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# CANADIAN JOURNAL OF Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XX. TORONTO AND MONTREAL, NOVEMBER, 1903. No. 11.

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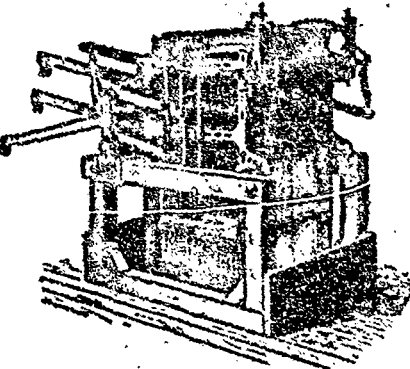
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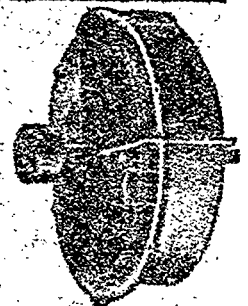
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# CANADIAN Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XX.

TORONTO AND MONTREAL, NOVEMBER, 1903.

No. 11.

## Canadian Journal of Fabrics

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

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**BIGGAR-SAMUEL, LIMITED, Publishers**

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### THE CANADIAN TEXTILE DIRECTORY

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

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### CONTENTS OF THIS NUMBER.

	PAGE		PAGE
Among the Mills .....	327	Fabric Items .....	328
Aramina Fibre, The .....	319	Fabric Machinery Wanted .....	326
Aniline Trade, Germany vs. Britain in .....	316	Flax Manufacturing in 1718 ..	323
Amalgamation, An Important ..	315	Foreign Textile Centres .....	314
Another Handicapped Industry ..	314	Hosiery, Making Woolen Unshrinkable .....	332
Business Notes .....	331	Irish Rugs and Carpets .....	320
British Trade With Canada .....	325	Imports and the Surtax .....	312
Blanket Mills .....	316	Kidlers and the Canadian Tariff ..	318
Chemicals and Dyestuffs .....	4	Literary Notes .....	315
Cocked Goods .....	323	Mule Spinning, Advantages .....	321
Cotton, Blending of .....	320	Miscellaneous .....	317
Cotton, Getting it from Flax .....	320	Naked Steam in Dyeing .....	6
Complicated Case .....	324	Personal .....	332
Cotton Situation .....	325	Shaft, Lining up a .....	326
Commercial Dishonesty .....	311	Spraying Method of Dyeing .....	319
Cotton Market .....	6	Tariff Revision, Why a is Necessary ..	314
Dyeing Union Fabrics in Two Colors .....	322	Turkey Red .....	324
Determination of Loss in Raw Wool and Woolen Yarns .....	325	Textile Designs .....	6
During Scouring .....	325	Unions—Notes on Dyeing them .....	321
Ellis Mr., Replies to the Globe ..	324	Uneven Yarns .....	323
English vs. American Woolens ..	325	Wool Market .....	6

### COMMERCIAL DISHONESTY.

The Shareholder very properly condemns the agreement, for such it was, whereby the two Toronto merchants, Messrs. Bachrack and Blakley, were allowed to escape with such a light penalty for having conspired with Margolus to defraud his creditors. Levy's case is yet to be disposed of, but it is hardly likely it will be pressed. As the Shareholder points out, the rights of twenty-five per cent. of the creditors, who refused to sign an agreement for a settlement, are ignored, and justice in the case has not been done. We think the Attorney-General should not have given his consent to a settlement, but should have insisted that the

case should be pressed. The penalty of a small fine and two hours' imprisonment, on the accused having pleaded guilty, was not adequate punishment for such an offence, but what could the judge do when the facts were not brought out in evidence? Commercial morality is too little regarded in these days. A few examples would have a good effect in preventing dishonest persons from purchasing goods from the wholesale trade without having either the means or the intent to pay for them.

And Margolus' punishment was still lighter. Think of a fine of \$50 for such an offence

### ANOTHER HANDICAPPED INDUSTRY.

Another Canadian industry is knocking at the door of the Government, at Ottawa, for relief from the position in which it finds itself placed by the preferential tariff. We refer to the neckwear manufacturers. Previous to the imposition of the German surtax, necktie silks were admitted into Canada from Germany, Switzerland, and Austria, under a duty of 30 per cent, while those from England found entrance at 35 per cent, less one-third preferential, which brought the net duty down to 23 1/4 per cent. Under the German surtax the duty is raised against that country until the difference between necktie silks from Germany and silks from England amounts to 16 2/3 per cent. According to the customs regulations no goods manufactured in England from raw materials imported from another country can come under the British preferential, unless at least 50 per cent. is added to the value in the process of manufacture in Great Britain. There is nothing, however, to prevent the Germans sending their raw materials into England, and there having them manufactured into neckties, to be shipped to Canada under the British preferential. The Canadian manufacturers are thus suffering from German competition through English channels. In the business of neckties the condition is particularly serious from the fact that 75 to 90 per cent. of the value of a necktie is the silk it contains, the manufacture running only from 10 to 25 per cent. of the value. The members of the Canadian Manufacturers' Association are in favor of having the entire duty upon silk fabrics taken off, admitting all free, which would give the manufacturers on this side the benefit of at least 23 1/3 per cent., the amount of the preferential tariff from Great Britain. They state that there are practically no silk

fabrics made in Canada, and therefore no reason for the duty. The necktie manufacturers state that they find it impossible under the circumstances to compete with Europe upon staple lines of goods, the only thing which gives them an existence is the manufacture of exclusive styles. Quite recently the Imperial Neckwear Company, in Montreal, was obliged to close down, throwing some sixty hands out of employment.

The attention of the tariff committee of the Canadian Manufacturers' Association has been directed to the matter and representations have been made to Ottawa, but whether relief will be granted, or whether their representations will be treated the same as those of the woolen men, remains to be seen.

### IMPORTS AND THE SURTAX.

Some writers have been raising a cry against the German surtax on the ground that Canadians will have to pay it. While this is true to a certain extent, as in the case of any tariff, it is not universally so. The Dry Goods Review has been enquiring into the effect of the surtax on goods which we have been in the habit of importing from Germany, and after interviewing more than a score of importers these are its conclusions: There have been a few lines of German wrapperettes, table linen, towels, cotton hose in the cheap grades, cashmere hosiery, shawls, cement, cutlery, smallware, etc., handled by our wholesale houses which will revert almost entirely to the home or the English market. The cheaper grades of Axminster squares which have come from Germany will be bought in England; much of the ribbons in Switzerland; cashmere dress goods in France and Great Britain; gloves and mitts in Great Britain and France; heavy iron and steel work in Great Britain and the United States, and so on. It is not yet known how the surtax will affect velveteens, as they are woven in Oldham, England, but dyed and finished in Germany, and they may be allowed to enter under the preferential tariff as being 25 per cent. British made. German worsteds are completely driven out of our market. Wool yarns, and the ready-made clothing, which has come in boys' sizes, will be considerably affected. Beet sugar, lead pencils, pins, skates, etc., will be received from Germany in much smaller quantities. In some of these, German manufacturers may retain their business, but it will be at the sacrifice of their profits or of quality, and those things cannot last long.

—Joseph Chamberlain, in his tariff crusade fears what may happen to British trade if the present policy is continued. He points out that foreign tariffs are aimed at British trade. Agriculture in Great Britain is practically destroyed, the sugar trade is gone, the silk trade gone, the iron and wool industries are threatened, and the same fate would come to the cotton trade. He continued. "How long are you going to stand it? England is not afraid of foreign countries. She is the greatest market in the world, and

foreign countries are her best customers. If a tariff war came, England would not come out second best. One reason advanced for America's prosperity is her enormous population of 70,000,000, but the British Empire has 60,000,000 all white, and some 350,000,000 of other races, all prospective customers of the Mother Country." Again: "You are adopting a suicidal course. If you persist in the present policy, your workmen must either take lower wages or lose your work."

—A new style of floor covering, which was shown at the last Dominion Exhibition, at Toronto, is deserving of more than the passing notice which it received at the time. It is made of small star-shaped pieces of hard rubber, which interlock and form a solid, durable covering, said to be superior to linoleum. It is noiseless, non-slippery, water-proof and sanitary. This covering, which was shown by the Gutta Percha and Rubber Co., Toronto, is in use in the King Edward Hotel, and other places, where the hard traffic will put it to the test.

—The lace industry has received an impetus in France by a law promulgated last July, ordering compulsory instruction in the making of hand laces in all girls' boarding schools, as well as in the seminaries for lady teachers in all those departments where lace making is still practised by the population, or where it formerly existed and through lack of interest has died out. But for this order the industry promised to become extinct, and as laces are to be more worn, the authorities have doubtless taken a wise step in the interest of textile industry in their own country.

—It is rather disheartening to those who have built hopes upon direct trade between the leading British colonies to learn that just as the preferential tariff is going into operation between Canada and South Africa, news comes of a severe depression of trade in the Cape. This is caused partly by one of those prolonged droughts to which the country is subject; and partly by the dumping of war office supplies on the local markets after the war. The mushroom traders that sprang up on the strength of war office expenditure are being swept away, but the large and old-established houses appear to be in good shape. Canadians, who are preparing to do a trade there, should be careful whom they appoint as local agents. The drought is causing immense loss to stock, and as a consequence, there is a heavy decline in the output of wool, which has fallen £300,000 in one month. The general financial outlook depends upon the solution of the labor problem on the gold fields. The mines are only in partial operation, and Kaffir laborers made so much money during the war that they will not go back to work in the mines, nor are they likely to until hunger compels them. There is a prejudice against using Asiatic labor in the mines, but the agricultural crisis may lead the farmers to see that the immediate and full resumption of mining is the only hope of saving the situation. No doubt the

drought will further affect the London and European wool markets, especially as the Australian wool growers have not yet recovered from the terrific drought which destroyed sheep there by the million, and which has resulted in almost doubling the price of fine wools in the markets of the world.

—England, France and Germany are all bending their energies to developing new sources of raw cotton in their African possessions. The avowed purpose is to make themselves independent, as far as they can, of the American cotton supply.

—The Toronto Globe of recent date had an article urging the raising of Angora goats in Canada, for the sake of their hair, which enters into the manufacture of mohair and other textiles. If we mistake not, attempts have already been made, but they were not attended with success. The raising of the ordinary breeds of goats is possible, but their hair is not of much value for textiles.

—The British Board of Trade returns give no support to the opinion expressed in some quarters that the export trade in carpets from that country has been ruined by the tariffs of other countries. For the first nine months of the last three years the number of yards exported was: 1901, 5,930,300; 1902, 6,133,600; 1903, 6,661,600, showing a substantial increase. Even to the United States with its high tariff, the increase has been considerable.

—A recent decision of the United States general appraisers is of interest to the textile trade. Certain finished goods, such as union damask cloths and doyleys, drills and towels, had been assessed for duty under paragraph 346 of the tariff, but the importers claimed that cotton was the component of chief value in damask cloths and other goods, and that those articles of which the most valuable component was flax were dutiable at special rates determined by their weight and fineness. A number of samples were analyzed under the supervision of the Board, and the result was a decision in favor of the importers.

—A number of the woolen mills which were referred to in the last issue of the Journal as having closed, or partially so, are again in full operation. The Rosamond Co.'s mill, at Almonte, is again running, the Auburn mill, at Peterboro, is running two-thirds, the Canada Mills, at Hespeler, are in operation for six hours a day, and the Waterloo mills are running about half time. Others are on full time. It is hard to tell just what the situation is. A statement has been made by a Scotch manufacturer, that the real cause of the dullness is the fact that the Canadian mills are not prepared to produce goods equal in newness of design to those of the English and Scotch makers. This is refuted here, and it is pointed out that the designers employed are men brought over from the British mills.

—B. J. Coughlin, of Montreal, a lifelong free trader, who recently returned from England, thus expresses his views on the subject which is now engrossing so much attention in that country and throughout the world: "During my absence I have given a good deal of study to the trade question, and I have reached the conclusion that the time is quite ripe for England to protect her manufactures against foreign goods. I regret being forced by stern facts to make this statement, as I have been a free trader all my life, and have also advocated the same policy for Canada. However, I can no longer close my eyes to the facts which stare me in the face." Chamberlain seems to be making converts.

—The situation in the woolen trade has not altered for the better during the past month. The knitting mills and the blanket mills are nearly all busy, but owing to the competition of cheap British tweeds, the Canadian manufacturers of tweeds and similar cloths are passing through what may truthfully be called a crisis. About half a dozen of the large mills are either closed down or running on short time, and the outlook is certainly not promising. Since the preferential tariff was adopted, the importation of this class of goods has increased from an annual value of \$5,000,000 to about double that during the past year, which must dispose of a large amount of goods of home manufacture. In view of the expectations held out to the woolen manufacturers at the conference of the Canadian Manufacturers' Association with members of the Government last year, the manufacturers are now talking of some political action on new lines.

—There have not been wanting for some time indications that the wave of prosperity, which has swept over the United States, as well as other countries, was beginning to recede, and that the inevitable depression, which must come sooner or later, had begun to show itself on the horizon. Naturally, this would cause some uneasiness in Canada, for our trade relations in the past have been so intimate with that country that the conditions which affect them are felt here. The Toronto Globe has been investigating conditions in Canada, and from all sides comes the assurance that there is nothing to indicate any break in the prosperity which we have enjoyed for some years. On the contrary, there is everywhere manifested a feeling of hopefulness and confidence as to the outlook that is very cheering. Notwithstanding the condition of certain branches of woolen and to some extent of cotton manufacturing, the remark applies to the textile as well as other trades. Canada, which at one time depended very largely on the United States for her trade, has discovered new markets where she may buy and sell, and it is gratifying to know that we are not likely to be seriously affected by any check to the era of prosperity which may come upon our neighbors to the south.

The Cassella Color Co has issued a card of Fashionable Shades produced with Easy Levelling Dyestuffs. It contains an immense variety of shades

## Foreign Textile Centres

**Belfast.**—The spinning department shows a disposition to brighten. The manufacturing branch is still dull though there are more enquiries. Shipping trade slowly improving. Colonial orders fully maintained. White goods for home market slow of sale.

**Bolton.** All the cotton mills are again running full time. Some have been on short time for upwards of sixteen weeks, and some stopped altogether. It is expected that all the new mills will be finished by the end of the year, which will find employment for upwards of 600 operatives.

**Bradford.**—Trade very flat. Repeat orders for winter goods come in slowly and mills generally running on low tweed mixtures for next spring. American trade shows a falling off.

**Dundee.**—Jute market still unsettled by official forecasts of the crop which seem to be unreliable, but spinners are more ready to buy, especially as sellers are offering for forward shipment at a little lower price. Jute yarns a shade firmer. Flax firmer. Heavies firmer. Linens dull. Flax line yarns difficult to sell. Tow yarns in steady demand. Light fancy linen goods made from wet spun foreign yarns brisk. Miscellaneous jute goods in demand.

**Huddersfield.**—Market quiet. Slight enquiry for winter goods, mild weather being against both overcoatings and suitings, and demand much below what it should be at this season. Clothing trade active. Good demand for all classes of cloth for Canada, Africa and Australia.

**Kidderminster.**—There is a fair movement in the carpet trade, but many of the orders are for delivery next year, so there is no hurry to make them. Bad weather is hurting the trade. In yarns no change can be reported, and spinners are distinctly quiet. More business is coming from outside markets, and higher level of prices for worsteds is recognized.

**Leeds.**—Weather against trade, but rainproof light overcoatings active, and have almost driven heavy fabrics out of the market. Worsteds coatings and serges have indifferent sale, but worsteds and woollens with designs in good request. Plain goods neglected. Tendency towards better class of goods. Good orders are in hand for the Canadian spring trade. Wool firmly held but slow of sale.

**Leicester.**—Home grown wool is in better demand than for years and prices are strong. Yarn market slightly better, but strong resistance to prices asked by spinners. More enquiries with regard to new business. Hosiery industry good, and stocks are being rapidly reduced. The better classes of goods in demand.

**Manchester.**—Mills running short for want of raw cotton. Future of raw cotton still uncertain and prices somewhat erratic. Contracts for yarns fairly numerous, but mostly for small weights. For export they run on the higher numbers. In cloth, miscellaneous goods, bleaching, dyeing, and printing fabrics experience a moderate demand, but heavy grey staple cloths dragging slowly.

**Nottingham.**—Cases of blood-poisoning, said to be due to the use of inferior so-called fast black dyes by continental manufacturers, are causing a reaction in favor of midland specialties, and thereby benefiting some well-known local brands. Trade dull.

**Oldham.**—Mills are resuming full time. Difficulty in getting twist cotton to keep mules employed. In manufac-

turing branch some improvement, though there are still some idle looms.

**Rochdale.**—Flannel market quiet. Prices unchanged.

### WHY A TARIFF REVISION IS NECESSARY.

Canada is distinctly a protectionist country; to protection she has remained faithful for more than twenty-five years, regardless of the political party in power. But while the principle behind the tariff has remained unaltered, the tariff itself has been changed frequently to suit the changing conditions in the industries of a growing country.

In two or three cases British competition is too keen, but the great source of trouble comes from the dumping process indulged by German and American manufacturers, particularly the latter. Take, for example, the wall paper industry. Statistics for the past four years give Canadians ample cause for fear. For the year ending June 30th, 1900, the imports of wall paper into Canada were 623,052 rolls for a value of \$95,260. But for the year ending June 30th, 1902, these figures were increased to an alarming extent, the imports being 2,679,567 rolls for a value of \$194,230. This is an increase of 330 per cent. in quantity, but only 101 per cent. in total price.

Previous to 1899, the wall paper trust of the United States maintained normal prices and controlled their home market. While it lived, the Canadian manufacturers gradually shut United States wall papers out of this market, but the growth of independent concerns in the United States sounded the knell of the trust, and when it fell to pieces unparalleled depression ensued in the trade. Immediately there was over-production, goods began to pour into Canada, and in 1902 more than four times as many rolls were imported as in 1900, two years before, while the prices charged were less than half. During the past year the number of rolls slightly decreased, but not materially.

The Canadian manufacturers claim, and with reason, that their interests should not be placed in such jeopardy. Their goods are now adjudged equal to imported lines and they claim the right to control the home market, in order that they may have a maximum production, and thereby a minimum price based upon the cost of production. The only means by which this dumping process can be offset, is by specific duties, and these should be adopted in many other lines.

When the Clergue syndicate entered into the manufacture of caustic soda and bleaching powder, the English and the German firms sent word to their agents to sell below the new competitor. Added to their desire to retain this market, was the desire to rid themselves of their surplus. The Canadian industry was at first able to realize \$1.35 per 100 lbs. on its bleaching powder, but that price became gradually reduced by foreign competition to 90c. per 100 lbs., which is below the cost of production. In other words, the institution of the manufacture of bleaching powder in this country has reduced the cost to the consumer by about 33 1-3 per cent.

To bear out these facts, it may be pointed out that while the works of the Canadian Electric Chemical Co., at Sault Ste. Marie, were in operation, much of their product was sold in the United States, paying a duty of \$4 per ton, permitting a realization of about \$1.57 per 100 lbs., or about \$4.50 per ton more than could be obtained in Canada. A similar tale could be told of caustic soda if space permitted.

The manufacture of neckwear is an industry that has suffered by the practical but unjust operation of the prefer-

ential tariff. The German surtax, instead of removing the grievance, bids fair only to aggravate it. The bulk of the silk used for the manufacture of neckwear comes from Germany, France and Switzerland. If, from Germany, this silk is charged a duty of 40 per cent.; if, from any other country, 30 per cent. Silk from the same factories is admitted free into England, and is there made up into ties which are brought into Canada under a duty of 35 per cent., less the preference of one-third. This constitutes a discrimination of 6 2-3 per cent. against the Canadian manufacturer, even in the case of Swiss and other non-German silks. Ties made in England from German silks are not supposed to receive the preference, but by some occult means they frequently do, and in such cases the discrimination against the Canadian manufacturers is 16 2-3 per cent. Certainly the Canadian neckwear manufacturer is in an unenviable position. He can hold his trade only through the excellence of his styles.

The needs of the cotton and woolen industries are too well known to require much explanation here. The preference has caused the industries to suffer severely, in view of the fact that their wages are higher and their run on single patterns cannot be nearly as heavy as in the English factories. Our mills in Canada are up-to-date; our cottons sell in foreign countries; our homespuns have a name and fame of their own. Altogether they are industries that deserve encouragement, for between them they pay out about \$7,000,000 a year in wages. The increases of duty asked for in these lines are moderate.

The few industries dealt with in this article go to show how imperative a tariff revision is. There are other lines wherein grievances exist, such as the shirt and collar manufacturers, but space will not permit of any further treatment of the subject in this article.—Dry Goods Record of Canada.

**LITERARY NOTES.**

The Burnside-Smith Publishing Co., 107 Coristine Building, Montreal, have issued the first number of the Dry Goods Record of Canada. This journal, which is published monthly at \$1 a year, is devoted to the retail dry goods and allied trades, and the purpose of the publishers is to produce a serviceable trade journal at a popular price. A story having been circulated that the new journal was to be a Canadian annex to a New York dry goods paper, the editor calls attention to the fact that the project is Canadian through and through; that the company has a Canadian charter, and that all its shareholders are Canadians. Messrs. Burnside and Smith, the principal promoters, have been for some years in responsible positions with the J. B. Maclean Publishing Co., and have a knowledge of the field which the new journal is covering. The gentlemen composing the company are: F. Bacon, J. W. Paterson, George G. Foster, K.C.; David Burnside, H. R. Smith, and Edgar M. Smith. The first number has 60 pages, besides cover, and contains a number of instructive articles, one of which is quoted elsewhere. The Burnside-Smith Co. also issue a hardware paper published under the title of the Hardware Dealer.

The Canadian Magazine for November contains an appreciative sketch of George E. Drummond, of Montreal, president of the Canadian Manufacturers' Association. A timely article is that by E. Stewart, superintendent of Forestry, warning our public men of the approaching timber famine in Canada, and calling for a forest preservation policy. James Hannay contributes another instalment of his interesting history of the War of 1812. Ed. Sandys tells us

a number of things, not commonly known about quil, in a sketch entitled, "Robert White, Jr." The wonderful history of the British and Foreign Bible Society is treated in an illustrated article giving reproductions of some of the quaint wood-cuts from early English Bibles. The article is apropos of the centenary of the society to be celebrated in March next, and gives cogent reasons why Canadians should take a special part in this great centenary.

The Delineator, for November, is as ample and exhaustive as ever in the presentation of the styles, and gives much of interest about household affairs, as well as the stories and literary sketches that have not been wanting in the recent history of this excellent ladies' magazine.

The November number of The Century opens a new volume and celebrates the event by a new cover in color, and by a variety of colored insets, which include among the subjects Tropical Sunsets, Wild Animals, and Italian Gardens. Edmund Clarence Stedman contributes the opening article on the New York Stock Exchange, entitled "Life 'On the Floor.'" As a veteran and retired broker, Mr. Stedman brings to this subject a personal knowledge, and the interest is heightened by his trained literary style. The paper is illustrated in a lively way by Blumenschein and Bacher. Of the color work four pictures are by Maxfield Parrish, accompanying the first article of Edith Wharton's series on "Italian Villas and their Gardens," a project upon which the author and the artist were engaged last winter in Italy. Mrs. Wharton's special topic is Florentine Villas, and there is an introduction by her setting forth in general the desirable features of Italian Gardens. Ernest Thompson Seton contributes a series of short sketches in an entirely new vein entitled "Fable and Woodmyth," together with illustrations, some fanciful, some realistic. A leading feature of the number is the opening paper of the new literary "find," Thackeray's letters recording his friendship with an American family, the Baxters of New York, to which Miss Lucy W. Baxter contributes an introduction, and which are accompanied by a number of drawings and interesting autographs of Thackeray. Andrew D. White adds another of his "Chapters from my Diplomatic Life," this month on Bismarck, with whom he had unusually interesting relations.

**AN IMPORTANT AMALGAMATION.**

There is a rumor in Montreal, important, if true, that the Dominion Cotton Company, the Merchants' Cotton Company, and the Colonial Bleaching and Printing Company are about to amalgamate. The difficulties of the past season, in view of the low tariff against cotton, is believed to be the cause of the move. The capital of the two cotton companies concerned is as follows:

	Merchants.	Dominion.
Common stock .....	\$1,500,000	\$3,033,600
Bonds, 4½'s .....	650,000	1,500,000
Total .....	\$2,150,000	\$4,533,600

The Dominion Cotton Company has a bond issue of \$3,700,000, of which 1,388,000 is held against present sterling issue due 1916. Of this issue \$174,000 has been exchanged for preference stock, and the balance of \$2,138,000 has been underwritten at 97, and subscribed for by shareholders at par. Of the Merchants' bonds, \$400,000 mature in ten years from 1899, and \$250,000 in ten years from 1901. When in full blast the Dominion Company employs 5,000 hands, and



the Merchants' 3,000. The Colonial Company has a capital of \$300,000, with \$200,000 in bonds. They employ about one hundred hands, and make fancy linings, silerias, etc.

### THE LOOFAH.

The loofah is a fibrous plant that grows spontaneously and very abundantly in the tropical regions of the River Plate, where the natives use it for washing pots and plates, also for making fancy baskets, and sometimes for stuffing saddles and making hats. There are at least three varieties of the loofah—one with texture or fibre rather open; another of a closer texture, but containing innumerable thin fibres interspersed through the outer surface, with an interior more compact, and the third exceedingly close and more compact throughout. The latter class is the one principally cultivated. Before shipping the loofah it is well classified into bales, each containing from 1,000 to 4,000 plants, according to length. The plants are likewise cleaned of all the gummy substance they contain, and are freed from seeds, so that they present a very neat appearance as well as good color. The planting season usually begins about September, so that harvest may be about February.

### THE BLANKET MILLS.

Editor, Canadian Journal of Fabrics,—

I notice your remarks on "More Protection for Woolens." The reason that the blanket business is good is because several mills have not been running on blankets this season. Among these mills are Brodie, of Streetsville, Dundas and Bolton. Brantford mill also lost considerable time at the beginning of this year. The loss of production on account of the above mills being stopped will amount to 125,000 pairs. Then there is the shortage of help in the balance of blanket mills which I am safe in saying brings the total loss up to 150,000 to 175,000 pairs.

BLANKETS.

### GERMANY VS. BRITAIN IN THE ANILINE TRADE.

Thomas Tyrer, past president of the Society of Chemical Industry, the one society in the Empire which treats scientifically every problem that may arise at home or abroad affecting our manufacturing industries from the chemists' point of view, gave our representative some important facts on the subject of duty free alcohol for manufacturing purposes.

To understand the position taken up by the Society of Chemical Industry one had better make it perfectly clear at the onset that the work undertaken by the members of the society is not limited to research in laboratories, but includes as a necessary factor for the elucidation of industrial questions, that equally important branch—the business side. Enquiry, however, must be scientific amongst the members of that august body of professors, and no figures are allowed to be put forward in support of any trade theory unless they equate with the certainty of an algebraical problem.

"You want me to talk about the use of duty free alcohol. In what direction?" suggested Mr. Tyrer.

"The aniline dye trade."

"A most important branch and one Germany has virtually captured, or to put it in another way, while we at home have gone on plodding in the same hum-drum fashion the foreigners have been supported by their banks and facilities

have been put in the way of the German manufacturers by their Government. It is not quite within the region of truth to say there are no aniline manufacturers in this country. There are firms at Hounslow, Hackney, Wick, Huddersfield, Clayton near Manchester, Silvertown, and elsewhere, but while the trade is handicapped by all the restrictions imaginable, the German competitors are liberally supported. In taking a retrospective view of the aniline dye trade, one must go back many years to recall the bright prospects which suddenly opened up to English manufacturers. In the late fifties, Perkins, who subsequently became one of our most distinguished chemists and a fellow of the Royal Society, was working in his laboratory under Hoffman, a German scientist Prince Consort brought over to England, when he accidentally discovered what color chemists call "violet." That opened to view the whole range of aniline colors, a discovery which has done so much for the prosperity of North of England manufacturing firms. The color chemists went on with the research, the three Perkins, Hoffman, and Sir Frederick Abel, and a new era dawned in commercial circles. In 1868 Hoffman disgusted with the lost opportunities of English scientific research and the apathy of the Government, left the country for Germany, and placed his scheme of scientific endowment before the authorities. The bankers of the Fatherland responded to his cry of help. Money was advanced to aniline manufacturers at 2½ per cent, and after the war with France was terminated the Government found ways and means, if not actually by money advances, at least by the establishment of scientific schools and laboratories, to help forward the industry which had been so successfully begun in this country. England's weakness was Germany's strength. From that time the dwindling of the aniline dye trade began to be marked, and it only exists to-day on the crumbs that fall from the German manufacturers' table. It may be here mentioned that in Manchester the agents for German firms are to be counted by their thousands, they have immense interests in the yarn trade, and dye trade, and are gradually gaining ascendancy in other textile branches of the Lancashire industries. Before giving figures to prove wilful neglect on the part of all previous Governments in dealing with the questions affecting British enterprise, Mr. Tyrer wished to emphasize the point of contrast between the policy of the English Government and that pursued by the Germans. England, the home during the early Victoria Era of all the great discoveries, is absolutely without adequate endowment for research.

"His great point, however, apart from the apathy of politicians in aiming at scientific and industrial advancement, was their equally apathetic indifference in supporting by advantageous legislation the trades already existing.

"What English aniline manufacturers want granted to them in order to be able to compete with German firms is the use of cheap alcohol, almost duty free, and under restrictions and conditions which are equal to the necessities of excise supervision and control, as distinguished from our present expensive and restrictive methods.

"In Germany a distiller uses his plant to its full capacity, while in England if you have a plant as big as St. Paul's you are not allowed by law to make more spirit than the law allows, which of necessity makes the cost of production much greater than it would be under different or more reasonable restrictions. As well as the restricted output which is carefully guarded by the vigilant eyes of many excise officers, 18-inch walls and three sets of locks and keys and an alarming number of other impediments all

adding to the cost and paid for by the manufacturer, the English distiller cannot begin his work of replenishing until the excise authorities give the necessary permission. To compensate him he is told that there is a fivepence preferential duty on all foreign spirits, which will amply repay him for the official interferences he has been forced to put up with.

"Nothing can be done," said Mr. Tyrer, "until the law is altered."

The law in 1870 (Spirit Acts), Gladstone's measure, limits the quantity, strength, time, and every operation of manufacture.—Imperial Union.

### MISCELLANEOUS.

The clothing factory of Paquette Chevalier, Montreal, was destroyed by fire, causing a loss of \$4,000 or \$5,000.

The Front Valley Woolen Mfg. Co., Campbellford, is running to its full capacity, and the carding and spinning departments are running overtime.

Twelve negroes, who were sent to Siberia from the Southern States to experiment in cotton culture, have just returned, the experiment having proved a failure.

The Boyd Caldwell Co. report business good at their two mills, the Clyde woolen mills, Lanark, and the Mississippi woolen mills, Appleton. They manufacture high-class woolens.

The product of the Joseph Simpson & Sons Co.'s knitting mill, Toronto, is sold up to June, 1904. They make flat ribbed, fleeced and children's underwear and sweaters. Some new machinery has recently been installed.

The Golden Fleece Woolen Mills, Almonte, are making improvements in their machinery. One new set of 60-inch cards, two 220-spindle mules and some new looms and finishing machinery have been installed. This mill was idle for a number of years.

The Maple Leaf Woolen Mills Co., Markham, Ont., has installed the following machines, twister, one gig, one shear, one folder and measuring machine. It has also built a new dyehouse, and has ordered a new Miller press. The company is manufacturing ladies' dress goods and is running full time.

J. B. MacPherson, superintendent of the Canada Mills, and Arthur Bades, superintendent of the Stormont Mills, owned by the Canadian Colored Cotton Mills Co., at Cornwall, state that their mills are running to their full capacity, and that some departments are running overtime. Some new machinery has been added.

A new use is announced for asbestos. A chain mat, covered with an asbestos smothering cloth or blanket, with chains attached at two corners, which may be made fast to a saddle, is used for extinguishing prairie fires, by being dragged over the edge of the burning grass.

Mrs. James H. Hendry, wife of the manager of the Auburn Woolen Mills, Peterboro, died at Pittsfield, Mass., October 31st. She has been in poor health for the past two years. Mrs. Hendry was born at Georgetown, Scotland, on October 5th, 1851. She came to this country about nineteen years ago, and took up her residence at Utica, N.Y. Her husband was formerly employed as a designer in the Globe Woolen Mills there. About ten years ago she removed to Pittsfield, where she has since resided. She was married to Mr. Hendry about twenty-eight years ago. She leaves one son and three daughters.

The Anchor Knitting Co. is having an improved hoist installed in its mill at Almonte.

The pay roll of the Montreal Cotton Co., at Valley field, is now about \$60,000 a month.

The total exports of wool from New Zealand for the season of 1902-03 amounted to 410,401 bales, an increase of 14,362 bales over the previous season.

Messrs. Sykes and Crothers, of Huddersfield, England, large woolen manufacturers, are paying a visit to Canada, and were recently the guests of Mayor Forbes, of Hespeler.

"Now, this," said the carpet salesman, "is an odd design." "You wouldn't recommend that carpet for a nursery, surely," protested Mrs. Kidd. "Yes'm, Why not?" "Why, that's so loud it would wake the baby."

Latest advices from Kirkealdy state that the molenum and floor-cloth manufacturers at that place continue busily engaged. All the various grades of floor cloth there manufactured are in extremely good request.

So much difficulty has arisen in consequence of the Canadian Cotton Co., at Hamilton, emptying its dye water into the bay that the city council has let a contract for a sewer for the use of the cotton factory only.

The death is announced of George D. Bromley, whose name is familiar in connection with the carpet trade. His father, John Bromley, founded the vast carpet enterprises in Philadelphia, which bear his name, and the son, now deceased, was the principal owner of the Albion Carpet Mills and the business in Philadelphia.

The Ellis Mfg. Co., Hamilton, Ont., a comparatively new firm, has 20 latest needle knitting machines, made by the Cooper Mfg. Co., Bennington, Vt. They have the exclusive right to use these machines in Canada, on which they make a fine line of underwear. They expect soon to double their capacity.

The Peterboro Examiner tells of a drinking fountain cover, ordered by telegraph, from Sydney, C.B., for use in the cemetery there, which has just been made and shipped by J. J. Turner & Sons. It is a novelty in canvas manufactured goods, and is one of the many novelties which that firm makes a specialty of. The covering is made of white duck, and is fifteen feet in diameter at the base, sloping to six inches at the peak. It has been artistically painted in green tints. It is to cover a drinking fountain during the winter, protecting it from snow and ice.

The case of the American Cotton Yarn Exchange v. Hoffman, has been appealed by the defendant. The appeal is from the judgment of Justice MacMahon, in favor of plaintiff, in an action to recover \$366.34, the price of certain yarn sold and delivered by the plaintiffs. The defendants had received the goods, but on inspection found about one-half of them not in accordance with the samples, and wrote to plaintiffs saying that certain parcels were not as ordered. The plaintiff wrote directing that the faulty goods should be returned to the Indian Orchard Company, by whom they had been dyed. The defendants did not do this. Judge MacMahon held that the defendants by retaining the goods and having part of them redyed had assumed ownership, and gave judgment for the plaintiffs for \$340.36, with interest from 10th December, 1901, allowing the defendants \$25, which was sufficient to cover the cost of redyeing. The appeal has been heard, but judgment not yet given.

One of the growing industries of Rock Island is that of the Telford & Chapman Manufacturing Co., manufacturers, among other things, of horse blankets, whips, etc.

Smith & Baker, glove manufacturers, Dundas, have compromised and are selling out.

A. W. Brodie, formerly of Peterboro', Hespeler and Streetsville, is reported as again going into the woolen manufacturing business at Brussels, Ont.

The Crown Tailoring Co has won its suit against the city of Toronto in connection with the contract for firemen's uniforms, and Chancellor Boyd has made the injunction perpetual, restraining the city from inserting a specification for the union label in city contracts.

According to the Textile Excelsior considerable quantities of Canadian cotton sheetings are being shipped to China as American goods, by order of a New York firm. The mills at Moncton, N.B., and at Montmorency, Quebec, are reported as steadily engaged in this business. They receive from the New York house a die for marking the pieces with an eagle stamp and the legend, "American line sheeting."

At the individual rifle championship match, for Greater New York and vicinity, which was shot on November 3rd, Dr W G Hudson won the championship, breaking the 50 and 100 shot records, his score being 1,154 and 2,301, respectively. Dr Hudson used the Stevens-Pope barrel, 33 calibre; Mr Kelly was second, using a Stevens-Pope and Fred. C Ross, third, using a regular Stevens' 32/40. Nearly all of the records during the past two years in rifle contests have been made and broken with a Stevens or a Stevens-Pope. The word "Stevens" on a rifle is considered by all expert riflemen as meaning extreme accuracy.

The partnership heretofore existing for the past five years between J. D. McEachren and W. D. Sheldon, under the name of the McEachren Heating and Ventilating Co., of Galt, has been dissolved by mutual consent, J. D. McEachren retiring, and his interest in the business being purchased by W. D. Sheldon. The business will be continued under the same management as formerly, but with a change of name. S. R. Sheldon, who has been associated with the firm for five years past, will be admitted as partner, and the firm will now be known as Sheldon & Sheldon. The firm has gained a good reputation throughout Canada as manufacturers of heating and ventilating appliances, forge and cupola blowers, steam traps and separators, exhaust heads, back pressure valves, etc.

A ring spinning machine has been invented in Germany, whose distinctive feature is an inclination of the spindles inwardly, so that the yarn passes in a straight line from the delivery rolls to the guide eye above the spindle. This arrangement enables the twist to pass without hindrance from the traveller along the whole length of the yarn to the delivery rolls. It is claimed that the yarn can be twisted as soft on this machine as on the mule. This machine is the result of many years of experiment on the part of the builders. Another German invention is a movable reed, which is forced back from the cloth in case the shuttle is in the shed when the lay beats up. If the shuttle is not in the shed the reed becomes locked firmly in place before it strikes the cloth.

C J Altman, who recently withdrew from the Union Hat Works, at Brockville, has got into difficulty with his late partners, and has been arrested on a charge of mutilating goods in process of manufacture, with intent to render the same useless, while a member of the firm. It is alleged that Altman bribed a workman, named McQuigge, to cause

part of the machinery to be so disarranged as to destroy a large quantity of hats while in process of manufacture, to the extent of \$3,000. When the discovery was made, the firm engaged Detective T. F. Malloy, of Montreal one of the Government Secret Service men, and also one of the Quebec provincial detectives to investigate the matter. McQuigge in the meantime moved to Belleville. Malloy made his acquaintance there in disguise, and states that he obtained from him a confession, making a clean breast of the whole affair, in which he implicated Altman. On the strength of this, McQuigge was placed under arrest and taken to Brockville and lodged in jail. Altman was also arrested. When the case came before the police magistrate on November 5th, the parties were not ready to proceed, and the case was enlarged for a week. Altman could not procure bail, which was fixed at \$4,000, and was remanded to jail. It is likely that McQuigge and Altman will waive preliminary hearing and be committed for trial before the judge. It turns out that previous to Altman's withdrawal from the partnership, which was by mutual consent, there had been considerable disagreement among the partners.

### "KIDDERS" AND THE CANADIAN TARIFF.

One by one the staple industries of Great Britain begin to offer themselves as object lessons illustrating the disguised, very much disguised, blessings of one-sided Free Trade. Nottingham led the way, Northampton followed. Rochester not only prepared a case for us, as the lawyers say, but also gave us an opinion; and now it is the turn of Kidderminster. Shoes and socks and carpets have a pedal connection; but Rochester seems to be showing that there is a cement which will unite apparently divergent if not antagonistic interests. Kidderminster has been asking herself how her carpet and yarn trades are affected by tariffs; how by the Dingley tariff of the United States, how by Continental tariffs, how by Colonial tariffs, more especially by the Canadian preferential tariff. There is nothing surprising about the replies; they are exactly what might be predicted. The Dingley tariff has killed Kidderminster business, once brisk with the United States. No carpets go across to Boston now, no worsted yarn can pass the customs barrier, while the United States have built up within their borders a great business which threatens to compete with our own. We shall presently put a German sock into a Chicago boot to tread on a New York "Kidder," laid on German cement, as we pass to solace our souls by the strains of an American organ. A similar story is told about the Continental tariffs. They almost exclude our goods; 'tis no longer worth while to send agents abroad. The Germans send us carpets but take none of ours. Russia behind her tariff wall has equipped the largest spinning wheels in the world. France sends yarn to Kidderminster itself—coals to Newcastle. What Continental trade is now done must be at diminishing profits; in other words, the English manufacturer pays the foreign duty. There is a gleam through the darkness only in the Canadian preferential tariff. Some Kidderminster houses have, in consequence of it, at least held their own; others look forward to a busy future; others already enjoy increased trade. Kidderminster has benefited, and we venture to add that England has benefited. What need is there to add a word? Kidderminster has gained by a Canadian concession, freely made; and the gam mus; radiate like radium. What Canada has granted we shall not retain for long unless we reciprocate.—Imperial Union, London.

### THE ARAMINA FIBRE.

It will no doubt be remembered, says the *Textile Mercury*, that a Scientific and Technical Department exists in connection with the Imperial Institute in London, with laboratories attached for the purpose of investigating new or little known products, with a view to their utilization in British commerce, and also to provide trustworthy scientific and technical advice on matters connected with the trade and industries of our Colonies. In the current bulletin, an interesting account is given of a fibre which, it is thought, may possibly compete with jute for some classes of goods. It is derived from the Carrapicho plant of Brazil, and was mentioned by Consul-General Rhind in his report on the trade of Rio de Janeiro for the year 1899. In his despatch Mr. Rhind quoted the opinion of Dr. Silva Tolles, of the Sao Paulo Polytechnic School, to the effect that the fibre, which is probably derived from *Urena lobata*, is likely to be of great value for cloth-weaving, spinning, and other purposes, being more silky and stronger than jute, and comparable with the best kinds of hemp. It was stated that information as to the cost of production and price could not be given, as systematic cultivation was only in an experimental stage. It was, however, known that the plant was easily grown, and the cost of production would probably therefore be very low. A sample of this fibre has lately been subjected to investigation by the Department above mentioned, but as it was rather small, a decisive opinion as to the value of the material is reserved until a larger quantity has been examined. The specimen consisted of fine silky fibre of great length in staple, having in general the characteristics of the best jute, but very much less lignified and of good color. On chemical examination, it was found to contain a high percentage of cellulose, the results being very similar to those obtained from jute of the best quality. A portion of the sample was afterwards submitted, with a statement of the results of its chemical examination, to a well-known firm of fibre-brokers, who reported that it could be employed for the same purposes as fine jute. Its value was estimated approximately at from £17 to £18 per ton. The brokers stated, however, that it was impossible to give the precise value of the fibre until a much larger quantity had been examined with special reference to its behavior during spinning, weaving, and other processes to which it would be submitted. They suggested that a hundredweight or two should be sent in order that these further trials might be made. In his report upon the trade of Rio de Janeiro for 1901 the Consul described the steps which have since been taken to utilize this fibre locally. Numerous experiments have demonstrated its excellent qualities, samples of rope and other woven materials were manufactured from it, and an exhibition of these products was held in the city of Sao Paulo. The plant is now being extensively cultivated, and a factory has been erected at Sao Paulo exclusively for the manufacture of goods from aramina fibre. The price paid at the factory for the clean fibre is about 1d. per pound.

### THE SPRAYING METHOD OF DYEING.

In describing my process I must begin with the sprayer. It consists of two small tubes meeting one another at an angle. One dips into the dye solution, while the other sends a blast of steam or of compressed air over the upper end of the first, in the familiar manner of the perfume sprayer. In this way the blast is made to carry finely divided particles of dye solution. By varying the angle at which

the tubes meet, the form and size of their openings, and the consistency of the dye liquor, the fineness of the spray can be regulated. The dyes are dissolved as usual, with their usual adjuncts as required, such as acid, thickening, etc. To get effects with a cantharides lustre the alcoholic dye solution was mixed with certain resins, such as shellac. The blast is, of course, made to impinge upon the fabric. The fabric is carried at an adjustable rate of speed past the blast, and then passes over a drying cylinder. The speed depends chiefly on the effect to be produced—whether a light or heavy shade is wanted. Very dark shadows, and such as consist of several tints passing one into another, require repeated passages.

So far, little difference can be recognized from a method described by Dr. Lepetit. But we are now coming to a marked distinction. In my process, stencil plates, just far enough from the fabric to be movable without touching it, came between the fabric and the blast. The stencils were of thin metal plate and of various designs. They permitted of exact patterning. For example, to get a shadow fading away towards one side, the stencil was a triangle with its hypotenuse vertical. The angles of these triangles varied according to the effect desired. The more gradually the shadow was to disappear, the longer the triangle horizontally. For shadows disappearing in two directions, parallelograms or squares with a vertically moving diagonal were used. By proper arrangements and several passages, shadows could be got in which various hues passed one into another—e.g., from pale pink through a light golden yellow to sap-green. The effects which can be got by means of stencils are very numerous and beautiful. If, for example, we take a stencil with a wavy cut in it the sides of which are at varying distances from each other we can by its use get effects which, by light and dark shades, produce the appearance of wavy relief in the fabric. By means of stencils arranged together and having circular cuts, the appearance of relief can also be produced. The upper and lower rows of stencils can be moved independently. The wavy effects can be increased by putting two complimentary shadows, one on the lightest part, the other on the darkest. Thus the shadows themselves may be blue, and if then covered with red at the darkest part will show there violet. If then a suitable yellow is applied to the lightest part we shall have there a green. Comical shadows are easily produced, and in fact good taste is necessary to select from the immense number of effects producible. The effects may be greatly varied if the fabric, the sprayer, and the stencils are all movable at will. When designs are cut out of stencil, they are made shorter than they are to appear on the fabric, so that the fabric can move slowly.

The spraying process is not intended to replace or even to compete with printing for ordinary purposes but for the production of special patterns with graduated shades. It is only in the production of such effects that it is of value, but they are most striking and attractive, and can be produced by no printing process whatever. Nevertheless, printing and spraying may be combined and the warp having been sprayed, various effects can then be got with wefts of different colors, especially rainbow effects. With thin solutions of dye in water or spirit and suitable blast-jets the color can be sprayed as the finest mist. With larger jets and less pressure of blast, and a little thickening in the dye, the mist is coarser and the drops of color thereby cast on the fabric can be made to run into one another more or less by regulating the dampness of the fabric. If the blast is heated to 110° C., the solvent is evaporated and the dye may be driven in the form of a dry fine powder

on to a wetted fabric. More or less sharply bordered but microscopically small points, which can be distributed thinly or thickly over the goods by means of stencils, produce very beautiful effects.

I must not run the risk of being tiresomely prolix, but think I have said enough to make any one interested familiar with this new process. The question may be asked, why the method has not been more exploited. I can only reply that the introduction of anything quite new is very difficult. Although I was able to show very beautiful patterns from my work at Zillesen's, people shunned the risk of the articles not catching on. Ombre effects were not modern, while the warp-printing style, *chiné* effects introduced from France, were new and in great request. As a rule, real novelties cannot be introduced into the German silk trade until they make their way abroad and it is known that they are asked for. Then people do not care what they pay for them. This was the case with half-silk dyeing from France and plush and sealskin dyeing from England. When a new process is offered, everyone waits to see if somebody else will adopt it, even if it is only an improvement on some old method. It is unfortunate to have to admit that such is the fact, but if it is passed over in silence there is little chance that any change will take place in this state of things. Could not the silk industry form a union like the Mulhouse Society, which would support the introduction of novelties and the working out of new methods?— C. Knapstein, in the Berlin *Farber Zeitung*.

#### COTTON-GETTING IT FROM FLAX.

The *Revue Generale des Questions Economiques* mentions an incident, which may lead to a revolution in the cotton industry, namely, that a Russian engineer, M. Scheveline has discovered a process by which the fibre of flax and hemp can be transformed into a substance similar to cotton by being treated with the residuum of naphtha. This causes the fibre to decompose and to acquire the appearance and qualities of cotton. This substance can then be worked with cotton-spinning machinery, and the manufactured article has all the qualities of cotton tissues. No preparation of the flax is necessary. The plant can be used just as it is pulled out of the ground. The inventor does not intend taking out a patent for his discovery. On the contrary, he offers to make his system known to all who ask. This discovery is of great importance to Russia. The area planted with flax in 1900 was about 4,250,000 acres which produced about 490,000 tons, and this quantity, treated with the new process would enable Russia to dispense with American cotton. This proceeding would naturally be fraught with serious consequences for other countries. It is estimated that of the 490,000 tons of flax grown in Russia in 1900, 260,000 tons were exported to the United Kingdom, France, Germany and Belgium, in which countries the flax-spinning industry could not exist without Russian flax, and if their supplies of this article were cut off it is difficult to see from what other sources they could be obtained. It is pointed out that, although it may appear surprising that Russia does not work up all the flax she produces instead of exporting the greater part of it, this anomaly can be explained by the fact that machinery for spinning flax is more expensive and complicated than that for cotton. With the new system this difficulty would disappear. This new question is therefore of great interest to the flax industry, as, in spite of the encouragement given by the Government, the cultivation of flax in France does not develop very extensively.

Some of the flax manufacturers regard the foregoing

statement somewhat sceptically, as many firms have previously spent thousands of pounds in trying similar experiments. The nearest imitation of cotton or flax was got from the rhea grass of China, and the Chinese make the gum extractions from this by hand stripping. If a process of replacing the Slav manual labor by machinery could be devised, then there would be a vast revolution in the flax and cotton trades. At it was, the rhea grass made a fabric unexceptionable in strength and color, but its production cost about double the market price of flax.

#### BLENDING OF COTTON.

Among the many little points that go to make up the sum total of accomplishments for a mill manager, the art of blending cotton is by no means the least. In the making of yarns of medium numbers, say from 40's to 90's for the thread, hosiery and knit goods trade, a good knowledge of blending may be deemed a necessity, for there are numerous opportunities in which a manager can save his company more than his salary for the time being by the proper manipulation of the different types of fibre which are usually selected for these kinds of goods in that range of numbers. Of course there is no known mathematical formula for blending, and as to just how it should be done or just where it should begin is a question upon which many good men differ, as the judgment of men will differ, but a good cotton spinner with a fair knowledge of the effects of chemicals for bleaching and dyeing on the fibre should be able after a little practice to proceed without much difficulty. Where yarns for bleaching are needed it would not be advisable to blend or to allow any but the most spotless of fibre to go into the mix, and the same rule would apply to stock from which goods of particularly bright or delicate tints were to be made, but for unbleached or for dull or heavy colors it can often be done with a saving that well repays the effort. As each lot of cotton differs in texture, spirality, lustre, etc., from every other lot of cotton, the judgment of the individual must be the arbitrator on the question of stock, but the proper place to begin blending is a subject which will perhaps bear discussion. Some contend that the only place to begin is at the picker, and there is no doubt or question but that commencing at that point the most thorough mixture can be obtained, but I have known of instances where for some reason it was impossible or inconvenient to begin at that point that good blends have been obtained commencing at the drawing or at the sliver lapper when the stock was to be combed. The object of blending cotton is to produce from two or more different kinds of cotton a stock which will be better for certain purposes than any one of those kinds of varieties alone. For instance, combed Egyptian cotton of the type known as Ramia, 13½ inches staple, should make good number 60's warp or thread yarns: it draws well, takes twist well, and has a good lustre, but it is not as strong as some of the other types of Egyptian or some grades of American cotton of equal length, but when blended with a certain percentage of American cotton of the type known as Vicksburg, a strong cotton but lacking somewhat in spirality and lustre, it produces a better yarn for the purposes named than would either kind alone have made at a less cost than that of the higher priced of the two kinds. It draws well, takes twist in the roving well, and spins into good, strong even yarn. Another instance: a lot of cotton selected for 80's warp yarn, combed stock, 14½ inches in length, clean and strong, opened well, drew quite hard but spun well.

but in the dressing failed to take size well, which caused trouble in the weaving, but when this cotton was blended with a stock of equal length but of more pliability this trouble was overcome and the finished fabric was satisfactory and produced at a slightly reduced cost than if made wholly from the stock as originally used. Now there are some, and capable men, no doubt, who think that there is nothing in it, or it is adulteration at best, but if questioned most of them will admit that they have never tried it. As for adulteration, how much is bought in the way of supplies, oils, dyestuffs, soaps, etc., that has not undergone the process of blending? Question the manufacturers of those goods and they would probably tell you, and truthfully, too, that the process was necessary to produce an article of merit. The popular Sir Thomas Lipton would probably contend that the blending of tea is a fine art and necessary to produce certain flavors; and such is the case with coffee, spices and many other articles of commerce. Why, then, should not the fibre upon which we work and which we know possesses such vast capabilities, why should not that too be blended and be improved by the process?

**THE WORLD'S SPINDLES AND LOOMS.**

Samuel Andrew, secretary of the Oldham Spinners' Association, has compiled the following up-to-date figures, as to the number of spindles and looms in the world—

	Spindles.	Looms.
Great Britain .....	49,727,107	719,389
United States, North .....	14,500,000	335,000
United States, South .....	6,714,000	153,000
Russia .....	6,000,000	146,000
Poland .....	850,000	12,000
Germany .....	8,434,000	212,000
France .....	6,150,000	106,000
Austria .....	3,250,000	110,000
Switzerland .....	1,558,000	15,500
Italy .....	2,435,000	110,000
Spain .....	2,614,000	68,000
Portugal .....	160,000	Nil
Sweden .....	372,000	10,000
Norway .....	88,000	2,300
Holland .....	300,000	10,000
Belgium .....	936,000	Not known
Roumania .....		
Greece .....	1,000,000	2,100
Smyrna .....		
India' .....	5,000,000	43,000
China .....	600,000	1,200
Japan .....	1,333,000	Hand weaving
Brazil .....	300,000	15,000
Canada .....	773,000	18,000
Mexico .....	500,000	15,000

**UNIONS—NOTES ON DYEING THEM.**

The dyeing operation is conducted at or near the boiling point, and with the addition of 2 lbs. dried Glauber's salt or 4 lbs. crystallized Glauber's salt in each 10 gallons dye liquor for dark shades, and 1 lb. dried Glauber's salt or 2 lbs. crystallized Glauber's salt in each 10 gallons dye liquor for light shades. For subsequent lots to be dyed the above quantities can be reduced to one-fifth.

Temperature.—The principal means of obtaining even results is a judicious regulation of the temperature. Below the boiling point the diamine colors dye chiefly the cotton,

while the wool does not get well covered until the boiling point is reached.

The following method of working has, by practical experience, been proved the most advantageous: For pale shades the goods, which have been well wetted out, are entered in the lukewarm bath previously charged with the dyestuff and Glauber's salt, steam is turned on, the liquor brought slowly to the boil, and boiling continued until the wool had obtained the required depth.

For heavy shades the bath, containing the necessary amount of color and Glauber's salt, is boiled up for a few minutes; steam is turned off, and the goods are entered dry or wet. After one-half hour's working small samples are taken off for matching.

The following possibilities have to be considered in matching. (a) The wool is still too light in shade. Allow to boil again somewhat longer until the wool has attained the required depth. (b) The cotton is still thin in color. Keep the goods running while the bath is cooling down, adding at the same time such colors as dye chiefly the cotton, according to necessity. (c) The required shade is still not obtained, or both the cotton and wool are not full enough. After the addition of the necessary dyestuffs, boil up and keep the goods running for a quarter to half an hour without steam. It must be borne in mind that by boiling the liquor up repeatedly, the wool may become too dark through feeding off the cotton; long continued or quick boiling should, therefore, be avoided as far as possible.—Boston Journal of Commerce.

**ADVANTAGEOUS MULE SPINNING.**

According to some of the methods being adopted by some of the mule men on both sides of the Atlantic we see the smallest advantage of time saving is being taken advantage of so as to make the most of the mules; intermittent system of spinning, as over against the continuous method of the ring frame; all the various steps necessary by the changes in the mechanism; each stretch is being so minimized that it is not fully evident whether it is a saving of time or a loss. When we hear such questions mooted as to how much sooner may the backing off of the mule be put in motion before the mule really gets on to the catch so that there be no time lost in the change; or how much sooner may the drawing be put in motion before the backing off is really accomplished, or the faller properly locked, both to save time. Many of us see that this is born of the idea of the use of the hastening motion, which has been a good thing in two ways. When spinning coarse numbers with a slow rim shaft speed and a large rim, it both helped the rim to overcome the law of inertia and give it a good start, as well as acting as a kink preventer by winding the yarn tauter on the bare spindle as the faller rose after unlocking; but we must keep in mind that the hastening motion was never profitably used except on mules with an accessory to lift the drawing-up friction out before the carriage got up to the stops, an incline somewhere on the carriage with an adjustable slot to regulate the lifting out of the friction. This allowed the carriage to finish its inward run by the momentum it has gained, less power being needed than if the change did not take place till the cam changed, and this was a great saving on check bands; and although we have the easing out motion, which allows the carriage to use its momentum in reaching the limit of its outward run, thus requiring less force, if any, to stop the spindles before backing off by the back off friction, yet, we must remember

that the least tendency to draw in the carriage before the back off friction is released will tighten the quadrant chain if there is the least leeway at the catch and stick the click in the click gear. The same if the back off friction is put in one moment before the carriage is safe on the holding out catch; hence, broken chains, quadrant teeth, click, click gear teeth and various vandyked breaks too common when these things are the result of accident, and should be enough to cause any practical mule man to refrain from attempting too close settings of these changes, as the loss will many times outweigh the gain.—Old Mule Man in Fibre and Fabric.

### DYEING UNION FABRICS IN TWO COLORS.

Fancy dress fabrics are quite the feature of the first decade of the twentieth century, and in the production of these, the manufacturer makes use of various fibres—silk, wool, cotton, ramie, linen, etc., often combining two or more in one fabric. Perhaps this fabric may only be produced by a plain weave, or by a twill weave, or oftener than not, there may be a ground of one fibre, say of wool, while a figured design is formed of another fibre, perhaps of cotton. These have a fine effect even when the fabric is only dyed in one color but if it be dyed in two—the ground in one color and the design in another and of a paler shade contrasting strongly with that of the ground—then the effect obtained is very fine.

We now propose to describe some methods of dyeing such fabrics in two colors the woolen threads in one and the cotton in another. At one time the fancy dress manufacturer could only produce such materials by weaving the ready-dyed wool or cotton yarns together but now thanks to the great progress which color chemistry has made during the past fifteen years it is possible to weave the fabric first and dye afterwards. One great advantage results from this method in that the woven cloth can be cleansed after weaving and before dyeing so that the colors come up in the finished fabric brighter and clearer a matter of no little consideration. Such fabrics composed of wool and cotton, may be dyed in two ways; either the wool may be dyed first and the cotton afterwards, or vice versa. The latter, which is generally known as cross dyeing, is perhaps the most commonly used method, especially where the cotton is to be dyed black.

In the following recipes, the quantities given are intended for 100 lbs weight of mixed wool and cotton goods in which there is about an equal weight of each fibre. Should the fabrics be composed of unequal proportions of cotton and wool, the dyer can alter the quantities of the respective dye stuff to suit the new proportions.

For producing the color effects according to the former method, the wool is first dyed in a boiling bath which contains 10 lbs. Glauber's salt and 2 lbs. sulphuric acid, or 10 lbs. bisulphate of soda, whichever the dyer thinks is most convenient to use. The dyeing takes about an hour, after which the material is taken out and well rinsed to free it from acid, the presence of which would interfere with the subsequent dyeing of the cotton.

The cotton is next dyed in a strong bath to which has been added 20 lbs. Glauber's salt and 8 ozs. soda ash. The dyeing can be done in the cold or lukewarm; the heat, however, must not be high, or the dye will work on the wool, and this is not desirable, as it would affect its color.

Wool, Blue; Cotton, Orange. The wool is dyed with

2 lbs. Cyanole Extra and 3 ozs. Formyl Violet S 4 B; the cotton with 2 lbs. Diamine Orange D.

Wool, Brown; Cotton, Pale Blue. The wool is dyed with 4 ozs. Cyanole Extra, 9 ozs. Orange G G and 1 oz. Acid Violet 4 R S; the cotton with 1 lb. Diamine Sky Blue.

Wool, Purple; Cotton, Green. The wool is dyed with 1½ lbs. Acid Violet 4 R S, the cotton with 2 lbs. Diamine Fast Yellow A, and ½ lb. Diamine Sky Blue.

Wool, Gray; Cotton, Orange. The wool is dyed with 4 ozs. Cyanole Extra, 1 oz. Orange G G, and ¼ oz. Acid Violet 4 R S; the cotton with 1 lb. Diamine Orange D.

Wool, Bronze; Cotton, Lilac. The wool is dyed with 9 ozs. Acid Green Extra and 9 ozs. Orange G G; the cotton with 1 lb. Diamine Violet N.

Wool, Bright Blue. Cotton, Yellow. The wool is first dyed with 1 lb. Cyanole Extra and 1½ ozs. Formyl Violet S 4 B; the cotton with 1 lb. Diamine Fast Yellow A.

Wool, Dark Lilac, Cotton, Pale Blue. Dye the wool with 2 ozs. Naphtol Red C and ¼ oz. Formyl Violet S 4 B, the cotton with ½ lb. Diamine Sky Blue.

Wool, Dark Green, Cotton, Lilac. Dye the wool with 2½ lbs. Naphtol Green B and ½ lb. Orange G G, the cotton with 1 lb. Diamine Violet N and ¼ lb. Diamine Sky Blue.

Wool, Green; Cotton, Orange. The wool is dyed with 2 lbs. Acid Green Extra and 1 lb. Fast Yellow S, the cotton with 1 lb. Diamine Orange D C.

Wool, Black, Cotton, Yellow. Dye the wool with 5 lbs. Naphtol Black 3 B; the cotton with 1 lb. Diamine Fast Yellow B.

Wool, Black; Cotton, White. The wool is dyed black with 5 lbs. Naphtol Black 3 B.

The second method of dyeing two-colored effects is to dye the cotton first and the wool afterwards. In this case, care must be taken to select cotton dyes which are fast to weak acids, as they will have to resist the acid which is needed in dyeing the wool afterwards. The following are a few examples of this method of working:

Wool, Blue; Cotton, Red. Dye the cotton in a bath of 3 lbs. Primuline and 20 lbs. salt, then pass into a cold bath of 3 lbs. sodium nitrate and 6 lbs. hydrochloric acid, and finally develop the red in a bath of 3 lbs. betanaphthol dissolved in caustic soda. After this process, rinse the goods well and dye the wool in a bath of 1 lb. Cyanole Extra, ¼ lb. Formyl Violet S 4 B, 20 lbs. Glauber's salt and 2 lbs. sulphuric acid.

Wool, Green; Cotton, Black. Dye the cotton in a bath with 3 lbs. Diamine Black B H, then diazotize with sodium nitrite and develop with naphthylamine ether. Dye the wool with ½ lb. Acid Green Extra in the usual way.

Wool, Green; Cotton, Red. Dye the cotton with Primuline as described above, then dye the wool with ¾ lb. Acid Green Extra and ¼ lb. Naphtol Yellow S.

Wool, Orange; Cotton, Black. Dye the cotton with 5 lbs. Diamine Black B H, diazotize and develop with Phenylene Diamine and then finally dye the wool with 1 lb. of Orange Extra.

Wool, Red; Cotton, Black. Dye the cotton with Diamine Black as described above, then dye the wool with 2 lbs. Brilliant Cochineal 2 R.—Textile Colorist.

Fred. Herbin, foreman of the Union Hat Works, Brockville, has been presented with a silver tea service, by his fellow-employees, on the occasion of his marriage. The presentation took place at the house of one of the firm, J. C. Saulnier.



**FLAX MANUFACTURING IN 1718.\***

On August 4th, 1718, an advance party of Scotch-Irish emigrants arrived in five ships at Boston. They selected for their permanent abode a tract twelve miles square, called Nutfield, which now embraces the townships of Londonderry, Derry and Windham, N.H. It was there that linen, as a matter of commerce, was first made in New England. The hum of the spinning wheel was heard in every house. As early as the year 1748, the linens of Londonderry had so high a reputation in the colonies that it was found necessary to take measures to prevent the linens made in other towns from being fraudulently sold for those of Londonderry manufacture. A town meeting was held for the purpose of appointing "fit and proper persons to survey and inspect linens and hollands made in the town for sale, so that the credit of our manufactory be kept up, and the purchaser of our linens may not be imposed upon with foreign and outlandish linens in the name of ours." The people brought their spinning and weaving implements with them from Ireland, and their industry was not once interrupted by an attack of Indians. The improvements in the cultivation and manufacture of flax, which the Scotch-Irish brought to Londonderry, were soon adopted by many other settlers in New England. Many families made it their principal product, although the seed at that time was not as valuable as now. In Fryeburg, Conway and Albany, settlers from the banks of the Merrimac cultivated flax, having carried on its manufacture for many years before removal. Hundreds of persons, if their history were known, would reveal to the world full accounts of a long and detailed experience, for many years, throughout New England, in the culture and manufacture of flax. In 1770 there lived on the banks of the Merrimac a young farmer by the name of Jeremiah Gilman. He was largely engaged in the manufacture of flax by hand power. Tradition says that the success of this farmer, over his immediate neighbors, in the flax business was in consequence of the experience and labors of a manumitted slave in his employ, who was celebrated for working flax. Wishing to secure a larger tract of land upon which to settle his family of twelve children, he went up to the head waters of the Merrimac and afterwards made arrangements for commencing the settlement among the mountains of New Hampshire. A large tract of land was purchased in the township of Burton, now Albany, and he commenced a settlement there, while his brother chose a location farther north. They were followed by other families, all of which went more or less into the manufacture of flax, but none so extensively as Co. Gilman, who, in connection with a grist mill that he had built, arranged to spin flax by machinery and water power, the first which is supposed to have been erected in America. After many years had passed, the eldest son returned to his father's house. He worked upon flax, and introduced the mixture of cotton and flax threads into cloth, and from that period the united efforts of the family were joined with others in the neighborhood to make the most of this article as a means of income.

**UNEVEN YARN.**

It is usual to blame all uneven yarn making to uneven roving, says a writer in *Fibre and Fabric*, that has been the standard excuse for years. Now, the carder's sins of commission and omission are many, but they have this redeem-

ing feature, they are all easily seen and found before going far or before much damage is done. In reeling yarns on the mule or jack, it is the usual rule to take five bobbins from different spools, a short time after the set of bobbins has started, or at the bottom. This, no doubt, gives a fair average, and perhaps is as reliable as can be got. Reel these same bobbins when the set is full, and you hardly ever find them the same as at the bottom. This is nothing new, you say. Well, why is it? Take five bobbins off of one spool at the end of the mule or jack and reel the same. Now take the same spool and put it in the centre of mule and spin a few draws more. Reel it again and in the same way. They don't agree in weight. Now why is it? Let us think it over. Get a line and run it from one end to the other just above the rolls. Level the line; never put a level on the rolls. After having got your line tight and level look and see where your rolls are. Some places will be about right; other places down an inch or more; the spindle points will be the same or worse on the carriage. This shows that the floor has settled in places; sometimes caused by shafting on the girders or floor-joists in the room below, generally by weight of mule head. The rails under the carriage go with the floor, and that throws the spindles out of true pitch. Say your spindles were set at 78 degrees when first set up, that is three inches forward pitch from bottom of spindle to top of spindle 18 inches long. The lowering of the rail would increase the pitch to say four inches. Now here is something that will give you very uneven yarn. On 4-run work, I have seen yarn at bottom of bobbin 4-run and at the top of bobbin 2½-run, all caused by drawing off the bobbin when the carriage was coming out. This to-day is the cause of coarse threads, for short lengths showing so badly in dress goods, sacking and all light weight goods; besides all the monkey and parrot time in card and spinning rooms. There is only one remedy: Line up; level up and have your carriage go up close, so the spindle points will come up to the rolls to about 2½ inches. Much more might be written on this subject. Now one word to carders. Learn to spin; learn all the points about a mule or jack. Then you can come within a row of apple trees of the size of yarn you want to make and know where the trouble is. No carder will ever be master of his room until he can spin his own roving.

**COCKLED GOODS.**

There is nothing more serious as an imperfection in the finishing room than cockled goods, and it is doubtful if anything is more likely to cause a controversy as to who should bear the blame. Very naturally the controversy arises because there is hardly a place from the sorting board to the fulling department that may not contribute to the trouble. Because the cockles are developed in the fulling is by no means the proof that the cause is there, or that it can be remedied by the fuller, and yet they may be caused by fulling altogether when the work in other departments is faultless. But there is no need for a controversy to long exist with the fuller, for it may be very easily determined whether the cause is in the fulling or elsewhere, though if elsewhere it is not so easily located. The best way to determine whether cockles are caused in the fulling or elsewhere is to spread out ten or more yards of the cloth upon the floor, so that the cockles can be plainly seen, and by their appearance it can at once be determined whether they originated in the fulling. If they did, they will appear longer in the middle of the cloth and shorter or less marked near the selvages.

\* Extract from "Fibrella," a book published in 1861.



or, in other words, the wrinkles caused by them will be more pronounced in the middle and less on the sides. This is owing to the fact that the middle of the cloth is the most likely to suffer if the soap is either insufficient in quantity or strength, which is usually the cause if attributable to the fulling. The edges of the cloth receive the soap the most readily, and, in case of irregular fulling, the sides of the cloth suffer the least. If the cause of cockles be in the variation of the stock, the twist or size of the filling, the variation in picks or irregular friction or let-off at the loom, the result will show in regular cockles, showing alike all across the cloth, or, in other words, the change in the cloth from wide to narrow will be abrupt and straight across, corresponding with the variation in the filling or friction, as above referred to. If caused by irregular let-off the changes will not be so abrupt, but will be uniform, and usually correspond with each turn of the beam in weaving. If caused by the condition of the stock or yarn, it can usually be traced to one or more bobbins in a place, but always changing abruptly, while, if caused in fulling, there will be no suggestion of regularity to them.—*American Wool and Cotton Reporter.*

#### MR. ELLIS REPLIES TO THE GLOBE.

Jonathan Ellis, the well known woolen manufacturer of Port Dover, has been taking the Toronto Globe to task for its editorial on the woolen industry, which was reproduced in the last issue of the Journal. Mr Ellis replies in this fashion:

"The solicitude of The Globe on behalf of our suffering woolen mills, as evinced in its sympathetic editorial of the 8th ult., under the above caption, is very touching indeed. It is somewhat remarkable, however, that the able editorial writer was unable, in a half column article, to evolve something of a more practical and encouraging character than the one or two insignificant remedies which he propounds for the very serious ills now affecting our woolen industry. The matter of a duty of 25 per cent. on their machinery is not regarded seriously by our woolen mills; in fact, they do not object to this duty, and could not do so consistently, while asking for a sufficient protection on their own output. Moreover, if granted their request, viz., a net protection of 30 per cent. on their product, I feel safe in saying our woolen mills would cheerfully submit to even an equal tariff on their machinery. They are not asking duty off their machinery, which would certainly be comparatively no saving for years to come, seeing that they are already well equipped and have paid full duty, and a remission of duty would only decrease the value of their plants to that extent. Of course a reasonable adjustment of freight rates would be acceptable, but I am not aware that our woolen mills are at any more disadvantage in this respect than other industries. A net duty of 30 per cent. on their product would, I am sure, entirely relieve our woolen mills, and this would only offset the difference in the cost of manufacture between England and Canada, as I am assured by a woolen mill superintendent who recently left the management of a mill in England to accept a similar position in Ontario, that he could produce the same class of goods in England fully 30 per cent. cheaper than in Canada, for reasons which I will not now occupy space to give. This trifling addition would add not more than a very few cents to the cost of a suit of clothes, and I feel that it is not to the credit of a Liberal Government that they have so long lent a deaf ear to such a reasonable request. I might add that it is remarkable that only a very insignificant quantity

of woolen machinery is now being made in Canada in comparison with thirty years and more ago.

#### TURKEY RED.

If fabrics mordanted with alumina be dyed in a boiling bath containing alizarine and a corresponding amount of lime, bright red shades are obtained, and if then rinsed with cold water and dried, the shade changes to a dull yellowish brown. It is this dull brown substance which combines with fatty acids to give brilliant fast-red shades, such as Turkey red. The original bright-red fibre, as taken directly from the bath, does not combine with fatty acids, and the color is at this stage not fast to soap. If the dull brown fibre be steamed or boiled with distilled water, the shade changes to a bright red, which will not react with fatty acids, and is also not so fast. This phenomenon is explained by the assumption that the brown substance, which is unsaturated, and can therefore combine with fatty acids, undergoes an internal condensation to form the saturated bright red compound which has lost the property.

Turkey red oil is not very stable, and loses the property of dissolving in water. Schlieper and Baum employ acid sodium ricinoleate instead, which they make by saponifying castor oil with caustic soda lye, and neutralizing half the combined soda with hydrochloric acid. The required substance rises to the top as an oily layer, congealing to a semi-crystalline mass, readily soluble in water. They employ, says Textile Mercury, an alumina-mordant, sodium aluminate, made by dissolving hydrated alumina in excess of soda lye, and neutralizing the excess of caustic soda with hydrochloric acid. The white goods are padded with this, dried, treated with hot, moist hair, allowed to stand, washed, and twice treated in a warm lime bath to convert the sodium aluminate completely into calcium aluminate. The fabric is then rinsed and dyed at 87 deg. C. in very large vats, which are replenished continuously with water, containing one and one-half pounds of ten per cent. alizarine and six pounds of lime water per 100 gallons. The same vat is used for an indefinitely long time, the amount of lime and alizarine being carefully controlled and corrected as required. After dyeing, the goods are cooled, pressed, impregnated with the fatty mordant (in aqueous solution), dried, steamed and soaped. Finally, they are re-soaped with the addition of a small amount of tin salt. If the dyebath were heated to a higher temperature than 90 deg. C., the "saturated" red substance would be formed, and would not combine with the ricinoleic acid.

#### A COMPLICATED CASE.

One of the most complicated cases which has ever arisen in the dry goods trade in this country has just been disposed of before Chief Justice Sir W. R. Meredith, at Toronto. Gault Bros., of Montreal, wholesale dry goods merchants, sued Albert L. Pentecost, retail dry goods dealer, of Hamilton, his brother, Robert W. Pentecost, managing director of the W. R. Brock Company, of Toronto; Edward Wilson, insurance agent, of Paris, Ont.; Hamilton Cassels, barrister, of Toronto, and also solicitor for the Brock Company, and the W. R. Brock Company. It was alleged that Albert Pentecost owed \$3,341.22 to the Gault firm, who obtained a judgment for that amount. While owing the above sum to Gault Bros., Pentecost assigned some of his stock in trade to the W. R. Brock Company. Several consignments of stock, valued at \$6,000, were sold to Alf. Wood for 85 cents on the dollar, and resold at 95 cents, all, it is al-

leged, in order to prejudice the plaintiffs and other creditors, an unjust preference being given to the W. R. Brock Company. After the case had proceeded some distance, a settlement was arrived at, the basis being that the Brock firm turn over the sum sued for, about \$7,000, as an asset of the A. L. Pentecost estate, to be divided among all the creditors, and that the plaintiff's costs be paid out of the assets of the estate, and that the defendants pay their own costs. Mr. Brock does not hold any advantage through these transactions, and restores to the common fund the proceeds of the Wood sale and the first Wilson sale, amounting to \$7,000. R. W. Pentecost also agreed to abandon his claim of \$6,000 against his brother's estate. Edward Wilson, who was with A. L. Pentecost, in Hamilton, during his monetary troubles as financial adviser, and who subsequently handled a portion of the stock, the proceeds of which plaintiffs sued for, under cross-examination admitted purchasing a portion of the goods at a reduced price, which he immediately afterwards sold to Alfred Wood, through Kelley, of the firm of Cassels, Cassels and Brock, solicitors for the W. R. Brock Company. Kelley also handled the money in this transaction. Wilson also stated that during this time Pentecost was sacrificing goods below cost, he was at the same time directing letters to be sent to Gault Brothers, desiring them to forward immediately goods ordered. Witness was not surprised at Pentecost slaughtering goods as he (Wilson) knew Pentecost needed the money. Witness also admitted that he borrowed \$1,300 from R. W. Pentecost to pay for the goods purchased from Albert Pentecost, giving his note for the amount. Kelley paid this note for Wilson. A number of leading lawyers were engaged on the case, which has attracted much interest in business circles. W. R. Brock disclaimed any knowledge of the transactions. Sir Wm. Meredith characterized them as savoring strongly of fraud.

**THE DETERMINATION OF LOSS IN RAW WOOL AND WOOLEN YARNS DURING SCOURING.**

Determination of the loss of weight by scouring wool must depend on one of two principles; the wool may be washed with some scouring agent, then rinsed, dried, and weighed, or it may be treated with some solvent to remove the fatty matter, washed with water to remove sand, etc., then dried and weighed. Comparison was made between the scouring method and the extraction method, two samples of the same wool being used. (a) Wash the wool twice with water, then treat for thirty minutes in a 5 per cent. soapy solution at 65 to 67 deg. C., stirring constantly. Wash well in boiling water, dry at 105 deg. and weigh. Loss—25 per cent.

(b) Extract with ether for thirty minutes in an ordinary extractor, wash twice in boiling water, dry, and weigh. Loss—28.5 per cent.

Wool of a different origin gave: Soap scouring; loss—27.6 per cent. Scouring with a 5 per cent. solution of sodium carbonate, applied in the same way; loss—24.7 per cent. By the extraction method, ether gave a loss of 24.2 per cent., alcohol 27.9 per cent., and petroleum ether 27.2 per cent. Probably the deviations were due to difficulty of sampling the raw wool.

Conclusions.—The figures obtained by the different methods probably differ no more than would those obtained by the same method on different samples of the same wool. When using soap it is very difficult to properly scour raw wool by hand, and still more difficult to rinse it. An ex-

traction method is more quickly and easily performed than a scouring method, though it is hardly suitable to use as a check on factory practice when dealing with low-grade yarn containing cow's hair, on account of the mechanical disintegration of the yarn in practical working. It makes little difference what solvent is used in the extraction, but petroleum ether is recommended as being both cheap and readily volatile.—*Jour. Soc. Chem. Ind.*

**ENGLISH VS. AMERICAN WOOLENS.**

Says the Philadelphia Record: A tailor was discussing the superiority of English to American cloth. This superiority, say what we please to the contrary, does, he declared, exist, especially in trouserings—in those fabrics, as strong as a board and as soft as silk, for which we don't hesitate to pay eight dollars a yard. English trouserings are better than ours for the same reason that Bavarian beer is better than ours; they undergo an aging process which we don't use because we want to do things quickly, because we want to keep turning over our money fast. The wool used in these fabrics has aged three, four and sometimes even five years. A manufacturing firm buys it, washes it, and stores it in well-lighted and dry warehouses for six months. Then it is taken out and washed again, afterward being returned to its storage rooms for another half year, and so the process goes on till the wool has been freed from all life and from all impurity. This wool weaves into a cloth that is at once thick and firm and soft, and that won't shrink. We could make in America just such cloth; we have the skill, and we have the machinery and the materials; but we are not willing in this country to lock money up for three or four years, and that is what must be done in the making of the best fabrics.

**BRITISH TRADE WITH CANADA.**

The following are the British Board of Trade returns of exports to Canada for September and for the first nine months of the year:

	Sept.		Nine Mos. to Sept.	
	1902.	1903.	1902.	1903.
Wool .....	£ 1,540	£ 5,873	£ 23,755	£ 37,738
Cotton piece goods ..	70,535	51,956	628,665	616,853
Woolen tissues .....	52,362	38,404	448,715	462,853
Worsted tissues .....	66,559	44,221	627,184	731,458
Carpets .....	25,487	27,702	199,953	266,498
Haberdashery .....	38,682	38,443	168,592	284,519
Jute piece goods .....	21,695	21,894	129,393	162,192
Linen piece goods .....	16,309	10,630	145,720	148,379
Silk, lace .....	575	95	2,368	6,169
Silk, article partly of ..	7,022	2,800	59,957	55,688
Apparel and slops .....	42,517	35,144	254,811	306,210
Earthen and china ware ..	11,343	13,623	106,921	153,600
Writing paper, etc. .....	4,285	3,667	31,372	39,779
Other paper .....	903	1,377	8,380	11,523

**THE COTTON SITUATION.**

A New York authority, writing in October of the cotton situation, says: "During the next sixty days there will be picked, ginned and made ready for the market in the south at least 100,000 bales of cotton daily, worth \$5,000,000. The accuracy of this statement will readily be seen when it is re-

membered that, during the past ten years the quantity in sight up to January 1st has averaged 6,500,000 bales, while in addition the amount in sight at the 2,800 uncounted points, and in course of transportation, is probably not less than 3,000,000 more. The quantity of cotton thus available for the liquidation of sellers' contracts would seem to preclude any possibility of such manipulation as that from which the market has but recently emerged, and the course of the market during the next three months, therefore, becomes a question of the world's disposition and ability to absorb the amount of cotton which will be offered for sale."

### WHITE INDIGO.

Indigo, if brought into contact with nascent hydrogen, says the Colorist, has the peculiar property of taking two atoms of this into combination, at the same time losing its color and being changed into white indigo. This white indigo is soluble in weak alkalies. The whole process of indigo dyeing is based on this reaction. When this white indigo comes into contact with the oxygen of the air, it is at once reoxidized back into the blue and insoluble state. The principle then of the indigo vat is simply to reduce the indigo to the colorless state by means of agents, which give off hydrogen, and at the same time dissolve it by some weak alkali. Fabrics steeped in this solution absorb the indigo, which on being exposed to the air, changes back to the insoluble state, and becomes fixed on the fibre.

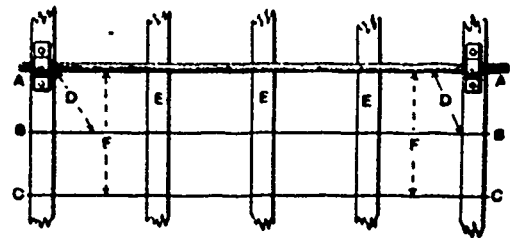
### IRISH RUGS AND CARPETS.

In a recent report on industrial conditions in the west of Ireland, the rug and carpet industry established there a short time ago receives special attention. In the wild mountain passes of Donegal are Irish peasant girls who, with fingers as deft as those of their Eastern sisters and an eye for color even truer and more artistic, are able to produce on the same kind of loom as is used in Persia, rugs and carpets which rival in color and design the products of the Oriental looms. The peculiarity of these carpets is that they must be entirely made by hand and by the method which may be seen illustrated in the painting on Greek vases more than 2,000 years old. The tufts or mosaics of small woolen squares are tied by the fingers in knots into longitudinal warps which are stretched between two long parallel beams. The design is placed in front, and the girls varying in number according to the size of the carpet, as many as twelve sometimes working at the loom, select the colors indicated, row by row, these are then tied and bound down by shoots or woolen weft drawn across the entire width, and beaten down by small heavy iron-toothed combs. The carpets can be made to any size and shape. Purchasers can, also, if they so please, have the carpets woven according to any design which they may select. A factory at Killybegs affords accommodation for more than 400 workers, all living within a radius of 2 miles. Being situated on a branch line of the Donegal Railway and having an excellent harbor, Killybegs has been chosen as the chief centre of the industry. For those girls who live too far away to attend a factory, a simple arrangement has been contrived by means of which, after having learned the art, they can take the frame looms away in the seclusion of their mountain homes. Who can tell how much the artistic instincts of these children of the mountains may be quickened by the magical effects of light and shade on those mighty peaks? The unqualified success that has attended the venture has encouraged the promoters of the industry to increase their efforts. They have planned to extend the industry all over

the west of Ireland, thus affording profitable employment to hundreds of young people. One of the Donegal carpets was presented to Queen Victoria on the occasion of her last visit to Ireland. King Edward has ordered a dozen of them for the royal yacht, and some of them are in Buckingham Palace. A number were on view at the Cork Exhibition, and many of the designs are very beautiful. One of the Celtic pattern is taken from the Book of Kells, representing plain green panels, forming a central cross, with pillars in blue, gold and red, which will be readily understood by those who are versed in Irish tracery. Practically any design which can be drawn on paper is capable of reproduction by this process. The mechanical repetition of patterns in machine woven fabrics is not obligatory in the manufacture, and they are as durable as the Turkey carpets whose process of manufacture they reproduce. Wherever these beautiful productions are known they are highly appreciated, especially by lovers of things artistic. Orders have been received at Killybegs from the highest decorative art critics in England and America. The Donegal carpets have undoubtedly a most successful future before them.

### LINING UP A SHAFT.

The following method allows of putting a shaft in perfect line from end to end without removing the pulleys or taking off the boxes. Two wires should be stretched the whole length of the shaft (a light steel wire is best), far enough from the shaft to avoid the largest pulleys, one wire, B B, in horizontal line with the shaft, the other, C C, verti-



Lining up a Shaft.

cally above or below the shaft. The ends of the wires should be drawn tight and fastened securely at exactly the same distance from each end boxing of the shaft. The figure shows the arrangement. Let the dotted lines D D represent the exact distance of the wire B B from the end boxes of shaft, and F F the distance of wire C C. Having made the ends correct, bring each box on every one of the posts E E to exactly the same distance from the wire, thus aligning the shaft in one direction. Then follow the same plan in measuring up to the shaft from the lower wire C C, and it will give a perfect alignment every time.

### FIBRE MACHINERY WANTED.

Fibre-preparing machinery is stated to be in considerable demand in Argentina. It is required (so the United States Consul at Asuncion writes), by owners of semi-mountainous land where grows a kind of sisal, called caraguata, and another fibrous plant called ibira. The former grows to the height of from 4 to 5 ft., and is about 5 in wide at the base. This plant gives a most excellent fibre for rope-making. The latter plant—ibira—is much smaller growing 2 and 2½ ft. in height, and has a strong silk-like fibre that can be twisted to form a fine twine. The Indians make excellent hammocks of it. Machinery adapted to clean this sort of plant is wanted.

## Among the Mills

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

The Goderich Knitting Co. has had to ask the indulgence of its customers, as it is unable to keep up with its orders.

A. J. McAlear, of Cornwall, has been appointed overseer of the weaving department of the Excelsior Woolen Mills, Montreal.

The faculty and students of the School of Practical Science, at Toronto, paid a visit to Peterboro, to see its industries, on October 24th. Among the factories visited was the Canadian Cordage Works.

By a terrible earthquake, which practically demolished the town of Turshiz, Persia, one hundred and eighty-four carpet factories were destroyed, and three hundred and fifty of the inhabitants killed and many injured.

The Montmorency Cotton Mills Co., owing to the large demand for cotton blankets, is doubling its capacity for this class of goods. New looms of the very latest design, of United States manufacture, are being installed.

The Gibson cotton mill, at Marysville, N.B., had to shut down last month on account of having run out of raw cotton, a shipment of nine carloads from the South having been delayed in transit. This is the first time that such a thing has occurred at that mill.

A young girl, employed in the Stormont mill, at Cornwall, recently dropped her pay envelope. When she went back to look for the lost envelope she found it torn open and her two weeks' pay gone. Her name was on the envelope, so that the thief knew to whom it belonged.

The knitting mills of Shipman & Co., at Hamilton, are about to treble their capacity, and the proprietors are looking for a suitable site on which to build. The mills have been only a short time in operation, but have done well, which is true of most of the knitting mills in Canada.

The town of Dundas has voted a loan of \$10,000 to the Empire Carpet Co., which will remove there from St. Catharines. The vote was 454 for and 12 against, 334 votes being necessary to carry it. The loan is for ten years at 4 per cent. interest, and the company agrees to employ not less than 50 hands.

The following are the boss dyers at the mills indicated: Henry Twigg, at the Trent Valley Woolen Mfg. Co., Campbellford; George Ashman, at the Mississippi Woolen Mills, Appleton, Ont.; Harry Omrid, at the Anchor Knitting Co., Almonte; Joseph Sadler, at the Almonte Knitting Mill, Almonte; Robert Ferris, at the Clyde Woolen Mills, Lanark; David Stewart, at the Brodie Mill, Streetsville; John Dempster, at the Paton Mfg. Co.'s mill, Sherbrooke, Que.

Edward Manion, an employee of the felt mill in Perth, had a narrow escape from being killed. He and another employee were raising bales of wool from the ground floor to the third flat, and tied the rope around the bale, securely as they thought. Manion got on the bale and grasped the rope while the other boy proceeded to haul away. When the bale reached the third floor the knot slipped and Manion was hurled downwards. He struck with great force, but escaped with a broken arm. The distance of the fall was about thirty feet.

The Almonte Times says the old Baird woolen mill is being fitted up by the Wyle Company, to help the Elmsdale mill to fill its orders.

The Auburn woolen mills, at Peterboro, partially closed for some weeks for want of orders, are again in operation. They commenced with a two-thirds staff, and are gradually increasing. It is hoped they will soon be running with the full staff again. The cards and mules in the Canada Woolen Mills, at Hespeler, have been running six hours a day.

The Gutta Percha Rubber Company, of Toronto, has branched out for colonial trade, and is shipping regularly to Australia and New Zealand. Their trade is one of considerable difficulty, owing to the trouble and expense involved in adopting standards for foreign business. The returns, however, have proved very satisfactory. They ship all classes of mechanical rubber goods, hose, tires, belting, etc.

A strike, which has been on for a number of weeks, at the Maple Leaf Rubber Works, at Port Dalhousie, Ont., has come to an end. The members of the union marched to the works, where their names were taken, one by one, and arrangements made for taking them on as soon as their work could be laid out. The manager does not recognize the union, and deals with the strikers as individuals. In some cases they will get increased wages.

Low water has compelled a number of mills to close down in whole or in part in a number of places. This is the case with the Paton Mfg. Co., and the Lomas mills, at Sherbrooke, P.Q., and the Dominion Cotton Mills at Magog. The output of the latter has been reduced one-third. It is said to be the first time the mills at Sherbrooke have had to stop for this cause. At Milltown, N.B., recent rains have raised the water twenty inches, enabling the St. Croix mill to run more machinery.

A new piece of machinery has been placed in the York Cotton Mill, at St. John, N.B. It is what is known as a warp-dyer, and will greatly facilitate the work of dyeing the cotton. Up to the present, all the cotton had to be dyed in a raw state before it was spun into yarn, but this machine will enable the cotton to be dyed after it has been made into yarn. Recently machines for the manufacturing of blankets were installed in the mill, and cotton blankets are now one of the staple products.

The members of the French Chamber of Commerce, of Montreal, to the number of over 100, recently visited the Valleyfield Chamber of Commerce as their guests. Among the places visited was the Montreal Cotton Company's mills where they inspected the exhibit which had been prepared for them by Mr. Lacey, manager of the company. This exhibit was much admired and showed the great strides made during the past few years in the manufacture of cotton goods. The wonderful results in the way of finish, often attained after repeated experiments, show that the Montreal Cotton Company is in the front rank as makers of such goods.

The Union Hat Works, in Brockville, established there about a year ago, find such a growing demand for their goods that they have not been able to keep up with their orders. In order to meet the requirements of the trade, it has been decided to double the capacity by erecting a duplicate of the large brick building, 100 feet by 45 feet, three stories high. The firm was calculating on beginning operations this fall, but owing to the lateness of the season the work will hardly be undertaken before next spring. In the meantime they will make the best of the room at their command.

The St. Jacob's Felt Factory will be running some time in December.

The new woolen factory at Brandon, under the management of P. N. Fraser, is about ready for operation.

As soon as the new clothing factory, at Newmarket, is in operation, the number of hands will be increased from about 30 to 60.

The C.P.R. intend putting in a switch near the Elmsdale Flannel Mill, Almonte. It will be quite a convenience to the mill, and will make shipping much easier.

A spanking team and outfit, which belonged to the Canada Woolen Mills, at Carleton Place, have in consequence of the closing of the mill been sold, and are now employed in a general cartage business.

George Dick, Edward Oliver and A. McFadden, three employees of the woolen mills, at Carleton Place, have, in consequence of the closing of the mills in that town, gone West, where they have secured responsible positions as superintendent, boss finisher and boss dyer, respectively.

John Gerbie, the 14-year-old son of Henry Gerbie, was killed in the Perme mills, at Doon, on October 26th. No one saw the accident, and the boy was dead when found. He had been working about the carding machine when his arm was drawn into it and torn to shreds. It is supposed he died from the shock.

The Colonial Weaving Co., of Peterboro, is installing machinery for the manufacture of silk ribbon and other narrow weave goods in the building formerly used by the Peterboro Underwear Co. R. H. Kells, to whose energy and push the forming of the company is mainly due, is superintending the placing of the machinery.

Women agents, acting on behalf of the mill owners of Valleyfield and other manufacturing localities in Canada, have been visiting Lancashire and Yorkshire in search of women weavers willing to emigrate to the Dominion. It is believed that passage money has, in some cases, been advanced, and a considerable number are coming.

The premises of the Toronto Woolen Machine Co., Duke street, were last month damaged by fire to the extent of about \$5,000, covered by insurance. When the alarm was sent in the flames were raging in the storeroom in the rear part of the building. The Allan Paper Box Co. occupies part of the same premises, but their loss was slight.

Mayor McCosh, of Orillia, has received a letter from E. J. H. Pauley, president of the Dominion Linen Mills Co., announcing that he was leaving Halifax for Boston, to meet some of the British capitalists interested in the country, and that from there he would go to Orillia, after spending a day or two in Toronto. He spoke of making arrangements to go on at once with the work of building the new linen mill.

The addition which the Guelph Carpet Company has been building is now complete. From fifty to sixty extra hands will be engaged. Eight new Russell carpet looms and a large amount of other machinery is to be installed, together with an improved electric lighting plant. In connection with the addition is being built a new stone boiler-house with two 115 horse-power boilers and a 115 horse-power engine. It is expected that over two hundred thousand yards of carpet will be manufactured, meaning an increase of income of over \$100,000.

The Imperial Cotton Company, at Hamilton, has commenced night work in its mills. At 6.15 the girls report for duty, and, instead of working by day, they work for ten hours at night. The company explains this move by

stating that it has not been able to get the requisite power in the day time, and has been forced to ask the girls to work at nights. The Imperial Cotton Company has an idea that the Cataract Power Traction and Light Company is slow in getting the additional power started. The new steam plant is calculated to give customers all the power they may require, but it has not been satisfactorily established yet.

The new factory, which the Singer Machine Co. proposes to erect, will employ one thousand hands, and turn out 30,000 sewing machines a year. A location has not yet been fixed. Their present factory in Montreal turns out 700 a week. Ten years ago they made 300 a week. The market is principally in the Northwest.

Fred. Block, employed in the R. Forbes Co.'s woolen mill, Hespeler, met with a terrible accident. He got his hand caught between the rollers in what is known as the gills, as a result of which the back of his hand was pierced by about 400 needles and the small bones were broken. Some of the needles broke off, and it required the united strength of three men to pull them out.

John Dick, of the John Dick Co., Toronto, has purchased the Davies' brewery property, near the Don river, and will next year erect on the vacant land a textile mill for the manufacture of jute, cotton bags, and canvasses. In the meantime they will remove their cotton bag machinery, which is now in their mill at Cobourg, to some of the buildings on the Davies' property, where the manufacture of cotton bags will be continued. Additional machinery is being installed in their woolen mill at Cobourg.

The Attorney-General has consented to become joint plaintiff, with the Trent Valley Woolen Mills Company, of Campbellford, in an action against William Wynn, of that town, who is charged by plaintiffs with interfering with the course of the Trent river to the injury of the plaintiffs. The company has spent over \$200,000 on their property, and consider it unfair that they should be interfered with by a land owner who has spent only \$300 on his land. The company derive power from the Trent river, and they claim that a building erected by Wynn on the bank of the river will interfere with their penstocks, and have asked for an injunction restraining further building operations. The case will probably be tried at Belleville on November 23rd. In the meantime, nothing further is to be done by Wynn on his building.

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## Fabric Items.

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An attempt is being made in England to bring alpaca shirts into general use.

A naphtha process, which enables hemp to be worked on cotton machinery, has just been invented in Scotland.

In view of the establishment of a linen factory at Orillia, John Curran is contributing a series of letters to the News-Letter regarding the growing of flax for fibre.

The Canadian Association of Cordage Manufacturers met at Montreal on October 20th. After the meeting it was given out that no changes in prices are contemplated.

A shipment of 2,500 sheep was made from Renfrew one day recently to Boston and vicinity. The consignment required thirteen cars. This is the largest shipment ever made from that point.

The Flaxseed Co., of Belle River, Ont., lost nearly all this season's crop of flax by fire, involving a loss of about \$3,000. They believe the fire to have been caused by incendiarism, and an enquiry is to be held.

Crude rubber is advancing, and is now 30 cents a pound above the low price of the year.

According to a German patent, washable carpets are obtained if alcohol is added to the printing color. The best plan is to mix the spirit first with thickening before adding the latter to the dye.

A primitive but at one time extensive form of the spinning industry, that of the hand mule, has just died out at Bolton, England, the last hand mule having given place to self-acting mules in the Royal Sovereign mills.

Five patents have been granted to Pacific Desorey, of Windsor Mills, Que., for process of making wool garments, forming machine for felt garments, manipulating apparatus for felt stocking forms, felting machine, and stocking stretcher.

The Cassella Color Co. has sent out a card containing samples of gentlemen's suitings dyed with Azo Merino Blue J B pat. and G pat. and Azo Merino Dark Blue R pat. The company's Canadian branch is at 86 and 88 Youville Square, Montreal.

In some sections of Texas, cotton-growing is being abandoned because of the boll weevil pest, and the land is being turned to other crops, while in some cases Texas cotton-growers are moving to Oklahoma and Indian Territory, where the boll weevil has not yet reached.

A Plattsburg, N.Y., despatch of October 25th states that the customs inspectors have seized 17,000 pounds of wool valued at about \$3,000 from Marshall H. Maynard, a farmer residing near Champlain, N.Y., about two miles from the Canadian line. The officers claim that the wool was smuggled from Canada.

A few weeks ago one hundred goats, of the best European breeds, were imported and placed upon a goat farm near Montreal, which is to be called La Chevrerie Canadienne. The goats are to be kept for their milk and cheese, but incidentally a profit may be made from the goats' hair. It is the first farm of its kind in Canada.

The Hamilton Cotton Co. have advised their customers by circular of an advance in chenille curtains, table covers, etc. The Penman Mfg. Co. also have advanced some lines of half-hose. The Dominion Cotton Co. have issued a circular advising their customers of an advance of from 5 to 12½ per cent. on all the products of their Hochelaga mill, including grey and bleached sheetings, pillow cotton, quilts, towels, yarns, and warps.

A change is to be introduced in the manner of selling the rubber which comes from the Congo Free State. Under the present arrangement agents collect the stock at Boma, and thence it is forwarded to Antwerp, where it is sold. In the future it will be collected at some place on the Lower Congo, where it will be sold at public auction. This change will be a serious blow at the commerce of Antwerp, but it is thought that it will benefit the Congo Free State.

A Liverpool firm, which does a large trade with East and Southwest Africa, received recently a species of a plant hitherto unknown, which produces rubber. The plant grows under ground, and probably will be found in English East Africa. If the bark of the plant is broken the rubber keeps the pieces together and is of extraordinary elasticity. The rubber is directly beneath the bark and is of unsurpassed quality. Ordinarily the roots, when about one month old, contain from 6 to 6½ per cent. of rubber; if the bark is removed, the percentage is from 12 to 15.

Mr. Thompson, a well known authority, speaking of the crop in the Canadian Northwest, places the flax crop for 1903 at 750,000 bushels, valued at \$500,000. In 1902 it was 500,000 bushels, value, \$475,000.

Over 3,000 cases of rubbers were disposed of at the 36th annual sale, which took place at Montreal, on October 29th. Owing to the advanced price of rubber, the prices realized were from 10 to 20 per cent. higher than last year.

Examine your slubber, intermediate and roving bobbins periodically, to see if any are hard, caused probably by the top rolls needing oiling and cleaning, or too soft, by the ends not being lapped round the presser foot the right number of times.

The imports of silks at the port of New York for the five weeks ending October 30th, were. Durable goods, \$2,530,766. This shows a slight falling off from the same period in 1902. Free raw materials, \$798,887. This shows a falling off of nearly a half from last year. The falling off is chiefly in raw silk.

A German patent has been taken out for producing patterns by actually eating holes through the fabric by the use of caustic liquids and heat. It is almost needless to say that great care has to be exercised, not only in printing on the discharge, but in very thoroughly rinsing at the conclusion of the process.

A. McDougall & Co., Montreal, have adopted a new idea in their dry goods business, and have devoted one floor of their building to samples of the various goods in stock. The goods are taken partly from the roll and draped on slanting stands. They are arranged according to price, quality and character throughout. Customers can inspect the goods in a very short time, and with much less trouble than in the ordinary way.

A rather remarkable case of theft in the woollen business is reported from New York. John Walsh, J. P. Flanagan, and William Gould, all employed in the factory of the Hartford Carpet Corporation Company, in that city, have been arrested charged with robbing the company of wool to the total value of \$25,000 during the past two months. The prisoners are supposed to have disposed of their plunder to a junk dealer.

Canadian homespun are becoming better known and appreciated in Great Britain, and a filip should be given to their popularity by the fact that Princess Louise (Duchess of Argyll) has ordered homespun for herself and the Duke from Montreal. The Canadian Woman's Art Association, who are doing much to foster Canadian home industries, have been in communication with the Duchess of Sutherland, whose interest in Scottish industries is widely known. The Duchess has expressed great admiration for the Canadian homespun, both as to their wearing value and artistic qualities.

Canadian shirt manufacturers are rushed at present, and many retailers are finding it impossible to have their orders filled. One prominent furnisher said that he had repeatedly this fall sent in orders to one manufacturer, but he had been told that they simply could not be filled at any price. The result was that the buyer was forced to obtain his supplies from the United States, which he objected to do from patriotic motives. In fall knitted underwear the usual shortage is also making itself felt. Canadian mills appear to be unable to meet the requirements of the trade, and a very much larger trade could be done if only the goods could be manufactured. Inability to obtain suitable help is the cause given.

The number of sheep in Australia is given as about 87,000,000.

The Irish linen market is steady under continued good demand.

Knitted waistcoats, cardigans and jerseys for ladies' wear will be in demand for the winter.

Dress goods of woolen texture are 10 to 20 per cent. higher at Canadian factories owing to excessive demand.

There is a steady increase in the production of hats in Canada, indicating a corresponding improvement in manufacture.

Other things being equal, stubbing will stand more draft than intermediate or roving, owing to there being no twist to contend with.

The contract for the service uniforms of the new Highland regiment, at Hamilton, has been given to the Sandford Co. of that city.

It has been found, through extended experiments, that Rhodesia can produce first-class cotton, which will command the highest price in Liverpool.

Cargoes of American cotton, which are beginning to arrive in England, are being rushed to Lancashire, and the mills are rapidly resuming full time.

Remember that in whatever direction the yarns may be strained while being made up into the fabric, the goods will show evidence of it wherever they may be used, either before or after finishing.

All the English manufacturers are talking about advancing the price of goods, though the cotton men have accepted orders at old prices except in certain fine grades. The finer wools are also harder to get.

Canadian importers say that next season they will look to France, Austria and Holland for goods to replace those shut out by the surtax on German wares. Great Britain will also be a large contributor towards this trade.

Tweeds and tweed effects will be in great demand for dress goods for next spring. The tendency is towards lighter colors, and for neater and more unobtrusive designs. For the better trades some very coarsely woven goods are showing.

A company has been incorporated in South America for the purpose of simplifying the methods of handling cotton. It is claimed that this company will have the power to regulate the supply of cotton so as to maintain a steady price, and to offset the evils which arise from speculation in the staple.

A German contemporary says that the difficulty in producing bleaching powder from chlorine produced by electrolysis is due to the presence in the gas of carbonic oxide. If the mixed gases are dry, bleach can be prepared satisfactorily if the lime does not contain more than 5 per cent. of water above that present as water of hydration.

White mercerized cotton is often stained in the finishing process, and many complaints arise from this. In the great majority of cases the reason is that the goods were not absolutely clean when dyed. In addition, goods must not be milled too hot or too dry, and if they are to be subjected to potting, they must have a preliminary working with weak acetic acid for 15 to 20 minutes, to remove all the residues of soap and soda. If this is not done, the colors will certainly bleed. After-chromed blacks bleed less than others in the milling.

Cotton hosiery is likely to be a good deal dearer next spring, as it will not only have to bear the advances in price, but the surtax as well. In spite of the surtax, it is held that we shall still have to import most of our spring hosiery from Germany. It is the Hermsdorff dye that holds the trade for that country.

The most important cotton-weaving centre in the whole of Syria and Palestine is Homs, having as many as 5,000 looms, giving an estimated annual output of 1,500,000 pieces of cloth of a minimum value of £150,000. A small part remains in the country, and the remainder is exported to Damascus, Constantinople, Smyrna and Egypt.

The eye of the shuttle should always be toward the weaver, and facing the fell of the cloth, otherwise the shuttle would have to pass over it and frequently cut or else mark the weft. The shuttle binders should always be placed so they will crowd the shuttle toward the reed, and the shoes of the shuttle should be slightly bevelled, to assist the binders in keeping the shuttle true with its opposite box.

A Belfast correspondent states that a syndicate is in existence which seizes the opportunity of any flax spinning mills offered for sale to break up the machinery and so reduce competition. As yarns are being freely imported from France, Russia, and Belgium, it is not surprising to hear that there is a great variety of opinion both inside and outside the linen trade as to this policy.

In wool washing it is customary to use potash soaps, as soda soaps, although cheaper, are not soluble enough. On the average, a soda soap requires fifty times its weight of water for complete solution. If, however, the soap is mixed with a quarter of its weight of cresol, the solubility is increased tenfold, and the detergent power is greatly increased, so that the compounded soda soap will do the work of a much larger quantity of potash soap.

A New York report says: "A new number in mohair dress goods woven to resemble Scotch tweed. In blue and white it is very attractive, but looks more like tweed than mohair. The gunmetal effects in mohair are the prettiest yet produced. Fine white stitch effects on black or end on end have stripes or checks on black grounds. The nub or bourette effects are not so successful, seeming to lack refinement."

According to Bradstreet, the cotton mills in the Southern States now take more raw material than those of the north. In 1903 the northern mills took 49.58 per cent. of the American cotton used at home, while the southern mills took 50.42 per cent. Thirteen years ago the north took 76.7 per cent. and the south 23.3 per cent. The increased use of raw material in the north is only 9 per cent., while the south has quadrupled its output. North and south together manufacture less than half the raw product of the United States, while last year the north imported \$5,000,000 worth, or say 130,000 bales of Egyptian or other foreign growth.

—A man's brains can do more work than both his hands.

—The Paris correspondent of the New York Economist sends out the following meanings of the French color terms: Regent—deep orange with a burnt cast. Creme—slightly yellowish white. Reine—light cherry pink. Geranium—bright red with a slightly yellowish cast. Beige—golden tan. Russe—dark green with a vivid tone. Argent—light or silvery gray. Mauve—pinkish lavender. Dahlia—dark reddish purple.



## Business Notes.

The Edmonton Wool and Wood Co. has been incorporated in the Northwest Territories.

The Canadian Colored Cotton Mills Co. paid a quarterly dividend of one per cent. on October 15th.

The Crystal Laundry Co. has been incorporated at Victoria, B.C., and will engage in business there.

The E. B. Nash Co. has been incorporated to establish and conduct a departmental store at Winnipeg. Its capital is \$50,000.

The finishing touches have been put on the outside of the Greenshields, Western, Limited, wholesale dry goods block, Winnipeg.

D. Knipfel, of the Pearl Steam Laundry, Berlin, Ont., has purchased a lot and will erect a two-story brick building for laundry purposes.

The Griffin Curled Hair Co. has been incorporated at Toronto, with a capital of \$50,000. The provisional directors are: Patrick J. Griffin, Thomas C. Tracy, and John B. Harris.

The name of Thomas Logan, woolen manufacturer, of Renfrew, appears as one of the incorporators of the Renfrew Manufacturing Co., incorporated to carry on a lumbering and building contracting business.

The Nova Scotia Oil Clothing Co. has been incorporated, with a capital of \$50,000, head office at Getson's Cove. The incorporators are: J. D. Sperry, of Petite Riviere; Jos. N. Wolfe, of Getson's Cove; V. J. Paton, of Bridgewater.

A. E. Rea & Company, wholesale fancy and dry goods dealers, Toronto, have been incorporated with a capital of \$50,000. The company is composed of Andrew E. Rea, Jas. B. Rea, Alice T. Rea, William C. Cliffe, and Roy Stanley Gece.

John Maclean and Daniel Hector, conducting business as Maclean, Ross & Co., wholesale hatters, Winnipeg, have dissolved. The partnership was of brief duration, and has come to an end, it is said, because of adverse conditions in United States factories.

The assets of the Strathcona Rubber Company, Montreal, including some 23,178 feet of real estate, with buildings, have been sold by auction to the Montreal Waterproof Clothing Company for \$15,000. The plant and machinery were sold to Gustave Gravel at 68½c.

At the annual meeting of the McAtmorency Cotton Mills Co., the following directors were elected: F. C. Henshaw, J. T. Ross, H. M. Price, N. Rioux, R. Forget, Alex. Pringle and J. N. Greenshields, and at a subsequent meeting, F. C. Henshaw was elected president, and J. T. Ross, vice-president.

Letters patent have been issued to the C.P.R. Laundry, incorporating Walter Scott, Jemima Scott, A. L. Scott, Florence M. Scott, Aaron Munshaw, and William Grant, all of Winnipeg, for the purpose of carrying on a general laundry, dyeing and bleaching business. The capital of the company is \$75,000.

The Montreal Colored Cotton Co. has purchased the plant and business of the Cornwall Cotton Manufacturing Company. The former will continue the operation of the entire cotton plant in connection with its business. The woolen machinery recently purchased by the Cornwall Company will be disposed of.

The Wright Hat Co., Berlin, Ont., which manufactures men's, women's and children's hats, are opening shops in a number of towns and cities.

The Parisian Laundry Company, of Toronto, has been incorporated, with a capital of \$100,000. It will take over and carry on the business heretofore known by that name. The provisional directors are John Stevenson, Hugh K. Lorimer, Robt. Morton, and David Morton, the younger.

In the case of the town of Galt against the Bank of Montreal, arising out of the H. H. Burrows carpet factory deal, referred to in the last number of the Journal of Fabrics, Judge Jamieson, of Guelph, has given his decision in favor of the town, confirming the claim that the marking of a cheque good, by the bank, guaranteed its value.

Sheriff Dana, assignee of the estate of Thomas Clearhue, glove manufacturer, Brockville, has issued a writ to compel Cole & Cameron, of Montreal, to complete the purchase by them of the assets of the estate, and to recover a certain sum of money and a quantity of goods said to have been wrongfully disposed of before the assignment.

H. Telke and M. Finklestine have formed a company in Winnipeg for the purpose of establishing a fur dressing, tanning and manufacturing business. It is stated that the home product will be used as largely as possible, but that a large supply of furs will be obtained from London, and that Russian fur experts will be employed in the business. A site has been purchased and buildings will be erected at once.

The Parisian Corset Manufacturing Company, with a capital of \$65,000, has been incorporated, headquarters at Quebec, to manufacture, import, export and deal in all kinds of corsets, corset-waists, braces, infants' bands, corset steels, corset clasps, dress steels, dress shields, hose supporters, bustles, laces, lace trimmings, corset boxes and all boxes and cartons in general, and all dry goods and small wares in general. The charter members are: J. A. Cote, E. E. Ross, A. Borden, F. S. Bruneau, and Mrs. Marie L. Garneau.

The old established firm of Gault Bros. Company, wholesale dry goods merchants, Montreal, has been subdivided into three companies. One will be known as the Gault Bros. Company, and will operate the offices and warehouses in Montreal, and Vancouver, B.C. Leslie N. Gault will be president of this company. The factory owned and operated by the old Gault Company will be managed by the Crescent Factory Company, and J. Rodger, who was formerly vice-president, succeeds the late A. F. Gault, as president. The Winnipeg branch will be severed entirely, and will be run by a syndicate to be known as the Gaults, Limited. R. W. McDougall will be president, and H. M. Belcher, general manager.

The charge against three Toronto merchants of conspiracy to defraud the creditors of George Margolius, has at length been disposed of, so far as two of the defendants are concerned. The case came before the Court of King's Bench, at Montreal, on November 2nd, when Bachrack and Blackley withdrew their plea of not guilty and pleaded guilty, admitting that they bought goods from Margolius at very low prices, knowing that the creditors would in the end lose by Margolius' assignment. They were fined \$100 each, and two hours in jail. J. N. Greenshields, their counsel, explained that owing to an irregularity in the commission which went to New York to take evidence, a new commission would have to issue, that restriction had been made, and that 75 per cent. of the creditors had signed a petition to the effect that they were not desirous to press the case. The Crown counsel stated that he had communicated with



the Attorney-General, and that he was willing the case should be disposed of as stated. Levy, the other defendant, held to his former plea of not guilty, and his case was adjourned to the next sitting of the court. It is likely it will be dropped.

Speaking of cotton company stock, as an investment, Rudolph Forget, of L. J. Forget & Co., Montreal, one of the most influential brokers and best-known financiers in Canada, says: "Cotton companies are doing well. Of course they would do better if they had protection. Canadian Colored Cotton at 40, pays 10 per cent. on the investment. Surely there should be a big chance in buying it with hardly any risk. One buying Dominion Cotton at 32 should double his money in a year or two. This may seem a long time, but it may be sooner."

Wm. Makepiece & Co began business in Toronto on February 1st, 1902, as a wholesale and commission fancy dry goods house. Makepiece came from England, and the company--W. H. Harris--had been in the employ of several houses in Toronto. At the start the latter claimed he had \$3,000 in investments and Makepiece had property in England said to be worth \$6,000. Owing to lack of capital they have been compelled to make an assignment. The liabilities are placed at \$3,521.58, and the assets at \$2,374.89. The principal creditors are Gault Bros. & Co., Greenshields, Limited, and the Royal Neckwear Co., of Montreal; and R. Forbes & Co., Hespeler; Thomas Stevens, Coventry, Eng., and W. Thompson & Sons, Leicester, Eng. The estate is to be wound up. R. Osler Wade is assignee.

The case of Thorp vs. the Walkerton Binder Twine Co. is now before the County Court at Guelph. When stock was being solicited for the Binder Twine Co. a man named May subscribed for three shares, the value of which was \$30. Instead of paying for his stock in full, he only paid \$10 on it. By a mistake in making out the certificates, May was given a certificate as though he had paid for his stock in full, and was even paid a dividend on it. Subsequently he sold his stock to Thorp, who lives in Guelph. When Thorp applied to have the stock transferred, it was discovered that it had not been paid for, and the Board refused to make the transfer. Now Thorp enters action to compel them to do so. Thorp, of course, holds the certificate, but a by-law of the company declares that no stock can be transferred without the company's consent, hence they feel confident of winning the suit.

## Personal.

Wm. Black, finisher in the Hewson woolen mill, at Amherst, N.S., has given up his situation to take a similar one in the Willet Mills, Chambly Canton, Que.

James Jordan, who has charge of the weaving at the Merchants' Mill, Montreal, was formerly overseer of weaving at the Queen Cotton Co., Burlington, Vt.

James W. Hunter, of Winnipeg, who has all his life been a hard-working carpenter, has fallen heir to over a million dollars. The money was made by his father's uncle in the cotton trade.

F. J. Lanier, manager of the Dominion Carpet Co.'s works, which recently went out of business at Sherbrooke, Que., has accepted a position with one of the largest carpet manufacturing companies of Philadelphia.

John Munroe, of Hespeler, has gone to Seaforth, where he has secured a situation in the woolen mill.

Mr. Ballantyne, late assistant designer in the mills of the Canada Woolen Co., Carleton Place, Ont., has accepted the position of assistant designer with the Auburn Mills, Peterboro.

Oral Copp, who has been for several years with the Dominion Cotton Mills Co., at Magog, has resigned, and taken a situation with the Colonial Bleaching and Printing Company, at St. Henri, Montreal.

Robert Lang, formerly dresser tender with the Auburn mills, at Peterboro, has been visiting his parents there, accompanied by his bride, a young lady of Lawrence. He has been in Lawrence for six years.

Samuel McIntyre, for the past four years boss carder in the Auburn mills, Peterboro, has resigned to accept a much better position at Dexter. His position at Peterboro has been taken by Wm. Lowe, of Clayville, N.Y.

Marcus Malcolm, of Brantford, is dead. He was born in the township of Oakland in 1830, and engaged at Scotland, Ont., at an early age, in the woolen manufacturing business, which he moved to Brantford 22 years ago.

Miss Cora Quinn, for fifteen years an employee of the Ontario Glove Works, at Brockville, has severed her connection, and gone to La Riviere, Manitoba, to reside with her brother. Before leaving she was suitably remembered by her fellow-employees.

A. H. Gledhill, of the Canada Woolen Mills, Hespeler, is a graduate of the Textile School, Yorkshire, where he received three scholarships and was appointed assistant instructor in the Textile School. He has also had much experience in designing and superintending in worsteds and woolen mills in England.

Charles Heber Clark (Max Adeler), one of the best known humorists in the United States, who is a strong candidate for the position of chief of the Bureau of Manufactures in the new Department of Commerce, is said to be an authority on the manufacture of textiles, and is a well known writer upon economic subjects.

Since the last issue of the Journal of Fabrics, Frederick Kennedy, eldest son of ex-Mayor Warring Kennedy, of Toronto, died of typhoid fever. He was born in Ireland and came to this country with his parents, where he eventually became manager of the wholesale dry goods house of Samson, Kennedy & Gemmill, in which his father was a partner. For the past few years he has been associated with R. H. Cosbie, manufacturers' agent.

### MAKING WOOLEN HOSIERY UNSHRINKABLE.

One of the best processes for making woolen hosiery goods unshrinkable is the following. It is best carried out in a wooden vat which is provided with guide rollers to carry the goods through if in piece, or if they are in separate pieces these are not necessary and the goods are simply put in and raked about for half an hour. Above the vat are a pair of squeezing bowls. The wood vat is charged with water to which is added 4 lb. sulphuric acid for each 100 lb. weight of goods. The quantity of acid should be increased when thick, heavy goods are dealt with, and may be reduced with light, thin fabrics. This bath is used at 170 deg. F. In a second vat is prepared a clear liquor from 10 lb. bleaching powder, using altogether 100 gallons of water. This is used at 80 deg. F. The goods are taken out of the acid bath

# 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.

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Beam Warps, Mule  
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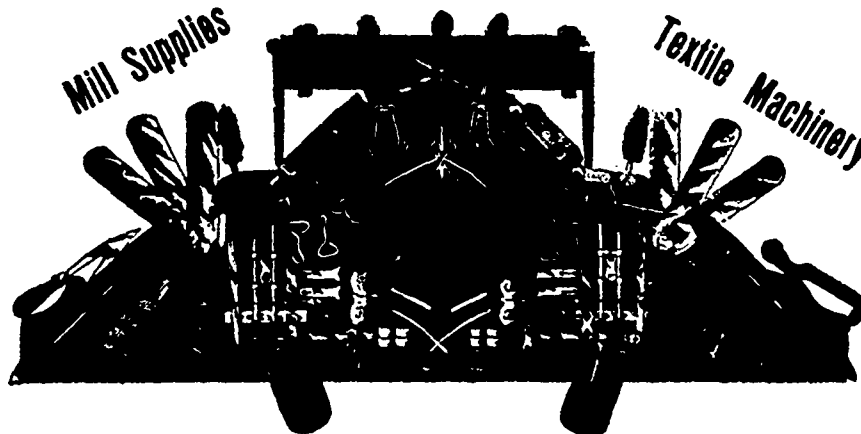
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J. Smith  
**Woolen Machinery Co.**

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Carding, Spinning,  
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**Grimpton & Knowles  
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Looms for weaving  
every description of  
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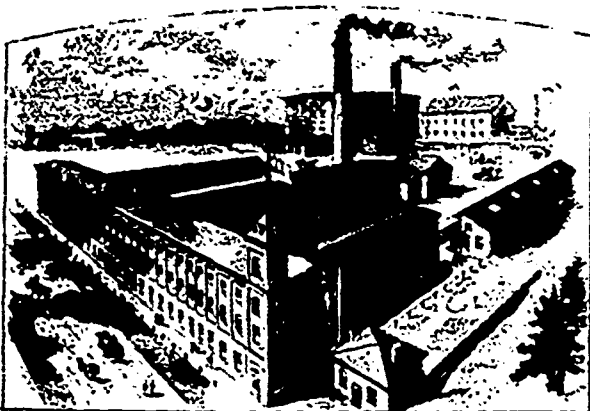
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## Hamilton Cotton Co., Hamilton

MANUFACTURERS OF

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



SELLING AGENTS

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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 Woollen Machinery Company

118 DUKE STREET, TORONTO.

I. BREDANNAZ, Manager.

Sole Agents for Canada and the United States.

Prices on Application.

Prices on Application.

and after squeezing are put direct into this chloring bath, and left there for a quarter of an hour, after which they are rinsed and are then ready for being finished or dyed as may be required. While it is possible to sour and chlore in the same bath by first treating with acid and then afterwards running in the chloring liquor, the best results are always obtained by using a two-bath process as above described, while it is, if anything, more convenient to the workman, as there is less risk of chlorine gas being evolved.

### STATE OF GERMAN TRADE.

In his report on the trade of Germany for the first half of 1903, just issued, Consul-General Schwabach says: "Since 1899 profits in the textile industry have diminished considerably. The average dividends of the textile companies quoted on the Berlin Stock Exchange fell from 8.15 per cent. in 1899 to 4.58 per cent. in 1900, and 2.91 per cent. in 1901, while for 1902 the dividends in a share capital of £5,200,000 averaged 5.22 per cent. The dividends distributed by the different companies in 1902 varied between 0 and 17 per cent. The number of companies which paid no dividends fell from twenty-four to fourteen. In the first half of 1903 business in this industry has, on the whole, been satisfactory, and at the end of June continued so active in most districts that the customary dead season was hardly perceptible. Weavers and most of the spinners were working full time; dyers, printers, and dressers were well provided with home and export orders, cloth manufacturers also being fairly employed although prices were low. The American cotton corner has affected the German cotton industry to some extent; but the

influence of the corner seems to be confined to narrow limits, as the mills are still well stocked with raw cotton."

—A person, who is no use in a mill, may succeed in some other line. When The Little Minister made a hit, an old Thrums woman, who had known Barrie from a bairn, remarked: "Weel, it's a gude thing the laddie can mak' somethin' at his writin'—he never could hae made his livin' in the mills."

### CHEMICALS AND DYESTUFFS.

Sulphate of copper is higher in sympathy with the rise in copper.

Bleaching powder is reported firmer for next year, and some contracts have been placed on private terms.

Sulphur is scarce on the spot in first hands. Jobbers ought to command good prices, as cargoes are bought up directly steamer is in port.

Bleaching powder .....	\$ 1 30 to \$ 1 50
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 00 to 2 25
Caustic soda, 70° .....	2 35 to 2 50
Chlorate of potash .....	0 09 to 0 10
Alum .....	1 30 to 1 50
Copperas .....	0 65 to 0 75
Sulphur flour .....	1 50 to 1 70
Sulphur rock .....	1 60 to 1 80
Sulphate of copper .....	0 06 to 0 6½
White sugar of lead .....	0 07 to 0 08
Sumac, Sicily, per ton .....	57 50 to 58 00
Bich. potash .....	0 07 to 0 08
Soda ash, 487° to 587° .....	1 15 to 1 25
Chip logwood .....	1 50 to 1 75
Castor oil .....	0 07 to 0 08
Cocoon oil .....	0 07 to 0 08

### Situations Wanted.

OFFICE MAN and salesman, young, energetic, English-American, conversant with modern office methods, hard worker, seeks engagement in either capacity. At present compiling costs and acting as chief clerk in small cotton mill in United States. Address, "H. R.," care of Canadian Journal of Fabrics, Toronto.

### NEW BLACK FOR WOOL

# EMPIRE BLACK

**Absolutely Fast ONE DIP Black**

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

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### 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

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# Anilines, Alizarines, Synthetic Indigo, Etc.

**55 ST. FRANCOIS XAVIER ST., MONTREAL.**

# **FIRE PROTECTION.**

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**FIRE HOSE—  
Cotton—Rubber Lined.**

**FIRE HOSE—  
Linen—Unlined.**

**Full Stock constantly on hand.**

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**HIGH GRADE  
“GENUINE OAK”  
(ENGLISH TANNED)**

**LEATHER BELTING**

**No Shoulders, Necks or Bellies.**

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# **ENGLISH CARD CLOTHING**

**Full Stock on Hand.**

*QUALITY UNEXCELLED.*

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**D. K. McLAREN,**

**132 Bay Street, Toronto.**

**751 Craig Street, Montreal.**

## Textile Design

### FANCY WOOLEN OVERCOATING.



Complete Weave. Repeat  $60 \times 8$ .

Warp:—5,250 ends, 10 harness fancy draw.

Reed:—15  $\times$  5 = 70 inches wide.

Dress:—

1 end, 4 run black and 64's worsted, white twist	} $\times 1 = 20$ ends
1 end, 2/52's worsted, black and white twist	
1 end, 4 run white and 64's worsted, white twist	} $\times 8 = 40$ ends
2 ends, 4 run black	
1 end, 4 run black and 64's worsted, white twist	} $\times 2 = 10$ ends
1 end, 4 run black	
1 end, 4 run black and 64's worsted, white twist	} $\times 22 = 110$ ends
2 ends, 4 run black	
1 end, 4 run black and 64's worsted, white twist	} $\times 2 = 10$ ends
1 end, 2/52's worsted, black and white twist	
1 end, 4 run black and 64's worsted, white twist	} $\times 22 = 110$ ends
2 ends, 4 run black	
1 end, 4 run black and 64's worsted, white twist	} $\times 2 = 10$ ends
1 end, 4 run black	
1 end, 4 run black and 64's worsted, white twist	} $\times 22 = 110$ ends
2 ends, 4 run black	

Repeat of pattern: 180 ends

Filling:—63 picks per meh, arranged thus:

1 pick, 4 run black	} $\times 4 = 16$ picks
1 pick, 2/52's worsted, black and white twist	
2 picks, 4 run black	} = 40 picks
40 picks, 4 run black	
1 pick, 4 run black	} $\times 28 = 112$ picks
1 pick, 2/52's worsted, black and white twist	
2 picks, 4 run black	} = 112 picks
2 picks, 4 run black	

Repeat of pattern: 108 picks

Finish:—Scour well, full slightly, clip on shear; 56 inches finished width.

### WOOL MARKET.

There is a temporary lull in the English wool market. The next colonial sales open on November 24th. Meantime the situation may be summed up by the remark that the market is steady in fine wools, strong in coarse.

In the United States there is practically no change from a month ago. The business done by dealers consists of small transactions, and manufacturers are indifferent. Dealers assert that stocks are low, and are firm as to prices. The domestic clip is decidedly short, so that prices are likely to take firm, and the advantage is with the seller.

The Toronto market is quiet, but firm. Only the blanket and underclothing mills are buying. There is no demand for export to the United States since prices are better here than across the border. Dealers are paying about a cent over last month's quotations. Combing fleece, 17½ to 18c.; clothing, 19 to 20c.; rejections, 13 to 14c.; unwashed, coarse, 10c.; unwashed, fine, 11c.

Montreal.—There is very little change to report in the wool market, except that all stocks are firmly held at last prices, and, in fact, in some instances higher figures have

been maintained. The cloth mills are reported to have very few orders, while the knit goods trade appear to be doing very well and ordering wool very freely.

In Winnipeg dealers offer 7¼c. for further lots of unwashed fleece laid down. The Commercial estimates the territorial clip for the year 1903 at 990,500 lbs. The average weight per fleece is from 4½ to 6 lbs., and the average price about 2c. above that of last year.

### COTTON MARKET.

The assertion that the month of October would see a tremendous slump in prices for raw cotton has not been realized, nor has it come as yet in November. Among the Canadian mills the situation is decidedly unsatisfactory. There is no prospect of lower prices and stocks of raw cotton are becoming depleted. The following are the prices at New York, November 10th: Spot, quiet; middling uplands, 11.15; do Gulf, 11.40; futures, December, 10.91; January, 10.93; March and May, 10.99.

### NAKED STEAM IN DYEING.

In using naked steam as a means of heating a dye vat, that is to say, steam blown directly into the vat, care should be taken that the pipe is in direct communication with the boiler. In examining into one of the mysterious faults that will occur in dyehouses, lately, says the Dyers' Bulletin, the writer found that the dyer was using a main pipe from the boiler connected with smaller pipes into a number of vats. The trouble was caused by some dirty liquor from a vat (actually on a lower level than the vat in use), being carried through the main pipe into the working vat. When this was explained to him the dyer said that this was impossible, but it is a simple matter. When the steam pipe is out of use, and begins to cool, naturally the liquor in all the vats is drawn by suction up into the main pipe, and is blown into the vat next used.

—Some time ago an Indian war blanket was received at the Methodist mission rooms, Toronto, through Rev. J. C. Spencer, a missionary at Bella Coula, B.C. It came from an Indian family, who desired that it should be sold and the proceeds applied to the purchase of a knitting machine. Creelman, of Georgetown, a manufacturer of such machines, whose advertisement appears in the Journal, agreed to give a \$25 knitting machine for the blanket, and it was duly forwarded to the Indians.

—The hosiery trade of the world, says Pearson's Weekly, was created by the knitting frame, which was invented by the Rev. William Lee, vicar of Calverton, Notts, about the year 1590. The story goes that the lady of his love was so engrossed with her knitting that she paid too little attention to his suit. He thereupon set to work to invent a machine which should supersede handwork. In this he succeeded, and resigned his living in order to develop his invention. His machine was brought to the notice of Queen Elizabeth who gave him no encouragement, on the ground that the invention would bring ruin to many knitting women. Public opinion took the same view, and the inventor was reduced to great straits. In 1610 Lee took his machines over to France, to establish the industry there, but soon after his arrival he died. His brother brought the knitting frames back to England, where opposition gradually abated, and the hosiery trade became an English industry. Dr. Cartwright, rector of Goadby, Marwood, did equal service about 1780 as the inventor of the power loom.

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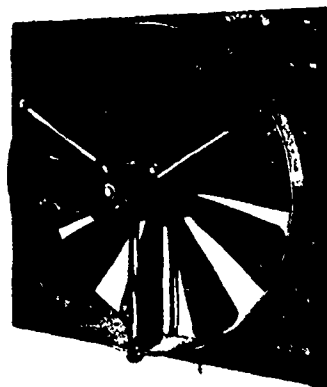
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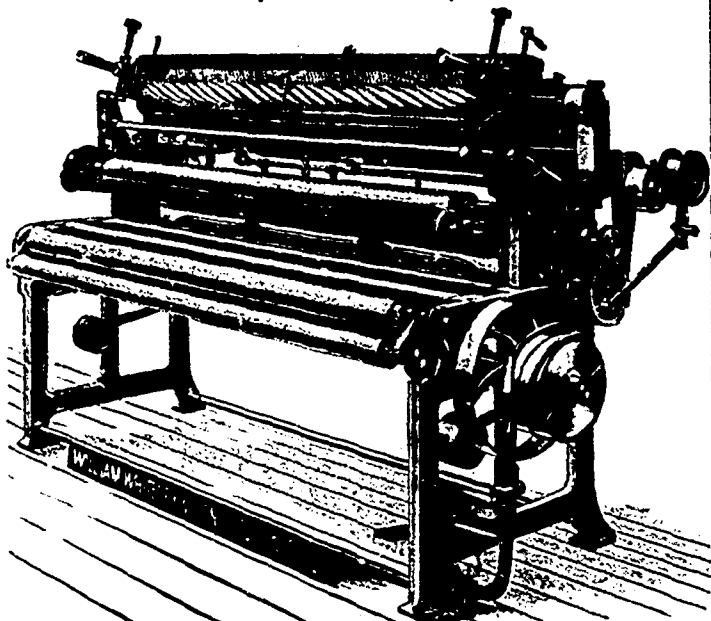
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**INDEX TO ADVERTISEMENTS**

Atteaux & Co., F. E.	4
Barlow, John W.	10
Becker, Chas. W.	8
Bellhouse, Dillon & Co.	1
Benson & Co., W. T.	1
Bischoff & Co., C.	2
Brown, John E.	9
Canada Bobbin Co.	8
Canadian Colored Cotton Mills Co., e.o.m.	
Cantlie, James A.	10
Carter, E. T.	9
Cassella Color Co.	1
Crabb & Co., William	10
Crowe W. M.	2
Davison Publishing Co.	12
Dominion Dyewood & Chemical Co.	1
Guarantee Co.	10
Oil Cloth Co.	10
Dronsfeld Bros.	13
Elliott & Hall	10
Fickhoff, A.	8
Felten & Guillaume	14
Firth Co., William	7
Forbes Co., The R.	9
Fraser, Robt. S.	2, 13
Garland Mfg. Co.	2
Gessner, David	13
Graham, William	9
Halton's Sons, Thomas	2
Hamilton Cotton Co.	3
Jack & Co., Watson	1
Klipstein & Co., A.	4
Lachute Shuttle Co.	9
Lawson & Sons, Samuel	14
Leigh, Evan Arthur	7
Leitch, A. W.	1
Levy & Co.	8
Lewis, John D.	10
Long & Bisby	9
Mather & Platt	7
McArthur, Corneille & Co.	1
McEachren Heating & Ventilating Co.	2 & 12
McLaren, D. K.	5
Belting Co., J. C.	14
Mississippi Iron Works	9
Montreal Blanket Co.	9
Morrice, Sons & Co., D.	12
Morton, Phillips & Co.	9
New York & Boston Dyewood Co.	1

Philadelphia Textile Machinery Co.	7
Reiche & Co.	10
Reid & Co., George	3
Riley & Co., C. E.	3
Roesler & Hasslacher Chemical Co.	2
Rosamond Woolen Co.	10
Sheldon & Sheldon	2 & 12
Smith Woolstock Co.	9
Stevens Arms & Tool Co.	8
Stoddard, Haserick, Richards & Co.	12
Toronto Woolen Machinery Co.	3
Turnbull Co., The C.	10
Want Advertisements	4
Watson Mfg. Co., L. S.	11
Whiteley & Sons, Limited, William	7
Wilson Bros.	11
Bobbin Co.	13
Paterson & Co.	1
Young Bros.	9

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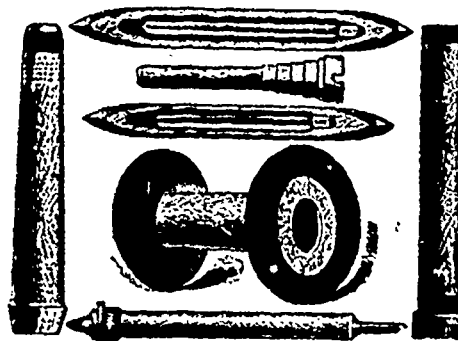
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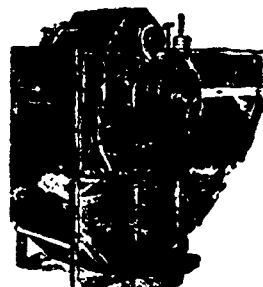
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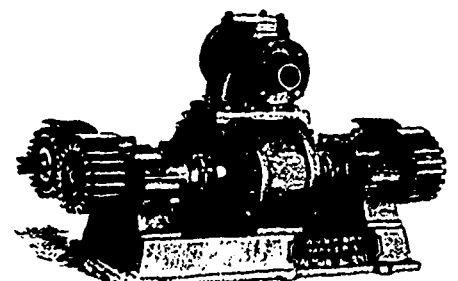


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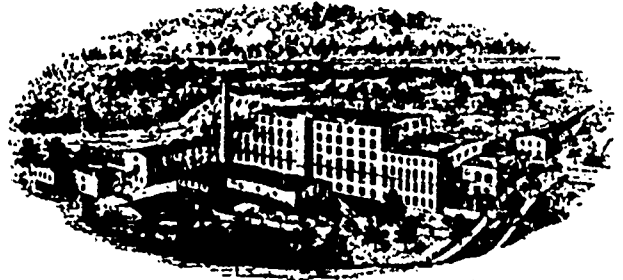
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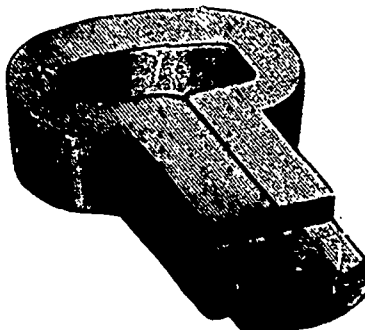
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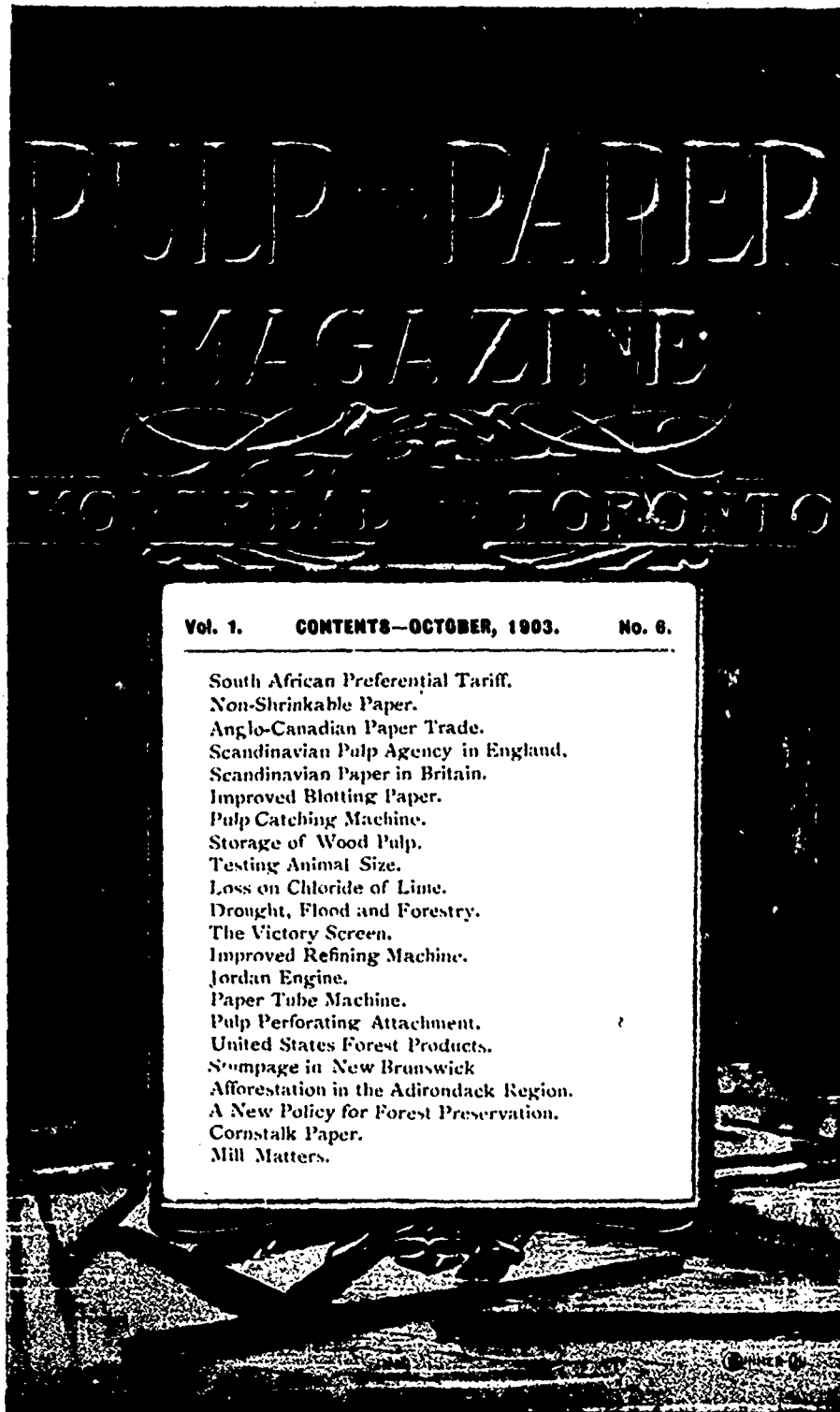
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CONTENTS OF OCTOBER NUMBER.



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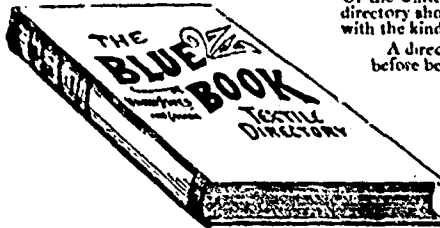
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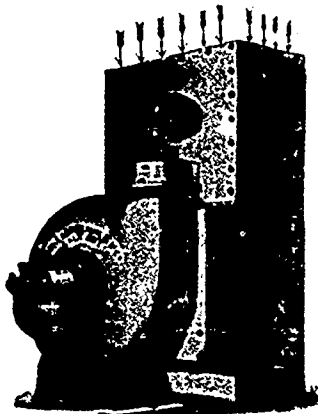
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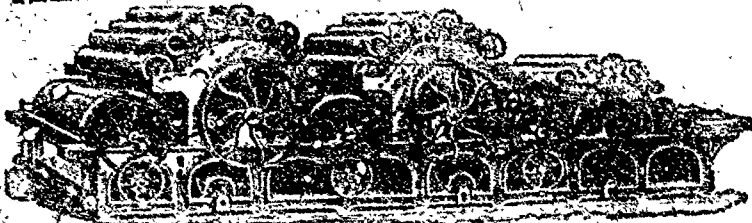
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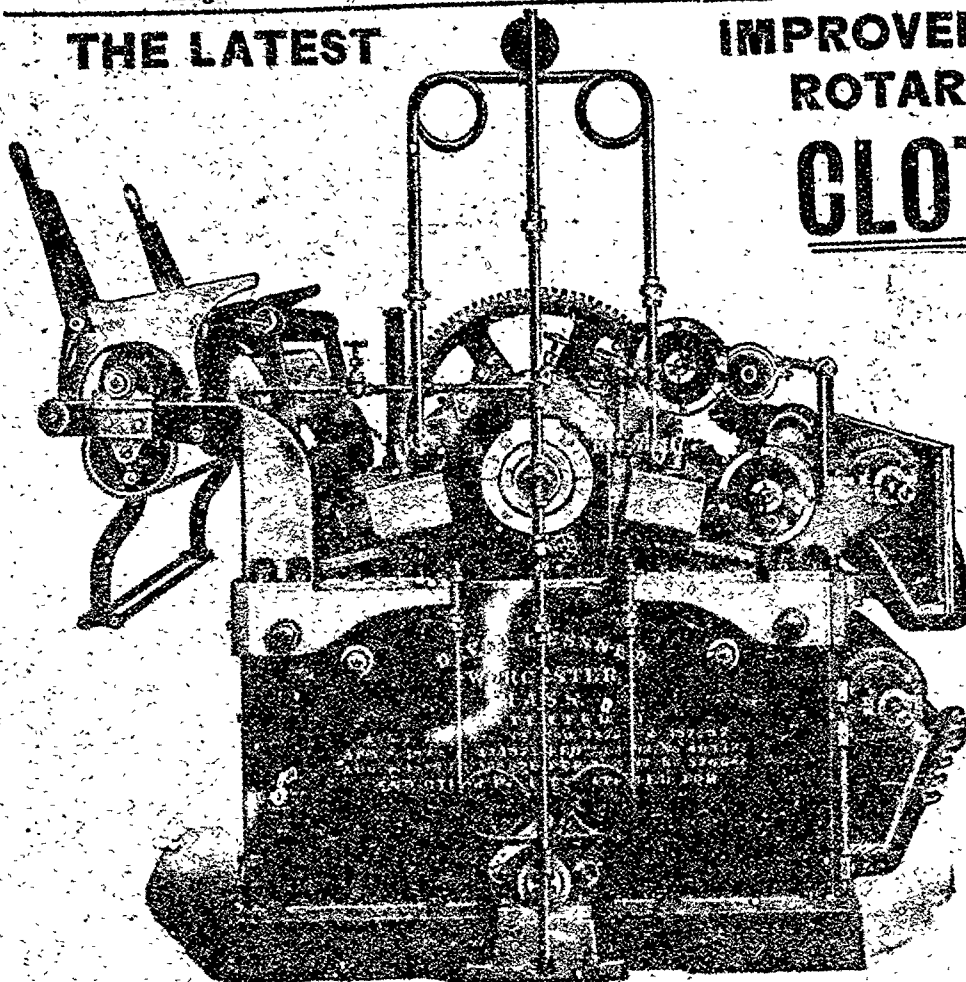
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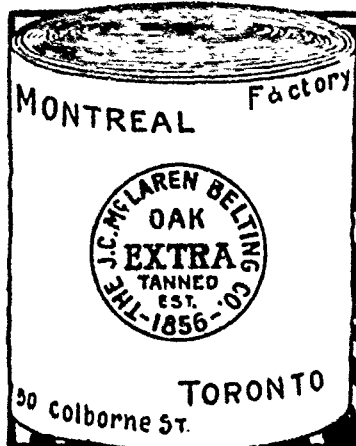


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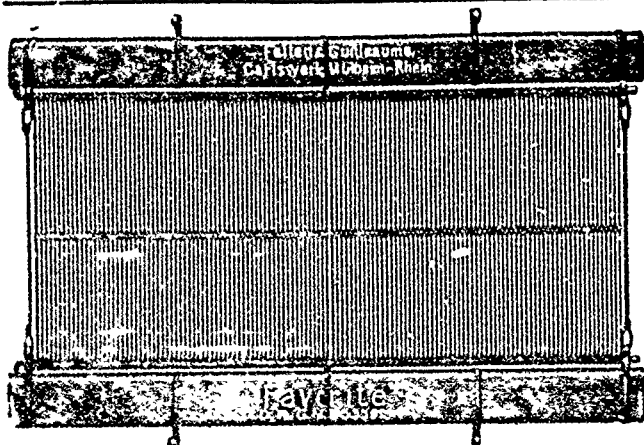
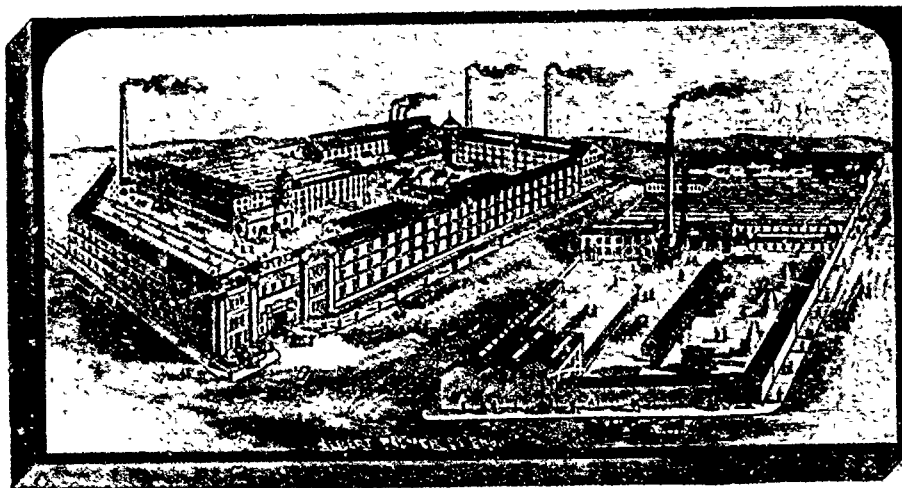
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