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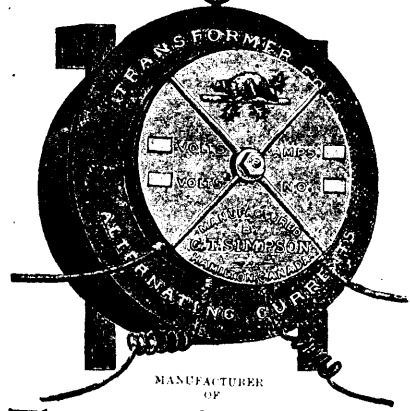
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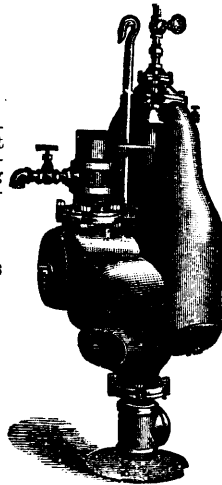
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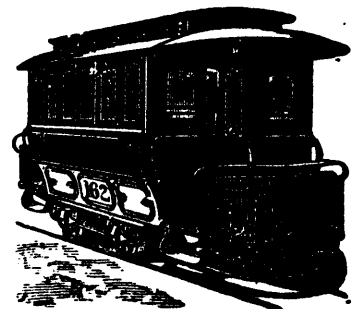
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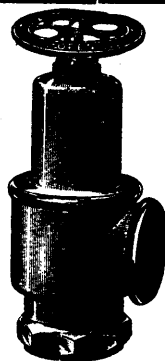
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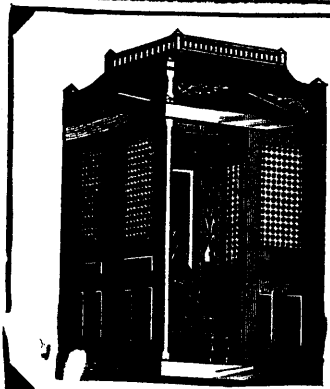
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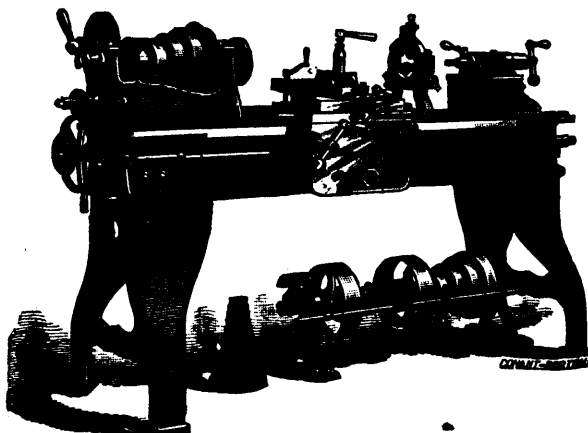
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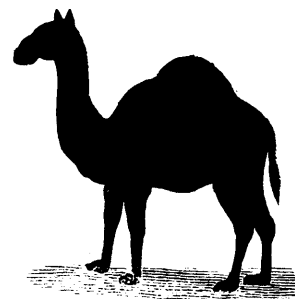


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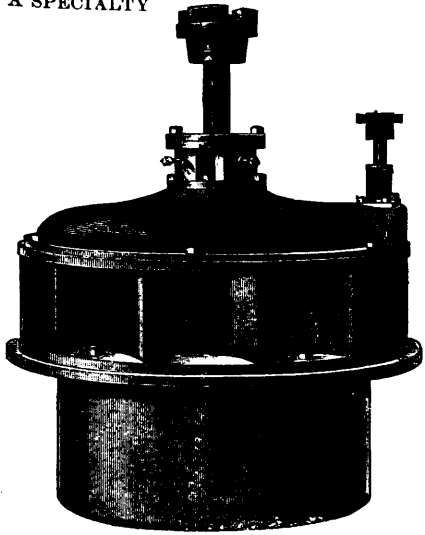
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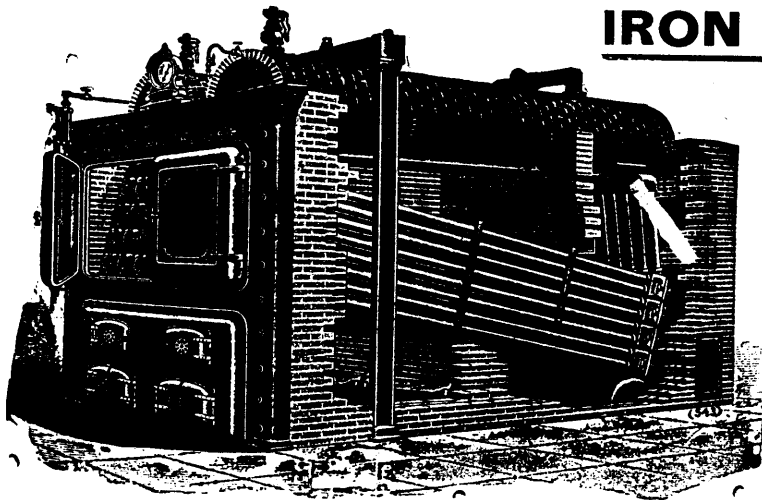
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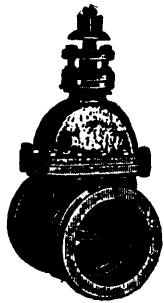
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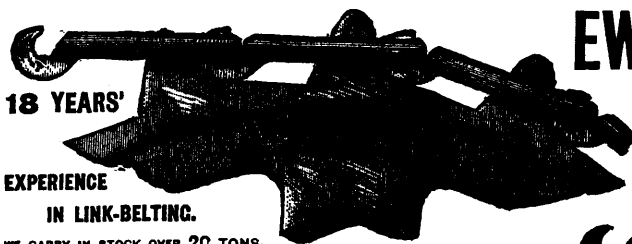
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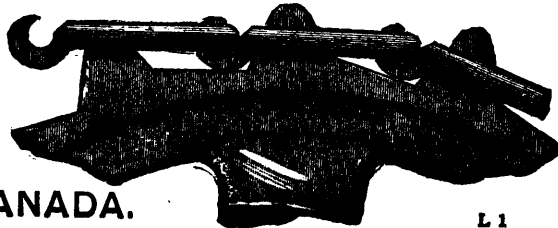
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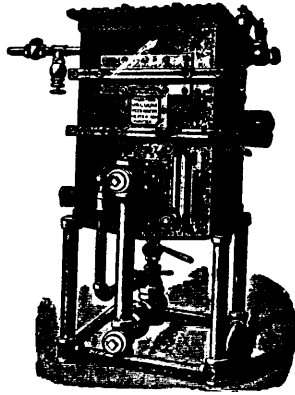
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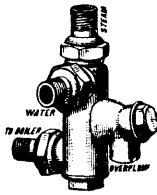
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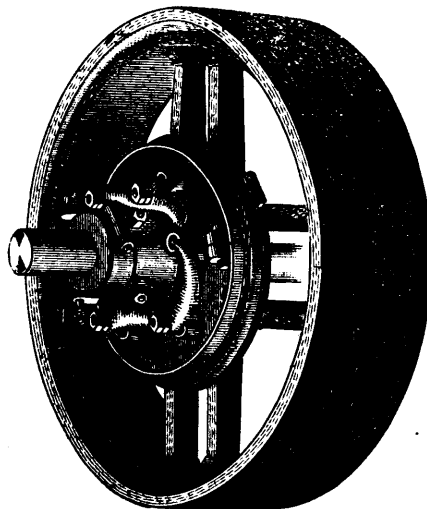
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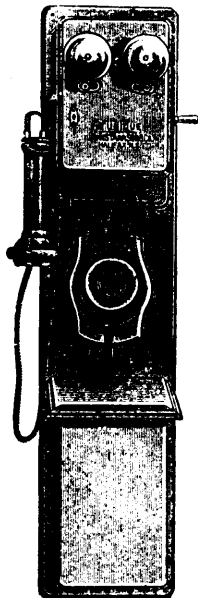
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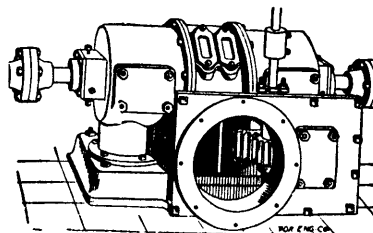
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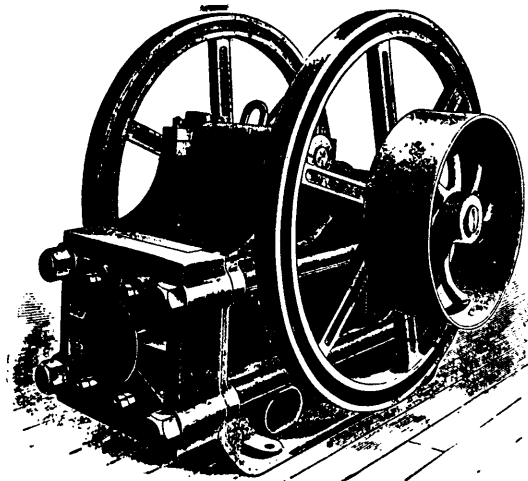
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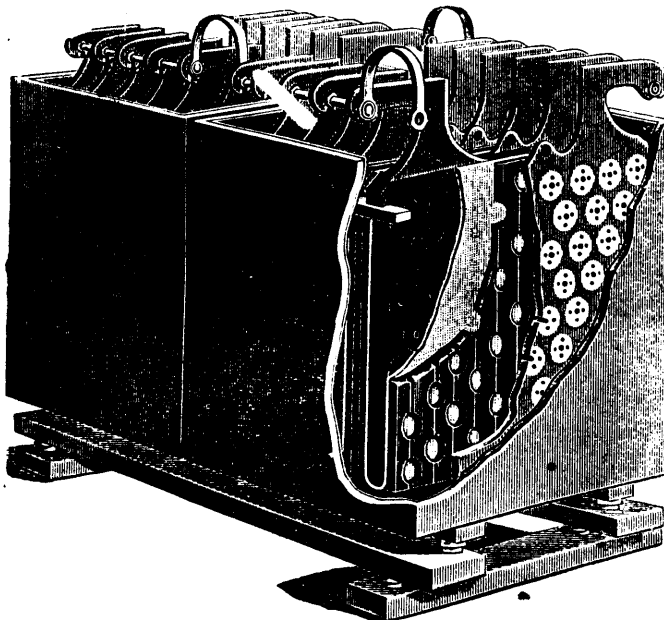
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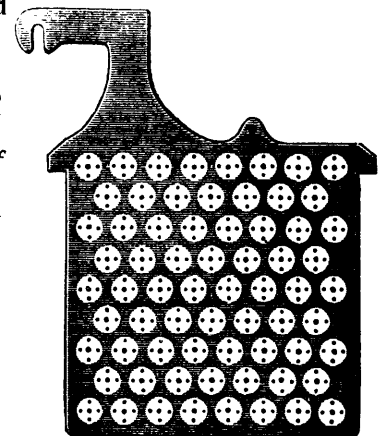
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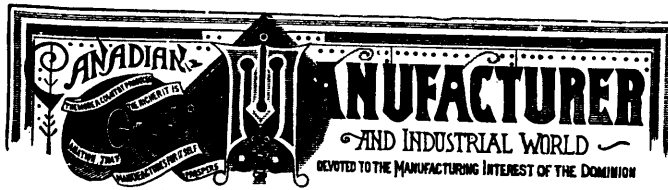
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THE INDUSTRIAL EXHIBITION.

It goes without challenge that all of the annual fairs of the Toronto Industrial Exhibition Association are unqualifiedly successful; and that which closed so auspiciously last week was in strong evidence as proving the rule. During the year important extensions of some of the buildings had been made, great improvements made to and upon the grounds, and many facilities provided for the comfort and convenience of both exhibitors and visitors that had not been before noticed. Within the past year Canada has developed a new and large industry—the manufacture of bicycles—and the management of the Fair, quick to realize the importance of it, and to add to the attractions of the occasion, made a considerable enlargement to the Carriage Building in which the first general display of

Canadian made bicycles was ever shown. Our judgment in this matter is, however, that the entire Carriage Building, enlarged as it has been, is none too large for a proper display of carriages, etc. and that another and more modern building should be erected for the exhibition of bicycles. The Main Building, too, is entirely too small to accommodate the ever increasing number of would be exhibitors, and it seems inevitable that the whole structure should be remodelled and enlarged, the impression prevailing that if this were done, and the floor space be extended to at least twice the present capacity, every foot of it would be in demand. The necessity for such an enlargement was evident in the fact that a very capacious canvas tent was required to accommodate the overflow of exhibits that could not find locations in the Main Building.

Whatever may be said regarding the desirability of enlarging other buildings, and erecting new ones, all manufacturers exhibiting in Machinery Hall, and all visitors interested in such exhibits, are unanimous in the opinion that the accommodations provided for the display of heavy machines and machinery, dynamos, motors and electrical appliances, are entirely too small and badly arranged to afford exhibitors the space and conveniences for displaying their products that they are entitled to. It is no small undertaking for a manufacturer to bring heavy and intricate machinery from a distance, bearing all the expense thereof, and requiring the presence of skilled attendants, and then find that the foundations upon which he must place his machinery is entirely too light and insufficient, not to say in some cases unsafe for his purpose. We have knowledge that some manufacturers who would have otherwise made most attractive exhibits in Machinery Hall declined to do so for reasons here specified. The management of the Association quite fully appreciate the importance of having the manufacturers of fine and expensive machines display their products at the Fair, but they should understand that a leaky, insecure building that may have been sufficient for the needs of ten or a dozen years ago does not meet the requirements of to-day, and they will do well to immediately proceed to the erection of a large, well lighted, strongly built hall, with suitable foundations, to take the place of the present structure.

CUSTOMS DECISIONS.

The Dominion Board of Customs have made the following decisions, which have been approved by the Controller of Customs, and under the provisions of the law are now operative:—

Medicinal Wines (so-called), viz:—"Amer Kina Camperdon," "Armour's Nutrient Wine of Beef Extract," "Wincarnis Wine," "Vino du Salud," "Vin de Vial," "Vin de Barbier," "Vin de Chevrier," "Vin d'Anduron," "Vin de Rancio," "Vin St. Michael," "Vin St. Raphael," "Vin Mariana," "Esperit d'Comemille," and others of like nature, \$2.25 per gall. and 30 p. c., Item No. 7 (b).

Jewelry, what shall be classed as:—Brooches, Scarf and Breast Pins, Belt and Skirt Pins, Baby or Lace Pins, and other pins of metal (except hat pins) when for the adornment of the person, 25 p. c., Item No. 343.

Pins, which shall be classed as:—Hat Pins, Hair Pins Knitting Pins or Needles, Stick Pins and Safety Pins (common), 30 p. c., Item No. 309.

Hair Pins, celluloid, etc., (except metal pins) with plated or metal tops, 25 p. c., Item 343.

Hair Pins of Celluloid, Bone, Ivory, Horn or Tortoiseshell, 20 p. c., Item No. 481.

Hair Pins of Rubber, 25 p. c., Item No. 231.

Isinglass, 25 p. c., Item No. 25.

Sunflower Seed, in bulk or large parcels, 10 p. c.; in small papers or parcels, 25 p. c., Item No. 58.

Canary, Hemp and Millet Seed, dutiable under Item No. 58.

Track Carriers and Pulleys, not to include the forks, 27½ p. c. Item No. 319.

Harness Leather, 17½ p. c., Item No. 220 and Sec. 13 C.A.

Artificial Essential Oil of Wintergreen and Sassafras, 10 p. c., Item No. 130.

Two or more Essential Oils, blended, 10 p. c., Item No. 130.

Packages containing Lamp Chimneys, dutiable at same rate as contents, viz., 30 p. c., Section 21 Tariff Act.

Douches, rubber, 25 p. c., Item No. 231.

Pessaries, 25 p. c., Item No. 461.

Feed Mills, Feed Cutters, Root Cutters, Straw and Hay Cutters, Corn Huskers and Shellers, 35 p. c., Item No. 283.

Bone Cutters and Crushers, 27½ p. c.

Brass Springs, 30 p. c., Item No. 326.

Rose Water and Orange Water, non-alcoholic. 20 p. c., Item No. 481.

Advertising Rules and Yard Sticks, 35 p. c.

Hay Presses, portable, 30 p. c., Item No. 295; stationary, 27½ p. c., Item No. 293.

Bread Knives, not plated, 32½ p. c. Item No. 286.

Dried Orange Peel, free, Item No. 570.

Surgical Splints, all kinds, 15 p. c., Item No. 288.

CANADIAN ELECTRICAL ASSOCIATION.

The fifth convention of the Canadian Electrical Association assembled as per programme, at Ottawa, on Tuesday last, and continued its session through three days. The papers announced to be read by different members of the Association were presented and duly read and considered, and proved to be of exceedingly interesting character. The more interesting of these papers were "The Telegram in Canada," by Charles P. Dwight; "From the Coal Pile to the Meter," by James Milne, and an address by J. J. Wright of Toronto.

Mr. K. J. Dunstan, the president, in his most excellent address, among other things said that the electrical industry had not escaped the world-wide depression, nevertheless he pointed out that at the last session of the Ontario Legislature there were incorporated no less than twelve electric railway companies. "This fact alone," said Mr. Dunstan, "gives a fair indication of the great activity in that particular branch of applied electricity. I am well aware that railway construction does not in every case immediately follow the acquisition of a charter. Too often charters are obtained for purely speculative purposes, and legitimate enterprises are blocked by unreasonable demands on the part of speculating incorporators, who do not hesitate to ask heavy compensation for giving up charters never seriously intended to be used by themselves. But on every hand, throughout the whole country, we now find electric roads projected or under discussion. Towns and villages are being connected together, with the result that this cheap and easy means of local transit,

together with the intercommunication afforded by the telephone, will go far to break down that isolation which makes farm and country life so distasteful to the younger members of the community." Speaking of electric lighting, Mr. Dunstan remarked:—"The question of municipal control of city lighting was fought to an issue in Toronto, in a contest remarkable for warmth and energy. Every effort was made on both sides to educate the people in the way they should go to the polls, the result being that the by-law to provide funds to erect the civic plant was defeated by a vote of 8 to 1." In reference to the conflict between gas and electric light, the president said that "this year a new disturbing element was found in the form of acetylene gas. This gas had important defects to prevent it coming into general use, but at the same time it will prove an important factor. Electric light, however, was of such superior value that it only had to be kept at a high standard to fear no rivals. Whatever the outcome, electric light men must face the fact that prices from competition or other causes have a downward tendency, and this tendency must be met with improved methods of production. Indications pointed strongly to the fact that we are on the verge of a 'horseless age,' an age when bicycles, carriages, etc., would be self-propelled. Will the motive power be derived from electricity, petroleum, compressed air, or some other source of energy? Tests have resulted, so far, greatly in favor of petroleum. But electricity, as free from dirt, and with a more economical storage battery would establish what was wanted."

The election of officers of the Association resulted as follows:—

President.—A. B. Smith, Superintendent Great North Western Telegraph Co., Toronto.

First Vice-President.—C. B. Powell, Ottawa Electric Co., Ottawa.

Second Vice-President.—L. B. McFarlane, Manager Eastern Department Bell Telephone Co., Montreal.

Secretary-Treasurer.—C. H. Mortimer, Toronto.

Executive Committee.—W. Y. Soper of Ahern & Soper, Ottawa; George Black, Manager Great North Western Telegraph Co., Hamilton; E. C. Breithaupt, Electrical Engineer, Berlin, Ont.; J. J. Wright, Manager Toronto Electric Light Co., Toronto; O. Higman, Internal Revenue Department Ottawa; J. A. Kammerer, General Agent Royal Electric Co., Toronto; F. W. Badger, City of Quebec; A. Wickens, Electrical and Mechanical Engineer Parliament Buildings, Toronto; John Carroll, Sec.-Treas. Eugene F. Phillips Electrical Works, Montreal; K. J. Dunstan, Manager Bell Telephone Co., Toronto.

The Convention decided that the next place of meeting should be in Toronto, in the month of June next.

The banquet tendered to the Association was a novelty in more than one respect. Electricity was utilized in every possible way to beautify the dining-room of the Russell House. The decorations were illuminated by electricity, and in the midst of the room was a brilliantly lighted revolving float. Many ladies were present, and occupied seats with the gentlemen at the tables. Each chair at which a lady was seated was surmounted with a floral arch, at the top of which was an electric light. The serving of the dishes was done on a raised platform within the sight of all, and as the knives were sharpened they emitted flashes of electricity. Altogether the

wizard fluid played a more prominent part in the gathering than it ever did before in Canada on a similar occasion.

EDITORIAL NOTES.

The editorial article in the last issue of this journal re Birch Oil has excited much interest in different sections of Canada, and we are in frequent receipt of enquiries as to whom of our manufacturers are prepared to produce the necessary apparatus and machinery for the extraction of the oil from birch wood. If there are any such we would be pleased to learn the fact to the end that our enquiring correspondents may be supplied with the information they desire. There seems to be a good opening for a new industry in Canada.

The platform adopted by the Pennsylvania Republican State convention recently held at Reading, declares for an honest dollar, opposes the debasement of the national currency by the admission of silver to free and unlimited coinage at the arbitrary ratio of 16 to 1, and continues:—"We declare our continued adherence to the protective policy, which has been so steadily championed for one hundred years by the great men of our state and of our nation and to the acceptance of which policy by the Republican party the country owes all the prosperity it has enjoyed during the last thirty years. We insist upon the passage of such legislation as will secure the restoration and maintenance of this policy without qualification or abatement."

Formerly the land was the mainstay of the ruling men in England, but it is not and cannot be so now. More and more must rich men sustain themselves by investments in business enterprises apart from land-holding, and it is often these very men, successful in life, who are most capable of conducting the various departments of government. Thus the London Investors' Review, speaks of the Chamberlains (Joseph and Austen Chamberlain) as "able and expert men of business." So far as Great Britain is an example, public opinion does not demand that its leading statesmen should have no connection with business matters, but rather that the connection should be clean, and that the character of the man be such that he will not be swayed by his private interests in deciding upon matters of national importance.

The legality of sugar bounties is one of the questions pending before the American Supreme Court. Fancy the people of the United States paying to a great trust a bonus because sugar is refined within the boundary! A Conservative protectionist in Canada could see the absurdity of such a project.—Toronto Globe.

The Globe should try to be honest. The people of the United States have never been asked to pay a bonus to the sugar trust nor to pay a bonus because sugar is refined in that country. A bonus was offered, however, by the law, upon the production of sugar in the United States, this being intended to encourage the growth of sugar beet and the manufacture of beet sugar therefrom. As long as a protectionist government existed in that country the bounty was paid, but now Mr. Cleveland's free trade party is in power the payment of the bounty is contested, and the beet growing farmers are badly left.

A few days ago two gentlemen connected with the beet sugar industry in Germany visited Whitby, Ont., to inspect some of the plots of sugar beets that were being cultivated this season in that section. The parties were Mr. Wilhelm Kunthal consulting engineer for the Maschinen-fabrik in Grevenbreich, Prussia, and Mr. Ernest Otten, who has been superintendent of the beet sugar factory at Chino, in California. Both were delighted with the soil around Whitby and with the size, shape and quality of the beets, a few of which they pulled indiscriminately from the several plots and examined carefully. They could not be surpassed. They asked for and obtained, copies of the Act imposing duty on sugar, and granting a bounty on Canadian produced beet sugar. They took liberal notes as to price to be paid for beets, supply to be relied upon, cost of labor, coal, lime, etc. They made estimates of probable working of factory, and had no hesitation in pronouncing that under present Government policy Canada affords a better opening for this industry than is to be found anywhere else. Mr. Kunthal has sailed for Germany and will submit the scheme to capitalists there. A French gentleman who has examined all the probable locations for the industry in the United States, and who is thoroughly informed as to the condition in Canada, writes to Mr. Robert H. Lawder that a fund of \$1,000,000 has been promised from Paris for establishing the industry in the United States or Canada.

There is, perhaps, no better criterion of the development of Canada's commercial relations with foreign countries to be adduced than that afforded by a review of the extension of our postal service within the past few years. Since 1894 there has been a wonderful expanse of our parcel post conventions, more than a score of important routes having been added to the system. The Postoffice Department has been obliged to issue an entirely new schedule of parcel routes, to come into operation on the 1st of October. It shows that a tariff has been arranged for the carrying of parcels to almost every part of the world open to foreign commerce. Of course to some of the more distant parts of the globe the prices of parcel carriage appear to be so high as almost to preclude the transaction of business, but when it is considered that to many of these distant localities it would have been impossible a year ago to have posted a letter by any route the cost of parcel carriage thither does not seem so exorbitant after all. An examination of the table shows that distance does not always dominate the charges. For instance, it costs to send a parcel of one pound weight to the Congo Free States seventy-two cents and to Chili \$1.02, which latter is the same rate charged per pound to Cochin China. Again, while it costs \$1.48 to forward a five-pound parcel to Panama, a package of similar weight may be sent to Constantinople for ninety cents. The most expensive rates are those to the Dutch East Indies, Persia, and the German colonies in East Africa, the rates being from \$1.10 to \$1.18 per one-pound package. For same rate one may send a six-pound parcel to Jerusalem.

Referring to the advocacy of air brakes for street cars by the Electrical Engineer, the Syracuse Courier remarks:

An electrical paper, in discussing the question of fenders as life preservers for electric cars, suggests that good brakes are more of a necessity to street cars than the fenders, concerning

which so much is being said about the country. Very likely this conclusion is correct. Inventors are reported to have already devised power brakes by which the motorman, by a slight movement of the hand, can almost instantaneously stop a car, while running even at a very high rate of speed. These brakes are quite expensive and for this reason, possibly, they have not been, as a rule, adopted by the trolley companies. The time will come, however, when the railroad companies will be compelled, both by public opinion and by business considerations, to adopt every or any practical appliance, no matter how expensive it may be, which will protect human life. Costly litigation will follow the killing of people on the public streets, and in time, if the killing continues, the damages that in many instances must necessarily be paid will far exceed the cost of appliances which would prevent such accidents. The objection is raised by the trolley companies to the use of the instantaneous brake, that the immediate stopping of the car would shake up the passengers and possibly bruise some of them. This argument is not a tenable one, for steam cars running at the rate of forty to fifty miles an hour, are often stopped by the application of air brakes and the reversing of the engine to prevent accidents, even if the passengers are somewhat shaken up by the operation. It would be better for the trolleys to slightly bruise a few people than to kill one by their inability to stop in time to prevent such killing. In the long run the most expensive appliances for the trolley cars may become the cheapest.

To the question, "Has the National Policy made you rich?" the Advertiser some time ago submitted the following classified answers:

Answer—No.

The mechanic.
The city and town laborer.
The professional man.
The farmer.
The farm laborer.
The independent manufacturer.
The railway employe.
The railway shareholder.
The storekeeper.

Answer—Yes.

The combinester.
The monopoly holder.
The privileged class.
The boodling politician.
The fat office-holder.
The crooked contractor.
The crooked contract broker.
The railway charter manipulator.

Readers can judge for themselves whether or not the class law has been operated in the best interests of the great mass of the people.—London Advertiser.

Our worthy contemporary is simply immense in supplying classified answers to fool questions; and judging from the above it might be supposed that the answers it gives were bona fide replies to a question it had sent out. It is careful, however, not to supply the names of any of the classes answering No, not even of one so-called independent manufacturer; and it is entirely too cautious to mention the names of any of those whom it classifies as answering Yes. This is cowardly. Why don't it tell that for years a large majority of the people of Canada answer Yes to its question.

There are 731 banks in the Dominion of Canada under control of the Postoffice Department where people deposit their savings. That is 32 more than there were in 1894. During the year which ended June 30th, 1895, as many as 143,685 deposits were made in these banks, averaging \$52.11, or in all \$7,488,028. This is some \$36,000 less than was deposited last year,

but it is still a very large sum, when an account is taken of the general depression in business. Besides this the postoffice savings banks have now the competition of almost every incorporated bank in the country. They all started savings departments so soon as the Government lowered the rate of interest in the postoffice savings banks from 4 to 3 1-2 per cent. and raised their rate of interest back to 4 per cent. In the postoffice savings banks there was on deposit on the 30th of June, the sum of \$26,805,542, or \$3,547,674 more than at the close of 1894. The average sum at each depositor's account is \$222.22. The average the previous year was \$215.84. The accumulated interest on the popular savings during the fiscal year was \$876,049. In ten years the savings have increased over eleven millions of dollars. The system was established in 1868, with 81 postoffice savings banks. The following year there were 231 banks, with a total deposit of \$856,814. The system cost to manage that year 0.67 per cent. of the total amount in the banks. In 1885 the cost was 0.24 per cent., or \$35,751. In 1891 the cost of management was 0.26 per cent., or \$60,193; last year the cost of running the 731 postoffice savings banks in the country, with their \$26,000,000 of savings, was but \$57,116, or 0.24 per cent. The number of deposits made during the year was 143,685; number of withdrawals 85,588. Twenty-six thousand accounts were closed and 29,000 new ones opened, leaving 120,628 accounts on the books of the institution at the close of the year. The 731 postal savings banks in the country cost on an average \$78 each to run last year.

The American Carpet and Upholstery Trade paraphrases a familiar poem, applying it to dealers who do not advertise and which is exceedingly appropriate to a large number of manufacturers whose names we know. Hear what it says about Mr. A. B. Adhem:—

Abou Ben Adhem—may his soul have peace.—
Sold rugs and carpets down at Delhi, Greece.
Early each morning he rose and quickly hied
Himself unto his store, the where he cried
His rugs until the evening's shadows fell,
But many a day poor Adhem failed to sell
Enough to pay expenses; this him sore
Did grieve, and often deep he swore.
One night he sought his hard and lonely bed—
He was a bachelor: how could a wife be fed
On such scant profits as his trade returned?
He slept, but soon awoke; his eyes discerned
A form of wondrous beauty standing near,
The sight of which filled Abou Ben with fear.
"Your pardon, sir; I did not hear you knock.
No rugs I want to-day, I think; my stock
Is full." "That's true," the angel said,
"And so it will be until you are dead.
Here is a list of men that have much gold,
Read carefully the names that are enrolled.
Pray do you know them, these men blessed with scads?"
"Yes, lord," said Adhem, "oft I've read their ads.
I see it now, and henceforth will be wise;
Write me as one that's going to advertise."
The angle wrote and vanished. Adhem slept.
And at the earliest light from bed he leapt.
Then to the newspapers he went in haste,
And interviewed the men of shears and paste.
More printers did each editor engage,
For Abou in each paper took a page.

* * * * *
The angel came no more, but the next Fall
Ben paid the biggest income tax of all.

Manager Hill has missed an opportunity to capture a freak that might have proved a drawing card at the Toronto Fair,

if we can believe what we read in the Chicago Tribune, which says:—

Ensign Joseph C. Ludgate, of the Salvation army, "champion long-distance singer of the world," went after the one-hour-of-continuous-song record at the army barracks, No. 184 North Clark street, last night. At the end of the hour he had warbled off 51 hymns and smashed the record which he made some time ago. He extracted a few notes from the concertina just to get a flying start, and then away he went at a record gait, paced by the entire army. The first hymn was, Follow, Follow, I Will Follow Jesus, and he reeled of the four stanzas in just 49 seconds. Through Down Where the Living Waters Flow, and There is Sunlight In My Soul, he kept up the gait and left his pacemakers several notes in the rear. Then he slowed up somewhat and sang the thirteenth hymn, a solo, in slow time. But he was paced through the fourteenth by the brothers at a lively rate. At the sixteenth, sung to the tune of Marching Through Georgia, he lost time by waiting for the audience, who insisted on singing the war time-song entire, but he was five seconds ahead at the twenty-first, where the sisters acted as pacemakers. Throw Out the Life Line, Pull for the Shore, and I've Reached the Land of Corn and Wine, put him still farther in the lead. The thirty-seventh hymn, I Need Thee Every Hour, he delivered in a low voice, as if singing to his faithful concertina. His voice began to show signs of exhaustion and the ensign proceeded more slowly through the next 12 hymns, which he sang with much expression. The fiftieth, O, Take Me as I Am, he sang with the perspiration pouring down his face and in a voice that nearly cracked. But he gathered himself together and rendered the fifty-first and last with all his strength, while the audience rose to its feet and joined in the chorus. He uttered the last word just four seconds ahead of the hour. A mathematical sharp calculated that Mr. Ludgate's programme of 51 numbers averaged four verses, or 16 lines, to the hymn, exclusive of the chorus. On a basis of 10 notes to the line he sang 8,000 notes in the hour, or more than 100 a minute. A constant pressure of six pounds on the vocal cords for that time would equal a force of one horse-power exerted for three minutes. During the delivery of his songs he expelled about 35 cubic feet of air.

The Cycling edition of the Petrolia Advertiser, of August 29th, issued in connection with the great meet of the Canadian Wheel Association, held at Petrolia, is a highly creditable production. It is printed in two colors, blue and yellow—the colors of the Petrolia club—affid illustrated with well executed photo-engravings of the several officers. It also contains views of the parade, the Petrolia track, etc., also a fine view of the Petrolia oil wells.

The leading illustrated articles in The Methodist Magazine for September are: "Savonarola, the Martyr Monk of Florence," by the editor; "City, Rice Swamp and Hill, or Missionary Triumphs in India," by Rev. J. G. Angwin; "Walks in London," by Rev. W. Harrison; "In a Sledge Through Famished Russia," by E. W. C. Brooke; "The Early English Drama," by the editor; and "Florence Nightingale," by Marie A. Belloc. The story, "Airlie's Mission," is also handsomely illustrated.

The corn crop now being harvested will be the largest ever grown in the United States, and very appropriately the September Good Housekeeping gives the place of honor to the subject of "Indian Corn as a Food." Miss Parlos writes of the market places of Hanover and Dresden, in her usual entertaining manner; there is a short story, "Murial's Sacrifice," by Cornelia Weason Boyden; a variety of papers relating to home topics and the whole sprinkled with original verse of more than ordinary merit. Clark W. Bryan Company, Springfield, Mass.

"Compulsion in Child Training" is the subject which the Rev. Charles H. Parkhurst, D. D., discusses in the September Ladies' Home Journal. "The Men Who Write Our Comic Operas" are represented by portraits and sketches of "The Composer of 'Wang,'" "The Composer of 'Robin Hood'" and "The Composer of 'Princess Bonnie.'" Graceful in the theme and melodious in construction is Mr. Robert Coverley's song, "Love's Reflections," written exclusively for this issue of the Journal. Grace Greenwood writes of "The Man Who Most Influenced Me,"

Amelia E. Barr of "Conversation at the Dinner-Table," and Frank R. Stockton's "Love Before Breakfast" comes to a conclusion. J. Harry Adams writes of "Some Artistic Doorways" and several bright women give some charming ideas for "Beautifying the Home." Published by The Curtis Publishing Company, of Philadelphia.

Canadians will find much to interest them in Outing for September, a beautifully illustrated number. In "The Seigneur's Shooting Party," Gertrude Cundill portrays life in the Province of Quebec. In "Paw Ducket's Coon-Hunt," Ed. W. Sandys is at home in the woods of Ontario; in "True Canoeing," R. B. Burchard shows the advantage of the old-style meets, and in "On and In the Ottawa," Wm. Thomson describes the capture of a big muscalonge. Other attractive features are "The Cup Champions and their Crews," "Family Camping" and "International Athletics for 1895."

The September issue of The Canadian Magazine is very distinctly above the average as to interest. There is the same strongly Canadian flavor throughout it, and the range of subjects which are dealt with are wide and varied. As a representative of the culture and thought of the country it is entitled to the respect and support of Canadians, and it is gratifying to learn that it is receiving both in measures which are encouraging to the magazine's promoters. Mr. O. A. Howland, M.P.P., reviews Mr. Hopkins' "Life of Sir John Thompson," corrects one or two inaccuracies, as he conceives them to be, in the work, and adds some bright remarks of his own concerning that lamented statesman's career.

The success of a magazine serial dealing with contemporary American affairs has been demonstrated by the wide interest that has been aroused by President Andrew's "History of the Last Quarter Century in the United States," now running in Scribner's Magazine. The great variety of the topics treated makes each instalment of new interest. This is illustrated by the splendid instalment which leads the September number of Scribner's. There is no one who cannot find something of unusual interest in an instalment which includes episodes of such variety as the third-term contest of President Grant, Conkling's feud with Garfield, the assassination of Garfield, the Star Route and Whiskey Ring frauds—all of which topics are illustrated with a unique series of pictures collected with great pains from authentic sources.

In The Popular Science Monthly for September, ex-President Andrew D. White reviews "The Closing Struggle" of the theologians and the higher criticism; relating the stories of Bishop Colenso, Prof. Robertson Smith, Renan, the work of the Italian critics, and Pope Leo's Encyclical on the Study of the Scriptures, and expresses the belief that there is now reason to hope that "the path has been paved over which the Church may gracefully recede from the old system of interpretation and quietly accept and appropriate the main results of the higher criticism." In his fifth paper on "Professional Institutions," Herbert Spencer shows how history and fiction have been evolved from biography, and literature has been ultimately derived from it. Mr. Morse's article on "Apparatus for Extinguishing Fires" is concluded, with accounts of the latest improvements and methods now in use. Mr. Alexander McAdie treats of the clouds as "Natural Rain-Makers." The articles in the Editor's Table are on "the Prospects of Socialism and Sham Education." New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

The Anderson Furniture Co., are enlarging their works at Woodstock, Ont.

The Consolidated Kansas City Smelting and Refinery are reported arranging to put up a large smelting plant at Nakusp, West Kootenay, B.C.

The Mica Boiler Covering Co., Toronto, in consequence of rapidly increasing business, find it necessary to vacate the premises they have been occupying on Bay street, and have secured more commodious quarters at 9 Jordan street, which are now being prepared for them and which they will occupy early in October.

It was expected that the new glass works at Wallaceburg, Ont., would be put in active operation this week. The fuel to be used in these works will be natural gas, which is found in great quantity at that place. About 250 hands will be employed.

A new industry is being started in Ottawa which, if successful, may prove a very satisfactory solution of the sawdust question, and provide a cheap and easy way for the great sawmills of the country to dispose of their refuse. Mr. John McLatchie and Mr. Olney, the inventor of the process, which the new industry is to test, are placing a plant in a suitable building at the Chaudiere for the manufacture of fuel from sawdust.

THE INDUSTRIAL EXHIBITION.

Without doubt the number of manufacturers displaying machines, machinery and mechanical appliances at the Toronto Exhibition this year was greater than ever before, and the exhibits of greater importance. Where so much excellence prevailed, and where the exhibits were so numerous it would be practically impossible to give the briefest description of all of them, and we therefore give only the names of the principal exhibitors and the character of their displays.

It will be noticed that the names of a very large number of the exhibitors are marked thus *, particularly those occupying spaces in the Machinery Hall. This indicates that the parties advertise their business in The Canadian Manufacturer.

MACHINERY HALL.

*The Royal Electric Co., Montreal, had a most instructive exhibit of their electric machinery and appliances, the most noticeable of which was their S.K.C. two-phase alternating current apparatus, the machine shown being the first of the kind built in Canada, and from which current was taken for both arc and incandescent lamps, and also for motive power. They also showed generators, transformers, motors, arc and incandescent lamps, etc.

*The Packard Electric Co., St. Catharines, Ont., made a brilliant display of their new Packard incandescent lamps, recently described in full in these pages; also their Packard transformer.

*The Toronto Electric Motor Co., Toronto, exhibited a large number of their constant potential motors, dynamos for incandescent lighting and electro-plating, etc. The company inform us that during the Fair they sold twenty-six motors that they had on exhibition as follows:—One each to Steele, Briggs & Marcom Co.; Oakley & Holmes; Matthew Guy; Toronto Carpet Cleaning Co.; The Cork Co. of Canada; The A. R. Williams Co.; Park & Blackwell; James Wollings; D. M. Diamond & Co.; Murray Printing Co.; Toronto Granite Co.; D. W. Leaster, and John Fensom Elevator Works, all of Toronto, to the latter six machines; also Goold Bicycle Co., Brantford, Ont.; D. Graham, Son & Co., Inglewood, Ont.; Pedlar Roofing Co., Oshawa, Ont.; and to Duncan & McLennan, Campbellton, N. B.; and to John Irwin, Niagara Falls, New York, two each.

*The Kay Electrical Mfg. Co., Hamilton, Ont., exhibited a number of specimens of their dynamos, motors, etc. They make these machines in all sizes and voltages for lighting and power.

The W. A. Johnson Electric Co., Toronto, made a display of their slow speed alternating current dynamos, equipped with machine wound removable armature coils. These machines are made in sizes of from 500 to 5,000 lights capacity.

*The Electric Storage Battery Co., Philadelphia, Penn., occupied a liberal portion of the space assigned to the W. A. Johnson Electric Co., in which they displayed a number of their chloride accumulators and electric storage cells, a full description of which has heretofore been given in these pages. The Johnson Co. are the Canadian agents for these accumulators.

The London Electric Motor Co., London, Ont., made a good display of their motors, dynamos, transformers and electrical equipments.

*Cowan & Co., Galt, Ont., made an attractive exhibit of their wood-working and other machinery, engines, etc., including shapers, saw mill machinery, planers, matchers, etc.

*The Goldie & McCulloch Co., Galt, Ont., made their usual display of wood-working machinery, etc., and of their Wheelock steam engine, which supplied power for much of the machinery in motion in the building.

*John Bertram & Sons, Dundas, Ont., made an exhibit of a number of their iron working tools in operation. The ease with which iron could be planed and otherwise worked excited much interest.

*The Northey Mfg. Co., Toronto, manufacturers of pumping machinery, had a good display of pumps, some of which were in operation.

J. H. Ackert, Holywood, Ont., showed a double shingle edger, for which he has recently been granted a patent. With it one man can operate two saws and edge some 30,000 shingles per day.

*The Cant Bros Co., Galt, Ont., made a display of exhaust fans, wood-working machinery, etc.

A. R. Williams, Toronto, showed lines of iron-working machinery, blast and exhaust fans, etc.

*J. R. Baird, Woodstock, Ont., had on exhibition one of his gasoline engines that excited much admiration. A full illustrated description of this engine will be given in these pages at an early day.

*J. S. Parmenter, Woodstock, Ont., exhibited a model of his patent dry kiln, for drying lumber, shingles, staves, heading, etc. A full description of this kiln will be given in a subsequent issue of this journal.

*Dodge Wood Split Pulley Co., Toronto, made their usual fine display of their Dodge patent wood split pulleys, with patent bushing, the use of which, they say, will save from 30 to 60 per cent. of power.

*Reid Bros. Mfg. Co., Toronto, exhibited specimens of the Reid patent bent rim wood split pulley made by them.

*The Reeves Pulley Co., Toronto, had on exhibition a number of their patent wood split pulleys. These pulleys are made in all usual sizes.

The Power Belting and Rope Co., St. Catharines, Ont., exhibited specimens of their patent woven rawhide belting. Regarding these belts we are informed that there are no joints in them, no cement, no rivets, and are water and weather proof.

*Daring Bros., proprietors of the Reliance Works, Montreal, exhibited a number of the mechanical appliances made by them, among the more important of which were the Webster vacuum feed water heater and purifier, Webster oil extractor, Webster live steam separator, Morse valve reseating machine, Prouty wire valve wheel, etc.

*The Kerr Engine Co., Walkerville, Ont., had an attractive exhibit of the valves manufactured by them, noticeable among them being the Lunken and Weber gate valves, for steam and water, and the Kerr quick opening hot water valve for radiators. We are informed that the valve department works of this concern is being worked to its full capacity on orders already booked.

*The Heeson Rocking Grate Bar Co., Toronto, had a working specimen of their apparatus on exhibition. It is made to suit all kinds of heating furnaces.

*The Mica Boiler Covering Co., Toronto, showed many specimens of their mica covering, and how it can be applied. A full description of this article has already been given in these pages. The process of manufacture is patented. It can be made with a perfectly flexible jacket which may be cut to almost any size or shape.

*The Hamilton Brass Mfg. Co., Hamilton, Ont., made an attractive display of some of their products, including their T.J.C. injector, cyclone and other lubricators, cocks and other brass goods.

*The Penberthy Injector Co., Windsor, Ont. and Detroit, Mich., had on exhibition specimens of their automatic injector. This injector was awarded a diploma at the World's Columbian Exposition.

*Dean Bros., Toronto, displayed specimens of their phosphoric Babbitt metal and brazing spelter. This concern are also brass founders, making to order all kinds of brass, phosphor bronze, zinc, copper and aluminum castings.

T. Draper, Petrolia, Ont., made a display of brass balls and ball valves, refacers for globe and Jenkins' valves and water taps, etc.

A. T. Morrow, Toronto, exhibited his patent Economic oil filter, made in four sizes. By its use no oil is wasted, as it is filtered continually and used over and over again.

*G. T. Pendrith, Toronto, exhibited one of his two-spindle power improved tub dough mixers, for bread and biscuit makers. These mixers are made in several sizes.

Smith Bros., Toronto, exhibited their Premier chemical fire extinguisher, capable of working up to a pressure of 700 pounds per square inch.

The Dominion Metallic Packing Co., Hamilton, Ont., made an exhibit of their elastic metallic rod packing, together with suitable method, showing how it is applied.

*Wm. O. Wilson, Toronto, made a very attractive exhibit of the steamboat, railroad and mill supplies handled by him, including cylinder and valve oils, lubricators, boiler compounds, rainbow sheet and gasket packing, etc.

Talbot, Cockroft & Harvey, Elora, Ont., had a power loom in operation manufacturing body brussels carpet, the article turned out being very beautiful indeed both as to quality, style and finish. In connection with their exhibit they also showed wool—Canadian wool, both natural and scoured, and yarns made from the same, dyed in many colors, the carpet being woven on the loom being made of them.

J. R. Ronald, Brussels, Ont., had three of his celebrated steam fire engines on exhibition that excited a great deal of favorable comment.

A number of American manufacturers had attractive exhibits in Machinery Hall, noticeable among them being:—Pratt & Letchworth, proprietors of the Buffalo, N.Y. Malleable Iron Works and the Buffalo Steel Foundry. The specimens shown of their products excited much interest.

Lambert & Co., Buffalo, N.Y., showed their Lambert improved rounder and Lambert shaper, for making carriage wood work. These machines shown by this concern were sold to the McLaughlin Carriage Co., Oshawa, Ont., and duplicated to several other parties.

The Chicago Rawhide Mnfg. Co., Chicago, exhibited specimens of the rawhide belting manufactured by them. This concern make flat belting, twist and rope belting, lace leather, picker leather, etc.

W. W. Ingraham, Chicago, exhibited his patent Excelsior oat clipper, polisher and separator by which oats are prepared for market. This article is manufactured in Canada by Wm. & J. G. Greay, Toronto.

STOVE BUILDING.

The usual displays of cooking and heating apparatus, etc., were made in this building.

*Gurney Foundry Co., Toronto.—Oxford stoves and ranges, and gas ranges.

The Gurney Tilden Co., Hamilton, Ont.—Souvenir stoves and ranges, and gas ranges.

James Stewart Mnfg. Co., Woodstock, Ont.—Good Cheer stoves and ranges, and Sultana double heater.

Moffatt Stove Co., Weston, Ont.—Pearl stoves, ranges and heaters.

Wm. Buck, Brantford, Ont.—Happy Thought stoves and ranges, base burners, heating furnaces, etc.

Record Foundry and Machine Co., Moncton, N.B., and Montreal.—Good Luck stoves and ranges.

McClary Mnfg. Co., London, Ont.—Famous warm air furnaces, and combination warm air and hot water heating apparatus.

R. McDougall & Co., Galt, Ont.—Eclipse hot water heating apparatus.

Watson Heater Co., Montreal.—The Watson hot water heater.

J. F. Pease Furnace Co., Toronto.—Economy heating furnaces.

Warden King & Son, Montreal.—Daisy heaters.

Doherty Mnfg. Co., Sarnia, Ont.—Favorite base burner heaters.

R. Bigley, Toronto.—Bigley's patent base heating furnace with hot water heater.

Toronto Portable Oven & Mnfg. Co., Toronto.—Hubbard patent portable steel bake oven.

Midgley Vapor Burner Co., Paris, Ont.—Midgley vapor burner.

Citizen's Gas Control Co., Montreal.—Peterson gas governor.

Davidson & Co., Toronto.—Common Sense dish pan, rest for kitchen sinks.

CARRIAGE BUILDING.

The display of wheel pleasure vehicles, sleighs, omnibuses, carts, etc., in this building was exceedingly attractive, a new and special feature being the bicycle department, where a large number of wheels were shown. Exhibitors included the following:—

Brantford Carriage Co., Brantford, Ont.

Canada Carriage Co., Brockville, Ont.

McLaughlin Carriage Co., Oshawa, Ont.

Kingston Vehicle Co., Kingston, Ont.

J. B. Armstrong Mnfg. Co., Guelph, Ont.

B. J. Nash & Co., London, Ont.

Wm. Gray & Son, Chatham, Ont.

The Thousand Islands Carriage Co., Gananoque, Ont.

Hutchinson & Son, Toronto.

S. Brown, Toronto.

John Campbell, London, Ont.

Dixon & Co., Toronto.

John Dixon, Toronto.

Tudhope Carriage Co., Orillia.

M. W. Guy, Toronto.

Sullivan Carriage Works, Toronto.

Ashley Carriage Works, Belleville, Ont.

Robinson Carriage Mnfg. Co., Coldwater, Ont.

Isaac Simpson Mnfg. Co., Brantford, Ont.

Allied industries included:—

T. A. Crow, Toronto.—Delivery wagons.

St. Charles & Pringle, Belleville.—Omnibuses.

D. Conboy, Toronto.—Conboy roller buggy top.

James Warnock & Co., Galt, Ont.—Bolster springs, etc.

Newlands & Co., Galt, Ont.—Saskatchewan buffalo robes.

McCaskill, Dougall & Co., Montreal.—Standard varnishes.

Andrew Muirhead, Toronto.—Carriage varnishes.

Safety Rein & Whip Holder Mnfg. Co., Toronto.—Combined rein and whip holder.

E. N. Heney & Co., Montreal.—Harness and saddlery.

Standard Whip Co., Toronto.—Whips, lashes, etc.

Canadian Harness Co., Toronto.—Harness, collars, etc.

T. B. Dowsley, Owen Sound.—Eliptic springs.

In the Bicycle Department of the Carriage Building the following exhibitors made displays of wheels:—

*Welland Vale Mnfg. Co., St. Catharines, Ont.—The Welland Vale.

*G. T. Pendrith, Toronto.—The Sun.

J. Lochrie, Toronto.—The Antelope.

H. A. Lozier & Co., Toronto.—The Cleveland.

Wanderer Cycle Co., Toronto.—The Wanderer.

Goold Bicycle Co., Brantford.—The Brantford.

McLean & Bulley, Toronto.—The Planet.

Comet Cycle Co., Toronto.—The Comet.

A. D. Fisher & Co., Toronto.—Bicycle supplies.

Cycle Wood Rim Mnfg. Co., Toronto.—Bicycle rims.

C. W. Hurndall & Co., Toronto.—Bicycle rims, mudguards, etc.

Automatic Bicycle Saddle Co., Toronto.—Automatic bicycle seat.

American Dunlop Tire Co., Toronto.—Dunlop tires.

AGRICULTURAL MACHINERY HALL.

McMaster Mnfg. Co., Orangeville, Ont.—Steel binders.

John Goodison, Sarnia, Ont.—Mowing machinery.

William Brown, Whitby, Ont., (Successor to Mowat Mnfg. Co.)—Reapers and mowers.

P. E. Shantz, Preston, Ont.—Binders, mowers, tedders, etc.

Frost & Wood, Smith's Falls, Ont.—Harvesters, mowers, reapers, binders, etc.

Cossitt Bros., Brockville, Ont.—Reapers, binders, mowers, etc.

Peter Hamilton Mnfg. Co.—Binders, mowers, cultivators, etc.

Massey-Harris Co., Toronto.—Binders, reapers, mowers, etc.

W. A. Gerolamy, Tara, Ont.—Plows, cultivators, etc.

McPherson & Co., Fingal, Ont.—Threshing machinery.

McDonald Mnfg. Co.—Threshing machinery, horse powers, etc.

Waterloo Mnfg. Co., Waterloo, Ont.—Threshing machinery, horse powers, etc.

R. Woon & Co., Oshawa, Ont.—Clover huller and thresher.

Macpherson & Hovey Co., Clinton, Ont.—Threshing machinery.

Matthew Moody & Sons, Terrebonne, Que.—Threshing and farm machinery.

*John Abell Engine and Machine Works Co., Toronto.—Threshing machines, clover huller machines, separators, threshing engines, traction engines, horse power, farm engines, etc.

Sawyer & Massey Co., Hamilton, Ont.—Clover mills, separators, horse powers, etc.

Chatham Mnfg. Co., Chatham, Ont.—The celebrated Chatham wagons for all purposes.

Adams & Son, Paris, Ont.—Farm and other wagons.

Bain Bros. Mnfg. Co., Brantford, Ont.—Farm wagons.

James Grierson, Toronto.—Dump wagon.

Speight Wagon Co., Markham, Ont.—Coal and other wagons.

J. Cruickshank & Sons, Weston, Ont.—Wagons and carts.

Snowball Wagon Co., St. George, Ont.—Farm wagons.

Manson Campbell, Chatham, Ont.—Fanning mills.

Neely, Durand & Co., Dorchester Station, Ont.—Hay and grain elevators and carriers.

Richardson & Webster, St. Mary's, Ont.—Horse-power feed cutters, etc.

B. Bell & Son, St. George, Ont.—Sweep powers, cultivators, etc.

M. T. Buchanan, Ingersoll, Ont.—Hay tools, carriers, stackers, etc.

Jas. W. Provan, Oshawa.—Hay carrier, fork and sling, etc.

Shelburne Tire Setter and Cooler Machine Co., Shelburne, Ont.—Tire settings and cooling machine.

Holmes & Halliday, Clarksburg, Ont.—Spray pumps.

D. Thom, Watford, Ont.—Feed cutters.

Whitman & Barnes Mfg. Co., St. Catharines, Ont.—Feed and ensilage cutters.

P. Straith, Clinton, Ont.—Reaper and mower knife sharpener.

Goold, Shapley & Mun Co., Brantford, Ont.—Wind power pumping machinery.

George White & Sons, London, Ont.—Threshing, farm and traction engine, etc.

Watson Mfg. Co., Ayr, Ont.—Agricultural and farm machinery.

J. W. Mann Mfg. Co., Brockville, Ont.—Cultivators.

Coulthard-Scott Co., Oshawa, Ont.—Seed drills, cultivators, etc.

T. T. Coleman, Seaforth, Ont.—Plows, cultivators, farm machinery, etc.

Cockshut Plow Co., Brantford, Ont.—Plows, harrows, cultivators, etc.

Wilkinson Plow Co., Toronto.—Plows.

Verity Plow Co., Brantford, Ont.—Plows.

J. Fleury's Sons, Aurora, Ont.—Plows, cultivators, etc.

James Whiteman, Amulree, Ont.—Pea harvester.

Tolton Bros., Guelph, Ont.—Plows, harrows, pea harvester, etc.

T. E. Bissell, Prescott, Ont.—Disk harrow.

Noxon Bros. Mfg. Co., Ingersoll, Ont.—Disk harrows.

Copp Bros. Co., Hamilton, Ont.—Road machines, plows, harrows, etc.

David Maxwell & Son, St. Mary's, Ont.—Binders, mowers, reapers, etc.

John H. Grout & Co., Grimsby, Ont.—Harrows, plows, etc.
Wortman & Ward Mfg. Co., London, Ont.—Harrows, pea harvesters, farm machinery, etc.

*Waterous Engine Works Co., Brantford, Ont.—Saw mill machinery.

Several American concerns also made display, including :—

American Harrow Co., Detroit, Mich.—Disk harrows.

Hunt, Helm & Ferris, Harvard, Ill.—Hay carriers, haying tools, etc.

ON THE LAWN.

Those sections of the fair grounds apportioned to exhibits of wire fencing, wind engines, farm pumps, etc., were well occupied, and at all times presented much animation. Included among the exhibitors of fences were :—

The Page Wire Fence Co., Walkerville, Ont.

Safety Barb Wire Co., Toronto.

Ontario Lead and Barb Wire Co., Toronto.

Collins Manufacturing Co., Toronto.

Canada Fence Co., London, Ont.

Land Spring Steel Wire Fence Co., Hamilton, Ont.

M. T. Buchanan, Ingersoll, Ont.

H. A. Stringer, London, Ont.

Edward Litt & Co., Rostock, Ont.

Locked Wire Fence Co., Ingersoll, Ont.

Benedict & Co., Windsor, Ont.

Kitselman Bros., Ridgeville, Indiana. This concern are about manufacturing their goods in Canada.

Concerns exhibiting wind engines, etc., were :

Ontario Wind Engine and Pump Co., Toronto.

D. Plews & Co., Toronto.

Goold, Shapley & Muir Co., Brantford, Ont.

ROBIN, SADLER & HAWORTH

Manufacturers of

OAK TANNED LEATHER BELTING

MONTREAL AND TORONTO.

Orders addressed either to our Toronto or Montreal office will have prompt care
Goods will be forwarded same day as order is received.

The Babcock & Wilcox Water Tube Boiler

Over 1,500,000 Horse Power

Of these Boilers now in use



Sales During 1892 were 162,300 Horse Power.
Sales for Month of June 1895,
Exceeded 25,000 Horse Power.

WM. T. BONNER,

General Agent for Canada.

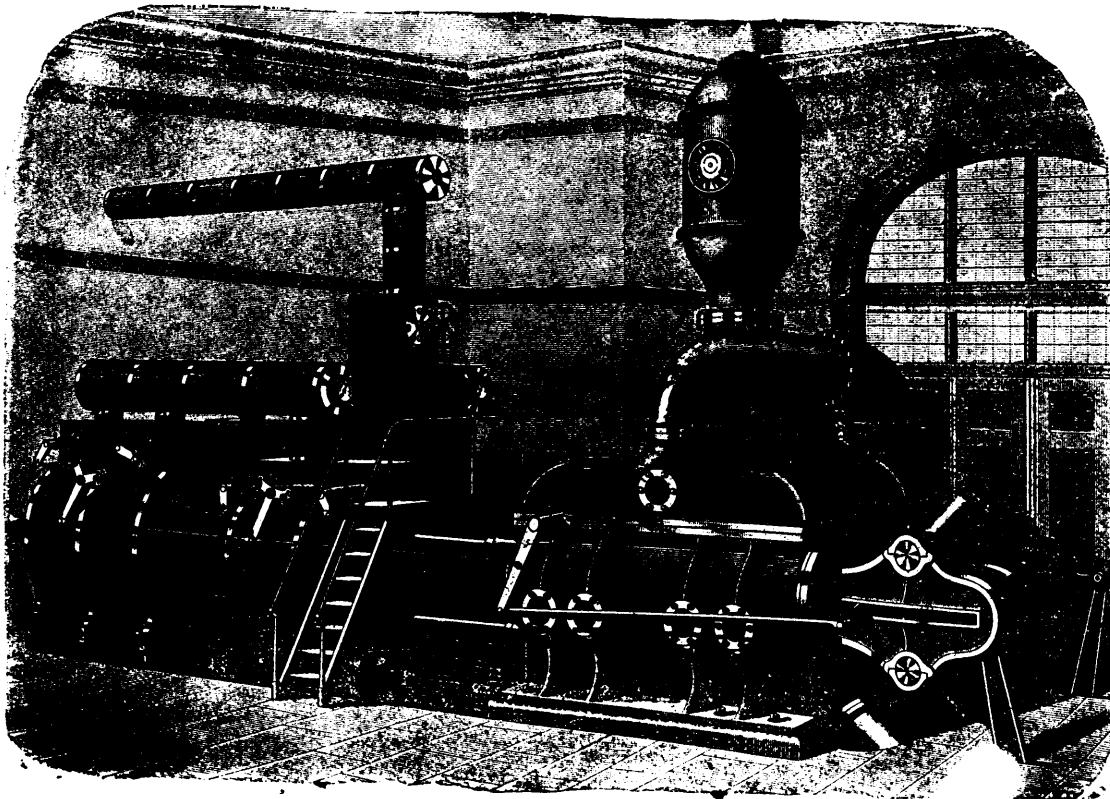
HEAD OFFICE—415 Board of Trade Building, MONTREAL.

Shops at BELLEVILLE, CANADA.

JOHN M^CDOUGALL

CALEDONIAN IRON WORKS,

MONTREAL, QUEBEC.



General Agents
in Canada for

THE FAMOUS

Worthington
Pumps

Hydraulic
Machinery

Condensers

AND

Water Works
Supplies

WORTHINGTON PUMPS ARE UNEQUALLED FOR EFFICIENCY AND ECONOMY

Stratford Bridge and Iron Works, Stratford, Ont.
Woodstock Wind Motor Co., Woodstock, Ont.
Walter Longstaff, Weston, Ont.

Anderson Force Pump Co., Aylmer, Ont.

The Tisdale Iron Stable Fittings Co., Toronto, had their kiosk ornamented with a large variety of the iron stable fittings manufactured by them.

The Toronto Granite Co., manufacturers of marble and granite monuments, etc., made a very attractive exhibit of their goods.

* The Metallic Roofing Co., Toronto.

* The Pedlar Metal Roofing Co., Oshawa, Ont.

Exhibits of the products of these concerns were to be seen upon all the different buildings in the Fair Grounds. Special exhibits in their respective stands showing corrugated and other roofing, siding, panels, ceilings, tiles, etc.

MUSIC PAVILION.

The displays of pianos, organs and other musical instruments were made as follows:—

*Bell Organ and Piano Co., Guelph, Ont.

R. S. Williams & Sons Co., Toronto.

The Doherty Organ Co., Clinton, Ont.

Dominion Organ and Piano Co., Bowmanville, Ont.

Mason & Risch Piano Co., Toronto.

Mendelssohn Piano Co., Toronto.

Newcombe Piano Co., Toronto.

Morris-Field-Rogers Co., Listowel, Ont.

Berlin Piano and Organ Co., Berlin, Ont.

H. & F. Hoerr, pianos, Toronto.

Scribner Organ Manufacturing Co., London, Ont.

Heintzman & Co., pianos, Toronto.

D. W. Karn & Co., pianos and organs, Woodstock, Ont.

Gerhard Heintzman Piano Co., Toronto.

Whaley, Royce & Co., Toronto, pianos and band and other instruments.

Ontario Veneer Co., Toronto, fancy veneers, car veneers, basket material, etc.

MAIN BUILDING.

H. R. Ives & Co., Montreal.—Brass beadsteads, etc.

The McClary Mfg. Co., London, Ont.—“Famous,” “Imperial,” and “White” lines of enamelled ware.

Thos. Davidson & Co., Montreal.—Enamelled ware, tin ware, etc. They also manufacture the “New Process” Vapour stoves, of which there was a fine display.

The Macdonald Mfg. Co., Toronto.—Decorated tin ware, grocer's chests, tea caddies, etc.

Toronto Gas Stove and Supply Co., Toronto.—Gas stoves, ranges, heaters, etc.

The Wrought Iron Range Co., Toronto.—“Home Comfort” hotel and family ranges, hot air furnaces, etc.

A. B. Ormsby & Co., Toronto.—Metal ceilings, hot air furnaces, etc.

L. Blumbergh & Son, Toronto.—Machine oiler, factory lamps, etc.

The Whitman & Barnes Mfg. Co., St. Catharines, Ont.—Mower, reaper and binder knives, wrenches, twist drill, drop forgings, etc.

E. Westman, Toronto.—Butcher's and cook's tools, etc.

Frank Wehrle & Co., Toronto.—Machine brushes, etc.

The St. Maurice Tool and Axe Works, Three Rivers, Que.—Edge tools, etc.

Geo. B. Meadows, Toronto.—Bank and Office railing, wire cloth, wire works, etc.

Alongo W. Spooner, Port Hope, Ont.—Spooners Specific—copper-ine, Babbitt metal, solder, Gaudries patent can labeller, germicide disinfectant, etc.

Toronto Steel Clad Bath and Metal Co., Toronto.—Steel Clad baths.

W.B. Malcolm, Toronto.—Bath with adjustable basin stand.

The Canada Paint Co., Montreal.—Varnishes, paints, colors, etc.

Francis Frost & Co., Toronto.—Weather and water-proof ready mixed paint.

Scientific Varnish Mfg. Co., Toronto.—Varnishes, Japans, bicycle enamel, stove polish, etc.

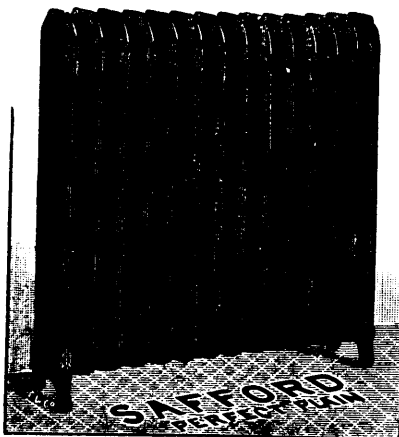
HEATING APPARATUS

Safford .: Radiators

RECEIVED THE HIGHEST AWARDS :

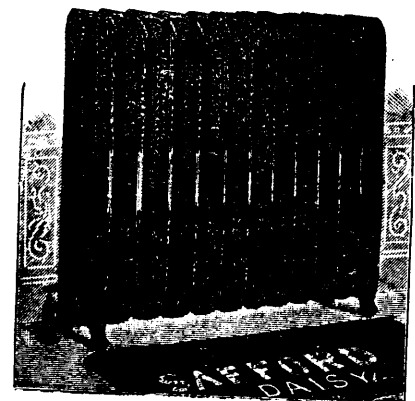
ANTWERP (BELGIUM) EXPOSITION 1894.
SHERBROOKE (QUEBEC) EXHIBITION 1893.

TORONTO (ONTARIO) EXHIBITION 1894
OTTAWA (ONTARIO) EXHIBITION 1892



All Iron.

Largest Radiator Manufacturers
Under the British Flag.



The **Toronto Radiator Mfg. Co. Ltd.**, TORONTO, ONTARIO

* Samuel Rogers & Co., Queen City Oil Works, Toronto.—Lubricating oils, cylinder oils, "Princess" lamp filler, etc.

Creelman Bros., Georgetown, Ont.—Typewriters and knitting machines.

St. Lawrence Starch Co., Port Credit, Ont.—Ivory starch.

Brantford Starch Co., Brantford, Ont.—Laundry starch.

Edwardsburg Starch Co., Cardinal, Ont.—Starch, prepared corn, etc.

C. Wilson & Co., Toronto.—Scales, refrigerators, baker and butcher tools, etc.

Christie Brown & Co., Toronto.—Biscuits.

Jos. Tait & Son, Toronto.—Biscuits.

Toronto Silver Plate Co., Toronto.—Silver plate.

Standard Silver Co., Toronto.—Silver plate.

Brown Bros., Toronto.—Blank account books, stationery, etc.

Hart & Riddell, Toronto.—Blank account books, etc.

W. E. Sanford Mfg. Co., Hamilton, Ont.—A most attractive display of ready-made clothing.

* The Canadian Rubber Co., Toronto.—Rubber shoes and all manner of rubber goods.

Don Valley Pressed Brick Works, Toronto.—Pressed bricks, terra cotta ornaments, etc.

* I. C. Fell & Co., Toronto.—Stencils, rubber and steel stamps, etc.

A. B. Mitchell, Toronto.—Rubberine and vulcanite, waterproof cuffs, collars, etc.

Laughlin-Hough Drawing Table Co., Guelph, Ont.—Patent drawing table.

Colin McArthur & Co., Montreal.—Wall paper.

The Parkdale Woodenware Co., Toronto.—Refrigerators, folding beds, etc.

Seaman, Kent & Co., Toronto.—Window blinds, door screens, etc.

Eureka Refrigerator Co., Toronto.—Refrigerators.

John Hillock & Co., Toronto.—Refrigerators, mouldings, sash, doors, etc.

*Office Specialty Mfg. Co., Toronto.—Shannon letter and bill filing cabinet.

Menzie, Turner & Co., Toronto.—Window shades.

American Rattan Co., Toronto.—Rattan furniture.

J. S. Hamilton & Co., Brantford, Ont.—Wines, etc.

A. F. MacLaren & Co., Toronto.—Imperial cheese.

W. C. Boulter, Picton, Ont.—Canned goods.

The Truro Condensed Milk and Canning Co., Truro, N.S.—Condensed milk, coffee, cocoa, etc.

*J. H. Farr & Co., Toronto.—Peerless soft oil soap, etc.

St. Croix Soap Mfg. Co., St. Stephen, N.B.—Soaps, etc.

*John Taylor & Co., Toronto.—Perfumes, toilet soaps, etc.

Toronto Salt Works, Toronto.—Windsor salt.

Radnor Mineral Water Co., Montreal, Que.—Mineral water.

I. P. Doolittle, Toronto.—Hose couplers.

THE TORONTO ELECTRIC LIGHT COMPANY.

This enterprising concern made a very interesting display of their electrical clocks upon a large tablet in the Main Building. These clocks are actuated by electric current generated at their central station, and indicated the correct time not only of Toronto but of all the principal cities of the world. A large number of these clocks are in use by the Toronto Street Railway Company, usually attached to their trolley poles or the telegraph poles in many parts of the city, for information of their employees. The clocks are also being introduced with much satisfaction into commercial houses, factories, etc.

*One of the most instructive displays at the Fair was that of the Toronto Carpet Mfg. Co., who had a generous space allotted them in the Main Building, in which they exhibited full lines of the carpet manufactured by them. These included ingrain and "Imperatrix" Axminster; some half-dozen or more qualities of ingrains, Kensington art squares, Axminster mats, rugs and squares, body border and stair carpet, etc. The carpet manufactured by this concern and exhibited at the World's Columbian Exposition at Chicago, in 1893, were awarded gold medals. These goods are of guaranteed quality and cleanliness, and are equal to the best English or American carpets.

WM. & J. G. GREY

2 CHURCH STREET,

TORONTO, ONTARIO

BUILDERS OF

Model Roller Flour Mills

OF ALL CAPACITIES.

Manufacturers of High Grade Improved Flour Mill Machinery.

Dealers in Mill Furnishings and Supplies.

Sole Agents for Genuine Dufour Bolting Cloths

Large and Varied Stock Ready for Immediate Shipment

SOLE OWNERS FOR CANADA OF THE

DAWSON IMPROVED ROLL CORRUGATIONS

Producing Unsurpassed Results. No Extra Charge for this Corrugation.

Rolls Elegantly Ground and Corrugated with Despatch.

... ORDERS SOLICITED

IN THE OVERFLOW TENT.

Dick, Ridout & Co., Toronto.—Jute and cotton bags, horse blankets, binder twine, etc.

The Turnstyle Letter Clip Co., Toronto.—Turnstyle Letter Clip.

H. L. Bastien, Hamilton, Ont.—Sail and row boats.

Wm. J. Hynes, Toronto.—Architectural and decorative ornaments.

*Toronto Fence & Ornamental Iron Works, Toronto.—Iron fencing, ornamental and brass work, etc.

J. H. Connor, Ottawa.—Washing machines, wringers, clothes dryers, etc.

S. A. Lazier & Son, Belleville, Ont.—Folded paper carpet lining, stair pads, etc.

J. Leckie, Toronto.—Boat sails, tents, fishing nets and twines, cordage, flags, etc.

The Laurentide Pulp Co., Grand Mere, Que., contemplate erecting a new pulp mill.

Thos. Bell's new furniture factory at Wingham, Ont., is rapidly approaching completion.

The Canadian Typograph Co., will manufacture ball-bearings, machines, bicycles, and vehicles in which ball bearings are used.

Messrs. John Mundell & Co., Elora, Ont., have erected a large three story addition to their furniture factory.

Messrs. Shaw & McLeod have sold their Banner File Works, at Almonte, Ont., to Messrs. Thomas Graham & Son, Toronto.

The lumber yards and steam saw mill of Messrs. A. L. Hurtubise & Bros., at Hurtubise, on the C.A.R., near Casselman, Ont., were destroyed by fire Aug. 27; loss about \$35,000.

The Manufacturers' Committee of the city council of Toronto, have recommended the Council to grant the request of the Metallic Roofing Co., of Toronto to erect a building on the corner of Dufferin and King Sts., the land to be leased from the city for 21 years. The building will cost about \$6,000 and employment will be given to 40 men.

CAPTAINS OF INDUSTRY.

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

The Baylis Mfg. Co.'s varnish factory, Montreal, was damaged by fire Aug. 30 to the extent of about \$5,000.

The Ontario People's Salt Mfg. Co., Kincardine, Ont., are applying for authority to change the corporate name of the company to the Ontario People's Salt and Soda Co.

The Grant Tanning Co., Woodstock, Ont., are applying for incorporation with a capital stock of \$90,000 to acquire the businesses carried on by J. & T. Grant, at that place to manufacture leather, etc.

The Office Specialty Mfg. Co., Toronto, are applying for incorporation with a capital stock of \$75,000 to manufacture furniture, office, church and school furnishings, etc.

The Imperial Brush Mfg. Co., Montreal, has been incorporated with a capital stock of \$140,000 to manufacture brush machinery, brushes, brush back, etc.

The Dominion Cartridge Co., Montreal, have increased their capital stock from \$100,000 to \$250,000.

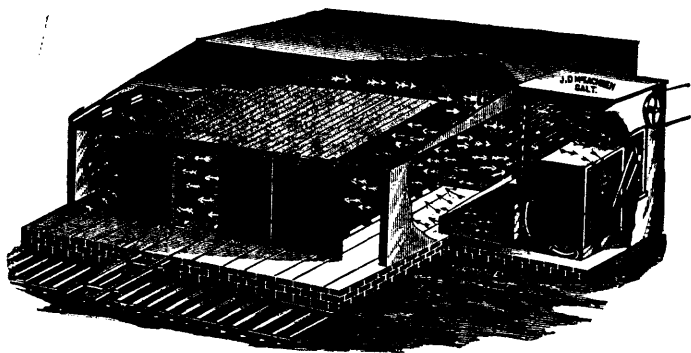
The Canada Switch & Spring Co., Montreal, will manufacture railway, electrical and contractor's supplies, etc.

Messrs. John Stevens & Son, Toronto, are applying for incorporation with a capital stock of \$50,000 to carry on the business of manufacturers of surgical instruments, druggists' sundries, etc.

The Woodstock Wagon & Mfg. Co., Woodstock, Ont., are applying for incorporation with a capital stock of \$25,000 to manufacture wagons, buggies, sleighs, etc., and to acquire the business carried on by Messrs. McIlwrath & Clynick Bros., of that place.

McEachren's System of Drying, Heating and Ventilating

Under Recent Patents.



CHEAP AND EFFECTIVE.

HIGHLY APPROVED OF BY PRACTICAL MEN.

The following is a specimen of letters received from customers:

J. D. McEACHREN, Esq., Galt, Ont.

OTTAWA, April 1, 1895.

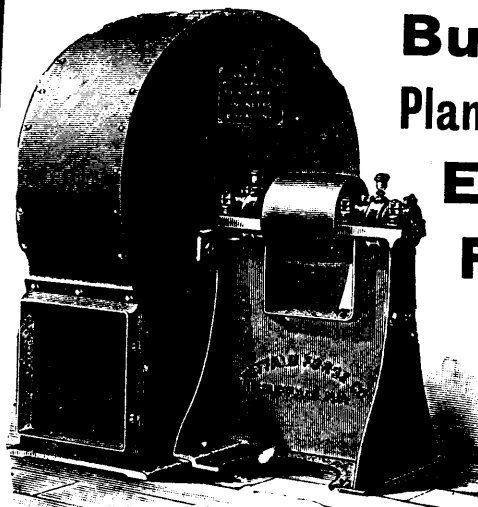
DEAR SIR,—Replying to your enquiry regarding Dry-Kiln purchased from you last summer, we beg to state that our lumber is stained hardwood, principally birch, which is put through a chemical process thereby rendering seasoning a very difficult operation. We tried to have it dried in the several styles of kilns used by factories in this district, all of which failed to take the moisture out of the core of the wood. In August last we put in one of your kilns with a capacity of 10 cars, or 30,000 feet, and since that time have seasoned most satisfactorily about 200,000 feet. The boards come out free from checks and warps, and we are now thoroughly convinced that it is the only dry-kiln in the market which fills the bill both as to efficiency and economy.

Yours truly,

McRAE BROS. & CO.

For particulars address—

McEACHREN HEATING AND VENTILATING CO.
GALT, ONTARIO



Buffalo Planing Mill Exhaust Fans

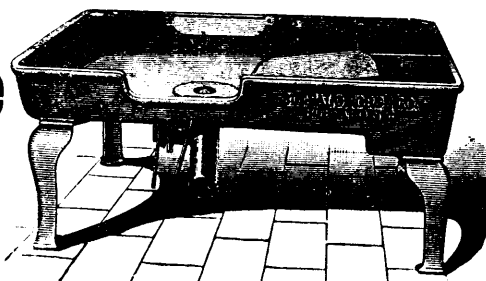
EFFICIENCY UNEQUALLED
DURABILITY UNSURPASSED
SMOOTH RUNNING
INCOMPARABLE

THE LARGEST

Forge

IN THE WORLD

Thirty-Eight other Designs of Portable and Stationary Types.



BUFFALO LUMBER DRY KILNS

Blowers, Blacksmiths' Tools, etc.

—SOLD IN—

Toronto, Ont., by H. W. Petrie.
Brantford, Ont., by Canadian Machinery & Supply Co.
Montreal, Que., by Canadian Machinery Agency.
Chicago Store, 22 and 24 West Randolph Street.

The Cottingham Varnish Co., Montreal, are applying for incorporation with a capital stock of \$20,000 to manufacture varnishes, japans, oils, dryers, etc.

The Walter Cottingham Co., Montreal, are applying for incorporation with a capital stock of \$100,000 to manufacture paints, colors, leads, varnishes, etc.

The Northumberland Paper & Egg Co., Campbellford, Ont., are applying for incorporation with a capital stock of \$100,000 to acquire the business formerly owned and carried on by the late Edmund G. Burke, under the name of the Northumberland Paper & Egg Case Co.

A. Dunlops's flour and grist mill at Watford, Ont., was destroyed by fire Sept. 1, loss about \$12,000.

Arthur MacGregor has started a sash and door factory at Middleton, N.S.

The Power Rope & Belting Co., St. Catharines, Ont., are applying for incorporation with a capital stock of \$20,000 to manufacture rope, belting, etc.

Messrs. S. B. Chandler, Son & Co., Toronto, have been incorporated with a capital stock of \$50,000 to take over the business carried on by S. B. Chandler & Son to manufacture surgical instruments, druggists' supplies, hospital furniture and supplies, etc.

Mr. G. Prevat will erect a grist mill at Murillo, Ont.

The Canadian Locomotive & Engine Co., Kingston, Ont., are manufacturing a large number of Drake's shingle and other wood-working machines.

Mr. John Bale's saw and grist mills at Rodney, Ont., were destroyed by fire Sept. 7; loss about \$5,000.

The Sayward Saw Mill Co., Victoria, B.C., will put in a band mill.

E. Baines & Co., have purchased the Victoria Iron Works, at Victoria, B.C., from Hinton & Penny.

Messrs. Watson, Foster & Co.'s (Canada Wall Paper Co.) wall paper factory, Montreal, was damaged by fire Sept. 12th, to the extent of about \$50,000.

Mr. Esnouf's saw mills at Maddington Falls, Que., were destroyed by fire Sept. 10th.

A factory for the manufacture of sawdust fuel is rapidly being completed at the Chaudiere at Ottawa. Mr. McLatchie, the manager of the company, states that fuel will shortly be tested on a C.A.R. or C.P.R. locomotive.

Mr. H. S. Patterson, Portage la Prairie, Man., contemplates the erection of an elevator of fifteen thousand bushels capacity.

Negotiations are in progress for an electric road between Renfrew, Ont., and Portage du Fort. The distance is eight miles, and water power will generate the electricity. Mr. A. C. Wright, of Renfrew, is interested in the project.

J. H. Babcock, of the late firm of Mancur & Babcock, Odessa, Ont., has purchased the Asselstine water power and mill site. He has commenced building operations, which, when completed, will comprise a shingle, saw and grist mill.

J. R. Booth's saw mill at Wisawasa, Ont., was destroyed by fire August 27th.

The Richelieu & Ontario Navigation Co.'s shops, which were recently destroyed by fire, are to be rebuilt at Sorel, Que. The works include the boiler, tin, blacksmith and carpenter shops, and give employment to a large number of men.

Messrs. Wm. Beck & Co.'s box factory, London, Ont., was damaged by fire September 4th.

The Levy Bros. Co., Hamilton, Ont., purpose establishing a jewelery factory at that place.

The Ontario Silver Plate Co., of Humberstone, Ont., have purchased the plant of the Canada Cutlery Co., of St. Henri, Que.

Kingsbury's saw mill at Comox Valley, B.C., was destroyed by fire August 29th.

R. D. Patterson's planing mill, Winnipeg, Man., was damaged by fire August 31st, to the extent of about \$500.

The London Auer Light Co., London, Ont., are applying for incorporation with a capital stock of \$50,000 to supply the Auer system of incandescent gas lighting to London and other places.

The Ontario Auer Light Co., Hamilton, Ont., are applying for incorporation with a capital stock of \$50,000 to manufacture appliances for illuminating purposes, etc.

The Peterboro' Lock Manufacturing Co., Peterborough, Ont., contemplate moving their works to Port Hope, Ont.

The Royal Electric Comp'y

MONTREAL, QUE.



Western Office.... TORONTO, ONT.

—Incandescent Lamps—

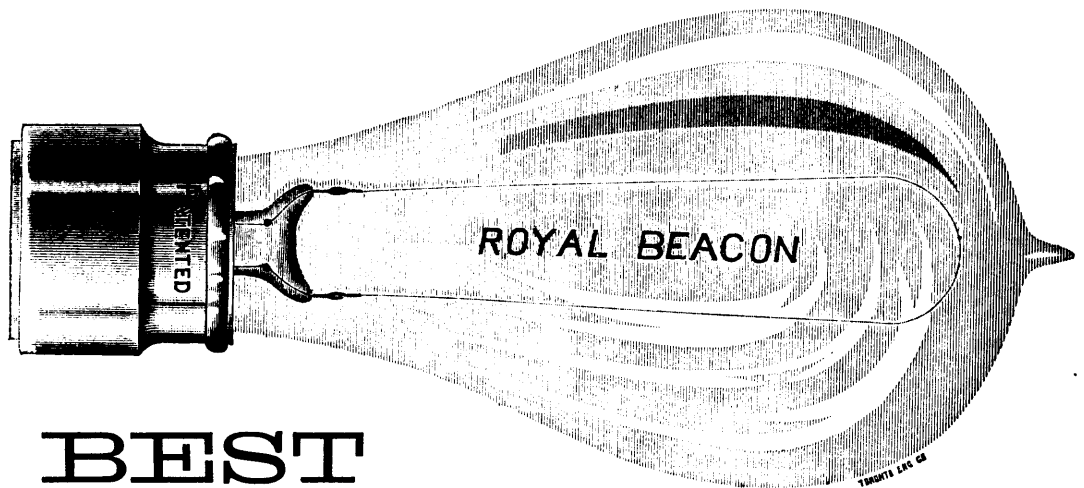
As the result of many comparative tests and long experience, we have found the Incandescent Lamps made for us by . . .

THE.....

**Beacon
Lamp Co.**
BOSTON, MASS.

To be

THE BEST



We have obtained the sole right for the sale in Canada of Incandescent Lamps made by that Company, which are manufactured especially for us, and are known as ROYAL BEACON. Best Efficiency. High Grade. Sustained Candle Power.

Write for Prices and Catalogues

The Canada Linseed Oil Mill Co., Mission City, B.C., are applying for incorporation with a capital stock of \$100,000, to manufacture linseed oil, etc.

The Cashmere Manufacturing Co., Cashmere, Ont., has been incorporated with a capital stock of \$20,000 to manufacture staves, hoops and lumber. They will carry on business at Cashmere, Ont., and at Wallaceburg, Ont.

The Riddle Manufacturing Co., Winnipeg, Man., are applying for incorporation. This is connected with the biscuit and confectionery business now carried on by Messrs. Ruhlee, Riddle & Co., of that city.

The Buffalo Forge Co. are in receipt of a letter from the manager of the Baltimore, Md. Music Hall, here reproduced, that explains itself. Probably in no class of buildings is an efficient heating and ventilating plant more appreciated than in a theatre, especially the feature of pure air kept steadily at the proper degree of temperature for comfort. This seems to be embodied in the plant in the Baltimore Music Hall, which was installed by the Buffalo Forge Co., the following letter being but one of the many expressions made to the company by the managers of such buildings:—"Baltimore, Aug. 2nd, 1895. Buffalo Forge Co., Buffalo, N.Y. Gentlemen:—It may interest you to know that the Music Hall of Baltimore City, Md. enjoys the distinction of being one of the largest, finest and best appointed concert auditoriums in the world. In one respect it excels any public building in this country, and that as regards its heating and ventilating system and the plant which your company furnish a Music Hall for this purpose, has been pre-eminently satisfactory, and has contributed in no small degree to the luxurious and comfortable air temperature which is always maintained in every auditorium and apartment in our spacious building. Respectfully, John J. Nolan, Manager.

SITUATION WANTED.

An Overseer in a Cotton Mill with twelve years' experience in the business, desires a situation in either Canada or United States, in weaving, slashing, or cloth room. Good testimonials.

Address, **H. S. WILKINSON**, Box 525, Windsor, N.S.

NEW DYESTUFFS.

Benzo-Chrome-Black N. (Patented).—This new Cotton Black differs from the older colors of its class such as Direct Blue Black B. & C. as with an after treatment with bichromate of potash and sulphate of copper it gives results exceedingly fast to washing and acid. When dyed boiling on cotton direct, with an addition of soda, Benzo-Chrome Black N. gives a beautiful Indigo Blue, pretty fast to washing and alkali, and very fast to acid and light. Possessing these qualities, this dyestuff is recommended for the production of indigo and navy blue shades which can be discharged with tin and zinc.

If cotton dyed as above and well rinsed is put into a fresh boiling bath and treated with four per cent. bichromate of potash and three per cent. sulphate of copper for half an hour, a black is produced which is exceedingly fast to washing and acid. This black is also very fast to light, air, rubbing, ironing and perspiration, and is only very slightly affected by alkalis.

The Farbenfabriken, vorm. Friedr Bayer & Co., Elberfeld, are the inventors and only manufacturers. Dominion Dyewood & Chemical Co., Toronto, sole agents for Canada.

Direct Deep Black G.—This new color (which is a self color, not a mixture) has same properties as the well known Direct Black T. and Direct Blue-Black B., but is cheaper in price and gives a coal black shade at one dip. It is very fast to acid, alkali, perspiration, and faster to light than logwood. For further particulars address the Dominion Dyewood and Chemical Co., Toronto, sole agents for Canada.



-Incandescent Lamps-

SWAN and EDISWAN

MANUFACTURED BY THE

EDISON AND SWAN

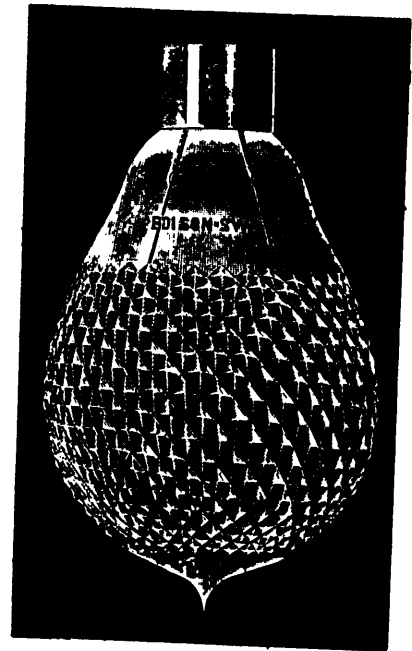
United Electric Light Co.

RUBBER COVERED WIRE

WEATHER-PROOF WIRE

MAGNET WIRE.

ELECTRICAL SUPPLIES OF EVERY DESCRIPTION.



John Forman, 650 Craig Street MONTREAL.

Alizarine Yellow 3 G. (Powder), which surpasses the older products of this series by its intense greenish shade, as well as by its great clearness and purity.

1. Dyeing. *Alizarine Yellow 3 G.* is dyed on wool with the ordinary chrome mordant (bichromate of potash and tartar, or bichromate of potash and oxalic acid or fluoride of chrome), but the well known one bath method may also be applied. For the latter purpose the wool is dyed in a bath to which acetic acid has been added, and after same has been exhausted the wool is chromed with fluoride of chrome or bichromate of potash. With bichromate of potash, similar shades are obtained to those produced by mordanting the wool first, while by treating it afterwards with fluoride of chrome the shade is far greener and clearer. The clearest shades are produced when mordanted first with fluoride of chrome. The color is easily soluble, dyes even without any difficulty, and is of equal value for dyeing pieces of yarn or loose wool. Shades, whether dyed on wool mordanted first or chromed afterwards, are very fast to alkali, acid, stoving, ironing and rubbing, and in artificial light they appear only very slightly altered. They are also very resistant to atmospheric influences; they stand milling fairly well, and only bleed slightly on to white wool or cotton, so that in cases where the material has only to stand a moderate milling, it is quite satisfactory.

Alizaride-Yellow 3 G. is very suitable for combination with all *Alizarine-diamond* and chrome colors, and especially with our *Brilliant Alizarine Blue G.* or *Brilliant Alizarine Cyanine 3 G.* gives very fiery and fast greens.

Silk which has first been mordanted with chloride of chrome can be dyed a clear greenish yellow, and is very fast to water and soap.

2. Cotton Printing. *Alizarine Yellow 3 G.* — Is fixed on cotton with acetic acid, and gives a very greenish yellow. The best results are obtained when printing on unoled cloth, as when printed on oiled material, the color runs into the white slightly. After printing it is steamed with or without pressure.

The fastness to washing as well as the fastness to light of this Yellow is very good; by mixing with *Brilliant-Alizarine Blue S.P.*, beautiful green to olive shades of good fastness to washing and light are obtained, whilst by the addition of *Anthracene-Brown*, beautiful shades of fashion colors are produced. *Alizarine Yellow 3 G.* can

also be dyed on cotton cloth, which has been first padded with chrome.

For further particulars and information address the Dominion Dyewood and Chemical Co., Toronto, sole agents for Canada for the *Farben fabriken vormals; Friedr, Bayer & Co., Elberfeld, Germany.*

HEMOLIN.

Messrs. Wm. J. Matheson & Co., New York and Montreal, have sent in the following article re Hemolin, written by Professor Austen, which is, we are informed, a fuller description of the article than has ever before been published.

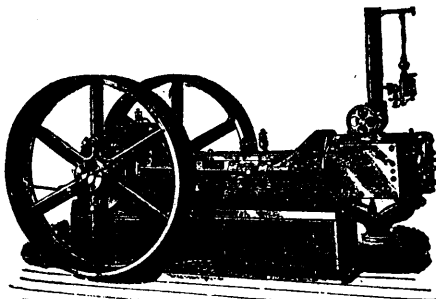
The dyestuff, known as Hemolin, has now been on the market long enough to show its value and to allow the promise of its still greater success. It consists of a dry powder, easily soluble in cold water, and very easily soluble in hot, without appreciable residue. This property classes it, so far as convenience in use is concerned, among the anilin colors. It contains the coloring matter of the logwood in a purer and more concentrated form than logwood extracts.

The ordinary liquid extract of logwood, is, as every dyer knows, an essentially "nasty" article. It is thick, viscous and sticky, not easy to weigh out accurately, loss usually occurring during the operation. The barrels cannot be entirely emptied with ease. Extremes of heat or cold affect it injuriously, and, on slight provocation, it passes into fermentation. It is often adulterated to the last degree of endurance. The barrels are liable to leak. The extracts rarely dissolve clear in cold water, and the hot solutions in cooling often deposit a large amount of "muck." They are of very variable composition, some containing a good deal of tannin matter some highly oxidized, some giving pure shades, while others give dull tones. Hence, it is hard to say how an extract will work until considerable experimenting has been done.

The so-called solid extracts are really like thick pitch. They are slow to dissolve in hot water and are practically insoluble in cold water. The adulteration of the so-called solid extract seems to be carried still further than in the case of the extract, for adulterations are less easily noticed in a solid than in a liquid extract. The use of chip, or cured logwood, has so greatly diminished of late years, that the industry may be considered as waning. The great

Armington & Sims

AUTOMATIC
HIGH SPEED ENGINES



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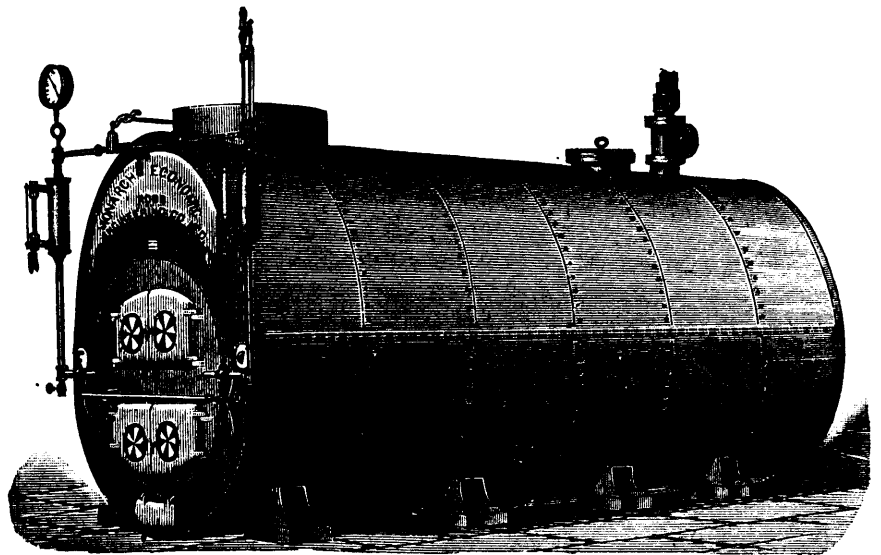
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bulk of the chip wood is against the use of it, as is also its extremely variable tinctorial power. The extraction of the chips by the dyer is tedious and wasteful.

The appearance of a dyestuff which contains the coloring matter of logwood, in the form of a dry powder, which is not affected by heat, cold or moisture, and which can be accurately weighed out, marks a decided advance in the technology of logwood. Hemolin is quite free from resinous matter, does not ferment and presents no opportunity for loss in shipping and handling. Its great strength is shown by the fact that 200 to 300 lbs. Hemolin will do more and better work than a ton of cured or chip logwood.

The stability of Hemolin towards light has been put to severe test. The results show better than logwood extract dyeings; dyeings with chip wood is about equal to it.

The process of dyeing Hemolin is much simpler and less tedious than with the extracts and chips.

In ordinary black dyeing on wool, the wool is mordanted as usual with chrome, chrome and tartar, etc., and dyed in a bath of eight per cent. If a jet black is desired, small amounts of red and yellow coloring matters are added. To get the fullest bloom in dyeing Hemolin on wool, a small amount of acetic acid should be added to the dye bath. To get a jet black without the trouble of mixing, Hemolin XX may be used. For lighter blues, Hemolin XS in smaller percentages gives better results than logwood extract. Many excellent shades and tones of color can be obtained with mixtures of Hemolin and Anilins.

When it is desired to get a full black on unmordanted wool, Hemolin 4300 is the best grade. To dye wool black with this, it is not necessary to mordant it. The color is dissolved in water, and the unmordanted wool or woollen goods are boiled in the solution. The black develops rapidly. It has a fine and full body, and its production is quick and economical.

In dyeing with bluestone, soda ash running kettle, Hemolin gives excellent results and a decided saving of time is reported by dyers, in serving the kettle, owing to the greater ease and quickness of handling the powered Hemolin over the sticky extract. The kettle is prepared with Hemolin XO, bluestone and soda ash, and served with these substances as required.

To produce a cheap iron black on cotton, the goods are mordanted in acetate of iron, fixed with lime water, washed and dyed with Hemolin X. S. Only 5 per cent. of the dye is required to

develop a black. The addition of a little Morin Yellow gives a jet black.

Excellent slates are dyed on cotton by padding the goods in a weak solution of Hemolin X. S. and then passing through a solution of copperas.

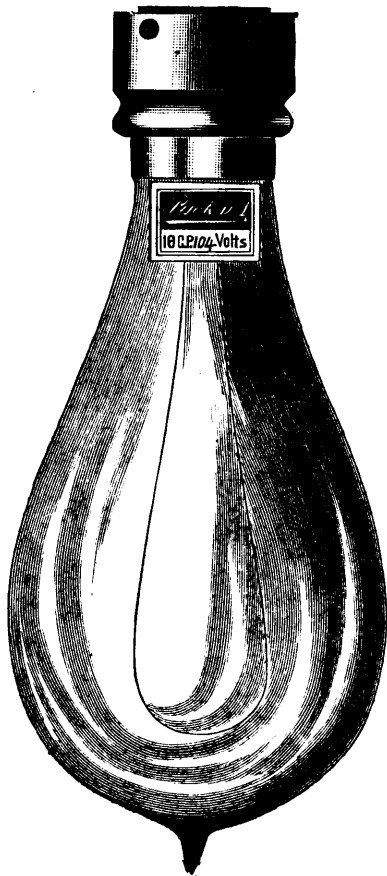
To speck-dye mixed goods of cotton and wool, they are mordanted with chrome and tartar and dyed with Hemolin X. S. This dyes the wool. To dye the cotton, the goods are next dyed with Hemolin X. O., using bluestone and soda ash as mordants. In this way a handsome and fast cotton black is obtained.

Cotton piece goods are dyed with Hemolin X. S. by padding in a weak alkaline solution of bluestone, then chromed, after which it is dried on the hot cans, sized and finished in the usual way. Or they may be padded in an acetic acid solution of Hemolin, dried, chromed and finished.

On silk a fine black is produced by padding with nitrate of iron, washing and soaping, dyeing blue with yellow prussiate and muriatic acid, mordanting again with nitrate of iron and then, after washing, working in a bath of cutch and dyeing in a bath of Hemolin X. S. and soap, after which the goods are avivified.

Tanned leather develops a fine black with Hemolin X. S. The solution of the dye is applied with a brush. The color is struck with copperas and the leather oiled and finished in the usual way. Chrome tannage is soaked in a weak solution of Hemolin. The color is developed by oiling, after which the goods are finished as usual.

The directors of the Ottawa Car Company, of which Mr. T. Ahearn is president, report for the 12 months ended June 30th, a very prosperous year. The amounts show a net profit (after making a liberal allowance for bad and doubtful debts and depreciation), of \$3,168.38, or over 12 per cent. on the paid up capital stock of \$25,000. Out of this a dividend of 4 per cent. was paid on 2nd January last and a further one of 4 per cent. on 1st of August, which leaves \$2,148.57 at credit of profit and loss up to the 30th June, 1895. The directors during the past year commenced the manufacture of wheeled vehicles of all descriptions, in addition to street cars. So far the result has been very encouraging. The prospects for the ensuing year are reported very bright and the directors look forward to a continuance of the profitable business which the company has enjoyed thus far.—Ottawa Citizen.



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United States Patents to Canadian Inventors.

Since our last issue United States Patents to Canadian inventors were issued as follows, as reported by Mr. Chas. H. Riches, solicitor of patents, Canada Life Building, Toronto:

- 544,791 Vacuum can, J. Nicholson and W. H. Ferguson, London, Ont.
 544,860 Chain ladder, John Maw, Hamilton, Ont.
 544,956 Life saving apparatus, R. Bustin, St. John, N.B.
 545,033 Cordage machine, W. H. Avis, Toronto.
 545,071 Evaporator, D. J. Grondin, Yamachiche, Que.
 545,086 Match-racking machine, J. Manton, Hull, Que., and E. G. Shepherd, Ottawa, Ont.
 545,122 Filter, A. Davis, Montreal.
 545,126 Hub-attaching device, F. Lebel, Montreal.
 545,130 Footwear, J. H. McKechnie, Granby, Que.
 545,141 Fire alarm box, Thos. Walsh, Montreal.
 545,184 Steam engine indicator reducing gear, J. Wright, Montreal.
 545,238 Means for counter-balancing end pressure in steam turbines, E. A. Le Sueur, Ottawa.
 545,241 Manner of obtaining power by rise and fall of tide, R. McNaugh, Victoria, B.C.
 545,338 Automatic vending machine, G. H. Bowie, Ottawa.
 545,372 Car-moving bar, J. McFarland, Austin, Man.
 545,456 Triturating machine, W. B. Cowan, Guelph, Ont.
 545,793 Perforator, W. O. Gottwals, Ottawa.
 545,587 Railway switch, C. S. Jackson, Bridgeburg.
 525,510 Yarn protector for spinning machines, Matthias Lerner, Milltown, N.B.
 545,709 Gas engine, Frank S. Mead, Montreal.
 545,605 Flake mica for boiler coverings, H. C. Mitchell, Toronto.
 545,579 Car fender, W. Vanwart, Fredericton, N.B., and J. R. McConnell, Marysville, N.B., as assignees.
 545,948 Bicycle, W. DeLany, Cobourg, Ont.
 545,048 Envelope, Chas. Kelley, Toronto.
 546,188 Lasting jack, C. S. Pym, Windsor.
 546,244 Bill file, F. W. Owen, Toronto.
 546,232 Insulator, conductor and conduit for electrical wires and cables, W. R. Hitchcock, Cornwall, Ont.
 546,238 Electric igniter for gas engines, F. S. Mead, Montreal.

CANADIAN PATENTS.

The following patents have been issued from the Canadian Patent Office, from June 1 to June 30, 1895.

Information regarding any of these patents made be had on application as follows:—

- Fetherstonhaugh & Co., Bank of Commerce Building, Toronto.
 Ridout & Maybee, 103 Bay street, Toronto.
 C. H. Riches, Canada Life Building, Toronto.
 A. Harvey, Central Chambers, Ottawa.
 Copies of American patents corresponding to Canadian patents can be procured from either of these attorneys for the sum of twenty-five cents each.
 49,050 Metal for blades, Jas. W. Wyckoff and Jno. M. Wetton, Jacobsville, Mich.
 49,051 Envelope, Wm. Angus, Montreal.
 49,052 Dress stay, Marcus M. Beeman, Syracuse, N.Y.
 49,053 Sack, Emons H. Lobdell and Andrew J. Acker, Mecosta Mich.
 49,054 Mechanism for propelling boats, Wm. H. Thompson and George Morris, Hamilton, Ont.
 49,055 Mortise lock, Adna Wildern, London, Ont.
 49,056 Check thill, Richard Zabel, Leipsic, Germany.
 49,057 Pencil sharpener, Patrick Gallagher, Donegal, Ireland.
 49,058 Process of repairing damaged artificial teeth or natural teeth, Max Salier, Aschersleben, Germany.
 49,059 Knife bar, Zadoc E. Wiseman, Vaclis, W.Va.
 49,060 Spool holder, work-box, etc., Jos. H. Jones and Alfred Burrows, Stoney Creek, Ont.
 49,061 Bar iron and rail cutter, Jos. B. Calef, North Easton, Mass.
 49,062 Lamp for burning oil or spirits, August Kiesow, London, Eng.
 49,063 Rotary plow, Lafayette D. Railsback, Indianapolis, Ind.
 49,064 Hair curler, Sarah Russel, Waterloo, Scotland.

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- 49,065 Gas meter apparatus, Richard T. Glover and Jno. G. Glover, Clerkenwell, London, Eng.
- 49,066 Illustrated planetariums, Angus J. McDonald, Toronto, Ont.
- 49,067 Quoin, Richard Kinsman, Galt, Ont.
- 49,068 Hair dryer, Jos. E. Auger, Montreal.
- 49,069 Coin freed apparatus for the sale of gas, Richard T. Glover and Jno. G. Glover, London, Eng.
- 49,070 Refrigerator, Martin Warner, Yorktown, Ind.
- 49,071 Wheel tire, Wm. R. Hensel and Jno. Smith, Toronto.
- 49,072 Mechanism for closing collision doors on shipboard, Alex. Moore, Holland Lodge, Eltham Rd., Eng.
- 49,073 Manufacture of flongs for producing moulds for stereotyping, Geo. Eastwood, London, Eng.
- 49,074 Skate, The Star Mngf. Co., Halifax.
- 49,075 Furnace, Emilien A. Manny, Beauharnois, Que.
- 49,076 Fruit stoner, Jos. Boeri, New York, N. Y.
- 49,077 Ore separator, Jno. W. Carter, Brooklyn, N. Y.
- 49,078 Railway crossing, Mason D. Pratt and Jno. F. Ostrom, Philadelphia, Pa.
- 49,079 School desk, The Globe Furniture Co., Walkerville, Ont.
- 49,080 Dental chair, The S. S. White Dental Mngf. Co., Philadelphia, Pa.
- 49,081 Check, hook, Jno. N. Moehn, Jacon Katz and Frank W. Ricker, Milwaukee, Wis.
- 49,082 Apparatus for deodorizing oils, The Filbert Mngf. Co., Baltimore, Md.
- 49,083 Lock for fastening crossed wires, Abel Land, Hamilton, Ont.
- 49,084 Automatic fluid brake, Alex. H. Moyes, Ogden, Utah.
- 49,085 Steam generator, Bion St. Bernard, Detroit, Mich.
- 49,086 Boiler, Ossian C. Davis, Racine, Wis.
- 49,087 Pile covering, Jos. Derret, Everett, Washington.
- 49,088 Dish cover, Thos. York, Portsmouth, O.
- 49,089 Foot warmer, Asa Kindley, New Holland, Ind.
- 49,090 Grain cleaning machine, Charles J. Moore, Minneapolis, Minne.
- 49,091 Automatic lighter for gas stoves, Wm. J. Gurd, London, Ont.
- 49,092 Car coupler, Ephrem Martin, St. Hyacinthe, and Jos. Martin, St. Henri de Montreal, Que.
- 49,093 Fastening for freight car doors, Jas. Gellay and Donald McDonald, Levis, Que.
- 49,094 Valve, Jas. Casey, London, Eng.
- 49,095 Disc harrow, Torrance E. Bissell, Prescott, Ont.
- 49,096 Electrottype, Ansbert E. Vorreiter and Dr. Eugen Mullendorff, Berlin, Germany.
- 49,097 Cycle tire, Walter H. Morden, Frank S. Jackson and Earle S. Lyon, Toronto, Ont.
- 49,098 Seed sower, Wm. R. Bowen, East Palatka, Pa.
- 49,099 Check rein attachment, Geo. W. Taylor, Denver, Col.
- 49,100 Apparatus for sterilizing liquids, Etienne W. Kuhn, Paris, France.
- 49,101 Steam boiler, Ed. P. McGerr, Jersey City, N. J.
- 49,102 Steam heating apparatus, Elias Watts, Keyport, N. J.
- 49,103 Medicinal compound, Pierre Hamel, Montreal.
- 49,104 Curtain stick and guide, The Brussels Tapestry Co., Chauncey, N. Y.
- 49,105 Skeleton lettering, Alfred White and Chas. N. Sutherland, Toronto.
- 49,106 Railroad tie puller, Danl. G. Ries, Marion, O.
- 49,107 Match and match-box for advertising, The E. B. Eddy Co., Hull, Que.
- 49,108 Paper wrapping machine, Jas. P. Henderson Logan, Newark, N. J.
- 49,109 Fire kindler and holder, Philip J. Harrah, Bloomfield, Ind., and Thos. E. B. Mason, Shenandoah, Iowa.
- 49,110 Tack pulling attachment for sole sewing machines, Jos. E. Bertrand and Mellen Bray, Newton, Mass.
- 49,111 Machine for making chains, The Phoenix Hardware Mngf. Co., Syracuse, N. Y.
- 49,112 Bottle stopper, Frank T. Robinson and Wm. H. Rand, Chicago, Ill.

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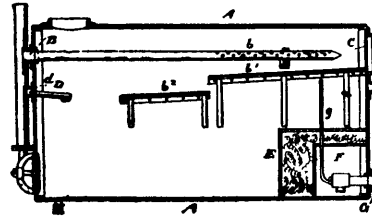
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THOS. REID, Eastern Representative.



- 49,113 Animal poke, Otis Bettis and Wm. Hotaling, Chesaning, Mich.
- 49,114 Eye glass guard, Geo. Bausch, Syracuse, N.Y., and Sylvester Eastman, Providence, R.I.
- 49,115 Truss, Julius Brickner and Abraham S. Herr, Tiffin O.
- 49,116 Process of making and treating pigments and paints, W. N. Blakeman, Jr., Morunt, N.Y.
- 49,117 Gas retort charging apparatus, Gaston Aloysius, New York, N.Y.
- 49,118 Lobster trap, Hy. D. Brophy, Mechanic Falls, Me.
- 49,119 Process of removing tin from tin scrap or tin coated metal, Thos. G. Hunter, Philadelphia, Pa.
- 49,120 Machine for making insulator pins, Geo. R. Butler, Sandusky, O.
- 49,121 Drawing press, Geo. Asa. McKeel, St. Catharines, Ont.
- 49,122 Flower stand, William Nafe, Waterloo, Ont.
- 49,123 Glazing and enamelling bricks, etc., Maurice Ahern, Bound's Green, New Southgate, Eng.
- 49,124 Filter, Jno. Brown & Sons, Philadelphia, Pa.
- 49,125 Cream whipper, Catharine M. J. Macdonald, Montreal.
- 49,126 Cartridge, Geo. D. R. Aikin, Louisville, Ky.
- 49,127 Stocking and the art of manufacturing the same, Jos. Ben-
nor, Macon, Ga.
- 9,128 System of controlling electric motors, The Canadian General Electric Co., Toronto.
- 49,129 Display rack, Jno. J. Currier and Geo. A. Camp, Galesville, Wis.
- 49,130 Attachment for wash boilers, Jno. N. Moehn and Jacob Katz, Milwaukee, Wis.
- 49,131 Billiard table, etc., Albert C. Ives, London, Eng.
- 49,132 Furniture castor, Adolph Kirmse, Marthastrasse, Germany.
- 49,133 Flouring machine, Hugh M. Whitney and Jas. H. Bishop, Minneapolis, Minne.
- 49,134 Puzzle toy, Amos B. Paulson, Philadelphia, Pa.
- 49,135 Panoramic cabinet, Antonio A. Aguero, New York, N.Y.
- 49,136 Shackle for vessel chains, Jas. B. Miller, Rockland, Me.
- 49,137 Packing box, The National Patent Box Co., Chicago, Ill.
- 49,138 Scaffold bracket, Jno. A. Murphy, Chas. G. Polleys, and Wm. C. Scott, Newport, P.I.
- 49,139 Fruit and flower picker, The Clauss Shear Co., Fremont, O.
- 49,140 Mucilage holder, Eugene Terry and Bradford Almy, Ithaca, N.Y.
- 49,141 Chair, Jos. G. McCaffery, and Annie D. Lentz, Detroit, Mich.
- 49,142 Car-coupler, Napoleon Guillemette, jr., Three Rivers, Que.
- 49,143 System of calking vessels, Alfred J. Brooks, Chester, Pa.
- 49,144 Electric operating mechanism for vehicles, Louis E. Freedly, Boston, Mass.
- 49,145 Garbage dryer, Geo. T aylot, Boston, Mass., and Martin McLauthlin, Malden, Mass.
- 49,146 Kettle, Ed. W. Ingamello, Albert W. Mathews, and Wm. Mathews, Bournemouth, Eng.
- 49,147 Oil can, Dan'l J. Holliger, and Ira H. Everhard, Canton, O.
- 49,148 Coffee pot, Alpheus Fay, Cincinnati, O.
- 49,149 Stamp cancelling machine, The American Postal Machine Co., Portland, Me.
- 49,150 Hot air furnace, Jos. B. Sheriden, Toronto.
- 49,151 Air valve, Jos. Poulson, Philadelphia, Pa.
- 49,152 Ventilator, Hermann Doerge, New York, N.Y.
- 49,153 Car-coupler, Jas. Roosevelt, Austin, Texas.
- 49,154 Apparatus for regulating the supply of feed water, Jno. Isaac Thornycroft, Chiswick, Eng.
- 49,155 Gate, Wm. J. Slack, La Grange, Ing.
- 49,156 Saw mill carriage, Mat Cox, Hales' Pt., Tenn.
- 49,157 Sash lock, Harry Bitner, Chicago, Ill.
- 49,158 Steam boiler, etc., Orland D. Orvis, Chicago, Ill.
- 49,159 Coin-controlled electrical apparatus, Jno. O. Frost, Greensburg, Pa.
- 49,160 Spark conductor for steam engines, Jno. Thos. King, Little Rock, Arkansas.
- 49,161 Culinary implement, Jas. Hayes, Kaukakee, Ill.
- 49,162 Kiln for burning cement, Ditter Berg., Aalborg, Denmark.

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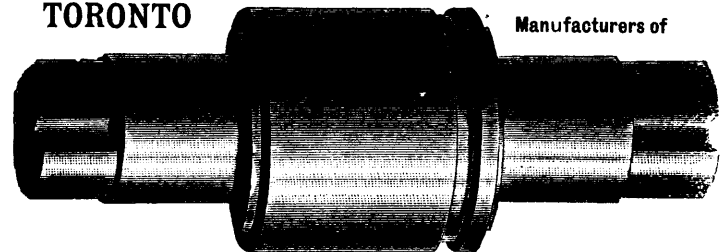
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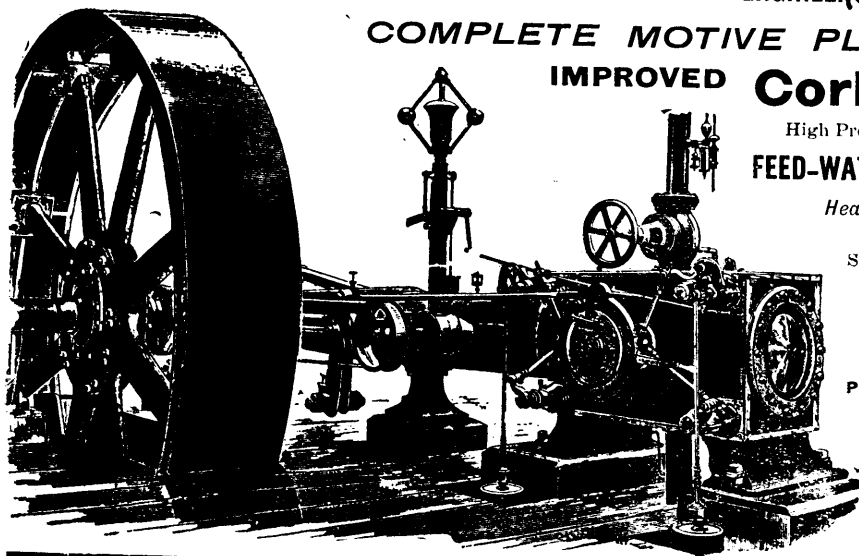
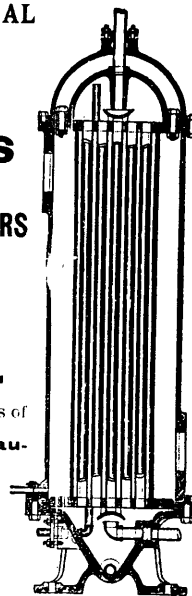
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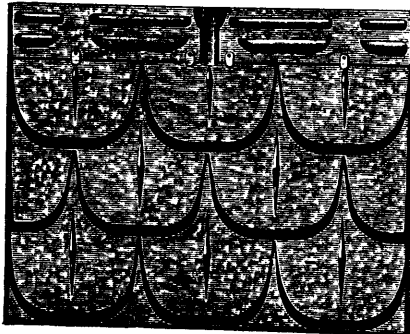
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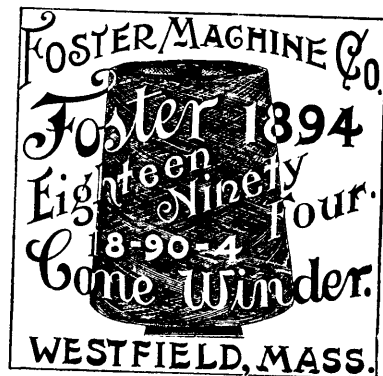
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- 49,164 Slate attachment, Jesse M. Davis, and Logan P. Currin, St. Joseph, Mo.
- 49,165 Machine for making cigars, Chas. A. Baker, and Frank R. Keyes, Binghampton, N.Y.
- 49,166 Machine for turning articles of pearl, etc., The Standard Pearl Button Co., Detroit, Mich.
- 49,167 Dating machine, Chas. K. Travis, Minneapolis, Minn.
- 49,168 Support for hose nozzles, Wesley A. Cain, Medicine Lodge, Kansas.
- 49,169 Bicycle nipple wrench, Albert Dudley, Menominee, Mich.
- 49,170 Gear cutting machine, Lucius E. Whiton, New London, Conn.
- 49,171 File for papers, etc., Arthur J. Wells, Syracuse, N.Y.
- 49,172 Bottle filling and corking machine, Samuel B. Smallwood, Astoria, L.I.
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- 49,175 Thill coupling, Angus D. Cameron, Charlottenburg, Ont.
- 49,176 Type writing machine, The New Jersey Type-writer Co., Camden, N.J.
- 49,177 Filter, Jno. Braum, Wm. P. M. Braum, and John F. Braum, Philadelphia, Pa.
- 49,178 System of electrical distribution by alternating currents, Chas. Scott, Pittsburg, Pa.
- 49,179 Match cabinet, Hy. F. Ganon, Indianapolis, Ind.
- 49,180 Machine for treating heavily sweetened tobacco fillers, Thos. W. Helm, Danville, Va.
- 49,181 Roofing tool, Chas. H. Dana, West Lebanon, N.H.
- 49,182 Can, Thos. Neal, Detroit, Mich.
- 49,183 Paper box machinery, Frank H. Allen, Norwich, Conn.
- 49,184 Manufacture of forks, spoons, etc., Count Geoffry de Kergerlay, Bornel (Oise), France.
- 49,185 Incandescent light, David Gravel, Montreal, Que.
- 49,186 Machine for making matches, Ebenezer B. Beecher, Westville, and Jacob P. Wright, New Haven, Conn.

- 49,187 Metal tank, etc., Harvey N. Hill, and Martin W. Bloom-bury, Pontiac, Mich.
- 49,188 Type-setting machine. The Cox Type-setting Machine Co., Chicago, Ill.
- 49,189 Bicycle, Jno. A. Beam, Waterloo, and Fred A. Kraus, Baden, Ont.
- 49,190 Process of preparing food products and apparatus therefor, Jas. Campbell, San Francisco, Cal.
- 49,191 Kerosene oil burner, Frank P. Boland, Providence, R.I.
- 49,192 Hot air motor, The Trentham Engineering Co., Trentham.
- 49,193 Lawn sprinkler, Jerome B. Fellows, Conway, N.H., and Chas. F. Lebbly, Portland, Me.
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- 49,195 Grate, Ed. Scanlan, and John Zipp, Louisville, Ky.
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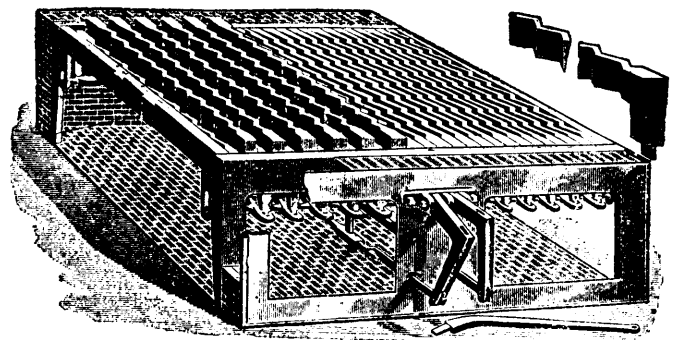
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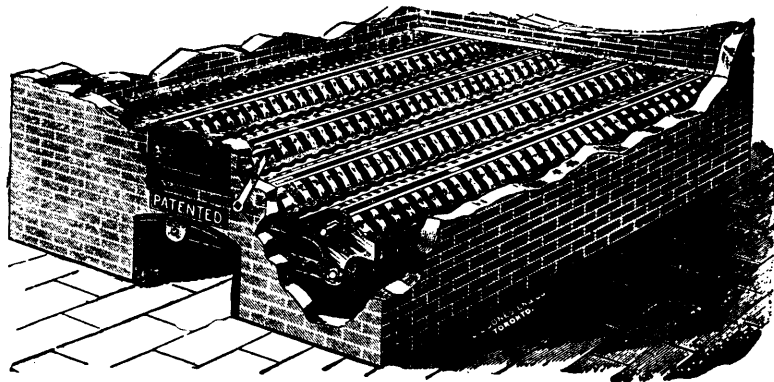
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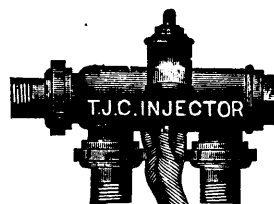
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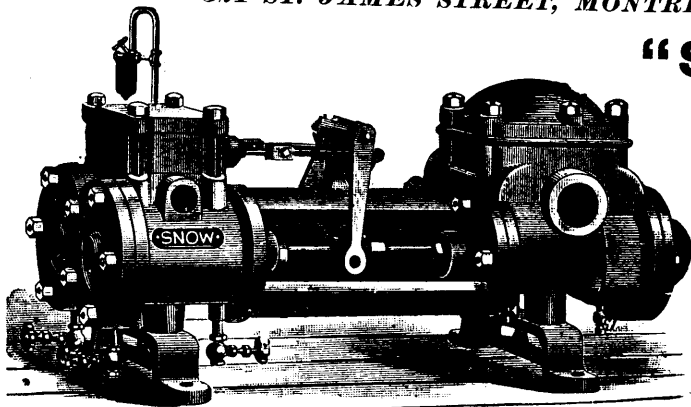
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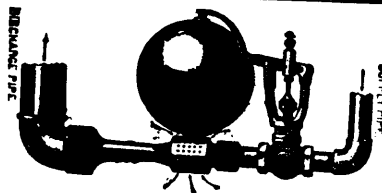
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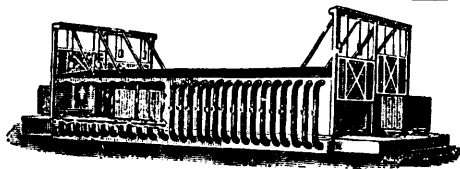
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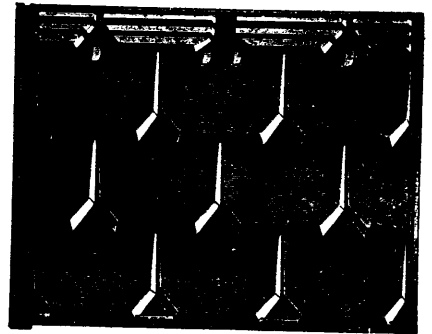
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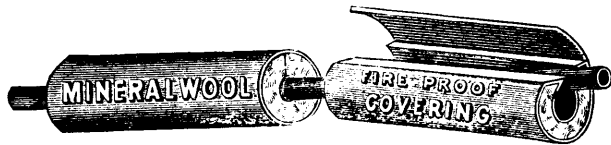
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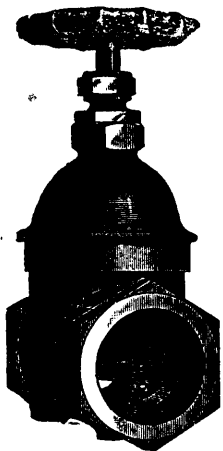


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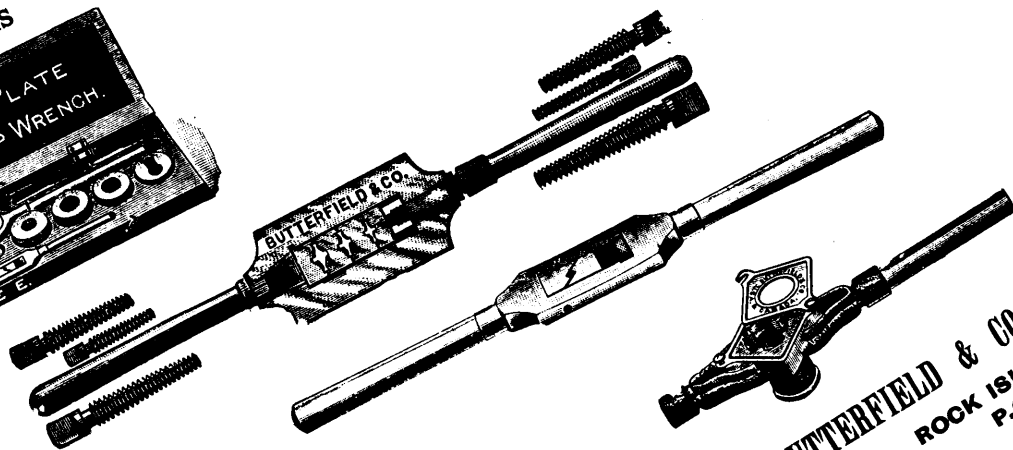
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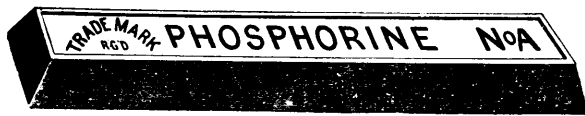
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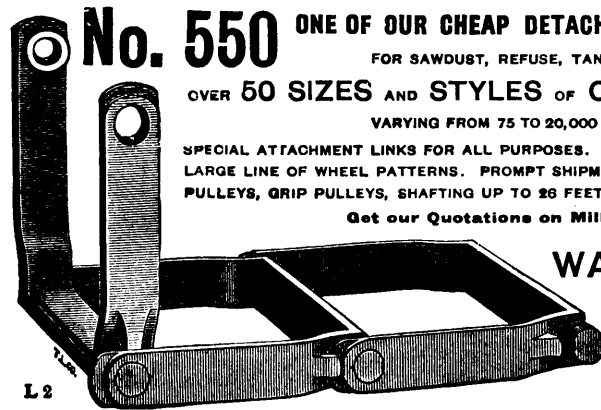


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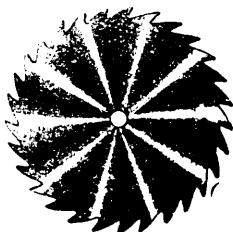
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1¾	1¾	7.46	"	3½	3½	30.04	"
2	1¾	9.83	0 04	4	4	42.33	0 05
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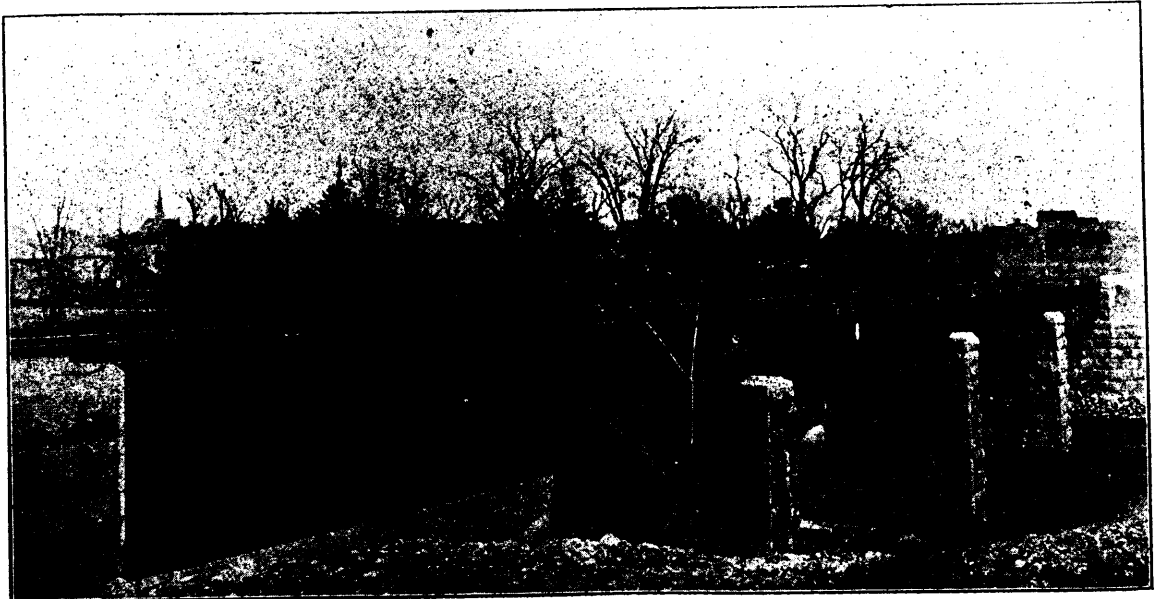
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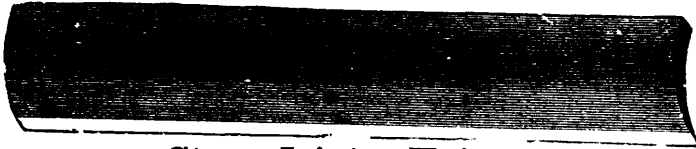
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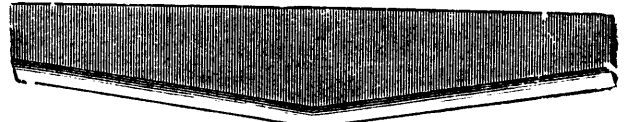


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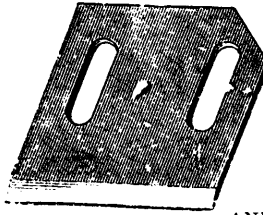
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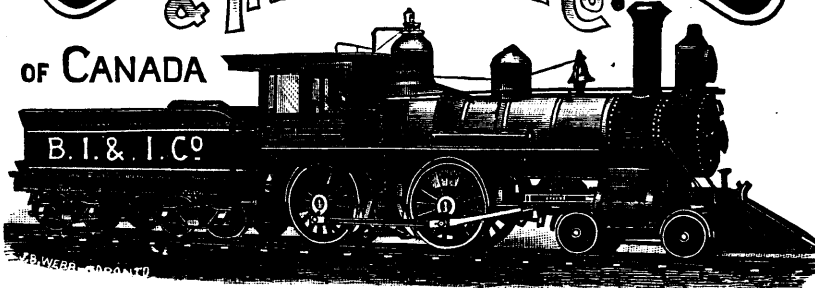
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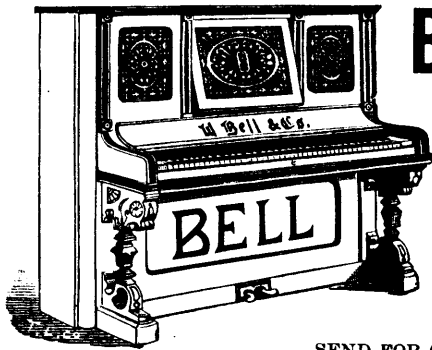
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Bonds and Mortgages	228,473.21	692,751.15	Other Liabilities	5,884.76	1,282.48
Other Assets	58,939.88	89,359.40	Net Surplus	Nil	50,460.72
Total	\$293,592.53	\$821,320.88	Income	157,354.67	326,715.63
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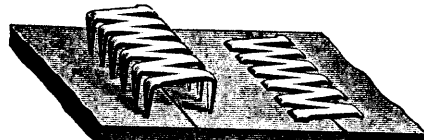
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