

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.

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

Additional comments: /
Commentaires supplémentaires:

Pagination is as follows: 1-2, 235-258, 3-12.

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

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
								✓			

CANADIAN Journal of Fabrics

THE JOURNAL OF THE
Textile Trades of Canada.

Vol. XXI.

TORONTO AND MONTREAL, NOVEMBER, 1904.

No. 11.

WILSON, PATERSON & Co.

Board of Trade Bldg., Montreal,
REPRESENTING IN CANADA

The United Alkali Company of England.



OFFER TO THE TRADE.

Caustic Soda, 50° to 78°, Caustic Potash, Salt Cake, Salsoda,
Soda Ash (Ammonia and Leblanc processes).—Chlorate of Soda,
Chlorate of Potash, Hypsulphite of Soda (Curlew Brand),
Chloride of Calcium, Bichromate of Soda, Richromate of Potash
etc., etc.

McARTHUR, CORNEILLE & CO.

Importers and
Manufacturers of

OILS
CHEMICALS
and **DYE**
STUFFS

310 to 316 St. Paul St.

MONTREAL

ANILINES ALIZARINES

DOMINION DYEWOOD & CHEMICAL CO.
TORONTO

Direct Importers. Sole Agents in Canada for

Messrs. The FARBENFABRIKEN Vormals FRIEDR BAYER
& CO., Elberfeld, Germany.

WATSON JACK & COMPANY, MONTREAL.

ANILINES and DYESTUFFS.

Chrome Acid Colors.

Excellent on Yarn or Pieces

Send for dyed Samples illustrating their
great utility.

AMERICAN 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.

CASSELLA COLOR COMPANY.

(American Branch of
Leopold Cassella & Co.)

Dye Stuffs

NEW YORK, 182-184 Front Street.

BOSTON, 68 Essex Street.

PHILADELPHIA, 126-128 South Front Street

PROVIDENCE, 64 Exchange Place.

ATLANTA, 47 North Pryor Street.

MONTREAL, 88-88 Youville Square.

W. T. BENSON & CO.

ANILINE COLOURS
DYEWOOD EXTRACTS
CHEMICALS, & c., & c.

Specialties:

Logwood for Cotton and Wool.

Fast Onedip Cotton Dyes.

Alizarines & Azo-Alizarines.

164 St. James St., Montreal

DILLON DYESTUFFS & CHEMICAL CO.

206 Coristine Buildings, MONTREAL.

SOLE DEPOT IN CANADA FOR THE

"ALLIGATOR" BRAND of Logwood Extracts

of the West Indies Chemical Works Limited.

Sole Agents in Canada for

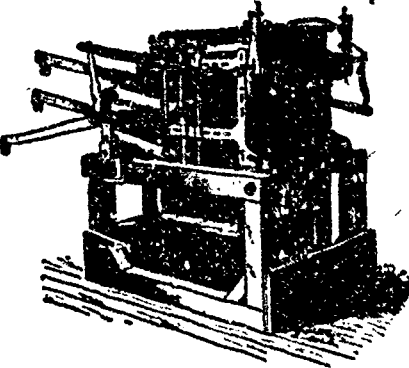
Kuttroff, Pickhardt & Co.,

ANILINES, ALIZARINES, INDIGO, ETC

USE THE
"Halton"
 Jacquard

BEST MACHINE ON THE MARKET

Single Lifts
 Double Lifts
 Rise and Falls
 Double 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
 CATALOGUE UPON REQUEST.

LUCIEN MARCAN'S Successors
BRADFORD (England.)

Exporters of Wool Tops, Nails, Rags, Shoddies, Silk, Mohair, Camel Hair Nails, and all Specialities in Raw Materials required by Cloth, Hosiery, Blanket, Carpet and Felt Manufacturers.

An enquiry will cost you two cents and two minutes' time. If you will favor us with the same we shall be glad to send you samples of any raw material which you may require—quoted at lowest prices, delivered at your station, duty and other charges paid.

CABLES—"LUCIEN, BRADFORD."

CODES—A. B. C. 4th and 6th Editions and Private Code.

IRA ICKRINCILL & CO., Ltd., Top Makers and Spinners of all kinds of Worsted Coating, Mohair Camel Alpaca, Fancy Loop, Genapp, Spiral, Hosiery and Carpet Yarns.

KEIGHLEY and BRADFORD.

AGENTS FOR CANADA: LUCIEN MARCAN'S SUCCRS., BRADFORD.

Railway Engineering

A Hand-Book of Railway Engineering,
 ing, By Cecil B. Smith, C.E.

PRICE, **Biggar-Samuel, Ltd.,**
\$1.50. 18 Court Street. - TORONTO.

GARLAND MFG. CO.,

SACO, MAINE.

(Formerly Loom Picker Co., Biddeford, Maine).
 H. P. GARLAND, Treasurer.

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.

PEROXIDE OF SODIUM BLEACHES

**"White
 Without
 Weakening"**

THE ROESSLER & HASSLACHER
 CHEMICAL CO. 100 WILLIAM ST. NEW YORK.

Machinery For Sale

**CORNWALL
 WOOLEN MILLS**

IN LOTS TO SUIT PURCHASERS.

APPLY TO

MR. ROBT. S. FRASER, Montreal, or
 MR. S. GREENWOOD, Canadian Colored Cotton Co.,
 Cornwall.

**Mechanical Draft Apparatus.
 Heaters and Fans.
 Blowers and Exhausters.**

Drying Apparatus for all Textile Materials.
 Heating and Ventilating for Mills and Factories.

For Catalogues and Prices write—

SHELDON & SHELDON,
 GALT, Ontario, Canada.

Formerly McEachren Heating & Ventilating Co.

THE JOURNAL OF FABRICS

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XXI.

TORONTO AND MONTREAL, NOVEMBER, 1904.

No. 11.

Canadian Journal of Fabrics

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

Subscription: Canada, United States and Great Britain, \$1.00 per year Foreign, 5/. Advertising rates on application.

Offices: 18 Court St., cor. Church, Toronto, and the Fraser Building, Montreal

BIGGAR-SAMUEL, LIMITED, Publishers

TRAVELLING REPRESENTATIVE: A. W. SMITH.

Toronto Telephone, Main 4310 | Montreal Telephone, Main 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 1st of each month to ensure insertion.

CONTENTS OF THIS NUMBER

Page	Page		
Among the Mills	239	International Wool Trade.....	246
Artificial Cotton in France	251	Loom, A New German	251
British Textile Centres	257	Manchester Man, A Chat with a.....	237
British Wool and Textile Markets.....	244	Maritime Trade	251
Canada Woolen Mills Case	235, 252	Peroxide Bleaching	248
Crompton-Thayer Fancy Worsted Loom.....	248	Personal	239
Edmonton Woolen Mills	238	Prizes for Improvements in Textile Industries.....	240
Elections, After	236	Platt Bros. & Co. at St. Louis.....	244
Electricity in Textile Mills.....	240	Shuttle Check, New.....	249
Erythroscopie, A Simple Form of.....	249	South African Wool	237
Fabric Items	237	U. S. Hosiery in Chemnitz.....	241
Feed for Woolen Cards, New.....	245	Weaving, Practical Details of.....	243
India, Mill Life in.....	246	Wool Markets	238

THE CANADA WOOLEN MILLS CASE.

No more important case affecting the textile trades has ever come before the courts in Canada than that of the Canada Woolen Mills, Ltd., the recent sale of which is now in question. Because of its importance the Journal of Fabrics has given a good deal of space in this and last issue to the report of the decision of the official referee who made the sale, and to the decision of the Judge who upset that sale. No doubt the referee in selling the mills to Mr. Long, acted, according to his belief, in the best interests of the estate. The unsatisfactory bids that had been made up to the 15th September, and the risks and loss that so often occur through allowing the affairs of an insolvent estate to drag along unsettled, made the offer of Mr. Long appear to be the best practical way out of the difficulty. The Winding Up Act, however, prescribes a certain course which was not followed, and the omission of notice to smaller creditors was a serious one.

To some of these minor creditors their small loss signified as much as the larger amounts did to the heavier but wealthier creditors, and justice required a notice to all alike.

It appears also that under the Winding Up Act the inspectors, the liquidator and the referee are regarded as a sort of committee of control of an estate, and that the liquidator and not the court is the executive officer of this committee. The evidence in the case showed that the consent of this officer was not obtained to the sale; in fact he declares he was opposed to Mr. Long's offer as inadequate.

Apart from the point that it would be to the advantage of the creditors if the best offer available were accepted, it appears by Judge MacMahon's decision and the very able argument of Mr. Blake, that the principle that persons holding a position of trust in an estate, and to whom the creditors look as a counsellor and protector of their interests should not derive personal advantage by that relationship to the possible detriment of others, is a principle which the law in Great Britain and this country holds to strongly. It is the law of trust applied to insolvency. On this ground largely the decision of Judge MacMahon was based.

The difficulty now is that while these legal proceedings are going on—for an appeal against Judge MacMahon's decision is contemplated in the latest legal move at Osgoode Hall—the properties of the company are depreciating in value while the costs which ultimately have to come out of the creditors are being piled up. As broad-minded and practical business men, which Mr. Long and Mr. Benson are, it would seem that these gentlemen ought to get together to effect a settlement. "Agree with thine adversary quickly while thou art in the way with him," is a motto which if applied would lead to a settlement consoling not only to the creditors but to the trade in general. This ought not to be difficult considering that in reality Messrs. Long and Benson are not "adversaries," but personal friends, and are only now on opposite sides through a series of misunderstandings which can surely be removed at the present point of procedure.

All laws are presumed to be based on equity, and this is another way of saying that at the base of all law, as it affects the individual, is the golden rule, "Do unto others as ye would that they should do unto

you." The trust law in particular binds one by the code of honor as well as by the sense of fair play. Webster defines the word Trust primarily as the "assured resting of the mind on the integrity, veracity, justice, friendship, or other sound principle, of another person," and a trust in law as "an estate devised or granted in confidence that the devisee or grantee shall convey it, or dispose of the profits, at the will or for the benefit, of another." The inspectors and the liquidator together, of the Canada Woollen Mills, Ltd., were in the position of trustees. This appeared to be admitted on all hands. But while the position of Mr. Long has been called in question in the case, little has been said of the position of the bank connected with the case. If Mr. Long is precluded by his relationship of trustee from participating in the affairs of the estate in his own personal behalf how does the bank stand when the spirit of the law is invoked? W. D. Matthews, the vice-president of the Dominion Bank was a director of the woolen mills company, while W. R. Brock, another director of the bank was president of the company. Mr. Matthews representing the bank was himself an inspector, the same as Mr. Long. How then can the bank influence the affairs of the insolvent company without violating the spirit, if not the letter, of the law. At the meeting of the 22nd September, the bank's legal representative advocated the acceptance of Mr. Long's offer of \$253,000, but at a meeting of the inspectors held since Judge MacMahon's decision, at which the bank was represented, it opposed Mr. Benson's offer of \$275,000. The question is not here raised as to why it should refuse an offer \$22,000 better than the one whose acceptance it favored, but rather the broader question why its influence or opinions should be brought to bear on the trustees at all. The bank is perhaps within its legal rights, and no reflections should be made upon the good intentions of Mr. Matthews personally; but whatever the merely legal position of the bank, its moral position would appear to the ordinary lay mind to be on the same plane as that of Mr. Long or Mr. Benson, or any other inspector whom the law forbids to interfere with the estate for its own purposes.

AFTER THE ELECTIONS.

The elections in Canada, the United States and Newfoundland have all been held within the past three weeks, and in each case the result has been no surprise. It is safe to say that if all the electors of Canada had been directly engaged in the woolen manufacturing business there would have been a shock to the party in power at Ottawa. Or, what is more probable, there would have been a pre-election consultation and the woolen tariff would have been readjusted with such effect that a score of new mills would now be planned or in course of erection to take care of the orders in woolens that are now going to manufacturers abroad. Unfortunately, the woolen in-

dustry, though very important, is not the greatest in the country, and, unfortunately, too, it is the sore industry now crippled by a policy over which the manufacturers and employees in other spheres of industry can wave the old flag and claim merit for a gift to the Mother Country that calls for no self-sacrifice on their part. The situation is truthfully described by Prof. Goldwin Smith in the last issue of the Weekly Sun: "It was not hard to foresee the result of the Dominion election. When there is no exciting issue, the odds are always in favor of the Ins, who have the patronage in their hands, and can hold out to venal interests hopes of Government expenditure. The Government also seems to have had a large election fund, the sources of which it is not difficult to guess. The railway sets all schemes at work. Wealth made by unjust taxation is used to make taxation still more unjust. Quebec has been true to her national Prime Minister. The minor Provinces had been secured in the usual way. The North-West has voted for the railroad, the new immigrants, moreover, being much under the influence of Government officials. Ontario holds out alone, the milch-cow, against the rest of the Confederation. The Machine, as might have been expected, has completely triumphed over free election. Not a single man apparently has been elected who will be a member of the Legislature, not of a caucus, and owe allegiance solely to the public good. On the whole, it may be said that we are just where we were before."

Woolen manufacturers who look for fair play to their business apart from their political leanings must feel that political vice is here "shown her own image" with terrible fidelity. As far as the practical effect of the recent tariff changes is concerned the woolen men must certainly confess that "we are just where we were before." The percentage of increase of the tariff on woolen goods while it amounts to something material on high priced goods, makes no essential difference in the price per yard of low grade goods, the Canadian makers of which have all along suffered most. Heavy importations go on as before. Only a specific duty could have met the case of the makers of cheap goods, and as has been said before, the fact of the recent change having been made in this form appears to be proof, not that the Finance Minister has been unwilling to bring about an honest solution of the difficulty, but that he has not really understood the situation. This seems a fair deduction when we recall the fact that the Finance Minister himself, when the closing down of various woolen mills was reported to him, attributed the action of the owners to bluff, or to their incompetency in the matter of machinery and management. Now that such assumptions have been shown, by the actual situation to-day, and the facts laid before him, to be unfounded, let us hope that the Government will yet repair the injury it has wrought to an industry that would under equitable treatment grow to be one of the most important in the country.

The statement was made in a semi-official way the other day that there would be no general revision

of the tariff at the coming session of Parliament. If that is the plan of the Government we will still hope that the readjustment of that which was done amiss at the last session will not be construed as a departure from the plan.

CHAT WITH A MANCHESTER MAN.

Among the passengers by the Allan liner Ionian was Arthur R. Scott, of 24 Market Place, Manchester, and a member of the Manchester Exchange and Chamber of Commerce.

Interviewed by a representative of the Journal of Fabrics, Mr. Scott said: "I came over partly on holiday—partly business—and, though as a member of the Geographical Society, I had, of course, some fair knowledge of the area of Canada—yet the trip up St. Lawrence river was a delightful surprise—to see the restful villages, neat and homelike, after we had visited the grand old citadel of warriors' memory at Quebec.

"Montreal was also a surprise in its numerous and well-fitted warehouses and well-equipped factories, the Colonial Dye and Print Works and town offices being especially up-to-date in their arrangements under the general manager, A. W. Cochrane, and his staff.

"The view from Mount Royal and the visit to Lachine water-power were of great interest, and the St. Lawrence river should help to immense developments of electrical driving and coal saving.

"A very wet day showed the city to need a lesson in paving the streets, which must lose thousands of dollars by extra wear and tear of horses, carriage wheels, and also to citizens' boots and garments getting bedraggled in the mud. Old Socrates would suggest that the Paving Committee be compelled to walk in processions on wet days 'until they mend their ways.'

"Ottawa is a credit to the Canadians, and its water-power a fund of wealth for all future time.

"Toronto is, however, a much finer city than any Britisher can suppose from mere reading, and its stores are a marvel, and almost equal Whiteley's in London.

"Hamilton, too, and its turbine steamer shows the go-ahead spirit of Canadians."

"Well, now, what about your own city, Mr. Scott, and cotton in Lancashire?"

"Well, we are all awake to the prevention of any more cotton corners by Sully & Co.

"Just before I left in September I had an interview with Sir Alfred Jones, and he requested me to secure an audience composed of Lancashire cotton spinners to buy up a small estate in Jamaica.

"Well, I gathered about a dozen good men to dinner; and after a two hours' description of the soil and climate, the planter proved that the original Sea Island cotton had its home in Jamaica. The land was bought—about 6,000 acres—with road, rail and river going through it, and a \$100,000 company floated."

"Is there any other similar land on offer?"

"Oh, yes; this is only a trial strip, and shows a handsome profit to the grower. One of my friends is now over there, and Sir Alfred Jones has given me an invitation to go out next year early. He will carry first 1,000 tons free of charge right up our Ship Canal to Manchester by Elder, Dempster steamers."

"What is the English opinion of Mr. Chamberlain's tariff schemes?"

"Well, people of weight and position have seen Mr. Chamberlain change his policy and his arithmetic so many times that they never feel sure what he will do or say within a change of the moon. His figure of ten millions for the cost of the Boer war damaged his fame as a financier, since it cost two hundred millions, and his unfulfilled promise of old age pensions has broken the faith of the working people. They will not consent to any taxation of food. They have already suffered the pinch of hunger too often to consent to dearer food. Dearer food would demand higher wages. This would result in advancing prices of textile cotton and woolsens, and out of £90,000,000 we export £70,000,000 abroad."

"What do you say to our 33 1/3 preferential tariff?"

"Well, we don't grasp the beneficial result so well as we should like to do"

"What do you propose?"

"Well, we allow all Canadian productions to come into Liverpool free, and we think you ought to allow our productions to come free through Montreal; and we find you protection by army and navy. Then Canada could put your 30 or 35 per cent. against any other nation's productions, such as France or Germany. This would be clearly understood in England as being really preferential."

The Loss of Life on Your Railways is Appalling.

"Your railway crossings are dangerous. We have passengers' footbridges at all main crossings."

"What else strikes you here?"

"Well, you all take life very sadly. Your young people deserve more gymnasiums and lads' clubs and girls' clubs. They seem to only have the streets to promenade in, and this we in England found to have an undesirable result; hence, we formed recreation grounds for summer and clubs for winter—healthy, moral amusements. Your Riverside Zoo is small but interesting, but requires shelters and some tea-rooms for young people.

"Your tram-car service is very immense, but twice as expensive as Manchester and Liverpool, where for one penny—two cents—we go two miles.

"I return by New York to enjoy an English Merry Christmas, and tell friends of the country and kindness of the commercial men of Canada, and I trust some good business will result as I am in touch with all the cream of Lancashire and Yorkshire manufacturers, and also with the large buyers of cheese, corn, and farm produce.

"When you come over I will show you the finest Corn Exchange in England. Thanks for your journal; it equals anything of its kind in England."

SOUTH AFRICAN WOOL.

The wool industry in South Africa is at present the object of much expert attention and not a little optimistic and equally reliable prediction. It is stated by those who have fully considered the question that the country has a great future before it in wool exporting alone, and general opinion endorses this assertion. The attention of farmers is being generally called to the fuller and more skilled exploitation of this most remunerative branch of their calling, and they are not slow in grasping the prospects thus opened up. South African wools have invariably held their own on the London market, the best qualities, indeed, having always met with an ample demand. Efforts are, therefore, being directed to improving the quality, as, apart from the

initial cost of assuring better animals, and assuring them adequate care, the cost of production between inferior and first qualities shows no increase. The experience of the past and, still more, the prospects of the future go to prove that sheep, properly tended, are the best stock for South African farms, and their wool the most valuable commodity. Particularly is this the case if quality as well as quantity is aimed at, for a good class of animal costs no more to keep than an inferior type, while the price received for its wool is infinitely more remunerative. It is essential, however, that the farmer should be enabled to get his sheep well and cheaply shorn; indeed, the lack of such facilities in the past has handicapped the industry, and manufacturers of suitable machines will find a large and growing market for their output. What is wanted is a cheap and efficient sheep-shearing machine, which has yet to become in any sense general in South Africa. Scouring plants to wash the wool are also wanted to properly prepare the fleece for the market. Home manufacturers of these descriptions of plant who are willing to secure for their goods the requisite publicity and representation will find a demand well worth the seeking, for no branch of agriculture is likely to show greater development than the wool industry.—South Africa, London.



EDMONTON WOOLEN MILLS.

The Edmonton Bulletin gives an enthusiastic account of the new woolen mill there, from which the following extracts are taken: A woolen mill at Edmonton seemed very much like a flight of fancy when it was first spoken of a few years ago, but to-day it is an accomplished fact, and blankets, both white and grey, flannels, tweeds, *etoffes*, friezes and other woolen goods are being turned out in large quantities of a quality and finish that leave nothing to be desired.

People both in the West and East are apt to look upon manufacturing in all its branches as an exclusively eastern industry. While the East certainly has many advantages in many lines, there are lines in which up to the point of supplying the local demand the West has a distinct advantage. Mr. Webster has demonstrated that in the manufacture of woolen goods, such as are in most demand here, and are produced from the wool of mutton sheep, the advantages of the West more than balance its disadvantages. Taking blankets as an example, the wool is produced here and large numbers of blankets are used here. It is said that 16,000 pairs were sold in Edmonton last year. If the wool grown here is made into blankets in the East it pays three cents a pound freight going east, and the blankets into which it is made pay an equal amount coming west. This makes a total of six cents a pound on the wool and the blankets in favor of the home factory. The mill can pay the farmer a little more for his wool than he could get for it if it had to be sold for export. It can sell him blankets and heavy woolen goods of undoubted quality at less money than he would have to pay for the imported article and still make a sufficient profit to stay in business. The extra cost of manufacturing at Edmonton is not so very much greater than in the East. Staple articles of food, such as flour, oatmeal, meat, vegetables, butter and eggs average cheaper here than there. Fuel is cheaper and clothing almost as cheap, groceries a little higher, but not very much. Cash is paid for wool or is taken in trade for cloth. Up to date this year (September), the mill has taken thirteen and one-half tons of wool, all of local production, but the supply is about exhausted, and some will have to be imported from the southern ranges to keep the mill going. The present price is 13c. for washed wool and 7 c. for unwashed. The mill is run by steam power and the machinery includes two carders, one finisher, two spinning

jacks, one washer, one fuller, two blanket looms, and one narrow loom. Thirteen hands are employed, and the output of the mill is sold to farmers in exchange for wool and wholesaled to merchants in Edmonton, Strathcona, and all the way down the line to Calgary. In connection with the woolen mill is a wood-working shop in which school desks, butter tubs, and cheap lines of furniture are made. The school desks are made of British Columbia fir, which finishes very handsomely, and the castings are supplied by the Edmonton Iron Works and the butter tubs are made of native spruce. Speaking of manufacturing in the West, Mr. Webster said there are three conditions of success; local supply of raw material, local demand for finished product, and the process of manufacture must be businesslike and economical. Under these conditions there is no reason why manufactures of many kinds might not be carried on successfully in the West if the necessary capital and enterprise were forthcoming.



FABRIC ITEMS.

The Star Shirt and Overall Co., Moses Fineberg, proprietor, of Montreal, has made an assignment on demand, with liabilities estimated at \$15,000.

In the decade ending with 1903, Canadian imports of United States cottons rose from \$1,992,680 to \$2,907,096, and Canadian imports of United States silk manufactures from \$72,297 to \$538,315.

J. A. Kimmerly, of Dresden, Ont., has disposed of his stock of boots and shoes, dry goods and furnishings to Mr. E. N. Smith, of that place, who was recently burned out. It is the latter's intention to add groceries.

The Montreal Clothing Co., Simon & Miller, proprietors, are seeking to compromise with creditors at 30 cents on the dollar. Some of the creditors have instituted criminal proceedings for alleged fraudulent secretion of assets.

Last year 10,000 sheep and lambs were shipped from the Manitoulin, and this year it is said the shipments will be in the vicinity of 15,000. There is no better place in all Canada than on the Manitoulin for the successful raising of sheep, and the farmers are appreciating this more year by year.—Manitoulin Expositor.

The N.W.M.P. department are investigating the advantages of asbestos as a material for the construction of portable buildings for outpost work. Asbestos, it is claimed, is both fire and water-proof. The Marine and Fisheries Department is also investigating asbestos as a possible material for the construction of movable lighthouses.

The Canadian Glove and Mitten Company, Limited, has been incorporated to manufacture, sell and deal in gloves, mittens, overalls and underwear. The provisional directors are Sherman McKenney, Angus McKay and John Alexander Neff. The capital of the company will be \$30,000, divided into 300 shares of \$100 each; the head office will be at Ingersoll.

A Dominion charter has been granted to the "Canada Flax Fibre Co." of Montreal, capital \$100,000. The incorporators are: T. H. Tombyll and R. N. Tombyll, manufacturers; James Walker, hardware merchant; George A. Childs, sales agent; J. H. Sherrard, manufacturer; S. P. Howard, freight agent; T. E. Howard, sales agent, and C. E. Scarff, druggist, all of Montreal, and George W. Fowler, barrister, of Sussex, N.B. The company has power to acquire plant and machinery for the treatment and manufacture of flax and its various products, woven or otherwise.

Arrangements have just been completed between Mr. E. B. Nash, president and manager of the E. B. Nash Co., Limited, dry goods and clothing, Winnipeg; Mr. Carson, of Pasadena, Cal., and Mr. Naylor, of Chatham, for forming a large company under the name of Nash, Carson, Naylor, Limited, which will take over the business of the E. B. Nash Co., Limited.

The Brantford Felt and Rubber Co. has been incorporated in that city with a capital of \$100,000 "to deal in and make all kinds of rubber, gutta percha, leather, felt, woolen, cotton and shoddy goods." The incorporators are: John F. Martin, insurance agent; John P. Bell, bank manager; Frederick W. Frank, accountant; Joseph H. Ham, manufacturer, and Robert E. Ryerson, fruit merchant, all of Brantford.

Aurele Rosther, proprietor of the Victoria Hotel, Quebec, and also interested in a tailoring establishment in Montreal, has assigned, with assets of \$124,500 and liabilities of \$73,624. The meeting of creditors is fixed for the 9th November. The principal Montreal creditors are Fitz-Gibbon & Schafheitlin & Co., \$21,112; Mark Fisher, Sons & Co., \$1,979; John P. Ellison, Sons & Co., \$1,286; the Gault Bros. Co., Limited, \$1,166; John McNee & Sons, \$400; J. Z. Rosther, \$250; Hudon, Herbert & Co. \$367.

The Standard Shirt Manufacturing Co. has been incorporated in Montreal under a Dominion charter with a capital of \$1,000,000. The incorporators are: David Yuile, manufacturer; Charles Blair Gordon, manufacturer; William Yuile King, cashier; James Roy Gordon, commission merchant; and Robert Andrew Dunton, notary, all of Montreal. The new company is to purchase the business formerly carried on by the Standard Shirt Co., and recently acquired from that company as a going concern by David Yuile and others. The firm will manufacture and deal in shirts, collars, haberdashers' supplies, men's, women's and children's clothing of every description.

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 short cut in "The Canadian Journal of Fabrics" by contributing occasionally such items as may come to your knowledge, and receive as dividend an improved paper.

J. F. Gordon, proprietor of the Athens Woolen Mill, has purchased the carding and spinning machinery of Westport Woolen Co., Westport, Ont., and has installed the same, thus increasing the output of his mill by a third.

The Simcoe Wool-Stock Company, of Simcoe, Ont., has doubled the size of its plant in the last year, having installed an up-to-date card room and picking rooms. The company has in the last few days started building an addition for new machinery.

The bleachery of the Drummond Cotton and Bleaching Co., Limited, at Drummondville, Que., is being pushed ahead, and it is expected that operations will commence early in the new year. The company will employ about 100 men at the start. They will restrict themselves to the higher grades of goods, such as lawns, cambrics, etc. The gray cloth will be imported from England.

Peter Ryan, of Toronto, is erecting a knitting mill at Toronto Junction. The building, which is to be a solid brick structure, 250 x 50 feet, is now in course of erection. Machinery of the latest design will be installed, and it is expected that operations will commence early in the year.

The town council has granted exemptions from all taxes, except local improvement and school taxes, for a period of ten years, and will supply water at cost. The mill will make knit goods, and will employ sixty hands.

The Perth Flax and Cordage Co., Limited, of Stratford, Ont., recently put in a complete plant for making all classes of jute, hemp and flax twines, polished, dyed and bleached, and now claim to have one of the most complete plants in the country for this purpose. They have up to the present year grown from two to three hundred acres of flax, but this season did not put in a crop. They make twines, thread, cordage and binder twine, and use considerable Canadian flax and tow in their mill for making coarse and fine commercial twines. The new manager is W. E. Holmes, who came recently from England.

The Chefoo election dispatch writer was in evidence in the textile trades. A meeting was held at Valleyfield on the 26th ult., at which five thousand people were reported to be present. The Chefoo dispatch writer said: "A feature in connection with the presence of Sir Wilfrid here was an announcement by the local manager of the Montreal Cotton Mills. Mr. Ward said that in view of the Government's promises to enquire into the condition of the cotton industry, it would not be advisable for them to oppose the Liberal candidate. He admitted that the present difficulty at the cotton mills at Valleyfield was not due to the Liberal policy." Now, Mr. Lacey is manager of the Montreal Cotton Co.'s Valleyfield mill, and he felt called upon to issue a contradiction of this story, and to explain that he had issued no instructions, nor even made a suggestion, as to how the employees of the mill should vote.

PERSONAL.

James Kendry, of the Auburn Woolen Mills, Peterboro', after serving the textile interests well in Parliament for several terms, was defeated in the recent election. His opponent won by a very narrow majority. T. B. Caldwell, elected for Lanark, appears to be the only woolen manufacturer now in the Dominion Parliament.

Many in the textile trades will regret to hear of the death of Feodor Boas, formerly head of the Granite Knitting Mills of St. Hyacinthe and the Pike River Knitting Mills at Stanbridge, Que., and also in the wholesale dry goods trade of Montreal, with a branch in Toronto during the eighties. Later on Mr. Boas acquired the woolen mill at St. Hyacinthe, and combined the three factories under the name of the Boas Manufacturing Co., with himself as president, and his brother, Moritz Boas, as vice-president and manager. The affairs of the company becoming somewhat involved, the business was taken over by New York parties who were financially interested, and became the Canadian Woolen Mills, Limited. Mr. Boas was a man of abounding energy, and was never afraid to tackle great enterprises. It was believed to be his courage and venturesome disposition that led to his business misfortunes in the woolen business. In addition to his textile interests he re-opened the slate quarries at Danville, Que. and promoted another company to mine and manufacture asbestos in the neighborhood of Danville. He put on the market a new product in the form of a wall plaster made from the refuse asbestos rock which was too short for fibre. This was ground up, and made a fire-proof plaster, to which he gave the name of asbestic. The business passed into other hands, but the product is still sold, and, we understand, has a

recognized place in the building trade. On quitting the dry goods trade Mr. Boas made over his agencies and connections to Hermann H. Wolff & Co., Montreal. He died in Edinburgh, Scotland.

PRIZES FOR IMPROVEMENTS IN THE TEXTILE INDUSTRIES.

We have previously commented on the encouragement given on the Continent to textile and other inventors, and have given, from time to time, lists of the prizes offered by the Industrial Societies at Mulhouse and Rouen. A selection of prizes was recently offered by the Industrial Society at Amiens, whose headquarters are at 29 Rue de Noyen in that city, and who certainly show great thought and much practical knowledge in the compilation of the list. Gold medals were offered for the best self-acting temple applicable to the manufacture of all kinds of cotton velvets; for the best means of preventing the weft from becoming stained before its insertion by the shuttle into the warp; for the best improvements in warp-sizing machines and in the jacquard mechanism, whether in connection with hand looms or power looms, for improvements in the automatic loom; for any material improvement in spinning or doubling machinery; for the invention of a new cloth (the value to be proved by the sale of a certain quantity); for the best product for giving lustre to woollen threads; for the introduction into the Department of the Somme of a new textile industry connected with spinning or weaving; for improvements in bleaching wool, silk, hemp, or jute; for a chemical composition which may be applied by means of printed characters to the headings of woollen or cotton pieces, and which shall be still visible after scouring and dyeing; for a means of embossing Utrecht or cotton velvet so as to withstand rubbing and water; for improvements in the machines and chemicals used in dyeing and lustring cotton velvets; and for a practical method of mercerizing yarns, cotton fabrics or mixtures, especially for cotton velvets. Silver medals were offered for a simple process for getting rid of mineral oil stains in the bleaching of cotton goods, and a good disinfectant for glue size and bone-glue which should arrest the fermentation of gelatines. Money prizes were offered for any improvement in loom parts or accessories; for improvements in knitting machines; and for improvements in the tools for cutting the pile on cotton velvets. The competition was open to everybody, whether French or not, but mechanical appliances must have worked for at least three months before the final date in some mill at Amiens or within sixty miles of that place. It is needless to comment on the impetus given to invention by these prizes, for not only are the competitors themselves affected, but the fact of having the appliances working in some local mill infects other people with the desire to improve something or other. In addition, the trial of these new mechanisms is an education to all who come in contact with them, and one of the surest means for dispelling old-fashioned ideas. It is needless, also, to comment on the advantage of having inventive talent directed in the right channel instead of being wasted on foolish and unpractical fancies.—Textile Manufacturer.

—Official returns to the Ontario Government show that on the 1st July, 1904, the number of sheep over one year old in the Province was 772,730, under one year 682,752, making a total of 1,455,482, as against 1,642,726 in 1903. The wool clip of 1904 was estimated at 4,972,042 pounds.

ELECTRICITY IN TEXTILE MILLS.

Charles Robbins, 5 Nassau Street, New York City.

The importance of constant speed in spinning and weaving is well known. Good work and a maximum production depend upon constant speed, and it is the universal opinion that should the smallest variation in speed take place in the engine or shafting it will seriously affect the operation of the spinning and weaving departments.

When the first alternating current generators, for use in connection with existing steam engines, were built and operated, it was found that a single machine would operate with entire satisfaction, when, however, it became necessary to operate two machines together for increased capacity, or in what is technically known as "in parallel," there developed conditions which caused a periodical transference of the load from one generator to the other. Electrically speaking, this is known as "hunting." After carefully investigating the causes which produced this result, it was found that the engines had a periodical variation in rotative speed during each cycle of operation. This trouble was due to the angularity of the connecting rod and to the extreme variation of torque upon the shaft at each piston stroke. This condition led to the study of the subject by engine builders so that at the present time they are able to furnish an engine for driving electric generators which do not vary more than 1-30 of a degree from absolutely uniform rotation, which engines are usually heavier and of a higher speed than found ordinarily in mill work. This "hunting" in a mill engine is similar to a sea-sawing process, a surging forward and backward, which is still further amplified by belting, and when transmitted to the spinning frame has a tendency to break the threads resulting in a decreased production of yarn.

It is evident, therefore, that an engine or turbine for operating an electric generator will furnish a more uniform and steadier speed than the regular mill engines, and if this uniform speed is available at the spinning frames and looms then an increased production with a more uniform quality of work must result. In so far as observation goes this is true. Electrically driven mills undoubtedly turn out more work and of a better quality than those driven by mechanical means.

The ideal power plant is one that is so laid out that each unit is working at its maximum efficiency at all times, requires a minimum amount of attendance, occupies the least possible space, and is at the same time of such a design that it may readily be extended and when so enlarged have any or all generating units supplying power to any and all points, irrespective of location of power, demand or distance. This condition is best met by electric transmissions.

If electricity is adopted as a method of transmitting power, the plant may be installed at the most convenient point, which may or may not be attached to the buildings or it may be placed any reasonable distance from the mill, thus permitting the mill to be located at a point which is most desirable on account of land, transportation, help, light, etc., whereas the power plant may be installed with a view to its location as a power generating station, irrespective of the point where the power is to be used, thus rendering available many water power developments which could not otherwise be used commercially.

The units used in an electric power plant may be installed of the right capacity to do the work in hand and all future extensions may be made when required without altering or in any way disturbing the original installation, and future additions will work together, each unit operating its share of the load.

*A paper read before the New England Cotton Manufacturers' Association.

in proportion to its capacity. Often this increase in units will not require an increase in attendance. If desired, the initial installation may consist of two units, each of sufficient capacity to normally carry from 70 to 75 per cent. of the total load at its most economical point of operation, and in the event of an accident to either of the prime movers the remaining one could by reason of its overload capacity carry the entire demand for power until such time as repairs were made on the damaged units.

The space required by the engine driven electric generator is but very little larger, in fact, usually no larger than a similar Corliss type of engine, and if the steam turbine is used, much smaller, and with the turbine the foundations will be considerably less than with the Corliss engine equipment. The necessity for belt towers, heavy main shafts and belts, and all of the details which go with a rigid belted system are avoided, as well as the loss of power consumed by these belts and shafts, permitting lighter walls and detail of building construction.

The enormous use of electricity as motive power in street railways, in industrial establishments of all kinds, and by electric lighting companies, demanded the most economical generation of power in the prime mover, and to-day engines and steam turbines are in operation using much less steam per horse-power than was considered possible a few years ago. Therefore it is fair to credit the use of electrical power with some of the great improvements now existing in steam apparatus.

Owing to the intimate relation existing between steam turbines and electrical distribution of power, it seems proper that we should discuss briefly this subject of steam turbines. The first commercial development of the steam turbine took place in England in 1884, by the Hon. Charles A. Parsons, and within four years turbines of an aggregate capacity of some 4,000-h.p. were in operation. Up to the present time, approximately, 200,000-h.p. are in operation throughout England. It was not until 1898 that the Parsons turbine was introduced in America by the Westinghouse Machine Company. An estimate which is conservative, places the combined use of turbine generators now installed at about 300,000-h.p., and on order one-half million horse-power additional.

The turbine development is by no means confined to a single company, it having been taken up in this country by several manufacturers, two of which were organized to manufacture steam turbines only and the other companies have been manufacturing steam engines. It will, therefore, be seen that the engine builders realized the rapidly increasing demand for steam turbines which in the end will materially affect their production of reciprocating engines, and for this reason are taking up this form of prime mover.

The general principles of steam turbines are undoubtedly well known to the members of this organization and for this reason we will not dwell upon the details of construction.

The partial success of the steam turbine as a power generating device lies in its extreme simplicity, it having a rotary motion without reciprocating parts, and owing to the high speed at which the turbines run, the moving elements are much lighter than those existing in steam engines of equivalent capacity.

An important detail in connection with the turbine is that no internal lubrication is required, consequently the condensed water may be returned directly to the boiler; thus, the cost of feed-water and the necessity for a purifying process is eliminated. It follows, therefore, that considerable saving in operating expenses is made as well as the item of cylinder oil, while the cost of bearing oil is really insignificant.

In a particular instance on which data have been obtained, after several years of operation, the cost of oil for a 600-h.p.

turbine is approximately five cents per day of twenty-four hours, which, we believe, is hardly ten per cent. of that usually required by a reciprocating engine of equivalent capacity.

The space occupied by the horizontal type of turbo-generator is in the neighborhood of .6 of a square foot per electrical horse-power, or, to state it another way, approximately two-thirds of that required by the vertical type, and one-fifth of that required by the horizontal type of piston engine of the cross-compound Corliss type operated in connection with condenser. The height of the turbine is about two-thirds the height of the horizontal and three-tenths of that of the vertical engine.

Owing to the uniform rotary motion and perfect balance of the turbo-generator a foundation of only sufficient size and depth to support the weight of the outfit is required, it not being found necessary to use foundation bolts. It is, therefore, apparent that a very large saving in the cost of foundations is made when compared with Corliss engines of either vertical or horizontal type.

The steam economy of the turbine is another of its important factors and it is well to know that this does not vary much with the size of turbine.

(To be continued.)

UNITED STATES HOSIERY IN CHEMNITZ.

(Correspondence of the Hosiery Trade Journal, Nottingham.)

The story of Chemnitz, Saxony, as a great hosiery centre is as old as the hills. For many years this city has contrived wide markets in all parts of the world. It has annually exported from four to five million dollars' worth of hosiery to the United States alone. No markets have been surer for the Chemnitz manufacturer than those of the States. Both in spring and fall dozens of buyers flock into the city. And now, after all these years of absolute supremacy, like the irony of fate, we find American sellers of hosiery follow the footsteps of the buyer.

Incredible as it may seem, a good beginning has already been made in the introduction of American hosiery into Germany. This movement is significant. The aim is not so much to sell American hose on the German markets as it is to compete directly with the Chemnitz hose in the trade of the Levant and Orient. Scores of buyers of hosiery from India, Turkey, and other Eastern countries annually visit Chemnitz to buy up cheap grades of hose. From now onwards they will also have the opportunity to buy American hose right in Chemnitz, as good lines of cheap grades have been sent over there. Most business is done in the cheap \$1 seamless ribbed hose. Cheap plain hose in this grade is also being tried, though as yet with but varied success. American manufacturers are able to compete in the line of cheap hose, because of their gigantic and economic scale of machine manufacture. Whilst Germany has the well-known great advantage of extremely cheap labor, this is more than offset by the economy effected through organization upon a large basis, and the possibility of one man managing a number of the excellent hosiery machines.

In the matter of packing, American exporters still have much to learn. Hose are put up in what appears to be a careless manner. Some boxes are too big for their contents. The cartons are not tastily made, and frequently consist of plain cardboard made up in crude fashion. Such cartons form a pathetic contrast to the tasty colored boxes of German hose. The German manufacturers have attained the par excellence in packing. Every detail is attended to, and scrupulous care is visible everywhere. While the local

firm which conceived the novel idea of selling American hose in the Chemnitz market is but just beginning its operations, enough has already been accomplished to make success reasonably sure.

FOREIGN MILL HANDS IN NEW ENGLAND.

I have read with much interest, several articles which have recently been published in the local papers regarding immigration to this State.

I am impelled by my interest in this subject to submit some of my personal observations, which may be of interest to others.

From a personal connection of more than twenty years with manufacturing interests of New England, I have had an opportunity to observe many immigrants of various nationalities, and most especially have I been interested in the adaptability of said immigrants to the various manufacturing interests. My observation has been that the Italians who enter the factories seem to do the best in the various iron manufacturing plants and foundries. Many Italians are also employed in railroad work, in building sewers and similar work in the large cities. Many more are employed in the fruit business.

The French-Canadians have for more than thirty years constituted a large proportion of the cotton mill help in Maine, New Hampshire, and Massachusetts. These people are industrious and thrifty, as a rule, they save their money and almost invariably their ambition is to save sufficient money to return to Canada to buy a farm and end their days in Canada. Some of these people, however, have settled in the "waste places" and on the "abandoned farms." They have almost invariably reclaimed these lands and made them profitable, and they have become prosperous and good citizens. During the many labor strikes, which have occurred in these New England mills, a very large proportion of the French-Canadian operatives have moved back to their farms in Canada, there to wait for better times, and when the strike has passed they immediately flock back to the mills again.

The English immigrants are very largely employed in the machine shops and cotton factories. As a rule, they are industrious and frugal, and have for years constituted a large proportion of the cotton mill help in Fall River. My observation is that Fall River has had more labor strikes than any other cotton manufacturing section. I believe it is because so large a proportion of the mill hands in Fall River are English, my belief being that labor organizations are more successful in England than they are in any other country.

The English are good operatives, but are very insistent for what they consider their rights.

The Portuguese from the Western Islands have become very prominent in cotton factories during the last ten to fifteen years. These people are industrious, frugal and make good mill operatives. New Bedford mills employ a very large number, and it is a fact that New Bedford history in cotton manufacturing has been remarkably successful. New Bedford was at one time the principal port from which the whaling vessels sailed, and many New Bedford fortunes were made from this industry. On the decline of the whaling industry New Bedford was for years considered a dead town in a business way, and when a few pioneers attempted to start cotton manufacturing in New Bedford all the prophets predicted a bad failure and claimed that New Bedford never could manufacture cotton goods successfully, and it required years to demonstrate that New Bedford could successfully manufacture said goods, and to-day it is known that New Bedford's success in this line

has been phenomenal. New Bedford is now making the finest goods made in the North, and her mills are more generally successful than are the mills of any other Northern city.

We all heard similar predictions of failure when the South began to bend her energies to cotton manufacturing, and we all know that said predictions were made by false prophets.

I will go a step farther and say that many of us have heard prophets proclaim that Charleston would never be successful in the line of cotton manufacturing. I have no hesitation in saying that my opinion is to the contrary, and that these prophets will be proven to have been false prophets.

Charleston can be as successful in the cotton manufacturing business as New Bedford has been.

It is customary for forces to move in the lines of least resistance and heretofore cotton manufacturing has been more successful in the Piedmont section, because that section has had an abundance of cheap labor, which has been due to the fact that said labor has not had as many opportunities for profitable employment along other lines, while Charleston and other Southern coast cities have had profitable opportunities for the employment of said labor along other lines. Conditions seem to be now changing and labor is becoming scarce in the Piedmont section. It is becoming necessary to get this labor from other sections, and when the mills which have for a long time been curtailing their production and the mills which have been entirely shut down shall again run full time and in many cases double time, this scarcity of labor will be more seriously felt.

I am of the opinion that the mill managements will then more seriously turn their attention to the problem of securing a portion of the most desirable of the immigrants who are continuously streaming into the Northern ports of our country.

Believing the facts to be as I have stated, I most earnestly call your attention to the merits of the Portuguese, believing them to be a most desirable class of labor for employment in field and factory.

During many presidential campaigns, we have heard the story of the stony and abandoned farms of New England. These stories were largely true. The farmers' children grew up and moved West and to the cities, where opportunities for advancement were better. When the old folks died or followed their successful children to the cities, the farms became in many cases abandoned farms. The buildings fell into decay and the land deteriorated. This condition in southern New England has been very largely changed. The writer has seen many of these abandoned farms reclaimed and made productive by the portion of the Portuguese and French-Canadians who did not seek employment in the mills.

The writer knows also of many waste sections reclaimed and made profitable by these same Portuguese and French-Canadians.

The South is making marvellous strides in manufacturing and commerce and this progress is developing many opportunities for improvement and advancement of the native Southerner. History will repeat itself and as the native Southerner steps out of the lower places and lines of employment his place will be taken by the immigrants of recent arrival.

The mill operatives in New England were at one time wholly native Americans. There are practically none in the mills at this time. They have gone into more profitable lines. The native Americans were followed by the Irish. These latter people have now very largely left the mills, they are in business of their own.

The Irish are being followed by the French-Canadians and the Portuguese in the mills of the North; the latter making good citizens and law-abiding people.—Sumner B. Sargent, in Charleston Evening Post.

PRACTICAL DETAILS OF WEAVING.

Picking-Stick, Picker and Shuttle Checking Devices.

It soon becomes manifest, even to a casual observer of a power loom in operation, that its action is of a very irregular, spasmodical, and jerky character. The causes of this are equally manifest on examining the functions of the various parts of a loom, the chief of which are shedding, picking, and beating-up the weft. Each of these functions is performed intermittently and periodically, at regular intervals, with the result that there is considerable fluctuation in the energy required to drive a loom, thereby causing jerkiness in its action. Some loom-makers, recognizing the evil consequences arising from such variable action, weight the fly-wheels of a loom, which are adjusted in such a manner as to neutralize, or at least, minimize, its variable movement.

The influence of picking is not the least factor which contributes to the fluctuation of movement in a loom. The propulsion of a shuttle from one side of a loom to the other involves a sudden development of considerable force far in excess of what would be required to project it the same distance under unrestricted conditions. It is with the object of successfully overcoming the surplus energy of a moving shuttle that various checking devices and buffers are contrived. The great variety of these contrivances bears ample testimony to the difficulties which they are designed to overcome, and of the inadequacy of any single contrivance to meet the requirements of all types of looms. It is the purpose of the present article to describe a few varieties of these devices, and to compare their relative merits.

As just stated, the function of a checking device is to gradually overcome the energy stored in a moving shuttle, beyond what is required to ensure its transition from one shuttle-box to another, and so prevent unnecessary wear of pickers and shock to the shuttle, which would tend to displace weft contained in the latter.

The choice of a suitable checking device will largely depend on the particular construction of loom, as regards the kind of picking motion, speed of loom, and form of shuttle-boxes, rising and falling boxes, or revolving boxes or chambers. In any case, a checking device should be selected that will give a maximum efficiency with simplicity of construction.

One of the simplest and most effective checking devices, and one that is usually applied to ordinary narrow, overpick, single-box looms is illustrated in Fig. 1. It consists of a narrow strip of leather, A, passing through staples fixed on the lay front from one shuttle-box to the other. Each extremity of A is buckled to a tab of broader and stronger leather, B, the end of which is threaded upon the picker spindle, C. The straps are adjusted so that the distance between the extremities of the tabs is about two inches shorter than the distance between the inside of the shuttle-box ends, so as to gradually offer resistance to the progress of a shuttle, and prevent its concussion against an unyielding part. Short tabs of leather, D,

have one end threaded upon the box spindle, on the inside of the tab B, and the other end on the spindle outside the box end, for the purpose of preventing tab B from drawing too far inward. The constant friction of the latter upon the picker spindle tends to soon wear them out at that part.

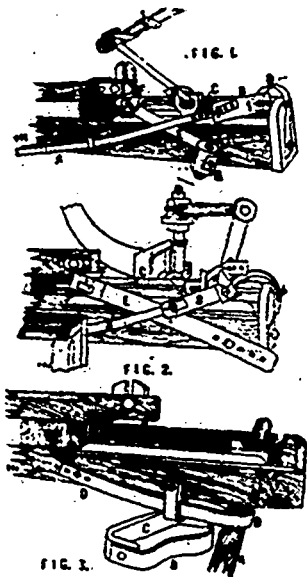
By riveting a piece of buffalo hide on to the end of the leather tab that works on the spindle (in the manner indicated by dotted lines), it is made much more durable. Instead of employing a tab, D, to prevent the check-strap, A, from being drawn too far into the box, the check-strap itself is sometimes continued, and fastened on to the spindle end outside the shuttle-box, in a similar manner to the tab, D. This is not so satisfactory as the former method, as the tab, B, is not so well protected from concussion with the picker, and is, therefore, more liable to wear out; whereas the renewal of the smaller tab, D, could be made at less cost and trouble.

A novel device for checking a picker at the extremity of its forward stroke is also shown in Fig. 1. This consists of a strap, E, one end of which is attached to a leather buffer or stopper, F, upon the picker spindle; whilst the other end is attached to the periphery of a drum, G, containing a coiled spring, and supported upon a bracket in front of the lay. The spring causes the buffer to serve the purpose of a cushion, that gradually yields on being struck by the picker. By this means, the picker is saved from hard knocks and therefore lasts longer.

The usual device for stopping a picker at the extremity of its forward stroke, and one that is very satisfactory, is that shown in Fig. 2. This device consists of a stout leather strap, E, one end of which is secured to the front by means of a nut and bolt, or a coach-screw, whilst the other end is attached to a leather or buffalo stopper, F (in the manner shown), so that the stopper reaches within about three-eighths of an inch from the inner spindle bracket when the strap is at normal tension. By this means, the elasticity of the leather strap is analogous to the action of a spring and thereby provides a yielding stopper for the picker.

Fig. 2 also shows another method of fixing shuttle check-straps so as to effect economy in leather—an important consideration in a concern running a great number of looms. By this arrangement, an independent check-strap is employed for each shuttle-box. These are bolted to the rear of the breast-beam of the loom, in the manner indicated, instead of being connected by a strap extending across the lay front, as in Fig. 1. In the former arrangement, one check-strap is pulled inward on the arrival of the shuttle in the opposite box; whereas, in the present arrangement, both check-straps are pulled inward simultaneously on each backward stroke of the lay, thus relieving the picking motion of that effort, and putting the work directly on the crank shaft.

Fig. 3 is a simple checking device for a single-box underpick loom. It consists of two leather straps so arranged that they act directly on the picking-stick on both the forward and backward strokes of the latter, respectively. The forward stroke of picking-stick, A, is checked by means of strap, B, bolted at the extremities to a bracket, C, fixed on the loom side, so as to produce a gradually yielding obstacle to the picking-stick. The progress of a shuttle, as it enters a box, is checked by means of a strap, D, one end of which is bolted to the lay front, and, after being passed around the picking-stick, the other end is bolted to the rear of the lay, as indicated. Strap D should be adjusted so as to prevent a picking-stick from coming in hard contact with the extremity of the slot in the base of the shuttle-box, otherwise the picker, E, will have less latitude as a yielding obstacle to a shuttle, and will, consequently, more quickly wear out.—Harry Nisbet, in *Textile American*.



PLATT BROS. & CO., LIMITED, AT ST. LOUIS FAIR.

We reproduce herewith a photograph giving a partial view of the exhibit of Platt Bros. & Co., Limited, which covers nearly five thousand square feet of floor space in the Palace of Varied Industries at the World's Fair in St. Louis. As will be seen, the exhibit consists of cotton spinning machinery, and in keeping with the watchword of the Fair, "Processes rather than Products," this is in operation about six hours per day.

Two dozen units make up the exhibit, as follows: Double action gin, double roller gin, hopper bale breaker with mixing lattices, patent automatic hopper feeder, with filling motion; lattice feeder, single Crighton opener, cylinder part; exhaust opener with dust trunk, etc., roving waste opening and feeding machine; single scutcher and lap machine, for 45-in. laps; single card, 45-in. by 50-in., 106 S.S. flats, single card, 45-in. by 50-in., 99 S.S. flats, sliver lap machine, 20 cans, 11¾-in. laps; Heilmann's Comber, 8 boxes, 12-in. laps, drawing frame, 3 heads of 2 deliveries, 18½-in. staff, slubbing frame, 28 spindles, 21¾-in. staff; intermediate frame, 38 spindles, 24-in. staff; roving frame, 60 spindles, 20½-in. staff; fine roving frame, 76 spindles, 16-in. staff; west ring frame, 144 spindles, 2¼-in. distance; warp ring



frame, 48 spindles 2¼-in., and 64 spindles 2½-in. distance; S.A. cotton mule, 168 spindles, 1¾-in. distance; S.A. cotton mule, 224 spindles, 1 3/16-in. distance; show case of spindles, rollers, cotton, etc., show case of spindles, rollers, worsted, etc.

Starting with the cotton bale, all the processes in cotton treating are shown, and a trip through the exhibit under the direction of one of the attendants, is most interesting. This is the only exhibit of its kind on the grounds, and it is usually surrounded by crowds of interested onlookers. The whole arrangement is neat and attractive, and informing placards are attached to the various machines, so that the exhibit is an instructive one to the uninitiated as well as to the mill man.

The firm has been making spinning machinery at Oldham, Eng., since 1821, and has now the largest plant of the kind in the world. Some idea of the extent of the works may be had from the following paragraph taken from a description in "The Cotton Factory Times."

"The works now comprise the following establishments, each of which is equal to many an individual concern of the largest dimensions. Hartford Old Works, Hartford Forge, Hartford Sawmills, Werneth Spindle Works, and Hartford New Works, which would alone constitute the largest textile machine manufacturing establishment in the world. The firm also own four collieries—Moston, Butterworth Hall, Jubilee and Brushes Clough. The whole of the various works cover an aggregate area of about 56 acres, with more land for extensions, exclusive of the collieries, and give employment to an average of between 10,000 and 12,000 workpeople, the Hartford New Works alone engaging the services of no less than 6,000 hands. Something like 33,000 tons of iron are consumed in the course of a year, while about 300,000 cubic feet of timber are used annually for machinery purposes alone."

BRITISH WOOL AND TEXTILE MARKETS.

(Correspondence, Canadian Journal of Fabrics.)

Bradford, Oct. 25th, 1904.

Since our last report there has been no material change with regard to prices in this market. Prices all round keep exceedingly firm, and appearances indicate that they will remain so for some time to come. Business in Bradford is only dragging, the chief enquiry being for wools suitable for the army requirements.

Spinners still find a difficulty in booking new business at a margin secure against loss, but there is a shade more doing on the whole. The piece trade is quiet in every department, and the carpet trade is so unsatisfactory that short time is being resorted to.

From Leicester we hear that the hosiery trade still shows signs of improvement, and the quantity of goods being shipped to Canada and other colonies is considerable.

Leeds manufacturers show no signs of being very busy, and their trade with the colonies still remains unsatisfactory.

In London about 30,000 bales have come forward for the sixth series of auction sales, but before these commence, the total will probably reach 90,000 bales.

Continental reports are also unsatisfactory, the chief demand being for crossbreds for which high prices are being paid.

On the 29th inst. the Bradford Exhibition closes after a six months' run. The success which has attended the efforts of the management has been well merited, and has surpassed the most sanguine expectations.

The news which has just arrived from Melbourne regarding a drop in merino wools has caused several combers to unload at low prices. Subsequent private reports, however, have caused the market to harden again.

MILL LIFE IN INDIA.

The danger to American and European textile industries from the production of goods by Indians, Chinese and Japanese, who are satisfied to work for 3 to 10 cents per day, is periodically held up as the Asiatic peril, and predictions are often made that the higher priced labor of Europe and America must eventually sink to the Asiatic level. The rapid development of the cotton industry in India apparently confirms the prediction, but a closer examination of conditions in India tends to modify the opinion thus formed. The development of the Indian industry has been on very coarse yarn and cloth for which the cheap Indian cotton is especially adapted. While the low cost of labor has unquestionably been a factor in this growth it has so far failed to produce successfully the medium and fine goods which European mills supply to the Asiatic market. Indian labor is very cheap and very poor. Until its efficiency is increased by a better standard of living, which means higher wages, it is not likely to prove dangerous to the high priced and highly productive labor of Europe and America. Skilled English overseers are usually employed in Indian mills.

Although a large proportion of those Anglo-Indian men, who return at intervals to their fatherland, assure their friends and acquaintances that India is the finest country in the world, and life there is one endless round of pleasure, the fact remains that these people are so accustomed to their surroundings that they are not—with all due respect—able to express a reliable opinion. For, having left their own country to better themselves, they are so charmed when they return with their increased salary and other advantages that they do not mind several years of unpleasant exile.

His Prospects.

A word as to the prospects of the Anglo-Indian mill man. These are, on the whole, distinctly promising. He receives, according to his agreement, an increase in his "pay," as one's salary is termed locally, and upon the completion of his agreement he is entitled to a free passage home. He has a bungalow, often a very excellent one, assigned to him, one or two native servants, and as he is in a position to know what the mill's output is likely to be, he may make many friends among the shareholders, each of whom is ready to entertain him. Should he have social aspirations, he has but to join a volunteer corps and he is eligible for presentation at a Government House levee, while his rank is a sure passport to the various official functions held in Calcutta, Bombay, and other parts of India. Should he make himself so useful to his employers that they cannot do without him, he is in a position to dictate his own terms—and these may include a seat on the Board and a present of mill stock. However, it must be pointed out that there are not many instances on record of the Anglo-Indian mill manager having forced the hands of the managing agents in this manner; more often he is too satisfied with his position to try to improve it. Whether he is wise in following this policy of contentment is open to discussion, but there is no getting past the fact that nearly all Anglo-Indians allow their energy to succumb to the enervating climate.

The Cost of Living.

Those stay-at-home mill men, who have not had any experience in India, are sometimes under the impression that living is cheap, and that hordes of black servants pine to be engaged at wages which would not keep an English housemaid in hairpins. Although the Indian domestic of twenty years ago was exceedingly moderate in his demands, things have altered very much and wages now are about fifty per cent more than they were. Still the exiled mill manager has no difficulty in securing a cook who will work cheerfully for 9 rupees (\$3) a month, while a bearer (general servant), is satisfied with from 8 to 9 rupees (\$2.60 to \$3). In the small provincial stations wages are even less and at Cawnpore, Rawal, Pindi and other places, it is possible to find a native servant who will cook, look after his master's clothes, clean his boots, sweep the house, and do everything that may be required of him for 11 rupees (\$3.75 a month). Nor are meat, bread, butter and kindred supplies high priced, but should the new arrival object to tough and tasteless beefsteaks and mutton chops and pine for tinned lobster, jam and preserved fruits he will have to pay a high price for them. His wardrobe, on the other hand, will cost him but little, for except in the evening when he takes his pleasures abroad, he invariably wears a white drill suit which can be made by a native tailor, called durzi, for from 5 to 6 rupees (\$1.66 to \$2). It is worth noting that when the English mill man first arrives in India he pays some attention to his attire—only to consign his English clothes to an airtight tin box, and to acquire in their stead an outfit similar to that worn by his brother exiles.

A Drawback.

Perhaps his chief drawback is that there is none of the light side of life for him. If he is in charge of a Calcutta mill he can go to the theatre or a music hall performance in the cold season, as the winter is called; races and steeple chases await him; concerts take place periodically and a band plays almost every night in the public gardens. But these amusements are of a more or less inferior nature and no matter how much the miller may appreciate them, he is always confronted with the thought that he is temporarily cut off from the pleasant home life. Still a considerable percentage of English employees in Anglo-Indian mills are contented with their life

there and would be very loath to give it up and return to England. Unconsciously they lead their acquaintances at home into imagining that India is a paradise on earth.

The Lonely Manager.

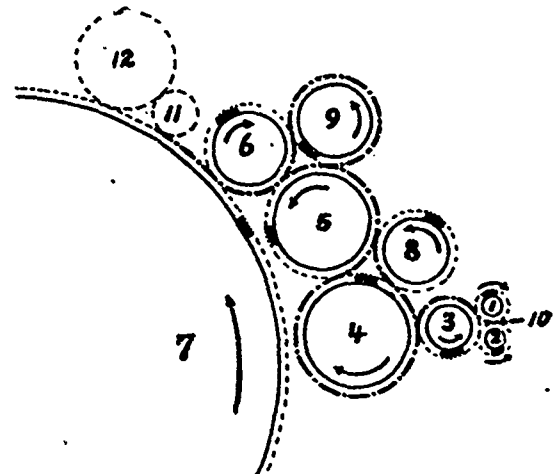
It sometimes happens that the manager finds himself in charge of a mill which is the property of a syndicate of wealthy natives and that he is the only white man in the place. Under these circumstances he is more than lonely, for not only is a Mohammedan or a Hindoo impossible as a companion, owing to his having nothing in common with the Englishman, but the characteristics of the black man are such that the mill man does not, as a rule, care to cultivate his acquaintance. Occasionally a commercial traveller, working in the interest of whiskey or cigars, or the representative of a firm of mill machinery makers, puts in an appearance, and is welcomed by the miller, but he may have to go weeks without seeing another white face. Sometimes he prevails upon a girl of his own nationality and color to marry him.

It would perhaps be as well to close with a word of advice: Stay at home, make a fortune if you can, but in any case stay at home.—World Record.

NEW FEED FOR WOOLEN CARDS.

The gist of the novelty refers to a special carding, on a small scale, of the stock previous to its delivery to the main cylinder, i.e., carding proper in the regular manner, the new attachment being applicable both to first and second breakers as well as finisher cards.

The object of the improvement is to thus provide a feed to woolen cards, by means of which more stock can be successfully handled by a given machine in a given time, and this at the same time in connection with an improved



quality of the sliver if used in connection with breaker cards, or roving with the finisher card. The increased production results from the accelerated speed which thus is possible to give a card, whereas the improved quality is brought about by working the lumps out of the material as fed, and getting the same into good condition before its delivery to the main cylinder. It is also claimed for the new attachment that its use in connection with the first breaker, the first and second breaker, or all three engines of a set of cards, will permit the handling of a lower grade of stock for a given count of yarn, and thus lower the price of production still more. Although, as mentioned before, the attachment may be applied to all three cards of a set, it more particularly will find use in connection with the first breaker. The new attachment can readily be applied to old as well as

new sets of cards, and in itself only slightly increases the length of the carding engine to which it is applied, both being also two most valuable features for it.

The accompanying illustration is a diagram in outline, showing the new feeding attachment as applied to a carding engine, only so much of the latter being shown as is necessary to show its relation to the feed. A description of the construction and operation of the new attachment is best given by quoting numerals of references accompanying our illustration, and of which:

1 and 2 indicate the two feed rolls between which the stock, or the sliver, as the case may be (first or second breaker or finisher) is entered to the machine, and from where it is, by means of the leader or transferer, 3, delivered to the tumbler, 4. From here instead of delivering the hlm of stock, which is now (especially if dealing with a first breaker card) lumpy, coarse, and uneven, directly to the main cylinder, the tumbler, 4, delivers it to an auxiliary cylinder, 5, which has a much more rapid surface speed than said tumbler, 4. Cylinder, 5, in turn delivers the web to the faster running doffer and feeder, 6, and from which it is taken off by the rapidly revolving main cylinder, 7. From this point on, the web takes the usual course and receives the usual treatment. By the time the web reaches the main cylinder the lumps have been pretty thoroughly worked out, and it is finer and more even, thereby adapted to produce a better grade of yarn than if carded without the attachment, owing to the additional treatment of carding the new attachment provides. Furthermore, the time required to produce this improved yarn is greatly reduced by the new feed. In order to still further assist in preparing the stock in the best possible condition for the main cylinder, the two workers, 8 and 9, are provided, and which in their turn split the web twice between the tumbler, 4, and the doffer and feeder, 6. The worker, 8, takes the web, or a portion of it, from the auxiliary cylinder, 5, and returns it to the tumbler, 4, which delivers it again to said cylinder, 5, and the worker, 9, takes from the cylinder, 5, and delivers to the doffer and feeder, 6, which delivers the now united splits to the main cylinder, 7. The slow running workers, 8 and 9, operating with the comparatively fast running members, 4, 5 and 6, augment the effectiveness of the latter and enhance the efficiency of the feed. The heavy dotted line, 10, indicates the course of the web, through the attachment, thus explained.

The dotted circles, 11 and 12, indicate the positions of the first worker and its stripper, respectively, of the carding engine proper, being referred to merely for the purpose of showing that the new attachment can be applied without disturbing such members when they are located as usual. In short, the only alteration required to apply the new attachment to an old carding engine is simply the providing of suitable bearings for the new parts, i.e., to move back the tumbler, leader, and feed rolls about an inch, or replace the old tumbler with one which is an inch or so smaller.

With reference to revolutions per minute and surface speed of various members of the attachment, the following are a fair average:

Assuming that the main cylinder:

(7) = 125 r.p.m. \times 18095' surface speed.

Auxiliary cylinder:

(5) = 260 r.p.m. \times 7351' surface speed.

Tumbler:

(4) = 130 r.p.m. \times 4084' surface speed.

Doffer and feeder:

(6) = 450 r.p.m. \times 9896' surface speed.

Worker:

(8) = 12 r.p.m. \times 226' surface speed.

Worker:

(9) = 8 r.p.m. \times 175' surface speed.

Leader:

(3) = 150 r.p.m. \times 1484' surface speed.

Feed rolls (1 and 2) revolve very slowly, the speed varying according to the weight of stock per yard which is to be run between them.

Although speeds quoted are relatively correct, at least approximately, it is to be distinctly understood that such speeds must vary considerably in different machines and for different grades of stock.

The arrangement of the card clothing, with reference to direction of pointing, on the various cylinder and rolls, is clearly indicated (exaggerated for the sake of clearness). When the arrangement is such that the points of two adjacent teeth upon associated members have the same direction, the teeth are said to be point to point, and when the arrangement causes the points of such teeth to assume different directions, the teeth are said to be point to back, the object of this being to arrange the teeth as to handle the stock to the best advantage. The teeth on the tumbler, 4, and the cylinder, 5, are arranged point to back, and the same is true of the teeth on said cylinder and the doffer and feeder, 6. The teeth on the cylinder, 5, and each of the workers, 8 and 9, are arranged point to point, while the teeth on the workers, 8, and the tumbler, 4, are point to back, as are those on the worker, 9, and the doffer and feeder, 6. The arrows associated with the cylinder, 7, and other rotary members in the illustration indicate the directions in which the said cylinder and members are adapted to revolve.—Textile World Record.

THE INTERNATIONAL WOOL TRADE.*

It is not altogether easy to select a suitable starting point for a paper on the international wool trade. Is one to go back to the days of King Edward I., when we were the great raw wool exporters of Europe and our sovereigns drew a large, indeed the largest, part of their revenue from an export duty on "wool, woollens, and leather," as the old phrase ran? Or are we to set out from some point in the eighteenth century, when the English woollen industry had grown so great that it required every pound of the home-grown wool—the export of which was by this time forbidden by the law—and a good deal of foreign wool into the bargain? However, as the greater part of this paper will be given up to the most modern developments in the trade, it would, I think, be unwise to take so distant a starting-point even as the reign of George III., much less of Edward I. But in order to understand the importance of recent changes and developments in this, one of the oldest and one of the greatest branches of international trade, it is, I think, well to begin with a few words on the trade as it existed sixty or seventy years ago, about the time of the late Queen's accession.

At that time England was still to a considerable degree self-supporting in the matter of wool, and most Continental countries were to a greater or less extent exporters. The prohibition of the export of English wool had only recently been removed, and there was still a tax on the foreign wools imported into this country. The home clip was probably—

*Abstracts from a paper by Professor J. H. Clapham, read before the Yorkshire College Textile Society.

I say probably, for the facts are not certain—no less than it is to-day; that is to say, from one hundred and thirty to one hundred and fifty million pounds. The imports were about a third of that amount; so that, from the English point of view, the international trade was not by any means as vital a matter as it has since become.

It is curious to us, looking back from the end of the nineteenth century, to notice where these imports came from. Up till 1800 the great exporting country was Spain, the old home of the merinos; but by 1837 or 1840 Spain had fallen far behind in the race. Her rams, exported to England, Saxony, Prussia, Australia, and elsewhere, had already improved the flocks of other countries, while her own were stationary or declining in quality, if not in quantity. Her place, for the time, had been taken by some of the German States, above all by Saxony. The Saxon wools, or electoral wools, as they were often called, are still a familiar name, but as the whole quantity of wool now imported from Germany is exceedingly small, they are no longer of any real importance. But sixty-five years ago they were the leading class among the imported wools—far greater in quantity and far better in quality, I believe, than the Australian. In 1830 more than three-quarters of the wool that came into this country from abroad was German. About 1840 the German wool had sunk to less, but not much less, than a half of the total import; the Spanish was no longer of any importance; the Australian was increasing year by year in the most amazing fashion; and the import from the Cape, and a little later that from South America, was beginning to make itself felt. Russia, India, and other countries already shared in the trade, but it is not possible to follow all its branches in detail.

The striking facts of the situation from 1840 till 1850 are the decline of Germany and the rise of Australia, and with the rise of Australia the rise of the London wool market. Always important, that market now became the recognized headquarters of the greatest branch of the international wool trade, beating Liverpool because of its more central position with regard to Europe, which more than balanced the greater distance from the English manufacturing districts. As for Germany, she was beginning to learn how to manufacture on modern lines for herself, and her own wools were ceasing to supply her needs. Fashion, I believe, had something to do with the decline in the sale of German wool in this country, and besides that the quality was in many cases declining; but the growth of the home demand was what really killed the export.

Up till 1840 the exports of wool from the old German Customs Union, the now so familiar Zollverein, had always been well above the imports. Since that year they have only twice exceeded the imports, and since 1850 never. Those ten years may, therefore, fairly be taken as the termination of the period during which Germany was, from the point of view of wool at any rate, a raw-material raising rather than a manufacturing land. Of course, German wools continued to be exported after 1850, just as British wools are exported to this day; but she had by that time taken her place as a demander and consumer of foreign wool—as a buyer rather than a seller in the international markets. France, too, never a great exporter, began about 1850 to import on a considerable scale and to come forward as a buyer.

The fresh supplies required by Europe were coming, as we have seen, in rapidly-increasing quantity, first from Australia and the Cape, next from South America, while later still—between 1860 and 1870—New Zealand took her place alongside the other countries of the Southern Hemisphere

as an important feeder for the manufacturing nations of the Northern. For a whole generation and more, say from 1840 till 1875 or 1880, almost every pound of the Australian and New Zealand wools went direct to London; the Cape wools came mainly to London; while the South American were shipped for the most part to Havre and Antwerp, the English merchants, spinners, and manufacturers being then—as many still are—indifferent to the Buenos Ayres wools. These latter were of very little importance in any of the great markets before 1850. It was only in the 'forties that wool-growing for export took root in the Argentine Republic and Uruguay; and it is, therefore, not surprising that England, already well supplied from her own colonies, and able both to receive from them and to raise at home wools vastly superior to those of South America, should have left the development of that branch of the trade to others. If low-grade foreign wool was wanted in this country, it could be had from India or elsewhere; and from the accounts that one sometimes gets of Buenos Ayres wools to-day, it may fairly be assumed that in the 'forties and 'fifties they were very low-grade indeed. In the early days of the trade a fair quantity came to Liverpool and London, but that quantity did not grow, and never has grown, to any extent.

The Australian wools had by 1850 won their way into high favor, both here and abroad. In the 'twenties and 'thirties, when the quality of the wool was not what it subsequently became—when the trade was irregular, the time and money consumed in carriage enormous, and the natural prejudice of English spinners in favor of home-grown or German wools not as yet broken down—the sales of Australian consignments in London were not considerable, and grew but slowly. There were no regular auctions until 1835. But as the auctions became better known and the trade better organized and more regular, there set in that period of rapid growth of which I have already spoken. In 1840 about 40,000 bales of Australian wool were offered at the London auctions; by 1850 the quantity had grown to 140,000 bales; by 1860 to nearly 200,000; and by 1870 to between 500,000 and 600,000.

Foreigners came to London to buy, or bought through London agents, almost from the beginning. At the end of the period 1869 and 1870 rather less than a half of the whole quantity of Australian and Cape wools together, offered at the London Colonial sales, was taken by foreign firms. I ought to mention that the Cape wools sold in London were at that time relatively more important than they now are, amounting in quantity to something like a fifth of the whole colonial stock; just before the war they were not one-tenth. From 1870 till the present day the relative importance of the English and the foreign buyers in London has not greatly changed. Generally about a half of the wool knocked down at the auctions goes abroad, as it used to do. Indeed, before the troubles that began in 1899 in the world's wool markets, rather more than a half had, as a rule, been sold for foreign account. This does not mean, however, that the London sales are now as important as they were thirty years ago. In 1870 almost all the Australian wool was sold there. Now, as I shall explain later, barely half of it goes to the London auction.

In 1870 the South American wool was in no way comparable, either in quality or quantity, with the colonial wools which found their way to the London market, and consequently the position of that market was more supreme, more unchallenged, than it is to-day. While London disposed of over 600,000 bales of colonial wool in 1871, Antwerp, at that time far the greatest of the Continental markets, did a trade not a third as great and much less than a

third as valuable in South American wools. "England," says a French writer in 1867, "furnishes us with rather more than a quarter of our foreign wool; all the wool from Australia and the Cape, in the carriage of which our ships ought to have a share, escapes us completely." "Is it not deplorable," he writes in another place, "that the Continental industry should be obliged to cross the Channel periodically to supply itself in the London market?"

(To be continued.)

PEROXIDE BLEACHING.

In the bleaching with the peroxides a great deal of importance has been rightfully placed on the necessity of a thorough preliminary cleaning of the goods to be bleached. A moment's thought will make this apparent to the experienced bleacher. In the spinning the fibres must be oiled, or come in contact with oils from the machines, in the knitting or in the weaving. If this oil, or any part of it, is allowed to remain, it is clear that the bleaching solution cannot come into intimate contact with the fibre, and its action will, therefore, be slow and incomplete.

Different bleachers have different methods of getting rid of the oil, natural or artificial, and they again vary with the kind and quality of yarn or fabric under consideration. Especial care must be taken with such, of which wool or worsted forms an ingredient. Strong alkalis must be avoided, as they are liable to produce a yellowish cast, which it would be very expensive to bleach out. Recently, for cheapness, spinning oils mixed with mineral oils have come into use, which are very difficult to remove. The best spinning oil is none too good.

In comparing peroxide bleaching—by which is meant bleaching with peroxide of sodium, the other peroxides yielding no additional benefit, while being materially higher in cost of operation—with the old process of lime or sulphur bleaching, there is one distinctive difference: the chemie bleach impregnates the fibre of cotton, linen, jute, or hemp with salts of lime, which continue the process of disintegration of the fibre already started in the bleach bath. The sulphur bleach is efficient only so long as a part of the sulphurous acid gas remains in the fibre. This gas, however, gradually changes to sulphur acid, and simultaneously the original color begins to reappear. The sulphuric acid, however, is a carbonizer of cotton, and consequently in any mixtures which have been bleached with sulphur, as they must be unless peroxide is employed, the strength of the fabric begins to fail at the same time that the white begins to go back. Mixtures which have "yellowed" on the shelves will also be found to have lost from 25 to 50 per cent. of their strength. In both instances, as will be seen, harmful combinations have been left in the goods, additional to the weakening through direct action of the bleaching treatment in the case of cotton, and to the fugitive and uneven white produced in the case of woolsens and mixtures.

On the other hand, in peroxide bleaching these objections seem, in theory as well as in practice, to be completely overcome. The only compound due to the peroxide bath is the very soluble and harmless Glauber's salts, which, wherever a thorough rinsing follows the bleach, is entirely washed out. The action, as is well known, is an oxidation which can only affect the natural coloring matter in the fibre, and in no way its strength or natural elasticity. Even were the decolorized matter not washed away in the finishing bath, it could never be regenerated by action of air, because that action is also oxidizing.

Having thus traced the chemical and physical effects of the different processes, it must be determined whether the more beneficial and reliable method can economically be substituted for the older treatments. This has been a disputed point for many years, says the "Textile American," and still it would seem as though one mill after another, in a leisurely fashion, it is true, but unerringly, found the benefits of peroxide to outweigh the cheapness of lime and sulphur.

THE CROMPTON-THAYER FANCY WORSTED LOOM.

Editor Canadian Journal of Fabrics:—

Sir,—Being naturally interested in anything new in the line of weaving machinery the writer made it his business to look into the merits of the above loom, principally in the first place, for his own edification, but after seeing it and finding certain features of it to be of special interest to mill men in general, he has decided to give the readers of the "Canadian Journal of Fabrics" some description of them as they appealed to him.

There is no question in the author's mind about the quality of the product of this company, they are certainly turning out a first rate fancy worsted loom. This loom is built on the open shed principle, which, by the way, has by far the greatest preference at the present time, and probably always will have.

Amongst the principal items which attracted the writer's special attention was first, the Pickerball Stud. This is so socketed into the arm which carries it around, that there does not seem to be any possible chance for it to work loose; it certainly creates a "lasting impression." Although this stud is adjustable to any necessary position it is just as secure when tightened up in its place as if it was a fixture.

Another thing which I noticed, though not without looking for it particularly, was the way the shuttle boxes were connected with the box rod. This I found to be accomplished in a radically different way to anything I have seen before, and it is all right. There are two small castings riveted underneath the shuttle boxes opposite each end of the supporting arms of the box rod. These are fastened to the arms by means of screws in the ordinary way. The advantages of this are that it not only insures a steadier box movement, but a more durable connection. There seems to be an air of thoughtfulness at every point of its construction. The Crank Arms on this loom are to all outward appearances just the same as other ordinary wooden ones, but there is a great difference nevertheless, and the man who got it up undoubtedly has a great head on him. The difference lies in the means provided in it for tightening up the connections or steel collars which connect it to the loom.

The belt which passes through the collar and the arm at each end has a slanting projection on the middle of it which presses against a small piece of steel fixed inside the hole in the crank arm. Thus the farther the bolt is drawn downward, the more it contracts the space between the end of the crank arm and the collar. To facilitate the adjustment, there is a thread and nut on both ends of the bolt. The one on the under side will regulate the fitting of the connection which, when adjusted to suit one's ideas or purpose, is clinched right there and becomes a fixture by tightening the nut on the top side. It is a most ingenious and simple arrangement. Mr. Riley, the superintendent, has, I believe, the credit for getting up this idea. These are items which will certainly be appreciated by the loom fixers.

Another interesting feature of this loom is the crank shaft boxes; the cap on which is securely held in place by one bolt, and there is no possible chance for it to get loose as the bolt is so arranged that it will do its work just as well even if the nut on it should become loose. If any one disbelieves this statement let him say so, and I will try to explain to and enlighten him on the subject.

This loom is supplied either with or without brake attachments according to request. The brake itself is practically the same as what we have always been used to, but the methods of working or releasing it are somewhat different. There is no foot lever to be pressed down before the loom can be started. All that is necessary in starting the loom when the brake is on, is to push the shipper handle forward just a little, that is, contrary way to the way you would start the loom. This releases the brake, and can be done at the head end just as well as the driving end of the loom.

There is a clutch arrangement on the take-up motion which is disconnected by the release of the shipper handle but connects itself when the loom is started up. Thus the take-up stops working right on the broken pick. This reduces the tendency in some cases for making light or uneven places.

The framework, immediately below the protector trigger is made sufficiently strong to stand an unreasonable amount of banging off.

As to the setting of the reed it has for a number of years been in my mind that if the warp on the lower side of the shed could be made to pass a little higher through the reed there would not be as many knots slipping loose or breaking off in front of the harnesses, on account of the fact that the wire in the reed is more flexible, or at least does not set so rigid half way up the reed as it does at the bottom or top. I therefore made it a point to speak of this matter to Mr. Jack Fitton, the loom expert, but was promptly informed by that gentleman that they had also thought of this matter, and that they were setting the bottom of the reed considerably below the surface of the shuttle race for this very reason.

An apparently good idea in connection with the head-motion on this loom is the "new Spring Follower," which is applied with the release motion. These are released and out of operation while the vibrators are in operation, but are brought to bear on the connector as a steadier when the latter reaches its locking point. This makes it lighter for the weaver when turning around by hand. There is also no need for the loom fixer to climb up on top of the loom in order to latch up the follower whenever he has to take out a vibrator, as, by pulling the plug in front of him he can lift them all simultaneously. The makers also rid themselves of about sixty different pieces on a thirty harness loom by using this arrangement in preference to the stationary spring followers. There are a number of other points that ought to be mentioned, but on account of the length of this article the writer thinks it would not be advisable to take up any more of the valuable space of this paper.

ALBERT AINLEY.

128 Plainfield Street, Providence, R.I.

A NEW SHUTTLE CHECK.

Charles Lefrance, employed as second hand in No. 3 weave room of the Whittenton Mfg. Co., Taunton, Mass., has been granted a patent for shuttle checking means for looms.

This invention relates to certain new and useful improve-

ments in the shuttle checking motion for looms and has in view the provision of a simple and practical form of checking device which may be readily attached to the lay of any of the ordinary types of looms and presenting simple and effective means for checking the movement of a shuttle as it enters a shuttle box, and preventing the rebound thereof, while at the same time not interfering with the action of the picker in throwing the shuttle out of the box.

To this end the invention contemplates a checking device attachment for the shuttle box end of looms operating in connection with the usual binder and picker-stick, and so arranged as to reduce to a minimum all wear on the picker-stick while at the time directly actuated thereby when a shuttle moves into a box.

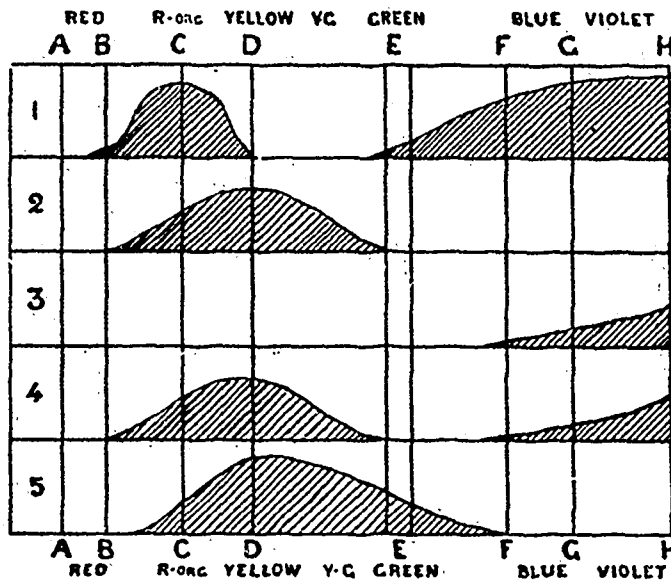
A special object of the invention is to so arrange the parts of the device in connection with the binder and picker-stick, as to exert a gradually increasing binding or checking pressure upon the shuttle after the same comes into contact with the picker, thereby checking the motion of the shuttle in such a manner as to positively prevent rebound thereof, and also prevent the filling from breaking, by reason of the checking motion provided for. Through the medium of the improved device the shuttle can be run very loose in the box and requires less power to throw the same across the lay.



A SIMPLE FORM OF ERYTHROSCOPE.

(Concluded from last issue)

On viewing a variety of colors, such as may be found in a large bouquet of flowers, it will be observed that all the colors divide themselves into three groups reds, blues, and orange-scarlets. All colors of the blue and violet class, such as the red of the poppy, the crimson of the rose, the pink of the ger-



anium, the magentas and blues and violets of the cinerarias, etc., undergo little or no alteration in color. The yellow flowers, ranging from sulphur yellow on the one hand to orange-yellow on the other, all appear scarlets under the violet film; and even browns, like wallflowers, match the color of the poppy. A bunch of forget-me-nots, with their delicate blue petals and yellow-tipped centres, becomes a deeper blue with a scarlet centre, and a bed of variegated pansies composed of all tones of yellow and brown presents a wonderful appearance, being all of a vermilion and geranium-red color. The pink colored blooms of the rhododendron, become wonderfully

intensified when viewed through the violet film, and appeared to the writer as if almost self-luminous. They glowed with a beautiful pink light, as if the bush was decorated with fairy lights.

But words fail to describe the many beautiful color changes to be seen in viewing different flowers and colored objects.

Ordinary straw looks as if it had been dyed in a dilute magenta bath, and ordinary yellow varnished wood appears as if stained with carmine. Sombre golds and citrines, and browns appear scarlets and deep reds, and a curtain dyed of a rich shade of olive, when strongly illuminated with sunlight, glowed with a superb crimson. Foliage of a deep green shade, when viewed with the violet film, looks a deep plum color, more resembling a bronze, or the color of the beetroot leaf, and an ordinary green beech tree growing beside a copper beech look both the same color when viewed through the film. A field of rich green grass or hay, dotted here and there with patches of buttercups, becomes transformed into a beautiful sight, the grass being a dull plum color in its shadows, and a claret in its strong lights, while the buttercups are masses of vermilion.

An Interesting Property.

From the fact that this violet film throws some colors into greater contrast to each other, and therefore into greater prominence, there arises the interesting property of its being able to show up some colored objects at a distance, which are undistinguishable to the unaided eye.

This property might prove a valuable one under some conditions. Here are cases in point. In a far distant field were clusters of buttercup flowers, almost imperceptible at the distance. On looking through the film they became easily visible, standing out from a dull plum-colored background, in masses of scarlet. Distant brown flowers were at once seen through the film, when they were not distinguishable to the naked eye. A hillside in the far distance was carefully scrutinized with the naked eye to try and distinguish any colored objects, but none were visible. On applying this violet film to the eyes there were seen patches of faint red here and there along the hillside. These patches turned out to be clusters of yellow-broom bushes in flower.

The ordinary brown wallflower can be distinguished by the film at a far greater distance than it is possible without it, because, instead of its being a soft tertiary brown color, easily merging into obscurity, it becomes changed into vermilion or a poppy red.

An alcoholic solution of chlorophyll, although of a rich green color to the naked eye, assumes a dull ruby red color under the violet film. This same modification is also observed in a green solution made with Wool Green and a little Naphthol Yellow. With these two dyestuffs one can make up a very dilute solution to match in color a solution of Naphthol Green.

To the unaided eye these two dye solutions, in test tubes, appear exactly similar when held up to the light; but if they be viewed with the film a remarkable difference is observed, the compound green looks red, while the Naphthol Green looks blue. A miscellaneous collection of shades of russet, yellow, buff, old golds, olives, salmon, reds, pinks, orange, berry, etc., although widely differing from each other to the ordinary vision, when viewed through the violet film all appear of one class of reds, varying only in depth of tone. A clear pure tone of green dyed with Aniline Yellow and Wool Green appears a black, while its lighter tints appear dull shades of red under the film.

Absorption Spectra.

All these extraordinary changes in appearance can, of course, be easily explained, from a knowledge of the absorption spectra of the colors under examination, and of the violet itself.

A strongly colored violet film shows a spectrum consisting of only two luminous broad bands. These are first, the extreme red from the line A in the spectrum, through cherry red on towards scarlet red between the lines C and D. (See 5). Then comes a strong band of total absorption, or darkness from C $\frac{1}{2}$ D, on towards the line F in the blue-green. So that, yellow, yellow-green and green, are all absorbed.

Then the second luminous band begins faintly beyond the E lines toward F—say E $\frac{1}{2}$ F—and extends through the blue, blue-violet and violet, to the end of the spectrum. (See 5.) From this, it will be seen that, with a strongly colored film, all the colors viewed will assume only two classes of colors, i.e., classes of reds, and classes of blues and violets. All the others, which come in between the extremes of the dark absorption band, will appear dark shades, or blacks, and it is only the red present in the composition of the yellow, that makes it appear red under the violet film. If a homogeneous yellow could be found, it would appear black under such a film.

Absorption spectrum No. 1 shows approximately the locality of absorption in a moderately strong solution of chlorophyll green. The curve shows strong absorption in the cherry red, extending from line B to C, and on through the orange-red towards the line D. Then follows free transmission from the yellow, through the yellow-green to the E lines in the green, from which there is a gradual and increasing absorption towards the violet at the end of the spectrum. Absorption spectrum 2 is that of Cobalt Blue Glass, showing free transmission of the extreme red rays from A to B $\frac{1}{2}$ C, then follows absorption, greatest at the orange-yellow line D, and diminishing at the E lines in the green.

Spectrum 3 shows the faint absorption in the violet end of a dilute yellow with the free transmission of all the rest of the spectrum, and curve 4 shows the effect of the combination of spectra 2 and 3, which constitutes Simler's erythroscop. By comparing spectrum 4 with that of chlorophyll No. 1, it will be observed that the luminous or freely transmitted part of chlorophyll, extending all through the yellow and yellow-green, corresponds exactly to the dark or absorbed part of the Simler combination No. 4. So that the only light that is common to them both is the red light, and it is this transmitted extreme red light that gives to the foliage its red appearance when viewed through the erythroscop.

Spectrum 5 shows the absorption curve of a film of Methyl Violet 3B, which will be observed completely absorbs that part of the spectrum reflected from chlorophyll, its absorption curve extending from the line C in the cherry red through yellow and yellow-green, and the green at lines E on to blue-green between E and F.

It will be seen that this curve has not the slight absorption in the violet, as shown in Simler's apparatus (spectrum 4), but this is compensated by the freer transmission of the red rays.

Autumn Tints.

On viewing Nature during the autumn time with this violet film, the color changes become very marked, as the foliage at this time has a yellow or russet appearance which becomes greatly accentuated with the film. The autumn tinted foliage glows with ruby or scarlet, and an elder tree, having only a few leaves here and there of a yellow tinge appeared like a copper beech hanging with cherry red fruit, which stood clearly out against the dark colored background of foliage.

A yellow cornfield during harvest operations is indeed a wonderful sight. The harvesters seem to be working among long purple red grass, while the gathered sheaves or "stooks" appear a dull magenta color. Towards sunset, when the light becomes "warm" in color, the magic effect is more pronounced, and the beauty of the scene can scarcely be imagined.

Dye'd Shades.

The following are a few of the principal effects on dyed colors, when viewed with this Methyl Violet film:

Description of Color	Aspect Under Violet Film.
Reds, Crimson, Scarlets, and Magentas	} Change very little in appearance.
Orange and Yellows	
Very light tints of Yellow..	— Pinks and Berry colors.
Greens	} Soft Sages, darkening down to a Black.
Yellow Greens	
Blue Greens	} Dull Green Sages, deepening to Blacks.
Blues, Violets, and Pinks	
Mauves, Purples, Clarets ...	— Very little change.
Olives and Citrines	} Shades of Russet reddening to Crimson.
Bronzes and Old Gold shades	
Buff shades, like Salmon, Ecu, etc.	} All more or less Reds and Pinks.
Russets (all tones)	
— Varying ones of Red.	

—By David Paterson, F.R.S.E., in the Dyer and Calico



ARTIFICIAL COTTON IN FRANCE.

The French Chamber of Commerce of Milan says that an artificial cotton is now made from the cellulose of the fir tree freed from bark and knots. The fibres, after being pulverized by a special machine, are placed in a horizontal, brass, lead-lined cylinder of some 3,500 cubic feet capacity and steamed for ten hours, after which 2,000 cubic feet of a bisulphate of soda wash is added and the whole heated for thirty-six hours under a pressure of three atmospheres. Then the wood, or fibre, which has become very white, is washed and ground by a series of strong metallic meshes, after which it is again washed and given an electro-chemical bleaching by means of chloride of lime: Passage between two powerful rollers then dries the matter, producing a pure cellulose, which when reheated in a tight metal boiler containing a mixture of chloride of zinc and hydrochloric and nitric acids, to which is added a little castor oil, casein, and gelatin to give resistance to the fibre, gives a very consistent paste. Threads are then produced by passing this paste through a kind of drawplate. These threads, after being passed over a gummed cloth, are immersed in a weak solution of carbonate of soda and passed between two slowly turning drying cylinders. Finally, to give the necessary solidity, the thread is treated to an ammoniacal bath and rinsed in cold water, after which the product is pliable and works well.—Commercial Intelligence, London.



MARITIME TRADE.

W. R. Holloway, United States Consul at Halifax, N.S. in the course of a report from his district, writes of the textile trade in Canada as follows:

The woolen goods manufacturers in the Dominion of Canada, who have been engaged in the manufacture of the cheaper grades of goods, have been complaining for the last year that the preferential tariff in favor of England has so reduced their

profits as to prevent their paying dividends, and that England now practically controls the Canadian market for woolen goods, except tweeds. Three mills in the vicinity of Montreal have recently shut down, and it is expected will remain out of business until there is a change for the better in the market.

The Oxford mills, at Oxford, and the Hewson mills, at Amherst, which manufacture a high grade of tweeds, are doing a prosperous business, and the Hewson mills are to be enlarged with a view to American export business.

Last autumn there was a shortage of blankets, owing to the increased western demand, and this year a recurrence of like conditions is expected. Already some mills have withdrawn quotations on blankets, while others have advanced their prices. Local mills are paying about 12 per cent. more for wool than they did at this time last year, and seem to have some difficulty in getting their supplies.

The Canadian mills never have been able to make successful use of shoddy, which is made from woolen rags or cloth ground up in a machine, the resulting fibrous mass being again spun into yarn, sometimes around a cotton thread, or being mixed with new wool, so that the product looks almost as good as if made wholly from new wool.



A NEW GERMAN LOOM.

The following description of a new loom employed in weaving cloth in Germany is given by a contemporary:

The loom is a four decker, but only works with No. 2 and 3 box on right-hand side, as the 4 is used for the full and empty shuttles. The loom can run five shuttles, one and one. The loom is driven with a friction motion, like the pulling motion of a mule. It can be set on or stopped at any time, no matter what position the crank is in. It stops and sets off like lightning. There is only one picking tappet, and it picks for both sides. There are no laces or chains to make for the picking. Wherever the shuttle is it picks it out, if there are two shuttles opposite, it does not pick at all, and if there is not a shuttle in the boxes it picks at both sides. It is done from the box swell. When the shuttle is put in the box, it relieves the picking catch of the other side. The box motion is effected with levers, like Dobeross, but there are no chains to wear like Dobeross. It is done with rods and levers. If anything happens so that the box cannot rise or fall the box motion disconnects itself. Nothing can break. It is the same with the picker. It disconnects itself the same. The shedding motion is a centre shed dobby. There are wheels like Dobeross for pattern, and they work on the jack. The letting-off motion is done with levers and springs, and when you have set it with a full warp you have nothing to do with it till it is felled. The taking-up motion is a self-regulating motion with levers and weights. The automatic motion is like a dobby, and there is a plan to add to it. There is a lever to every shuttle that is running, and when a weaver wants a shuttle to come out she has only to reverse that number lever, and goes up and receives the empty shuttle. Then when that shuttle is wanted it drops to No. 1 box and lets the new shuttle off. Then the first box rises and is ready for filling again. The shuttle can be put in at any time. There is nothing in the way. The 4 box, where the empty shuttle goes in, is half-round shape. You can get the shuttle out in any position, and everything is done with the loom running at 60 picks a minute. It does not lower the speed to change the shuttle, and one ran the other day fifty-five minutes without a stop of any sort.



L. Maher's department store in Winnipeg, with contents, was completely destroyed by fire; loss estimated at \$35,000; insurance, \$28,000.

THE CANADA WOOLEN MILLS CASE.

Result of the Appeal—The Sale Set Aside.

In last issue a report was given of the proceedings at Osgoode Hall, Toronto, in the case of the Canada Woolen Mills, Limited. It will be remembered that upon the declaration of insolvency of the company and the appointment of George Davidson, the inspector of the company, as liquidator, the Master-in-Chambers, J. S. Cartwright, was appointed referee, and after the failure to secure satisfactory bids from advertisements calling for tenders, it was decided to sell the properties by auction on the 15th September last. At this meeting no bids were made that could be entertained, and the meeting adjourned. In talking the matter over in the Master's office, upon adjournment on this day, W. D. Long, of Hamilton, said he would make an offer himself, provided the offer was either accepted or rejected, and not made the lever upon which some one else might raise the price on him. According to the evidence submitted, it appeared that Mr. Long's offer was not known to some of those concerned, notably to George F. Benson, of Montreal. At the latter meeting, as reported in last issue, Mr. Long bid \$250,000, which he afterwards raised to \$253,000 for the whole properties, and this offer was accepted by Mr. Cartwright. Mr. Benson strongly protested against selling the mills at that figure, which he considered too low. The liquidator also, it appeared, disapproved of the sale. G. H. D. Lee, the legal representative of the Dominion Bank, advised the acceptance of Mr. Long's offer. Argument was heard on Mr. Benson's protest on the 5th October, and judgment reserved till the 11th, when Mr. Cartwright maintained the validity of the sale, and accepted Mr. Long's cheque, drawn on the Dominion Bank, for \$243,000 the balance of the purchase money.

Meantime on the 30th September, Mr. Benson made a formal offer of \$275,000 for the properties, and agreed not to withdraw the offer under penalty of the forfeiture of his deposit of \$10,000.

Within a week after the referee's decision, W. H. Blake K.C., counsel for Mr. Benson, entered an appeal against that decision on the following grounds:

1st. That the sale was not made by the liquidator, as the statute requires, and that he did not accept the offer of Mr. Long.

2nd. That Mr. Long was and is an inspector of the estate and could not purchase.

3rd. That the sale was made improvidently and at an undervalue, and not in accordance with the practice of the court.

4th. That the offer of Mr. Long and the acceptance by the referee did not constitute a definite bargain capable of being enforced. There was no written evidence of such bargain, and its terms were not enforced.

In his argument, Mr. Blake said he had no doubt the referee had acted with the best intentions, but he had misread the language of the Winding-up Act, and had assumed powers not given to him by the statute. According to the evidence it appeared that the properties were originally valued at about \$900,000. The liquidator did not expect to realize that sum, but brought them down to something like half a million. What had taken place was that Mr. Long offered \$253,000 for assets worth half a million, and then turned around and made use of the knowledge he had acquired as an inspector to sell the properties in detail at a profit of nearly \$125,000. When Mr. Long made his purchase there was \$40,000 of cash in the bank, \$75,000 in bills receivable, \$17,000 net in manufactured goods (realized upon at 55 cents on the \$1 on \$32,000), \$1,500 in rebates on insurance. Then there was the following valuation

of the mill properties, based on what Mr. Long had been offered or what he had put forward to prospective purchasers as "bargain counter prices:" Lambton Mills, \$6,000; Carleton Place, \$56,000; Hespeler, \$125,000, and Waterloo, \$54,000, making in all \$377,500. From this deduct the \$253,000 accepted by the referee, and there would be left the handsome margin of \$124,500. The question, however, was not whether Mr. Long was making an excessive profit by the transaction, but whether the sale took place according to the practice prescribed by the court, whether the usual safeguards had been taken and whether it was a fair and orderly transaction, which the court could support? On these points he directed attention to the evidence of the liquidator, who had said that the reserve bid should not be less than \$350,000, and who when asked as to the sale at Mr. Long's figures, said: "I did not approve of the sale. I did not object. I followed the direction of the court, as its servant." Mr. Davidson supposed he was bound to obey the direction of the court, but he disapproved of the sale, but in the face of that disapproval there could be no proper sale under the Act. Section 31 of the Act states that "the liquidator may, with the approval of the court, sell the real and personal property, etc." While he requires the approval of the court it will be seen that the liquidator, not the court, is the contracting party. The liquidator has, in this case, never entered into a contract or sale. He cited the case of the Sun Lithographing Co., which was an appeal from the Master-in-Ordinary, as to whether a compromise could be effected against a dissenting minority of the creditors. It was held that the court had no jurisdiction to effect such a compromise, but that this power was vested in the liquidator with the sanction of the court. The liquidator is not a mere figure-head, but is nominated by the court for his fitness to wind up an estate in the best interests of the shareholders, and he has absolute control of the assets, and the creditors are entitled to the benefit of his experience and judgment. It is he who sells or determines upon a compromise, though his work is not complete without the sanction of the court. Mr. Blake then recounted the steps that led up to the sale on the 22nd September, and remarked on the fact that only about a quarter of the shareholders received notice of this meeting, the notice itself being vague and not stating the definite step that was to be taken of selling the assets without reserve. On that date we have Mr. Long coming and purchasing at a figure which he must have known was utterly inadequate. As an inspector, he was there to get the most for the creditors, and as an inspector he had access to special knowledge of the affairs of the company. It was not fair that he could drop the character of inspector and make use of the knowledge he had gained to become a purchaser. Mr. Long was a shareholder in the Penman Mfg. Co., of Paris, Ont., to the extent of \$64,000 or \$65,000, and to that company, within two days of his purchase of the properties, he offered the Hespeler mills at what he regarded as a "bargain counter price." The letter was as follows:

"There is in the mills at Hespeler:

Wool	\$3,279 08
Shoddy	1,433 53
Rags	925 95
Yarn	1,643 50
Supplies	5,439 69
Dyestuffs	2,543 80
Machine supplies	722 85
Office furniture	329 54

\$16,297 94

As a director of the Penman Co. I would recommend that you offer \$130,000 for the mills, houses, lands and everything

connected with the place, on one year's time without interest. I could hold the deeds and endorse your paper. If accepted, I would suggest putting a man in charge who is a carder and spinner and let him do all the work you could give him, and try and work for Newlands, the Galt Knitting Co., Berlin Felt Boot Co., and any others who give out work or buy yarn; look after the houses, collect rents, etc., and keep the place in order and insurance right. Next spring, if it is decided that you do not want them connected with your present mills, we could sell them or may be get up a separate company to run them. I feel sure these mills will be worth double the day after the Penman Co. buy them, and I do not like to let these mills get into other hands until the Penman Co. has plenty of time to consider. The risk is so small in buying, as I suggest. I think you should seriously consider the proposition."

Mr. Long had been some months inspector, and why did he not, while in that capacity, make this offer to the Penman Company in behalf of the creditors, whose rights and interests he was expected to protect? If he had in the meantime resigned his position as inspector and then come in as an outsider, there would have been less objection to his course, but there was no line on record to show that he had relinquished his inspectorship. He was still, by his own admission, an inspector. Mr. Long had sold the manufactured cloth, valued at \$32,000, for \$17,000; had sold the two Carleton Place mills at \$56,000; had refused \$6,000 for the Lambton property; had asked for the Waterloo mill \$54,000; had named \$130,000 as a bargain counter price for the Hespeler mills, while the supplies were estimated by the liquidator to be worth 90 cents on the \$1. As to the Waterloo mill, he had wired, as follows, to George Moore, a prospective purchaser: "Waterloo for sale, \$54,000, including all supplies in mill. I will take \$5,000 [down] with you, Seagram, Randall and friends. Payments made easy." In the case of the Hespeler mill, he had wired to C. Kloepper, Guelph, on the 30th September, as follows: "If you buy Hespeler, I believe you could bond it for \$100,000 at 6 per cent., so it would only be necessary to raise money to run it. There is a big thing in this property for a promoter." A letter from Mr. Long to Mr. Benson, dated September 28th, was also put in as follows: "I have been thinking over the loss you will make re Canada Woolen Mills. I will offer you the Hespeler mills, including wool, supplies, etc., inventoried as \$16,297.94 for \$125,000, (this does not include any finished goods). If you accept, wire me and send cheque for \$25,000 on account. You can turn in your dividends from the liquidator as part payment on balance, and I will carry the remainder for you for one year at 6 per cent. on security of the property or other approved securities. By accepting this offer and properly handling the properties, you should save your whole investment. I will hold this offer open until 5 p.m. to-morrow, 29th." It would be seen from these dealings that Mr. Long expected to make a good thing out of it; and the fact that he made it a condition of his offer to the referee that his terms would be either accepted or rejected on the nail made it evident that he wanted to make the good thing sure. He (Mr. Blake) contended that the sale was improvident and a proof of this was in the offer of \$275,000, which his client was prepared to give. In speaking of this offer, he was aware that all he had said against Mr. Long's offer would tell against Mr. Benson's, but his client had made the offer not merely for the sake of displacing Mr. Long, but of doing better than had been done for the creditors, of which Mr. Benson was one. If the court should be willing to release Mr. Benson from his position as an inspector, he would guarantee that the whole estate would fare better by \$22,000. Dealing with the legal precedent, quoted by the referee, Mr. Blake contended that the principle affirmed in the Quebec case was that any one occupying a fiduciary relation to an estate

should not be allowed to make a profit for himself out of that relationship. In the case re Alger, it was laid down that what the court looked at was that the utmost should be done to render the most complete justice to the creditors, and to get the highest price possible for the estate. It was not the mere language of statutes that should be looked at, but their plain purpose and principle. Upon these grounds he maintained that Mr. Long, as an inspector, was placed in a fiduciary position, whether he willed it or no, and had no right to appear as a purchaser making a profit to himself out of his position; that the sale was an improvident one, as shown by Mr. Benson's offer, by the liquidator's valuations, and by Mr. Long's expectations in re-selling the properties; and that the notice given of the sale was vague and insufficient, in that it was not sent to all the creditors, but only to an actual minority in number, and that it did not inform the creditors that a sale without reserve would be made or even that a sale would be made at all. His own client, for instance, as shown by his evidence, was unaware till two hours before the meeting, that an offer was to be made. Mr. Benson protested at the meeting that had he known a sale was to be made under such conditions, he would have prepared himself, before leaving Montreal, to make a better offer. On these grounds Mr. Blake asked that the sale be set aside.

I. F. Hellmuth, K.C., acting for Mr. Crerar, Mr. Long's counsel, said that in approving of the sale, he spoke not only for Mr. Long, but for two of the other large creditors. He maintained that the notice of sale was sufficient, as it was made to 90 per cent., in value, of the creditors, being sent to all over \$5,000. He regarded the sale as having come about not by Mr. Long tendering for the property, but by the referee tendering it to him at \$253,000. If Mr. Benson thought the properties worth \$275,000, why did he not make that offer on the 22nd September? The liquidator had given his consent to the sale, and this with the notice made it complete and regular.

His Lordship pointed out that the liquidator, in his evidence, said he did not approve of the sale, as the price in his judgment was too low. Whatever appearance of consent there was on the part of the liquidator seemed to have come from his own inadequate knowledge of his rights. The liquidator thought he was bound to follow the direction of the court.

Mr. Hellmuth said that Mr. Benson's action in objecting to the sale was on purely selfish grounds, and was not dictated by any interest in the other creditors. Mr. Long, on the other hand, could say this that he had written to and interviewed, on behalf of the estate, before the sale, several of the very men to whom he afterwards sold parcels of the property, and it was admitted that he had, previous to the sale, done more to hunt up customers than any of the other inspectors or others concerned—perhaps more than all of them put together. As for Mr. Long's position as an inspector, he contended that, whether he formally resigned that position or not, from the moment he put in the tender he de facto ceased to be an inspector. He recounted the difficulties met in making the sale, and claimed that in view of the condition of the woolen trade and the apparent doubt or indifference of those who might be expected to come forward as purchasers, and in view also of the depreciation of the properties by further delays, the price paid by Mr. Long was a good one. Nothing came of the advertisement calling for tenders, though they were extensively circulated. The Carleton Place mills were tendered for at only \$35,000, and \$35,000 was bid for the Waterloo mills. It was said that the liquidator was privately offered \$40,000 for the Waterloo mill, and \$5,000 for the Lambton estate. For the other properties nothing was offered, and as two experienced mill men had said that nobody would buy the Hespeler mills, except at a bargain, it seemed clear that the referee had done the best thing

for the creditors, when he made the sale to Mr. Long. It appeared to him that the liquidator, though he may not have known his duties, had sufficiently approved of the sale. The great majority of the creditors represented approved of the sale, and it was never intended that a single creditor should block the settlement of an estate in this way.

G. H. D. Lee, representing the Dominion Bank, said that at the meeting of September 22nd no objection was taken to the sale on the ground that Mr. Long was an inspector. From June till August nothing effective was done to dispose of the mills, and the offers that were made for individual properties were such that no one concerned could accept. He only mentioned these circumstances to show what might happen if Mr. Long's offer had been rejected. They accepted that as the best they could get. The difficulty appeared to be that the reserve bids were too high. The inspectors were the best judges of the possibilities of the case, and the majority of them thought the best thing had been done. If they were to refuse the \$253,000, what were they going to get?

Richard Cassels, of Cassels, Cassels & Brock, representing the liquidator, said he must repel the insinuation that his client thought the sale carried out in the best interests of the creditors. He did not approve of the sale, but was advised that if he refused the offer made he might be held personally liable for the consequences. The offer of Mr. Long, it should be understood, was made direct to the referee and not to the liquidator. His services were not on a commission basis, but were remunerated by a fixed sum. His hands were tied. At first the mills were to be sold as going concerns, but afterwards this plan was changed, and he was directed to advertise for tenders. Unfortunately this step was taken at a time when many possible purchasers were out of town, some of them in Europe, and the uncertainty of the trade told against the prospects for the sale. The liquidator was never in a position to go personally to purchasers and negotiate.

Mr. Blake, in replying to opposing counsel, said that if Mr. Long had proceeded with the idea of his duty as inspector in his mind he should have gone at first to the persons to whom he afterwards effected sales, and should, on behalf of the creditors, have made the sales he afterwards did in his own behalf. The meeting, at which it was decided to hold the sale of the 22nd September, was a casual meeting, in the referee's office, of three out of the six inspectors and was not a representative meeting. Neither he (Mr. Blake) nor his client knew what transpired there. As a matter of fact, Mr. Benson had matured his own offer before ever he knew that Mr. Long had an offer to make.

His Lordship said he would give his decision within a few days, and the court adjourned.

In addition to the telegrams, and letters referred to in the addresses of counsel, an affidavit was submitted from George Davidson, the liquidator, stating that the following were the valuations he had placed upon the properties with the reserve bids fixed in each case:

	Valuation.	Reserve Bid.
Hespeler mills	\$400,000	\$200,000
Waterloo	150,000	75,000
Hawthorne	50,000	35,000
Gillies	35,000	30,000
Lambton	33,000	7,000

The deponent stated that at the time, and for many years before the company was formed, he was connected with the Waterloo mill and had knowledge of the properties. The prices named were not unreasonable. After the acquisition of the mills by the present company, considerable money was spent in improvements and new machinery. The Hespeler mills were now in better condition than before and Waterloo in as good

condition (though not so much was spent on the last named). The conditions of trade were not now so good. The Lambton mill had been burnt and not rebuilt, but the company own the site and the dwellings erected for the employees to whom they were rented at the time, and a small rental is derived from these still. The supplies and tools were in good condition. There was probably \$20,000 to \$25,000 worth of raw material which ought to be worth 90 cents on the \$1. The reserve bid should not be less than \$350,000 for the six parcels. Since the company bought the Hawthorne and Gillies mills, values have entirely changed, and the reserve bid should be higher for the Gillies than the Hawthorne. The book accounts are all of high class, and, except about \$7,000, which has been on the books for two or three years, are worth 100 cents, not less than 75 cents, anyhow.

On the 25th October, Judge MacMahon gave his decision, as follows:

The Judgment.

Motion on behalf of W. T. Benson & Co., creditors of the Canada Woolen Mills, Limited, by way of appeal from the certificate of James S. Cartwright, Esq., official referee, and for a reconsideration of the offer made by W. D. Long to purchase the assets of the said company and to consider any further offers that might be made, and for such orders and direction as may seem proper under the circumstances upon the following amongst other grounds:

(1) The sale was not made by the liquidator of the said company, as the statute requires, nor did he accept the offer of the said Long.

(2) The said Long was and is an inspector appointed under the said Act, and could not purchase.

(3) The sale was made improvidently and at an undervalue and not in accordance with the practice of the court.

(4) The offer by the said Long and the acceptance thereof by the said referee did not constitute a definite bargain capable of being enforced, and there was no written evidence of the said bargain and its terms were not settled.

The most of the material facts are set out in the report of the learned referee and need not be repeated. There are, however, a few facts of moment which are not dealt with in the report, and those I will refer to presently.

Mr. Long was one of the six inspectors in the liquidation, and was such when he purchased the assets of the estate for \$253,000. The first ground of appeal is that being an inspector, and therefore in a position of trust, he could not legally become a purchaser of the estate. In *Segsworth v. Anderson, et al.* (1893), 23 O.R., 573. Jorgenson, a merchant, had failed, and made an assignment for the benefit of his creditors under the statute to one Barber. The defendants, Anderson and Lee, were creditors, the latter being appointed sole inspector of the insolvent's estate. The insolvent's wife purchased the estate from the assignee, the defendants becoming responsible to the assignee for payment of the purchase money, and by a secret arrangement beforehand received security from the wife upon the goods purchased by her not only for the amount for which they had become responsible, but for the full amount of these claims as creditors of the husband. It was held in an action brought by Segsworth, another creditor of Jorgenson's, that the estate was entitled to the benefit of whatever advantage the defendants derived from the transaction, and that they should account to the assignee for the difference between the amount of their claims and the amount they would have received by way of dividend from the estate. The case was appealed to the Court of Appeal, and that court, while holding that the defendant Lee occupied a fiduciary position towards the creditors, thought that, as on the evidence it was not shown that the

estate was likely to lose anything by the sale to the defendants, the appeal should be dismissed; 21 A. 242. When the case reached the Supreme Court (24 Sp. Ct., 699), that court allowed the appeal from the Court of Appeal, and held that the defendant Lee, as inspector, stood in a position of trust towards the creditors, and could not obtain an advantage for himself from his position, and that the creditors were entitled to a reference to ascertain what profit, if any, he had derived from the transaction.

In *Gastonguay v. Savoie, et al.* (1899) 29 Sp. Ct., 613, it was held that an inspector of an insolvent estate is a person having duties of a fiduciary nature to perform in respect thereto, and he cannot be allowed to become a purchaser on his own account of any part of the estate of the insolvent. Mr. Justice Taschereau, in his judgment, page 614, says: "Upon the ground that the inspector of an insolvent estate cannot be allowed to purchase any property of the insolvent, as the respondent has done, I would allow the appeal to annul this sale. It is a principle of law which courts of justice are bound to strictly apply, and no one having duties of a fiduciary character to discharge, should be allowed to put his duties in conflict with his interests." . . . "I cannot divest my mind of the opinion that it would be opening the door to frauds if the courts failed to forbid such dealings."

In *ex-parte James*, 8 Ves., it is said by Lord Chancellor Eldon, at page 345: "This doctrine as to purchases by trustees, assignees, and persons having a confidential character, stands much more upon general principle than upon the circumstances of an individual case. It rests upon this that the purchase is not permitted in any case, however honest the circumstances; the general interests of justice requiring it to be destroyed in every instance, as no court is equal to the examination and ascertainment of the truth in much the greater number of cases. And at p. 348: The principle is, that as the trustee is bound by his duty to acquire all the knowledge possible, to enable him to sell to the utmost advantage for *cestui que trust*, the question, what knowledge he has obtained, and whether he has fairly given the benefit of that knowledge to the *cestui que trust*, which he acquires at the expense of the *cestui que trust*, no court can discuss with competent sufficiency or safety to the parties."

Now, I find from the correspondence put in that Mr. Long, having purchased on the 22nd of September, he, two days after—on the 24th—telegraphed to George Moore, at Waterloo, offering the Waterloo Mills for fifty thousand dollars, including all supplies in mill, and saying: "I will take five thousand with you, Seagram, Randall and friends. Payments made easy. Wire me reply. Sold both Carleton mills." He sold the Carleton mills at \$50,000. He also on the 24th wrote the Penman Manufacturing Co., of Paris, in which he is a large shareholder and a director, regarding the mills at Hespeler, giving a list of mill supplies on hand, amounting to \$16,297, and then stating:

"As a director of the Penman Co., I would recommend that you offer \$130,000 for the mills, houses, lands and everything connected with the place, on one year's time, without interest. I could hold the deeds and endorse your paper. If accepted, I would suggest putting a man in charge, who is a carder and spinner, and let him do all the work you can give him, and try and work for Newlands, Galt Knitting Co., Berlin Felt Boot Co., and others, who give out work or buy yarn; look after the houses, collect rents, etc., and keep the place in order, and insurance right. Next spring, if it is decided that that you do not want them connected with your present mills, we could sell them or may be get up a separate company to run them. I feel sure these mills will be worth double the day after the Penman Co. buy them, and I do not like to let these

mills go into other hands until the Penman Co. has plenty of time to consider. The risk is so small in buying, as I suggest. I think you should seriously consider the proposition."

There was at the time that Mr. Long made his offer \$37,000 cash belonging to the estate in the bank, which was included in the assets sold; there were manufactured goods, which Mr. Long immediately sold for \$17,000; there were supplies which were necessary for the running of the mills amounting to \$26,000, but which were carried into the account at \$13,000, and bills receivable amounting to about \$80,000, which were carried in at \$75,000, as it was considered that they were good for that sum; then there was \$4,500 rebate on insurance. These several items amounted to \$146,000.

The Penman Co. has these mills under option at \$125,000.

It is manifest that Mr. Long was in a position to know of people who were likely to be purchasers for the mills which he acquired, and the facility with which he was able to dispose of some of the properties shows that, that when the mills were being sold separately there was no great difficulty in disposing of them; and he seems to have been possessed of a knowledge as to intending purchasers, which if, as inspector, he had communicated to the liquidator, would have been of very great value to the estate.

As to the point arising under Section 31 of the Act, upon the appointment of a liquidator, the estate of the insolvent company became vested in him, and the duty devolved on him of receiving offers or tenders for the sale of the estate; and "he may, with the approval of the court, and upon such previous notice to the creditors, shareholders or members as the court orders, sell the real, personal, heritable and movable property, effects and choses-in-action by public auction or private contract, and transfer the whole thereof to any person or company, or sell the same in parcels."

It is, I think, reasonably clear that it is upon him, as one of the officers of the court, that the duty is cast of recommending—perhaps with the sanction of the inspectors—to the court, that the offer of a particular tender for the assets of the estate be accepted or rejected. The liquidator is to dispose of the estate with the sanction of the court; but the court cannot dispose of the estate without the sanction of the liquidator.

This, I think, is apparent from the interpretation put upon Section 33, which provides that the liquidator may, with the approval of the court, compromise all calls and liabilities to calls, debts and liabilities . . . and all claims that are present or future, certain or contingent, etc.

Under Section 190 of the English Winding-up Act (which is not essentially different from Section 33 of our Act), the Court of Appeal held in *Re East of England Banking Co.* (1872), L.R. 7 Ch. Ap., 309, that the court had no jurisdiction to order the liquidator in a winding-up to consent to a compromise with a contributory, L.J. James saying at page 311: "I am of the opinion that the only power is in the liquidator with the sanction of the court, and there is no power in the court to order a compromise, whether the liquidator recommends it or not." That case was followed in *Re Sun Lithographic Co.* (1893), 24 O.R., 200, where it was held that there was no power under Section 33 to enforce a compromise upon dissentient minorities of creditors.

I, therefore, reach the conclusion that the referee could not dispose of the assets of the estate without the assent of the liquidator.

The offer made by Mr. Long to the learned referee, of

\$253,000, was not sanctioned by Mr. Davidson, the liquidator. He thought that a better offer could be had, having regard to the prices at which the mills were purchased by the insolvent company (between \$600,000 and \$700,000), and he considered the sacrifice would be too great if Mr. Long's offer was accepted. The opinion he entertained has been fully justified by the celerity with which Mr. Long was able to dispose of some of the mills and other assets, and the prices realized therefrom. The probable profit to Mr. Long would, if the sale were carried out, be about \$125,000.

The sale must be set aside, and Mr. Long must account to the liquidator for the profits arising from any portion of the assets sold by him. The costs of the motion must be paid by Mr. Long.

Notes of the Case.

The Canada Woolen Mills, Limited, was incorporated in 1900, with a capital of \$2,000,000, which by supplementary letters patent, was reduced to \$1,954,000.

Owing to bad conditions of trade, as the result of the severe competition from abroad under the preferential tariff, the company assigned on the 25th April last, the subsequent steps in winding up the estate being recounted in last issue.

The following was a statement of the company's affairs, as made up on the 20th September, 1904:

ASSETS.

Cash on hand	\$ 220 88	
Cash at mills	363 50	
Cash in bank	35 168 67	
	<hr/>	\$35 753 05
Sundry net cash accounts	3,970 01	
Accounts to be adjusted with claimants..	342 48	
	<hr/>	\$ 4,312 49
Accounts receivable	33,107 83	
Bills receivable	42,554 55	
Overdue accounts	7,124 33	
	<hr/>	\$82,856 71
Insurance refund estimated	4 576 00	
Manufactured goods	31,904 19	
Hespeler stock supplies	\$15,968 40	
Hespeler office furniture	329 54	
Waterloo stock supplies	4,219 35	
Waterloo office furniture	95 00	
Carleton Place stock supplies	6,285 00	
Carleton Place office furniture	139 00	
	<hr/>	\$ 27,036 29
Head office furniture and fixtures	1,571 00	
Hespeler real estate and plant	395,334 68	
Waterloo real estate and plant	159,125 69	
Gillies real estate and plant	76,784 81	
Hawthorne real estate and plant	72,079 29	
Lambton Mills real estate and plant	8,000 00	
	<hr/>	\$899,367 20

LIABILITIES.

Total amount of claims	\$4,0597 85
Less dividend, 12 1/2 per cent. paid	51,815 25
	<hr/>
Surplus	\$368,782 60
	<hr/>
	\$30,584 60
	<hr/>
	\$899,367 20

Out of this the expenses of liquidation were to be met, and there was also a claim made by John F. Morley of an in-

definite amount. Since the statement was made up, another dividend of 12 1/2 per cent. has been declared.

The following is a list of creditors of the Canada Woolen Mills, the odd cents in each case being omitted:

Dominion Bank, Toronto	\$240,719
Long & B'sby, Hamilton	82,943
E. T. Carter Estate, Toronto	30,014
W. T. Benson & Co., Montreal	23,778
Oelrichs & Co., New York	21,761
Thomas H. Traplin, Hespeler	3,150
Dominion Dyewood and Chemical Co., Toronto	2,320
Millichamp, Coyle & Co., Toronto	1,687
Hamilton Cotton Co., Hamilton	1,545
Toronto Mill Stock Co., Toronto	1,421
Martin Reidel, Waterloo	1,155
A. Klipstein & Co., New York	880
F. E. Atteaux & Co., Toronto	675
D. Morton & Sons, Limited, Hamilton	494
R. Forbes Co., Limited, Hespeler	452
Canada Foundry Co., Toronto	352
Grant-Hamilton Oil Co., Toronto	242
Balmer, Clay & Denison, Bradford, Eng.	235
New York and Boston Dyewood Co., New York	216
Taylor Bros. & Co., Carleton Place	199
Calvert, Dwyer & Co., Toronto	180
O. W. Shipman & Co., Detroit	170
R. J. Lockhart, M.D., Hespeler	161
Canada Jute Co., Montreal	159
Sadler & Haworth, Toronto	143
R. W. Chisholm & Co., Buffalo	130
Queen City Oil Co., Toronto	120
Paragon Oil Co., Montreal	119
Robert Bain, Paris, Ont.	108
Davis & Furber Machine Co., North Andover	107
Kloepfer & Co., Berlin	103
M. Weichel & Son, Waterloo	105
The Goldie & McCulloch Co., Galt	95
Standard Fuel Co., Toronto	82
Eureka Mineral Wool Co., Toronto	82
W. A. Kribs, Hespeler	69
Julius Cohen & Josephy, Leeds, Eng.	69
B. Greening Wire Co., Hamilton	66
Excelsior Woolen Co., Montreal	64
Arthur Merritt, Boston, Mass.	61
R. F. Preston, M.D., Carleton Place	61
George Reid & Co., Toronto	61
Crowes Iron Works, Guelph	59
Copeland-Chatterton Co., Toronto	54
A. C. Neff, Toronto	60
Keerleyside & Co., London, Ont.	46
George B. Checkford, Toronto	45
H. G. Vogel & Co., Montreal	47
Thomas Bros., Limited, St. Thomas	42
Jacob Kaufman, Berlin	41
Rice Lewis & Son, Toronto	38
Cataract Refining Co., Toronto	36
Bechtel Bros., Waterloo	36
Canada Wool Stock Co., Dundas	34
Charles Kreutziger, Waterloo	33
J. L. Goodhue & Co., Danville, Que.	33
F. W. Mudge & Co., Montreal	30
A. & C. W. Holbrook, Providence	26
James Morrison Brass Mfg. Co., Toronto	25
Conrad Bros., Waterloo	24
M. Coll Bros. & Co., Toronto	19
Wm. Hebrand, Waterloo	15
Anthony Ochs, M.D., Hespeler	15

Andrew Young, Montreal	15
Kilgour Bros., Toronto	15
John Gillies Estate, Carleton Place	14
P. S. Lawrason, Preston	11
Hamilton Brass Co., Hamilton	10
A. B. Jardine & Co., Hespeler	7
H. Brown & Sons, Carleton Place	5
Lewis Grill, Hespeler	6
Grand & Toy, Toronto	4
I. E. Shantz & Co., Berlin	4
W. A. Wood, Montreal	4
Salisbury Mfg. Co., Providence	3
Menzies & Co., Toronto	2
Johnson & Bassett, Worcester	2
Quaker City Rubber Co., Philadelphia	1
H. W. Karch, Hespeler	1
John F. Morley, Dundas	981
Samuel King, Toronto	20
Waterloo Mfg. Co., Waterloo	26
S. J. Moore, Markham	2,000
Henry Sachs, Hespeler	4
Millichamp, Coyle & Co., Toronto, rent	500
Canadian Manufacturers' Association	190

On the 7th inst., Mr. Hellmuth, for Mr. Long, moved for leave to appeal from Judge MacMahon's judgment to the Court of Appeal. After hearing argument, leave was granted, on the understanding that Mr. Long would expedite the hearing of the appeal. Meantime, Mr. Long's purchase money (\$253,000) is to be paid into the court or to the liquidator.



BRITISH TEXTILE CENTRES.

Kidderminster.—The improvement in trade is very gradual. Orders are now coming in, but buying is done in a cautious and hesitating manner. The delay does not seem to be caused so much by the higher price lists, for which the buyers are quite prepared, as from an inclination to lower stocks as far as practicable. A little more is doing in yarns, especially woolens, but both in worsted and woolen it is extremely hard to get a margin of profit. The market is forced to be firm, and it is probable that the output of yarn will be further curtailed until a profitable price can be obtained.

Leeds.—New winter ranges, which will be submitted to merchants in a few weeks, are being prepared by manufacturers. Plain greys and fancy styles, with large, quiet, overchecks, are likely to be the fashion, but there is also a feeling for brown shades both for suits and overcoats. While manufacturers show no signs of being really busy, winter repeat orders are coming in, stimulated by the colder weather of the past few days. There is considerable depression in many other branches, and there is but little demand for better-class goods, the industrial population showing a decided preference for low-grade woolens. Trade with Canada still remains unsatisfactory, but South Africa and Australia are sending few orders.

Leicester.—The yarn market was slightly more active, and the deliveries on home account were on a larger scale, while rates showed increasing firmness. Low-grade hosiery fabrics were in very active demand.

Huddersfield.—Trade here is running favorably in the right channels. There was no crush of buyers at the market on Tuesday, but manufacturers and merchants were not overstocked during the week, and those who have not added to their orders are the exceptions. The chief of

activities were the makers of cheap and medium woolen goods and fine and medium worsteds. The former led the way by reason of the great volume of cloth turned out. In all departments, however, there continued fair placements for next spring. The weather, stocks, and, it is asserted, fashion, too, all adversely affect the winter demand, and there were consequently very few repeat orders either for overcoatings or thick suitings. Most branches of the European and colonial trade are kept steadily moving, but South Africa and the United States were slow. There was a fair consumptive demand for wools.—*Textile Mercury.*

Bradford.—The Bradford correspondent of the American Wool and Cotton Reporter writes: Cable news to hand from Melbourne on Thursday respecting the opening of the season's sales there has rather upset the apple cart of merino holders in this market, and a fall of 5 to 10 per cent. is more than what the market had bargained for. Adelaide more or less shook the confidence of spinners, and induced them to bid one cent less for 60s. tops, and now that values are no better in Melbourne has rather disturbed the temper of the market in no uncertain way. There are here no two opinions that colonial prices for fine wools are 5 per cent. below London, and when topmakers are willing to contract for the future delivery of 60s. tops at 1/2d. less than current rates, it must be said that things are off. The circumstance of two days ago is just the thing for Bradford croakers, and some are of the opinion that it will do good to the Bradford trade. My own opinion is that for the time being it has upset all trade, has somewhat dimmed prospects, and weakened the position of holders of the raw material. Bradford has never yet got up to London's level, and now that wool is cheaper in the colonies, it is certain that spinners or manufacturers will not increase their limits. Some argue that the slight ease in Melbourne has only been sufficient to adjust values to current market rates, for last season all colonial markets were ahead of those here, consequently Melbourne and Adelaide have only fallen and come into line with London and Bradford. Prices, so far as they affect current rates, are unchanged, but for next March and later nobody will buy forward unless at a reduction. Some seem to think that the present is simply a "bear" move with the object of getting down values, but Yorkshire representatives in the colonies are not doing much yet, it being the general opinion that rates may still fall a shade more than what they have done. To my mind, whether or not we are going to have lower prices will depend entirely on the trade in manufactured textiles, for some improvement in the output of pieces would undoubtedly lead to a ready absorption of next year's Australian clip. The few crossbreds and comeback wools offered sold very keenly, indeed, at rates fully on a par with those current here. The textile trade is just peeping up a little in the West Riding. Bradford is the most badly situated, Halifax has got a spurt up, Dewsbury and the Calder Valley have found a benefit from blanket orders. Leeds has found a better demand for blue worsted serges, and it is hoped the clothing trade will improve, so that there may be a brighter outlook for the workers. Batley is not slack, some firms going night and day. Huddersfield is fair to good, and during this week there were indications of a still better outlook. Some firms are now on full time that have not been so for some time. There is evidence also that the prices of goods—although cut fine—will leave with careful management a substantial margin on profit. In fact, the way our manufacturers live now-a-days makes them aim at a large profit. Masters are too extravagant now in all trade matters except wages. They want to fly before they can run, and walk before they can creep, and look for a great 'tune in a few years' time. This is one of the causes of

the erratic character of trade such as we have experienced for a couple of decades.

Rochdale.—Manufacturers are fairly well employed in delivering orders placed earlier in the year, and the condition of the wool market keeps prices very firm, the tendency being towards further improvement.

Kirkcaldy.—Business is again somewhat more in evidence in the district linen trade, and some hope is entertained that the worst is past.

Belfast.—The market on Tuesday exhibited a rather improving tendency; though there was a complete absence of any activity, the outlook all round was the turn better. Prices continued very firm, and with any increase in demand would probably advance. The spinning branch was without any material change; current production was easily disposed of; deliveries were in arrear, and prices were stiffly maintained. Manufacturers secured a little more business, and, with exception of damasks, gradual improvement was the rule. White goods for the home markets were in fairly satisfactory demand. The shipping trade was slightly better, and the States showed more vitality.—Textile Mercury.



WOOL MARKETS.

The Toronto market is now practically bare of fleece wool. Supplies now coming in are in very small lots, and the dealers' quiet season is on. Mills are finding some difficulty in securing wool at a price at which they can fill their orders. Quotations remain about the same as last month; that is: Unwashed, 13 to 14c.; fleece, washed, 20 to 21c.; pulled supers, 20 to 22c.; extras, 22 to 24c. During the first few days this month merinos were a trifle easier, but all medium and coarse crossbreds are bringing good prices.

America has been a very large buyer of down and lustre fleece wools in Great Britain during the last month.

Montreal.—Wool market here is strong; prices unchanged, but more demand for wool is experienced, and a further advance is expected at the next London wool sales as a result of a great falling off in wool all over Australia, and Africa especially. Cape greasy, 17 to 21c., according to quality and condition; Canadian pulled, 25 to 26c.; North-West, 17½ to 18½c.

As to the situation in the United States, the Textile Manufacturers' Journal said on the 5th inst:

The developments of the week in the principal wool markets of the country show a decided scarcity of medium and fine medium wools. The inland markets claim that shipments to the East have cleaned up the bulk of available supplies, but there is a growing conviction that first hands in the country districts are hoarding at least a part of the clip for advanced rates. The seaboard markets claim to be almost bare of desirable lots within reasonable price limits. The scarcity of wool is not actual so far as the number of pounds representing the world's supply is concerned, but is relative in so far as wool available at a price consistent with probabilities of the goods market exists. American buyers are operating in London and in Argentina, and their eagerness for wool is reflected by the upward course in foreign markets. The present offers a splendid opportunity for the market to clear itself of noils, wastes and low-grade lots, which is being availed of to the utmost by dealers and manufacturers. Prices are hardening steadily, and the temptation to hold for further advances is probably going to prove too much for dealers who have hitherto shown a very conservative tendency in regard to the possibilities afforded by a rising market. Manufacturers who have taken orders for goods without being covered in wool and yarns are in some-

what of a quandary, and their only course is at present to stay out of the market in hopes of retarding the rapid advance. Most large spinners, however, are believed to have bought sufficient to carry them for a month or two, and are, therefore, indifferent to present conditions.

Of the New York market the Journal has this to say: "Sell and repent" has been the motto of the majority of the New York wool men during this period of rapidly hardening raw material markets. The dealers have been conservative in regard to their expectations of big prices, and have not as a rule held wools for speculation, although to-day a dealer is morally certain that when he lets go of a desirable lot, even at top of the market quotations, he will not in all probability be able to replace it at anything like present selling prices. In fact, local dealers are said to be timid in not having the courage of their convictions in regard to holding wools for the better values which they can foresee. At the same time the loathness of owners of wool to put a definite price on their holdings is becoming more marked every day, and is driving some manufacturers who are sadly in need of supplies to the point of desperation.

Medium wools of all denominations are markedly scarce; that is, at a price. The vast business that has been doing on these grades for a year or two has gradually brought prices to a point which is not only relatively higher than finer qualities, but is dangerously near the importing point of foreign substitutes. A great deal of foreign wool of such grades would have been brought in ere this to relieve the situation had the market on the other side not advanced recently. As a veteran dealer expresses it: "There is and always has been wool enough to go round, and the world will not suffer for clothing, but there is going to be a stringency in available wools at reasonable prices, and the only possible relief to manufacturers is for them to advance considerably the prices of their finished goods. Those who do not do so may face the alternative of closing their mills." Scoured fleeces are supposed to be in demand at 60 cents and over, but 64 cents is universally asked for good qualities. Fine medium wools have been bought freely at 57 and 58 cents. Scoured wools are getting scarcer owing to the belief that when laid aside for thirty days or so they will gain slightly in weight.

The London correspondent of the Journal writes as follows under date October 22nd: "During the week business has been decidedly quiet in this market. Buyers have become rather tired of sending applications for wool and then finding nothing available to answer their requirements. The stock is so small here just now that the chances against meeting with what one is in search of are quite 20 to 1. There is also another cause which inclines consumers to hesitate in buying raw material at the present time, namely, the news coming to hand with reference to the opening of the season in the Australian markets. The impression conveyed by the cable advices to hand so far is that prices are not as strong there as they were in the last London auctions. In other words, that on all the descriptions of wool available the Australian level is below that current in Europe at the present time. Arrivals for the sales which open here on November 22nd accrue very slowly. Of course, at this period of the year when the new season's clip is just beginning, the shipments are very closely calculated, so that the wool should just reach this side by the date on which the arrival list closes. That date is November 14th, and doubtless within a few days of that there will be a considerable rush of ships. Up to now the total to hand only amounts to 25,500 bales, and of this 5,000 bales are passing by London and going direct to those who purchased them in Australia, New Zealand and South Africa."

C. E. RILEY & CO'Y.

281-285 Congress Street, Boston, Mass.

Builders and Importers of

COTTON, WOOLEN, WORSTED

MACHINERY

CARD CLOTHING, EMERY FILLET, EGYPTIAN COTTON,

SPINDLES, FLYERS, FLUTED AND SHELL ROLLS, GRINDING ROLLS, &c.

Sole Agents for
Hamilton Cotton Co.'s

Beam Warps, Mule
Ropes and Spindle
Bandings.

Samuel Law & Sons

H. & T. Steel English
Card Clothing.

Francis Willey & Co.

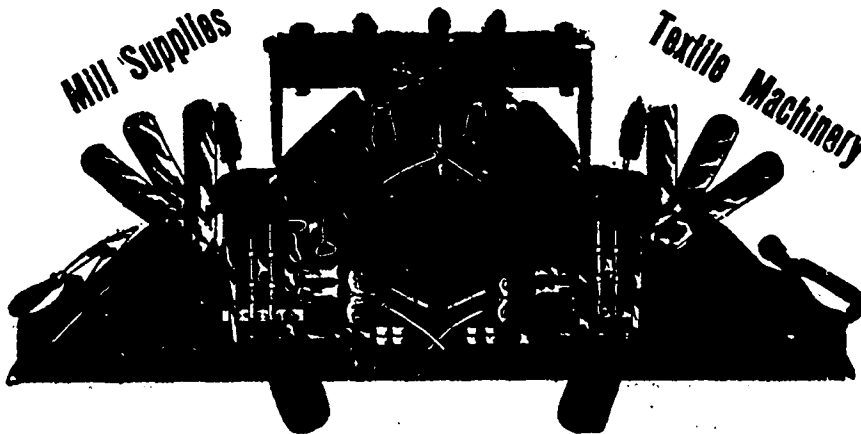
Bradford, Eng.
Wools, Tops, Noils.

English Leather
Belting.

GEORGE REID & COMPANY, WOOL

Mill Supplies

Textile Machinery



J. Smith
Woolen Machinery Co.
PHILADELPHIA.
Carding, Spinning,
Pickering Machinery.

Crompton & Knowles
Loom Works.
Looms for weaving
every description of
Fabric.

Prince, Smith & Son
KEIGHLEY, ENG.
Worsted Spinning
Machinery.

Office—11 & 13 Front E.

Warerooms—138 Esplanade E.
(Foot of Jarvis St.)

TORONTO

Telephone, Main 3591
Night call, North 2561

G. THOMPSON.

J. S. MITCHELL.

THOMPSON & CO.

SHERBROOKE, QUEBEC.

Manufacturers of

Bobbins and Spools

OF EVERY DESCRIPTION

For Woolen, Cotton and Rope Mills. Extra facilities for
supplying new mills and filling large orders.

Correspondence Solicited.

Orders Promptly Filled

FOR SALE.—“SET WOOLEN MILL” favorably situated for general
work, also for custom trade. Mill now going and doing a healthy business.
Address “BROWN,” c/o Canadian Journal of Fabrics.

—The Cassels Color Co., New York and Montreal, have recently issued a book of samples of diamine colors on cotton yarn. The book contains about 175 samples, with dyeing instructions. These dyeings are fast to washing and milling. Another production of the same firm is a case containing over 100 samples showing immedial colors on loose cotton; this also contains full instructions for dyeing.

THE NEW

French Shoddy Picker Machine

SUPERIOR TO ALL OTHERS.

High Test Awarded at Paris Exposition, 1900.

Of SILK, WOOL, COTTON, WASTE, JUTE, etc., it will produce fifty per cent. more production than the Garnett Machine on one-half the power.—Has no rival on the market.

Toronto Woolen Machinery Company

118 DUKE STREET, TORONTO.

L. BREDDANNAZ, Manager.

S Agents for Canada and the United States.

Prices on Application.

Prices on Application

A DYING INDUSTRY.

The Textile World Record, Boston and Philadelphia, says: Canada is slowly learning from her own expensive experience a lesson that she could have learned without cost from the past experience of the United States, that the woolen industry cannot exist in America under an ad valorem tariff of 30 or 40 per cent. The practical abolition of the British preference on woolen goods some months ago has not helped the woolen mills. The woolen tariff is now only 30 per cent., and the difference between the old and new rates is so slight as to be negligible. Even if an adequate specific duty had been imposed, the enormous stock of cheap English goods now in Canada would alone have been sufficient to delay for years the revival of the domestic woolen industry. Mills are closed or running short time at a loss while the volume of woolen imports has not lessened. Importers are visiting England and making contracts for future delivery as freely as before the change. This is not surprising, because the increase amounts to but 6 2-3 per cent. ad valorem. It is difficult to believe that the Fielding Government actually expected any relief to result from such a change, especially in view of the fact that the experience of the United States has shown so clearly that British woolen goods can be kept from an American market only by a combination of high ad valorem and specific duties.

The general curtailment of production and bankruptcy of leading Canadian mills forced the Government to abolish the

preference to British goods some months ago, and failures and shut-downs have continued without interruption, the latest case being the closing of the Excelsior Woolen Mills of Montreal.



CHEMICALS AND DYESTUFFS.

No change to report in trade. The mills are now waiting the action of the Government in regard to tariff.

Bleaching powder	\$ 1 40 to \$ 1 60
Bicarb soda	1 75 to 2 00
Sal. soda	0 75 to 0 90
Carbolic acid, 1 lb. bottles	0 35 to 0 40
Caustic soda, 60°	2 10 to 2 25
Caustic soda, 70°	2 35 to 2 50
Chlorate of potash	0 07 to 0 08
Alum	1 75 to 1 95
Copp. vas	0 50 to 0 65
Sulphur flour	1 50 to 1 60
Sulphur rock	1 45 to 1 80
Sulphate of copper	0 06 to 0 06½
White sugar of lead	0 07 to 0 08¾
Sumac, Sicily, per ton	45 00 to 50 00
Bich. potash	0 07 to 0 08¾
Soda ash, 487° to 587°	1 15 to 1 25
Chip logwood	1 50 to 1 75
Castor oil	0 07 to 0 08
Cocanut oil	0 07 to 0 08

NEW BLACK FOR WOOL



Absolutely Fast ONE DIP Black

Unequaled for depth of shade. Users of black should investigate. Fastest Black on the market.

F. E. ATTEAUX AND CO.
BOSTON.

CANADIAN BRANCHES:

41 Colborne Street, TORONTO

13 Lemoine Street, MONTREAL

A. KLIPSTEIN & CO.

122 PEARL STREET, NEW YORK.

HAMILTON, Ont., 24 Catherine Street, N.

MONTREAL, Que., 17 Lemoine Street

Chemicals and Dyestuffs.

CARBIDE BLACK E

Cheapest and Best One Dip Black on the Market

HEADQUARTERS FOR

- | | |
|-------------------------|-----------------------|
| Caustic Potash 90% | Carbonate of Potash |
| Chlorate of Potash | Bleaching Powder |
| Phosphate of Soda | Refined Cutch A.K.C. |
| Yellow Prussiate Potash | Yellow Prussiate Soda |

BRANCHES—

BOSTON—287-288 Congress St.

CHICAGO—126 Kinzie St.

PHILADELPHIA—70-72 N. Front St.

PROVIDENCE—13 Mathewson St.

Sole Agents for the Society of Chemical Industry, Basle, Switzerland.

POLLACK BROTHERS & CO.,

Canadian Sales Dept. for

H. A. METZ & CO., NEW YORK.

Sole Agents for the products of FARBWERKE VORM. MEISTER LUCIUS & BRUENING, HOECHST O/ MAIN.

ANILINES, ALIZARINES, SYNTHETIC INDIGO, Etc.

55 ST. FRANCOIS XAVIER ST., MONTREAL.

GEIGY ANILINE and EXTRACT COMPANY

No. 69 Barclay Street, - New York.

BOSTON. PROVIDENCE. PHILADELPHIA. ATLANTA. CHICAGO. TORONTO.

Aniline Colors, Calico Printers' Specialties. Dyewood and Sumac Extracts Synthetic Indigo J. R. G.

Canadian Manager: T. D. WARDLAW, 11 Front St. East, TORONTO.

SATISFACTION GUARANTEED

—TO USERS OF—

“GENUINE OAK” TANNED LEATHER BELTING

Made from **ENGLISH STOCK.**

More Solid Leather to the Foot than any
Other Belt Made.

No Shoulders, Necks or Bellies.

D. K. McLAREN,

Manufacturer and Mill Furnisher

TORONTO

Bay Street

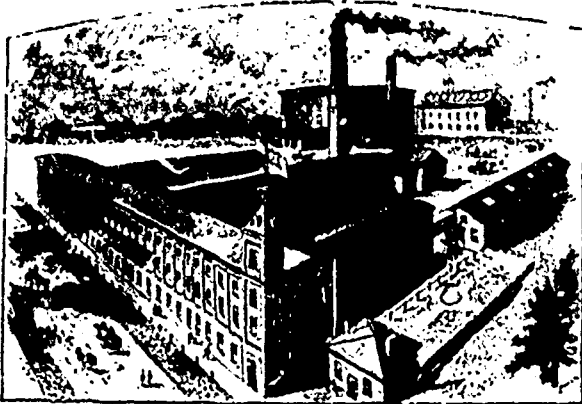
MONTREAL

Craig Street

Hamilton Cotton Co., Hamilton

MANUFACTURERS OF.

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



SELLING AGENTS

WM. H. STEWART, 18 Front St. East, Toronto.
Agent for Warps. GEO. REID, 11 & 13 Front St. E. TORONTO.

Labels

FOR EVERY
PURPOSE
EMBOSS
PRINTED
ENGRAVED

LEVY & Co., 19 Leader Lane, TORONTO

COMMERCIAL TRAVELERS' TEXTILE DIRECTORY

Unquestionably the best thing obtainable in the way of a Pocket Directory of Mills in the United States.

NEW AND ORIGINAL FEATURES

Thirty-two pages of superbly engraved maps, printed in three colors, showing the Textile Towns and States.
Patent Marginal Index, throwing the book open at once to any desired department.

A full list of Hotels in Textile Towns, giving rates, plans and terms of the first class rated houses; also telegraph and money-order stations.

Full data as to Railroads, Population of Towns, etc.
Memorandum margin opposite all mill items throughout the book
For commercial travelers' use only—hence, contains absolutely no textile advertising

PRICE, POSTPAID, \$2.50.

FOR SALE BY

American Directory Company,

102-104 Fulton St. - NEW YORK, N. Y. 10-3

Canada Bobbin Company,

WALKERTON, Ont.

Successors to
KRR & HARCOURT.



Established
1837.

Largest Makers of Bobbins in Canada.

MANUFACTURERS OF ALL KINDS OF

Spools and Bobbins

Used in Woolen, Cotton, Silk, Rope and
Wire Mills, and Small Wood Turnery.

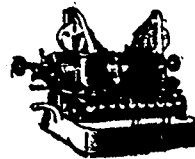
Having lately enlarged and improved our plant, and having a large quantity of well-seasoned stock in the rough always on hand, we are prepared to fill any order carefully and promptly.

REASONS WHY

The Canadian Oliver Typewriter

IS SUPERIOR TO

ALL OTHERS



VISIBLE WRITING.—The writing is visible, each letter being in plain sight the instant it is made.

DOUBLE TYPE-BAR.—It has a double or U shaped Type-Bar provided with a shaft bearing as broad as the bar is long, thus insuring Permanent Alignment without guides.

SPEED.—Its visible writing, rapid escapement, direct type-bar connection, downward stroke, and light touch, make it the most speedy of all writing machines.

TYPE, FACE UPWARD FOR CLEANING.—The type are of steel and lie face upward so that they can be cleaned with one sweep of the ordinary type brush.

PRICE.—\$30.00 cheaper than imported machines of like standard; because MADE IN CANADA.

Why Pay Duty?

CANADIAN OLIVER TYPEWRITER CO., - - MONTREAL.
MANUFACTURERS

Branch: 55 VICTORIA STREET,
TORONTO.

EVAN ARTHUR LEIGH

232 Summer Street, Boston, Mass., U.S.A.

IMPORTER OF

Textile MACHINERY

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 Bros. & Co. are exhibiting in the **Varied Industries Building**, Louisiana Purchase Exhibition, St. Louis, Mo., the most complete line of Cotton Machinery that has yet been exhibited, for spinning from coarse counts up to 800's.

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. Sykes's Card Clothing for Cotton. Critchley's Card Clothing for Woolen and Worsted. Varey's Fallers. Harding's Pins and Circles. Dronsfield's Grinders and Emery Fille. Comber Aprons, Condenser Aprons, etc.

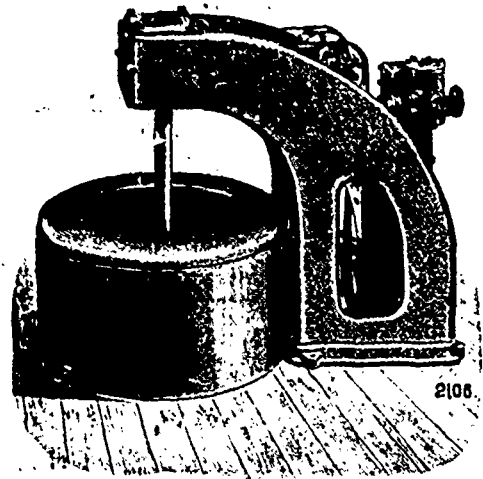
Textile Machinery Association, Limited,
Flax, Hemp and Jute Machinery.

George Hodgson, Limited,
Bradford, Looms for Worseds, etc.

The Automatic Feeding Machine Company,
Feeders for Fibres of all classes.

HYDRO-EXTRACTORS

FOR
WOOL, COTTON, WORSTED
AND ALL OTHER
TEXTILE TRADES



48 in. Engine Driven Suspended Hydro Extractor.

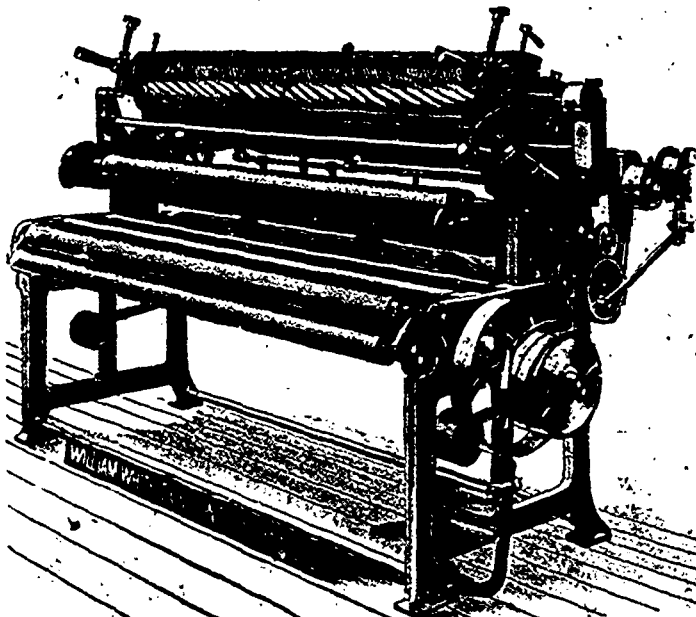
WATSON, LAIDLAW & CO.

DUNDAS STREET. GLASGOW. SCOTLAND.

SEND FOR OUR 1904 CATALOGUE.

William Whiteley & Sons, Ltd.

LOCKWOOD, HUDDERSFIELD, ENGLAND



Complete Cloth Finishing Plants
Tentering and Drying Machines
Wool and Cotton Drying Machines
Improved Self Acting Mules
Winding, Warping and Sizing Machines,
and other Woolen Machinery

Mercerizing Machinery. Complete Plant for Aniline Black.
CATALOGUE ON APPLICATION.

WILLIAM FIRTH,
President.

EDWIN BARNES,
Vice-President.

JOHN H. NELSON,
Treasurer.

WILLIAM FIRTH COMPANY

67, Equitable Bldg., - 150 Devonshire St., BOSTON, Mass.

SOLE IMPORTERS OF
ASA LEES & CO., Limited, Textile Machinery of every description for Cotton, Woolen and Worsted.
SOLE AGENTS FOR
JOSEPH STUBBS, Gassing, Winding and Reeling Machinery for Cotton, Worsted and Silk.
GEO. HATTERSLEY & SONS, Ltd., Makers of every description of Looms, &c.
JAMES MACKIE & SONS, Ltd., Makers of Flax, Tow, Hemp and Jute Preparing and Spinning Machinery.
GEO. ORME & CO.'S Patent Hank Indicators, &c.
JAMES YATES & SON, Hardened and Tempered Steel Card Clothing for Woolen and Worsted Cards.
LOCKETT, CROSSLAND & CO., Engravers and Builders of Leather Embossing Machinery, &c.
R. CENTNER FILS, Heddles.
GOODBRAND & CO., Yarn Testing Machinery, Wrap Reels, &c.
JOSHUA KERSHAW & SON, Roller Skins, &c.
GEORGE SMITH, Doffer Combs, &c.
BRADFORD STEEL PIN CO., Comber Pins. [&c.
CLAPHAM, SMITH & CO., Caps, Tubes and Spindles for Worsted, [&c.
ALSO AGENTS FOR
JOSEPH SYKES BROS., Hardened and Tempered Steel Card Clothing for Cotton.
WILLIAM TATHAM & CO., Waste Machinery.
DRONSFIELD BROS., Limited, Emery Wheel Grinders, Emery Fille and Flat Grinding Machines.
COTTON GORD & VELVET CUTTING MACHINE CO., Corduroy Cutting Machines, &c.
Pick Glasses, Leather Aprons, Patent Wire Chain Aprons.

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 Simpson

Price \$1.00
Post-paid

Address **BIGGAR-SAMUEL, Limited,**
Fraser Bldg., MONTREAL, Can.

ESTABLISHED 1859
THE C. TURNBULL CO.,

OF GALT, Limited.

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

"WE HOLD THEM SAFE."

**The Dominion
 Guarantee Co.**

LIMITED.

Head Office, Montreal, Can.

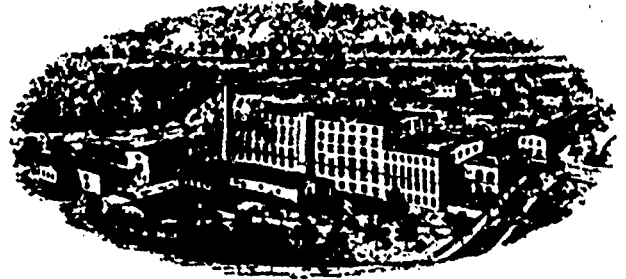
CAPITAL, \$300,000.

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..

Dominion Oil Cloth Co'y

MANUFACTURERS OF Limited

**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.

The Smith Manfg. Co., Limited

Manufacturers of

WOOL STOCK, SHODDIES.

Custom Dyeing, Custom Carpeting,

219-221 Front St. East, - Toronto.

RAILWAY ENGINEERING.

By Cecil B. Smith, M.A. E.

A concise Treatise on Railway Construc-
 tion, etc., for Engineers and Students.

Cloth. 200 Pages.

Profusely Illustrated, - \$1.50.

Biggar-Samuel, Limited, Publishers

Toronto and Montreal.

THE MONTREAL BLANKET CO.

Manufacturers of

**Shoddies, Wool Extracts
 and Upholstering Flocks**

Office and Works: COTE ST. PAUL

P.O. Address: MONTREAL

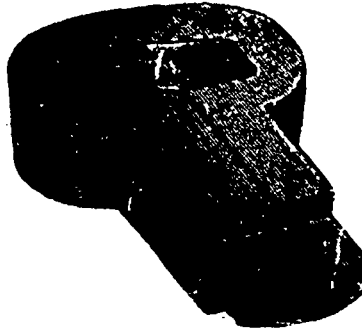
WILLIAM CRABB & CO.

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 Banding and General Mill Furnishings.

Bloomfield Avenue and Morris Canal, NEWARK, N. J.



JOHN W. BARLOW

Manufacturer of

LOOM PICKERS,

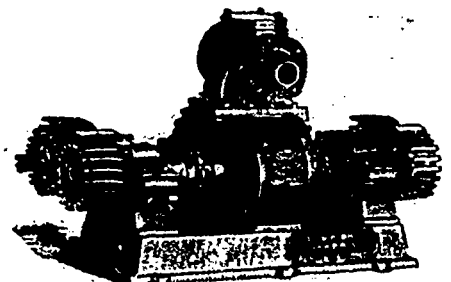
LAWRENCE, MASS.

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

MISSISSIPPI IRON WORKS



ESTABLISHED
 1875.



Manufacturers of English or American Pulling Mills and Washers, Wool Pickers,
 Exhaust Fan Drivers, Dusters, Rotary Force Pumps for Fire Duty, Bellor Feed
 Pumps, Shafting, Hangers, Castings, Pulleys, Gearing, Forgings.
 Equipment of MILLS of every kind

YOUNG BROS., Almonte Ont.

E. T. CARTER & Co.
TORONTO
WOOL & COTTON
COTTON WARP

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

JOHN E. BROWN,
 Foreign and Domestic
WOOL
 77 McNab Street N.,
HAMILTON, ONT.

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

INDEX TO ADVERTISEMENTS

American Dyewood Co.	1
American Textile Directory Co.	6
Atteaux & Co., F. E.	4
Barlow, John W.	8
Benson & Co., W. T.	1
Brown, John E.	9
Canada Bobbin Co.	6
Canadian Oliver Typewriter Co.	6
Carter, E. T.	9
Cassella Color Co.	1
Crabb & Co., William.	8
Davison Publishing Co.	9
Dillon Dyestuffs & Chemical Co.	1
Dominion Dyewood & Chemical Co.	1
" Guarantee Co.	8
" Oil Cloth Co.	8
Dronsfield Bros.	11
Eickhoff, A.	9
Fairbairn, Lavson, Combe Barbour Ltd.	12
Felten & Guilleaume.	12
Firth Co., William.	7
Forbes Co., The R.	9
Fraser, Robt. S.	2, 11
Garland Mfg. Co.	2
Gelgy Aniline & Extract Co.	4
Gessner, David	11
Halton's Sons, Thomas	2
Hamilton Cotton Co.	6
Havergal College	9
Jack & Co., Watson	1
Klipstein & Co., A.	4
Leigh, Evan Arthur	7
Leitch, A. W.	1
Levy & Co.	6
Linotype Co.	6
Long & Bisby.	9
Marcan's Successors, Lucien.	2
Mather & Platt	7
McArthur, Cornelle & Co.	1
McLaren, D. K.	5
" Belting Co., J. C.	12
Mississippi Iron Works	8
Montreal Blanket Co.	8

Morton, Phillips & Co.	9
Pollack Bros. & Co.	4
Reid & Co., George	8
Riley & Co., C. E.	3
Roessler & Hasslacher Chemical Co.	2
Rosamond Woolen Co.	8
Sheldon & Sheldon.	2
Smith Woolstock Co.	8
Thompson & Co.	8
Toronto Woolen Machinery Co.	3
Turnbull Co., The C.	8
Want Advertisements	3
Watson, Laidlaw & Co.	7
Watson Mfg. Co., L. S.	12
Whiteley & Sons, Limited, William.	7
Willcox & Gibbs Co.	10
Wilson Bros.	9
" " Bobbin Co.	11
" Paterson & Co.	1
Young Bros.	8

Established 1846.

A. Eickhoff & Co.
 Manufacturers and Dealers 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
 Catalogue sent on application.

**Matte's, Hughes' and
 Robinsonian
 Interest Tables**
**Buchan's, Oates' and
 Robinsonian
 Sterling Exchange Tables**
**Tables in French and
 German Exchange.**

Send for Catalogue.

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

WILSON BROS.
Wool Importers
 38 Front Street East, - Toronto.
 B. A. WOOLS and CARBONIZED
 NOLLS a specialty.

Havergal College,
TORONTO.
School Reopens 13th Sept., 1904

Principal, MISS KNOX, University of Oxford first-class honors final examinations—assisted by a resident staff of twenty-five members, chiefly graduates of English Universities, and eighteen visiting masters and teachers.

Pupils are prepared for Matriculation at the University of Toronto, for the Havergal Diploma, and for examinations at the Toronto Conservatory of Music, Toronto College of Music, and the Royal Drawing Society of Great Britain.

Special attention is given to Physical Culture, under two resident graduates from Boston.

French resident mistress, assisted, by six specialists in French.

Advanced classes in Domestic Science in the Senior School. Domestic Science, Cookery, Wood-carving courses are class subjects throughout the Junior School, Kindergarten.

Large grounds for tennis, basket ball, cricket, with full sized rink for hockey. Each form of sport specially supervised by an expert.

Full information on application to the Burnar.

AGENTS WANTED.

Local agents wanted to take subscriptions for an Engineering Publication. For terms, apply, Box B.

Office of Canadian Engineer,
 18 Court Street,
 Toronto, Ont.

**World's Fair Edition
 NOW READY**

Contents of Book:

Leads all others. **THE BLUE BOOK**
 Textile Directory United States and Canada
 401 Broadway, N.Y.
 Davison Publishing Company.
 Send for Booklet.

Contents of Office Edition
 Contents of Pocket Edition

Cotton Mills.
 Woolen Mills.
 Worsted Mills.
 Carpet Mills.
 Silk Mills.
 Knitting Mills.
 Jute and Linen Mills.
 Textile Mills in Canada.
 Mill Dyers.
 Commission Merchants.
 Cotton Goods Converters.
 Cotton Dealers.
 Wool Dealers.
 Waste Dealers.
 Rag Dealers.
 City Maps.
 Textile Maps.
 Railroad Maps.
 List of Railroads.
 Patent Index.
 Index to Mills.
 Classified Directory of Cotton and Woolen Mills.
 Dry Goods Jobbers.
 Textile Supply Directory.

The BLUE BOOK

Shows a Classified Directory of the Cotton & Woolen Mills showing all mills in accordance with the kind of goods manufactured.

This classified directory is found in no other work published, and only appears in the office size of the BLUE BOOK, bringing it up to 850 pages.

An accurate directory of Cotton and Wool Dealers has been added, the BLUE BOOK thus covering more features than any similar work.

Arguments would not cause thousands of firms to buy this work every year—it's the book.

When you think of Textiles,
 it's the BLUE BOOK.

PRICE DELIVERED, OFFICE SIZE, \$4.00.
 POCKET SIZE, \$3.00.


TRADE "OVERLOCK" MARK.
MACHINE.

Extract from the Report dated July 26th, 1899, of the U. S. Consul at Nottingham, England.

"The Overlock stitching device of Willcox & Gibbs has had a phenomenal success since the date of its introduction. . . . The keen competition among manufacturers has necessitated its use both as a matter of economy and to improve the character of output for a discriminating market

TELEPHONE 2666 BRANDEEY

G. J. BRONHOLZ, PRINCEBTON ALBERT BROHN, MANAGER



Schoenherk
ORIGINAL LINEN MESH CO.
103 FIFTH AVENUE
New York October 17th 1898

Messrs Willcox & Gibbs S. M. Co.
City

Gentlemen,

We have much pleasure in informing you as the fact that according to telegraphic advices received today from St. Louis, we have been awarded the "Grand Prix" for Underwear at the Louisiana Purchase Exposition.

To not a small extent we attribute our success to the splendid work of your "overlock" and filling machines. -

Very truly yours
Schoenherk & Co. Ltd.
Albert Brohn Mgr.

For Trimming, Seaming (or Hemming or Overedging) and Covering Raw Edges of Knit Underwear and Hosiery in **ONE OPERATION**, and for making "Overlock" Corded Edge on Lace Curtains, Silks, Ribbons, etc.

Willcox & Gibbs Sewing Machine Company,

658 BROADWAY
Corner Bond Street,
NEW YORK.

Branches
LONDON, PARIS,
MILAN, DRESDEN,
NOTTINGHAM.

BOBBINS & SHUTTLES

ESTABLISHED
1823.



Telegrams—
"Kuggeel, Liverpool"
A.B.C. & A.L. Codes Used

47 GOLD MEDALS AND DIPLOMAS.
SEE EXHIBIT—ST. LOUIS.

Wilson Bros. Bobbin Co. Ltd.
Cornholme
Works: Garston, Liverpool.

The best results in
Card Grinding
are obtained by using

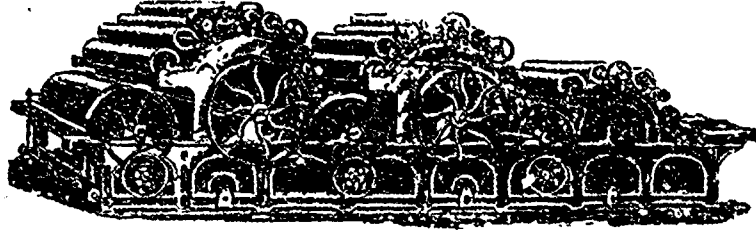


**DRONSFIELDS' PATENT
D-GROOVED EMERY FILLETING**
SPECIALITIES: MACHINES FOR GRINDING CARDS
MACHINES FOR COVERING ROLLERS WITH LEATHER.

DRONSFIELD BROS. LTD.
Atlas Works, OLDHAM, ENGLAND.

CHEVY 6"

TEXTILE MACHINERY (New and Second Hand)



English Sales Attended.

CARD CLOTHING

TETLOW'S
Stock in Canada

Condenser Aprons

Buffed Surfaces
Plain & Grooves

Oak-Tanned and White Belting
Cotton Banding, Rim Spindle and Braided

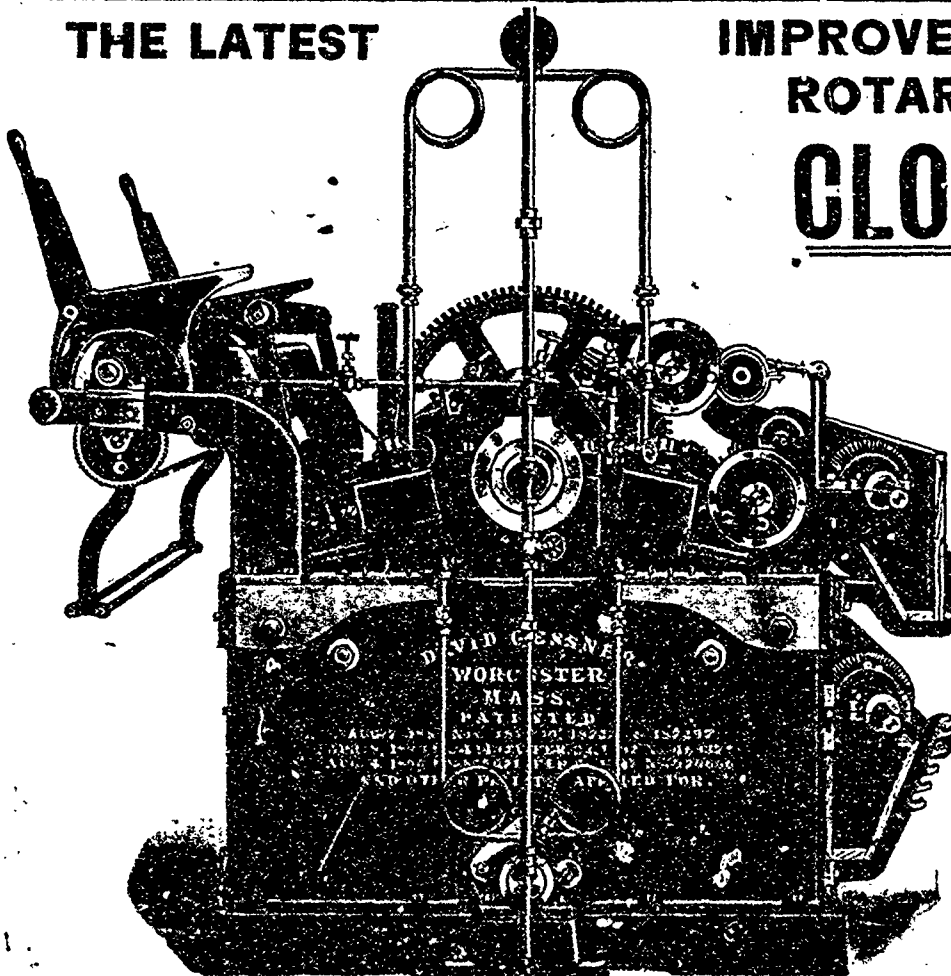
Shuttles, Pickers, Heddles, Harness

Patent Frames, GENERAL FURNISHINGS

ROBT. S. FRASER

17 LEMOINE ST., MONTREAL

THE LATEST



**IMPROVED DOUBLE-BED
ROTARY**

CLOTH PRESS

The bed plates are self-adjusting, the levers that operate them being mounted upon sliding steel fulcrum bars within the frames. The trussing apparatus of the bed plates is so arranged as to permit not only a forcing of the centres of the bed plates in a forward direction, toward the cylinder, but also away from it, which is of the utmost importance if the bed plates should ever become sprung. Bed plates and cylinder after being cold finished, are ground absolutely true while heated by steam at 75 lbs. pressure, insuring perfectly straight and uniform pressing surfaces. Pressure is applied and removed instantaneously, and by power.

DAVID GESSNER,
WORCESTER,
MASS., U.S.A.

The J.C. McLAREN

TORONTO
MONTREAL

BELTING Co.

Fairbairn-Lawson-Combe-Barbour, Ltd.

LAWSON BRANCH: HOPE FOUNDRY, LEEDS, ENGLAND

Makers of Machinery for

Preparing and Spinning Flax, Hemp, Tow and Jute

AND OF **Special Machinery for the Manufacture of Twines,**

— ALSO OF —

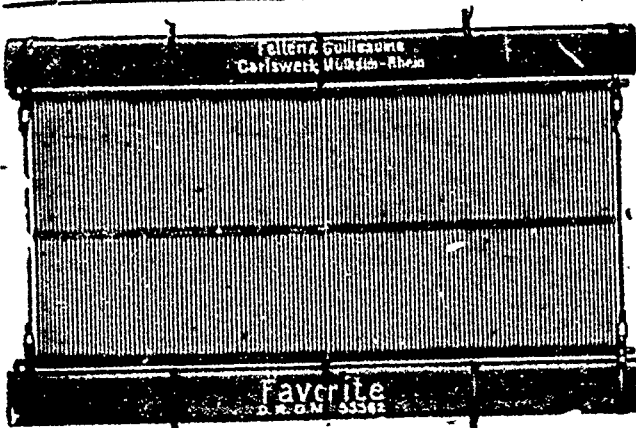
GOOD'S COMBINED HACKLING AND SPREADING MACHINE,

Long Reach Screw Gill Drawing Frames, — Chain-Gill Drawing Frames with Apron Head,
PATENT HIGH-SPEED HORIZONTAL AND AUTOMATIC SPINNING FRAMES FOR MANILLA,
AND OTHER

SPECIAL MACHINERY FOR THE MANUFACTURE OF ROPE YARNS AND BINDER TWINE.

Improved Laying Machines. Haskell-Dawes Tubing Twisters
Brownell's Patent Twisting and Laying Machines for Twine.

— Complete Plans and Estimates for Flax, Tow, Hemp and Jute Mills, Trawl Twine Factories and Steam Ropeworks. —



Fellen & Guillaume, Carlswerk
Actien-Gesellschaft, Mülheim-on-Rhine

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.

Sole Agents for the BEST
Spinning & Twisting Travelers
Made by Prouty Wire Co.



Send samples of the Travelers you use and we will send you a sample box to match of our make free of charge.

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.

Also Agents for the SMETHURST Roving and Twisting Gear for all woolen manufacturers and makers of yarns. Write us for particulars