

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:
Commentaires supplémentaires:
- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Continuous pagination/
Pagination continue
- Includes index(es)/
Comprend un (des) index
- Title on header taken from: /
Le titre de l'en-tête provient:
- Title page of issue/
Page de titre de la livraison
- Caption of issue/
Titre de départ de la livraison
- Masthead/
Générique (périodiques) de la livraison

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

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

CANADIAN JOURNAL OF Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVII.

TORONTO AND MONTREAL, FEBRUARY, 1900.

No. 2.

The United Alkali Company, Limited, of England.



Caustic Soda, 60°, 70°, 74°, 76°, 77°. Soda Ash, all strengths, SAL. SODA. PURE ALKALI, 58°.

WILSON, PATERSON & CO., Montreal, Sole Agents.

Importers of Sulphate of Alumina, Hypo Sulphite of Soda, Dichromate of Soda, Silicate of Soda, Caustic Potash, Crystal Carbonate, Borax, Coconut Oil, Palm Oil, Castor Oil, Cotton Seed Oil, Rosin Oil, ROSIN. All Chemicals used by Soap, Paper, Woolen, and Cotton Manufacturers.

NEW YORK OFFICE, - 133, 135, 137 FRONT STREET

McARTHUR, CORNEILLE & CO.

Importers and Manufacturers of



OILS CHEMICALS

and **DYE**

310 to 316 St. Paul St.

MONTREAL STUFFS

DOMINION DYEWOOD & CHEMICAL Co. TORONTO
MANUFACTURERS

JACK & ROBERTSON,

7 St. Helen St., Montreal.

Dyewoods, Chemicals, Alizarines

SOLE CANADIAN AGENTS FOR

The Society of Chemical Industry in Bâle.

ANILINE COLORS.

New York and Boston Dyewood Co.

MANUFACTURERS OF

DYEWOOD Extracts

Importers of **INDIGO AND ANILINE COLORS.**

SELLING AGENT IN CANADA:

A. W. LEITCH, 16 Hughson St. South, Hamilton, Ont.

ANILINE DYES } **LOGWOOD**
SUMAC } Extracts
INDIGO }

HEMOLIN BLACK, MORIN YELLOW

WM. J. MATHESON & CO., Limited
423-425 St. Paul Street, **MONTREAL**

Main Office: 182-184 Front Street, New York.

Branches: Boston, Philadelphia, Providence.

Works: Long Island City, Port of New York

W. T. BENSON & CO. MONTREAL

Sole Agents in Canada for

The British Dyewood and Chemical Company, Limited.

JOHN DAWSON & CO., } Glasgow Branches.
W. R. SCOTT & CO., }

Manufacturers of Dyewoods and Extracts.

Wm. Blythe & Co., Church, England,

Manufacturers of all CALICO PRINTERS' SUPPLIES, Chloride and Sulphate of Zinc, Glaubers and Epsom Salts, Arsenates, &c.

St. Denis Dyestuff and Chemical Co., Paris, France,

Manufacturers of ANILINE COLORS, Aniline Oil and Salt, Cudbear, Cachou de Laval, Archil Extracts, Thioacetanilides, &c.

Bellhouse, Dillon & Co.

SOLE AGENTS IN CANADA FOR

THE WEST INDIES CHEMICAL WORKS, LIMITED,
Spanish Town, Jamaica, W. I.

TRADE MARK



ALLIGATOR BRAND

Write for samples and prices.

PURE EXTRACTS
LOGWOOD

FOR COTTON, WOOL AND SILK

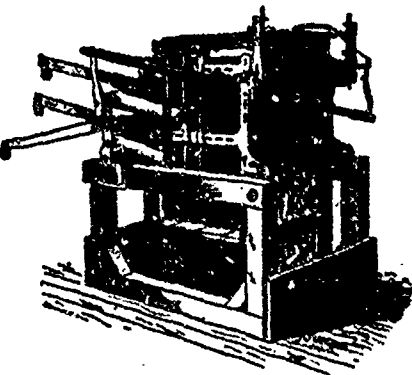
Toronto Office—30 Wellington Street East.

30 St. Francois Xavier St., Montreal
New York Office, 20 Cedar Street

USE THE
"Halton"
Jacquard

BEST MACHINE ON THE MARKET

Single Lifts
 Double Lifts
 Rise and Falls
 Down's Cylinders
 Cross Borders
 Brussels



"1304" Fine Index
 Double Lift.

The only
 Reliable
 Fine
 Index
 Machine.

Thomas Halton's Sons

Alleghany Avenue and C. Street, - PHILADELPHIA

ANILINES
ALIZARINES

DOMINION DYEWOOD & CHEMICAL CO.
TORONTO

Direct Importers. Sole Agents in Canada for
 Messrs. The **FARBENFABRIKEN Vormals FRIEDR. BAYER**
 & CO., Elberfeld, Germany.

A. R. CLARKE F. G. CLARKE C. E. CLARKE

A. R. CLARKE & CO.



Manufacturers of **CLOVES and MITTS**
 Office: 25 Front St. East
 Works: 199 to 309 Eastern Ave. **TORONTO**
 Branches at Montreal, Quebec, Halifax, Winnipeg and Victoria

W. H. PARKER J. H. PARKER
New Toronto Wool Stock Co.

Manufacturers of
CARDED and GARNETTED WASTE
 The Garnetting of Wool and Cotton Waste | Office and Works,
 a speciality. Wool Stocks in every shade. **NEW TORONTO, Ont.**

THE BOER WAR,

Its Causes, and its Interest to Canadians

with general information and statistics of the South African Colonies and States. 40 pages. Price 10 cents. Seventh edition now on the press. Address

BIGGAR, SAMUEL & CO., TORONTO or MONTREAL.

CANADA GARNETT CO.



MANUFACTURERS OF
 Garnetted Wastes
 and Shoddies

Waste Openers
 and Pullers.

Office 17 Lemoine Street
 Works, Canal Bank, near
 Selgneur St., Montreal

The Canadian Journal of Fabrics.

Is the only effective medium for reaching the Textile Trades of Canada.

Why?

Because it is the only journal in Canada exclusively devoted to the interests of manufacturers in the Textile and kindred trades.

Because it is the only paper reaching to any extent both the owners of the mills and the leading operatives, such as the superintendents, boss weavers, spinners, dyers, etc.

Because it reaches more than once in the year every textile mill in Canada, whether subscribers or not.

If you are not convinced by those reasons, others can be given on addressing the publishers.

Biggar, Samuel & Co.

MONTREAL and TORONTO

CANADIAN JOURNAL OF Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVII.

TORONTO AND MONTREAL, FEBRUARY, 1900

No. 2.

Canadian Journal of Fabrics

A Journal devoted to Textile manufactures and the Dry Goods and kindred trades.

Subscription Canada and United States, \$1.00 per year. Great Britain, 6s. Advertising rates on application.

Offices 62 Church Street, Toronto, and the Fraser Building, Montreal

E. B. BIGGAR } BIGGAR, SAMUEL & CO } PUBLISHERS } A. R. SAMUEL

PHILADELPHIA AGENT H. E. BURNETTE, Cor. Fourth and Locust Sts.

BOSTON AGENT F. P. GRANT, 5 Gayland St., Roxbury.

Toronto Telephone. 1392 | Montreal Telephone. 2589

Business correspondence should be addressed to Montreal, but cuts, news items and editorial correspondence to Toronto; cuts from abroad should be sent by post wherever possible, not by express; changes of advertisements should be in our hands not later than the 10th of each month to ensure insertion.

THE CANADIAN TEXTILE DIRECTORY

A Handbook of all the Cotton, Woolen and other Textile manufactures of Canada, with lists of manufacturers agents and the wholesale and retail dry goods and kindred trades of the Dominion, to which is appended a vast amount of valuable statistics relating to these trades. Fourth edition Price, \$3.00

BIGGAR, SAMUEL & CO, Publishers,

Fraser Building, Montreal

CONTENTS OF THIS NUMBER

	PAGE		PAGE
Among the Mills	46	Foreign Textile Centres	39
Aniline Colors, New	45	Flax Spinning, Modern	33
Acid, Influence of Excessive, in dyeing	46	Literary Notes	43
Canadian Cotton in China	45	London Wool Sales	45
Canadian Manufacturers Association, The	42	Patents, Recent Textile	38
Chemical Detection of Vegetable Fibers	47	Purification Waste Water	37
Chalk Manufacturing Co. Ltd The Toronto	45	Soap, Natural Grain for Textile Purposes	37
Dividends, Fall River	42	South Africa, Its People and Trade	35
Fabric, A New	46	Ventilation, How Good Increases Production	36
Fabric Items	49	Woolen Mills Combination The Wool Market, The	42

MODERN FLAX SPINNING.*

BY H. R. CARTER.

(Continued from last issue.)

Another means in general use of giving motion to the "head" is the cam wheel, which is a solid wheel of similar size to the last mentioned, with a somewhat heart shaped groove or race cast in one side of it. A runner or roller working upon a stud fixed near the fulcrum in the end of a lever works in this groove. The long arm of the lever is slotted and connected by a rod with the top shaft, the height of lift being adjustable by lengthening or shortening the effective length of the long arm of the lever. To obtain

a uniform up and down motion without appreciable rest either top or bottom, the shape of the cam groove or race should be of the ordinary heart shape. In practice it is usual to give a short rest at the top of the lift when the holders are shifting, and a longer one at the bottom. To effect this, the part of the cam next the centre is rounded into an arc of a circle of length, say 20°, while the other extremity is formed into another arc of, say, 40°. This wheel, if properly made, gives a nice motion, but is heavy to drive.

One of the newest forms of mechanism for giving this up and down motion consists of two wheels geared into each other, and having runners working upon studs near the periphery of each. As these wheels revolve the friction rollers alternately come in contact with either side of one arm of a T shaped lever arrangement working upon a central stud. The other arms of the lever are slotted to adjust the height of the lift, and connected by rods with a segment upon the top shaft of the machine. The dwell or rest of the channel when at its lowest point can be altered by means of adjustable hinges, through which the revolving wheels communicate motion to the lever, the amount of rest depending upon the point in the path of the stud in the aforesaid wheels where contact takes place with the hinges on the lever arm. The shifting of the holders along the channel is effected by means of a slide bar, upon which "dogs" or detents are pivoted, which catch upon the bearing pins of the holder when moving towards the fine end of the machine, and slip over them when receding prior to making a fresh shift. These catch bars are actuated either by a cam wheel and connecting levers or by means of mitre wheels transmitting the reciprocating circular motion of the top shaft to a short cross shaft, upon which is keyed a circular slotted disc with adjustable studs actuating the "catch bar" by a lever and connecting rod. Machines are often fitted with what is termed a casting or throwing out motion, by means of which the holders may be ejected without subjecting their contents to the last or two finishing hackles, thus in a measure enabling a fine machine to take the place of a coarser one. Motions to effect this purpose are numerous, one of the simplest consisting in a lever, one extremity of which works upon a stud fixed in the channel, while the other is connected to a long arm which slides in the channel and pushes out the holders. A point nearly midway up the lever is connected by a rod with the catch bar, the traverse of the throwing out arm bearing the same ratio to that of the catch bar as does the

*Reprinted from the Textile Recorder.

length of the lever to the distance between its fulcrum and point of connection with the catch bar.

The brush and doffer mechanism for clearing the short fibres or tow from the hackles consists in a circular brush, a pinned doffer, upon which the brush deposits its tow, and a reciprocating knife for clearing the tow off the doffer and dropping it into receptacles placed to receive it. The brush consists in an iron shaft the whole length of the machine or section, having bosses about 9 in. diameter keyed upon it at regular intervals. To these bosses are screwed staves of wood shaped so as to form segments of a circle. Rows of hair are set either directly in these staves or in slips of wood which are attached to them by screws. The hair may be set at an angle to the radius of the roller with a view to better penetration and cleaning of the hackles. The speed of the brush is so made to conform with the number of rows of hair, the speed of sheet, and the number of bars, that each row of hair strikes a hackle as it comes round and strips off the tow. The position of the brush is below the bottom sheet roller. It can be moved in and out to a position corresponding to the length of the hair, and such that the brush strikes the pin at its root, without touching the stock, and gives it a clean wipe. The brush can only act on one side of the pin unless the hackle is so open that the hair penetrates between the pins. To overcome this difficulty the brushes are sometimes worked through a clutch arrangement by means of which the speed of the brushes may be periodically reduced to a speed below that of the hackles, when the pins pass through the brush bristles, cleaning the side not acted on in the ordinary way. This difficulty in cleaning the pins when working fine and gummy flax has led to a change in the number of rows of pins in the hackle stock. At first only the finer hackles were made with a single row of pins, while at the present time many machines are made with single rows from end to end. It has been found in practice that a single row of pins, in comparison with double rows set at the usual distance apart, will cut in the proportion of 5 to 7. For instance, 50 pins per inch in a single row will cut as well as 35 per inch in a double row, although the latter has 70 pins per inch if the two rows be taken together. Long and fine machines now frequently finish with 60, or even 70, pins per inch in the single row.

Stripper-rod machines are of three makes. Perhaps the best known is Horner's Duplex. The stripping-rod mechanism, being less elaborate than the brush and doffer, occupies less room, and consequently in this make the machines composing the pair may be placed close together and supported between double gables. In this machine the two channels may be made to balance each other, thus dispensing with weights. The stripper rods are wooden laths, 3ft. to 4ft. long, about 2in. broad and a $\frac{1}{2}$ in. thick. The wood is shod with metal ends, or "stripper cocks," which work in radial slots in the rollers which drive the sheets. As the rollers revolve, the stripping rods shoot out by gravity to the lower extremity of their slots as they are carried round towards the under side of the roller, falling back again towards the centre as they approach the top. When falling from the centre, the rod passes close to the

pins of the hackle, loosening the tow from them, the tow being then received upon a "tow-catcher" which deposits it in the tow box every time the head rises. The stripping-rod arrangement employed by cotton necessitates the use of more rods—their number corresponding with that of the bars in the sheet. They are carried round with the sheet and act, as do Horner's, on the principle of gravity. Another form occasionally used for coarse work consists in a sheet of bars of the same pitch as the hackle bars, but exceeding them in number. The stripping sheet runs round the outside of the other, its bars occupying the spaces between the hackles, its extra length enabling it to be drawn outwards from them at a given point by means of a tension roller, thus clearing away the tow. The brush and doffer machine gives better results, and is now almost universal dealing with the finer qualities of flax. As before mentioned, the sheets are usually run at from 9 to 15 revolutions per minute, putting the pins through the flax at the rate of 120 to 13,000 per inch per minute, according to the number of bars in the sheet and the fineness of hackles. From 5 to 6 lifts of the head per minute, delivering the same number of holders, is the usual speed, working with four boys. At this speed a machine should put through 3 to 5 parcels per day, according to the size of the pieces.

The actual cost of machining may be taken at about 9d. per cwt. The yield in hackled flax from the machine usually runs from 60lbs. to 80lbs. per cwt., or from 53 to 71 per cent.; the remainder, with the exception of 1 or 2 per cent. waste, being tow, which is divided into four or more qualities (1, 2, 3, 4, etc.), according to the position on the machines where it is taken off. It ranges in market value from 2s. to 6s. per cwt., according to description and quality. The tow may be spoiled by having the parts of the doffing mechanism improperly set or in bad working order. If the flax be badly roughed, very long, or not sufficiently tightened in the holder, "ropey" tow is often the result. It is produced by the long fibres encircling the brush and keeping it from doing its work properly, they themselves failing to be stripped off by the doffer. Then again the doffer may be driven too fast or the knife too slow. The "card" or doffer should make about one revolution for every ten of the sheet, and the knife about 100 oscillations per minute. In order that the brush may strike every hackle, the number of teeth in the roller wheel must bear the same relation to the number of teeth in the brush wheel as the number of times the pitch of bars is contained in the circumference of the bottom roller does to the rows of hair in the brush. Thus, in a 27-barred machine, 2 $\frac{1}{2}$ in. pitch, circumference of bosses on bottom roller 25in., roller wheel 65 teeth, 8 rows of hair on brush, the number of teeth which the brush wheel must have in order that the hair may strike every hackle will be 52, or as—

$$\frac{25}{2\frac{1}{2}} = 10 : 8 :: 65 : 52$$

The speed of the doffing roller or card, taking the same particulars in conjunction with roller pinion 24 teeth, stud

wheel 110, stud pinion 27, doffer wheel 144 teeth, and speed of sheets 10 revolutions per minute, is—

$$\frac{10 \times 27 \times 24 \times 27}{10 \times 110 \times 144} = 1.1.$$

The speed of the knife, taking the speed of the driving pulley at 72 revolutions per minute, the wheel on the boss of driving pulley 50 teeth, and the eccentric or crank pinion 35 teeth is

$$\frac{72 \times 50}{35} = 103 \text{ oscillations per minute. The conditions}$$

necessary to obtain a maximum yield from the machines are—(1) Properly rough pieces; (2) the clamping of the root end in proper position in the holder; (3) long machines, with easy gradation of hackles; (4) "shift" not unduly long. If the flax be not properly "dropped" in the roughing, a large amount of loose fibre will go to tow in the hackling machine. Again, if the rougher has not thoroughly opened his piece "up to the hand," the first tool of the machine may break away a considerable amount of valuable fibre in passing through the piece. If the flax be squared in the root end by the rougher, the shorter fibres will extend up the piece to various distances. The first holder should, therefore, be tightened on the piece at a distance of about 12 in. from the root end, in order to retain all the short fibres which are long enough to preserve in the piece. If the holder be placed too high up, much of the medium-length fibre will be lost; if too low down, the length of the top end subjected to the hackle, in its turn, will be so great that it will be broken away for want of sufficient support. The happy medium of maximum yield lies between these extremes. The first tool or hackle of the machine is usually made coarse, say $\frac{1}{2}$ pin per inch double row, or 1 per inch single row, in order to open and prepare the flax for the finer hackles with a minimum of tow. The number of pins per inch should increase gradually in each succeeding hackle. The longer the machine, and consequently the greater number of tools, the more gradual can the increase in fineness be made. It should be borne in mind, in making out the gradation, that a "rise" of four or six pins per inch in the finer hackles is no more severe than, say, 1 pin per inch at the coarser end. Other important particulars of this machine are: Length of tools, 11 $\frac{1}{2}$; number of bars in sheet, 30; pitch of bars, 2 1-16 in.; size of holders, 11 in. by 4 $\frac{3}{8}$ in.; height of lift, 26 in.; extreme length over all, 30 ft. 6 in. The over all length of hackle pins is 1 in. The hackle stocks are 7-16 in. thick, giving 9-16 in. as the effective length of pin. There is but a single row of pins in each hackle.

—German wholesale manufacturers of clothing at a meeting in Berlin, a short time ago, deplored the great decrease in the export of their goods to foreign countries. This they attributed to the high customs duties imposed by foreign governments, especially by that of the United States. In Canada also we are now making our own cloths.

—Messrs. Smith, McQuade, Low and Hartley, spinners, from Lancashire, Eng., are putting up special spinning

machinery in the Dominion Cotton Company's mill, Kingston, Ont. There has been a vast amount of new machinery put in the mill lately. The building is to be electrically lighted. The mill is increasing its staff and is advertising for a number of young women.

—The justification of the policy of manufacturing raw materials in Canada instead of in the United States, as exemplified by the Ontario Government's embargo on saw-logs, has been shown by the long list of saw-mills removing to Ontario from Michigan, recently published in the Toronto Globe. Not the least of these to move their mills is John Charlton, we believe. There can be little doubt that the recent change in the Ontario regulations which prohibits the export of pulp wood cut in Crown lands will be similarly beneficial even if to a much smaller extent. Quebec is also taking measures to guard her natural resources against waste by imposing an increased stumpage on pulp wood amounting to \$1.90, of which \$1.65 will be refunded on wood manufactured into pulp in the province.

SOUTH AFRICA, ITS PEOPLE AND TRADE.

(Continued from last issue).

A great deal might be said on the external relations of the Transvaal. The convention of 1884 fixed the boundaries of the Transvaal exactly, and the republic undertook solemnly to respect the independence of native chiefs outside its territory. Scarcely a year has passed without the violation of the convention in this respect. One of Kruger's first acts was to invade part of the British Protectorate and proclaim it a portion of the Republic, following up the operations of some of his free booters. And he only withdrew because of Mr. Rhodes' protest and the Warren expedition, which cost the British Government over £1,250,000. Then the Boer Government turned its attention to Zululand, which, after an intrigue with Dinizulu against the other chiefs, it invaded and attempted to upset the settlement made by Lord Wolseley. Next they invaded the country of the Matabele whom they had driven out of the Transvaal originally, and who were now under British protection, and they were only turned back by the tact and firmness of Dr. Jameson. Again they tried to lay hands on Tongaland, but the Queen Regent would have nothing to do with any country but England, whose protection she had sought. The invasion and spoliation of Swaziland was another Boer outrage, which Great Britain, from a mistaken notion of keeping peace with the Boers, condoned.

Such are a few of the features of Krugerism in South Africa, and the reader can judge whether they are such as to justify the interference of Great Britain.

It is a subject of wonder to many that the Boers persist in a course which a large number of them must know to be wrong, and stand out against the whole might of the British Empire in so doing. It must be

remembered, however, that the vast majority, who never read a newspaper, or a book, except the Bible, are as ignorant of the outside world as the Hudson Bay Indians. Perhaps not ten of the whole body of burghers ever saw a man-of-war or visited England or Europe. Even Kruger and the other members of the Volksraad, who visited England, saw little of its resources; and it must be admitted of Kruger, who is a man absolutely without fear, that if he had the clearest realization of Britain's power, it would make no difference with his policy, so convinced is he that the Boers are the only favored nation of Heaven. What can be done with a man who believes (as Kruger argued with Dr. Hertz, and a deputation of Johannesburg Jews, who came last year to plead for educational freedom), that the Boers are the direct descendants of Isaac, and the Jews the descendants of Ishmael, and that, therefore, it would be against the Scriptures for both people to inherit the land together! It must also be understood that, whatever the Boer leaders know, the Boers themselves are convinced that when the Gladstone Government gave back the country in 1881, it was through fear, and that the profession of generosity or justice was merely a cloak for this fear. And they point, in confirmation, to the fact that when Mr. Gladstone, after denouncing the annexation, in his Midlothian speeches in Opposition, came into power, he refused all along to restore the Boer Government until he had the experience of Majuba Hill. The leniency with which the British Government treated the Transvaal in its repeated violations of the two conventions, and the way in which they were allowed to despoil the Swazi tribe, were to the Boer mind only so much accumulating evidence of this fear, apparent to him as the years went on. Perhaps Kruger himself thought the Transvaal was a match for Britain, as J. P. Fitzpatrick relates the following, in his "Transvaal from Within." "The late W. Y. Campbell, as spokesman of a deputation from Johannesburg, addressing President Kruger, stated in the course of his remarks that the people of Johannesburg 'protested' against a certain measure. The President jumped up in one of his characteristic moods, and said: 'Protest! Protest! What is the good of protesting? You have not got the guns! I have.' And Mr. Campbell, in reporting this in Johannesburg, remarked: 'That man is sensible; he knows the position. I claim to be sensible, also, and I know he is right; you can take my name off any other deputations, for we'll get nothing by asking.'"

We have evidence that several members of the Raad would have given the Uitlanders, not all, but some of the rights they vainly sought, but Kruger had become too powerful an autocrat, and they were no match for him either in diplomacy or determination. But though the Boers were ignorant, they were not so ignorant as to fail to realize that if the franchise was granted to Uitlanders, and a clean, honest administra-

tion inaugurated, these "doles" to burghers would cease, and they would no longer be able to live in ease at the expense of the hard-working alien. Hence, their determination to do what would otherwise appear insane—to risk the destruction of the Republic itself rather than to do justice at the cost of giving up control.

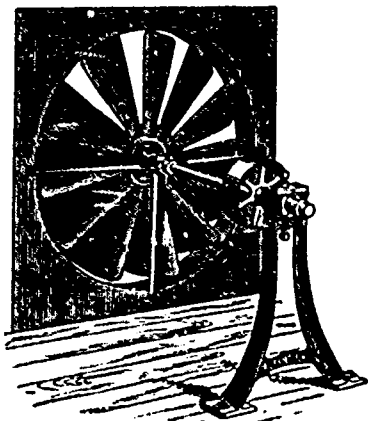
When the question of sending a Canadian regiment to help Britain in South Africa was discussed lately, one of our politicians asked, "Why should we entangle ourselves in Great Britain's foreign wars, and why should we spend our money and blood in those far-away places?" In the first place, this is not a foreign war. From an Imperial standpoint it is very much a domestic war. It is not merely a matter of the ill-treatment of our fellow-subjects in the Transvaal, but whether we are to abandon our fellow-colonists in the Cape and Natal to a misrule comparable only to that of the Turks in Armenia—whether, in short, we are to lose or hold our Empire in South Africa. The Cape, be it remembered, is the halfway house to India, to our possessions in China, to Australasia, and to the smaller islands of the Eastern Hemisphere. If it had not been for the possession of the Cape and the ability of Great Britain to send reinforcements thence to India, during the great mutiny, she would have lost her Indian Empire then. If it was vital to Britain then, the Cape is doubly so now, when Australia has become a daughter nation, and other Eastern lands have increasing claims upon her. South Africa is, in fact, the key of the Empire in the Eastern, as Canada is in the Western, Hemisphere. Moreover, knowing what the military ambitions of the Transvaal are, and what that state would certainly do the moment Britain became engaged in a foreign war, could we, as members of the British Empire, tamely watch our sister colonies of Natal, the Cape, Rhodesia, etc., overrun and reduced to the slavery which would be their lot under Boer rule? If we did our own turn would come, and the Empire would be dismembered limb by limb.

(To be continued).

HOW GOOD VENTILATION INCREASES PRODUCTION.

It has become quite a problem with the modern mill operator how far to go in the adoption of the later improvements. A careful study of working conditions has demonstrated, however, that the results obtained from a comfortable atmosphere in the work room are shown not only in the better health and comfort of the workmen, but also in a marked increase in the production and the quality of the output. In order to be independent of atmospheric conditions, the simplest way to secure a positive circulation of air is by adopting the fan system. The steamy atmosphere in many dye-houses is so dense as to seriously impair the efficiency of the plant. On the other hand when we come to the finishing department, we hear almost constant complaint, on account of the intense and almost unbearable heat escaping from the finishing machinery. For relieving the conditions referred to or for collecting dust and fly, thus preventing it from settling around the room or on other goods and machinery, the fan system is particularly

adapted. The Philadelphia Drying Machinery Co., 6711 Germantown Avenue, Philadelphia, has perfected a type of fan for the purposes described, the general construction of the "Hurricane" Fan being illustrated herewith. The blades, which are



"HURRICANE" STEEL BLADE FAN.

of sheet-steel, are all riveted to an iron centre, after which the fan is perfectly balanced. While several styles of cases are made, many advantages are claimed for the square iron case. Those who have experienced the trouble and extra expense of mounting a round fan case in an ordinary window or enclosure will, it is said, appreciate the ease with which the square case can be mounted in position, together with the much greater rigidity and strength thus secured. The illustrated catalogues of the Philadelphia Drying Machinery Co. will be sent upon application.

WASTE WATER PURIFICATION.

Early in January a paper was read before the Institution of Civil Engineers, Great Britain, which proved to be of great interest to the textile industries. R. A. Tatton dealt with the pollution of the rivers in the Mersey and Irwell district, and described the successful means that bleachers and dyers had taken to purify their effluents. A special description was given of the works at three factories where the trade waste is efficiently treated, together with the annual cost of treatment, and the paper was accompanied by plans and sections of these works. The manufactories referred to are those of R. Clay & Sons, Kelsall & Kemp and Syddall Bros. R. Clay & Sons carry on the process of ordinary bleaching, dyeing and finishing, and the works for purifying the trade waste consist of precipitation-tanks and filters, sludge-tank, presses, etc. The volume of water at times amounts to 500,000 gallons per day; it is treated with lime and iron alum and settled in tanks in which most of the suspended solids are intercepted; from these tanks the water is pumped to a second series of tanks for further precipitation, and the clear liquor is finally passed through cinder filters to the stream.

Kelsall & Kemp are woolen manufacturers, dyers and finishers. The trade waste is of a very polluting character, owing to the amount of soap used in the scouring processes and the grease extracted from the wool. The waste containing the grease, etc., is kept separate from the dye-water in the mill, so that it may be treated by itself. It is pumped into a series of three tanks, in which the solids are precipitated by lime and ferric chloride, the clear liquor passing forward through a second series of tanks and filters into the stream; the sludge is discharged on to filters composed of coconut matting, and after it has dried sufficiently it is pressed and the oil extracted. The dye-water from the mill, to which is added the clear liquor from

the grease tanks when they are being drawn off for cleaning, is settled in a series of tanks and filtered. The volume of water dealt with is 180,000 gallons per day.

Syddall Bros. carry on the processes of calico printing, dyeing and bleaching and the pollution is caused by alizarine, logwood and other dyes, soap, starch, etc. The total volume of the trade waste amounts to about 70,000 gallons per day. The water from the various departments is collected in a well, whence it is pumped to the purification works, which consist of a central settling tank and two precipitation tanks used alternately, each of the latter holding two and a half days' supply. Iron alum is used as precipitant. The sludge is drawn from the settling and precipitation tanks into a well, and thence pumped to a sludge-drying area. The water from the precipitation tanks is finally filtered through fine ashes.

Mr. Tatton also described the methods adopted at another print works in the watershed, where the waste waters from the logwood, indigo and soap are severally subjected to a preliminary treatment before being sent forward to the precipitation tanks. In the case of the logwood, the object of this preliminary treatment is to reduce the cost of treatment in the tanks, as the concentrated logwood liquor is more easily dealt with by itself than when mixed with other waste. The indigo and soap recovery plants are remunerative, and should be adopted at all works where possible. This method of treating the different polluting matters separately should receive special attention as being undoubtedly the most economical and efficient. In addition to the detailed description of the works mentioned, suggestions were given as to the methods of treatment which should be adopted at bleach works, paper works, tanners' and fellmongers' works, breweries, collieries, and chemical works. The polluting waters from bleach works might be treated by precipitation in tanks similar to those of Messrs. Syddall, and, if convenient, it is advisable to separate the final wash-water, to reduce the volume, as that water is usually pure enough to be discharged direct into the stream. The water from the kiers, being highly concentrated, should be collected in a separate tank, and discharged gradually into the remainder of the water for treatment.

NATURAL GRAIN SOAP FOR TEXTILE PURPOSES.*

Natural grain soap is one of the most useful soft soaps, and has the advantage over bars, not only because it does not require cutting up and dissolves more readily, but also because its potash has a beneficial effect upon the fabrics treated. Soda soap has a tendency to give a harsh handle and to affect dyes; potash soap has no such injurious action. Now, it is well known that natural grain soap is one of the freest from soda among soft soaps, and as it also contains a large percentage of saponified animal fat, it is one of the best soaps for textile purposes. To make it, the first requisite is suitable and pure raw material. The lye is of special importance, and must not contain more than 3 per cent. of soda at the outside. If there is more, the grain will be bad or absent. Nothing is better than 50 deg potash lye if it does not contain too much lime. Solid potash gives good results, but it is of course cheaper to buy the lye than to make it from the solid hydrate. The use of pure 50 deg lye not only gives uniform results, but effects great saving of labor, time and space. The tallow used must be as fresh as possible, and free from dirt and rancidity. Otherwise it should be clarified and purified before use. Two methods of doing this may be employed. One is to fuse the tallow and crutch into it at 200 deg. F. one-fiftieth of its weight of soda lye of 38 deg. B. containing plenty of carbonate. The fire is then drawn, and, after

*A soap boiler in the Dyer and Calico Printer.

half an hour's crutching 24 deg. salt water or potash lye is crutched in, in weight equal to the lye, and the mixture is allowed to stand. Another is to melt the tallow with one fifth of its weight of water, and when at the boil add a weight of alum or salt equal to 1 per cent of the weight of the tallow. After boiling about five minutes after this, remove from the fire, crutch in cold water to stop the boiling, and allow to stand till the tallow has set on the top of the water, which will contain the dirt and the neutralized acids. If such large quantities of tallow are treated that this purificatory process is not resorted to, the lye used for saponification should contain more carbonate than usual to neutralize the free fatty acids. Any other fat used should be purified by one of the above methods.

The chief liquid fats used in the manufacture of natural grain soap are oleine, alone or mixed with cottonseed oil. These are better for soap to be used for textile purposes than linseed oil, which resinifies too readily. Even when linseed oil is used, as is the case for soaps for certain purposes, a good deal of cottonseed oil is put with it, especially in summer. Cottonseed oil is put with it, especially in summer. Cottonseed oil must, however, always be used with caution in making natural grain soap, although it is cheaper than oleine. With it the best lye must be used, as even a trace of soda makes it give bad results. Besides the cottonseed oil itself is apt to contain soda, as strong caustic soda is used to purify and bleach the raw oil. It is true that this is not the case with the extra pale American oil from husked seed, but that is rather dear. If a little of the bleaching soda is left with the oil by carelessness it may have very disastrous consequences when the fat is made into soap. The presence of soda makes the grain soft and leathery, and cottonseed oil has the same effect, especially in winter. At low temperatures a natural grain soap made with the use of cottonseed oil readily sprouts, and it may lose its grain altogether in hot weather. A good soap made with tallow keeps its grain well. But now that linseed oil, oleine, and tallow, are all dear, we cannot afford to reject cottonseed oil altogether, especially during spring and autumn. In summer it cannot be trusted to grain, and in winter it is best avoided.

The fats must be added in such a way that those which require the strongest lye for saponification come last, otherwise the process will be slow and troublesome. Direct boiling seldom gives favorable results, and a preliminary boiling to grain is necessary. The old and well-known fact that mixed fats boil better and more easily to grain soaps, comes here to the front, but the fats must be so chosen that the finished soap is solid and cuts satisfactorily. Fats must not be used which will not produce closed soap, and in soaps for textile industries tallow must always be present. Oleine is added even to soft soaps, and the higher the percentage is the more valuable are the soaps. Soaps which are boiled clear on a sub-lye and are used as household soap only distinguish themselves as a rule by the color. The tallow soaps must be as white as possible, and therefore only pale and fresh fats must be used. A good recipe is 600 lbs. tallow, 500 lbs. lard, 200 lbs. cocoanut oil and 100 lbs. white cottonseed oil. Darker soaps extremely solid and economical in use can be prepared by the use of 700 lbs. tallow, 700 lbs. bone grease and 200 lbs. palmseed oil. These soaps are made in great quantities, but only those factories which stick to the old methods have any reputation for them. Ordinary tallow melted partly with acid, partly dry, and bone grease obtained by boiling with steam or water, are fats which are particularly suitable. If bleached palm oil is also used, as often happens, the soap acquires an agreeable odor. Fats which are difficult of saponification have always a tendency to produce soap apt to turn rancid. The grain soaps boiled on a precipitated paste are much prized for their purity and good appearance, and imperfections are usually due to imperfect saponification and to premature

discharge. Like the grain soaps boiled on a sub-lye, they should be made neutral by adding fat in proportion to the excess of alkali. These grain soaps can be made in a few hours if steam is used, but it is always better to leave over night and to take advantage of the spontaneous heating. A neutral white grain soap can be excellently made for textile purposes from tallow and lard only by boiling on a precipitate of paste. Tallow is at present cheaper than cocoanut oil, and in some places than palmseed oil. It is therefore advantageous to dispense with cocoanut oil as much as possible, and its omission makes very little difference in the appearance of the soap. If an easily lathering soap is insisted on, cocoanut oil must be used, but it need not form more than one-sixth of the total fat. It is better to clarify the tallow or hard fat used if necessary, and to boil with two waters. With the first the soap is saponified with 15 deg. lye, and it is scarcely possible to go wrong at this stage if we boil in paste until all froth disappears, and a sample becomes fairly solid when cold. We then relarge with salt to a clear sub-lye. The sub-lye separates very quickly with such soap, and can be drawn off after an hour's standing, and in boiling with steam even sooner. If steam is used it is advisable not to run off all the sub-lye, but to leave a little to help the second boiling, strengthening it if necessary with fresh 15 deg. lye. As soon as a swollen grain is produced in the second boiling the soap is ground, keeping the boiling uninterrupted. At first hot water is sprinkled over the soap and allowed to penetrate it, care being taken that the soap does not form a paste. If it does, 24 deg. salt water or dry salt is added. This operation may be regarded as complete when roses form and the soap boils lumpy. The soap is now tested for pressure, and when dry it should flake between the fingers. If it smears more lye is wanted. The special signs of completion are that the grain is uniformly dissolved. As long as grain is visible on the spatula weak lye or water must still be added. Another and very important sign is that the sub-lye ceases to be clear and becomes whitish and inclined to be thick. When the steam is shut off the pan must be well-covered up and left for thirty-six hours for the soap to settle. When an open fire is used the hot water sprinkled on the soap must be crutched in. When the grinding is finished some cold salt water is added and the fire is drawn and the fire-door left open. After removal of the froth and moulding the soap is crutched in the mould to make it uniform and then covered up.

Olive oil also answers well for making neutral soap, but the pure article is only available for those who live at the places of production or can get it thence direct. Olive oil supplied for soapmaking is usually inferior and older oil which is not suitable for table use. They saponify very easily and require comparatively small quantities of lye. The clear boiling follows as with any other grain soap. Olive oil soaps will not give a yield exceeding that of an ordinary pure grain soap, namely about 154 lbs. If the olive oil is adulterated with cottonseed oil, pure caustic soda must be used, as that alone will saponify the cottonseed oil properly, and the best strength is about 25 or 26 deg. B. In this case the first boiling to paste is the most important part of the process. This should be done with 20 deg. lye, adding later 25 deg. lye, until a clear, solid paste lies in the pan. Care must be taken not to recharge too soon. Such adulterated oil will only give rather less than 150 lbs. of yield.

RECENT TEXTILE PATENTS.

No. 65,072.—Embroidery making machine; James T. Roberts, Anderson, N.C., U.S.A.

No. 65,108.—Thread twisting machine; Albert Kryszat & Co., Berlin, Germany.

Foreign Textile Centres

MANCHESTER.—As to the general turnover in the warehouses the demand has been satisfactory, and for the time of the year the rate of distribution may be considered encouraging. The idiosyncrasy of the rumors current during a war could not be better illustrated than by the statement circulated of late that looms have been stopped, owing to the abstraction of tonnage for war purposes, and the consequent lack of cargo-carrying space. In some sections of the New York trade a delay of a few days has occasionally been necessary, owing to the absence of big liners on Government duty, says *The Drapers' Record*. But as Lancashire has no market in New York worth speaking of, the fact has not interfered at all with the output of its machinery. There has been a steady movement in the woolen departments, but worsteds are rather quiet, especially on American account. The demand for mercerized yarns is on the increase, and there has been a further development in the uses to which this article is applied. In the silk sections of the trade looms are well engaged, and some good orders have been received from the United States and Canada. The advance in linen thread quotations announced by the Linen Thread Company has been expected for some time. The advance on prices of flax has compelled spinners of every number to raise quotations, and the rises in cloth have been numerous and important. Under the circumstances, the action of the Linen Thread Company is not surprising. The kindred association connected with the sewing cotton trade issued revised lists, it will be remembered, some time ago. The velvet cutters are to combine, with a capital of about £150,000. These amalgamations are, as a rule, influenced from one source in Manchester, and the surprising feature about them is that this city, the home of the Cobdenite free-trade idea, placidly allows such schemes to be formulated, and carried to a successful issue, without any attempt at organized opposition on the part of its merchants, who do not like the combination idea at all, seeing that it tends to reduce their profits seriously.

BRADFORD.—The first few days of the last series of colonial wool sales certainly showed a flatter tone than this market here was altogether prepared for, but already there are signs of recovery of tone, and there has been very little really good wool which has been purchased at rates much under those of the previous series at present, says the Bradford correspondent of *The Drapers' Record*. Neither combed tops nor yarns made from pure merino wool had ever been sold here to any large extent at rates equal to the highest point of the previous London sales, and even the best rates obtainable for merino wool piece goods were very far below a proportionate level to the price of wool, so that a much greater drop must take place in the quotations for wool before the prices of goods are affected, and thus the shrewdest authorities here are quite unprepared for. The position of the merino wool market is also strengthened by the fact that the Buenos Ayres wool market is up to the present quite unaffected by the flat tone of the Australian sales now proceeding in London, and holders of this South American merino refuse to believe that the check is more than temporary. Cheaper money is helping holders a good deal, and better weather, with the consequent reduction in the influenza epidemic, coupled with an improvement in the war prospects, would, I believe, quickly reinstate fine colonial wools on the late basis of prices, especially as stocks are unusually small in all departments of the market. There has been a certain amount of weakness in the competition in London for the lower classes of colonial cross-bred wools, but spinners are so extremely busy on old orders that it would take at least a few weeks of quiet trade to cause them to accept lower prices for

cross-bred wool yarns. It seems hardly likely that the demand for these cheaper crossbred worsteds is likely to fall off, as the goods made from them are especially suited to the use of the working and lower middle classes, and the purchasing power of these very large consumers must be greatly in excess of anything it has been for some years past, both in this country and abroad. As raw cotton has again advanced considerably during the past week, fabrics partly composed of cotton which compete with such goods as worsted dress serges are comparatively dearer and less able to compete, so that the Bradford all-wool dress serges are to day intrinsically the cheapest fabrics in the market. A very large proportion of the last year's clip of English wool has now passed into consumers' hands and consequently the market is now in comparatively small compass, and there is no change to report in reference to the prices of the small amounts of the various kinds of home grown wool which are at present changing hands. The prices of raw alpaca are quite firm, and, in face of the probable shortage of the clip of Cape mohair, a slight advance has recently been made on the few parcels of this class which have recently been purchased. With all classes of spinners extremely busy, and a quiet market for wool, the immediate business in worsted yarns has been reduced to a minimum, and a few offers from abroad for worsted yarns which were on the market, at rates slightly under those recently ruling, have had to be sent back for improvements in the price limit. After the great promise of improved business in Bradford dress goods, which the large orders at the end of last year seemed to foretell, there has been some disappointment at the quiet way in which business has so far opened out in the new year, but the great prevalence of influenza, and the general upset of business caused by the war have, no doubt, had the effect of delaying business in the home trade. It seems likely also that the irritation caused by the war in some continental countries is also preventing representatives of British houses having as cordial receptions from their continental customers as they otherwise would have had. As the style of fashionable dresses at the present time is altogether in favor of the use of such fabrics as plain and figured mohairs, and as there is every indication of blacks being much wanted, and makers are being pressed for deliveries, there is no reason to doubt that in bright dress goods, at least, there will be a very large business done in the coming summer. Some of the new styles of black mohairs in styles of invisible stripes are also meeting with a warm reception in very good qualities, and these look especially stylish when made up. For the autumn trade there still seems to be great uncertainty as to what will be wanted in high-class fancy dress goods, and there is a good opening for a novelty in blacks to take the place of the mohair crepons.

KINDERMINSTER.—Manufacturers are actively employed on all qualities of carpet. We hear in one or two quarters that arrangements are being made to run looms overtime in order to deal with urgent orders. In the worsted trade local spinners are in a very much better position than for some time past. Orders are freely coming to hand, and there is now a considerable trade being done with outside districts both in hosiery and cloth yarns.

NOTTINGHAM.—Most branches of the lace trade continue busy. Not for some considerable period has the outlook been more cheerful, and, judging from present appearances, there does not seem much probability of any immediate falling off in the demand. The higher prices of cotton have caused quotations to be increased. Naturally the enhanced prices have created some friction, especially in the shipping departments, but manufacturers are firm in their demands, and are determined not to make goods at the recent unremunerative rates. The fancy cotton millinery lace branches are in a very

healthy condition, and prices show an upward tendency. The novelties that have been shown have been well received, and the stocks of old goods have been diminished. In addition to the increased prices of yarns, the higher price of coal and dearer labor have caused an upward movement in the cost of finishing, whilst machine holders will not accept orders at the low prices formerly prevailing. The principal enquiry is for lorcous, in linen and cotton. There is also a good demand for Valenciennes of various kinds, and also for Victoria laces. American, crochiet and warp laces are in average request. Silk laces show little change. Notwithstanding the enhanced prices, the plain departments show no falling off in activity. Bobbin nets, Mechlin tulles, and mosquito nets are all selling freely, although in some instances prices are nearly double what they were a little time back. The stocks of these goods are very low, and the machinery is well employed with orders placed in advance. Makers of aprons, caps, blouses, shirts, ruffles and other fancy goods are busy, but they are much handicapped by the scarcity of female labor. Competent machinists can earn good wages, but the supply is insufficient. Good quantities of plain and fancy veils are selling. Everlasting embroideries and Irish trimmings are only in limited request. Honiton braids and puris are moving in good quantities. The lace curtain and window-blind branches are doing a fair amount of business. The advance in the price of cotton has given an upward impetus to quotations, and the situation has been further complicated by the advance demanded by dyers, dressers, and finishers. Should the proposed combine become an accomplished fact, the ruinous competition in this branch would receive a salutary check. The hosiery trade shows few changes of importance. The wool and mixed branches are doing a good business, more especially in fine cashmeres. Manufacturers of vests and combinations are well engaged. There is a good demand for specialties of stockings and half-hose. The cotton branches are in an unsatisfactory condition, and adequate prices for ordinary goods are not obtainable. A moderate enquiry is experienced for silk goods.

KIRKCALDY AND DISTRICT—The year which has just closed has been one of the best experienced for a considerable time in the linen trade of this district, and outwardly there is evidence that manufacturers anticipate a continuation of good business, as large additions are still in progress in a number of our large works, says *The Irish Textile Journal*. No doubt some apprehension is naturally felt owing to the great increase in the price of all kind of yarns, which means a very heavy advance to the cost of the manufactured article, and unless a considerable rise in prices is obtained, weaving will be unprofitable. Advances have been realized, but at the present time they are not nearly equal to the advances paid in yarns. The serious increase in the prices of some of the heavier sizes is telling upon business to an alarming degree. In the way of making a further advance on the price of goods, nearly all our local manufacturers who do with Glasgow and provincial houses, where the terms have been 5 per cent. on payment, have now intimated to the trade that on and after 1st January the discount allowed will be 2½ per cent. This they consider a very suitable time to demand the alteration in terms in accordance with existing discount allowed to English or city houses. The present week will almost be a blank in the way of sending out goods, our holidays no doubt have taken up a good part, but this has been curtailed by many of the houses in comparison to past years. Flax and tow yarns—Although very few days have gone of the present year, there is evidently considerable activity for the demand of this class of yarns. Accordingly manufacturers look forward to a further advance, but up to the present only a moderate business is being transacted. Wet-spun yarns, Irish and continental, are very scarce and prices are keeping particularly firm. Cotton yarns are keeping at prices quoted end of year. Bleachers in Fortar-

shire in the past month have had some difficulty with their workers, although giving them in this short time from 5 to 7½ per cent. of advance in their wages. However the matter has been settled by the workers resuming work on the late advance. Hire bleachers in most cases have intimated to their customers an advance, after 1st January, to the Fifeshire and Forfarshire association rates, which were fixed on the 18th August last. No doubt the hire bleacher makes his own arrangement with his customer as to discount, but we understand in the majority of cases 20 per cent. is the allowance.

BELFAST.—The market in all departments has shown increased strength since last review, while the volume of business has been well maintained. The new year opens in a very promising manner and the course of trade is regarded with considerable satisfaction. At a time of the year when business is usually very quiet, we have had a market not only quite as strong as at any previous time, but actually showing an advance in prices of all descriptions. Although the rise in rates has no doubt been rapid, still the highest prices ruling barely keep spinners on the right side when the present cost of flax is taken into account, and it is more than probable that further advances in yarns will have to be obtained. There has been appreciably more enquiry for fine counts of line wests, which have hitherto had least attention shown them. Coarse end of tows continue to sell freely at full rates. Foreign spinners have further advanced their lists, to a point, indeed, which practically precludes business. Demand of the month has been of gratifying character, and fresh business added to that already on hands will keep manufacturers engaged for months to come. The market for brown cloth is very firm, with advances in most descriptions. Brown power-loom light linens have appreciated in value to quotable extent, and forward business at the moment is very heavy. Medium and heavy makes have also advanced, though not perhaps to the same extent. Cloth for dyeing and hollandcs has sold freely at an advance, and quite as much business is offering as producers care to accept. Roughs have changed hands fully on a par with previous months, and prices show a strong upward tendency. dress linens meeting with free sale at prices quite 50 per cent. ahead of those ruling at opening of last year. There has been a fair demand for damasks and the general run of housekeeping goods, and prices have a well-defined upward tendency. Union goods of all kinds move briskly into consumption at full current rates and in the finer end prices are harder, production, however, is much smaller than a few months back, owing to looms being fully and better engaged. Linen handkerchiefs have advanced and are still rising, whilst demand is of fairly respectable proportions. Plain cambries are perhaps a shade stiffer in price, demand being well maintained. Ballymenas and County Downs show little appreciable change. Movement is satisfactory and prices are stiff, at slight advance on the month.

LYONS.—The silk goods market in Lyons was not active at last mail accounts, if activity is measured only by the volume of new business done and of fresh orders placed. But the advance orders that were booked for spring were so satisfactory that manufacturers have no right to complain while the looms are busy. Sufficient work is already provided for to secure the success of the season, while the supplementary orders that are expected to come in as the year advances will help to keep the looms busy up to the close of what promises to be one of the most satisfactory seasons on record. Printed silks seems to be the leading favorites, and large deliveries of them are being made. Nearly all possible materials that can be printed upon being among the assortments. Piece dyed goods in serge, china and polonaise are particularly good sellers. Lace and gauze effects are among the favorites of the season, and have been well ordered. The demand for taffetas has decreased somewhat, but

plain taffeta in bright shades is in regular request. Some favor has been shown printed warp effects. Printed muslins have also received attention. In plain muslins, crepè de Chine, etc., production continues large. Gauze in plain, striped or broche has also met with favor. The situation, on the whole, is unchanged and continues satisfactory, says the correspondent of *The Dry Goods Economist*, New York. The Paris market is in a healthy condition in anticipation of the large business that is expected to be done for the Exposition. Business with America, while not of exceptional volume, has been fair and not below the average. The London market is the only one where the demand is not good, as is shown by the fact that the imports of silk manufactures in Great Britain in the last three months were about 7,500,000 francs smaller than twelve months ago. Velvets continue to give satisfaction, and, for this time of the year the demand for them can be called good, although business in black velvet has decreased and the demand is principally for fashionable colors. *Panne* and *miroir* are selling particularly well. Ribbons are unchanged and in moderate demand.

CIEMNITZ.—The situation of the market has not changed much during the last week or two. Almost all manufacturers are way behind in deliveries and are not able to keep the promises made four or even six months ago. Most of the large mills turn the goods out quickly enough, but after they come from the machines they lie around for weeks before they are sewed up, as it is almost impossible for the manufacturers to get hands enough for that kind of work, in spite of the high wages offered, and as the girls find better paying employment and easier work in other branches of the textile industry, the number is decreasing from week to week. Manufacturers are not very anxious for orders at the present time and are not in a position to deliver goods on short order, in almost all classes of staple hosiery. Wages are considerably higher than last year at the same time, and raw materials are way up in price. Yarns cost from 30 to 50 per cent more than a few months ago, and as at even these quotations the spinning mills will not contract for any length of time, the manufacturers are, therefore, also unable to bind themselves for long delivery. The demand is still mostly for black goods, but tans, grays, reds and blues are bought in liberal quantities. In lace hose the demand still exceeds the production, and the makers are filled with orders until June. In these goods white is bought in fair quantities. Printed hosiery seems to be growing in favor, probably because the demand in extracted goods cannot nearly be met. In fancy-striped hose mercerized yarns are used a great deal, and very pretty effects are obtained by them.

CREFFLD.—The demand for silk fabrics is more active and business has been resumed after the rest with much greater life than could have been expected, considering the conditions previously existing. Buyers who had delayed and neglected to place orders on account of the higher prices demanded, are now finding that they need the goods and are willing to pay even better figures than those they previously refused. The price question has thus been eliminated by the question of time of delivery. Buyers who are short of goods on the eve of the opening of the spring season are asking for shorter deliveries than manufacturers can afford to guarantee. This has led to the placing of fair orders and to purchases of manufacturers' ready stocks, whenever these were available. Wholesale dealers have experienced a good demand, and good orders have been sent in by travellers on the road, cheaper grades of goods, as well as those of medium and higher prices, having received attention. A more active business has also been done with the garment-making trade. Plain cloaking silks have been gaining ground and such articles as *peau de soie*, *bengaline* and *sicilian* have found a market. This, added to the relatively good orders that

were previously placed for damasks, brocatels and matelasses for cloak purposes, and some of which are being delivered, makes the movement of goods for the garment trade of satisfactory volume. In linings the demand has also been good and stocks are found to be small, so that goods are commencing to be scarce. Some orders for plain and fancy linings have been booked. *Moire* seems to become a favorite with garment-makers, who use it for revers. This has caused a fair but not heavy demand for *moire renaissance* and *moire velours*, stocks of which have found quick buyers. With the improved demand for fabrics an improvement in the manufacturing situation will soon follow, although it is not yet visible. Dress silks, cloaking silks and linings have been principally affected, and an increase in the production in these branches is likely to occur soon. In other branches of the industry there is no change. In umbrella silks the reorder business is decreasing, but the looms are well provided with work. In tie silks between-seasons conditions still prevail, as far as the placing of orders is concerned. There is an improvement in ribbons. Velvets are unchanged and manufacturers have enough work on hand for this time of the year. Plain velvet and *miroir* continue in demand, while novelties for blouses and dresses are also selling. *Velour du nord* has been in good demand for the cloak trade.

KIDDERMINSTER.—Machinery is kept well employed without any pressure. A carpet trade representative said recently, "there is not the 'go' in trade we wish to see. People are timid and do not know how to act." The wool trade is somewhat quieter, but prices have not given way. The wool sales this week have attracted considerable attention. The East India sales at Liverpool were successful, most of the bales offered passing hands at good prices. It is estimated that the home traders' share of the purchases amount to 9,000 bales, while the continent gets 2,000 bales and America 4,000 bales.

ZURICH.—The call for silk fabrics has not been active in this market, and the smallness of the English demand makes itself unpleasantly felt. What is most needed is orders for plain goods which would enable manufacturers to provide warp for their looms. The orders on hand for novelties are fair, but for staples they are decidedly small. Stocks of these latter have been accumulating, manufacturers having produced for stock as long as they had cheap raw material. But this supply having been exhausted, the situation does not warrant them to procure more. Some good lots of plain goods in taffeta, *duchesse*, *merveilleux*, etc., have found buyers, but at low figures. The slowness of business is shown by the conditioning figures of the second week in January, the local conditioning works having registered for that week 23,670 kilos, against 30,360 the same week last year. The raw silk market is quiet but firm.

CHEMICAL DETECTION OF VEGETABLE FIBERS.

This process rests on the property which cellulose possesses of transforming itself under the action of sulphuric acid into carbohydrates, possessing an aldehydic function, which can easily be detected by the colored reaction it gives with the phenols. The sample to be examined—suppose it to be a piece of woolen goods in which the cotton is to be researched—is, after careful washing, treated by sulphuric acid at 20 deg B., and heated one-half hour over the water bath. The imperfect solution is then diluted and the carbohydrates looked for in the following way. In a test tube about one centigram of a phenol—say resorcine—is introduced, 1 or 2 cc of the preceding solution added, and concentrated sulphuric acid perfectly free of nitrous products poured along the side of the tube, so as not

to mix it with the solution therein. The heat evolved is generally sufficient to develop a coloration at the plane of separation, and the intensity of this color can be increased if necessary by gentle heating in the water bath. If this product resulting from the treatment of about 1 gr. of cotton is brought up to 1 part in 1000, the resorcinol will give an orange, the alpha naphthol a purple, the gallic acid a green, becoming gradually violet down in the acid, the hydro quinone and the pyrogallol a brown, the morphine and codeine nice lavender, the thymol and menthol a pink color, etc. The extreme sensitiveness of these reactions allow us to characterize cotton, even in dyed goods, using bone black to decolorize the solution if absolutely necessary. An approximation as to the quantity of cellulose can be obtained by comparing the intensity of the coloration to the one given by a solution of cotton of a known strength. We have lately indicated* that the oxycellulose, owing to its aldehydic function, gives, too, with the phenols, colored reactions and could be used to characterize the cellulose, but in the presence of wool, the formation of oxycellulose is more difficult than the transformation of cellulose into carbohydrates.

THE WOOLEN MILL COMBINATION.

The combination of the Brodie Mills, Hespeler, the Waterloo Woolen Co., Waterloo, Ont.; Hawthorn Mills, Carleton Place, Ont.; the Maple Leaf Woolen Mills Co., Markham, Ont., and the Lambton Woolen Mills Co., Lambton Mills, Ont., has been effected. The new company is capitalized at \$2,000,000, of which \$800,000 is paid up. The mills and machinery were valued on a cash basis, the owners taking paid-up stock for the full price of their mills. W. R. Brock is president of the company, and the provisional directors are: T. Eaton, Toronto; A. W. Brodie, Hespeler; John F. Morley, Waterloo; George F. Benson, Montreal, and R. Millichamp, Toronto. The selling agent for the combination will be R. Millichamp, and J. F. Morley, whose management of the Waterloo Woolen Co. has been so successful, will, it is said, manage the business of the combination, having his headquarters in Toronto. Speaking to a *Toronto Globe* representative about the amalgamation, Mr. Millichamp said: "The principal reasons for the federation are the capacity of a large federated company to purchase wools and supplies in large quantities for the better advantage of all the mills; to distribute the production of the different classes of wools amongst the different mills according to the capacity of the machinery; to improve the quality of the goods and produce a more uniform finish; to regulate the credits of the sale of goods, and to reduce the expenses of management and operation of the mills."

THE CANADIAN MANUFACTURERS' ASSOCIATION.

At the annual meeting of the Canadian Manufacturers' Association in their quarters in the McKinnon Building, Toronto, John F. Ellis, of Barber & Ellis, occupied the chair as president. President Ellis in his address to the members said he hoped the bright outlook of to-day would long continue. The great advance in the price of raw material had stimulated the demand and increased the prices of manufactured goods. He was glad to note the progress taking place in Canada in the iron and steel industry, placing the manufacturers in a position to compete with other countries. The same could be said of the pulp and paper industry and the nickel industry. He then dwelt upon the legislation which had been sought during the past year. He also referred to the copyright question. In his concluding remarks he dwelt with enthusiasm upon the Imperial spirit now pervading Canada.

*Comptes Rendus p. 1407, 1892.

The election of officers resulted as follows: President, J. F. Ellis; first vice-president, P. W. Ellis; Ontario vice-president, R. E. Menzies; Quebec vice-president, Hugh Watson; Nova Scotia vice-president, W. Robb; Manitoba vice-president, R. E. Thompson.

Executive Committee for 1900—R. W. Elliott, E. A. Kemp, W. K. McNaught, P. H. Burton, J. P. Murray, Thomas Rodden, R. Donald, C. H. Riches, J. M. Taylor, J. O. Thoin, A. W. Thomas, W. J. McMurtry, W. B. Rogers, F. Stanley, W. K. George, F. Kent, William Stone, J. Wright, John Taylor, S. M. Wickett, E. G. Gooderham, Emil Boeckh, R. Simpson, John R. Barber, James Cowan, D. W. Karn, J. Bailey, Lieut.-Col. Gartshore, E. R. Thomas, George Heintzman, George H. Lees, J. B. Rowland, E. Jongs, C. Warnock, J. Rowley, C. W. Berge, George Lang, James Goldie, D. Morrice, Isaac Waterman, John Bertram, J. N. Kendrick, George Evans, John Pennman, W. W. Cox, H. Smith, John Hewton, George H. Hees. Resolutions were adopted in reference to many matters, including one endorsing the Pacific cable, and another urging the Dominion Parliament to pass a general bankruptcy act.

FALL RIVER DIVIDENDS.

Notwithstanding the rapid development of the cotton manufacturing industry in the Southern States, the Fall River mills appear still to be regarded as the criterion by which the condition of the trade in the United States is to be determined, says *The Textile Manufacturer*. Undoubtedly a change in the condition of affairs is imminent, if, indeed, it may not be said to have already taken place, which will rob the northern mills of their representative character, but for the time being it may suffice to base a comparison of the year's working with the results of previous years upon the dividends paid by Fall River companies. The following list is of interest in this connection, showing as it does the character and extent of the variation during the past fourteen years:

	No. of Companies.		Average Dividends.
1886.....	33	\$16,116,200	6.50 per cent.
1887.....	33	17,204,700	8.30 per cent.
1888.....	33	17,608,000	9.63 per cent.
1889.....	33	18,558,000	9.97 per cent.
1890.....	33	18,658,000	7.62 per cent.
1891.....	33	18,558,000	4.92 per cent.
1892.....	34	19,858,000	7.52 per cent.
1893.....	35	21,278,000	8.02 per cent.
1894.....	35	21,478,000	5.25 per cent.
1895.....	36	21,828,000	8.12 per cent.
1896.....	37	22,628,000	6.12 per cent.
1897.....	37	22,293,000	3.39 per cent.
1898.....	34	19,408,000	2.41 per cent.
1899.....	34	20,058,500	5.99 per cent.

It will be evident from these figures that the American cotton trade has distinctly improved, more especially when the marked increase in the average dividend is considered in conjunction with the remarkable extension of the southern mills. It will be noted that the number of mills included in the table has diminished since 1897, when the period of marked depression began. This, however, will not greatly affect the comparison with the immediately preceding years, over which the last twelve months' working shows a substantial improvement. A detailed examination reveals the fact that only two of the companies have declared no dividend in 1899, as against fifteen similarly circumstanced in 1898. The individual rates paid vary from 1 to 8 per cent., but excluding the two concerns which passed their dividends last year, all the remainder except two have increased their rates. One of the two exceptions has dropped

from 8 to 7 per cent., while the other pays 8 per cent., as before. As to the outlook for the immediate future it is unsafe to prophesy; but in considering this aspect of the North American cotton trade the fact must not be lost sight of that an advance of 10 per cent. in the wages of the operatives has recently been conceded, the increased rates coming into force during last month, and therefore too late to affect the dividend returns for the past year. The advance in raw material is also a factor in the situation, although the consequent increase in the prices of yarn and cloth has to a large extent, if not wholly, covered this difference.

LITERARY NOTES

British Policy in South Africa. By Spenser Wilkinson. Publishers, Sampson Low, Marston & Co., London. One shilling.

Paul Kruger: His Life Story. By Fred. A. Mackenzie. Publisher, James Bowden, 10 Henrietta street, London. Illustrated. one shilling.

An illustrated catalogue describing the new McEwen gas engine will be issued in a day or two by the Waterous Engine Works Co., Brantford, Ont.

The Transvaal Trouble; How it Arose, being an abstract of the biography of the late Sir Bartle Frere. By John Martineau. Publisher, John Murray, Albemarle street, London. One shilling

The History of the Great Boer Trek and the Origin of the South African Republics. By the late Hon. Henry Cloete, Her Majesty's Commissioner for Natal, 1843-4; edited by his grandson, W. B. Cloete. Publisher, John Murray, Albemarle street, London. One shilling.

No subject of interest to citizens of the British Empire in common has been so befogged with half-truths and with misrepresentations as the South African question. It is now generally known that besides the London edition of *The Standard* and *Digger's News*, controlled by the Transvaal Government, the Boers had—and in some cases still continue to have—subsidized newspapers on the continent and in the United States, which published and reiterated the most distorted and untruthful statements of affairs in the Transvaal. As many of these travesties of history originated as official statements from the Transvaal Government itself, and as British readers are apt to credit any other Government with the same respect for truth in official documents as would characterize their own Government, the Boer official falsehoods had been so widely and industriously circulated that when the war cloud burst a great proportion of people were in a mist as to the real facts of the case. The series of articles which have been appearing in this journal (now reprinted in pamphlet form under the title of the "Boer War") may have helped to dispel these mists from the minds of Canadian readers, but we are glad to call attention to the cheap and handy volumes above quoted, as further contributions to the literature of the subject, which will enlighten the Canadian reader still further on many points. The first named summary of the recently published biography of Sir Bartle Frere turns the search-light on the dealings of the Gladstone Government in South Africa at the time of the retrocession of the Transvaal to the tender mercies of the Boers. Leaving out of view Sir Alfred Milner, the present governor of the Cape and High Commissioner for South Africa, whose work is not yet accomplished. There have been in the history of colonial administration three great governors, who understood and wisely estimated the problems of British relations with both the Dutch and the natives. These were first, Sir Benjamin Durban (whose mortal remains rest in the old Papineau Road military burying-ground at Montreal), Sir George Grey and Sir Bartle Frere. If the policy of the first two governors had not been thwarted by the

Home Government, who sent them out, there would have been no Republic of the Orange Free State or the Transvaal to prove the thorns in the flesh of the rest of South Africa which they have; and if the policy of the last named had not been similarly thwarted even these separated communities would have been reconciled to the neighboring colonies, and we should have had a peacefully confederated South Africa to-day. One cannot rise from a perusal of "The Transvaal Trouble" without the feeling that Sir Bartle Frere was basely betrayed in his efforts to carry out his great aims, not only by the Gladstone Government, but by the Conservative opposition of that day, who selfishly sacrificed the higher interests of empire for party advantage in home politics. In the light of present events Sir Bartle Frere's estimate of the men with whom he was dealing from 1877 to 1880, and his judgment of the effects of the political movements then transpiring shows him to have been a man of extraordinary wisdom and foresight, and his predictions of what would happen if such and such a policy were carried out read now like pages of inspired prophecy. The statement in one of his letters that his administration would add another to the list of those whose teachings and work were not understood or appreciated till he was dead and gone, was itself a prophecy and has received its fulfilment in a way that must bring the blush of shame to some public men still sitting in the House of Commons, who deserted him in the hour of his trial. The memory of no governor in South Africa is to-day in higher regard, both among British and Boer, and if the British Government had only stood by him there would have been a confederation instead of a war there to-day. The "History of the Great Boer Trek" is a series of re-edited lectures on the motives of the great treks which led to the founding of the Free State and Transvaal, and in part to the colonization of Natal. The author, a loyal British subject of Dutch descent, treats the Boer's sentiments with natural sympathy, and shows us how they regarded the emancipation of the slaves in 1834-7, and how the blunders of governors combined with the vacillation of the British Government to produce that distrust and suspicion which are the regrettable national weakness of the South African Dutch, and which unfortunately have only been confirmed by the policy of the Gladstone and other recent British administrations. Mr. Wilkinson in his "British Policy in South Africa," takes up the question from the British and Imperial standpoint, but shows none the less clearly from this point, that party politics at home have been the curse of British rule in these colonies. Though this book was written before the war broke out Mr. Wilkinson saw that if Britain failed to maintain her position as paramount power or deserted the cause of the Uitlanders the Afrikander Bond would agitate for the independence of South Africa and British subjects, feeling deserted by their own Government, would make common cause with the members of the Bond. The loss of South Africa could then be only a question of a short time. Mr. Mackenzie's little book gives us a sort of crayon sketch of Paul Kruger, and avoiding politics as much as he can, desires to show us the man himself. He gives the old man credit for great virtues, but does not by any means hide his great faults. The result is a readable book, which has a number of half-tone illustrations. To those who wish more light on a subject of such vital interest to the future of the British Empire we can commend all of the above books.

A great deal of attention is now directed to the *Topeka Capital*, a Kansas daily, which is to be placed absolutely at the disposal of C. M. Sheldon, author of "In His Steps," etc., that he may show what a Christian daily newspaper ought to be. If the experiment is continued long enough it is certain to succeed because Canada has had for over sixty years a journal which has been consistently conducted upon this plan. It is *The Daily Witness*, Montreal.

"The First Night of a Play," "Through the Slums with Mrs. Ballington Booth," "What it Means to be a Librarian," by Herbert Putnam, Librarian of Congress, and "The Pew and the Man in it," by Ian Maclaren, are among the notable features of the February Ladies' Home Journal. An American Mother answers conclusively "Have Women Robbed Men of Their Religion?" and there is an interesting article on Mlle. Chamade, the famous composer and pianist. Another article describes "Frank Stockton's New Home in West Virginia." The opening chapters of "The Parson's Butterfly," a new serial by Mrs. Charles Terry Collins, are also presented. Molly Donahue discusses woman's rights with Mr. Dooley, and "Edith and I in Paris," "Her Boston Experiences," and "The Autobiography of a Girl!" continue with increasing interest. The pictorial feature, "In Honor of St. Valentine," by Alice Barber Stephens, will recall some happy bygone days. By The Curtis Publishing Company, Philadelphia. One dollar a year; ten cents a copy.

The last of the "body" articles in the February Century is the one that will doubtless attract the most attention. This is the first instalment of hitherto unpublished extracts from the private diary of Dr. B. E. O'Meara, Napoleon Bonaparte's physician at St. Helena. The original manuscript of this journal, in eighteen little volumes, has come into the possession of The Century Co., and is found to afford a surprisingly large amount of new material in the way of conversations with the exiled Emperor. These "Talks with Napoleon" will form an important feature of The Century during the year 1900. The editor has evidently had in mind the multitude of visitors to the French Exposition in organizing the series on "Paris of Today," by Richard Whiteing, author of "No. 5 John Street" and "The Island." The first of these papers, "Paris Revisited," appears in this number. Mr. Whiteing, who knows his Paris as few Englishmen know it, takes a bird's-eye view of the city from the Eiffel Tower; but his comments and criticisms on the people and their governmental machine are at least as piquant as his descriptive passages. The French illustrator Castaigne provides a running pictorial comment on the text. The West as the Eastern author sees it, or at least writes about it, and the West as it actually is, are the theme of a trenchant essay by E. Hough, author of "The Story of the Cowboy." In "Midwinter in New York," Jacob A. Rus tells incidentally how the American metropolis looked to him from his native Denmark, and how he wore a navy pistol strapped around his waist when he landed in New York, and was keenly disappointed at finding neither buffaloes nor Indians in Broadway. Other contents of the number are a group of poems, "The Hoosier Youngster," by James Whitcomb Riley, illustrated by Florence Scovel Shinn; an anonymous article on "The Military Element in Col. Waring's Career," and a poem, "Waring," by Helen Gray Cone; and the last instalment of Capt. Joshua Slocum's narrative of his solitary voyage of 46,000 miles around the world. In the fourth of his Cromwell studies, Mr. Morley treats of the execution of Archbishop Laud, Cromwell's reorganization of the army, and the battle of Naseby, which put an end to the King's fighting force. George Morland's "The Halt" is this month's Old English Master engraved by Cole.

Something which is as attractive as it is unusual is the swatch book issued by B. Kuppenheimer & Co., Chicago. Their Spring Book takes advantage of the closing year of the century and pictures the changes in men's wear from 1775 up to 1850, in character of such leaders as Brummel, D'Orsay, Beaconsfield, Nash, Lytton, et al., with appropriate references. The book is gotten up in old style throughout. There is a valuable dictionary of clothing information distributed on various pages. The whole book is a most interesting historical souvenir, not only as showing a contrast of old days and our

own, but also as preserving the styles and fabrics most in evidence in our present year of grace.

The Canadian Almanac for 1900 is better than any previous issue in the 53 years of its existence, which is saying a good deal. The Copp, Clark Co., Toronto, publishers.

Six editions of the "Boer War; Its Causes and Its Interest to Canadians," have been issued, and the seventh edition is now on the press. Biggar, Samuel & Co., publishers, Toronto and Montreal.

The P.E.I. Magazine issued a very attractive Christmas number, and the January number is a very good one. The frontispiece is a group of Miemac Indians. Among the local historical articles is "The First Settlement of Georgetown," by Prof. John Caven, and "Cavendish (P.E.I.) in the Olden Time," by Walter Simpson.

The Canadian Magazine for February has a strong military flavor. "Scenes on the Sardinian" is a well illustrated article depicting the life of the first Canadian contingent on shipboard. All who read the thrilling sketches of our daring Northwest Mounted Police by W. A. Fraser will feel proud of the plucky men who have maintained such excellent order over the vast stretches of the Canadian West for years past, and who are now going to serve the Empire in distant South Africa. T. E. Champion in another article gives some interesting reminiscences of distinguished Canadian officers; while C. F. Paul recalls vividly some personal experiences in the Canadian rebellion in Lower Canada. An article on the recent Manitoba elections is accompanied by a full page group of the rising politicians of the prairie province, the centre of which is Hugh John Macdonald. The few English Canadians who are disposed to cast doubt on the loyalty of French-Canadians should read the article by Errol Bouchette, entitled "French Canada and Canada." This testimony is the more striking as it was written before the question of the Canadian contingents to South Africa came up. After various references to the proved loyalty of the French Canadians in more than one crisis of our history, notably at the time of the American Revolution, and in the war of 1812, Mr. Bouchette says: "There is no alien race among us. . . . We are really one people, composed of two elements, who share the same interests and aspirations, whose existence side by side gives our nation its chief and most attractive characteristics, whose dissimilarities are a source of strength and not of weakness, because they agree in all fundamental principles of Government and social life, while affording every opportunity for healthy emulation." This is a view of the relations of the two races, which ought to be studied afresh by all Canadians.

Horace Tetu, Quebec, who has made several valuable contributions to the local history of the ancient capital, has just published an interesting brochure called a "Resume Historique de l'Industrie et du Commerce de Quebec, 1775-1900." It is a record of the dates when most of the business houses and several of the factories of Quebec were founded, giving in many cases the names of the founders.

Hull, Que., will celebrate this year the hundredth anniversary of its foundation. Laferriere & Page will publish for the occasion a special number of "Le Spectateur," called "The Century of Hull." It will be a complete history of that industrial city, cradle of the lumber trade in the most productive district in Canada. It will be a vivid description of the venturesome life of the pioneer of the Grand River, a complete panorama of the splendors of the most picturesque region in this country. The illustrations will cover all subjects relating to the political, religious, social and commercial history of Hull. It will be published in both languages about the month of June.

CANADIAN COTTON IN CHINA.

The following gives the amount of shipments of Canadian and American cottons (so far as they go over the Canadian Pacific) to China, the figures being for the calendar and not the fiscal year. These cottons run about 3¼ to 3½ yards to the pound:

	Canadian Cottons. Lbs.	American Cottons. Lbs.	Totals. Lbs.
1887.....	1,742,205	4,055,970	5,798,175
1888.....	2,009,974	6,816,798	8,826,772
1889.....	886,322	12,245,150	13,131,472
1890.....	2,279,150	17,079,730	19,358,880
1891.....	2,466,944	7,413,167	9,880,111
1892.....	1,825,259	4,322,452	6,147,711
1893.....	1,742,312	9,321,205	11,063,517
1894.....	3,770,343	4,303,701	7,074,044
1895.....	3,521,004	5,208,654	8,730,158
1896.....	3,392,042	11,834,372	15,226,414
1897.....	2,471,278	4,898,470	7,369,748
1898.....	1,375,257	8,639,191	10,014,448
1899.....	1,344,316	6,916,845	8,261,161

The above figures do not include 36,727 lbs. of cotton duck shipped to China and 296,549 lbs. shipped to Japan from Canada in 1897, and 63,648 lbs. cotton duck from Yarmouth, N.S., for China, and 211,683 pounds for Japan in 1898; and 32,334 lbs of cotton duck shipped to China, and 113,021 shipped to Japan in 1899.

LONDON WOOL SALES.

The first series of the colonial wool sales for this year closed in London, January 26th. The offerings on that day numbered 13,154, and consisted of a rather fair catalogue. Competition in merinos was good, especially the continent. New Zealand cross-breds were in active demand, and were taken by the home trade at full rates. Good lines of scoured stock were taken by the American Republics. During the series there were many withdrawals. The home trade purchased 47,000 bales, the continent 36,000 and America 4,000 bales. There were 57,000 bales carried over. After the strength of the last series and encouraging trade conditions, and short supplies, another rise was generally expected at the opening of the present series, but instead, the sale opened with hesitation on the part of the buyers. Merino cross-breds sold at par to five per cent, but soon eased to 7½ to 10 per cent. below the December series. This weakness was due to the dear money conditions and the unsettled political conditions in South Africa. The continental buyers were rather cautious at first, and the home trade was quiet in their speculations owing to the unhealthy trade reports. Later operators became more confident, especially the continent and American buyers, and as a result, prices advanced considerably, particularly coarse and medium cross-breds and fine greasy merinos. The closing tone of the series was steady at about December rates and occasionally five per cent. higher. Cape of Good Hope and Natal wools were neglected and largely withdrawn.

THE WOOL MARKET.

Toronto—The market is featureless and the few parcels coming in are taken at prices which do not affect the situation. We quote, 19 to 20c. for washed fleece. In pulled wools there is a moderate demand and prices are steady at 19 to 20c. for supers and 21 to 22c. for extras.

Montreal—There is absolutely no movement of any account

in wool at present. Manufacturers are buying sparingly, but prices of all lines are firm. Cape greasy, 24 to 26c.; Natal, 25 to 28c.; B. A. washed, 45 to 55c.; California grease, 19 to 20c.; Canadian pulled, 23 to 25c.

THE TORONTO CLOAK MANUFACTURING CO., LTD.

The Master-in-Ordinary has made an order directing that all the assets of the Toronto Cloak Manufacturing Co., insolvent, be sold, and that the proceeds be held until the court should decide upon the claim of the Quebec Bank to preference in respect to an amount of goods valued at \$13,000, on which they claim a lien. E. R. C. Clarkson is the liquidator in charge. The statement as presented at the meeting of creditors shows liabilities of \$87,832.43, and assets of \$47,631.84, leaving a deficit of \$40,200.59. The Toronto creditors are the Wyld, Grasett & Darling Company, Ltd., \$5,063.12; Quebec Bank (secured by endorsement), \$20,000; Millichamp, Coyle & Co., \$4,199.35; J. G. Mitchener & Co., \$747.80; Mark Fisher, Sons & Co., \$679.80; John Macdonald & Co., \$519.07; Wheeler & Wilson Sewing Machine Co., \$522.35; Gordon, Mackay & Co., Ltd., \$312.53; Maple Leaf Woolen Mills, \$288.71; W. R. Brock & Co., Ltd., \$220.92; Merchants' Dyeing and Finishing Company, \$183.92; Toronto Electric Light Company, \$165.34; A. Bradshaw & Son, \$137.65. Montreal creditors—H. H. Wolff & Co., \$3,773.23; Gault Bros. & Co., Ltd., \$790.78; Belding, Paul & Co., Ltd., \$160.28; Greenshields, Son & Co., \$382.92; Montreal Woolen Mills, \$192.84; Dominion Cotton Mills Co., \$182.04; Thibaudeau Bros. & Co., \$149.42; James Johnston & Co., \$112.05; aggregate under \$100 each, \$2,186. Other Canadian creditors are: Waterloo Woolen Mills Co., \$5,281.51; Paschmann Bros., Waterloo, \$138.73; J. F. Shantz & Co., Berlin, \$667.18; George Pattinson, Preston, \$1,161.36; Newlands & Co., Galt, \$586.62; Cornwall Manufacturing Co., Cornwall, \$1,079.86; Paton Manufacturing Co., Sherbrooke, \$2,771.80; A. L. Grindrod, Sherbrooke, \$318.54; Boyd, Caldwell & Co., Lanark, \$532.70, and Montreal Cotton Co., Valleyfield, \$254.58.

NEW ANILINE COLORS.

Benzo Fast Violet R.—The distinguishing feature of this new dyestuff is its superior fastness to light over any of the older qualities. It produces a very bright shade, the light tones of which yield nice heliotropes and lilacs, so much now in vogue. Benzo Violet R is adapted for the production of self shades, and on account of its fastness to light, and washing, should prove of value, especially for yarns and piece goods. In dyeing mixed fabrics the cotton dyes a deeper shade.

Celestine Blue B is a new color which dyes fine "Navy Blue" shades on cotton cloth previously treated with alumina and tannic acid. Such shades are considerably faster than, for instance, a combination of Methyl Violet with Brilliant Green.

Fast Light Yellow G.—This color is a clear yellow of reddish tone, which appears greenish overhand. It is possessed of extreme fastness to light, being faster than any hitherto known Acid Yellow, with the exception of Alizarine Yellow 3G. It is, however, brighter in shade than the Alizarine Yellow 3G. It is somewhat clearer and dyes easily level. In tinctorial power it is also stronger, and is well adapted for dyeing slubbing, yarn and piece goods.

Naphthaline Acid Black S produces a full deep black. The properties and method of dyeing are identical with the older 4B brand. It is possessed of good penetration, is fast to washing, rubbing, steaming and light, answering all the ordinary requirements as regards the above. Naphthaline Acid Black S is extremely well adapted for the dyeing of woolen yarns, pieces, dress material and felt.

Diazo Black 3B and G.—Both of these new Diazo Black

homogeneous dyestuffs, just brought out by the Farbenfabriken of Elberfeld, are adapted for the dyeing of cotton. They resemble the former brands of Diazo Blacks in fastness. The diazotized and developed shades being very fast to light and washing. With developer "A" full Navy Blues are obtainable, whereas developer "H" yields deep and gloomy black shades. A black so produced is indisputably the finest diazotized black obtainable. Dyed in the ordinary manner with common salt, good shades, uniformly dyed, on half-wool may be obtained.

Dyed patterns, samples and circulars, about new color products, promptly mailed gratis from the Dominion Dyewood & Chemical Co., sole agents in Canada for the Farbenfabriken, vorm Friedr Bayer & Co., Elberfeld, Germany.

INFLUENCE OF EXCESSIVE ACID IN DYEING.

The use of the so-called "acid colors" in dyeing of wool, requires the presence of a certain amount of free acid in the dye bath in order that the operation may proceed properly and produce level colors or shades. The addition of this acid is for a double purpose, first and of the most importance, to decompose the dyestuffs by forming a salt of the alkaline base and setting free the color radical, which has a much stronger affinity for the wool fibers than the dyestuff itself; and also to cause an opening out of the "scales" that cover the surface of the individual fibers, thereby allowing better penetration to the dye liquors. If an excess of acid is used, that is, more acid than will suffice to produce the results above noted, there is a strong probability that the fibers will become injured to such an extent that they may become troublesome in the weaving. As wool-dyeing generally proceeds at a boiling temperature, at which point it is quite soft and plastic, the presence of an undue quantity of acid will cause a permanent "set" to the fibers which will greatly impair its possibility of fulling, besides giving a very serious harsh feel which is quite undesirable. Owing to duration of time in which the wool is being subjected to the boiling acidified dyebath, and the usually short time of washing from the same bath, there always remains in the fibers a certain quantity of acid which manifests itself occasionally after the wool has been dried, and if our remarks apply to yarn, it will be found that one end of each of the hanks has become so much rotted by the drainings of the acid liquors toward the lower ends that the lot is quite likely ruined. As a rule, not more than 4 per cent of acid should be used in the dye bath, and, if possible, as much less as possible, so as to be on the safe side, even if the dyeing should be prolonged. There are many new dyes which are applicable for wool, which can be dyed without the aid of free sulphuric acid, and are remarkable for their peculiarly level dyeing properties, but there is a strong feeling on the part of dyers to give up the old-established custom of using sulphuric acid. Many complaints, too, have been heard about the use of an excess of acid, when upon investigation, it was found to be not an excess of acid, but an insufficient amount of washing

A NEW FABRIC.

It has been customary hitherto, when making union fabrics, to bring the wool as much as possible to the face of the cloth, and hide the cotton on the back or between the folds of the fabric. The advance of mercer-lustering appears probable to reverse this state of things in some instances, and a cloth is being made by a German manufacturer on such lines. The fabric in question is of the serge or zanella type, woven with a face almost entirely of cotton and with a wool backing. The woven cloth is then mercerized under tension in the usual way, and the result is a cloth of silky lustre without puckers or rumples, for the wool lying beneath the mercer-lusted cotton is yielding in its

action, and acts as a spring or tensioning medium, stretching and smoothing out any folds or creases which may form in the cotton face. The fabric is intended for use as a dress material or better-class lining, and may be still further beautified by the addition of a few silk threads to the face of the cloth.

Among the Mills

Co-operation is one of the guiding principles of industry to-day. It applies to newspapers as to everything else. Take a share in "The Canadian Journal of Fabrics" by contributing occasionally such items as may come to your knowledge, and receive as dividend an improved paper.

John Heatherington, Appleton, Ont., has taken a position in a Sherbrooke, Que., woolen mill.

The Durham Woolen Mills Co., Ltd., is offering its mill in Durham, Ont., for sale.

Syers' Carpet Factory, Port Hope, Ont., destroyed by fire February 17th; loss, \$900; no insurance.

D. J. Cornish, formerly of the Hawthorne mills, has gone to Sherbrooke, Que., where he has secured a position.

The Colonial Bleaching & Printing Co., Ltd., moved on January 22nd into its new offices, Victoria Chambers, 232 McGill street, Montreal.

It is stated that the Canadian cotton and woolen mills have enough orders on their books now to keep them going steadily until well on in the summer.

The woolen mills of Boyd, Caldwell & Co., Lanark, have just completed an order for 7,000 tweed bandages for the Canadian contingent in South Africa. Each bandage is three yards long and four inches wide.

The Barrie, Ont., Fanning Co. find its premises inadequate to meet the demands of a growing trade and is seeking municipal aid to assist in adding to the present plant, or to rebuild entirely, putting in up-to-date machinery.

James Pyle, manufacturer of the well-known washing compound Pearline, died at his home in New York last month, after an illness of over a year. He was born in Nova Scotia in 1823, and was a man of great wealth.

T. E. Braime, F. A. Cowan, W. M. Douglas, C. S. Norris and A. G. Malcolm, Toronto, have been incorporated to manufacture and sell clothing, suspenders, umbrellas and neckwear, as the T. E. Braime & Co., Ltd.; capital, \$40,000.

J. Northway, J. A. Northway, A. H. Winger and J. B. Ratcliff, Toronto, and R. M. Anderson, St. Thomas, Ont., have been incorporated as the John Northway & Son, Ltd.; capital, \$150,000; to make ladies outer garments and children's clothing.

The warden of the Kingston penitentiary has issued circulars to wholesale and retail dealers in all parts of Canada, announcing that twine, in large or small quantities, will be sold from the penitentiary. The output last year was 500 tons.

The J. R. Stouffer Manufacturing Company, Berlin, Ont., extensive manufacturers of buttons, buckles, suspenders, etc., has assigned to E. J. Henderson. The liabilities are estimated at about \$9,000, while the assets are placed at about \$9,500.

The Court of Appeal, Montreal, has confirmed the judgment of the Superior Court dismissing the action in the case of Morris and Stairs. This was an action taken by the Hon. A. W. Morris and Charles B. Morris, as testamentary executor of the late John A. Converse, against John F. Stairs and James M. Waterbury, asking the reimbursement of \$40,000, alleged to have been paid for 600 shares of the Consumers' Cordage Company, while only 400 shares were delivered, but refused.

The Ontario Glove Works are being now enlarged.

Harris & Co., Rockwood, Ont., have recently added some new broad looms.

The Brodie Mills, Hespeler, Ont., have added two Tatlem mules to their extensive plant.

The Canadian Colored Cotton Co.'s mill at Merritton, Ont., is now run exclusively on cotton blankets.

The T. H. Taylor Co., Ltd., woolen manufacturers, Chatham, Ont., has added an English willey to the plant.

Waterhouse & Bradbury, Ingersoll, Ont., have put in cop winding machinery doing away with bobbins altogether.

The Cornwall plant of the Canadian Colored Cotton Co. has had a large addition to the bleaching for special work.

The Stratford, Ont., Clothing Co., remains in Stratford though it was announced a short time ago that it would move to Toronto.

The Philadelphia Drying Machinery Co. is sending out a new pamphlet-catalogue of drying machinery, which will be sent on application.

C. A. Hess, L. Steinfeld, New York; F. Marquis, Quebec; J. H. Wintermeyer and E. H. Scully, Berlin, Ont., are being incorporated as the Canadian Tanners' Glue Co., Ltd.

The addition to the St. Croix mills of the Canadian Colored Cotton Co., at Milltown, N.B., is 160 x 100 feet. New Jacquard looms to the number of 500 have been added, making 1,200 looms in all.

Inside of three months there will be 4,000 looms running in the Montreal Cotton Co.'s mills at Valleyfield, Que. The plant for producing mercerized yarns now turns out goods equal to the imported English yarns.

Notice is given that the Dominion Cotton Mills Company, Ltd., will apply to the Dominion Parliament for an act to increase the capital stock of the company, and to authorize the company to issue preferential stock.

Fire in the picker room did about \$4,000 damage to the Slingsby Mfg. Co.'s woolen mill, Brantford, Ont., February 12th. It is fully covered by insurance. The mill will close for a short time to make necessary repairs.

The Almonte Gazette includes the following in a recent list of subscribers to the Canadian Patriotic Fund: Rosamond Woolen Co., \$250; Wm. Thoburn, \$25; Jas. McDougall, \$5; employees of J. H. Wylie's flannel mills, \$15.

Geo Henderson, who has gone as superintendent of the Penman Mfg Co's Mills at Coaticook, Que., was presented by the employees of the Penman Mfg Co., in Thorold, with a handsome gold watch and chain before leaving for his new home.

Very large orders for light khaki serge are being given by the British Government to clothe the South African army in woolen instead of cotton uniforms. Some of these orders could be executed to great advantage in our Canadian mills with our Canadian wools.

At the annual meeting of the Montreal Cotton Company, held February 13th, a satisfactory report was presented, and the following board of directors unanimously re-elected: A. F. Gault, president; Chas. Garth, vice-president; Jacques Grenier, Hon. J. K. Ward, S. H. Ewing, Samuel Finley and R. R. Stevenson.

The Weymouth, N.S., mill of the Sissiboo Pulp and Paper Co. is now turning out 300 tons of dry pulp per month. New machinery is being added and preparations are under way for building a new dam and a large mill in the spring, for which machinery is now being contracted for. The new plant will be in operation by November 1st next.

Manufacturers of Canadian homespun cloths find an increasingly active demand for these goods. It is only with difficulty that orders can be filled. This is due to the fact that such goods are now a fashionable fad.

The Berlin Record recently said that Ernest Jopson and Miss Minnie Nickason, two Hespeler, Ont., young people, were wedded. The groom was presented with a potato masher and a rolling pin by his fellow employees of the R. Forbes Woolen Co.'s Mills.

La Compagnie de Pulpe de Jonquiere is applying for legislation to enable it to expropriate lands on Riviere aux Sables and on Lake Kinogami in the county of Chicoutimi, Que., and develop the water power of the Riviere aux Sables, throughout its entire length, and to build pulp mills.

J. Loney, foreman of one of the engine rooms at the Royal Paper Co.'s Works at Angus, Que., was brought to the Protestant Hospital, Sherbrooke, Que., recently, suffering from a broken leg and other injuries. He had fallen down the elevator shaft a distance of some 25 feet into the cellar while at work.

The North River Lumber and Pulp Company, Ltd., is being incorporated, with a total capital stock of \$50,000; headquarters at Valmorin, Que.; to carry on the manufacture of pulp, paper, etc. The following are the names of the petitioners: C. R. Burleigh, Whitehall, N.Y.; G. W. Macdougall, Wm. J. Henderson, A. R. Macmaster and H. McKay, Montreal.

A circular issued by the G.T.R. announces that the special rates on pulp wood out of Canada to points in the United States have been withdrawn, and the regular tariff at a much higher rate has gone into effect. This has been done, it is said, to help encourage the manufacturers of pulp and paper in Canada. The low rates on pulp wood to and from local points will continue the same as before.

J. Bertram & Sons, Dundas, Ont., have shipped the large paper machinery to the Riordon Co., of Hawkesbury. This consists in part of 32 drying rollers, each 100 inches long and 48 inches in diameter, placed in a double row. The frame in which they set is 75 or 80 feet long and 10 feet high; each roller weighs about 2 tons, making the complete machine weigh about 120 tons. Bertram & Sons are the only firm which manufactures this style of machinery in Canada.

The Court of Review, Montreal, has confirmed the judgment of Mr. Justice Tellier, awarding N. K. Connolly and Michael Connolly \$22,324.48 and interest against the Consumers' Cordage Company for moneys advanced in connection with the binder twine factory contract of the Ontario Central Prison at Toronto, awarded to Patrick Louis Connor and transferred by him to Robert Heddle, who was a pretenom for the company. The company's incidental demand was dismissed.

The Dominion Cotton Mills Co. has added 1,000 new looms at Magog, Que., and is spending \$150,000 on its Kingston, Ont., mill. At Hochelaga, Que., an extension has been built, new looms have been put in, a machine-shop has been erected, and new machinery for several purposes acquired. An electric plant has been put in for power instead of coal. The Montmorency Cotton Co.'s mill, belonging to the Dominion Cotton Mills, has been enlarged for yarns, and exemption from taxation has been granted.

Judge Langelier recently rendered judgment in the case of Donovan vs. The Dominion Cotton Mills Company. The plaintiff claimed a hundred and fifty dollars damages on account of illegal dismissal before the expiry of his year's engagement. The defendant pleaded that a rule established in their works for the last two years, by which all employees were made to sign an agreement that they could be dismissed upon being given

one month's notice, justified them in dispensing with plaintiff's services at the time they did, and they resisted his claim. The Court held that as plaintiff had refused to sign the agreement referred to, and had nevertheless been kept in office, such agreement could not apply to him, and his action was maintained with costs.

The cards recently put into Wm. Thoburn's flannel mill, Almonte, Ont., were not supplied by Geo. Reid & Co., Toronto, as stated in our last issue.

The Lachute Shuttle Works are now under the management of Ernest F. Ayers, and are running to full capacity. References to the recent changes in the business will be made in next issue.

John Jackson, superintendent of the Ste. Anne's mill of the Dominion Cotton Mills Co., has been transferred to the Hochelega mill of the same company, to succeed Mr. Makepiece, who recently went to the States.

Attention is called to the announcement elsewhere of an opening for a woolen manufacturer in Oregon, U.S. Some statistics showing the advantages of Oregon as a woolen manufacturing State will appear in next issue.

E. & I. C. Keuth, of Campello and Boston, Mass., are suing James A. Young of Toronto and the Hudson Bay Knitting Company, of Montreal, to get \$532 on a bill of boots and shoes, or, in the alternative, \$1,000 damages for non-payment.

The Canadian Rubber Co. and the Gutta Percha and Rubber Mfg. Co. notified the trade that, beginning February 1, a 5 per cent. advance was made in the prices of rubber belting, packing, hose and mechanical rubber goods, owing to the advanced prices paid for crude rubber, cotton fabrics and other raw materials.

William Firth, Equitable Building, Boston, is receiving a large number of orders for worsted machinery made by John Perry & Co. Ltd., Shipley, Eng. Mr. Stephenson, who is a thoroughly practical man, and who had the management of Messrs. Perry's works, previous to coming to America, has full charge of this department, taking the position vacated by Joseph P. Battles, who left Mr. Firth's employment some time ago.

A Walkerton, Ont., paper of recent date, says in part: "With a view to the establishment of a binder twine factory in Walkerton, a number of the business men of the town recently sent W. E. Butler and P. Heffernan as delegates to Toronto and Montreal. They obtained a great deal of information, and report the scheme as quite feasible. They are now waiting for a proposal in writing from a capitalist in Montreal, and for communications from the manufacturers of binder twine machinery in the United States.

At the annual meeting of the Merchants' Cotton Company the report submitted was considered satisfactory. The growth of the mill has been most marked, the number of hands employed being over four times the number in 1883, and the number of looms have increased from 600 to 2,200. Two million five hundred thousand dollars has been paid in wages, and nearly 90,000 bales of cotton have been manufactured. A fourth mill is now in course of erection, with a capacity of 30,000 spindles, for the purpose of manufacturing different kinds of duck. The following were elected officers for the ensuing year: A. A. Ayer, president, James Crathern, vice-president; Messrs. R. B. Angus, J. P. Cleghorn, J. Hodgson, Robert Mackay, W. G. Cheney, directors, Alfred Hawksworth, manager, and W. S. Barker, secretary.

By the death of the late James Hall, which took place Jan. 27th in Toronto, Canada has lost one of her oldest and most useful citizens, who will be remembered "not only as a shrewd and enterprising business man, but also as a staunch friend to his employees, and a firm supporter of every good cause," says

The Toronto Globe in speaking of Mr. Hall's death. He came from Scotland in 1818, settling with his father in the village of Brockville, Ont., where the latter carried on a tanning business for a great many years. At his father's death Mr. Hall, who had been in partnership with him for a number of years, took full charge of the business, and a short time afterwards added to the regular tanning business that of making fine gloves. In this Mr. Hall was successful, and by energy and integrity gradually extended his business until his name became a synonym for sterling value in his business.

The following company announcement is among the most important that has been published for some time in the Ontario Gazette: Francis H. Clergue, Bertrand Clergue, Ernest V. Clergue and H. C. Hamilton, of Sault Ste. Marie, and E. S. Douglas, W. P. Douglas and F. S. Lewis, of Philadelphia, U.S., have been incorporated for the following purposes: (a) As a contractor, to construct railway and public and private works of all kinds and to equip the same and operate any of the works constructed by the company except railways; (b) To acquire by legal title mines and mining lands, timber and timber lands, and other lands, and to lease, sell, or otherwise dispose of the same, and (c) to manufacture and sell the products of raw material; the corporate name of the company to be the Algoma Commercial Co., Ltd.; and its share capital to be ten million dollars, divided into 200,000 shares of \$50 each; the head office of the company to be at the town of Sault Ste. Marie.

A number of very important changes have been made in connection with the Granite Mills of St. Hyacinthe. The new company, the Canadian Woolen Mills Co., whose incorporation was recently mentioned, has acquired the business of the Boas Mfg. Co., and has entirely reorganized the concern. The president of the new corporation is James G. Cannon, who is president also of the Fourth National Bank of New York, and the vice-president and general manager is Geo. P. Erhard, of New York. The new secretary-treasurer is A. W. Weisman; and the selling agent S. S. Lagowitz, who after several years' experience in the mill undertook the selling of goods, in which sphere his success has been quite marked, the entire product of the mills having been sold for some time to come. In the internal management of the mills several changes have been made, new superintendents having been appointed to the different departments; while a considerable amount of new machinery in the shape of looms, knitting machines, brushes, etc., is now being put in. The efforts of the new management are being directed to the production of finer goods in tweeds, flannels, underwear and hosiery; and while the mills now employ 850 hands, this staff will be increased by March to 1,000.

Judgment was given a short time ago in the suit of Vineberg & Co., wholesale clothiers, against the Dominion Woolen Mills Company, the plaintiff's action being dismissed with costs. The action was for \$10,962.50 for damages alleged to have been sustained by plaintiff, through failure of the company to fill certain orders given in January, 1897, for future delivery of about 40,000 yards of frieze. Delivery was to be made by June, and terms of payment—spot cash on delivery. The defendants pleaded in effect that after beginning to manufacture for plaintiff the goods in question, the plaintiff represented that they would not be able to take and pay for in cash the quantity of goods mentioned in the orders, and that the orders were cancelled and arrangements made by which smaller quantities of goods were to be manufactured and delivered to plaintiff as required. That the company cancelled the original orders in the books and manufactured and delivered to plaintiff certain quantities of goods, which the plaintiff failed to pay for in cash as delivered, and that plaintiff made no provision for the sum of \$25,000 required to pay for the goods on June 1, and did not take any steps to put the company in default to make

any delivery. That the capacity of the company's mill was sufficient to manufacture the quantity of goods for which they had orders. The judgment upheld the pretensions of the company upon all the points raised by them and dismissed the action with costs.

L. A. Brais, doing business under the name of Glover, Brais & Co., Montreal, shirtmakers, has assigned at the request of Foster, Porter & Co., London, Eng. George D. Ross, manufacturers' agent, Montreal, was named provisional guardian. The total liabilities amounted to over \$120,000. The greater number of the creditors are European firms, but some Canadian firms are interested to a large extent. J. McD. Hains has been appointed curator. The following are the creditors: Dent Allcroft Co., London, \$833.96; J. M. Esenstuck, Chemnitz, \$799.47; Foster, Porter & Co., London, \$2,400; Hughes & Young, Manchester, \$73.61; Emil Kaiser & Muller, Leipzig, \$875.58; J. B. Lewis & Son, Nottingham, \$3,128.25; Henry Matier & Co., Belfast, \$190.81; Newland & Gompertz, London, \$300.46; C. & F. Sudbury, Nottingham, \$1,277.04; I. H. Ceharschmidt, Timbach, \$2,989.67; Fred. Theak & Co., London, \$739.90; Taylor Bros. & Co., Manchester, \$378.13; T. Baxenden, London, \$578.81; S. Pollock, Nuremberg, \$154.40; Samson Smith, Leicester, \$556.80; William Anderson & Co., Glasgow, \$296.38; Chas. MacIntosh Co., Manchester, \$1,658.80; Moore, Eady & Co., Leicester, \$3,264.63; Aug. Clauss, Chemnitz, \$333.49; Vanden Adeele Freres, Paris, \$2,800.76; W. Blenkiren Son, London, \$5,514.67; M. Vandelden, Gronan, \$301.94; J. Patterson & Co., London, \$5,786.17; Toms, Steers & Toms, London, \$5,348.47; Geo. D. Ross & Co., Montreal, \$26,061.54; T. A. Code, Perth, Ont., \$757; Eagle Knitting Co., Hamilton, Ont., \$2,376.82; William Algic, Alton, Ont., \$387.06; Kingston Hosiery Co., Kingston, Ont., \$2,894.61; Boas Mngf. Syndicate, St. Hyacinthe, Que., \$3,292.72; Standard Woolen Mills, Toronto, Ont., \$1,862.74; Penman Mngf. Co., Paris, Ont., \$209.81; Waterloo Knitting Mills, Waterloo, Ont., \$1,476.67; Balcer Glove Mngf. Co., Three Rivers, Que., \$8,962.79; F. I. Mason & Co., New York, \$389.07; J. McMurchy, Huttonsville, Ont., \$326.35; J. Beaumont, Glenwilliams, Ont., \$20; Perrin Frere & Cie., Montreal, \$313.76; Schofield Woolen Mills, Oshawa, Ont., \$4,304.91; McIntyre, Son & Co., Montreal \$429.80; National Rubber Co., Bristol, \$406.50; Irving Umbrella Co., Toronto, Ont., \$256.68; Standard Shirt Co., Montreal, \$11,668.46; Anchor Knitting Co., Almonte, Ont., \$983.15; Montreal Suspender & Umbrella Co., Montreal, \$10,181.40; James A. McGee, Montreal, \$334.84; Montreal Shirt & Overall Co., Montreal, \$298.81; Joseph Simpson Co., \$430.64; James Hall & Co., Brockville, Ont., \$317.65; Estate Bruyer, \$5,000; Mrs. Johnson, \$1,036.75; Ontario Bank, \$12,937.50; Bank of Montreal, \$10,125; C. & F. Sudbury, \$1,277.04; creditors under \$100, \$951.45.

FABRIC ITEMS.

Lang & Co., dry goods, Ottawa, Ont., were damaged to about \$15,000 by fire, January 14th.

The safe in R. J. Tooke's men's furnishing store, St. Catharine street, Montreal, was blown up by burglars recently.

The Union Hat Works, St. Johns, Que., has a wholesale house in Vancouver on Cordova street, next door to the Corticelli Silk Co.

A fire, attributed to electric light wires, did about \$15,000 damages to the wholesale milling warehouse of W. J. O'Malley & Co., Montreal, last month. Fully insured.

T. J. Claxton died in Montreal last month. He came to Montreal in 1842 and commenced commercial life as a clerk in the dry goods business, and gradually developed until he became a partner in the firm of Thompson, Claxton & Co.,

WANTED POSITION—By Boss Spinner; experienced in cashmeres, flannels, dress goods, blankets, hosiery yarns. Had charge 19 years English and American operators. Age 45, married. Address "SPINNER," care Canadian Journal of Fabrics, Montreal, Que.

SITUATION WANTED—Blanket Mill Manager. Experience on all kinds of bed, steamboat, railroad and heavy camping blankets, and all kinds of carpets and yarns. Warrant from 10% to 15% profit per year. Address **MANAGER**, care of Canadian Journal of Fabrics, Toronto.

WANTED—Man thoroughly acquainted with the manufacture of Worsted and Mohair Brails. None but experienced hands in the manufacture of brails need apply. Address No. 6, Canadian Journal of Fabrics.

PROPOSAL FOR NEW WOOLEN MILL

Thoroughly Competent and Experienced Woolen Mill Man Wanted to correspond with Secretary Manufacturers' Association, Portland, Oregon, U.S.A., concerning establishment of a three-set woolen mill at Portland. Must be thoroughly qualified business man as well as practical woolen mill man, and must have some capital. Correspondence invited.

CAPITAL WANTED.

By a thorough practical worsted spinner (with small capital), a partner with capital, to start worsted spinning business and weaving worsted goods, in Canada, as there is a good opening for same, with good inducement offered at some places, correspondence confidential, only those with capital need apply. For further particulars address **CANADIAN JOURNAL OF FABRICS**, Box 7.

FOR SALE.

Woolen Mill in the Province of Quebec, near St. Lawrence River, and on line of railway, substantial stone buildings, both flour mill and carding mill, excellently situated for a large flour, pulp or woolen mill, and having the good will of a large country trade, owner wishes to retire because of advancing age, stone dwelling house attached, and the property in every way a desirable one. Address **O. G. P.**, care Canadian Journal of Fabrics.

Two-Sett Woolen Mill for Sale

A 2-sett woolen mill in first-class condition, 40 and 60 inch cards, all modern machinery to run on fine tweeds. The mill building is a four-story solid stone building with attic. The water power is one of the finest on the Mississippi River, having 18 feet fall and the whole flow of the river. Situated at Snedden's Station, on the main line of the C.P.R., in Lanark County, Ont. Apply to

GEO. REID & CO.,
118 Duke Street, TORONT

Woolen Machinery for Sale

- 1 60 in. 2-Cylinder Card.
- 1 Cam Loom, 100 in.
- 1 Crompton Loom, 45 in.
- 1 Picker, 30 in.
- 1 Shear.

May be seen at **MESSRS. GEO. REID & CO.'S**, 118 Duke St., Toronto, who will quote prices, or application may be made to

Qu'Appelle Felt & Boot Co.
QU'APPELLE, N.W.T.

FOR SALE

**Entire Equipment of Cotton
... Mill ...**

Spinning, Weaving and Twisting; 8,000 spindles all in first-class condition; cash or part cash and part bonds. For particulars address **COTTON MILL**, Office of the Canadian Journal of Fabrics.

later T. J. Claxton & Co. He had more recently been secretary treasurer of the Montreal-London Gold Mining Development Company

From the office of the Canadian High Commissioner in London, Eng., comes an enquiry on the part of a Scotch firm which is open to purchase blankets and flannels if satisfactory prices are quoted.

J. B. Kay, C. F. Gordon, J. I. Davidson and others, have been incorporated as the John Kay, Son & Co., Ltd., to carry on the carpet and furnishings business done under the name of John Kay, Son & Co. The capital is \$300,000.

One of Toronto's most respected citizens died recently in the person of J. D. Smith, an old resident of Toronto, and one of the oldest dry goods merchants in Canada. He was for a number of years connected with the pioneer dry goods firm of Crawford & Smith, Toronto. He leaves a widow and two children, Norman Smith, superintendent of the United Electric Co., and Minnie Josephine, wife of A. Burdette Lee, vice-president of the Rice Lewis Co., Ltd. He was 64 years of age.

TEXTILE PUBLICATIONS.

In order to accommodate readers of The Canadian Journal of Fabrics, the publishers will be pleased to mail any book in the following list on receipt of the publisher's price, duty free. Books on technical and practical subjects, not in this list, can be obtained and mailed at publisher's prices. In ordering, please give full address, written plainly:

- Worrall's Directory of Cotton Spinners, Manufacturers, Dyers, Calico-printers and Bleachers of Lancashire, giving the mills of the British cotton district, with number of looms and spindles, products of the mills, cable addresses, etc\$2 00
- Worrall's Directory of the Textile Trades of Yorkshire, comprising the woolen, worsted, cotton, silk, linen,

- hemp, carpet, and all other textile mills, giving looms and spindles, and the various lines of goods manufactured, etc 2 00
- Worrall's Textile Directory of the Manufacturing Districts of Ireland, Scotland, Wales, and the counties of Chester, Derby, Gloucester, Leicester, Nottingham, Worcester, and other centres not included in preceding works, with capacity, products of mills, cable addresses 2 00
- The Wool Carder's Vade-Mecum, by Bramwell; third edition, revised and enlarged; illustrated; 12mo..... 2 50
- Technology of Textile Design, by Posselt..... 5 00
- The Dyeing of Textile Fabrics, by Hummel..... 2 00
- Textile Calculations; very complete; by E. A. Posselt.... 2 00

CHEMICALS AND DYESTUFFS.

Buyers are now looking ahead for their spring requirements. Nearly all the leading articles show great firmness. Bleaching powder, Caustic soda, Chlorate of potash and Saltpetre continue to advance.

Bleaching powder	\$ 2 75	to \$3 00
Bicarb. soda	2 00	" 2 05
Sal soda	0 75	" 0 80
Carbolic acid, 1 lb. bottles.....	0 50	" 0 60
Caustic soda, 60°	2 25	" 2 50
Caustic soda, 70°	2 50	" 2 75
Chlorate of potash	0 13	" 0 15
Alum	1 35	" 1 50
Coppers	0 65	" 0 70
Sulphur flour	2 00	" 2 50
Sulphur roll	2 00	" 3 00
Sulphate of copper	6 00	" 6 25
White sugar of lead.....	0 08	" 0 09
Bich. potash.....	0 11	" 0 12
Sumac, Sicily, per ton	75 00	" 80 00
Soda ash, 48° to 58°	1 30	" 1 40
Chip logwood	1 90	" 2 00
Castor oil	0 09	" 0 09½
Cocoanut oil	0 10	" 0 11

Dye Stuffs

Chemicals

..Alizarines..

DIRECT DYING ANILINES FOR

COTTON & WOOL

Dyewood Extracts

F. E. ATTEAUX AND CO.

53 Colborne Street, TORONTO

15 Lemoina Street, MONTREAL

NEW YORK. PHILADELPHIA.

BOSTON.

CHICAGO. GLOVERSVILLE, N.Y.

A. KLIPSTEIN & CO.

122 PEARL STREET, NEW YORK.

Chemicals & Dyestuffs

Fast Color for Wool—Dry Alizarine, Phenocyanine, Gallocyanine
Direct Cotton Colors—Auramine, Congo Red.
Azo Colors—Naphthol Yellow, Orange, Scarlets, Fast Red.

HEADQUARTERS FOR

- Caustic Potash 90%
- Chlorate of Potash
- Phosphate of Soda
- Carbonate of Potash
- Bleaching Powder
- Refined Gutch A.K.C.

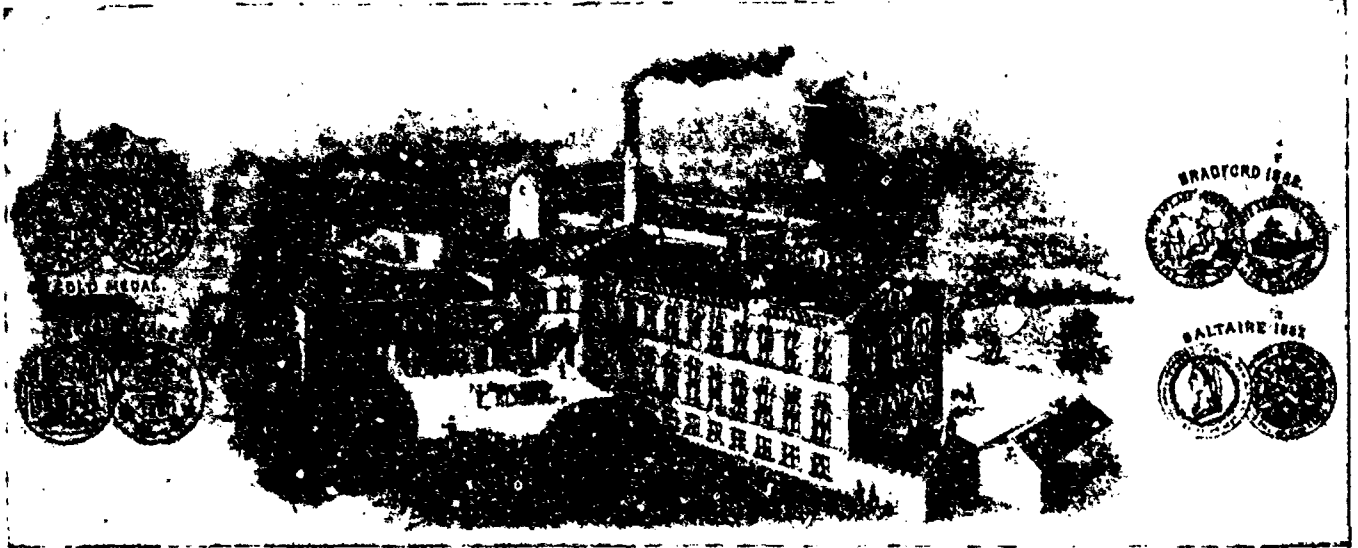
WRIGHT & DALLYN, Agents, Hamilton, Ont.

JOHN W. LEITCH & CO.

Milnsbridge Chemical Works, near HUDDERSFIELD, ENGLAND.

PHENYLENE DIAMINE (DISTILLED)
TOLUYLENE DIAMINE (DISTILLED)

Bismarck Brown, Chrysoidine, Crystals and Powder. Largest makers in the world.
Soluble Blues—all shades.
Binetro Benzol and Binetro Toluol.
Reduced Indigo. Wood & Leather Stains.
Specialties for Cotton, Wool and Silk Dyers, Paper Makers, &c.



JAMES YATES & SON

MANUFACTURERS OF

Card Clothing

Joint Inventors and Patentees of combined
Round and Flat Wire Cards.

Established 1820 

CLECKHEATON, ENG.

All Correspondence to be addressed to Canadian Stock Depot.

“Genuine Oak” Tanned Leather Belting,
Mill Furnishings of every description.

We would also draw your attention to our “LANCASHIRE” PATENT HAIR BELTING
for exposed situations.

D. K. McLAREN,

Head Office and Factory: MONTREAL

Branch: 88 Bay Street, TORONTO

—At the convention of the Cotton States Association held at New Orleans last month a resolution was adopted urging that the Southern Cotton Exchanges fix and adopt uniform classification of cotton to correspond with the cotton classification of Liverpool and the principal cotton markets of Europe.

—“A rumor is in circulation that furs are to be dyed khaki shade. The effort can only be accomplished,” says The Drapers’ Record, London, Eng. “in the case of white furs, and the result is not likely to be satisfactory. Khaki is not likely to be fashionable for long. Both the material and the shade

were selected by those influenced exclusively by utilitarian motives, and not by considerations likely to appeal to the votaries of fashion.” This is the opinion of an expert, yet we have learned by the Rough Rider hat on this continent to know that a fashionable fad can grow up independent of any considerations which usually appeal to fashion’s votaries. The facts are that khaki is a most becoming shade to many people; that as an outing cloth it is most serviceable in color, and that military enthusiasm would this year make people wear anything. Khaki will be the rage both in light-weight woolens, and ducks, and drills.

YOUR ENGINEER OUGHT TO HAVE A COPY!!
The Manual of Lubrication,
 Or, How to Choose and How to Use Lubricants for any description of Machinery
 With Methods of Determining the Purity and other Properties of Oils etc.
 By **LOUIS SIMMONS.**

Price \$1.00
 Post paid

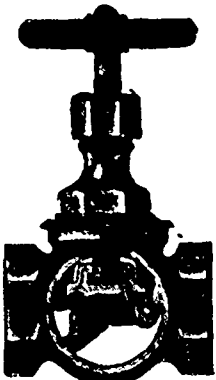
Address **BIGGAR, SAMUEL & CO.,**
 Fraser Bldg., MONTREAL, Can.

ESTABLISHED 1859
THE C. TURNBULL CO.,
 OF GALT, Limited.

MANUFACTURERS OF

Full Fashioned Lamb's Wool Underclothing, Hosiery and Knitting Yarns, Perfect Fitting Ladies' Ribbed Vests, Sweaters, Jerseys, Knickers.

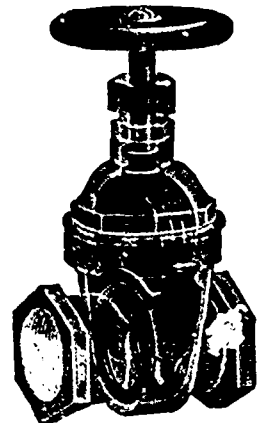
CANADA'S LEADING TOOL HOUSE!
FAIRBANKS'



GLOBE VALVE

Globe, Angle, Cross, Check, Gate and Ammonia Valves, and Vulcanized Asbestos Packed Iron Cocks.

A special feature of the **Globe Valves** is that they are provided with **Vulcanized Asbestos Discs**, furnished in brass holders ready for use, and can be put in place by simply removing the bonnet of the valve, slipping a new disc on the end of spindle and replacing the bonnet again without loss of time, or need of skill. This is a decided advantage over all other Valves. Write for catalogue and price lists.



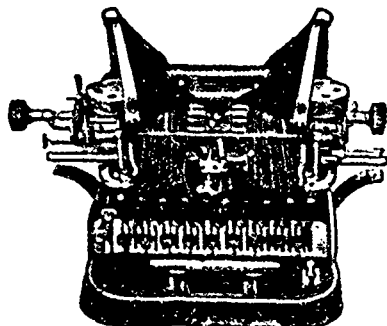
GATE VALVE

Aikenhead Hardware Co., Agents
TORONTO, ONTARIO

The Modern
 Type Machine
 Is The

OLIVER TYPEWRITER

Possessing all Latest Improvements—
 Including



Visible Writing, Lightest Touch, Strongest Mechanism,
 Double Type Bar, Strongest Manfolding Power,
 Unequaled Speed,
 Automatic Line Spacing, Writing in Various Colors,
 Lines Ruled Neater and Quicker than with a Pen.

The only Free Type-Bar Visible Writing Standard Machine manufactured. The price of the OLIVER is \$95.00, \$30.00 less than any other Standard Machine manufactured, because it is a "CANADIAN." Catalogue on application. Telephone us and our representative will call. Manufactured by

LINOTYPE COMPANY,

BRANCH:
 55 Victoria St., TORONTO, ONT.
 PHONE 8479

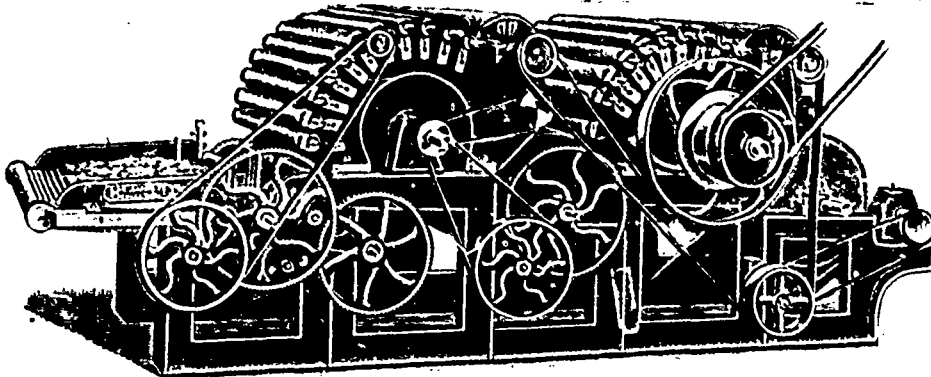
156 St. Antoine St., MONTREAL, Que.

Garnett's WOOLLEN & WORSTED WASTE OPENER MACHINES

**WORLD WIDE
REPUTATION**

TELEGRAMS: Garnett, Cleckheaton.

TELEPHONE No. 9, Cleckheaton Exchange, Under Dewsbury.



THESE MACHINES have a world-wide reputation. They are made in various widths up to 60 inches on the wire, and with one, two, or three swifts. They can be clothed as fine as 24 rows per inch so as effectually to open the finest threads.

Waste Opener or Garnett Machine, for Opening Hard Twisted Woolen and Worsted Waste.

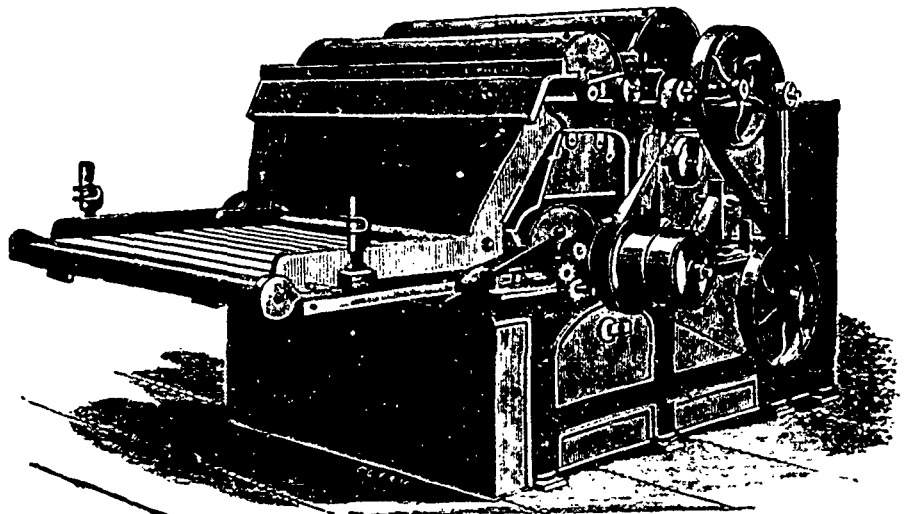


Garnett Wire. This Wire is used for covering iron rollers, breasts of woolen cards, lickers in of cotton cards, comber doffers, etc

Garnett Wire, or Metallic Card, made with any form of tooth, in Swedish Charcoal Iron or Cast Steel, with points hardened by electricity.

Patent Garnett Clothing Apparatus

By means of this simple and inexpensive apparatus parties can reclothe the rollers of their waste-opening machines in their own mills—and so save an immense amount of trouble and expense in sending their rollers away to be done.

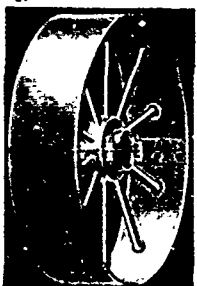


Improved Wool Cleaning or Burring Machine.

Capable of cleaning 1,500 pounds of wool per day. The very best and most economical machine made for the purpose.

Wrought Iron Pulleys

Light, True and Unbreakable



CAST IRON PULLEYS

Iron and Steel Shafting, Couplings,
Flummer Blocks, W. I. Collars,
Hangers, Wall Boxes, etc.

JOHN HALLAM,
 83 & 85 Front St. East, - - - Toronto
 and
 88 Princess Street, - - - - - Winnipeg
 Wholesale Dealer in
DOMESTIC AND FOREIGN WOOLS
 Suzaco, Japonica, &c.

LONG & BISBY
 DEALERS IN
 Foreign and Domestic
WOOL AND COTTON
 GENERAL COMMISSION MERCHANTS
 HAMILTON, ONT.

B. Spedding & Co.
 72 St. Henry St., Montreal
 Wholesale Dealers in all kinds of Foreign
 and Domestic Woolen & Cotton Rags.
 Paper Stock and Metals. Graded
 new Woolen Clips a specialty.
 Agent for
George Hirst & Sons, Exporter of Woolen
 Rags, Birstall, England
 Telephone 2822.
 Cable—"SPEDDING," Montreal.

ROBT. S. FRASER
Wools, Cottons, Noils, Yarns
 Specialties:
English Pick Lambs and Downs
Foreign Wools and Noils
Egyptian and Peruvian Cottons
Fancy Yarns
 17 Lemoine St., MONTREAL

The R. Forbes Co.
 (Limited)
 Manufacturers of
WOOLEN AND WORSTED YARNS
 For Hosiery and other work
HESPELER, ONT.

WOOL **WM. GRAHAM**
 54 and 56 Wellington
 St. East, TORONTO
 Dealer in
**Foreign and Domestic
 Wools**
 My manufacturing experience assists me in import-
 ing wool for any desired goods.

The Montreal Blanket Co.
 Manufacturers of
**Shoddies, Wool Extracts
 and Upholstering Flocks**
 Office and Works: COTE ST. PAUL
 P.O. Address: MONTREAL

W O O L

A. T. PATERSON & CO.
 MERCHANTS,
 Lon. & Lanc. Ins. Bldg.,
 164 St James St., MONTREAL
 REPRESENTED BY MR. DAVID GUTHRIE.

THE SMITH WOOLSTOCK CO.
 Manufacturers and Dealers in all Lines of
 Wool Stock, Shoddies, &c., Graded Woolen
 Bags, Carbonizing and Neutralizing.
 Best prices paid for Wool Pickings, Woolen
 and Cotton Rags, Metals, &c. Hard Waste, &c.
 purchased or worked up and returned.
 210 Front St. E., Toronto | Foot of Ontario St.

WM. D. CAMERON,
Woolen & Cotton Manufacturers'
Agent,
 HALIFAX, N.S., & ST. JOHN, N.B.
 Address P.O. Box 401. - HALIFAX, N.S.

We make the best

**LOOSE
 LEAF
 LEDGER**

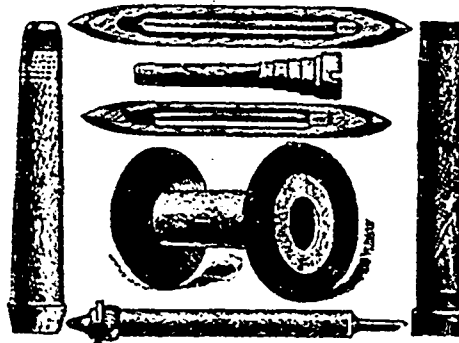
in the market

Get our Prices before
 ordering elsewhere.....

MORTON, PHILLIPS & CO.
 Stationers, Blank Book Makers
 and Printers
 1755 & 1757 Notre Dame St., Montreal

WILSON & COMPANY
DEALERS
IN ALL KINDS OF **WOOL**
 OF
 102 FRONT STREET WEST,
 TORONTO, ONT.

The Lachute Shuttle Company



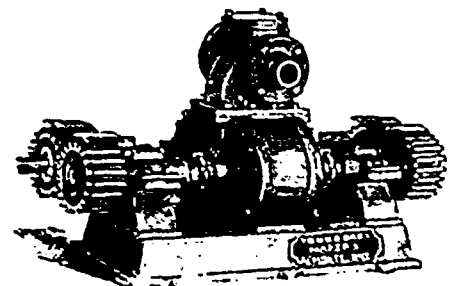
We are the largest Shuttle
 Manufacturers in Canada.
*Slubbing, Roving and all kinds
 of Bobbins and Spools for
 Cotton and Woolen Mills*
 We have always on hand
 a large stock of
 Thoroughly Seasoned
 Lumber.
 Orders solicited and all work guar-
 anteed to give satisfaction.

E. F. AYERS, Manager
 LACHUTE, P.Q.

MISSISSIPPI IRON WORKS



ESTABLISHED
 '875



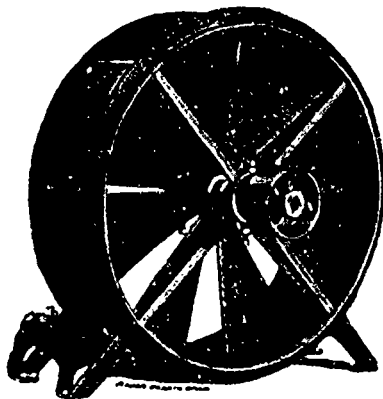
Manufacturers of English or American Fulling Mills and Washers, Wool Pickers, Ex-
 haust Fan Drifters, Dusters, Rotary Force Pumps for Fire Duty, Boiler Feed Pumps,
 Shafting, Hangers, Castings, Pulleys, Gearing, Forgings.
 Full equipment of mills of every kind. **YOUNG BROS., Almonte, Ont.**

NEW
ENGLAND**Ventilating & Heating Co.**

PROVIDENCE, R.I.

R. RICHARDSON, Treasurer

Manufacturers of

Exhaust Fans, Blowers,
Ventilators & Sheet
Metal Pipes.A workroom well ventilated
will increase its production.Our Exhaust Fans are used exten-
sively for removing smoke, dust,
heat and for drying by air circula-
tion.

Office and Works:

926, 928 & 930 MANTON AVE.

W. M. M. YOUNG,
Manufacturer
of
Novelty Braids

For Ladies' Dress and Wrapper Trimmings. Braided and Woven Spool Tapes and Bindings Tapes for Underwear, and Round Braids. Cotton Barding and Hook Bands. 30, 38 and 40 Frankford Ave., Philadelphia, U.S.

YARNS

William Hollins & Co., Limited, Nottingham; Cashmere, Worsted, Merino Yarns
David Sandeman & Co., Glasgow; Worsted and Woolen Yarns.
William Aykroyd & Sons, Bradford; Mercerized Yarns
James Smethurst & Sons, Manchester and Bolton; Cotton Yarns.
Bentley Silk Mills, Meltham; Spun Silk Yarns.
J. & R. Young, Belfast; Linen Yarns.

Agent for the U. S. and Canada

W. M. CROWE, 477 Broome St., New York.

Represented by J. A. ROBERTSON, Board of Trade Building, Montreal

The Canadian Textile Directory

1899 Edition Just Issued.**CLOTH, \$3.00.**

THE CANADIAN TEXTILE DIRECTORY is more than a mere directory of names. It gives facts and figures about the textile trades of Canada which have been attempted in no other work. It contains not only lists of all the general stores, retail dry goods dealers, hat and fur dealers, clothiers, haberdashers, tailors, milliners, etc. (the retail lists contain over 19,000 names), but all the wholesalers and commission merchants or manufacturers' agents in similar lines, and all the mills and factories engaged in manufacturing fabrics connected with the textile and kindred trades. It is the only work in Canada which gives a full list of the boards of trade, commercial travelers associations, and dry goods and kindred associations, while the immense amount of statistical information, such as the details of the imports and exports of dry goods, etc., the tariff of Canada, of the United States and Newfoundland, sterling exchange rates, etc., make it indispensable in an office of any pretensions.

As an example of the information given in the various lists of manufacturers, the following shows the form of report of the Woolen Mills. Name and address of Proprietors, and names of the Officers (if a joint stock company), the capacity in sets of cards, looms and spindles, when established, whether water, steam or electric power, description of goods manufactured, whether the mill has a dye house, and names of selling agents, if any. Corresponding information is

given concerning the other mills, of which the following is a list. Asbestos miners and manufacturers, manufacturers of awnings, bathing (wool and cotton), bedding, binder twine, braids, buttons, caps, carpets (including hand loom weavers), children's wear, cloaks, clothing, collars, cuffs, cordage, corsets, cottons, embroidery, feathers, felts, flags, flax, fringes, furniture, gloves, hair cloth, hats (straw, felt and cloth), haberdashery, horse covers, hosiery, jute goods, lace, ladies' wear, mantles, mats, mattresses, men's furnishings, millinery, mitts, neckwear, oil cloth, oiled clothing, overalls, paper, pulp, pins, print goods, regalia, rope, rubber goods, sails, tents, shirts, shoddy, felt, straw goods, suspenders, tarpaulins, tassels, thread, tow, trusses, linens, umbrellas, upholstery, wadding, water proof garments webbing, window shades, worsteds, etc. The woolen mills include the carding mills, manufacturers of tweeds, blankets, flannels, yarns, homespun, and all other piece goods, carpets, felts, and all kinds of knitted fabrics. The cotton mills include all classes of cotton piece goods, yarns, wadding, batting, etc. There is also a complete list of the tanners and curriers, laundries, dyers, dealers in raw wool, furs, etc. Under each heading the whole of Canada and Newfoundland is included.

The number of copies left on hand is limited and those wishing to secure a copy before the edition is exhausted should order without delay. Address,

Biggar, Samuel & Company.

62 Church Street, Toronto,

or

Fraser Building, Montreal

Copies Mailed post-paid on Receipt of Price

WILLIAM FIRTH,

IMPORTER OF

Textile Machinery

Equitable Building. Boston, Mass.,
150 Devonshire Street, U.S.A.

Southern Office, 40 South Forsyth St., Atlanta, Ga. C. E. W. Dow, Representative

SOLE IMPORTER OF

Hetherington's Patent Revolving
Top-Flat Carding Engines.

Combing Machine
Drawing Frames.
Roving Frames &
Self-Acting Mules.

Curtis Sons & Co., Patent Worsted Card, Woolen Cards and Mules.
John Perry, Limited, Shipley, England, Worsted Machinery. on
French and English Systems

William Tatham & Co., Vulcan Works, Rochdale, England, makers
of Waste Machinery for Working Hard and Soft Waste, Cop
Bottoms, etc.

James Yates and Son, Hardened and Tempered Steel Card Clothing
for Woolen and Worsted Cards.

Joseph Stubbs, Manchester, England, maker of Patent Quick Traverse
Gassing Frames for Cotton, Worsted and Silk Yarns; Yarn Pre-
paring Machines, also, Patent Adjustable Yarn Clearer for
Winding Frames.

**Machinery delivered, duty and freight paid,
and erected.**

The Improved **INMAN AUTOMATIC** BANDING
MACHINE

MANUFACTURED BY

COLE BROTHERS,
PAWTUCKET, R.I.

The **ONLY** Automatic Banding Machine in the
World for Making Loop Bands.
For Driving Spindles.

All the latest improvements are completed and is now ready for the market.
Will make a saving of 50 per cent. in cost of making bands, besides the superior
quality of the bands over those made on hand machines, which is conceded by all
parties using them.

These machines are now in use by the Montreal Cotton Company.

We are also Builders of **BEAMING MACHINES**, to beam yarn
on the slasher beam.

A. W. ALLEN

Textile Machinery

Patent upright bottle
Bobbin Winder, for
Hosiery and Under-
wear, both for Skeins
and Cops. Plain
Spooling Machines.
Improved Presser

Drum Spooler. Patent Bobbin Frames. Improved Dresser Spoolers,
with fifty-spool Rack, Creel or Cop Stand. Upright Warp Mills,
Warp Mill Hecks, from 60 to 300 eyes. Section Warp Mills Warp.
Splitting Machines. Beaming Raths. Yarn Bundling Presses for
Cotton, Worsted and Wool. The Old Jackson Winder. Rollers and
Shell Rollers. Plain Beaming Machines. Presser Beaming Machines.
Patent Cop Winders for Carpet and Woolen Manufacturers and Cot-
ton. Breast Reels and Plain Reels, 14 and 16 feet long.

Catalogue sent on application.

2421-3-5 & 7 Mascher Street,
PHILADELPHIA, PENN., U.S.A.

EVAN ARTHUR LEIGH

Successor to E. A. LEIGH & COMPANY

35-36 Mason Bldg., Boston, Mass., U.S.A.

IMPORTER OF

Textile MACHINERY

Etc.

Sole Agent for the U. S. and Canada for

Messrs. PLATT BROS. & CO.
(LIMITED), OF OLDHAM, ENGLAND.

BY FAR THE LARGEST MAKERS OF TEXTILE MACHINERY IN THE WORLD

Platt's Cotton, Woolen and Worsted Machinery.
Sole makers of Brown's Patent Carding Rollers for wool—
give woolen yarn a worsted appearance.

New Patent Noble Comb—increased production, better
work.

Platt's Special Machinery for making English and French
Worsted Yarns.

Platt's Special Machinery for making Cotton Waste into
Yarns.

Also Sole Agent for U. S. and Canada for

Messrs. MATHER & PLATT

Salford Iron Works, Manchester, England.

Bleaching, Dyeing and Finishing Machinery and Archbutt-
Deeley System of Softening and Purifying Hard Water.

The Best System on the Market.

Wool Washing and Drying Machines. Garnett Machines. French
and English Napping Machines. Card Clothing for Cotton (Sykes's).
Woolen and Worsted (Critchley's). Varcy's Fallers and Circles, etc.

Fine Cotton and Worsted Yarns. Machinery delivered duty and
freight paid.

Lowell Machine Shop

LOWELL, MASS.

COTTON MACHINERY.

Revolving Flat Cards

Railway Heads

Drawing Frames

Roving Frames

Ring Spinning Frames

Twisters, Spoolers

Warpers, Slashers

CLOTH ROOM MACHINERY.

Looms

The Denn Warping Machinery.

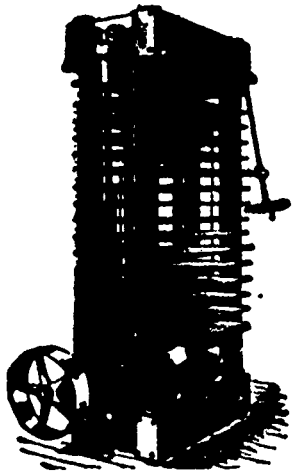
Linking Slasher Baling Beam

WARPERS

100 to 3,200 Ends.

Electrical Stop-Motions Applied to all Creele
SEND FOR CATALOGUE

GLOBE MACHINE WORKS, Oxford St., Frankford PHILADELPHIA



RELIANCE

Hot Plate Press

FOR

Hosiery & Underwear Trade.

For Price and Particulars, address

CHARLES HART
Hedge and Brown Streets
FRANKFORD, PHILA., PA.

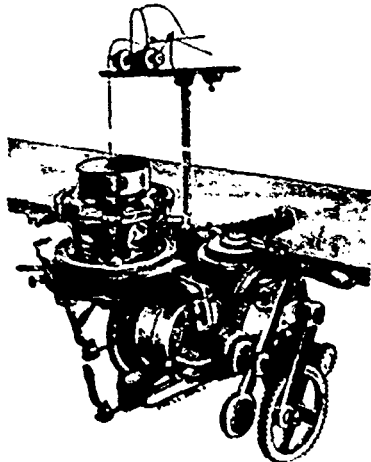
Branson Machine Co.

BUILDERS OF

Knitting Machinery.

Hand or Power, Open Top or Hold Down,
1-2, 3-4 or

7-8 Automatic Knitters
All Sizes and all Gauges.



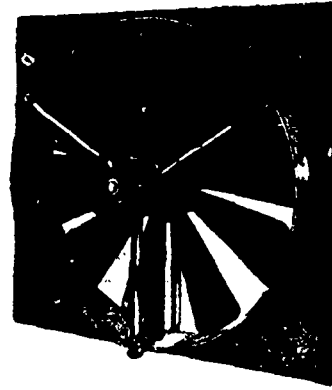
Welt or Two-Feed Ribbers, Loopers and
Parts, Presses and Boards, Estimates
for Plants complete.

Branson 3/4 Automatic Knitting Machine
WINDERS and BOBBINS.

HAND FORGED STEEL CYLINDERS.

BRANSON MACHINE CO.

506 N. American St. - Philadelphia, U.S.A.
Write for Information and Catalogue.



CYCLONE FANS

THE BEST FOR DRYING AND VENTILATING

CYCLONE DRYERS

For Wool, Cotton Stock, Yarn, Underwear, and Stockings.
Carbonising Machines, Yarn Scouring Machines.

GARNETT MACHINES

Breasts, Burring Machines, Feed-Rolls

RE-CLOTHING Garnetts a Specialty

PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

NYE & TREDICK,

MANUFACTURERS OF

Circular Knitting Machinery

PLAIN AND AUTOMATIC

Ribb Knitting Machines

606 ARCH STREET,

PHILADELPHIA, U.S.A.

"HURRICANE" FANS

FOR
DRYING
AND
VENTILATING

CARBONIZERS.
YARN SCOURING MACHINES.

"HURRICANE" DRYERS

For Wool, Cotton, Hair, Yarn,
Stockings, Underwear, &c.

Plans, Estimates and Catalogues
sent upon application.

Phila. Drying Machinery Co.,
6721 Germantown Ave.,
PHILADELPHIA, PA.



H. W. KARCH,

HESPELER, ONT.

Manufacturer of

Woolen Machinery,
Rotary Fulling
Mills, Kicker Full-
ing Mills, Soaping
Machines, Cloth
Washers,
Wool & Waste
Dusters, Rag Dus-
ters, Drum Spool
Winders, Reels,
Spooling & Doubling
Machines, Ring
Twisters, Card
Creels,



Dead Spindle Spooler for Warp or Dresser Spools,
Pat. Double Acting Gigs, Dyeing Machines.

—Developing Azo Dyes.—A French patent has been granted for developing azo dyes on the fibre, the process consisting in a preliminary treatment of the fabric with a soluble tungstate, then with a solution of a diazotized or tetra-azotized body, and finally with the solution of a phenol, naphthol, or diamine, which forms a compound insoluble, or nearly so with the azotized body. The threads may also be prepared with a diazotizable base, or a salt of such a base, and then after diazotizing in the presence of tungstate, adding the solution of phenol, naphthol, or diamine.

Education in Manufacture.—In his admirable life of Pitt, Lord Rosebery remarks that "The English mind moves slowly but with exceeding sureness," and in this manner we believe it to be now progressing in support of the movement in favor of a higher and well organized system of education in manufacture and trade. It would be strange were it otherwise, for the necessity of that departure is constantly being rubbed into the public mind. Mr. Haldane, Q.C., M.P., has just delivered a lecture on "The Duty of the State to make further and immediate Provision for Technical Education in this Country." Among many instances in point the lecturer mentioned that the manager of the largest dye-works in Great Britain supplied one. He said every ounce of the dyes used in his works came from Germany, although the coal-tar from which the dye was made was bought by preference in Great Britain. The establishment in Germany where those dyes were made employed 5,000 hands under 300 foremen or directors. No fewer than 87 of these directors were fully-trained expert chemists, drawing very large salaries, which were fully justified by the output of the works.—*Drapers' Record, London, Eng.*

RICHARD SCHOFIELD, TORONTO

Manufacturer of all kinds of

Cylinder Dials,
Cams,
Yarn Guides,
Cut Presses,
Mill Supplies,
Fluted Rollers,
Gear Wheels,
Worm Wheel,
Ratchet
Wheels,
Special
Screws,
&c., &c.

Power
Knitting
Machines

14 COURT ST.

Ontario Agent for the well-
known **Union Special**
Sewing Machine for plain
and ornamental stitching
as used in the manufac-
ture of shoes, gloves,
underwear, etc.



14
Court
Street.

"WE HOLD THEE SAFE."

The Dominion Burglary Guarantee Co.

LIMITED.

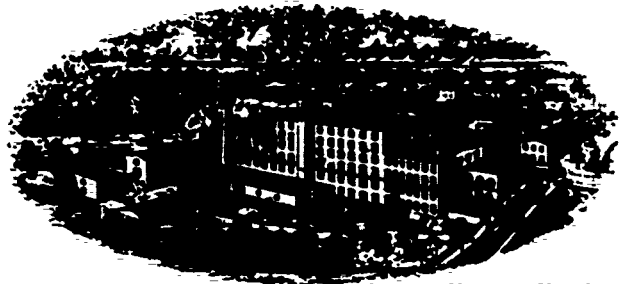
Head Office, Montreal, Can.

CAPITAL, \$200,000.

Insurance against burglary and housebreaking. Policies clear
and free from vexatious or restrictive clauses.

CHAS. W. HAGAR, General Manager

ROSAMOND WOOLEN CO., ALMONTE, Ont.



Fine TWEEDS, CASSIMERES, and Fancy WORSTED
SUITINGS AND TROUSERINGS

Colors warranted as fast as the best British or Foreign goods

CREELMAN BROS.

GEORGETOWN, Ont.

Manufacturers of

*K*nitting
Machines

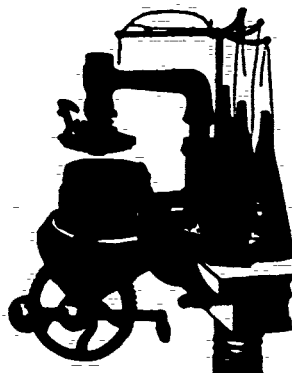
"THE DOLLAR," Family,

AND

"THE STAR," Steam Power,

AND

"THE WORLD'S STAR," for
Knitters



If You want the BEST

Order our Patent
Metallic

BURNISHED RINGS.

WHITINSVILLE SPINNING RING COMPANY
WHITINSVILLE, MASS

Loom Picker Co.
H. P. GARLAND, Treas. **BIDDEFORD, ME.**

MANUFACTURERS OF

Rawhide and Leather Loom Pickers,
Loom Harnesses and Reeds,
Duck and Ticking Lug Straps,
Tape Picker Loops, Leather Strapping,
Black Oak-Tanned English Picker Leather,
North Carolina Hickory Picker Sticks.

Illustrated Catalogue sent on application.

ESTABLISHED 1850

Phenix Iron Foundry

PROVIDENCE, RHODE ISLAND, U.S.A.

Manufacturers of


**Calenders, Starch Mangles,
Calender Rolls of Paper,
Cotton and Husk,**

Chilled Picker Balls, Dye Kettles, Expansion Pulleys, Wool Washing Machine Rolls, Bleaching and Dyeing Machinery, Shafting, Pulleys, Gearing, Hydraulic Presses, Tenter Drying Machines, Silk Lace and Cotton Finishing Machinery, and sole manufacturers of Nagle Power Feed Pump. Heavy and Light Castings, Green and Dry Sand, also Loam Work. Propeller Wheels made on short notice. Brass Castings, Rolls, etc.; Copper Singe Plates and Rolls. Send for Catalogue.

CALENDER EMBOSsing ROLLS

BEST Material
Workmanship
Results

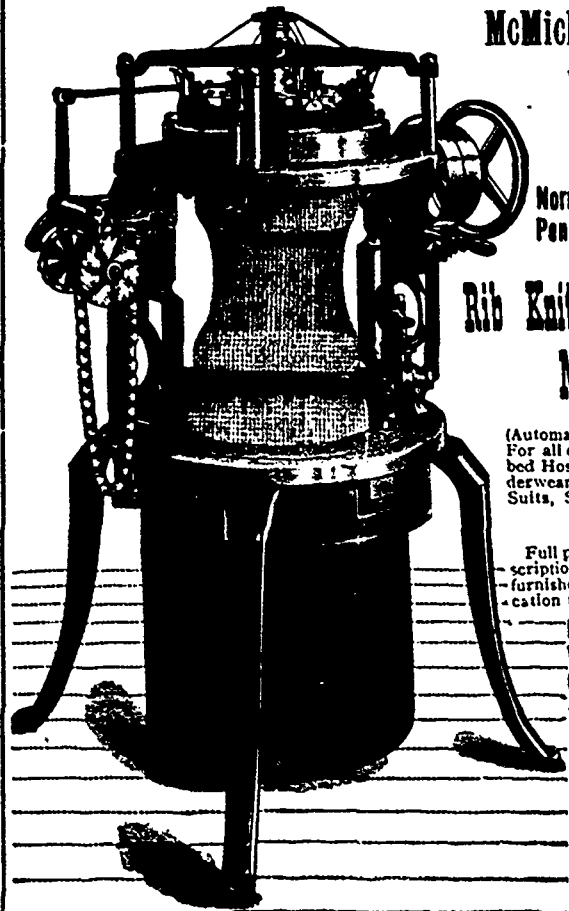
ARE COMBINED IN THE

Picking 
Machinery

BUILT BY

The A. T. ATHERTON MACHINE CO.
PAWTUCKET, R. I.

We can improve your work and save you money.
Correspondence solicited.



**McMichael &
Wildman
Mfg. Co.**
Norristown,
Penn.

**Rib Knitting
Machinery**

(Automatic and Plain).
For all classes of Rib-
bed Hosiery and Under-
wear, Combination
Suits, Sweaters, etc

Full particulars, de-
scription and samples
furnished upon appli-
cation to the

**McMichael &
Wildman Mfg
Co.**
Norristown,
Penn.

Established
reputation
for
Largest
Production.
Best Quality
Fabric.
Durability.
Economy
of
Operation

ROTHSCHILD BROS. & CO.
Manufacturers, Manufacturers' Agents
and Importers
BUTTONS.

Sole Agents for the
American Continent



Sole Agents for the
American Continent

Offices—466 & 468 Broadway, N.Y.
28 Rue de la Victoire, Paris, France.
11 & 14 Front St. East, Toronto.

John D. Lewis,
Importer and Manufacturer of
Dyestuffs, Dyewoods, Chemicals and
DIYWOOD EXTRACTS
3 & 4 Exchange Place, PROVIDENCE, R.I.
Mills: Charles and Bark Streets.

CHAS. F. TAYLOR

Successor to Burgess Cop Tube Co.

Manufacturer of
PATENT MACHINE

PAPER

COP TUBES

48 Custom House St
PROVIDENCE, R. I.
U. S. A.

JUST ISSUED

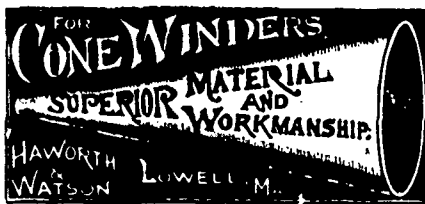
THE BOER WAR

Its Causes, and Its Interest
to Canada.

A History of South African Colonization,
with a Statement of the Grievances
of the Uitlanders.

Also miscellaneous statistics of South Africa
and a glossary of Cape Dutch and Kafir
terms used during the war. Forty pages.
Price, 10 cents.

BIGGAR, SAMUEL & CO., Publishers,
Toronto and Montreal



Established 1848.
A. EICKHOFF
(A. KRAMER, Proprietor)
Manufacturer and Dealer in
Hatters', Furriers', Tailors',
Glovers' and Shirt Cutters'
KNIVES AND SCISSORS.
Knives for all kinds of business always on hand and
warranted. All kinds of Cutlery ground
and repaired.
No. 381 BROOME STREET,
Between Broadway and Bowery,
NEW YORK CITY

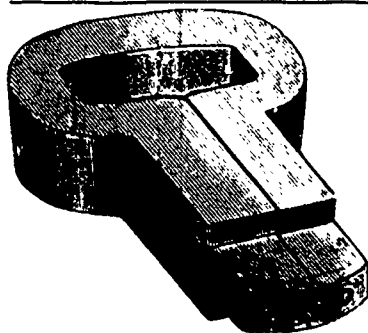
ELLIOT ———— Send for
Circular.
Cloth Folder and Measurer
For Cotton and Gingham Mills, Bleacheries,
Print Works, etc.
Manufactured by **Elliot & Hall, Worcester, Mass.**

WILLIAM CRABB & CO.

Manufacturers of all kinds of

**Hackle, Gill, Comb and Card Pins, Picker Teeth, Needle
Pointed Card Clothing in Wood and Leather for
Flax, Jute, Tow, etc.**

Hackles, Gills and Wool Combs made and repaired; also Rope Makers' Pins, Picker Pins, Special
Springs, Loom and Shuttle Springs, English Cast-Steel Wire, Cotton Binding and General Mill Furnishings.
Bloomfield Avenue and Morris Canal, NEWARK, N. J.



JOHN W. BARLOW

Manufacturer of

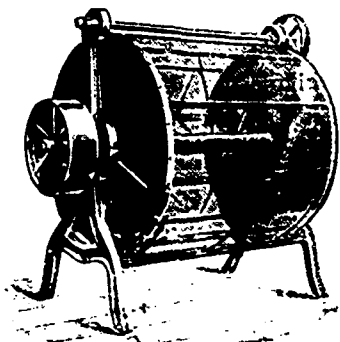
LOOM PICKERS,

LAWRENCE, MASS.

This cut represents Barlow's Pat. Bow Picker,
with solid interlocking foot. Pat. Feb. 26, 1889.

PATENT WASTE CLEANER

For Cleaning Woollen Card-Waste.



Does not Damage the Staple
Loses Nothing but the Dirt!

Over 500 a' Work.

Price £25 packed at Liverpool.
Space occupied 4 ft. 6 in. x 3 ft.
Power required 1/2 H.P.
Production 1000 lbs. per day.
Weight packed, 14 cwts

HENRY ISITT,
BRADFORD, ENGLAND.

DICK, RIDOUT & CO'Y

Office—69 Bay Street,
TORONTO.

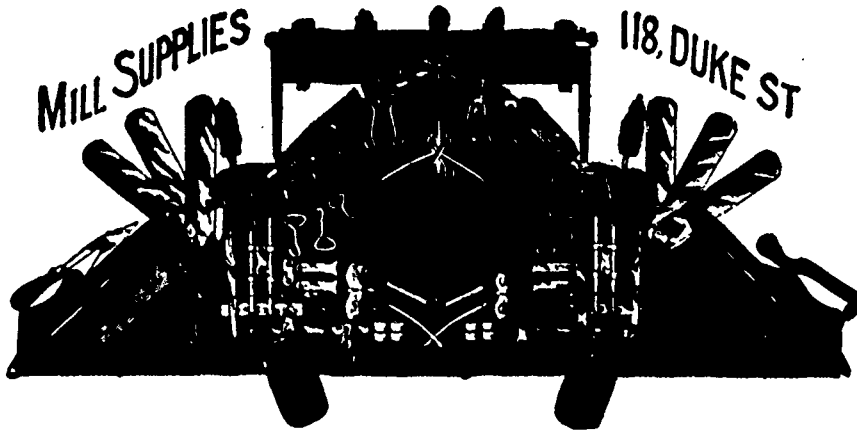
Works,
Cobourg & Winnipeg

Manufacturers of

Jute and Cotton Bags
Hessians, Starched and Dyed Jute Canvas.
Jute Binder Twine, Horse Blankets, Etc.
WOOLEN GOODS, TWEEDS, Etc.

Agents for **LOUIS BEHRENS & SONS,** Manchester, England,
Velveteens, Velvetas, Furniture Coverings.

GEORGE REID & COMPANY



MILLS FOR SALE

BEAM WARPS

Sole Agents for HAMILTON COTTON CO.

Card Clothing We are Sole Agents for Messrs. Samuel Law & Sons, Cleckheaton, Eng., and have always a large stock on hand.

WOOLEN MACHINERY—Cards, Mules, Looms, Pickers, etc. All kinds for sale.

WOOLEN MILL SUPPLIES—Every description kept in stock.

WOOL—Sole Agents for FRANCIS WILLEY & CO., Bradford, Eng. A large stock always on hand.

G. B. FRASER,

**3 Wellington Street East
TORONTO**

REPRESENTING

Miller Bros. & Co., Montreal; Paper and Celluloid Collars, Cuffs and Shirt Bosoms.

W. D. VanEgmond, Seaforth Woolen Mill; Etoffes, Friezes and Tweeds.

I. A. Teskey, Appleton, Ont., Fine Tweeds and Cassimeres.

D. Fisher, Paisley, Ont., Etoffes and Tweeds.

John J. Ashley & Co., Bradford, Eng., Dress Goods and Worsteds.

Horner, Dettermann & Co., Barmen, Germany Buttons, etc.

S. W. Whitham, Leeds, Eng., Woolens.

Merrimack Print Mfg. Co., Lowell, Mass.

Burton Bros. & Co., New York; Linings, &c.

H. T. Lamkin & Co., Cotton Brokers, Vicksburg Mississippi Long Staple Cotton a specialty.

COP TUBES
Cones and Shells
WORSTED TUBES
Conical Tubes
MAILING TUBES
Haworth & Watson, LOWELL, MASS.

ESTABLISHED 1865

GEORGE W. PAYNE & CO.

PAWTUCKET, R. I.

Builders of the

PAYNE & MATHEWSON



PATENT UPRIGHT CONE WINDERS

For Hosiery purposes,

Winding from Cop, Skein or Bobbin

SKEIN SPOOLER

with adjustable skein holders for cotton wool and worsted. Upright Quillers, quills from cop, skein or bobbin, Ring Dresser, Spooler and Reel Spindles, Cop Skeiners, Warp Spools, Spooler Guides, Bolsters and Steps made and repaired at short notice.

DEROCHIE BROTHERS, Cornwall Ont.

We build

NAPPING MACHINES

up to 80 inches wide, to nap one or two pieces in width. The machine naps cotton or woolen goods; can either furnish folders or winding attachments; this machine is so arranged that the changing of small gears changes the nap on cloth that is needed. The main shaft is 3 1/2 in. in diameter. All Roller Bearings are bronze and self-oiling. All Rolls are made of hydraulic piping—and every part of the machine is first-class in every respect.

Some of the machines are running at Canada Mills, Cornwall; Montreal Cotton Co's Mills, Valleyfield; Wm. Parks & Sons, St. Johns; Dominion Cotton Mills, Halifax.



The
UNDERWOOD

Visible writing start to finish—tabulating attachments for invoicing, billing, etc. No extra cost, easy touch, rapid action, handsome designs—

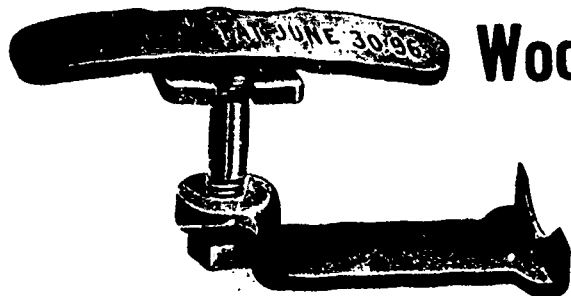
fully guaranteed.

All other makes, new and second-hand, at reduced prices.

GREELMAN BROS. TYPEWRITER CO.

15 Adelaide Street East, TORONTO

JOHN SHAMBOW, Treasurer.



Woonsocket Reed & Shuttle Works

WOONSOCKET, RHODE ISLAND.

Makers
of
Every
Description
of



Power Loom Shuttles

G. Root & Company

Wool and Noil Merchants
Combers
and Top Makers

Cable Address—
Roots,
Bradford.

BRADFORD, ENG.

**Australian, Cape and
B. A. Wools
Tops, Noils, Wastes**

AGENT:

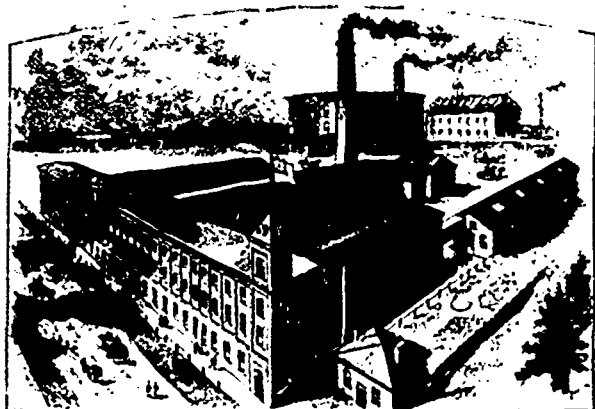
R. S. FRASER

17 LEMOINE ST., MONTREAL

Hamilton Cotton Co., Hamilton

MANUFACTURERS OF

White and Colored Yarns, Single or Double, Hosiery Yarns
of all descriptions, Warps, Twines, white or colored.
Webbings & Bindings in great variety, Lampwicks, etc



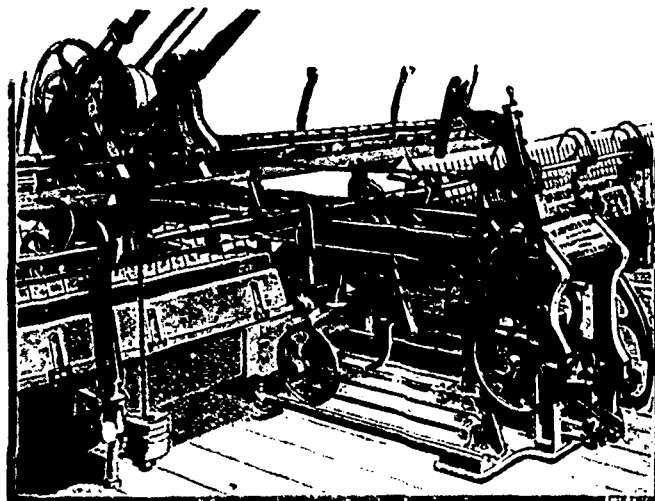
SELLING AGENTS:

WM. B. STEWART, 18 Front St. East, Toronto.

Agent for Warps: GEO. REID, 115 Duke Street, TORONTO

WILLIAM WHITELEY & SONS, Limited

LOCKWOOD, HUDDERSFIELD, ENGLAND.



Winding Machinery, Improved Self-Acting Mule, Suspended
Steam Driven Centrifugal Hydro-Extractor, Tentoring and
Drying Machines, Patent Wool and Cotton Dryer, Patent Wool
Scouring Machine, Cross Raising Machine, Patent Crabbing and
Winding-on Machine, Warp Sizing, Cool Air Drying and Beam-
ing Machine, and other Woolen Machinery.

CATALOGUE ON APPLICATION

SHAW BROTHERS, - Agents

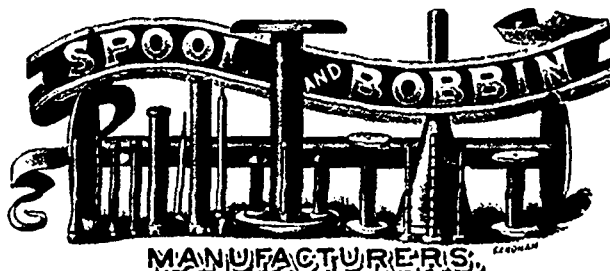
164 McGill Street, - Montreal.

THOMAS KER

J. HARCOURT

KER & HARCOURT,

ESTABLISHED 1857



MANUFACTURERS.

Orders by Mail
will be prompt

Parry Sound, Ont.

THORNTON BROTHERS, LIMITED,

CLECKHEATON (ENGLAND).

Makers of **WOOLLEN MACHINERY.**

Shake Willeys, Teazers or Tenterhook Willeys, Hopper Feeds, Single and Double Carding Engines, Blamire and Scotch Feeds, Self-acting Mules, Woollen Looms, &c.

Correspondence through our Sole Agent for Canada:

MR. HENRY ISITT, BRADFORD (ENGLAND).

Dominion Oil Cloth Co'y,

MANUFACTURERS OF

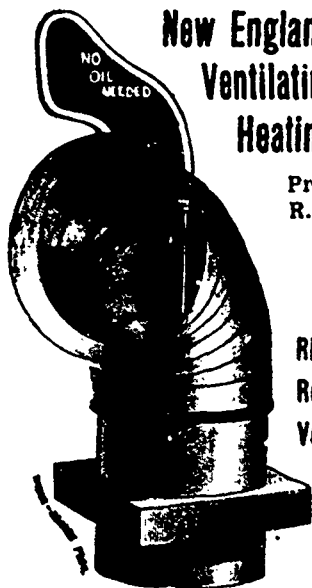
Oil-Cloths

of every description

Floor Oil-Cloth, Table Oil Cloth, Carriage Oil Cloth, Enamelled Oil Cloth, Stair Oil Cloth, etc.

Office and Works

Corner St Catherine and Parthenais Sts., MONTREAL, QUE



New England Ventilating and Heating Co'y.

Providence, R. I.

Manufacturers of

Richardson's Revolving Ventilator

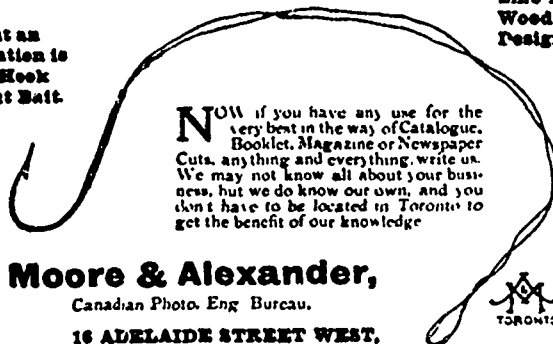
For use where power is not available

This Ventilator is balanced, has ball bearings and revolves with the least perceptible current of air, having no obstruction to its outlet, and never fails to give satisfaction. Specially adapted for Mills, Dye Houses, Workshops. They are so compact that any carpenter can erect them.

OFFICE AND WORKS

926, 928 & 930 Manton Avenue

An Ad. Without an Illustration is Like a Hook Without Bait.



NOW if you have any use for the very best in the way of Catalogue, Booklet, Magazine or Newspaper Cuts, anything and everything, write us. We may not know all about your business, but we do know our own, and you don't have to be located in Toronto to get the benefit of our knowledge

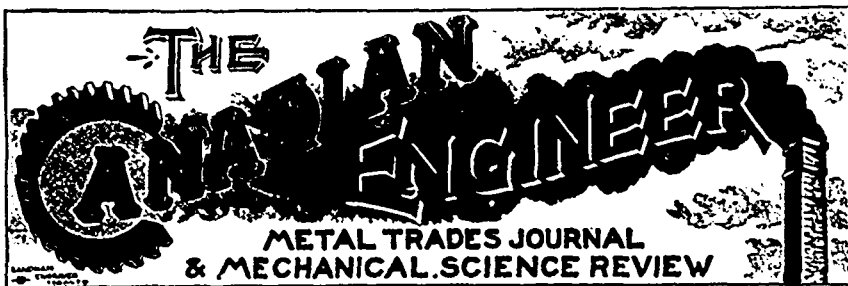
Moore & Alexander,
Canadian Photo. Eng. Bureau.
16 ADELAIDE STREET WEST,
TORONTO, CAN.

Half-Tone
Zinc Etching
Wood Engraving
Designing

MERIT ALONE WON'T BRING BUSINESS



We have learned this by experience.



METAL TRADES JOURNAL & MECHANICAL SCIENCE REVIEW

ISSUED MONTHLY IN THE INTERESTS OF THE

CIVIL, MECHANICAL, ELECTRICAL, LOCOMOTIVE, STATIONARY, MARINE, MINING, AND SANITARY ENGINEER; THE MACHINIST AND FOUNDER, THE MANUFACTURER AND CONTRACTOR. SUBSCRIPTION, \$1 - - A YEAR - -

The increase in its circulation is remarkable, as is shown by detailed statement confirmed by the affidavit of A W Law, Secretary of The Monetary Times Printing Co., our printing contractors. This statement shows that the number of copies printed and mailed increased from 2,000 per issue in May, 1895, to 4,600 in November, 1897. The CANADIAN ENGINEER stands to-day unrivalled among Canadian trade papers for the wide distribution and character of its circulation.

Departments devoted to Civil Engineering, Surveying and Mining, to Mechanical, Electrical, Locomotive, Stationary, Marine and Sanitary Engineering. Sample copies sent free to intending subscribers. Advertising rates on application.

BIGGAR, SAMUEL & CO., Publishers
FRASER BUILDING, MONTREAL,
Or 62 Church Street, - - - - - TORONTO

Established 1835.

41 Highest Awards.

Wilson Brothers Bobbin Co., Limited

Telegrams "Wilson, Cornholme"
A.B.C. and A1 Codes used.

BOBBINS & SHUTTLES

POSTAL ADDRESS:

Cornholme Mills, **ALSO** Atlas Works,
Todmorden, **Liverpool.**

OFFICE

14 Market Place, - - - Manchester.

The best results in
Card Grinding
are obtained by using  TRADE MARK

**DRONSFIELDS' PATENT
D-GROOVED EMERY FILLETING**
SPECIALITIES; MACHINES FOR GRINDING CARDS
MACHINES FOR COVERING ROLLERS WITH LEATHER

DRONSFIELD BROS. LTD.
Atlas Works, **OLDHAM, England.**

JOHN GOOD & JENNINGS PATENT CORDAGE MACHINE CO.

MANUFACTURERS OF

New
Patented and
Improved

Cordage Machinery

ALSO OF **BINDER TWINE and ROPE**

NOTE—This corporation is not the "John Good
Cordage and Machine Co." which is now
in liquidation under receiver.

299 to 305 Park Ave., Brooklyn, N.Y.

TEXTILE MACHINERY (New and Second Hand) **CARD CLOTHING** **TETLOW'S**
Stock in Canada



English Sales Attended.

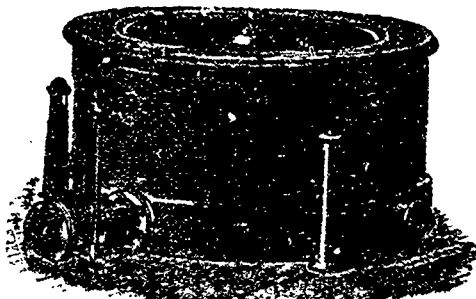
Condenser Aprons Buffed Surfaces
Plain & Grooved

Oak-Tanned and White Belting
Cotton Banding, Rim Spindle and Braided
Shuttles, Pickers, Heddles, Harness
Patent Frames, GENERAL FURNISHINGS

ROBT. S. FRASER

17 LEMOINE ST., MONTREAL

BROADBENT'S HYDRO EXTRACTORS



Direct Steam Driven. No Shafts or Belting required.
Suspended on Links and requiring no Foundation.

Adapted for **Manufactories, Dyehouses, Laundries,**
Chemical Works, Sugar Refineries, etc., etc.

—SEND FOR CATALOGUE—

Thomas Broadbent & Sons, Limited

CENTRAL IRON WORKS

HUDDERSFIELD, - - - ENGLAND

Telegrams: "BROADBENT, HUDDERSFIELD."

Agents for Canada: - - **SHAW BROTHERS, 164 McGill Street, Montreal.**

SEND FOR CURRENT PRICES OF LEATHER BELTING.

THE J. C. McLAREN BELTING CO.

Factory—Montreal. Toronto. Vancouver.

SAMUEL LAWSON & SONS, LEEDS, England

—MAKERS OF—

Machinery for Preparing and Spinning
Flax, Tow, Hemp and Jute

Special Machinery for the Manufacture of Binder and Ordinary Twines

Good's Patent Combined Hacking
and Spreading Machine

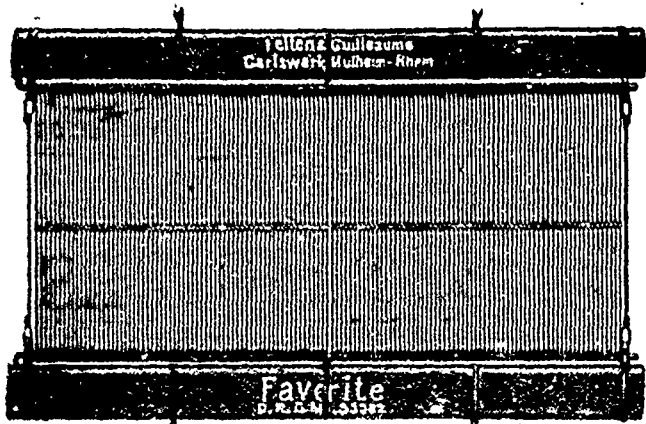
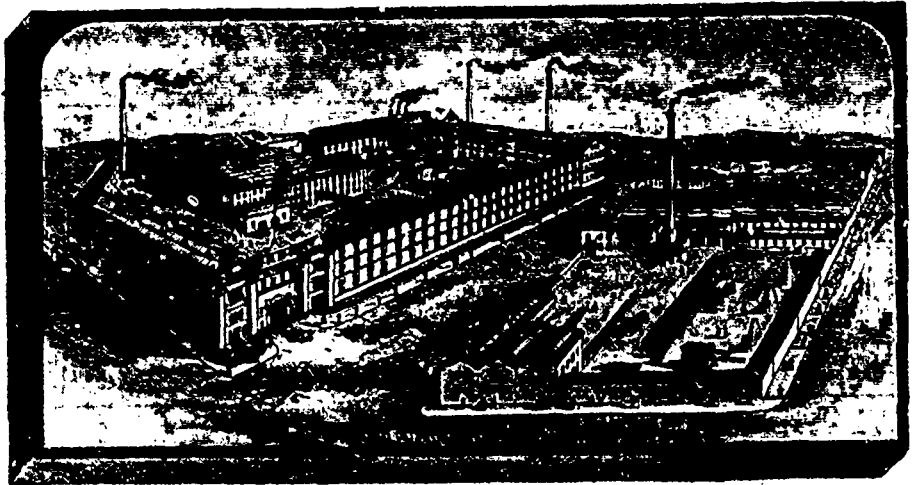
Patent Automatic Spinning Frames
Improved Laying Machines

and other special machinery for the
manufacture of Rope Yarns.

ALSO OF

Brownell's Patent Twisting and Laying
Machines for Twines

Council Medal, London, 1851; Grand Medal,
Paris, 1867; Prize Medal, Moscow, 1872; Diploma
of Honor, Vienna, 1873; Highest Award, Phila-
delphia, 1876; Gold Medal, Paris, 1877; Highest
Award (Medal), Melbourne, 1880.



Felten & Guilleaume,

MULHEIM-ON-RHINE, GERMANY

Manufacturers of

Tinned Cast Steel Wire Heddles

made on Patent Automatic Machines and consequently perfectly uniform in every respect. The Lightest, Exactest and most Uniform Wire Heddles ever made, not surpassed by any other Wire Heddles in the market.

Patent "Favorite" Shafts for Weaving

give, combined with above Heddles, the best, most Reliable and most Durable Harness, either made with one or two carrying wires inside the wooden frame. These shafts have already been adopted by a great number of weavers, who speak most favorably of them, as can be seen from many testimonials in the possession of the makers. For Prices apply to

L. S. WATSON MANUFACTURING CO., Leicester, Mass.

L. S. WATSON MANUFACTURING CO. LEICESTER, MASS.

Manufacturers of WATSON'S PATENT MACHINE WIRE HEDDLES

Guaranteed to be perfectly adapted to weaving all kinds of Woolen, Cotton and Worsted Fabrics, Fancy Cotton, etc., etc. Superior Harness Frames furnished promptly. Also Hand Cards of every description.