wrought Iron Pipe and Fittings.  
Plumbers' and Steamfitters' Brass Work.  
Rubber Hose, Belting, Packing, etc.  
Sole Canadian representative of the Celebrated Hancock Inspirator.



# THOMPSON & CO.,

SHERBROOKE, QUE.,

MANUFACTURERS OF

## BOBBINS AND SPOOLS

OF EVERY DESCRIPTION,

For Woolen, Cotton and Rope Mills.

Extra facilities for supplying new mills and filling large orders.

CORRESPONDENCE SOLICITED.

ORDERS PROMPTLY FILLED.

# W. H. BANFIELD,

TORONTO,

## MACHINIST AND DIE MAKER,

MANUFACTURER OF

Foot and Power Presses,  
Combination and Cutting Dies,  
Tinsmiths' Tools, Knitting Machines, etc.

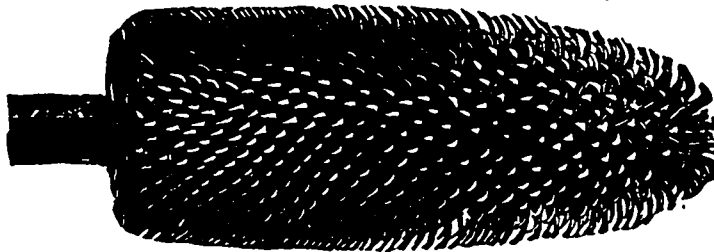
CUTTING AND STAMPING TO ORDER FOR THE TRADE.

Special Attention paid to Repairing Factory Machinery.  
78 WELLINGTON STREET, WEST.

# THOMAS C. KELLOGG,

SKANEATELES N.Y., U.S.A.,

Teasels are Grown, Cured and Packed on OWN PREMISES.  
New York Office,  
100 & 102 Beade Street  
A. H. KELLOGG, Manager.



DEALERS IN  
AND  
CROWER OF  
AMERICAN Teasels,  
CLIPPED AND PACKED  
TO ANY  
DESIRED SIZE.

T. H. EATON & SON, Windsor, Ont., and Detroit, Mich., Agents for Ontario.

Correspondence Solicited.

WRITE FOR PRICE LIST NO. 71.

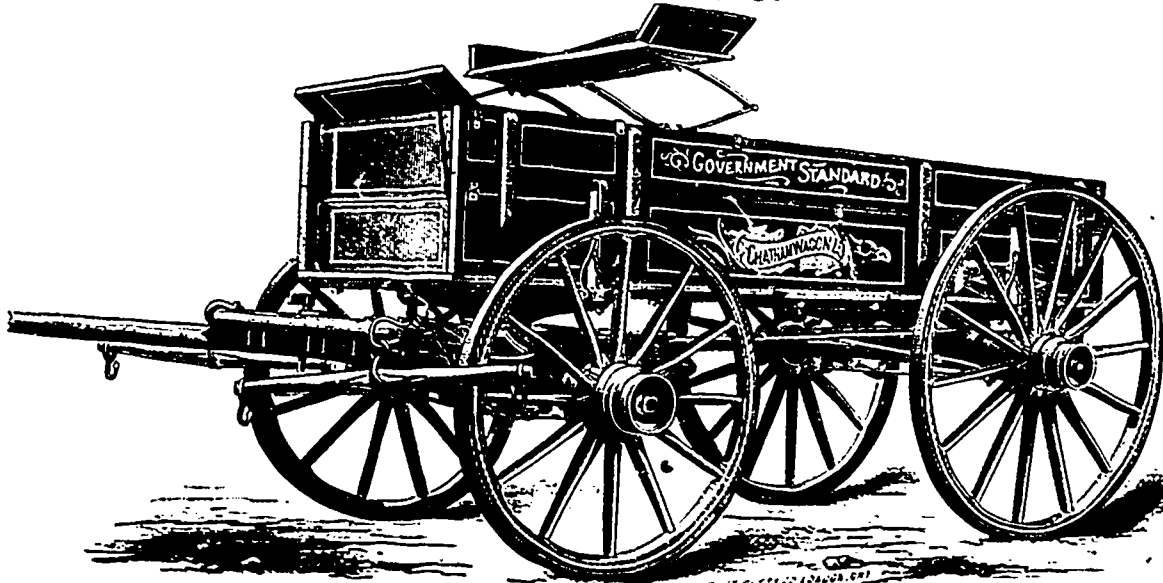
Samples sent by Mail upon Application.

# THE CHATHAM MANUFACTURING CO. (Ltd.)

MANUFACTURERS OF

HARDWOOD LUMBER,

SHIP PLANK AND



## THE CHATHAM WAGON, Of which wagon the above is a faithful cut, and which the Government of the Dominion of Canada has adopted as the STANDARD WAGON

We simply ask intending purchasers, in their own interests, to send to us for particulars of the Chatham Wagon, or if there is one convenient closely examine it before purchasing any other.

We also make Railway Platform Baggage Trucks, Farm and other Dump Carts, the Celebrated Main Bob Sleigh, the Patent Champion Eay Rack, etc., etc.

CORRESPONDENCE SOLICITED.

CHATHAM MANUFACTURING CO. (LIMITED).

# THE BELL Telephone Co'y

OF CANADA.

—Manufacturers and Dealers in—

*Telegraph & Electrical*

INSTRUMENTS,

Electro-Medical Apparatus,

Fire Alarm Apparatus,

Magnets for Mills

Electrical Gas Lighting Apparatus,

Burglar Alarms,

Hotel and House Annunciators,

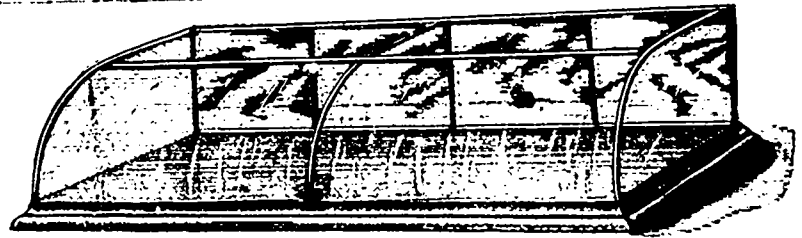
Electric Call Bells, &c., &c.

For further particulars apply to

No. 12 HOSPITAL STREET,

**MONTREAL.**

# DOMINION SHOW CASE MANUFACTURING CO'Y



HIGHEST AWARDS

Received at

TORONTO EXHIBITION

1884, '85, and '86.

SEND FOR CATALOGUE AND PRICE LIST.

Show Cases, of Every Description in Nickel, Silver Walnut, Ebonized, Etc.

HARDWOOD STORE FITTINGS, METAL SASH BARS, Etc.

SHOWROOMS AND FACTORY:

59, 61 and 63 Adelaide St. West, TORONTO, Ont.

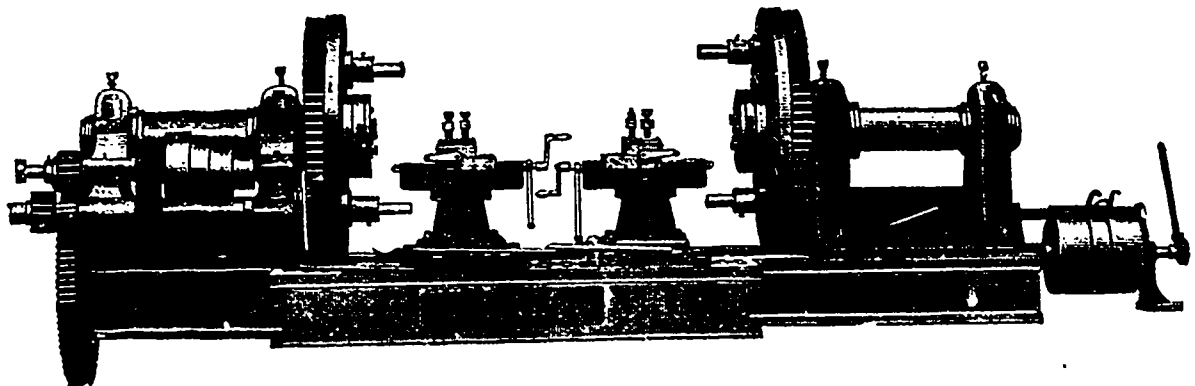
# Canada Tool Works, **JOHN BERTRAM & SONS** DUNDAS, ONT.

MANUFACTURERS OF

## MACHINE TOOLS AND WOOD-WORKING MACHINERY.

Special attention is directed to our new heavy class of Lathes, *with Inverted V Shears, large Bearing Surfaces*, and all the

PARTS INTERCHANGEABLE.



IN OUR LIST WILL BE FOUND THE FOLLOWING :

Lathes, Planers, Drills, Bolt Cutters,  
 Punches and Shears,  
 Boiler Makers' Rolls,  
 Slotting Machines, Milling Machines,  
 Cutting-off Machines, Shafting Lathes,  
 Pulley Turning Lathes, Surface Planers,



Wood Planing and Matching Machines,  
 Moulding Machines,  
 Mortising Machines,  
 Tenoning Machines, Band Saws,  
 Scroll Saws, Wood-Turning Lathes,  
 Timber Dressers, etc., etc.

Complete Sets of Machinery for Locomotive Works, Car Works, Implement Works, Cabinet Factories, Planing Mills, Machine Shops, Etc., Etc.

OUR Tools are all made from new and improved patterns and with the latest improvements. A large stock always kept on hand, and those not in stock made at shortest notice.

Write for Prices and Catalogues.

BUSINESS ESTABLISHED 1862.

# BELDING, PAUL & CO. SILK MANUFACTURERS MONTREAL.

ORGANZINES, TRAMS,  
SPUN SILK YARNS,

And all Threads for Manufacturing Purposes made to order.

Correspondence Solicited.

# THE WELLINGTON MILLS LONDON GENUINE EMERY

OAKEY'S Flexible Twilled Emery Cloth.  
OAKEY'S Flint Paper and Glass Paper.  
OAKEY'S Emery Paper, Black Lead, &c., &c.

PRIZE MEDAL AND HIGHEST AWARD, PHILADELPHIA, 1876.  
For Superiority of Quality, Skillful Manufacture, Sharpness,  
Durability, and Uniformity of Grain.

Manufacturers: JOHN OAKEY & SONS, Wellington Mills,  
WILKINSON BRIDGE ROAD, LONDON, ENGLAND.  
Enquiries should be addressed to

JOHN FORMAN, 467, ST. PAUL ST., MONTREAL.

# CANTLIE, EWAN & CO.

General Merchants and Manufacturers' Agents.

BLEACHED SHIRTINGS,  
GREY SHEETINGS, TICKINGS,  
WHITE, GREY AND COLORED BLANKETS,  
FINE AND MEDIUM TWEEDS, KNITTED GOODS,  
PLAIN AND FANCY FLANNEL,  
LOW TWEEDS, ETOFFES, ETC.

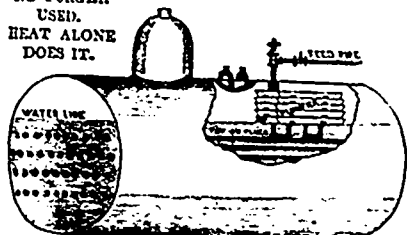
Wholesale Trade Only Supplied.

15 VICTORIA SQUARE,  
MONTREAL.

20 WELLINGTON ST. E.  
TORONTO.

# PATENT BOILER WATER PURIFIER.

NO PURGER  
USED.  
HEAT ALONE  
DOES IT.



SHOWING POSITION OF PURIFIER IN BOILER.

THIS PURIFIER ENTIRELY PREVENTS THE FORMATION OF SCALE UPON SHELL AND FLUES OF ANY BOILER IN WHICH IT IS USED. ALL IMPURITIES ARE EXTRACTED FROM THE WATER BEFORE IT REACHES THE WATER LINE, AND ARE DEPOSITED IN THE PANS OF THE PURIFIER.

THESE PANS CAN BE REMOVED, CLEANED AND REPLACED WITH VERY LITTLE TROUBLE, AND IN A VERY SHORT TIME, WITHOUT EMPTYING THE BOILER OF HOT WATER, WHICH MEANS A SAVING OF TIME, LABOR AND FUEL.

FOR PARTICULARS AND PRICES ADDRESS

J. W. HERMAN, 114 1/2 King St. West, Toronto, Ont.

Authorized Capital and other Assets over  
**5,000,000.**

# MANUFACTURERS' LIFE INSURANCE COMPANY

— AND —

# Manufacturers' Accident Insurance Company

ISSUE ALL KINDS OF LIFE AND ACCIDENT POLICIES  
AT THE LOWEST POSSIBLE RATES.

Special advantages are given Manufacturers' to indemnify themselves against the

"Workmen's Compensation for Injuries Act."

SIR JOHN A. MACDONALD, P.C., G.C.B. . . . PRESIDENT.

SIR ALEX. CAMPBELL, K.C.M.G. }  
GEORGE GOODERHAM, Esq. } . . . VICE-PRESIDENTS.  
WILLIAM BELL, Esq. }

J. B. CARLISLE,  
Managing Director.

38 KING STREET EAST,  
TORONTO, ONT.



# BUTTERFIELD & CO.

ROCK ISLAND, P.Q.

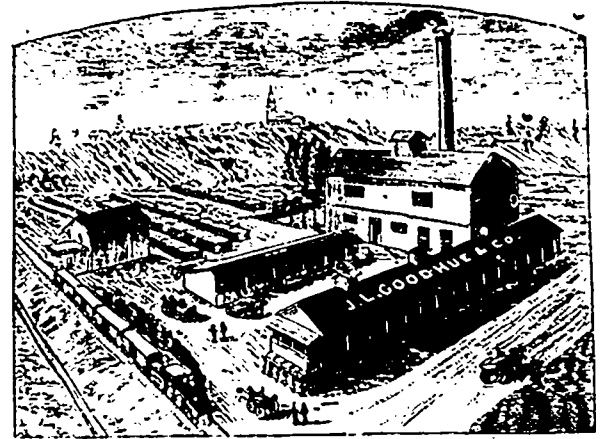
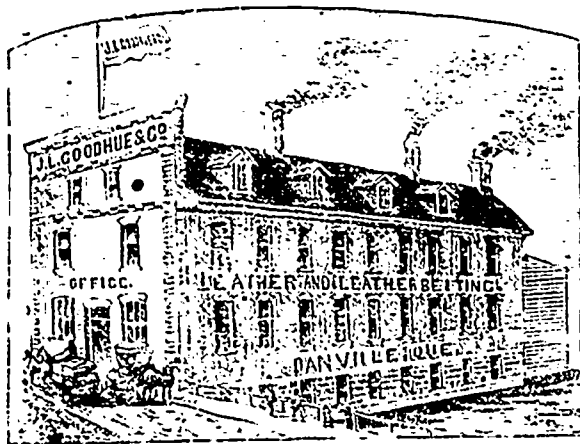
MANUFACTURERS OF

# PIPE TAPS, AND REAMERS

Pipe Stocks and Dies, Tongs, Cutters, Vises,  
and Labor-Saving Tools for Blacksmiths',  
Carriage Makers', Machinists'  
and Gasfitters' Use.

Send for Illustrated Catalogue, 1887.

NAME THIS PAPER.



**J. L. GOODHUE & CO.**



ORDERS  
PROMPTLY  
FILLED.

**LEATHER BELTING**

WRITE  
FOR  
PRICES.



\* DANVILLE, P. QUE. \*

**GALT MACHINE KNIFE WORKS.**

PLANING MACHINE  
KNIVES.



STAVE CUTTER KNIVES.



STAVE JOINTER KNIVES.



MOULDING, TENONING,  
MITREING,

SHINGLE JOINTER,

And other irregular shapes.

Cheese-box and Veneer, Paper Cutting, Leather Splitting and any special knife made to order. SEND FOR PRICE LIST. ALL WORK WARRANTED.

PETER HAY, - - - GALT ONT.

**Millers' and Manufacturers' INSURANCE COMPANY.**

STOCK AND MUTUAL.

**OBJECTS.**

1. To prevent by all possible means the occurrence of avoidable fires.
2. To obviate heavy losses from the fires that are unavoidable by the nature of the work done in mills and factories.
3. To reduce the cost of insurance to the lowest point consistent with the safe conduct of the business.

**METHODS.**

All risks will be inspected by a competent officer of the company, who will make such suggestions as to improvements required for safety against fires, as may be for the mutual interests of all concerned.

Much dependence will be placed upon the obligation of members to keep up such a system of discipline, order, and cleanliness in the premises insured as will conduce to safety.

As no agents are employed and the company deals only with the principals of the establishments insured by it, conditions and exceptions which are so apt to mislead the insured and promote controversy and litigation in the settlement of losses will thus be avoided.

The most perfect method of insurance must, in the nature of things, be one in which the self-interest of the insured and the underwriters are identical, and this has been the object aimed at by the organizers of this company.

**W. H. HOWLAND,**  
Vice-President.

**JAMES GOLDIE,**  
President.

**HUGH SCOTT, Managing Director.**

Applicants for Insurance and other information desired, please address **MILLERS' AND MANUFACTURERS' INSURANCE COMPANY,** No. 24 Church Street, Toronto.

# MACHINE BRUSHES

All kinds, Made to Order.

Highest Quality of Work Guaranteed.

Send full particulars of Dimensions and Quality when ordering.

OLD ROLLERS OR BLOCKS RE-FILLED  
WITH SPECIAL CARE.

**CHAS. BOECKH & SONS,**  
MANUFACTURERS.

Office and Warerooms:

Factory:

80 YORK STREET. | 142 to 150 Adelaide St. West.  
TORONTO, CANADA.

## VICTORIA WIRE MILLS.



Best brands of Crucible Cast, Siemen's-Martin, and Bessemer Steel and Charcoal Iron Rope. Cast Iron Wheels for transmitting power. Moulders, Bellows, Brushes and Riddles; Iron and steel Wire Cloth, all grades and strength. Perforated Zinc, Iron and Steel, all sizes. Bank and Office Counter Railings. Wire Guards, all kinds. Sand and Coal Screens; Sofa and Chair Springs. Blind, Furniture and Fence Staples. Dildine's Adjustable Wire Sieve. Ornamental Wire Work, &c.

Send for Circulars, mentioning your requirements.

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



1529 Arch Street, Philad'a, Pa.

### A Well Tried Treatment

FOR  
Consumption, Asthma, Bronchitis, Dyspepsia, Catarrh, Hay Fever, Headache, Debility, Rheumatism, Neuralgia and all Chronic and Nervous Disorders.

"The Compound Oxygen Treatment," Drs. Starkey & Palen, No. 1529 Arch Street, Philadelphia, have been using for the last seventeen years, is a scientific adjustment of the elements of Oxygen and Nitrogen magnetized, and the compound is so condensed and made portable that it is sent all over the world.

DRS. STARKEY & PALEN have the ability to refer to the following named well-known persons who have tried their Treatment:

Hon Wm D. Kelley, Member of Congress, Philadelphia; Rev. Victor L. Conrad, Editor "Lutheran Observer," Philadelphia; Rev. Charles W. Cushing, D.D., Rochester, N.Y.; Hon. Wm Penn Nixon, Editor "Inter-Ocean," Chicago, Ill.; Rev. A. W. Moore, Editor "The Centenary," Lancaster, S.C.; W. H. Worthington, Editor "New South," Birmingham, Ala.; Judge H. P. Vrooman, Quenemo, Kan.; Mrs. Mary A. Livermore, Melrose, Mass.; Judge R. S. Voorhees, New York City; Mr. F. C. Knight, Philadelphia; Mr. Frank Siddall, Merch. Int., Philadelphia; Hon. W. W. Schuyler, Easton, Pa.; Edward L. Wilson, 833 Broadway, N.Y., Editor Philadelphia "Photographer"; Fidelity Lyon, Waimea, Hawaii, Sandwich Islands; Alexander Ritchie, Inverness, Scotland; Mrs. Manuel V. Ortega, Fresnillo, Zacatecas, Mexico; Mrs. Emma Cooper, Uvilla, Spanish Honduras, Central America; J. C. Ibb, U.S. Vice-Consul, Casablanca, Morocco; M. V. Ashbrook, Red Bluff, Cal.; Ernest Turner, Nottingham, England; Jacob Ward, Bowral, New South Wales, and thousands of others in every part of the world.

"Compound Oxygen its Mode of Action and Results" is the title of a new brochure of two hundred pages, published by Drs. Starkey & Palen No. 1529 Arch St., Philadelphia, Pa., which gives to all inquirers full information as to this remarkable curative agent, and a record of several hundred surprising cures in a wide range of chronic cases many of them after being abandoned to die by other physicians. Will be mailed free to any address on application by addressing

**E. W. D. KING,**

58 Church St., Toronto, Ont.

# BELL ORGANS

FOR  
Chapel,  
Church,  
College,  
Parlor.

## ARE THE BEST



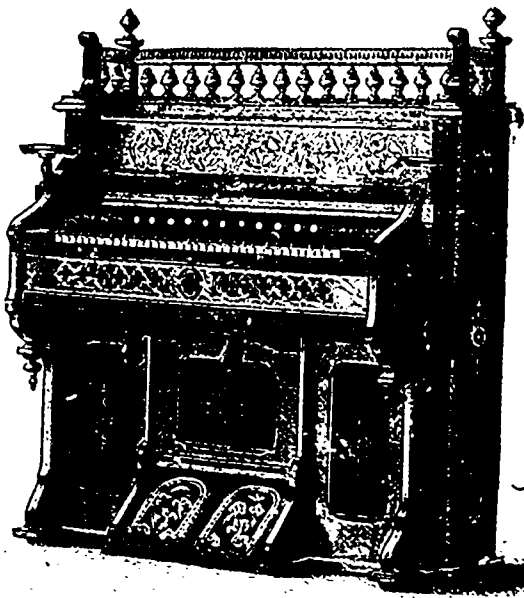
**O**UR Large Double and Single Manual Organs are the best in the Market, and Musicians should see them before buying elsewhere.

CATALOGUES  
SENT ON APPLICATION



# W. BELL & CO.,

GUELPH, CANADA.





## Industrial and Trade DIRECTORY.

### Acids and Aniline Dyes.

**THEO. H. EATON & SON**, Windsor, Ont.; Detroit, U.S.A.—Importers. Every Description **Pure Aniline Dyes** for Cotton and Woollen Manufacturers. **Dyed Samples** furnished on application. Address all correspondence to Head Office, Detroit, Mich.

### Agricultural Implements.

**A. S. WHITING MANUFACTURING CO.**, Cedar Dale, Ont.—Manufacturers of scythes, forks, hoes, etc.

**WELLAND VALE MANUFACTURING CO.**—Lock No. 2, St. Catharines, Ont., Canada—Manufacturers of axes, scythes, forks, hoes, rakes and edge tools.

### Bobbins and Spools

**THOMPSON & CO.**, Sherbrooke, P. Q.—Manufacturers of all kinds of Bobbins and Spools for Cotton and Woollen Mills—Special patterns made to order from sample.

### Bridge Builders.

**DOMINION BRIDGE CO. (Limited)**,—Shops at Toronto, Ontario, and Lachine, Quebec. Builders of Steel and Iron Railway and Highway Bridges.

### Chemicals.

**DOMINION DYEWOOD AND CHEMICAL CO.**, Toronto.—Importers and Manufacturers. Chemicals for Cotton, Woollen, Paper and Leather Manufacturers.

**MARTHUR, CORNEILLE & CO.** (successors to John McArthur & Son), Montreal.—Offer at closest figures chemicals required by soap-boilers, oil refiners, paper-makers, and by manufacturers of woollens, cottons, leather, &c.

### Cotton Mills.

**HAMILTON COTTON MILLS CO.**, Hamilton.—Denims, tickings and yarns.

### Dyes, Dyeing Drugs and Extracts.

**THEO. H. EATON & SON**, Windsor, Ont.; Detroit, U. S. A.—Carry full line of Pure Dyeing Drugs, Dye Woods and Extracts adapted for the requirements of Woollen and Cotton Manufacturers. **Paper Makers' Anilines and Chemicals** Address the Detroit Office.

### Dye Stuffs.

**MARTHUR, CORNEILLE & CO.** (successors to John McArthur & Son), Montreal.—Supply of best quality at closest prices. Every description of coloring materials required by manufacturers of woollens, cottons, silks, paper, leather, &c. Are sole agents in Canada for the celebrated aniline dyes of A. Porrier, Paris.

**LYMAN BROTHERS & CO.**, Nos. 71 and 73 Front Street East, Toronto.—Dye Stuffs of all kinds for Woollen and Cotton Manufacturers; Warps, Shuttles, Bobbins, Card Clothing, etc., etc.

### Dyewood and Dye Stuffs, Aniline Dyes.

**DOMINION DYEWOOD AND CHEMICAL CO.**, Manufacturers.—Pure Dyewoods, Dyeing Drugs. Sole Agents. English, German, and French Aniline Dyes, for Woollen, Silk Paper, and Leather manufacturers.

### Edge Tools.

**WELLAND VALE MANUFACTURING CO.**—Lock No. 2, St. Catharines, Ontario, Canada.—Manufacturers of axes, scythes, forks, hoes, rakes and edge tools.

### Emery Wheels.

**HART EMERY WHEEL CO.**, Hamilton.—Manufacturers of every description of Emery Wheels and Emery Wheel machinery.

### Gas Engines.

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

### Glove Manufacturers.

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

### Hoist and Elevator Manufacturers.

**LEITCH & TURNBULL**, Canada Elevator Works, cor. Queen and Peter Streets, Hamilton, Ont.—Patent Safety Hydraulic, Hand, and Power Elevators. Telephone connection.

### Hubs, Spokes and Bent Goods.

**F. W. HORE & SON**, Hamilton, Ont.—Manufacturers of wheels, wheel material, shafts, poles, etc.

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

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

**JOHN BERTRAM & SONS**, Dundas.—Machine tools and wood working machinery. Toronto wareroom, 55 Yonge St. Agents—The Polson Iron Works Co.

Montreal wareroom, Craig St. Agents for Quebec—The Machinery Supply Association, Montreal.

**THE OSIIAWA MALLEABLE IRON CO.**, Oshawa, Ont.—Manufacturers of malleable iron castings, to order, for all kinds of Agricultural Implements and miscellaneous purposes.

**SMITH'S FALLS MALLEABLE IRON WORKS**, Smith's Falls, Ont.—Manufacturers to order of refined malleable iron castings from air furnace. Agricultural and other heavy castings a specialty. Carriage castings in stock.

### Engines and Boilers.

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

### Knife Works.

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

### Knitting Mills.

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

### Manufacturers' Supplies.

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

### Oils.

**MARTHUR, CORNEILLE & Co** (successors to John McArthur & Son), Montreal.—Afford best value in pure olive and lard oils, also in all other leading lines of vegetable, animal, and mineral oils for factory use. Invite special attention to their celebrated crown diamond "engine" and "machinery" oils.

### Paper Manufacturers.

**WM. BARBER & BROS.**, Georgetown—Manufacturer of book and fine papers.

**THE TORONTO PAPER MANUFACTURING CO.**, Cornwall, Ont.—Manufacturers of engine sized superfine papers, white and tinted book papers, blue and cream laid and wove foolscaps, account book, envelope and lithographic papers, etc., etc.

### Saw Manufacturers.

**R. H. SMITH & CO.**, St. Catharines.—Manufacturers of all kinds of saws, plastering trowels, straw knives, etc. Sole manufacturers for the Dominion of Canada of the celebrated "Simon's Saw."

### Scythe Snaths.

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

### Tanners' and Wool Pullers' Supplies.

**THEO. H. EATON & SON**, Windsor, Ont.; Detroit, U.S.A.—Supply at lowest prices all Chemicals used by Tanners and Wool Pullers. Special Anilines for Sheep Skin Dyers, Wool Mat Manufacturers, etc., etc. Address correspondence to Head Office, Detroit, Mich.

### Taps and Dies.

**BUTTERFIELD & CO.**, Rock Island, P. Q.—Manufacturers of Taps, Dies, and all Screw Cutting Tools.—Telegraph Office, Derby Line, Vt.

### Wire Works.

**B. GREENING & CO.**, Hamilton, Ont.—Manufacturers of wire ropes, cloth and general wire workers.

**TIMOTHY GREENING & SONS**, Dundas, Ont.—Manufacturers of the strongest description of steel wire cloth, malt kiln floors and general wire weavers. Telephone connection.

# PATENTS

**MUNN & CO.**, of the **SCIENTIFIC AMERICAN**, continue to act as Solicitors for Patents, Caveats, Trade Marks, Copyrights, for the United States, Canada, England, France, Germany, etc. Hand Book about Patents sent free. Thirty-seven years experience.

Patents obtained through **MUNN & CO.** are noticed in the **SCIENTIFIC AMERICAN**, the largest, best and most widely circulated scientific paper. \$3.00 a year. Weekly. Send engraving and interesting information. Special men copy of the **Scientific American** sent free. Address **MUNN & CO.**, **SCIENTIFIC AMERICAN** Office, 361 Broadway, New York.

## TO ADVERTISERS!

For a check for \$20 we will print a ten-line advertisement in One Million issues of leading American Newspapers and complete the work within ten days. This is at the rate of only one fifth of a cent a line, for 1000 Circulation! The advertisement will appear in but a single issue of any paper, and consequently will be placed before One Million different newspaper purchasers—or FIVE MILLION READERS, if it is true, as is sometimes stated, that every newspaper is looked at by five persons on an average. Ten lines will accommodate about 75 words. Address with copy of Adv. and check, or send 50 cents for Book of 272 pages. **GEO. P. HOWELL & CO.**, 10 Spruce St., New York.

We have just issued a new edition (the 15th) of our Book called "Newspaper Advertising." It has 222 pages, and among its contents may be named the following Lists and Catalogues of Newspapers:—

**DAILY NEWSPAPERS IN NEW YORK CITY**, with their Advertising Rates.

**DAILY NEWSPAPERS IN CITIES HAVING MORE THAN 10,000 POPULATION**, omitting all but the best.

**DAILY NEWSPAPERS IN CITIES HAVING MORE THAN 20,000 POPULATION**, omitting all but the best.

**A SMALL LIST OF NEWSPAPERS** in which to advertise every section of the country; being a choice selection made up with great care, guided by long experience.

**ONE NEWSPAPER IN A STATE**. The best one for an advertiser to use, how will use but one.

**BARGAINS IN ADVERTISING** IN DAILY NEWSPAPERS in many principal cities and towns, a list which offers peculiar inducements to some advertisers.

**LARGEST CIRCULATIONS**. A complete list of all American papers issuing regularly more than 25,000 copies.

**THE BEST LIST OF LOCAL NEWSPAPERS**, covering every town of over 5,000 population and every important county seat.

**SELECT LIST OF LOCAL NEWSPAPERS**, in which advertisements are inserted at half price.

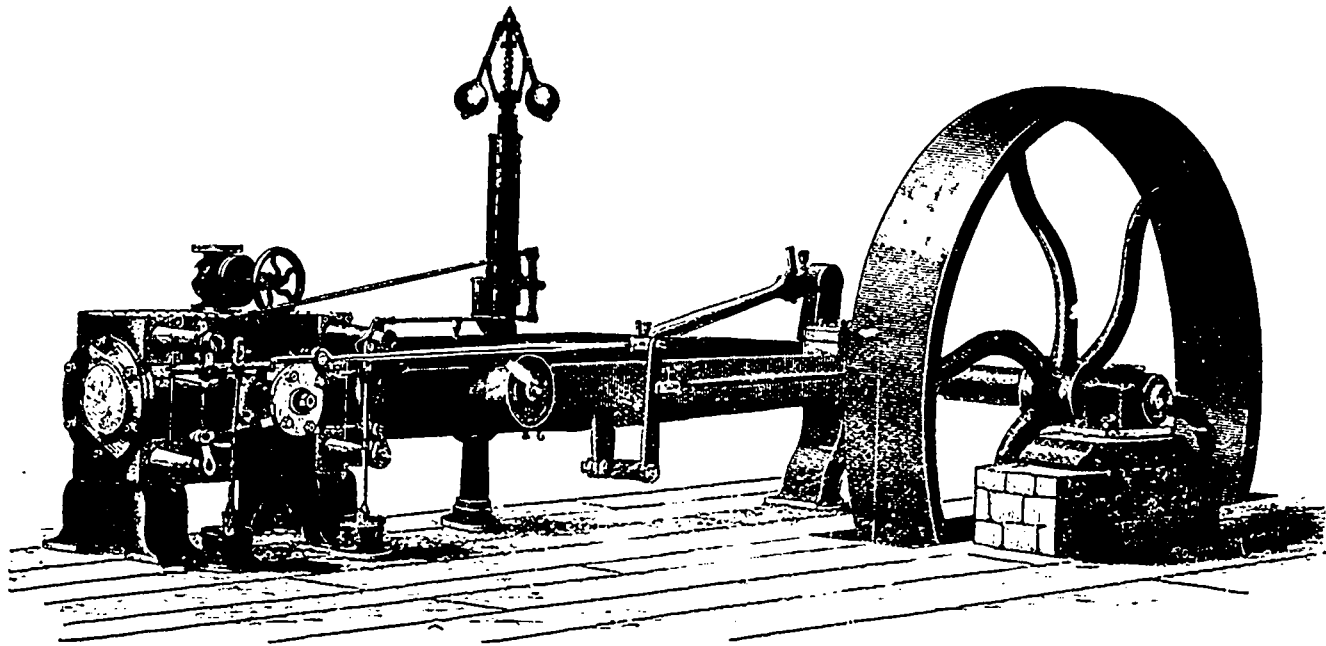
**5,372 VILLAGE NEWSPAPERS** in which advertisements are inserted for \$1.40 a line and appear in the whole lot—one half of all the American Weeklies.

Sent to any address for **THIRTY CENTS**.



# THE GALT FOUNDRY,

## Engine and Machine Works.



## THE HARRIS-CORLISS STEAM ENGINE

Is the most perfect Cut-off Engine made. For Economy of Fuel, Regulating of Speed, Accessibility of all its Parts, it has many Imitators, but no Equals, and is Unsurpassed.

While many Engines of the same class have been invented, built, tried and abandoned, the Harris-Corliss has steadily gained in public favor, and is now

**Without a Successful Rival.**

### PLEASE NOTICE SOME OF THE ADVANTAGES OF THE HARRIS-CORLISS ENGINE:

- 1st—The Steam is admitted at Boiler pressure to the piston by the main valve and is cut off at the same point, the load determining through the regulator, when the supply of steam shall be cut off. This is the only Engine that thus admits steam at full boiler pressure.
- 2nd—The success of the Harris-Corliss Engine lies in the simplicity and precise action of its governing elements, the Governor is an independent mechanism, with no extraneous load, and free to instantly respond to all variations in the regular velocity of rotating parts.
- 3rd—No parts of the regulating medium enter the steam chest and thereby become a part of the engine, and subject to the corrosive action of steam and the oil used for lubricating the valves and piston.
- 4th—Regularity of Speed under varying loads of steam pressure.
- 5th—Recessed Valve Seats which avoid the liability of wearing shoulders on them.
- 6th—Stop Motion on Regulator of Engine which effectually stops the Engine whenever the regulator by any means fails to perform its work, thus preventing the Engine from running away.
- 7th—Having four Valves either can be adjusted independently of the other with the greatest ease.
- 8th—The increased amount of power it develops.

We would draw special attention to our new and improved Adjustable Pillow Block, which is pronounced by all practical men who have seen it to be the very best in Canada.

## COWAN & CO.,

Galt, Ont., Canada.

Manufacturers of Engines, Boilers and Wood-Working Machinery—all kinds, new Patterns, high'y finished.

THE  
**Dartmouth Ropework Co.**

HALIFAX, NOVA SCOTIA.

MANUFACTURERS OF

**MANILLA, SISAL AND  
TARRED RUSSIAN CORDAGE,**

**MARLINE, HOUSELINE,**

**HAMBROLINE, SPUN YARN AND OAKUM.**

SPECIAL ATTENTION GIVEN TO

*Binder Twine.*

**HAMILTON  
COTTON COMPANY,**

MANUFACTURERS OF

**THE STAR BRAND**

COTTONADES, DENIMS, TICKINGS.

- Star Brand—BEAM WARP.
- " HOSIERY YARN.
- " BUNDLE YARN.
- " CARPET WARP.
- " BALLED KNITTING YARN.

First Prize, Silver Medals, for Beam Warps and Denims  
Toronto, 1881.

General Agents,—

**F. McELDERY & CO.,**  
204 MCGILL STREET, MONTREAL.  
22 & 24 COLBORNE ST., TORONTO.

**BEAVER LINE.**

The Canada Shipping Co.'s Line of Steamers,

BETWEEN

**MONTREAL AND LIVERPOOL.**

Comprising the following First-Class Clyde-built, Full-powered Iron Steamships

Ship Name	Captain	Tons
LAKE ONTARIO	Capt. Wm. Bernson	5,300
LAKE SUPERIOR	Capt. Wm. Stewart	5,000
LAKE HURON	Capt. H. Campbell	4,100
LAKE WINNIPEG	Capt. M. L. Trammor	3,300
LAKE NEPIGON	Capt. P. D. Murray	2,300

**SUMMER SAILINGS, 1887, WILL BE AS FOLLOWS:**

Ship	From	Day	Month
Lake Nipigon	Liverpool	Friday	Aug. 26
*Thamesmore	Liverpool	Thursday	Sept. 1
Lake Winnipeg	Liverpool	Friday	" 9
Lake Superior	Liverpool	"	" 16
Lake Ontario	Liverpool	"	" 24
FROM MONTREAL:			
Lake Superior	Montreal	Tuesday	Aug. 10
Lake Ontario	Montreal	"	" 6
Lake Huron	Montreal	Wednesday	" 7
Lake Nipigon	Montreal	Tuesday	Sept. 13
*Thamesmore	Montreal	Saturday	" 17
Lake Winnipeg	Montreal	Tuesday	" 27
Lake Superior	Montreal	"	Oct. 4

\*SS. Thamesmore does not carry passengers.

The steamers connect at Montreal by direct rail for all points in Canada, Manitoba, North-West Territories and United States, to which through tickets are issued.

These steamers are built in water-tight compartments, and of special strength for the North Atlantic trade.

In the passenger departments the most perfect provision has been made to ensure the comfort and convenience of all. In the Cabin the State-rooms are large and airy. The Steerage is fitted with the most approved Patent Canvas Berths, and is fully ventilated and heated by steam.

An experienced Surgeon is carried by each steamer, also Stewaresses to attend to the wants of females and children.

**RATES OF PASSAGE:**

Montreal to Liverpool—Saloon, \$40, \$50 and \$60. Round Trip Tickets, \$80, \$90 and \$110, according to steamers. Intermediate, \$30; Steerage, \$20.

For Freight and other particulars, apply: In Belfast, to A. A. Warr, 3 Custom House Square; in Queenstown, to N. G. SKYMOUR & Co.; in Liverpool, to R. W. ROSSAR, 21 Water St.; in Quebec, to H. H. SEWELL, 125 Peter St.

**H. E. MURRAY,**  
General Manager,  
1 Custom House Square, Montreal.

**TORONTO LITHOGRAPHING CO.**  
Globe Building, Toronto

MAKE A SPECIALTY OF  
**Fine Color Work**  
CHROMO ADVERTISING  
CARDS and NOVELTIES  
also do a Superior Class of Wood Engraving

**TORONTO BAG WORKS**

**DICK, RIDOUT & CO., Proprietors.**

MANUFACTURERS OF

LINEN,  
COTTON  
AND  
JUTE

**BAGS**

FOR ALL  
PURPOSES.  
★  
ALSO

BAG PRINTING EQUAL TO THE BEST AMERICAN WORK.

HESSIANS FOR MATTRESSES AND BALES,  
COAT CANVASES, TWINES, Etc.

11 & 13 FRONT STREET EAST, - TORONTO.

Storage Accommodation, Bonded or Free. Warehouse Receipts Issued.

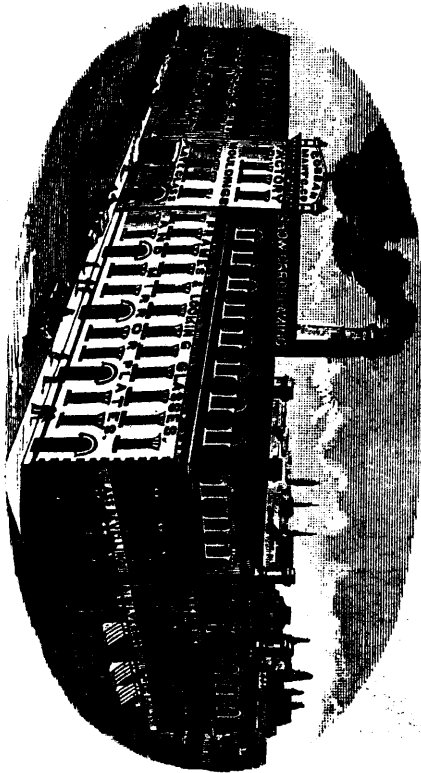
# ONTARIO BOLT CO., TORONTO,

MANUFACTURE

- Threshing Machine Teeth,
- Machine Bolts,
- Bolt Ends and Blank Bolts,
- Bridge Rods and Bridge Rivets,
- Coach Screws and Skein Bolts,
- The Superb Carriage Bolt,
- The Prize Carriage Bolt,
- The Eclipse Carriage Bolt,
- The Prize Tire Bolt,
- The Eclipse Sleigh Shoe Bolt,
- The Prize Plough Bolt,
- Best Whiffletree Bolts,
- Best Shaft and Step Bolts,
- Best Eccentric Head Spring Bolts,
- Best Elevator Bolts,
- Best Norway Shackle Bolts,
- Best Railway Track Bolts,
- Black Iron Rivets,
- Boiler Rivets,
- Railway Spikes,
- Pressed Spikes,
- Hot Pressed Nuts,
- Bridge Bolts and Rag Bolts.

Factory & Head Office: Toronto.

Cobban Manufacturing Co'y



Branch: 455 St. Paul Street, Montreal.

MANUFACTURERS OF

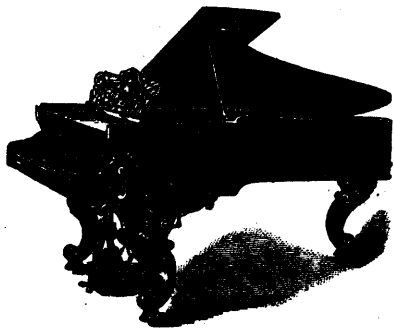
Mantles, Over Mantles and Mirrors in Finest Hardwoods. Mouldings, Picture Frames and Looking Glasses. Mirror Plates: British, French, German, Shocks. Plate Glass Beveling and Silvering a Specialty.

MONTREAL.

TORONTO,

# HEINTZMAN & CO.

MANUFACTURERS OF



GRAND,  
SQUARE,  
AND UPRIGHT  
PIANOFORTES.

SEND FOR ILLUSTRATED CATALOGUE.

Warerooms, 117 King St. West,  
**TORONTO.**



HART  
Emery Wheel  
COMPANY  
(LIMITED),  
Hamilton, Canada.

MANUFACTURERS OF

## EMERY WHEELS

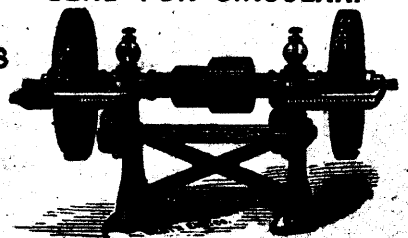
FOR

FOUNDRIES, MACHINE SHOPS,  
SAW MILLS, & PLANING MILLS  
SEND FOR CIRCULAR.

Also  
MANUFACTURERS  
OF

EMERY-WHEEL  
MACHINERY.

Illustrated Price List sent on Application.

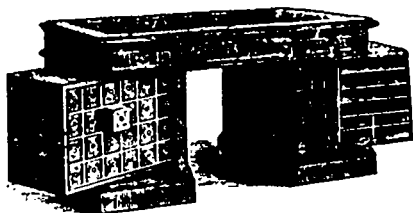


# W. STAHLSCHMIDT & CO.

PRESTON, ONT.

MANUFACTURERS OF

School, Office, Church and Lodge  
Furniture.



## ROTARY DESK

No. 50.

Send for Circulars and Price List. Name this paper.

## S. Lennard, Sons, & Bickford,

DUNDAS, ONT.

PATENTEES OF THE "ELYSIAN" SEAMLESS HOSIERY.

Manufacturers of Plain and Fancy  
Hosiery, Caps, Toggles, Sashes,  
etc., etc., etc.,

To the Wholesale Trade only.

Represented in Eastern Ontario, Que-  
bec, Nova Scotia and New Brunswick,  
by

**F. W. NEWMAN & CO.,**  
21 Lemoine St., Montreal.

In Manitoba by  
**PEDDIE & CO.,**  
WINNIPEG, MANITOBA.

In Western Ontario by  
**S. LENNARD,**  
Senior Member of the Firm.

ESTABLISHED 1820.

## EAGLE FOUNDRY.

**GEORGE BRUSH,**

14 TO 34 KING AND QUEEN STREETS, MONTREAL,

Maker of

STEAM ENGINES,  
STEAM BOILERS,  
HOISTING ENGINES,  
STEAM PUMPS,  
CIRCULAR SAW MILLS,  
BARK MILLS,  
SHINGLE MILLS,  
ORE CRUSHERS,  
MILL GEARING,  
SHAFTING,  
HANGERS AND  
PULLEYS,

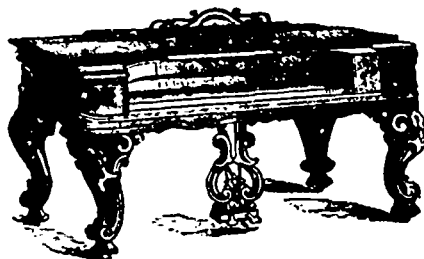
HAND AND POWER HOISTS FOR  
WAREHOUSES, &c., &c.

and Agent for

"Water's" Perfect Steam Engine Governor, and  
"Heald & Sisco's" Centrifugal Pumps.

## LANSDOWNE PIANO CO.

UPRIGHTS  
AND  
SQUARES



The Leading Canadian Pianos

STRICTLY FIRST-CLASS. Correspondence Solicited.

86 York St., Toronto.

Established 1872.

## THE ACCIDENT

INSURANCE CO. OF NORTH AMERICA.

NEW FEATURE,

JOINT INSURANCE

FOR PARTNERSHIPS

IMPORTANT TO MANUFACTURING FIRMS.

MEDLAND & JONES,

GENERAL AGENTS,

Corner Adelaide and Victoria Streets,

TORONTO.



EVERY REPUTABLE DEALER KEEPS  
THEM.

Insist on having the Genuine, and see  
that they bear our name.

## J. M. LAUGHLIN'S SONS,

GROWERS  
MERCHANTS,  
AND EXPORTERS OF

SHANEATELES FALLS  
N.Y.

# AMERICAN TEASELS.

