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# THE CANADIAN MANUFACTURER

And Industrial World.

Vol. I.

TORONTO, ONT., APRIL 28, 1882.

No. 9.

## TENTS, ANCIENT AND MODERN.

The Israelites of old were dwellers in tents, as many of their Semitic kindred, the Arabs, are to this day. So also are many of the wandering pastoral tribes of Northern and Central Asia, who have during two centuries past given so much trouble to the military power of Russia. The "lodge" or "wigwam" of the North American Indian is a tent, of such construction as savages can accomplish in their native wilds.

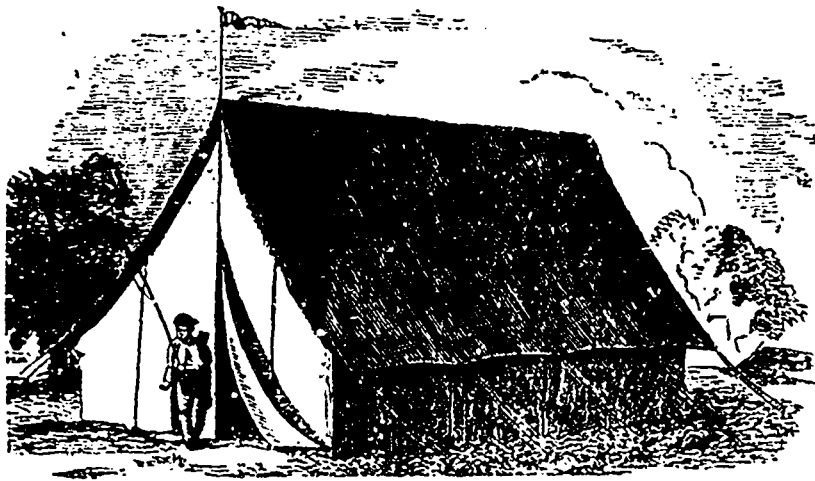
It may be said that in all these instances, tents were or are used for the reason simply that houses or fixed homes were not or are not available under the circumstances. This would be true of the Israelites, who, after they were fairly settled in the Promised Land, built houses, and even fortified towns or "fenced cities," as they are called in the Bible. But it would not be true of the wandering Tartar and Arab tribes, or yet of the Indians of the far west, whose manner of life renders necessary their frequent movement *en masse* from place to place. These tribes must continue to be dwellers in tents, until they adopt new modes of obtaining subsistence.

With their way of living, very many acres or even square miles of land are required for the support of each individual, and so they have to shift ground frequently, carrying their tents with them.

The early Greek military tents were small coverings of skins under each of which two soldiers slept. The Roman tent was a great improvement on those of the Greeks; it was made of cotton cloth, similar in shape to the "wedge" tent of the present day, and would accommodate ten soldiers. Alexander the Great is said to have had a pavilion of extraordinary magnificence. Its roof, one mass of gilded embroidery, was sustained by eight pillars covered with gold. In the centre was the royal throne, and one hundred beds could be made up within the temporary edifice.

Now, it may be said, are civilized men in this advanced age actually thinking of going back to certain habits of savage or half-civilized life, and becoming dwellers in tents? We answer, yes, at certain times and for certain purposes, but in a civilized way. What may be called the popular science of health has very much interested the people of both Canada and the Northern States in recent years, and it is every year receiving greater attention. Our own country, to confine ourselves to that for the present, abounds with romantic health-giving resorts, where Nature is seen in various attractive aspects, and where overworked citizens and their families may for a while during the summer season revel in the luxuries of pure air and sylvan and aquatic diversions in great variety. The thing can be done cheaply, too; no need of paying monster hotel prices

in order to secure such recreation and enjoyment as Nature furnishes free of cost. The tent of most modern make, a great improvement on the ancient construction, is what renders it possible for civilized people, at small cost, to carry the indispensables of civilization with them to the sylvan scenery of Muskoka, the picturesque wilds of the Upper Ottawa and



the Gatineau, to the cool, healthy breezes that blow among the Thousand Islands, and other such like resorts.

The extraordinary development of the Canadian North-West is another cause of a new demand for tents. There the rush of new comers is so great that the tent is in many cases indispensable for the summer. The cheap temporary accommodation of the tent made use of during the hot weather gives opportunity for the immigrant, on the spot, to prepare a permanent dwelling all tight and snug for the winter.

We say all this pleasure and health may be cheaply acquired, and we purpose to back up these statements by solid facts, and show how it may be done. There is no need for instruction in the art of enjoyment; all one has to do is to get equipped with a suitable outfit, and start for one or the other

of the many pleasure resorts with which our country happily abounds, and the enjoyment will follow sure enough. The outfit then appears to be the first thing to begin with, and as the comforts or discomforts of the trip may be enhanced by a good or bad selection, we can assist in the attainment of this object by recommending, with perfect confidence, the outfits of the

NATIONAL MANUFACTURING COMPANY, OF OTTAWA

This now well-known firm make a specialty of equipping camping or exploring parties with every requisite, and some of their specialties, made only by the firm, we both illustrate and describe.

The first thing that is to be secured is obviously a tent that



will protect the inmates from sun, wind, and rain, and this want the firm can quickly and cheaply supply, as they make no less than between two or three hundred different styles and sizes, suitable for every requirement. Some of the more popular shapes are styled Beil, Round End, Square End, Wedge, Egyptian, Oblong, Garden, Comfort-Immense, and Wall Tents, and are made from either plain or fancy striped canvas. If required, they are for a slight extra cost subjected to a new chemical process, which renders them perfectly mildew proof, and tents thus treated will last one-half longer than without it.

#### THE NATIONAL BED (PATENTED),

folds up only 3 ft. long, by 3 x 4 inches. By the illustration, which shows the bed both folded and open for use, it will be seen that it forms a small, light and compact parcel to be carried in the hand, which, in a few moments of time, can be opened out into a most comfortable bed, requiring no mattress. Although the bed is so light it is very strongly constructed, these two very important points being secured by the ingenuity of the inventor. For camping parties, hotels, board-



ing houses, private families, steamboats, or any other purpose where economy of space is an object and a comfortable bed may be wanted in a hurry, we have never seen anything to equal it, and can conceive of no more perfect contrivance. For parties going to the North-West they are indispensable.

#### THE NATIONAL CHAIR (PATENTED.)

is the firmest and strongest portable chair ever seen, and our pen cannot fitly describe it, as it must be seen to be fully appreciated. It can be opened and closed in a second's time,

occupies but little space, and is easily carried when folded up, and when opened out for use is as comfortable as any drawing room easy chair. They are made in several styles of finish, from the plain canvas covering to one of elegant raw silk,



so that they answer in the drawing room as well as for lawn, verandah, or camp use. It is really one of the cheapest as well as most comfortable chairs made.

#### THE NATIONAL COT (PATENTED),

is somewhat similar to the bed, but does not fold up quite so small, and comes a good deal cheaper than the bed. Hotels and boarding houses, during exhibition or race times, we are certain, would find this cot just the thing for the purpose, in fact "as handy as a pocket in a shirt." They are very strong, and make a good, comfortable bed without requiring a mattress.

#### THE FOLDING CAMP TABLE (PATENTED),

folds up in a space 4 x 6 x 10 in., and opens out large enough to afford seating capacity for six, and at the same time is rendered, from its peculiar construction, strong, firm and steady, three very necessary characteristics. They are made in a variety of styles, suitable for all sorts and conditions of men. Who has not experienced the discomforts of camping out, or picnicing in the old style, by sitting down crosslegged on the grass, with the edibles on one's knees, offering a premium to the gay and festive insect to make a minute inspection of the texture of one's undergarments. The inventor and introducer of the folding camp table has changed all this, as when such a table can be purchased for a trifling sum, one is not going to run the risk of chronic rheumatism by sitting down on mother earth. For surveyors going to the North-West it answers admirably for a drawing board as well as a camp table.

#### COLE'S FOLDING COOK STOVE,

which they are getting patented, is a *multum in parvo*. It is really marvellous, and to ladies that take an interest in that sort of thing, it may seem impossible that a cooking stove large enough to cook and bake for a party of six can, with the stove pipes, be folded up into a space of 9 x 9 x 18 inches. It is nevertheless a fact.

This stove is manufactured in a number of sizes, from the one described to those of a sufficient size to cook for a company of soldiers. The one described is, when folded up, about the size of an ordinary valise. This is another article that parties bound for the Prairie Province would find a great

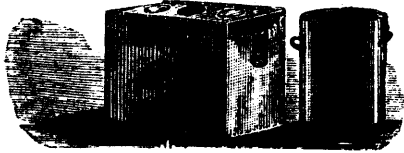
boon to have along with them, as well as those who are simply bound for a quiet pleasure excursion.

## CAMPING FURNITURE.

In addition to their folding beds, tables, chairs, stoves, &c., this Company make a very fine folding wash stand, which is a



STOVE OPEN FOR USE.



STOVE &amp; KIT PACKED.

handy article, and is also patented. It folds up into such a ridiculously small space that were we to state the dimensions, they might be discredited, so we advise all in need of such a desideratum to see for themselves. As with the other articles described, its peculiar construction, while rendering it very light, gives it a strength that will withstand even more than ordinary rough usage. Other articles of furniture made by the firm are stools and tripods in a variety of styles and at many prices, but a novelty that deserves a special mention is their walking cane which opens out into a stool. Indeed, so closely have the proprietors studied the needs and requirements of camping parties, that they have succeeded in rendering the entire outfit for six persons with a good-sized tent included, so compact that it can be packed into an ordinary travelling trunk.

## FLAGS.

The old saying, "nothing like leather," is appropriate in some instances, but there is nothing like bunting for making things look gay. The flags made by the National Manufacturing Co. are claimed to be of superior make, and are of all sizes, styles, &c., from the cheap five cent cotton flag to the largest and very best. The fine large flags that were flying from the two central flagstuffs at the Toronto Industrial Exhibition last fall were made by this company, and evoked much admiration. *Signal Flags, Streamers, &c.* for boats are also a specialty with them, and are made, unless otherwise ordered, of the best silk finish bunting.

*Awnings* for stores and dwellings, which have now come to be considered a necessity, are largely manufactured by this firm, who ship them to all parts of the country. They keep on hand a large stock of different styles of fancy colored stripes for making up these goods, and in fact they seem to

make everything conceivable for protecting from the sun and rain, such as Lawn Canopies, Boat Canopies, Bed Canopies, &c., &c. They also do an extensive trade with nearly all the largest lumbering firms in the country, supplying them with such goods as *Tents, Sails, Horse Covers, Nose Bags, Waterproof Sheets, Tarpaulins*, and other requisites, and lumbermen can always calculate on being supplied from their large stock, at short notice, with anything in this line.

The National Manufacturing Co. have been awarded *Silver Medal* at the Toronto Exhibition of 1881, as well as first prizes at Montreal, Hamilton, and other Exhibitions where they have displayed their goods. Their show of Tents and Camping Furniture at the Toronto Exhibition was undoubtedly the grandest and most luxurious ever seen in Canada, and we doubt if it could be equalled in any other country.

Their list embraces between 200 and 250 different sizes and styles of tents, as may be seen by referring to their handsomely illustrated catalogue, which by the way is another example of the energy, enterprise, and push displayed by the proprietors who believe in doing nothing by halves. The catalogue, which is beautifully done in colors, presents some pretty views of Canadian scenery, and introduces their tents, canopies, &c., in actual use by pleasure parties camping on islands and in the bush. One of the best indications of the success of an enterprise is the order-book, and from what we saw of the order-book of this firm, they have no cause to complain that their efforts are unappreciated.

Their camping outfits are undoubtedly the finest in the world, and the fact speaks well for Canadian enterprise.

His Excellency the Governor-General and Her Royal Highness have patronized the company freely on all their camping and fishing excursions.

All we would now add is, that the National Manufacturing Co. will be found prompt in answering all business communications, and, as the season is now approaching for the use of their goods, we recommend our readers to "order early and order often."

To our subscribers in the United States, we would mention that the company control the patents for that country.

## THE HISTORY OF ENGRAVING.

The art of engraving on metal is as old as we can trace the history of men in anything like civilization, the Greeks and Romans being renowned for their work. The pre-historic Aztec hatchet given to Humboldt in Mexico was just as really and truly "engraved" as a modern copper plate. The art was carried to great perfection during the middle ages, and the Venetian and Florentine goldsmiths earned an enduring reputation for the excellence of their work, any specimens that are preserved having a high monetary value placed on them as objects of "vertu." The last one hundred and fifty years, however, has seen great advances, and many valuable developments and new discoveries have been made. The word engrave is derived from the old French verb "engrave," *i.e.*, to mark by incision, the different varieties of engraving, however, having special designations, the principal of which are : (1) *Line engraving* on metal plates, usually of copper or steel

in which the lines are always incised. (2) *Etching*, usually on metal, in which the lines are corroded by means of acid. (3) *Mezzotint*, in which there are no lines whatever, but only shades produced by roughening the surface of the metal; and (4), *Woodcut*, on which the lines which print black have to be left in relief, while the surface round them is cut away.

That wonderful race, the Chinese, who are credited with the use of gunpowder and the mariner's compass, long before their introduction into Europe, are also said to have been acquainted with wood engraving from a very remote period, and to have used wooden blocks with the characters cut out in relief, for printing. The earliest known use of wood engraving in Europe is said to be in the year 1423, while engraving on metal plates did not come into use till 1461, or thirty eight years later.

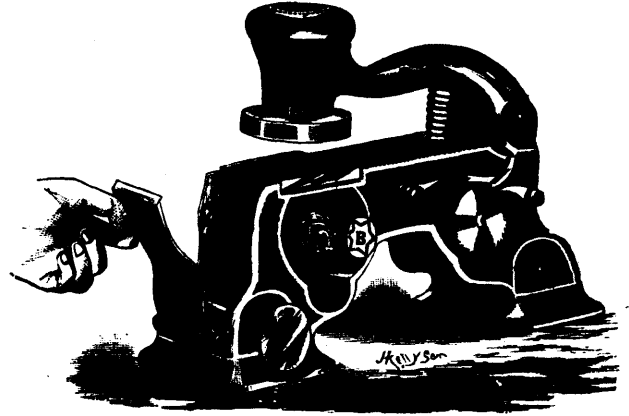
The difference between engraving on metal and wood is, that whilst in the latter the lines that are to appear on the impression are left prominent or in relief, in the former they are cut into the plate and when printed from are filled with ink, the rest of the surface being kept clean.

In Canada the art of engraving is carried to great perfection, and some firms turn out work that cannot be excelled, more especially in what we may term engraving for commercial purposes, such as Stamps, Seals, Letter-Heads, Cheques, Notes, &c. Probably the firm that has attained the highest reputation in this branch of business is that of MESSRS. PRITCHARD & MINGARD, *Sparks-st., Ottawa*, both members of which are practically versed in all the intricacies of the art, in its several branches; and we have had the good fortune to have been permitted to inspect some samples of their work, which are undeniably *chef-d'œuvres*.

Stamps and seals play a very important part in many transactions, such as legal documents and Government contracts, as well as in private papers of all kinds; and any of our readers who may have noticed the beautiful seals on the stationery used by the Government offices, have had unconsciously an opportunity of inspecting the workmanship of this firm, who are not only engravers to the *Dominion Post Office Department*, but execute a great deal of the higher class of work for the other branches. The extensive use and distribution of their goods may be imagined, when one thinks of all the post offices in this wide Dominion, each one of which has to be furnished with the necessary dating and obliterating stamps; and some of the larger offices, such as those at Montreal, Toronto, Ottawa, and Hamilton, have necessarily a formidable array of the many and various stamps used in our postal service. It certainly is a tribute to the excellence of *Messrs. Pritchard & Mingard's* workmanship that they are able to supply the Government with such an article, that instead of, as ten years since, importing all such appliances, the Dominion authorities now order them from this Canadian establishment; and although they are thus fostering an important industry, they are able to buy them at a much cheaper rate than formerly.

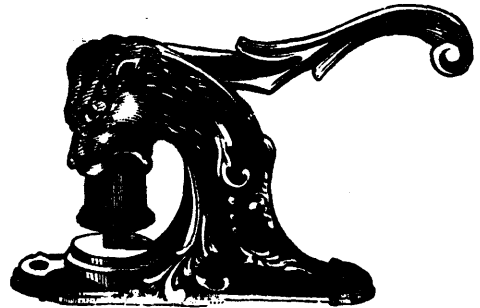
*Steel Stamps* is another branch of manufacture in which this firm are engaged, and which they have carried to great perfection. These stamps are very widely used, more especially by all manufacturers of wood and steel articles, who require them for marking their goods, such as axes, chisels, scythes, chisel-handles, etc., either with the firm name, trade mark, or both. These stamps, although of steel, are

altogether different from the post office stamps, and require to be cut with great precision, and tempered with unusual care, as if ever so little too hard they will "chip" on the first using, and if too soft will shortly become battered and spread out so as to be unfit for use. In using this description of stamp



considerable skill is required to make good work, as the blow must be struck so as to divide the force evenly, otherwise a bad impression, (or, more properly speaking, "indentation,") is made, one side being cut deep into the wood or metal as the case may be, whilst the opposite side is barely touched. The unskilful use is also calculated to damage the tool.

*Seals* require but brief mention here, as they are so well known, and no very startling improvements have yet been made in their manufacture. They are used for two purposes either for sealing wax or embossing. The former is not so much used now as a few generations ago, when every one who



aspired to be thought a gentleman was to be seen with a heavy bunch of seals dangling from the chain attached to his watch in the old-fashioned "fob" pocket. The improvements in envelopes since that time have happily done away with the common use of sealing wax; happily, we say, as the use of wax was attended with the loss of a good deal of time, trouble, and mayhap the unpleasant experience of a painful burn. Seals for embossing, which require a press, on the contrary, are in good demand, and are a cheap and ornamental means of addressing stationery.

A die is a seal made in a different shape, so that it will emboss thin metal, such as silver, etc., etc., or in another form again for embossing in colors Crests, Arms, Monograms, etc., on the envelopes and paper of those who desire an artistic and beautiful heading.

We have now to refer to the last but by no means the least important description of stamps. *Rubber Stamps* are used so extensively and are now so common that we need not more

than mention that there are "Stamps and Stamps," many in the market being very inferior. It is always a safe policy to consider that the "best is the cheapest," and this firm, while only making those of the very best finish, charge no more than other makers of inferior goods, their reputation for fine work bringing them so many orders from all parts of the country that the large quantities made enable them to turn them out at a remarkably low figure. We might mention, although our space is limited, that the great merit of the Rubber Stamp is in its elasticity and adaptability to all surfaces, rendering it available for many purposes where the rigid metal stamp would be worse than useless. Great improvements have also been made in the ink used, as it does not clog but keeps the stamp soft and in good order, and it is better to use the stamp daily, as the ink acts as a preservative. Messrs. Pritchard & Mingard started the manufacture of Rubber Stamps seven years ago, and the experience gained in this time has enabled them to introduce many new and important features.

We had almost forgotten to mention a branch of this business that is of especial interest to many of our readers, viz., the manufacture of *Stencils*, in which this firm excel. Although a comparatively new country, yet the artistic designs of stencils used by millers for flour brands, and by manufacturers of starch, soap, blacking and other commodities, for labelling the boxes used for packing their goods, show thought and skill surpassing even most of the productions used for similar purposes in the old world, and are also made for less money. In concluding we would simply advise those who may be in want of any such appliances as we have described above, to correspond with MESSRS. PRITCHARD & MINGARD, who will supply them with goods of superior workmanship at the lowest prices.

#### PACIFIC RAILWAY FREIGHTS.

We published not long since, as an item of manufacturing news, an account taken from a Brantford paper of machinery made in that city and shipped to Brandon, on the Canadian Pacific Railway, near the close of which it was added that the freight on this machinery was more than if it had been sent to Australia by way of New York. This statement has since been going the rounds of the press, and has been made use of to show that exorbitant rates are being charged on the Canadian Pacific. But there is really nothing very wonderful in the fact stated, if a fact it be, when we consider the extraordinarily keen competition now existing in the ocean shipping trade, and the intensity of the struggle between leading commercial nations for the possession of distant markets. While cheap steamship transportation is working a revolution in the trade by long ocean routes like that which is now going on, comparisons of ocean with railway freights are only idle and misleading. And comparisons between different railway rates under widely different conditions are apt to be misleading too, unless due regard be had to important points wherein circumstances alter cases.

By parties who ought to know better, if they have any knowledge of business at all, it has been assumed that on this new and still unfinished road—the Canadian Pacific—connecting the old Provinces with a new and undeveloped country, freight should be carried as cheaply, for instance, as on the

trunk lines between Chicago and the seaboard. They might as well have gone a little further, and have brought up the remarkable fact that some of the Atlantic steamship companies either are or recently were offering to carry wheat across the ocean for nothing, because something to do for ballast had to be obtained. In the course of the long and apparently interminable discussion regarding the railway war and proposed pooling or division of freight in the United States, the fact has been brought out that wheat is frequently carried to Liverpool from Chicago as cheaply as from New York. This is accounted for partly by the holding back of wheat in Chicago when gigantic combinations and "corners" are formed to control the market, and partly by the keen competition for European-bound freight among the immense fleet of large Steamships now engaged in the North Atlantic trade. The fact is that the conditions of railway competition on the lines connecting the Western States with the seaboard are altogether exceptional and extraordinary: the like of them exists nowhere else on the face of the globe. Even in England, that country of coal and iron and cheap production, no such low rates are to be had by shippers as those which prevail between the Western States and the seaboard in times of railway war, or even during suspension of hostilities, it may be added. To compare with these latter the rates charged on a road opening up a new country—a road, besides, which as yet gets only freight going west and none going east—is utterly preposterous. In another column we copy from the *Hansard* report a table of figures given by Sir Charles Tupper in the course of his Pacific Railway speech on the 18th inst., which will be found valuable for future reference.

In this table the rates and distances are given for four classes of freight on thirteen roads—five Canadian and eight American—also rates on the Canadian Pacific as they were before, under the Government, and as they are at present, under the Syndicate. Five different distances are given—from 20 to 25 miles, 45 to 50, 70 to 75, 95 to 100, and 145 to 150. The average of the thirteen roads is found to be 45½ cents per 100 lbs. and the Canadian Pacific 34 cents; and of six roads, 66½ cents and the Canadian Pacific 45 cents. The first thing the company did was to reduce their charges below the old government rates. For the same service for which the Canadian Pacific Railway now charges 45 cents—first-class freight carried 150 miles—the Chicago, Burlington and Quincy charges 59 cents; the Union Pacific, 60 cents; the Atchison, Topeka and Santa Fe, 75 cents; and the Northern Pacific, 80 cents. The Central Vermont carries a cent lower, and one or two others a little lower too, but on the whole the comparison is a favorable one for the Canadian Pacific. Nothing tells like hard facts; and we commend to the attention of our readers the facts given in the table. (The Table referred to will be found on page 161.)

#### A CERTAIN ASPECT OF THE STRIKE QUESTION.

We have been having a time of strikes in Canada lately, and the trouble is not yet over. The argument is advanced that Protection is a failure, because it has not raised wages so much as to do away with strikes altogether. This view of the matter is very far wrong, as we hope to show.

Why did we establish Protection in Canada at all, why did we think it necessary? Principally because this is a new country, standing towards older countries at a disadvantage as regards large capitals, long experience, abundance of manufacturing skill, and, most important of all—possession of the market. In many and various lines of production the Canadian market has been, ever since it was a market at all, in the possession, not of ourselves, but of outsiders. For a long time there appeared to be no help for this, or we thought there was none, until our thinking took another turn, and we determined to try whether or not Protection would enable us to do something for ourselves. The idea that we were at a certain disadvantage in relation to older competitors, who were in possession of the field when we ventured to dispute a place in it for ourselves, is of the very essence of the purpose we had in view when deciding to try Protection. But it is not to be assumed that Protection will suffice to offset *all* disadvantages, and make us successful in manufacturing whether we attend to other elements of success or not. Protection may under our circumstances be a *sine qua non*—a thing without which we may as well give up manufacturing altogether. But even with Protection secured we still want business management, skill, economy, and industry ere we can hope to succeed. The very fact that we make our start with several important and well recognized advantages on the side of our old established competitors, implies that we have need of every help that can be made to tell on our own side. And equally necessary is it that we clear ourselves of every hindrance that may tell against us in the race.

Strikes constitute one of the hindrances we have to fear; and a new country has to fear their consequences more than an old one, if they come. In other words, a new country can not so well as an old one afford to indulge in the expensive luxury of strikes. That is, let us explain, in those branches of industry which are connected with the production of articles which we manufacture at home, but which *may be* imported from abroad. If, through a strike of woollen and cotton mill hands these industries be paralyzed in Canada, this result would follow, that more woollens and cottons would be imported, and money would have to be sent abroad while hands were idle at home. A strike of carpenters, bricklayers, and plasterers would be a very different matter, for, though foreign workmen may come in, we cannot import houses ready built. Our present reference, therefore, is not to trades circumstanced as the latter are, but only to trades like the former, with regard to which the contingency of an advantage given to our competitors abroad, through derangement of industry at home, has to be considered.

The very fact that we resort to Protection at all implies our belief that our industries require help to enable them to withstand foreign attack. Even though with fair trade we might feel able to hold our own, the contingency of unfair competition, and of an undermining aggressive warfare carried on by foreigners with the design of crushing out our new enterprises, has to be provided for. For this purpose Protection is the main thing, to begin with. But the fact that we positively *are* at certain disadvantages in taking the field against older competitors implies, further, that we cannot afford to neutralize Protection by strikes, and so render it of none effect. Old England, with her manufactures long and strongly estab-

lished, can afford strikes, if they do not come *too* often and last *too* long. Young Canada, just starting in the race of manufacturing, cannot afford strikes at all in those lines wherein foreign goods may take the place of those we ought to be making at home. Nor is this any barren or merely verbal distinction, but one with a real and important difference attached to it. And it deserves to be well considered and well weighed by both employers and employed all over Canada.

## Special Notices.

### THE PREVENTION OF BOILER EXPLOSIONS.

After many years of experiment, and at an expenditure of much money and careful study, Professor S. C. Salisbury, of New York, has perfected an invention called an automatic engineer or feed water attachment for boilers, having for its object the gradual and constant feeding of boilers with water exactly to evaporation. Steam is the great motive power of the world, and yet it is the most dangerous, and requires the most careful watching to prevent dreadful accidents, and any invention tending to reduce the possibility of such accidents, and at the same time acting as an economizer of fuel, labor, and boiler, should commend itself to the general public: and this is exactly what this invention professes to be. It is fully endorsed, not only by eminent scientific engineers in the United States, but also by some of the first machinists of Montreal and other Canadian cities, who have not only thoroughly examined the machine itself, but also have for a length of time watched its working practically. Apart from its merits as a feed-water attachment, it is especially valuable by combining with the arrangement an alarm whistle attachment, which gives long notice of danger from low water, should such occur from the pumps or injector getting out of order, or from other unavoidable causes. Messrs. H. Shackell & Co., of 162 St. James Street, Montreal, are the agents, and at their office one of the machines can be seen and information obtained. Our advertising columns also contain further interesting particulars.

### WOOLLEN MACHINERY.

We have much pleasure in drawing attention to the advertisement, in this issue, of Messrs. Parkhurst and Holt, of the Atlas Manufacturing Co. of Newark, N. J. As we shall give a lengthy description of the machines made by this firm as soon as engravings which are being made for the purpose are ready, we now confine ourselves to the statement that in buying from them manufacturers will be consulting their best interests, and will be sure to receive the utmost satisfaction. Messrs. Parkhurst & Holt have already quite a connection in this country, and when we inform our readers that Messrs. Goldie & McCulloch of Galt are their agents for Canada, we need add no further recommendation.

To Mill Owners and Manufacturers.

USE

**F. E. DIXON & CO.'S**

PURE BARK-TANNED

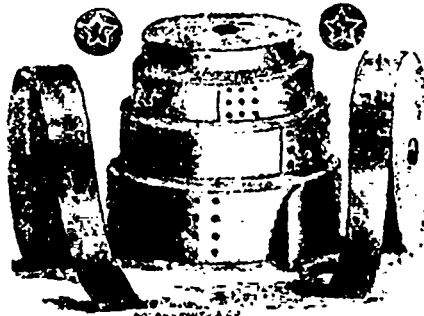
**Star Rivet Leather Belting !**

**FIRST PRIZE FOR LEATHER BELTING**

—AT—  
 Provincial Exhibition, Ottawa, - 1875.  
 " " Hamilton, 1876.  
 " " London, - 1877.  
 Industrial Exhibition, Toronto, - 1879.  
 " " Toronto, - 1880.

**EXTRA PRIZE FOR Genuine Oak Tanned Belting.**

—AT THE—  
 Provincial Exhibition, Hamilton, 1876.



**INTERNATIONAL MEDAL**

Centennial Exhibition,  
 PHILADELPHIA, 1876.

**FIRST PRIZE FOR BELTING LEATHER**

AT THE  
 Industrial Exhibition, Toronto, 1879.  
 " " " " 1880.

Our Belting is **Short Lap**, and is warranted to run straight and even on the pulleys, and certainly cannot be surpassed in quality by any other Belting in the market at the same prices.

Our **Leather is of Pure Bark Tannage**, and consequently is much more durable than the chemical tanned leather of which most of the American Belting imported into Canada is made, though sold under the name of **Oak Belting**.

To accommodate those who desire to have a really genuine article of **Oak Belting**, we beg to say that we keep in stock a quantity of

*Oak Leather of the Celebrated Tannage of J. B. HOYT & Co., of New York,*

and as the duties on imported rough Leather are much less than on the manufactured Belting, we are thus enabled to sell the Belting made from this quality of Leather much cheaper than it can be imported.

**LARGE DOUBLE BELTS A SPECIALTY.**

Please note that our Price List averages **Twenty to Twenty-five per cent.** lower than the American Price List at which all American Belting is sold in Canada.

Lace Leather of the very best quality always on hand.

*All Work Warranted.*

*Orders Solicited.*

**F. E. DIXON & Co.,**

**81 Colborne Street, Toronto**



## To Mill-Owners.

### **AMERICAN LEATHER BELTING**

OUR tannery near Providence, Rhode Island, is devoted to the tannage of Leather for Belting and no other purpose. Our Belt Factory in connection is second to none on this continent. The Belting we manufacture is of a very superior class, and such as cannot be compared with that made and sold by makers who sell at such low prices that the quality has to be reduced. If users of Belting would keep an account of the time lost in "taking up" and repairing these poor quality belts, they would find cheap belting a very expensive article. We offer a guarantee that our Belts will stand more strain, run straighter, and last longer than any bark-tanned Belting made. We keep on hand at our Toronto warehouse a larger stock than any other makers or dealers in Canada.

ORDERS SOLICITED.

**H. L. FAIRBROTHER & CO.,**

Manufacturers,

PAWTUCKET, R.I.

**Geo. F. Haworth, Agent,**

65 YONGE STREET, TORONTO.

THE  
**Canadian Manufacturer**  
AND INDUSTRIAL WORLD.

Published fortnightly by the CANADIAN MANUFACTURER PUBLISHING CO., (Limited).

15 WELLINGTON ST. EAST, TORONTO.

ANNUAL SUBSCRIPTION, IN ADVANCE, \$2.00.

CARD OF ADVERTISING RATES ON APPLICATION.

FREDERIC NICHOLLS,  
*Managing Editor*

All communications to be addressed CANADIAN MANUFACTURER,  
TORONTO, ONT.

AUTHORIZED REPRESENTATIVES.

Montreal, Que.	Mr. C. R. Scott.
St. John, N.B.	Mr. J. S. Knowles.
Winnipeg, Man.	Mr. K. Graburn.

**Editorial Notes.**

It is generally supposed that there is no jute manufacture at all in the United States, but this is a mistake. Eighty-six looms and 3,376 spindles are in motion at the Jute Works of the Dolphin Manufacturing Company, Paterson, New Jersey, and the finished product aggregates 4,144,748 lbs. per annum. Six hundred hands are employed.

There is a noticeable check to the railway construction boom in the United States. Consignments of steel rails arriving in New York find no eager buyers, but are going into warehouses to wait for an improving market. Cargoes on the water will be similarly disposed of for the present. In some cases American manufacturers have been asked to defer deliveries, and no more orders are going abroad.

In connection with the rapid settlement of Manitoba and the North-west, the construction of house timber, in parts, ready to be put together, is becoming a business at several points in the old Provinces. A great deal of the timber used in the North-west is carried there from points in Ontario, and even from as far east as the Province of Quebec; and, while the work can be done cheaper here, the cost of transportation is no more. It is therefore likely that there will be a considerable development of this new industry.

Meetings under the auspices of the Ontario Manufacturers and Industrial Association will be held as follows:—Oshawa, April 27th; Bowmanville, April 28; Port Hope, April 29; Cobourg, May 3; Belleville, May 4; Napance, May 5; Kingston, May 6; Gananoque, May 9; Brockville, May 10; Prescott, May 11; Morrisburg, May 12; Cornwall, May 13. The meetings will be addressed by A. W. Wright, Secretary of the Association. Discussion is invited at all the meetings, and a fair opportunity will be afforded to opponents of Protection for the purpose.

Sarnia has lately passed certain by-laws for granting bonuses to manufacturers desirous of locating in that town. According to the *Observer* the special committee appointed to look after the bonus business have had their hands full, ever since, answering applications. This goes to show that there must be a large amount of capital awaiting investment in manufacturing industries, which under the old tariff would probably have been deriving interest from mortgages on farming lands. The present prosperity is so general that farmers are enabled to pay off existing mortgages, and as a sequence capital seeks profitable investment in other channels. The *Observer* mentions that by-laws are to be submitted for bonuses to stove works and malleable iron works, which, if passed, will be the means of bringing two very valuable industries to the town.

In our last issue we drew attention to the possibility of a rise in ocean freights between Europe and America. At present the amount of freight being shipped from Europe greatly exceeds anything that has been experienced for a number of years, and passenger traffic has also increased in a like proportion. On the other hand, outward freight rates are in a perfectly demoralized condition, and the statement is going the rounds that a steamship company in New York has agreed to pay a bonus of 1½c. per bushel for the delivery of 16,000 bushels of grain for Europe; and steamship lines in Boston have actually offered a premium of twopence per bushel for grain cargoes, with the shippers holding out for 2½d. From all accounts, however, the thriving business doing in inward freights more than compensates for the loss experienced in securing ballast for the return voyage.

The United States has in hand the experiment of trying to naturalize and establish the silk manufacture in the country, by means of Protection. English statesmen have said in effect that if the silk manufacture cannot live without Protection it may perish, for none will be given it. According to the Free Trade view, England is all right, and the United States all wrong, in this matter. Yet the following, which is from the Paterson (New Jersey) *Guardian* of a recent date, may suggest a doubt, even to Free Traders:—"One of the best tests of the prosperity of the silk business is the volume of money being sent abroad to the friends of operatives in the old silk centres. This is largely done through post-office money orders, and we have the assurance from Postmaster Conklin that while there is not the same amount sent as during the holidays, which could not be expected, there is no falling off, but a steady increase, as compared with the same date in other seasons. The greater portion of the money sent in this way goes to the three English towns of Macclesfield, Coventry, and Manchester. The statement is certainly gratifying." It seems as if there were something here to reflect upon.

The electric light for illuminating large spaces has had its first trial in Canada, Ottawa having been selected as the place to conduct the experiments. The capital, we believe, was a fitting place for such an experiment, as Parliament being now in session, the members from all parts of the country will be in a position to disseminate in their several constituencies any information they may have acquired as to the practicability of

city lighting by electricity. The trial, we should imagine from reports in the local press, has not been an unqualified success, although it is claimed that the nights on which the light was used were most unfavorable, but it should be borne in mind that if electricity is to supersede gas for this purpose, it must be equally available in all descriptions of weather. As an outcome of the experiments which have taken place, the Ottawa City Council have decided to test the electric light fully, and intend illuminating a certain area where forty-three naphtha lamps are now doing duty. The Ball Voltaic Arc system is to be adopted, and six lamps, aggregating 11,000 candle power, will be first set up, at an elevation of 30ft. The motive power will be derived from a Backus Water Motor, placed in the Water Works engine house.

While politicians are racking themselves with anxiety as to the date of the coming general election, there is a certain view of the matter which particularly commends itself to business men. The National Policy has been on trial for now three years, and, as we firmly believe, is by a large majority of the people deemed a remarkable success. But there are those who say "no" to this, and it is certain that the issue has to be tried over again at the bar of public opinion. A principal question for the people to decide upon at the approaching elections will be—whether, after three years' trial, they like the N. P. well enough to continue it. Meantime capital to a very large aggregate amount delays investment until this question has been decided. With respect to many and various enterprises that are in contemplation, capitalists are waiting to see "how the cat jumps," to use a homely but expressive way of putting it. It would therefore be for the country's good to have the elections over and done with some time this present year, after which business men would know just what to do. A state of suspense and uncertainty exists. While it lasts, many important enterprises that are contemplated hang fire, and will not be proceeded with till the case of the N. P. has been decided on the appeal now pending. It is therefore for the public interest that the decision should be had at the earliest convenient day. As for giving notice, it has already been given, or taken perhaps, we should say, whether given or not; and both parties are already as well prepared as they could be a year hence.

### THE FACTORY BILL.

The expansion of manufactures in Canada has made factory legislation inevitable, and the Government factory bill now before Parliament will undoubtedly become law. If our manufactures were ruined or declining there would be no need of factory legislation; but the prosperity of manufactures and the need of factory legislation go together. The present bill is of course condemned by the *Toronto Globe*, and the reason given is that it must prove inefficient, because not going far enough. It is easy to find fault in this matter, but not so easy to show that anything more stringent would have been practicable. As we have elsewhere contended, our infant manufactures that have foreign competition to face cannot afford to carry the extra weight of strikes; and let us add that neither can they yet carry the extra weight of too much factory legislation. As regards provisions for securing safety to life and limb, the bill is surely stringent enough, but other matters have to be more cautiously dealt with. Candid people will say that the Government has made a very good beginning, going tentatively and feeling its way towards what is required, and what the country's circumstances will bear. Meantime we are not likely soon to see in Canada anything like the terrible abuses which years ago aroused public indignation in England, and brought Lord Shaftesbury to the front as a Reformer. Should such abuses actually arise here, the appropriate remedy will quickly follow.

## Manufacturing Notes.

The CANADIAN MANUFACTURER will be pleased to receive items of industrial news from its readers in all parts of the country, for publication in these columns.

Notes of new machinery, improvements, increase in capacity, &c., will be of special interest. All communications must be accompanied by the writer's name as a guarantee of good faith.

The seventh call of 10 per cent. has been made on the shareholders of the Windsor, N. S., cotton factory.

In a few weeks Messrs. M. Whiting and W. J. Scarfe will commence the manufacture of pumps in Brantford in an extensive way.

There was a heavy shipment from the Moncton refinery lately, 2,026 barrels of refined sugar for various parts of Canada. This would amount to 583,643 pounds, and would make about four heavy train loads.—*Times*.

Mr. Wm. Lamp, of Cleveland, a practical machinist, has purchased from Morrison Bros., Toronto, a complete outfit for a foundry and machine shop, to be located on Mr. C. J. Whellams' property, Rapid City.

The Government have agreed to give ten thousand dollars a year for twenty years to aid the Carleton dry dock, New Brunswick, and have further promised to use their good offices with the Imperial Government for additional aid.

An agricultural and industrial exhibition for the district embracing the counties of Hants, Colchester, and Cumberland, N. S., will be held in the town of Truro, from the 3rd to 6th October next. Prizes to amount of \$2,500 will be offered.

The contract has been let for the erection of a large addition to the moulding shop at the Peters Combination Lock Co.'s works at Moncton. The extension will be 80x40 feet in size. The contract specifies that the work is to be done in five days.

A new cotton factory is to be established in Hamilton, in the neighborhood of the North-Western freight yards. The machinery has been ordered in England, but the boilers and engines will be made here. Mr. A. Duncan, of Hamilton, is the local head of the firm.

Messrs. Chapman & Mattison will have completed this week the large foundry they were building for Messrs. McOuat & McCrae, at Lachute Mills. It is to be immediately occupied by the latter gentlemen, who will have greater facilities for carrying on their large and increasing business.

The Cochrane Manufacturing Co., of St. Thomas, Ont., have purchased from Dr. Wilson for \$2,000 the lot on the west side of Hinks street, opposite their ware rooms, and cornering on the railway track. The company will erect a large warehouse thereon, and will have a very convenient place for shipping.

Mr. Sheffield, of Woodstock, is about to start an establishment in the East End for the evaporating and drying of fruit. It will be on the corner of Kent and Adelaide streets, directly on the line of the Grand Trunk Railway. It will be capable of drying 1,800 bushels of apples per day. We hope to see it a success.

Work has been resumed in the Halifax sugar refinery under charge of John E. Turnbull, the new manager from Scotland. The staff of employees is considerably smaller than before. There is a large stock of sugar on hand, 12,000 bags having been received from Brazil, besides a quantity of West Indian sugars in store.

Mr. Huscher, business manager of the Felt Manufacturing Company, of Hanover, was in Mount Forest last week and purchased from Mr. J. Harris one of his large carding machines. Mr. Huscher also gave Mr. Stovel, of the Vulcan Foundry, an order for one of his rag pickers. This company is going to add materially to the business prospects of Hanover.

The Penobscuis Paper Company's Mills are now doing good work and giving considerable employment. The manufacture of leather board is being prosecuted on an extensive scale with the new facilities added. A single order for 100 tons has recently been obtained from a Canadian house. Mr. A. S. Mackay, one of Moncton's leading boot and shoe dealers, is manager of the leather board department.

It is expected to have the knitting mill running by the first of August. Next week samples (made in the old mill) will be placed on the market, for the purpose of securing orders for the fall. The output of the mill at first will be about 75 dozen per day, which the company's commissioner at Montreal says he will have no difficulty in disposing of. The outlook of trade in the knitted woollen goods is A1.—*Kingston News*.

A novel enterprise will be started in Hamilton shortly. Mr. C. H. Logan, of Newark, N. J., has leased the building on the Great Western railway track east of the city, for the purpose of building houses and exporting them to the North-West. All that is necessary for the construction of wooden houses will be manufactured on the premises. Mr. Logan has had a large experience in Newark, where he is a partner in a large factory of that kind.

The Woodstock Woollen Mills Company, we are told, is steadily having its capital subscribed for by the farmers of this and York County. This enterprise, when completely organized and put into successful operation, must confer the greatest benefits on the farmers, who will then be able to have their wool manufactured early in the season and at a cost one-half less than under the present tedious and expensive hand system.—*Woodstock (N. B.) Sentinel*.

At a meeting recently held at Belleville of the general committee in relation to the iron industry, it was resolved to offer the New York and Ontario Furnace Company a site of fifteen acres with right of way thereto, water frontage, an exemption from taxes for ten years of all their buildings, except dwelling houses erected on said site, provided that the Company will erect an iron smelting furnace with a capacity of forty tons per day, and a rolling mill with a capacity of twenty tons per day.

A new industry is about to be added to those existing in Paris, in the form of a Carpet Factory. Mr. Cambellford, lately of Brantford, has made arrangements to start the manufacture of carpets there, and has secured the old cooper shop in which to commence operations, and which is being fitted up for the purpose. He will start with ten looms, and employ about twenty hands, but expects to increase the capacity in a short time. The samples of the articles made show good work, and no doubt will find a ready sale.

The Almonte Knitting Co., under the superintendence of Mr. B. Rosmond, the Managing Director *pro tem.*, have greatly enlarged the main building of the old Almonte Iron Works, and transformed it into a knitting mill. The improvement in the external appearance of the premises cannot fail to attract the attention of our citizens. Mr. Priest, the superintendent, and a staff of men are at present employed in setting up the machinery, part of which has arrived. It is expected that working operations will be commenced in a week or so.—*Almonte Gazette*.

The machinery for the cotton mill at St. Croix, N. B., is fast being put in place. The building will be swept out April 30th. Some time during May cotton cloth will be manufactured. The first load of cotton for the factory has arrived. A general office in connection with the factory is to be built at once at a cost of \$10,000. There is no stock of the company on the market, but some of it will be parted with at 20 per cent. premium. Applications have been received from more mill operatives than will be needed. The managers are reticent with regard to the plans of the company.

The first meeting of the Nova Scotia Steel Company was held in the town office there recently. It was well attended by those interested in the proposed works. Mr. J. W. Carmichael occupied the chair and Mr. D. C. Fraser acted as Secretary *pro tem.* After forming a resolution to organize, it was decided that the capital of the Company be \$160,000, to be divided in 100 shares, seventy-five per cent. of which will be paid up. The building operations will be commenced at once and the work pushed forward with all possible despatch. We heartily wish the new enterprise success.

Mr. Townsend, managing director of the Northern and North-western railway company, together with Mr. Kerr, freight manager, and Mr. Jones, the company's engineer, met a deputation from Barrie lately, consisting of the mayor, reeve, and Messrs. Martin, Caldwell and Bird, to consult about the freight rates in the event of a cotton factory being established in Barrie; when Mr. Townsend stated that he would put the factory on a par with the other similar factories in the province, in so far as regards freight rates. He, however, declined to discuss the question of general freight rates then, but promised to do so when the changes required were placed before him, and the particular grievances complained of were formulated.

The *New York Sewing Machine Journal* says that Mr. S. C. Wilbur, late of Moncton, N. B., is in St. John, and is meeting with success in his efforts to form a company for the manufacture and sale of knitting machines and the operation of knitting factories in connection therewith. It is believed a factory for making knitted goods will be located in

Moncton when a sufficient number of the machines have been manufactured. It is also expected there will be a demand for the machines by farmers throughout the country, and that they will in future come into general use, being quite as necessary as the sewing machine. It is to be hoped the St. John enterprise will succeed.

W. S. Morrison, of Winnipeg, and H. C. Clay, of Rapid City, have purchased from Mr. Chubb the sole right to build and use his patent draw lime kiln in the newly added portion of Manitoba, the North-West Territories, and British Columbia. A joint stock company with a capital stock of \$50,000 is now being formed for the construction of large kilns east of Winnipeg, on the line of the C.P.R., where stone is plenty and fuel cheap. The company have ordered the construction of six cars particularly adapted for carrying lime. It is their intention to supply lime along the line of the C.P.R., west, as far as it is built. The particular construction of this kiln is such that the cost of producing lime is reduced to a nominal figure.

The town of Moncton was never in a more flourishing condition than it is to-day. There have been no failures of importance among the merchants for the last three years, and the outlook for business this summer never was more promising. Five years ago bills were protested daily, now it is a rare thing for one of our merchants to have a bill protested. Rents are high and there is not an unoccupied house in the town. The sugar refinery is running at full time now and sending out large shipments of sugar. The efforts of the Grit party to cripple this new industry, and especially the vote of Sir A. J. Smith, is severely commented upon. The people are determined to have their rights respected, the opinion of Sir Albert to the contrary.—*Post*.

Last week's *Courier* says that orders have been received to extend the length of the principal building of the Perth car-shops one hundred feet. This makes this one building alone three hundred and forty feet long. Two more railway sidings are now under construction, and three or four others are to be made, including one that will run all round the grounds. The premises will then be pretty well honey-combed with tracks. We are told the work of making cars will commence inside of two weeks. Carloads of machinery are arriving every day. These machines include hydraulic pumps, trip-hammers, bolt machines, pulleys, shafting, &c. The machinery used in the car-shops formerly connected with the Central Prison, Toronto, has been purchased and is arriving daily.

The well conducted work-shop of S. R. Foster & Sons, Moncton, has done a great winter's business, having made and sold six thousand kegs of nails since December 1st. This manufactory runs thirty machines, being the largest mill of the kind in the Lower Provinces, and the most varied in its line of products. They have seventeen tack machines running constantly, and a number of vibrators for springs and shoe nails, besides the usual number of plate cutters and trimmers, and polishers. The senior member of this firm has recently invented a simple and inexpensive process which prepares iron for cutting into nails without the use of acids. The machines are running longer and are doing much better and cleaner work for the amount of labor expended and more of it than they could possibly do without it.

The *Sherbrooke Gazette* has the following from "A Resident":—"Wm. Angus, Esq., was here last week in connection with his new pulp mill. He has purchased the water power of Hon. J. G. Robertson (adjoining the farm of J. R. Cunningham). The work of clearing away for the erection of the mill is being pushed as rapidly as possible. A saw-mill will be built as soon as time will permit for sawing the lumber for the buildings, &c. A large boarding-house, and a dozen or more cottages will be erected for the accommodation of the employees. We expect a station, telegraph office, and post-office. The place will hereafter be called Angus. A bridge across the St. Francis River is talked of as near to the mill as practicable. We congratulate the promoter of the enterprise in having located in so desirable a locality, abounding as it is with a never-failing supply of lumber, and also in close proximity to a railway. Success to the enterprise."

In starting a new branch of industry the natural facilities of the locality should be regarded. For the manufacture of glue this town seems to be suited. What is required is raw material, a sufficient quantity of soft water, a market, skill and capital. The raw material would be supplied by the tanneries of the town and surrounding country. The stream would furnish an abundant supply of water. The factories of the town use a large quantity of glue, while Toronto, the headquarters of the glue trade, is close at hand. Skill must be imported and surely capital can be found at home for a promising enterprise like this. We understand that there are two other good points in favor of the establishment of this business: all the glue factories are pressed beyond their capacity, and there is not a first-class article made in the country. The Cedar Dale Works, one of the largest consumers in the country, and the Stove Company, both use imported glue, no home production having yet been found to come up to the standard. Who has got enterprise enough to start a factory?—*Oshawa Vindicator*.

Messrs. Gill, Allan & Co., are "rushing" the plaster business, both at their mines at Cayuga as well as at Paris. Their mills are running full power, and they find a ready sale for all that can be manufactured. Considerable of their shipment at Cayuga is done by means of a large scow, but last week a rival plaster man purchased the scow from the owners, and thus deprived the Paris firm for a time of their means of transportation. But only for a time, for the sleepy village of Cayuga was astonished one morning to find a vessel sailing up the river for Gill, Allan & Co.'s dock, where it anchored. The vessel had been chartered by Mr. Allan, who was determined not to be outdone in the way of enterprise. A load of plaster was soon on board, and the vessel departed for its destination, navigating the river quite successfully. This is the first instance of a sailing vessel sailing up the Grand River to Cayuga. As the experiment proved successful, no doubt it will be repeated, and soon a common sight will be vessels sailing up the river to Cayuga. We hope Gill, Allan & Co. may have to employ a whole fleet of such vessels in order to meet the requirements of their trade.—*Brant Review*.

The following items are from the *Belleveille Intelligencer*:—The trial start of the immense new engine of the Stormont Cotton Company was made at Cornwall, Ont., on the 14th, and gave the greatest satisfaction. The engine is one thousand horse power, and is one of the greatest in the Dominion. Its fly wheel weighs fifty tons. The flies will find it pretty hard to stop that wheel.—The product of the Kingston cotton mill has been sold at retail in that city at 8c., 10c., and 12c. per yard. The firm who sold the cotton said it was the best value for the money that they had ever handled. This means better value for the money than they had sold in the ante-N. P. times. What have the Kingston Grit paper and its confederates to say now of the "cotton robbery?"—A scheme for the establishment of car works in this city is now being matured. Already \$60,000 worth of stock has been promised, and several of the best men in the city are identified with it. A contract for the construction of 400 cars has been promised. The arrangements are being quietly but energetically made, and there is every reason for regarding the scheme hopeful—especially as it is in good hands.

We learn from the *Lindsay Post* that considerable progress has been made during the past few months in developing the resources of the north country. We learn that the indications of iron ore are considered so satisfactory that Mr. S. C. Parry, resident in Lindsay, and Mr. J. G. Mills, of Chicago, have commenced the erection of a hot-blast charcoal furnace about six miles from Kinmount, on Myers' branch of the Victoria railway, and have purchased a water privilege on the Burnt River, conveniently situated for their purpose. The furnaces will smelt ore from the Snowdon iron mines. The proprietors have leased some lots from Messrs. O'Brien, Shortiss & Co., and from Irving & Co., for their ore supplies. The furnace is to be pushed forward with all possible despatch, and will probably be completed and in blast by next August. The capacity of the furnace will be 30 tons of pig iron per day, and will use 50 to 60 tons of ore daily. This will be of great advantage to the mining interests of the Snowdon district, as it will create a home demand for the leaner ores which it will not pay to export. This furnace will give constant employment to nearly 200 men, as in addition to the mines and furnace men a large force will be required to furnish wood and convert it into charcoal. The establishment of these works will be in many ways a benefit to this town.

Messrs E. R. Moore's new tack works are almost completed, and only await the arrival of some belting to commence extensive operations in this new branch of the business. The main room upstairs (about 80x45) has been fitted up with entirely new machinery of approved type supplied by Leeds, Thompson & Co., of Boston. The six tack-making machines have each a capacity of 150,000 tacks daily, and are adapted to turn out all varieties and sizes in iron, copper, brass, zinc and tin, from half ounces up to twenty-four ounces. This class of machinery is not at present made in the Dominion, though that used in the manufacture of cut nails is constructed and finished on the premises, the castings being furnished by city foundries. In the same room two horseshoe nail cutters of wonderful producing power are in position. These work at the rate of 700 revolutions per minute, turning out 4 nails at each revolution, in sizes ranging from  $\frac{3}{8}$  to 11-8. Alongside of these, Messrs. Moore have placed two new cut nail and patent brad machines, which have been finished on the premises, also three grindstones, one a beadstone and the other two faced stones for finishing work. They are all five feet in diameter and will be propelled with great swiftness by steam power. The other new machinery consists of two sets of shears for cutting and trimming iron in three feet lengths (one foot more than the usual lengths cut by such appliances), and two polishing cylinders for finishing nails and tacks by a very ingenious process. The cylinders, after being filled with the nails, etc., are made to revolve rapidly, the mutual friction of the contents rendering them perfectly smooth, all metallic and other dust being driven off by a strong blast of air forced into the cylinder at the axis. In a side room three wooden baths have been constructed for the purpose of scaling iron by the muriatic acid process. The metal, after being placed in the acid in the first of the series, is then washed thoroughly in the second bath, from which it is finally removed to the third, which, containing lime water, prevents rusting. In another portion of the upper premises a lathe for finishing castings has been placed. It will be seen

by the foregoing that the firm, in embarking on this new industry, are leaving nothing wanting for its conduct capital can purchase or experience considers essential. Messrs. Moore & Co. are confident of keeping all their new machinery in full work notwithstanding their great capacity, and there is no doubt but that their anticipations in this respect will be realized, and a ready market be found for the whole of the output.—*St. John (N.B.) Sun*.

The following items are from the *St. John (N. B.) Sun*:—Passenger traffic on the Intercolonial Railway continues to increase. A good crowd of workmen left yesterday for the canning establishments at New Mills and neighborhood.—Ten flat cars for the Canada Pacific Railway have just been turned out of Jas. Harris & Co.'s workshops, and are on the siding receiving the finishing touches of paint. Three box cars from the same works are also ready for delivery to the I. C. R.—Law's dye works, Gilbert's Lane, are in full running order, and the hands as busy as possible restoring to something like their pristine condition all sorts of fabrics, from the fragile gossamer lace to the more necessary and substantial articles peculiar to masculine attire—Thirty-five hands are kept constantly employed at Messrs. Abrams & Kerr's iron works making iron and brass castings, steam engines, and every description of wood and iron-working machinery. In the moulding shops a large number of these men were found yesterday making castings from the patterns prepared in another part of the works, two furnaces or cupolas furnishing the molten metal. This is the preliminary step towards making the varied descriptions of machinery manufactured by the firm. The castings are in subsequent operations subjected to the action of lathes, planes, milling machinery, etc., till after being through the hands of the finishers they are finally put together and become in their turn the instruments by which other appliances in wood or iron are fashioned. Among the appliances being at present manufactured are a large pulley for the Windsor Cotton Factory (a class of machine of which nearly all in use are made here), new spool-making lathes for a firm at Belleville, Ont., an improved gauge lathe, and a planer and matcher on an improved and novel principle which will be a very cheap and substantial machine for mill work. The spool-making machine is a specialty of the firm, who have supplied several thousand dollars worth within a very recent period. Mr. Abram, who conducted the *Sun* reporter over the premises, says he can now do more business, pay higher wages, and employ three times as many men as he could before the National Policy was inaugurated, and the duty on iron does not cause any detriment to his business. New machinery is being constantly added, yet he is compelled in many cases to refuse orders.—Numerous local industries are in operation on the City Road and none apparently more prosperous than the axe and car spring works of Josiah Fowler. Here a number of skilled artisans are hard at work at the various processes necessary for turning out the first-class work for which this establishment has earned a reputation. Although the outside demand for axes has declined, it has always been necessary for Mr. Fowler to make a considerable stock to keep on hand for following season's orders, hence this department of the business was in full operation, and with its capacity for turning out about six or eight dozen per day, will be ready for fall orders with a good stock for delivery. Londonderry iron of the best quality is invariably used in the manufacture of all axes made in this establishment. An important feature of this industry is the manufacture of car springs, of which immense quantities are turned out. It is estimated by the proprietor that two hundred tons of springs will be made during the summer. . . . The axles for the lighter cars display beautiful workmanship, and can be turned out at the rate of 35 sets a week. The machinery in use is all of the most improved description, but the increasing business has rendered necessary the ordering of a new rolling mill, which is under course of construction in Messrs. Abram & Kerr's foundry next door. Mr. Fowler describes business as "rushing," and says he has all he can do and never has to go outside his establishment for an order. An engine of 35 h. p. drives the machinery and also supplies power to Messrs. Abrams and Kerr's works.

A steamship recently arrived at Victoria, British Columbia, with 547 Chinese laborers. Nine thousand more coolies are to arrive before August.

The Canadian authorities are beginning to recognize the fact that to maintain a successful competition in the grain traffic with the Erie canal the Eastern coal fields must be developed, and cars filled with coal for western consumption, in order to have paying traffic both ways.—*American Manufacturer*.

The *Western Dry Goods Trade* (Chicago) says that of late there has been an enormous immigration of Poles and Bohemians to that city, overcrowding the market of unskilled laborers, and crowding into tobacco factories, glue and fertilizing and chemical works, brick yards, lime kilns, grain elevators, and all kinds of establishments requiring hard work with little or no skill.

TABLE OF RAILWAY FREIGHT RATES. (Referred to on page 153.)

Distance in Miles.	Class per 100 lbs.				Distance in Miles.	Class per 100 lbs.				Distance in Miles.	Class per 100 lbs.				Distance in Miles.	Class per 100 lbs.								
	1	2	3	4		1	2	3	4		1	2	3	4		1	2	3	4					
20 to 25	14	12	9	7	70 to 75	24	20	15	11	do	30	23	19	15	do	35	27	22	18	do	45	36	29	23
do	14	12	9	7	75 to 100	24	20	15	11	do	30	23	19	15	do	35	27	22	18	do	45	36	29	23
do	14	12	9	7	do	24	20	15	11	do	30	23	19	15	do	35	27	22	18	do	45	36	29	23
do	17	14	11	8	do	24	20	15	11	do	29	22	19	15	do	34	22	17	12	do	45	36	29	23
do	18	15	12	9	do	25	19	15	12	do	30	23	19	15	do	35	27	22	18	do	45	36	29	23
do	17	14	10	8	do	25	19	14	11	do	33	25	19	15	do	42	33	25	19	do	50	42	33	25
do	18	15	12	9	do	26	20	17	13	do	31	26	21	15	do	36	30	24	18	do	50	42	33	25
do	18	14	11	9	do	28	20	17	13	do	38	30	24	19	do	48	38	29	23	do	50	42	33	25
do	14	12	10	8	do	27	21	17	14	do	50	40	30	25	do	58	48	38	30	do	69	59	49	39
do	16	13	11	9	do	24	18	17	13	do	35	30	25	19	do	55	45	37	32	do	75	65	55	43
do	20	17	13	10	do	28	23	19	14	do	38	32	25	19	do	58	50	42	35	do	80	66	59	48
do	22	19	17	14	do	35	30	25	22	do	55	45	37	32	do	69	59	49	39	do	80	66	59	48
do	25	20	15	13	do	30	25	21	16	do	52	45	38	32	do	66	57	48	39	do	80	66	59	48
do	25	20	15	13	do	38	33	30	23	do	61	50	45	35	do	75	65	55	43	do	80	66	59	48
do	19	18	17	17	do	33	28	23	21	do	55	48	42	37	do	66	57	48	39	do	80	66	59	48
do	18	16	13	12	do	30	27	23	19	do	50	46	42	37	do	66	57	48	39	do	80	66	59	48
do	20	17	14	11	do	27	21	17	14	do	36	29	23	17	do	46	40	33	24	do	59	49	39	29

Wool.

PHILADELPHIA.

REDUCED STOCKS AND REVIVAL OF DEMAND—PROSPECTS OF A "BOOM" IN MARKETING THE NEW CLIP—INTERIOR AND EASTERN BUYERS.

(From Our Own Correspondent.)

PHILADELPHIA, April 24, 1882.

During the greater part of the past fortnight business has been sluggish and unsatisfactory, and values have been unsettled and irregular, with the tendency decidedly in buyers' favor. Within a few days past, however, the market has exhibited more steadiness, and there has been a slight improvement in demand. Forced sales at concessions have materially reduced the available supply of good wools, and the low prices and depleted stocks have developed some speculative demand. Dealers are beginning to compete with manufacturers for cheap lots of the best wools, in the belief that growers' ideas for the new clip are likely to be relatively higher than current rates on the seaboard. In fact, while there are no present indications of a flurry in the market, affairs appear to be drifting into the same condition as last year, when a late developed scarcity and advance in prices excited the country markets and led to the payment of higher prices for new wools in the south and west than had been previously realized for similar stock on the seaboard. The old clip contained a superabundance of inferior wools, and stocks now on hand are composed chiefly of this description, on which there is still general anxiety to realize; but choice lots both of washed and unwashed fleeces are in small supply, and some recovery from the recent depression seems very probable. If it comes in the shape of any decided advance, as some well-posted dealers anticipate, the effect will be apparent in a new clip "boom" in the interior that will give country holders an opportunity to unload, as they have done for several years past, at prices that will afford little if any margin of profit to Eastern buyers after the excitement has subsided and seaboard markets become well supplied. Quotations show no important change. Some large lines of fine Ohio and similar fleeces have sold as low as 40c. to 41c.; but dealers would buy at these prices, and sellers generally ask 42c. to 43c. for desirable lots.

MONTREAL.

A LARGE BUYER IN THE MARKET—A MONTREAL WOOL FIRM IN DIFFICULTIES, PERHAPS ONLY TEMPORARY—CANADIAN PURCHASES IN BOSTON—SALES AND CURRENT QUOTATIONS.

(From Our Own Correspondent.)

MONTREAL, April 25, 1882.

Transactions during the past fortnight have been limited in sales of foreign wool, chiefly Cape and Australian, the former selling at 18½c. to 20½c., and the latter at 22c. up to 30c. as to quality. The chief feature in the situation this week is the presence of a large buyer on the market, who it was thought had been well stocked up, and although we do not learn of his having made any purchases, it is known that he has several lots under offer, one of which is a lot to arrive. In Canadian wools there is no stir whatever, and prices remain as last quoted, Canada pulled A super at 33c. to 35c.; B super at 30c. to 32c.; and unsorted pulled at 27c. to 29c. The most important event in the trade since our last issue has been the financial difficulties of a wool firm in this city, but it is hoped they will prove only temporary. The Boston market during the past week has shown a fair degree of animation, resulting in sales of 212,000 lb of Australian at 32c. to 46c. according to quality, and 37,000 lb of Cape at 32c. Besides the above, a lot of Cape was taken on Canadian account, in bond, supposed to be on Hamilton or Toronto account. The total sales of foreign and domestic wools last week in Boston were 2,227,000 lb.

**Cotton.**

**PHILADELPHIA.**

**DEMAND FOR CONSUMPTION WELL SUSTAINED—LOW OCEAN FREIGHTS—RECEIPTS AND QUOTATIONS.**

*(From Our Own Correspondent.)*

PHILADELPHIA, April 24, 1882.

During the week following last report there was an improved feeling and a general upward tendency in American and foreign markets, with increased activity both for speculation and consumption. For the past week the demand for spot stock, for home consumption and export, has been well sustained, but the speculative movement has been comparatively small, and futures have slightly declined. Low rates of ocean freights have stimulated the export trade—as low as 1-16d per lb. having been accepted per steam from New York to Liverpool. Spinners have been buying with a fair degree of freedom. The slight depression in futures was caused by unfavorable reports from Liverpool and Manchester, a continued large movement at Bombay, and improved weather for planting in the South. Against these influences, however, were the small receipts at the ports and a growing belief in higher prices later in the season. The bears, therefore, have gained but a slight advantage—the closing prices of futures being but a few points below last week. The visible supply of cotton is 2,861,668 bales, against 2,974,366 bales at this time last year. Last week's receipts at the ports were 29,800 bales, against 33,229 bales for the previous week. The total since September 1st, 1881, is 4,398,136 bales, against 5,303,619 bales for the same time in 1880-1881. Closing quotations for spot cotton were as follows on the dates named :

	Middlings.	Low Middlings.	Middlings.	Low Middlings.
	April 8th.	April 22nd.	April 22nd.	April 22nd.
New York	12 1-16	12 5-16	12 1/2	11 13-16
New Orleans	12	11 1/2	12	11 1/2
Mobile	11 1/2	11 1/2	11 1/2	11 1/2
Charleston	11 1/2	11 1/2	11 1/2	11 1/2 @ 11 1/2
Savannah	11 1/2	11 1/2	11 1/2	11 1/2
Galveston	11 1/2	11 1/2	11 1/2	11 1/2
Wilmington	11 1/2	11 3-16	11 1/2	11 5-16
Norfolk	11 11-16	—	11 1/2	—
Augusta	11 1/2	11 @ 11 1/2	11 1/2	11 @ 11 1/2
Memphis	11 1/2	11 1/2	12	11 1/2
St. Louis	11 1/2	11 1/2	11 1/2	11 1/2
Cincinnati	11 1/2	11 1/2	11 1/2	11 1/2
Baltimore	12 1/2	11 1/2	12 1/2 @ 12 1/2	11 1/2
Philadelphia	12 1/2	11 1/2	12 1/2	11 1/2
Boston	12 1/2	11 1/2	12 1/2	12
Liverpool	6 1/2 d	—	6 11-16 d	—

**Dry Goods.**

**NEW YORK.**

**RETIREMENT FROM BUSINESS OF A. T. STEWART & Co.—THE REASONS ASSIGNED, AND THE TRUE REASONS—EXPORT OF AMERICAN COTTON TO CHINA—VARIOUS ASPECTS OF THE DRY GOODS TRADE.**

*(From Our Own Correspondent.)*

NEW YORK, April 24, 1882.

The most important event of the past fortnight has, of course, been the announcement by A. T. Stewart & Co. of their withdrawal from business. Owing to its suddenness, it was a complete surprise to the trade, although not at all unexpected at some future date from what was understood to have been the state of the business since the death of its originator and builder. The firm themselves publicly announced that there has not been any diminution of their business during this time, and, on the contrary, absolutely claimed a steady and profitable yearly increase, and that their retirement was because of the great burden and responsibility attached to the conduct of such vast interests. It is, however, needless to say that the

entire "trade," including our most highly respected merchants, discredit these statements, while they emphatically declare, as having reason to know, that the house has lost ground almost steadily since Mr. Stewart's death, and particularly since the discrimination against the Jews by the present manager. Meanwhile the mill property is to be disposed of separately, and the business of the New York and branch houses closed out, unless perchance purchasers should be found. It may be mentioned that Boston parties have attempted negotiations for the Chicago branch, but nothing definite is yet known. It is thought that two or three months at least will be required to wind up affairs, and no effect on the market is apprehended.

The general condition of the New York market remains unchanged. The spring trade, so far as first hands are concerned, is well advanced; and, while results have proved considerably below early anticipations, yet no real causes for complaint remain. The jobbing trade, also, shows less activity, but there is a fair force of package buyers present, and a good number of orders are being received from the retailers, while the latter are in many cases reducing their stocks with such rapidity as will shortly compel them to renew their assortments more freely. Values are steady on all such fabrics, woollens and cottons, as govern the market, but concessions have occasionally been made on outside makes of prints, gingham, dress goods, bleached cottons, and light-weight cassimeres, to stimulate their movement. Cotton goods are in moderate demand, and leading makes of browns are in light supply. Fine bleached shirtings are also well sold up, and wide sheetings in many cases are sold ahead. The export demand continues good, and it may be referred to as a feature, that 4,000 packages will be shipped to China about May 4th, via the Suez Canal. Print cloths are in good demand, and have lately advanced sharply, the present quotations being 3 15-16c. @ 4c. for 64 x 64s., and 3 7-16c. @ 3 1/2c. for 56 x 60s. Fancy prints remain in limited request, the chief attention being devoted to the choicest patterns; and no speculation has yet been developed in these despite the advance in print cloths. Gingham have subsided into a state of further quiet, after the recent break, and the movement in dress goods was irregular and confined to small parcels.

Woollen goods showed less activity than two weeks ago, as is, however, usual at this season, clothiers having placed the bulk of their orders for the fall trade. The best makes of heavy fancy cassimeres, chevots, suitings, and worsteds meet with a moderate inquiry; the leading makes are well sold up, and large deliveries are being daily made in the execution of back orders. Light-weight men's woollens are generally very dull, but in some cases considerable transactions were effected by means of concession to reduce or clean out remaining stocks. Overcoatings and cloakings are doing fairly, and satinets move steadily, but quietly. Kentucky jeans remain dull and in the same unsatisfactory position; while flannels are in moderate request. Carpets rule quite active, a very satisfactory business having been accomplished in extra supers and tapestry and body Brussels, at steady prices.

In foreign goods there has naturally been some decline of business after the recent activity, and trade was somewhat spasmodic, though the jobbing departments are still doing very fairly. Among importers the season is proving more satisfactory, as a rule, than was anticipated six or eight weeks ago. Fine and medium grade silks were in fair demand at steady prices, indifferent qualities being generally neglected at any price. Novelties in some cases are being closed out by means of extra inducements. Dress goods sell moderately, with the better demand for the specialties of the season, staple fabrics being dull. Laces continue active, but linen goods, white goods, and woollens are severally inactive.

**Leather.**

**MONTREAL.**

**RECENT SALES, WITH THE FIGURES—SPECULATION ON FUTURE VALUES—LARGE STOCKS OF BLACK LEATHER ON HAND—QUOTATIONS.**

*(From Our Own Correspondent.)*

MONTREAL, April 25th, 1882.

Since our last issue there has been more business in black leather, although at no higher prices, and we have now to report sales of 1,200 sides of heavy waxed upper, at 34 1/2c., 2,000 sides at 31c. @ 34c., and several

lots of splits at 20c. @ 21c. These sales, however, were mainly speculative, on the ground of a possible rise in values later on. We are informed, however, by well posted men in the trade, that stocks are too large to admit of any advance in black leather, and that tanners would need to curtail their operations at least 50 per cent for several months before stocks could get into that shape which would warrant an advance. The best parcels of Spanish and slaughter sole are taken readily at current rates, but ordinary descriptions are still difficult to sell, and prices have to be shaded in order to effect sales. During the week sales have been made of 500 sides of plump B. A. sole at 25½c., and several lots of from 100 sides upwards at about the same figure. Slaughter sole has changed hands at from 28c. to 29c. There has been some trading in buff at from 13c. to 14c., while one parcel brought as high as 16c., but we believe extended time was given in that case. Pebbled has also met with some inquiry at from 11½c. @ 14. Green butchers' hides are steady at \$8.00, \$7.00, and \$6.00 per 100; this is for Nos. 1, 2, and 3 respectively; and cured hides are selling at \$1.00 per 100 lbs more. Sheepskins have been placed at \$1.30 @ \$1.40 each from first hands, and lambskins at 25c. @ 30c. each. Calfskins are unsettled, as dealers have not yet been able to pull together, and sales are reported at 18c. @ 14c. per lb. We quote prices as follows:—No. 1 Hemlock Spanish Sole, 25c. to 26c.; No. 2 ditto, 22c. to 23½c.; Buffalo sole, No. 1, 21½c. to 23c.; No. 2 ditto, 20c. to 21½c.; Hemlock Slaughter, 27c. to 29c.; Harness, 28c. to 32c.; Waxed Upper (light), 34c. to 38c.; Waxed Upper, medium and heavy, 30c. to 34c.; Grained Upper (long), 34c. to 38c.; Scotch Grained Upper, 37c. to 40c.; Buff, 13c. to 16c.; Pebbled Cow, 11½c. to 15c.; Splits, calf, per lb., 30c. to 35c.; Splits, medium, Crimping, 27c. to 30c.; Splits, Juniors, \$0.18 to \$0.25; Calfskin (light), \$0.60 to \$0.75; Calfskin (heavy), \$0.75 to \$0.85; French Calfskin, \$1.05 to \$1.35; French Kid, \$15.75 to \$16.50; English Kid, \$0.60 to \$0.70; Busses Kid, \$15.50 to \$16.50; Patent Cow, \$0.15 to \$0.16; Enamelled Cow, \$0.16 to \$0.18; Green Hides, inspected, \$9.00; Calfskins, per lb., \$0.13 to \$0.14; Sheepskins, \$1.25 to \$1.40; Lambskins (spring), \$0.25 to \$0.30; Sheepskins, dressed, No. 1, \$5 to \$5.75; Sheepskins, dressed, X, \$6 to \$6.75; Sheepskins, dressed, XX, \$7 to \$7.75; Sheepskins, dressed, XXX, \$8 to \$8.75; Sheepskins, dressed, XXXX, \$9 to \$9.75; Sheepskins, dressed, XXXXX, \$10 to \$10.50.

there is a point beyond which men cannot be driven, and it is possible that in this case that point has already been reached.

The Chamber of Commerce has just issued a pamphlet containing a complete statistical review of the mining, manufacturing, and mercantile interests of Pittsburgh. From its voluminous tables we select a few figures, showing the magnitude of certain industries.

Class of Manufactures.	No. of Establishments.	Cash Capital Invested.	No. of hands Employed.	Value of Products.
Agricultural Imple-ments	5	\$400,000	365	\$675,000
Boilers, tanks, &c.	12	645,800	776	1,450,000
Brass foundries	16	683,000	330	1,800,000
Bridges, iron	3	570,000	752	1,462,000
Boating, rivers	—	7,477,000	3,260	2,400,000
Coal	67	15,552,000	17,962	12,208,306
Coke	60	10,854,500	5,659	4,423,559
Copper	2	600,000	120	975,000
Carriage makers	31	333,000	300	400,000
Domestic hardware	5	391,000	416	500,000
Founders, machin-ists, etc.	35	2,740,000	2,083	3,953,000
Fire Brick and Tiles	10	858,000	845	1,029,500
Files	5	20,000	40	20,000
Glass	59	5,985,000	6,442	6,832,683
Guns, Pistols, &c.	5	100,000	59	257,000
Iron rolling mills	36	19,020,000	18,905	30,242,257
Iron blast furnace	16	4,890,000	2,285	8,766,403
Iron railings and fences	6	100,000	85	204,000
Iron roofs, cornices, etc	3	167,000	141	316,000
Miscellaneous lead and iron	7	1,510,000	1,050	5,962,921
Railway Supplies	6	1,425,000	1,102	3,177,817
Steel	17	10,170,000	7,060	18,378,886
Saws and tool-	6	910,000	834	1,845,860
Stoves	7	444,000	406	693,000
Safes, fire-proof	4	100,000	127	143,000
Steam pumps	3	95,000	60	110,000
Stained glass	4	75,000	50	90,000
White lead and linseed oil	8	1,200,000	306	1,672,000

On Wednesday last Messrs. Carnegie Brothers & Co., limited, blew in a new furnace, and will have another ready in a short time. These two furnaces are 85 feet high and 20 feet across the boshes. Two other furnaces owned by the firm are 80 x 20 feet, and a fifth 65 x 16 feet. Another firm are also preparing to erect a blast furnace on the site of the two old Superior furnaces, which have not made iron since 1873.

Comparative depression is still the rule in the iron trade. But little pig iron is changing hands; the rolling mills are all running, but some of them have stopped running at night, and new orders come in slowly. At the steel works there is plenty of work on hand, but there has recently been a decided decline in receipts of new orders. We quote the various kinds of iron, steel, &c., as follows:

**Pig Iron.**—Neutral mill, from native ore, \$24.50 to \$25; cinder-mixed red-soft, \$25.50 to \$26; Bessemer, \$28 to \$29; No. 1 foundry, \$27 to \$28; No. 2 do., \$26 to \$27 (all four months). **Manufactured Iron.**—Bar, 2.50c.; No. 24 sheet, 4.30c.; tank, 3.30c.; C. H. No. 1 boiler plate, 5½c.; homogenous steel do., 6½c.; hoop iron, for common barrel hoops, 3.10c. to 3.30c.; lighter sizes, 3.20c. to 5.10c. All 60 days or 2 per cent. off for cash. **Nails.**—Demand fair, and card unchanged, but it is said the card is being "cut" in some cases. 10d. to 60d., \$3.40, 60 days or 2 per cent. off for cash. **Wrought Iron Pipes and Tubes.**—The discount on gas and steam pipe is 65 per cent.; on boiler tubes 42½ to 45; on oil-well casing 67½c. net, and tubing do., 20c. net. **Steel.**—Prices unchanged, best quality refined cast steel, 12c. per pound; machinery steel, 8c. for crucible and 5c. for Bessemer or open-hearth. **Steel Rails** are still lower, being now quoted at \$53 to \$55 on cars at works. **Railway Track Supplies.**—Spikes, 3.15c. per lb. 30 days; splice bars 2½c. cash; track bolts, 3½c. to 3¾c. cash for square nut, and 4c. for hexagon. **Old Rails.**—American ties, \$30, foreign ditto, \$29, and double heads \$31. **Scrap Iron.**—Demand light, and prices lower. No. 1 wrought, \$1.45 per 100 pounds; railway, \$1.50, and car axles, \$1.75, cast boxings. **Copper.**—Ignot, 19c. to 20c. per pound. **Lead.**—Fig, 6½c. per pound; bar, 6½c., and 4 per cent. off; pipe, 6½c. with a discount of 10 per cent.; sheets, 6½c., discount 10 per cent. **White lead.**—The works were never more fully employed; 7c. to 7½c. per pound, by the keg, whether dry or in oil. **Window Glass.**—Discount on double strength, 60 and 60 per cent.; on single strength, 60 and 10 per cent. **Linseed oil.**—Raw, 55c. per gallon by the barrel; 62c. **Connellsville Coke** is lower; may now be quoted at \$1.65 to \$1.90 per net ton on cars at ovens.

## The Iron Trade.

### PITTSBURGH.

DEMAND FOR ADVANCE OF WAGES BY PUDDLERS AND ROLLING MILL MEN—PROBABILITY THAT THE EMPLOYERS WILL REFUSE IT—NOT WARRANTED BY PRESENT CONDITION OF THE IRON TRADE—REPORT ON INDUSTRIES AND COMMERCE OF PITTSBURGH—NEW FURNACES—DEMAND FALLING OFF—QUOTATIONS.

(From Our Own Correspondent.)

PITTSBURGH, April 23, 1882.

The most important current topic in the iron industry of this city is the iron-workers' wages scale. At a district delegate meeting of the Amalgamated Association of Iron and Steel Workers, held on the 15th inst., it was voted to demand an advance of 50 cents per ton for boiling (puddling), which would make the lowest price \$6 per ton, instead of \$5.50 as during the present year. Advances are also asked for other rolling mill work, ranging from 10 to 12 per cent. The question has been before conference committees of the manufacturers and the workers, but no agreement has yet been reached. It is not at all likely that the manufacturers will concede the advance without vigorous resistance, and it is barely possible that they will prefer stopping their mills to yielding. The condition of trade at present does not at all warrant an increase of wage. Besides, there were a few advances made last year, and in the previous year the puddlers forced the manufacturers to raise their pay from \$5 to \$5.50. The Amalgamated Association, embracing as it does all the skilled workmen in the iron and steel works, is a powerful organization, and has generally compelled the manufacturers here to grant its demands; but



## PHILADELPHIA.

ON TRADE STRONG AND STEADY—RAILROADS PROMISE TO KEEP THE PEACE—STEEL RAILS DOWN TO \$50—IRON AND STEEL QUOTATIONS—THE TARIFF AND THE FREE TRADERS—COAL—THE "READING"—THE MECHANICAL ENGINEERS—THE LABORERS.

(From Our Own Correspondent.)

PHILADELPHIA, April 26, 1882.

Within two weeks a sharp inquiry has been developed for iron and steel and hardware. The spring trade has not as yet come up to expectations. The only reason is, buyers are certain lower prices are coming. Hence dealing has been of that five-cent character which is unsatisfactory. After all, the consumption is immense, and necessarily must be when we remember that every manufacturing establishment in the country is crowded with work at remunerative prices, and yet the iron and steel makers are not happy. They have escaped all sorts of threatened evils: first, importations like those of 1879; next, low prices; third, excessive home production. None of these evils have happened. To-day the trade is surrounded by healthful influences. The production of iron has not been reduced, and the consumption is evidently increasing.

The consumptive capacity of this continent is under-estimated, as is shown by the steadily increasing demand, the depletion of stocks, and the firmness of prices. The dulness of the past four months has been due to short crops, diminished exports, and fears that construction of railroads was being too rapidly prosecuted. We are now within three months of new crops, and within five months of possible heavy exports. These facts may soon transform the entire commercial situation. Eastern speculators and investors have privately paid agents travelling through the west, watching the coming crops and figuring up prospectively their value. Influences have been privately brought to bear on the railway authorities to have no more railway wars, to fix on rates and keep them. The railway managers have seen the importance of this by the efforts made in Congress and in the New York Legislative. Of course they know Congress and the Legislative are as putty in their hands at present, but they do not want to stir up the power behind the throne. The mustard seed of an anti-monopoly party is seeking to grow into a great political party, but when it is about becoming a party the dominant power in politics will do as they always have done, viz. pass enough of the desired measures to take the wind out of the sails of the would-be party.

A large volume of money awaits investment. The short crops last year restricted enterprise and dammed it up in banks, where it is to-day. Fresh enterprise will call it forth, and with its employment will come greater activity, firmer prices, and increasing production. The government disbursements are relied upon to keep money easy.

Steel rails have fallen to \$50 per ton. There are rumors of lower prices, but they lack foundation. The Bessemer manufacturers are preparing to accommodate themselves to the new situation which tariff changes and increased production and competition involve. Smaller lots for earlier delivery are held at \$52 @ \$54. The unsettling influence at this time is the number of second-hand orders. The low prices at which some sales have been made are thought to be due to the fact that buyers have paid a certain sum to cancel orders, and these lots have been thrown on the market, less the forfeit. Old rails are selling in a dull way at \$28 for ties, \$29.50 for doubles, and \$27.50 is offered for ties in small lots. A declining tendency has set in and lower prices are probable from to-day's indications. Parties who want large lots will not pay over \$27, they say. They are waiting. Scrap has declined further, several hundred tons having sold at \$30 for No. 1. Muck bars are held at \$42, but the tendency is downward. Merchant bar is nominally 2-8, but good iron is selling freely at 2-7. Competition is increasing. The Pittsburgh card is 2-5, but 2-4 is taken by some, and such iron gets into the east. The blast furnaces are fairly off for orders. Within a few days inquiries have improved. Quotations are firm. Stocks are not permitted to accumulate, and hence the long anticipated downward tendency does not appear. No. 1. Foundry best sells at furnace at \$25.50; poorest at \$23.50, but the average is \$24.50, with No. 2 \$1.00 lower. Gray Forge, \$22.50, with a little business, 50 cents on each side. Contracts are not being renewed. Consumers are extremely cautious. They buy ten tons at a time, or twenty, or perhaps fifty. Still, prices do not weaken. What will they likely do when the ten and twenty ton men come rushing in for fifty and one hundred tons as they did all through the last half of last year?

Bessemer pig has been at a stand-still during the past two weeks. Sales of 35,000 tons have been heard of at \$24 for summer delivery; \$25 is asked for what is called prompt delivery.

Ocean freights are down to eleven shillings. Outgoing freights are worth nothing; none to be had. There is nothing to attract vessels here. Foreign markets incline to weakness. This fact prevents forward buying. Consumers will, if they can, drag along this way until fall, when crops will attract shipping, thus reducing freights, increasing imports, and lessening prices.

Bridge building and general building operations are being most vigorously prosecuted. Angles are quoted at 3-2; beams, 4; channels and ties, 4-2, subject to usual concessions, but no unusual concessions are to be had. The works are full of orders. The bridge works are crowded.

The boiler and engine works are fixed until September. The ship yards

are beehives. The locomotive works are turning out engines as fast as they ever did. One thing is certain, buyers are satisfied to-day that prices have about reached bottom limits. Still, there are some who are holding back. Tank iron is sold at 3c., and large orders could be placed at even less. Refined is quoted at 3¼ to 3½; shell, 3¾; flange, 5; fine box, 6; sheet iron, 4½ to 5½; pipes, 60 off list; tubes, 40 off. Steel prices unchanged, and as near importing limits as is consistent with safety.

The tariff interests are dragging along. But for Hewitt, the New York free traders, and their western allies, the Tariff Commission bill would have been passed. The N. Y. Chamber of Commerce and two free trade organizations have become Hewitt henchmen to resist the Tariff Commission and secure a square and prompt reduction of duties. The wisdom of this is questionable.

The coal combination continues its policy of restriction, and holds up prices. Stocks are accumulating. Heavy investments are made in Central Pennsylvania coal lands, and railway connections are being projected by the three trunk lines—the P. R. R., the N. Y. C., and the P. & E.

The net profits for the Reading for March were \$600,000; and for three months \$2,471,145. The Coal and Iron Co.'s profits for three months were \$210,220.

The mechanical engineers held a three days' session. A multitude of manuscript papers were read. The Society was wined and dined and driven here and there, and went home with kindly remembrances of Philadelphia.

The bis-Centennial enterprise is gathering force and interest. It will be a second edition of the great Centennial. Cheap railroad rates will be relied on to fill the city with visitors, and there will be an abundance of attractions provided when they come, to make the visit a satisfactory one.

The laborers are gaining all around, employers concede the justice of their demands to higher pay under the increased cost of living. Rents are advancing, so is real estate. Suburban property is improving, as people feel able to buy and build outside the city limits. Anti-Chinese demonstrations have been started and will probably be followed by other labor demonstrations. The rush of immigration is one of the causes that will in time effect an equalization. A prosperous and happy yeomanry is, however, the secret of a nation's power and greatness. They are good purchasers.

## MONTREAL.

SCARCITY OF PIG IRON ON THE SPOT—SUPPLIES AFLOAT AND SOON TO ARRIVE—FIGURES OF RECENT SALES OF PIG AND BAR—ATLANTIC FREIGHTS—EXPECTED LARGE IMPORT OF RAILS—THE GLASGOW MARKET—GOOD WESTERN DEMAND FOR BAR IRON AND SHELF HARDWARE—PURCHASES FOR MANITOBA—QUOTATIONS.

(From Our Own Correspondent.)

MONTREAL, April 25, 1882.

The scarcity of spot pig iron is still a feature in the market, those dealers who are fortunate enough to hold stocks being able to realise pretty well their own figures; but the end of this state of affairs is near at hand, as several dealers have fair supplies of the different brands of Scotch pig afloat to this port, the S. S. Manitoban, from Glasgow, being expected here in a few days. Sales of car lots have been made of Summerlee and Gartsherrie at \$25.00 @ \$26.00 for immediate delivery from store as well as several lots of Siemens at within the same range of prices. For future delivery by early vessels, sales of Gartsherrie have been made aggregating some 1,500 tons, at \$21.75 @ \$22.00, while a lot of 500 tons of Eglinton has been ordered for May on p. t., but the figure is known to be in the close vicinity of \$20.00, and we have good reasons for believing that it is the exact one. Freight rates have given way from Liverpool to New York, but from Glasgow to this port dealers still quote 17s. 6d., although we hear of an engagement at a lower figure. Large quantities of rails, from 75,000 to 100,000 tons, are expected out this summer, and will therefore take up a very large portion of the dead freight tonnage to Canada, from which it is argued that although present high rates may ease off somewhat, any material reduction must not be looked for. Advices from Glasgow report generally lower prices in pig iron, owing to an unsettled condition of the market, which it is said has been caused by speculation, a clique of wealthy producers having the course of the market *pro tem*, almost entirely in their hands. Warrants are variously quoted by cable at 46s. 6d. @ 47s., but this discrepancy is owing to the frequent fluctuations which have taken place of late, the cables having probably been received at different periods although very close together. In bar iron there is a good Western inquiry, and we hear of a large order being filled on Toronto account on the basis of \$2.25 here, the quality being equal to the Staffordshire Crown brand. Siemens' bar iron has been placed in this market on Western account, since our last letter, 300 tons at \$2.35 here. In Canada plates there is nothing doing, the season having scarcely commenced. Tin plates have met with moderate inquiry, and owing to the recently demoralized state of the English metal market values have ruled in buyers' favor; sales being mentioned of several lots of 1,

C. charcoal at \$5.35 @ \$5.40, which prices are a little below our former quotations. Ingot tin is quiet and lower at 25c. @ 26c. Ingot copper is also quiet at 18c. for English, and 18½c. for Canadian. A very brisk trade on country account has transpired within the past fortnight, several large purchases of shelf goods having been made on Manitoban account. Prices are generally steady, remittances show some improvement, and the hardware trade is in an eminently healthy condition. Dealers are talking of advancing the price of window-glass 10c. all round. We quote revised prices as follows:—On spot, Coltness, \$25.00 to \$26.00; Siemens, \$25.00 to \$26.00; Summerlee, \$24.50 to \$26.00; Langloan, \$24.50 to \$25.50; Eglinton, \$24.00 to \$24.50; Calder, \$24.00 to \$24.50; Carnbroe, \$24.00 to \$24.50; Hematite, \$27.50 to \$28.00. Bar, per 100 lbs.—Siemens, \$2.35; Scotch and Staffordshire, \$2.25; Best Staffordshire, \$2.50; Swedes, \$4.00 to \$4.50; Norway, \$5.00; Lowmoor and Bowling, \$6.25 to \$6.50. Canada Plates, per box—Glamorgan & Budd, \$3.25 to \$3.50; Penn, \$3.25 to \$3.50; Nentgywnt, \$3.25 to \$3.50; Hatton, \$3.25; Thistle & Clifton, \$3.50. Tin Plates, per box—Charcoal, I. C., \$5.35 to \$5.75; Charcoal, I. X., \$7.25 to \$7.50; Charcoal, D. C., \$5.25; Charcoal, D. X., \$7.25; Coke, I. C., \$4.40 to \$4.75; Tinned Sheets, No. 26, Charcoal, 10c. to 11c. Cookly K. or Bradley, 10c. to 11c.; do, Coke, 10c. to 10½c.; Galvanized Sheets, best, 7c. to 7½c.; Hoops and Bands, per 100lbs., \$2.75 to \$3.00; Sheets, best brands, \$3.00; Boiler Plate, per 100 lbs.—Staffordshire, \$3.00 to \$3.25; Bradley, \$4.50 to \$4.62½; do, Lowmoor and Bowling, \$7.00 to \$12.00; Russia Sheet Iron, per lb., 12½c. to 13c. Lead—Pig, per 100 lbs., \$4.50 to \$4.75; Sheet, do., \$5.50; Bar, \$5.00 to \$5.50; Shot, do., \$6.00 to \$6.25. Steel—Cast, per lb., 11½c. to 12½c.; Spring, per 100 lbs., \$3.25 to \$3.50; Tire, do., \$3.25 to \$3.50; Sleigh Shoe, \$2.40 to

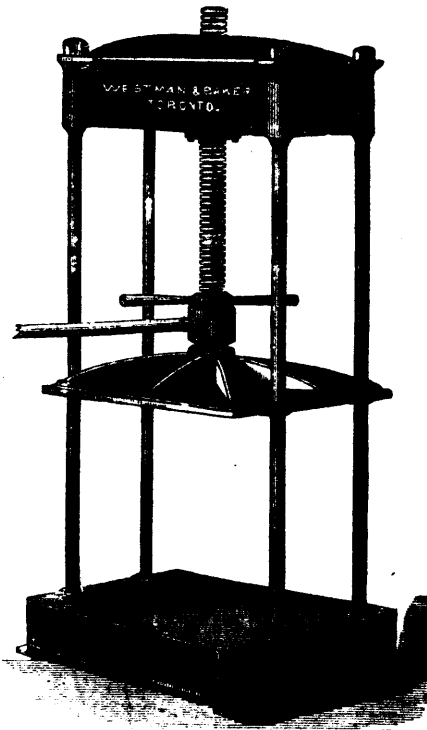
\$2.50; Ingot Tin, 25c., to 26c.; Bar Tin, 30c. to 32c.; Ingot Copper, 18c. to 19c.; Zinc sheet, per 100 lbs., \$6.00 to \$6.50; Spelter, \$00.0 to \$6.00; Horse Shoes, per 100 lbs., \$4.25 to \$4.50; Proved Coil Chain, 3 in., \$5.50; Anchors, \$5.00 to \$5.50; Iron Wire, No. 6, per bdl., \$1.75 to \$1.80. Cut nails are quoted as follows, cash:—Hot Cut American or Canadian Patterns, 3 inch to 6 inch, \$2.70; 2½ in. to 2¾ in., \$2.95; 2 in. to 2½ in., \$3.20; 1½ in. to 1¾ in., American, \$3.45; 1½ in., \$4.20; 1½ in. to 1¾ in. cold cut Canadian, \$3.20; 1½ in. ditto, \$3.70. Window glass is firm at the advance, and prices are—7½×8½, 7×9, 8×10, 10×12, and 10×14, \$2.00 to \$2.10; 10×16 and 14×20, \$2.20 to \$2.40, 18×24, \$2.40 to \$2.50.

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SIZE OF BED 24½ × 32½.

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### Warren's Asphalt Roofing,

THE BEST ROOFING KNOWN.

Also put on

PITCH AND GRAVEL ROOFING,

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LAMP BLACK,

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## Iron & Metal Company,

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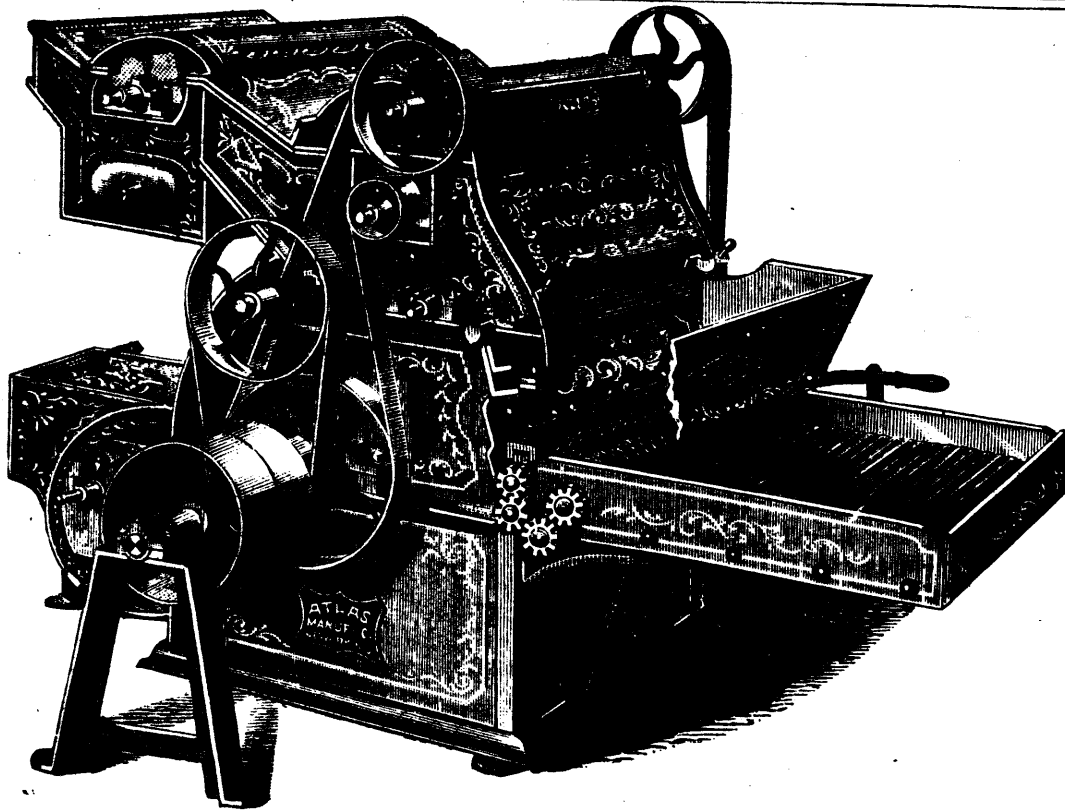
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Manufactured only by

**THE ATLAS MANUFACTURING CO.,**  
NEWARK, N.J.

**SENDALL & RICHARDS'  
PATENT  
BARLEY  
BEARDER.**

*Patented April 26th, 1881.*

The Farmers of Canada have long felt the need of a practical machine that would thresh their barley, and at the same time remove the beards from it, thus making it in first-class condition for market. Several different machines have been made and tried for that particular work, but have failed, because they were not practical machines. **THE SENDALL AND RICHARDS' MACHINE** is a complete success. It has been in use for two years in the western part of New York State, giving unbounded satisfaction to every one using it. Two machines were introduced into Canada during the past year, which were exhibited at the Provincial Fair at London, and the Central Fair at Hamilton. They were pronounced by practical machine men and farmers who saw them a decided success. Three or four of the leading manufacturers of Ontario are now manufacturing the Bearder, and others are invited to correspond with the owners with a view to the manufacture and sale of the machine.

Descriptive Circulars furnished on application.

**SENDALL & RICHARDS,**  
Brockport, N.Y.



**OTTAWA RIVER**

**Grenville & St. Anne Canals.**

**NOTICE TO CONTRACTORS.**

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Timber for Lock Gates," will be received at this office until the arrival of the Eastern and Western Mails on THURSDAY, the 11th day of MAY, next, for the furnishing and delivering, on or before the 3rd day of October, 1882, of Oak and Pine Timber, sawn to the dimensions required for the construction of Lock Gates for the new Locks at Greece's Point, Grenville Canal, and the new Lock at St. Anne, Ottawa River.

The timber must be of the qualities described, and of the dimensions stated on a printed bill which will be supplied on application, personally or by letter, at this office, where forms of Tender can also be obtained.

No payment will be made on the timber until it has been delivered at the place required on the respective canals, nor until it has been examined and approved by an officer detailed to that service.

Contractors are requested to bear in mind that an accepted bank cheque for the sum of \$300 must accompany each tender, which shall be forfeited if the party tendering declines to enter into a contract for supplying the timber at the rates and on the terms stated in the offer submitted.

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

This department does not, however, bind itself to accept the lowest or any tender.

By order,  
**F. BRAUN,**  
Secretary.

Dept. of Railways and Canals,  
Ottawa, 15th April, 1882.



**TELEGRAPH LINES.**

**SELKIRK TO EDMONTON.**

**NOTICE.**

SEALED TENDERS will be received by the undersigned up to Noon on WEDNESDAY, the 17th day of May next, in a lump sum, for the purchase of the Government Telegraph Line (embracing the Poles, Wires, Insulators and Instruments), between Selkirk and Edmonton.

The conditions to be that a line of telegraph communication is to be kept up between Winnipeg, Humboldt, Battleford and Edmonton, and that Government messages be transmitted free of charge.

The parties tendering must name, in addition to the lump sum they are prepared to give for the telegraph line, the maximum rate of charge for the transmission of messages to the public.

**F. BRAUN,**  
Secretary.

Dept. of Railways and Canals,  
Ottawa, 18th April, 1882.

**ECONOMY IN FUEL!**

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**FENWICK & SCLATER, Montreal.**—Asbestos packing, paints, and roofing.—Send for lists. Files, &c.

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**TORONTO BRIDGE CO., Toronto.**—Builders of Steel and on, Railway and Highway Bridges.

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**M. WRIGHT, next Exchange Bank, Hamilton, Ont.**—Sole agent in Canada for Ordway & McGuire, cotton factors, Nashville, Tenn.

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**Edge Tools.**

**R. T. WILSON, Dundas, Ont.**—Manufacturer of axes, picks, mattocks, grub hoes and railway contractors' supplies.

**Engines and Boilers.**

**G. C. MORRISON, Hamilton.**—Engines, boilers, steam hammers, etc.

**THOS. WILSON, Dundas, Ont.**—Manufacturer of stationary and portable steam engines, boilers and machinery of every description—cotton mill calenders, hosiery steam presses and propeller wheels, all sizes.

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**FILE & SPRING CO., Cote St. Paul, Montreal.**—All kinds of files and springs. Files recut. Sole manufacturers of Spaulding's patent concave spring.

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**Hubs, Spokes and Bent Goods.**

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**Iron Works.**

**CANADA SCREW CO., Dundas.**—Manufacturers of iron and brass screws, bolts and rivets.

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

**DOMINION BOLT CO., 139 Front St. East, Toronto.**—Manufacturers of every description of bolts; hot pressed nuts, railway spikes, bridge, boiler and iron rivets.

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**MONTREAL MALLEABLE IRON WORKS, St. George Street, Montreal.**—Manufacturers of malleable iron, steam, and gas fittings.

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

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**ULLEY'S BRUSH WORKS, 74 Bleury St., Montreal.**—Machine brushes for cotton factories, flour mills, &c. Machine brushes of every description a specialty.

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**JOHN MCARTHUR & SON, Montreal.**—Afford best value in pure olive and lard oils, also in all other leading lines of vegetable, animal, and mineral oils for factory use. Invite special attention to their celebrated crown diamond "engine" and "machinery" oils.

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

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**C. WILSON & SON, 45 Esplanade Street East, Toronto.**—Manufacturers of the Improved Wilson Scales. Designers to the Government. Received 29 first prizes, medal and Governor-General's grand diploma.

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**CORRIVEAU SILK MILLS CO., Montreal.**—First manufacturers in Canada of black and colored dress silks, ribbons, handkerchiefs, &c.

**Stereotypers, Engravers, &c.**

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

**MAJOR & GIBB, 646 Craig St., Montreal.**—Manufacturers and importers of wire cloth and wire goods and dealers in railway and mill supplies.

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

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**C. T. BRANDON & CO., Toronto.**—Have special facilities and machinery for the manufacture of all kinds of wooden articles. Correspondence solicited.

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**Woollen Manufacturers.**

**J. ROUTH & CO., Cobourg.**—Woollen Manufacturers.

**JOHN WARDLAW, Galt, Ont.**—Manufacturer of Scotch fingering, wheeling and knitting yarns.

**Wools and Cotton Warps.**

**WINANS & CO., Toronto.**—Dealers in wools and cotton warps.

**JAMES LESLIE,**

Manufacturer of

**CARD CLOTHING,  
LOOM REEDS, &c.**

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**COTTON & WOOLLEN  
MILL SUPPLIES.**

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WEST END, MONTREAL.**

P. O. Box 996.

# RICE LEWIS & SON

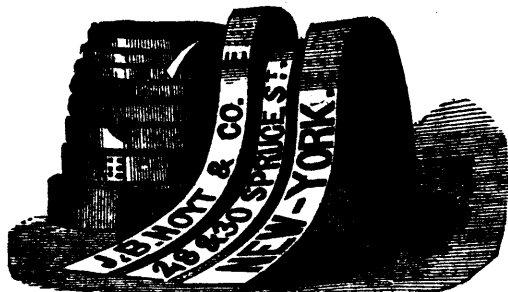
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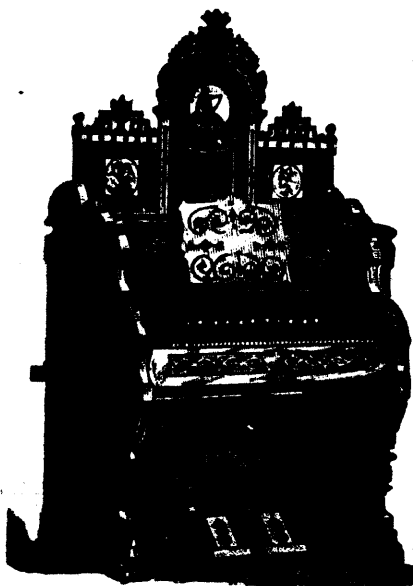
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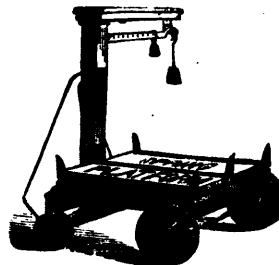
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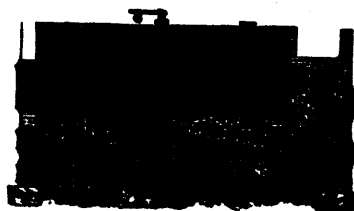
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