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Canadian Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVIII. TORONTO AND MONTREAL, JULY, 1901. No. 7.

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CONTENTS OF THIS NUMBER:

DISCRIMINATING RATES ON TEXTILES.

The Canadian Manufacturers' Association has called attention to the unjust discrimination in freight rates to western Canadian points, by which in some cases the railways deliver goods from Liverpool or New York at points on the Canadian Pacific Coast at a lower figure than they will ship them from Toronto or Montreal to the same destination. We have already mentioned cases of grossly unfair rates on wool, and the association mentions another instance where wool is carried from New York to Nelson, B.C. for $1.38 per 100 lbs., while $1.98 per 100 lbs. is charged from Toronto to Nelson. Details of the discrimination in dry goods are given by the association in the following table compiled from the winter schedule, comparing the rates from Toronto to Winnipeg and Vancouver, and from Liverpool to the same points. Similarly in many cases the rates are lower from Liverpool to these Western points than from Montreal. In the table the initials L.C.L. mean; goods in less than car lots:—

	Liverpool to Winnipeg, per 100 lbs		Liverpool to Vancouver, per 100 lbs.	
	Carload	L.C.L.	Carload	L.C.L.
Calicoes cambrics, etc	$1 30	$1.52	$....	$1.74
Cotton clothing	1.63	1.96	....	2.29
Dry goods, not otherwise specified	1.63	1.96	....	2.60
Bags, bagging, jute, ex Dundee	1 04	1 25	0 98	1 25
Bags, bagging, jute, ex Liverpool	0.98	1 20	0.87	1.15
Carpets	1.63	1 96	2 07	2 60
Wool clothing and hosiery	1.63	1 96	....	2 40
Hemp carpet in bales	0.87	1.09	0.98	1 20
Oilcloth	0.87	1 58	0.87	1 58
Kid gloves	....	1.96	....	3.26

	From Toronto to Winnipeg.		From Toronto to Vancouver.	
	Carload	L.C.L.	Carload	L.C.L.
Calicoes, cambrics, etc	$....	$1.38	$....	$1 73
Cotton clothing	....	1.82	....	2 25
Dry goods, not otherwise specified	....	1 82	....	2.85
Bags, bagging, jute, ex Dundee	....	1 16	....	1 20
Bags, bagging, jute, ex Liverpool	....	..	....	....
Carpets	1.24	1.82	....	2 75
Wool clothing and hosiery	....	1 82	....	2 85
Hemp carpet in bales	....	1.82	....	2.75
Oilcloth	0.82	1 24	1.16	1 70
Kid gloves	....	1.82	....	2.85

The curiosity of some of our readers has been excited by an item in the figures of the textile trade of Newfoundland given in last issue. This item states that "wool cards" to the value of $52 were imported to the island from Great Britain, $1,046 from Canada and $9 from the United States. The $1,046 should have been credited to the United States and the $9 from St. Pierre. One enquirer asks "Will you kindly inform us as to who the users of this article are?" We were under the impression that these were the hand cards, shaped like a large size curry-comb for grooming horses, and used largely to this day in country districts of Quebec by those who do their spinning on the old fashioned hand spinning wheel. This notion is confirmed by a reply just received from the assistant collector of customs at St. John's, in answer to our question. "The wool cards referred to are hand cards used by the country people in carding wool to prepare it for spinning. In nearly every country place in Newfoundland sheep are kept and the wool is used by the inhabitants to knit their own underclothing." These hand cards are made in the Province of Quebec, and though the total trade in this line in Newfoundland is not a large item, it seems strange that almost the whole of it is supplied by

United States firms. We fear that when it comes to trade with other countries our people have short-range optics.

Speaking of the island's domestic textile industry, we find the following interesting note in the Trade Review of St. John's: "Rev. Father Veitch, of Conception Harbor, has undertaken to spread a knowledge of hand-loom weaving amongst his people, and he is succeeding admirably to date. Last year he sent one of his female teachers, (Miss Rachel Gushue) away to the West Coast to learn weaving, and having got a thorough knowledge of it, she returned, and has since imparted it to twelve other young girls, who are preparing to take charge of schools later on. All these teachers will introduce weaving in the schools that will be placed under their charge, and their pupils will be taught the art. The example ought to be followed by other clergymen of the island, so that the next generation of girls will have been instructed in a useful art. The desire for sheep-raising is becoming general throughout the island, and side by side with the sheep, should come the domestic loom, and the knitting machine. It is in the spread of these small industries that the future comfort of our people lie. Rev. Wm. Veitch is a Newfoundlander in the truest sense, and since the very first days of his mission in this island he has labored unceasingly for moral and material welfare of his people, and this last step is but another evidence of his continued desire in this direction."

The lion-and-lamb relationship of the employing and employee interests of the British cotton trade to which we recently referred has been unhappily of short duration. The Lancashire cotton operatives refuse to accept the scheme of conciliation offered by the employers; and the trade journals deplore this as an evidence that neither English trade unionism nor French socialism will accept in any reasonable form this just principle of settling disputes. In the French Chamber of Deputies M. Millerand's bill proposing a compulsory arbitration of strikes has been examined officially by the socialist party which has rejected the principle of the bill as an obstacle to trade union organization and to the aims of the working classes. A large proportion of the world is not yet convinced that the "aims" of socialists are just or reasonable. While human judgment is liable to err the occasional errors of a court of arbitration would be as likely to work to the advantage of one side as the other, and one would think that even the socialists would be willing to give compulsory arbitration a trial in the hope that it would prove, as claimed, to be a great step in advance of the system of settling differences by the brutal and antagonizing method of strikes on the one hand or lock-outs on the other. After all no method of creating amity and concord between workman and employer will ever succeed till men accept the principle laid down 1900 years ago, "As ye would that men should do unto you, do ye even so to them." In whatever particular employer or employee fails to act up to this standard in a trade dispute his case is weak.

THE TRADE OF CHINA.

According to the last report of the Chinese Imperial Maritime customs, under the direction of Sir Robert Hart, the great expansion of China's foreign trade, shown by the statistics for 1899, was continued during the first half of 1900; but the disturbances in the North, which became serious in June, not only stopped for a time all trade at Newchwang and Tientsin, which had shown such improvement during the previous year, but naturally had a depressing effect throughout the ports. A disastrous commercial panic with heavy failures might have been expected; but the year, generally speaking, was a fairly good though anxious one. Trade was so brisk during the first six months, and revived so strongly towards the close, that, contrary to all expectations, the value of the foreign trade was well up to the average of late years, although naturally falling short of such an exceptional year as 1899.

The net value of the foreign import trade was 211,070,422 hk. taels. It was not to be expected that under such unfavorable circumstances the figures of the previous record year would be reached, but it will probably come as a surprise that the total of 1898, which beat all former years, amounting to 209,579,334 hk. taels, should have been exceeded.

Importers of cotton goods have passed through a very anxious crisis, but disaster was averted by another short cotton crop in America. The goods which arrived in the spring were imported at enhanced prices, and although on the breaking out of the trouble in the North the spring purchases for the autumn market were stopped, there were large stocks which could not be placed, and which would have shown a heavy loss had the price of cotton fallen. The banks assisted importers, the short cotton crop saved the situation, and the demand which arose late in the year, especially for the Yangtze ports, affected satisfactory clearances. With the exception of jeans, all heavy goods felt the disturbance in their principal markets in the North, though Dutch and Indian drills and Indian sheetings showed small improvement. English cotton yarn fell away again, and the importation declined to 30,916 piculs—less than half what it was ten years ago. Indian yarn only amounted to 985,989 piculs, a great decrease on previous years, while Japanese yarn was still imported almost as freely as in 1898. The principal feature of the trade was the increased demand for printed and dyed goods. Cotton prints rose to 968,828 pieces; printed twills to 68,915 pieces; cotton lastings to 1,216,460. Velvets and velveteens were in greater demand. The total value of the cotton goods was 75,606,360 hk. taels, as against 103,465,048 hk. taels in 1899 and 77,618,824 hk. taels in 1898. But exchange was higher, and the year turned out well for importers.

The value of the woolen goods was slightly in excess of that of 1898, and most of the principal staples showed an improvement on that year, though nearly all fell below the import of 1899. Camlets, long ells, lastings, and especially blankets were imported in excess of the arrivals in 1898, but Spanish stripes and Italian cloth fell off.

The value of the exports was estimated at 158,996,752 hk. taels, a falling off of 36,788,080 hk. taels, as compared with the figures for 1899, but only 40,397 hk. taels below those of 1898. This result may, under the circumstances, be regarded as remarkably satisfactory and unexpected. Raw cotton, in consequence of the short crop in America, was exported to the extent of 711,882 piculs, but this is not likely to be a permanent feature of the export trade.

The following table shows the value of the imports (not deducting re exports to foreign countries) into all the Treaty ports and the exports from all the Treaty ports from and to the principal foreign countries in the years 1899 and 1900 :—

	1899		1900	
From and To.	Imports. Hk. Taels.	Exports. Hk. Taels	Imports Hk Taels.	Exports Hk. Taels.
United Kingdom	40,161,115	13,962,547	45,467,409	9,356,428
Hong Kong	118,096,203	71,845,558	93,846,617	63,961,634
India	31,911,214	1,731,498	16,816,029	2,865,345
Singapore and Straits.	3,646,195	2,231,792	2,625,258	2,435 355
Australia & N. Zealand	272,553	670,078	517,884	861,020
S. Africa and Mauritius	—	230,613	—	224,159
British America	1,208,865	259,519	653,591	457,589
Total of Br. Empire..	195,296,150	90,937,605	159,926,788	80,161,530
Japan	35,896,745	17,251,144	25 752,694	16 938,053
Europe (except Russia)	10,172,398	36,763,506	10,273,405	24,976,619
United States of Amer.	22,288,745	21,085,715	16,724,493	14,751,631
Russian Empire.....	3,522,404	18,556 992	4,373,463	12,374,115
Macao	3,408,516	5,824,487	2,236,289	4,710,359
French Indo-China ..	1,611,140	945,544	986,445	1,302,833
Other countries.....	1,559,967	3,819,839	1,855,896	3,781,612
Grand Total....	273,756,065	195,784,832	222,129 473	158,996 752

(Note.—The average value of the Haikwan tael is stated to have been 73 cts. in 1899 and 75 cts. in 1900. Picul = 133⅓ lbs avoirdupois.)

CANADA AND SOUTH AFRICA.

Some of our contemporaries objected to the recruiting of the Baden Powell South African constabulary in Canada, and are now raising an outcry because the Imperial government has sanctioned a state aided scheme of emigration to the South African colonies, without proposing a corresponding scheme for Canada. This is a rather narrow view to take of such matters. The present settlement of the South African difficulty should be for all time and the larger the leaven of loyal British blood the sooner will the Boers realize that they have not only underestimated the might of the British Empire, but have misconceived the character and disposition of the individual Briton. A closer acquaintance as neighbors, with a man from the British Isles or from the British colonies will be a means of educating them as to what true liberty is. They will learn that Paul Kruger's so called republic was at bottom a system of class tyranny, which could not have lasted, and that the equal rights which are the basis of government in British colonies is the only safe foundation of government. Now every Canadian or Australian or other British subject is a missionary in this cause to the Boers, and surely a little temporary advantage to South Africa will not be grudged by Canadians when the security of the key of the Empire in the east is in question. Moreover every Canadian who goes to South Africa is not going to be a loss to this country. Each intelligent Canadian planted in the South African dominions is an advertising agent for Canadian manufacturers, and a living volume of information on Canadian resources and Canadian tolerance of race towards race. Surely even the most mercenary of all these purposes is worth the sacrifice of the few men whose presence there, whether temporary or permanent, will make known the land of the maple leaf to that great sister dominion of South Africa which will rise after the war.

—The Textile Recorder is not alarmed at the loud talk of American competition in textiles. Our contemporary concludes an article thus: "Anyone who will look at the contents of the Glasgow Exhibition and contrast them with those of ten years ago, or even with those in Paris last year, need have no fear of decadence. Let us take heart of grace and believe in our capacity to fill our proper place in the world. Monopoly may be gone, but there is yet ample ground for believing that the industry and skill of our people will meet with full and ample reward."

—*L'Industrie Textile* publishes a rather curious process of wool-washing and bleaching by means of gaseous ozone, or rather, ozonized air. Wool in the grease is placed in a closed vessel, whilst a current of ozone or ozonized air from an Andreoli apparatus is, by means of a vacuum pump, sucked through the fiber. Strange to say, not only is the fiber bleached under this treatment, but the whole of the fatty matter is rapidly "destroyed and volatilized." A short treatment with sulphurous acid gas completes the process, which, without any further washing or scouring, is said to deliver a clean, bleached fiber of unusual elasticity and strength, with little loss of weight. As 50 grammes (less than 2 oz.) of ozone are to suffice for treating 100 kilos. (about 220 lbs.) of wool, the process is described as equally cheap and expeditious.

—The annual clip of Australian wool has grown in the last forty years from eight million to seven hundred million lbs. Australasia now produces one-fourth of the world's supply of wool, and its quality is so superior to that of the rest of the world that its market value is one-third of that of the entire world. It is worth notice that this remarkable result is the work of a missionary, for the introduction of the Merino sheep into Australia is due to the Rev. Samuel Marsden, an English missionary, who in his efforts to spread Christianity among the natives and settlers thought it would be a good idea to bring some sheep to enable settlers and discharged convicts to go into sheep raising. The venture was a success beyond the missionary's dreams, as the climate was such an ideal one for the Merino sheep that the Australian wool soon proved itself to be the finest in the world, eclipsing that of the Cape or Spain.

Here is a train of thought to those who deride religious missionary work. A simple minded man in carrying the message of Jesus Christ to the far off island continent takes a few sheep in the hope of improving the people's temporal as well as spiritual condition, and within half a century his unselfish thought has materialized into the staple industry of a continent, without which the great commonwealth of Australia would not have been matured into existence to-day. More than that the impulse which suggested the venture to Marsden—himself a Yorkshireman—has alone made possible the present expansion of the woolen industry of Yorkshire which has maintained hundreds of thousands of English working people and brought millions of money to British merchants and manufacturers. And note that these two marvelous developments are only the secondary and material outcome of Marsden's mission to Australia—a sort of by-product of his religious zeal.

Textile Design

LIGHT-WEIGHT ALL-WOOL STRIPE CASSIMERE.

Yarns dyed in stock. Finished weight, 14 to 14½ ounces for 56-inch width.

Construction: warp, all wool, 4 runs, twisted to right. Filling, all wool, 4½ runs, twisted to left.

Dressed:

				Threads.
Med. slate and black mix	23	23	1	equals 47
Blue stain	1			" 1
Green stain		1	1	" 2
			Total pattern equals	50

7) 2,800 ends, 6-4 warp
50) 400 ends section,
8 patterns to section.

Woven.—All medium slate and black mix, 48 picks to inch. Drawn straight on eight harnesses. Reed, 72 inches over all.

	Ounces.
2,800 ends 4-run all-wool warp equal.....	7.70
48 picks 4½-run all-wool fill equal.....	8.94
Est. weight 6-4 yard from loom equals.....	16.64
16.64 oz. shrink 12½ per cent. equal.....	19

This style has been popular the past season and even now is being ordered in quantities in light weight by many clothiers for spring business. Similar style to above layout is made not only in cassimeres but in worsted and flannel cloths.

LIGHT-WEIGHT PENCIL STRIPE SERGE.

Dyed in the piece. Finished weight, 12 to 13 ounces for 56-inch width.

Dressed.

39 threads, 2-40s worsted (¼-blood serge stock), white.
1 thread, 2-50s white mercerized cotton.

40 threads pattern
11) 4,400 ends, 6-4 width
400 ends section
10 patterns to section,

Woven.—70 picks to inch; all 2-40s white worsted (¼-blood serge stock).

Drawn straight on 8 or 12 harnesses.

Reed.—64 inches inside selvage or 66 inches over all.

4 290 ends, 2-40s worsted, equal.....	6 80
110 ends, 2-50s cotton, equal.....	*
68 picks, 2-40s worsted, equal	7.12
Aver. w'gh 6-4 yd. from loom equals.....	13.92 oz.

*Not figured out.

13.92 oz. 2-40s worsted shrink 10 per cent. equal 14,35 oz.

Above is a very fashionable cloth the present season made by piece dye process, which is cheaper, and less liable to imperfections than when made with skein dyed yarns. Seen in black, blue and green olive shades. A great rival of fancy flannel, and much preferred by many.—American Wool and Cotton Reporter.

Foreign Textile Centres

MANCHESTER.—There is little to note in the general aspects of the cotton industry: Perhaps the most prominent is the agitation that has arisen regarding what the trade unionists term "driving" in the weaving section of the industry. The current cotton crop keeps up its remarkable contributions towards swelling the total outturn beyond any estimated figures.

BRADFORD AND HUDDERSFIELD.—There is little disposition to do anything in this market, operators awaiting the progress of the London sales. Topmakers who are in a position to hold are willing to consent, but there are those who are forced to come into the market, and thus values even for the finest classes of material are weaker than they ought to be. This market has always been below the prices realized at the last London sales, and it is expected that values will on this occasion come nearer to the rates that have been prevailing here. Medium and the lower classes of crossbreds are still in a poor way, and the coming sales are awaited with more than usual interest. English does not move, and mohair is quiet. In the yarn department not much new business is to be had. The general trade of Huddersfield continues to be very quiet, but there has been rather more doing in summer goods from the warehouses, and the recently reported improvement in the West-End demand for the very finest class of woolens and worsteds is still maintained. A new process of wool scouring by means of spirits of petroleum was recently shown to a number of the representatives of the leading firms of the West Riding by the inventor at Nottingham, by whom it is claimed that wool scoured by this process remains softer in the fiber and brighter than when scoured with alkalies in the ordinary manner.

LEEDS.—The trade generally lacks vigor, and many manufacturers continue to complain of the difficulty of keeping machines profitably employed. They are to a large extent producers of lower-class woolens, which for some time past have been subject to severe depression, owing mainly to the meagre demand for export; almost the only goods of the kind that attract buyers are fancies of plain blacks and blues. There is a very small sale, and though the profitable production of the more salable fabrics entails a special and costly equipment and also a large output, manufacturers feel constrained to meet the requirements of the market. More animation character-

izes business in worsteds and superior class woolens, but even in those cases orders from stock are of a restricted kind; mixture worsted vicunas and durable serges are the most sought after, and very little business is done in the local wool market, buyers refraining from purchasing until they have seen the trend of the London wool sales. Prices of piece-goods are steady, despite the lethargy of the market, for the reason that in most cases they allow no more than a bare working profit. The wholesale clothing factories continue to be fairly well employed. Official statistics just published show a serious decline in the export of worsteds and woolens to the United States, and at present there is no prospect of recovery in that direction

LEICESTER.—The hosiery industry has been greatly stimulated by exceptionally large Government contracts for army and navy purposes, while the Colonial trade promises to be remarkably heavy. The yarn market is active, and the deliveries are now on a large scale. Lambs' wool and fancy knitting yarns are in strong demand, good medium worsteds are a large turnover, but expensive cashmeres are dragging.

NOTTINGHAM.—Local manufacurers complain of the lack of animation in the lace trade, and many of them have a difficulty in finding employment for their machines. There have been more orders placed for the home trade than for some time past, and the shipping departments, with the exception of those doing business with the United States, have been kept tolerably busy. Australia has of late been a large purchaser of lace goods, and the business with Canada has also been of a substantial character. The goods most in favor in the fancy millinery lace departments, says The Draper's Record, are Valenciennes, torchons, Clunys, and some heavier special makes. They are mostly wanted in assorted widths, with insertions, galoons and allover nets to match. Malines are only in moderate demand, as are point de Paris. White Brabant, Bretonne, and ordinary loop laces are little enquired for. There is not much life in the trade for crochet, American, and warp laces and edgings. No fresh movement has to be recorded respecting silk laces. Production has now more than overtaken the demand for most goods in the plain branches of the trade, and prices are now more in favor of the buyers. Bobbin nets, Mechlin and zephyr tulles, and mosquito nets are now in less urgent request. Point d'esprit and fine tulles meet with a steady enquiry. Stiff foundation nets sell slowly. One of the most expansive branches of local trade is that concerned in the manufacture of aprons, caps, collarettes, blouses, ruffles, neckwear and other fancy made-up goods, which provide a large number of hands with steady employment. Manufacturers of plain and fancy veilings are doing a moderate business. The everlasting embroidery and Irish trimming branches are depressed. A fair amount of business is doing in Honiton braids, beadings, and purls. Large quantities of curtains, window-blinds, and toilets are selling, but there is still room for improvement. The Nottingham made curtain is still looked upon by most buyers to stand far ahead of its rivals, and its reputation is always kept up by manufacturers here striving to produce the most artistic designs. Taken all round, the hosiery trade is not in a very satisfactory position. Cotton stockings and socks are in limited request, and prices are unremunerative. Cashmere hose are unsteady in value, and orders are carefully placed. Merino and cashmere half-hose meet with an average demand, at steady prices. Manufacturers of vests and combinations in merino, cashmere and natural wool are doing a fairly good business. A steady demand is experienced for silk half-hose and embroidered stockings.

KIDDERMINSTER.—Business in carpets is not brisk, but it is very fair for the season. Foreign and colonial orders are helping to keep looms going, and the fag-end of the season might easily be worse. The yarn trade is dull, so far as this market is concerned, there is no revival to report. Manufacturers have been occupied by stock-taking and enquiries. Particulars and new orders have been scarce. Rather more has been done for the Continent and other outside markets, but there is not enough trade to keep spinners busy.

KIRKCALDY.—The linoleum and floorcloth works are fully employed, but stocks have been accumulating of late. Dull trade is still the cry among the linen manufacturers, and, what is worse, there is no prospect of an early improvement. Prices are much too high for free buying.

DUNDEE.—The market is quiet. Jute is offering on rather easier terms both for shipment and on the spot. It is now felt that there is to be plenty of jute for everybody. The market for yarns is also a shade easier. Common cops are done at 1s. 5½d. to 1s. 5¾d. for 8 lb., and warps at 1s. 7½d. For good yarn in 8 lb., 1s. 10d. is paid. Heavies are also a little easier to buy. Hessians are quiet. There are some American orders for light weights.

BELFAST.—On the whole there is a slightly better tone apparent in this linen market, but business as yet shows little expansion. Flax is making excellent progress. The spinning branch is quotably unchanged, with more disposition shown to buy, but at prices which are rather unworkable. Stocks are fairly well held. The manufacturing end is still very quiet, but the tendency is towards improvement. White goods for the home trade are in sluggish demand; the shipping trade in poor condition. The Continental trade very dull; the United States slow, and the Colonies very middling. Cuba has been purchasing a shade more of late.

CHEMNITZ.—Business has changed very little, reports The Dry Goods Economist, but the slight advance in cotton yarns has made prices somewhat firmer. The demand for lace hose is larger than ever, and no stock can accumulate. Even patterns which were considered old find ready sale; mostly they are bought in black, but red is still ordered in good quantities, and also white and blue in various shades. Lace goods are also extensively bought in men's and boys' socks, the latter being mostly in pink, light blue and cardinal. Fancy-striped hosiery is still in good demand. In the lower-priced goods strikingly new things are very scarce. Most of the goods are still bought striped throughout, but some are also carrying a line of boot patterns. Nearly all the styles chosen have boots in the same shade as principal color in the top. In gloves the leading article will be the frame goods, and of those the patterns with lace effects will sell better than the plain. Trade in taffetas will probably not be very large, and in those, as well as in Berlin gloves, styles with two and three clasps will be the sellers, while Jerseys will most likely be bought very little. Fine lisle and Milanese lisle qualities to retail for 50 and 75 cents are also bought in liberal quantities, and as these goods give splendid satisfaction in wearing, fit well and are a cool summer glove, a fair business is expected in them.

CREFELD.—The demand in Crefeld for ready consumption is lessening. Printed silks are still selling. In warp prints light colors for summer wear are going quietly out of demand, but their place is being taken by the darker fall colors, which have been well ordered. Printers of warps are very busy. The great favorite is damasse, which is being ordered by wholesalers as well as by retailers. The feeling in general is much better than it was at this time last year. Novelties that have been shown, and which have some merit, have been readily ordered. Fall deliveries have commenced and the goods are accepted readily. Orders have also been placed for plain goods, taffetas and some armures. A style which has been prominent recently may again be in the front. This is the gold and silver

effect, although orders for fall have not been placed freely. In the industry conditions of employment are unchanged. In dress, blouse and lining silks employment is fair. In umbrella silks there is no increase in activity and the good business done in parasol silks, which has cleared the stocks, has not been followed by the placing of orders with manufacturers. Ribbons are quiet. With the good prospects existing for velvet actual business in pile fabrics is disappointing and is relatively below what is done in piece silks. Some novelties in striped and figured velvet, as well as in printed velvets, have been ordered.

CALAIS.—There are rumors of beautifully appliqued laces with heavy cut-out pieces of velvet or chenille laid on them. Samples are in course of preparation which will be shown shortly. The applications are always black, and are sometimes on white, or again on ecru color or black. These ideas are not confined by any means to one class of goods. They are to be seen on galoons, allovers and nets. This is going to be a great net season, and it would not be at all surprising if quite a quantity of nets, particularly for the finer trade, were appliqued with some of this velvet or chenille. Both these materials, by the way, promise very well for the fall season Velvet was one of the great ideas of last fall and has not by any means outrun its popularity. As for chenille, this seems to have come in again with renewed life. We see it all over, in millinery, in veilings, and, in fact, for nearly every purpose for which it can be used. Style may, therefore, certainly be counted on the side of this new idea. About a year ago applications were very strong, but they became so much used that the trade tired of them. Now, however, it seems as though we were to return to them, and certainly the idea is well worth it. Outside of this appliqued idea, there is nothing startling in view.

THE SILK TRADE.—The London silk market is quiet. The markets of the Far East are under the influence of a strong current of speculation on the part of the natives, but the prices quoted do not show that business has taken place at those figures. Yokohoma quotes f.44.50 for 1½ 10-12; f.43.50 for both 2 11-13 and 1 to 1½ 13-15. From Shanghai gold kiling is quoted at Tls. 425, but without sellers; the second crop is reported small in quantity. Canton prices are unattainable with equally few sellers on the basis of $800 for best 2 9-11; $710 for best 3 11-13. The feeling in the silk goods market in Lyons is good. Manufacturers are delivering fall orders and everything is progressing favorably. The two great staples of consumption this fall and winter are likely to be taffeta and damasks, and all the looms that are adapted to the production of these fabrics have work on hand. But these do not exclude other lines. In piece-dyed goods, which have been slow recently, there is a better feeling and an improvement is soon expected. Reports from consuming markets are also favorable. The Parisian buyers who have visited the market recently have not only placed orders for fall, but have also reassorted for ready delivery in summer fabrics. Plain pongees have been ordered and the looms have work ahead on these. Crepe de Chine and crepe lisse have not received much attention of late and are rather slow. In muslin also little new business has been done. Printed silks sell for ready delivery, while for fall the orders placed for warp prints have been fair. In the ribbon market a better feeling has developed for silk and cotton mixtures. In these the prospects for fall are brighter. In the better grades of ribbons transactions are fair. Chiffon bands are quiet. Sashes are moderately active. A good season is looked for for velvet, and present business is satisfactory. Plain velvets sell; stripes and figures find buyers. Plushes are unchanged.

CARPETS AND CALICOES.

FROM A LECTURE BY A. E. GARRETT, F.R.G.S., LONDON.

Speaking first as to the antiquity of the carpet trade, the lecturer said that the carpets of India, Persia and Turkey took first place as regarded the length of time they had been in use, as well as on account of their beauty and intrinsic value. These carpets, which were among the most beautiful and durable in the world, were made by hand, and the process was so slow and laborious that the finished work was necessarily costly. The commerce in Turkish carpets, which were chiefly made at Onjak, and exported from Smyrna, was the most extensive of the three. The English Axminster carpet was a costly hand-made fabric of the same nature. It was to be remembered that the Indian carpets were valued not only for their great durability, but for the patterns woven in them. These patterns had very often been the means of giving European pattern makers ideas. The Indian weavers, however, while evincing great skill in the production of patterns according to their own ideas, if asked to do a thing not in accordance with their own work, did not succeed as well as Europeans—in fact, they made a muddle of it. The Kidderminster, or Scotch carpet, was no longer made at Kidderminster, but was largely produced at Durham and Yorkshire, Kilmarnock, Bannockburn and Aberdeen. The Scotch differed from all other descriptions of carpeting in having a similar pattern on both sides, so far as the outline was concerned, but with the colors reversed. For example, if a leaf appeared green on a red ground on one side, on the other it would appear red on a green ground. A real Scotch carpet was all wool, but carpets similar in appearance were made with cotton warps and worsted wefts. These were called "unions." The Scotch carpet consisted of two or three layers of cloth—if of two layers it was termed two "ply," and if of three, three "ply." The so far separated layers were united at many different points, because the yarns, according as their color suited any particular section of the pattern, sometimes formed part of the upper and sometimes part of the lower web, which explained why the colors of the patterns were reversed on each face of the carpet. In a three ply carpet, each thread was partly woven into all three layers Both two and three-ply carpets might be made with one color in the weft, in which case the figures in the pattern were formed by the warp threads, and when this was done the warp yarns were made much thicker than the weft. However, all the best carpets were made with as many colors in the weft as there were in the warp, but, of course, at additional expense. A Scotch three-ply carpet was very durable, and although the patterns on the two faces were the same in outline, they could be made to look very different from one another. Looms fitted up with jacquard apparatus were now almost entirely used in weaving Scotch carpets.

The Brussels carpet appeared to have been introduced into England nearly 100 years ago, and was the most extensively made of any of our better class carpets. In weaving it the colored warps were arranged in bobbins set in frames at the back of the loom. There was usually a separate frame for all the bobbins of one color, and according to the number of colors in one line, the fabric was styled a two, three, or five frame carpet. A peculiar and most complicated loom on which these carpets were woven had a jacquard mounting which raised at one movement those warp strings, and those only, which suited that section of the pattern across the breadth of the web. A wire was inserted to form the loop in the yarn (the top of which formed the face of the carpet), which was then bound in by linen weft. Another set of warp strings was then raised, and another wire inserted, another tie of linen weft and warp made, and so on. Only a limited number of

wires was required, since there was a motion in the loom which withdrew the wire furthest back and reinserted it in the front as the weaving proceeded. It should be clearly understood that, whenever there were say five colors in one line, all the five warp threads were present throughout its length, although only one came to the surface at a time in the form of a loop or loops.

THE VELVET PILE OR WILTON CARPET.

The structure of the velvet pile or Wilton carpet was almost the same as that of the Brussels, the chief difference being that in the pile, the loops of the yarn were cut so that they might more closely resemble velvet. In order to facilitate the cutting of the loops the wires used in weaving pile fabrics had a groove on their upper edge along which a knife was drawn. The upper weft threads in a pile carpet were usually twice as many as in Brussels in order to hold in the cut tufts very tightly. Wilton carpets were also generally made of finer yarn. Kidderminster was the chief seat of both the Brussels and velvet pile manufacture in Great Britain.

THE TAPESTRY CARPET.

The manufacture of tapestry, or printed warp carpet originated about the year 1832, when Richard Whytock, of Edinburgh, patented a method of imitating Brussels carpets with parti-colored warp yarns, which had been of greater service to the carpet industry than any other improvement of modern times. The structure closely resembled that of a Brussels carpet. Both had their patterns entirely produced by the warp, but on Whytock's plan a single warp thread did what it took a number to do in a Brussels, and this was effected in the following way: Supposing along a certain line there were five colors, then the single warp thread which travelled along this line was printed red for a certain length, green for another, blue for another, and so on. In this way one thread would do lengthwise, however many colors were required, but, of course, no two threads with the colored spaces exactly alike went together. Much care and correctness were therefore required in calculating the various sizes of the colored spaces and adjusting the pattern in the warp, because these carpets were woven on simple looms. Small rollers, each working in its own color box, and so arranged as to work across a drum on which the yarns were wound, were used to print the dyes, and the yarns were afterwards steamed to fix the colors.

THE PATENT AXMINSTER CARPET.

This ingenious improvement was the invention of Mr. Templeton, of Glasgow, who described it as follows: "I was a shawl manufacturer in Paisley, and, amongst other goods, made a great many of what are termed Chenille shawls, the process of which was to weave a pattern on a warp, the warp having been spaced on the reed according to the depth or thickness of pile required. This first cloth was then cut between the spaces into shreds, and then these shreds (having been twisted into a spiral form) were woven on to another warp, marks for the weaver's guidance having been woven in the first weaving to enable him to place the shreds so as to bring out the complete pattern in the second weaving. The idea occurred to us (one of my weavers and myself) that if the cloth could be so woven as when cut into shreds and not twisted to form chenille, but left free so that the two cut edges of the thread might collapse and form a pile or "fur" as we term it, it would (when rewoven on to another warp) produce a velvet pile or an 'Axminster surface.'" The first part of Mr. Templeton's process, therefore, consisted in weaving on a separate loom a single or parti-colored chenille of such a peculiar kind that, when cut up into strips, the lateral fibers of both cut edges were brought up in close contact with each other. In the second part of the process the chenille was woven as weft to a groundwork of flax, hemp or jute, which formed closely-woven under-fabric. In this kind of carpet the elements of the design or pattern existed in the chenille.

FELT CARPETING.

In making carpets and similar woolen goods with wholly felted textures the wool was first sorted for the different qualities of fabrics, and then carded into a thin "lap" on a carding machine. This lap, which was so thin that it hardly hung together, was immediately passed over a series of rollers so arranged as to fold it into a number of layers, the number varying according to the thickness of the felt required. As the strength of the fabric depended entirely upon the completeness with which the fibers were held together by the minute scales of the wool, it was necessary to prepare the wool so that the filaments might be as free as possible for the felting process. The more "hooking" and interlocking that took place the better, providing that it was uniform throughout the texture. After a proper thickness of carded sliver was made up it was passed through a series of rollers which had a lateral as well as a revolving motion, and when subjected long enough to the rubbing action of these rollers, with which steam was used, the felt was placed for a time in the fulling stocks and then taken to the drying house, where it was passed over another arrangement of rollers in an atmosphere kept at a high temperature. The surface of felt fabrics was raised and cropped in a similar manner to that of woolen cloths. Sir N. Digby Wyatt, in his report on the carpets exhibited in Paris in 1867, said that the four great tests of excellence in both Brussels and pile carpeting were: (1) Length of loop or pile; (2) quality of the woolen yarns which make up the carpet; (3) number of threads to the inch in width; and (4) the compactness of weaving at the back, so as to perfectly tie the loops and cut the filaments which formed the pile. If the pile or tufts could be made perfectly secure from pulling out in wear, the longer they were, or rather, the higher they rose from the back of the carpet, the greater would their durability be. It was much easier to tie in little tufts of wool, plaited in by the hand securely (because the threads of the tuft were already intertwisted and matted before tying) than any loop or tuft formed from wool or worsted, which had been spun or had once been brought into a state of even moderate tension, since the latter operation hindered the natural tendency of the fiber to interlock. This was why hand-worked Turkish and Indian goods were so extraordinarily durable.

CARPET PATTERNS.

A few hints on carpet patterns might not be out of place. All carpet patterns, as a rule, should be constructed on a radiating basis, i.e., with a central design, and the patterns radiating from that center. They might with advantage have a geometrical formation, and when patterns were not geometrical a general evenness of surface in the pattern should be preserved. Carpets were better not formed into panels, and at a distance the pattern should not appear blurred; the general outline should be distinct and increase in distinctness with decreasing distance. No pattern should give the floor the appearance of anything but a flat surface, unless specially required not to do this, and colors should be of a somewhat neutral character, as a background for the diffuse nature of modern-day furniture. Lastly, every carpet should have a border.

CALICO PRINTING.

The lecturer curtailed his address on carpets in order to add a few words on calico printing, which lack of time prevented him dealing with at the last lecture on "Dyeing and Bleaching," within the scope of which it should properly have

come. From the earliest time, he said, down to the end of last century block printing was universally practised in the treatment of calicoes, but cylinder printing had now almost superseded all other processes. The cylinder process dated from about the year 1785, and it differed in principle altogether from the block method. On a cylinder the pattern was not raised, as in a block, but cut in, and the cylinder could be so arranged that the printing could be carried on continuously, and without intermission. The processes through which a piece of goods ordinarily passed in printing were (1) singeing, (2) bleaching, (3) printing, (4) stoveing, (5) dunging, (6) dyeing, (7) brightening, and (8) dressing. In the printing process the pattern was engraved on a copper cylinder, which had to be charged with the mordant in such a consistency as not to run too freely nor stick to the metal. Each cylinder employed was arranged so as to fit into its exact place on the pattern, and passing over the cloth in succession, discharged the mordant upon it. The cloth then passed into another chamber to undergo "stoveing," a process in which the mordant was dried in a hot flue before it had time to spread. The dunging process, in which cow dung was generally used on account of the phosphorous and albuminous matter it contained, had two results, viz., the fixing of the mordants more thoroughly and the carrying off of any thickenings left. Then, after dyeing, which process he had already described, the brightening process, sometimes called clearing, was used for bringing up the colors to their full brilliance and to finish the operation of fixing. These results were obtained by passing the goods through a soap bath a certain number of times according to the dye used, and between each bath the fabric was thoroughly rinsed and exposed to the air. This cleansed the unmordanted portions of any color that might be adhering to them. Some dyes would not bear the action of soap, in which case a bran bath was used, the goods being immersed for half an hour, during which time the liquid was raised to boiling point.

TEXTILE PATENTS.

The following are recent patents granted in Canada of interest to the textile trade:

No. 70,457.—Twisting machine; Albert Goss, Lake View, N.J.; a machine for twisting together end to end and uniting threads and other filaments.

Nos. 70,531, 70,532.—Apparatus for cleaning and otherwise treating wool and other animal fiber; E. Maetrens, Providence, R.I.; a treatment of super-heated solvent vapors to remove residual solvents from wool after the grease has been extracted.

Nos. 70,557, 70,558.—Machine for breaking or scutching flax; E. J. de Courcy and R. Crawford, Belfast, Ireland; a combination of specially fluted rollers.

No. 70,581.—A storm curtain; F. A. Stukey, M.D., Lancaster, Ohio; a curtain for buggies with a sight glass.

No. 70,603.—Garment holder; J. W. Tyler, Camden, N.J., a hanger and presser combined

No. 70,632.—Wire and slat weaving machine; G. M. Blakeslee and F. Bath, assignees of G. E. deVore; all of Lansing, Mich.

No. 70,636.—Neck-tie holder; J. A. Sword, Toronto; an arrangement of flexible arms.

No. 70,767.—Fastener for belts, straps, etc.; R. C. Bouchier, E. W. Bouchier, G. Bouchier and R. T. Bouchier, all of Victoria, N.S.W.

No. 70,673.—Button making machine; W. A. Pendry, Detroit, Mich.

No. 70,691.—Lubricants for fibers; R. H. Hutchinson, New York; a neutral soap mixed with wool fats from which free fatty acids have been extracted.

No. 70,704.—Fibrous composition, the National Package Co., Glen Falls, assignee of G. W. Laraway, New York, a product of chemically treated fiber for packing purposes.

No. 70,721.—Twine holder; J. A. Thompson, Seattle, Washington.

No. 70,784.—Garment supporter and fastener; H. H. Byrne, LaCrosse, Wis.

No. 70,786—Union overall suit; W. A. McDaniel, Fort Wayne, Ind.

No. 70,817.—Garment supporting clasp; J. F. Atwood, Malden, Mass.

No. 70,842.—Hat with pliable stiffening; J. A. Parsons, Montreal, Que.

No. 70,868.—Washing glove; D. Potter, Pittsburg, Pa.

No. 70,924.—Corset clasp; E. W. Groeschel, Jersey City, New Jersey.

No. 70,930.—Trousers pattern, O. R. Tower, assignee of E. F. Henderson, North Greenfield, Wis.

No. 70,935.—Garment fastener; E. B. Watson, Upper Norwood, Surrey, Eng.

No. 70,944.—Hat stretcher; J. F. Kennepick, Cripple Creek, Col.

No. 71,013.—Puttee or bandage, F. H. Fox, Wellington, Somerset, Eng.

Nos. 71,057 and 71,058.—Necktie; E. Currie, Toronto, Ont.

No. 71,120.—Umbrella; D. Carpenter, Orion, Mich.

No. 71,121.—Mattress; A. A Brenden, Piqua, O.

No. 71,126.—Collar shaping machine for laundry use, A. E. Grant and J. H. Van Hoevenburg, Troy, N.Y.

No. 71,165.—Trouser design; W. H. Forsyth, Bristol, Eng.

Trade Marks and Designs.

No. 7,680.—McIntyre, Son & Co., Montreal, Que.; gloves and mitts.

No. 7,682.—The New York Silk Waist Mnfg. Co., Montreal, Que.; ladies' silk and sateen waists.

No. 7,685.—*The Toronto Bedding Co., Ltd., Toronto*, Ont.; mattresses.

No. 7,686.—Campbell Mnfg. Co., Montreal, Que.; ready-made clothing.

No. 7,711.—George Michael Trimble, New York; cleansing material for gloves, etc., having a smooth surface.

No. 1,762.—The Gold Medal Furniture Mnfg. Co., Ltd., Toronto, Ont.; woven wire mattress.

Nos. 7,759 and 7,774.—Orlwoola, Limited, London, Eng.; cloths and woolens, worsted and hair stuffs and clothing.

Nos. 7,760 and 7,761.—Lister & Co., Bradford, Eng.; sewing silks and machine twist, silk waste yarns, velvets, velvet ribbons, tapestries, furnishings and fancy dress goods.

No. 7,764.—The Jackson Mnfg. Co., Clinton, Ont.; men's, women's, boys' and children's ready-made clothing.

No. 7,773.—Pool, Lorramer & Taberrer, Leicester, Eng.; woolen and worsted knitting yarns.

Nos. 7,782 to 7,786.—The Lambertville Rubber Co., Lambertville, N.J.; rubber wearing apparel and boots and shoes.

Nos. 7,787 to 7,796—Dollfus-Mieg. & Co., Société Anonyme, Mullhouse, Germany; thread, lace and beaded embroideries.

Nos. 7,811.—Carl Hermann Commichau, Silkeborg, Denmark; linen cloth, articles of underwear and other clothing.

ARTIFICIAL INDIGO.

At the opening of the Hofman House, the new home of the German Chemical Society in Berlin, which was the occasion for a gathering of eminent chemists from all over Europe, Dr. Brunck, the principal managing director of the Badische Anilin und Soda Fabrik, delivered a lecture upon the manufacture of artificial indigo in Germany, and its present status. Dr. Brunck first referred to the advantages offered by synthetic indigo as compared with vegetable indigo. Its purity, constant uniformity of composition, and ready reducibility in the dyeing process benefit the dyer considerably, for, on the one hand, he knows exactly what he is buying, and, on the other, they make it possible for indigo to be used with success by less highly-skilled workmen than was formerly the case. Vegetable indigo, as sold, varies in composition, and it required a peculiar skill in the dyer to attain with certainty a desired shade whilst using a dye of varying composition. The prejudices against the introduction of the synthetic product were next dealt with. Much difficulty has arisen from the fact that people in general cannot grasp the idea of chemical individuality, and fail to realize that identically the same body can be obtained from two different sources, as in the case of indigo, from a plant and from the artificial synthesis of other substances. *As a consequence, synthetic indigo has been regarded* by some as a substitute or surrogate for natural indigo, and classed with aniline dyes giving similar shades. All these prejudices are giving way before a better knowledge of the facts. The development of the manufacture has been enormous. Already about $4,400,000 has been invested in the indigo department and laboratories of the Badische Company, and it is calculated that the quantity of indigo produced annually in Ludwigshafen would require the cultivation of more than 100,000 hectares—that is, a quarter of a million acres—of land in India. In July, 1897, the company built factories sufficient to supply the demand of Germany for indigo, and these were so planned as to fit in with a larger scheme if they proved successful. The factories have been, and are being, increased in size, until the yield has assumed the proportions mentioned above, and the lecturer expressed most sanguine expectations that the manufacturers in Germany would emerge triumphant from the competition with the Indian indigo planters.

Discussing the consequences for the indigo-planting districts in this case, he suggested that the land now devoted to the production of indigo might, with advantage, produce foodstuffs, which would be available in fighting future famines, and, while disclaiming any endeavor to pose as an impartial adviser, he stated it as his firm conviction that the Government of India would be acting in the best interests of India if it immediately grappled with the question as to what could best be done with the land hitherto devoted to the cultivation of indigo, and arranged for its systematic conversion to other uses. The greater part of the lecture was devoted to a discussion of the steps by which this success had been rendered possible. Under this head Dr. Brunck first referred to the processes for the manufacture of indigo based upon the researches of Adolf von Baeyer, and starting from toluene. Such methods are of comparatively small importance, because the quantity of toluene available for use as raw material is limited; it is calculated that the total quantity of toluene at present produced would only suffice for the manufacture of about one-third of the quantity of indigo used annually, and the whole of it is actually required for other purposes.

The circumstances are different with reference to the manufacture of indigo as practised by the Badische Anilin und Soda Fabrik. The process employed (Heumann's) uses, as its initial material, naphthaline, a product which is available in practically unlimited quantities. This body is oxidized by treatment with highly concentrated sulphuric acid in order to obtain phthalic acid. The next process is the conversion of the phthalic anhydride into anthranilic acid. This is combined with chloracetic acid, and the condensation product treated with caustic alkali, upon oxidation with the air, yields indigo.

CHART OF THE METRIC SYSTEM.

The publishers of The Canadian Engineer have received many letters complimenting them on the issue of the popular Chart of the Metric System of weights and measures. The following are a few sample opinions:

I have very much pleasure in seeing you step to the aid of those pressing the Metric System to the front. I shall be glad to call the attention of teachers to your chart. The Metric System has for a number of years—since I came into office—been taught in all the schools of the province; and the metric measures are those called for in the returns from all our high schools—dimensions of school rooms, etc. I have much pleasure in sending you a few copies of my brochure on the "Three Great Reforms," in which it will be seen that for a number of years I had been an advocate of the system—even in the conservative city of Toronto. Wishing you much success.—A. H. Mackay, Superintendent of Education, Nova Scotia.

I am in receipt of your favor of the 7th ult., together with a copy of The Canadian Engineer for June, and a specimen of the Chart of the Metric System prepared by your firm. I am very pleased to read your article, but I wish particularly to compliment you on the chart. It is, I believe, the best I have seen for explaining briefly the principles of the Metric System. It will afford my committee much pleasure to hear of this awakening interest in Canada. Australia too is showing a growing disposition to adopt Decimal Coinage and Metric Weights and Measures, and here we keep gaining a step month by month.—E. Johnson, Secretary Decimal Association, London, Eng.

We see that you, too, advocate the general adoption of the Metric System of weights and measures, and we believe that as much as possible everywhere the same means should be employed to accomplish the desired aim. The widest possible distribution of your chart would no doubt be a good step forward. We request you therefore to forward to us two copies for our office and for the library of the American Society of Dyers.—L. M. Carriat, Philadelphia.

The Monetary Times has a review of your Chart of the Metric System. I notice the price is stated at ten cents per copy, but if you have any other more expensive editions printed, I should be glad to receive a copy or two; as it is my intention to frame a copy (if possible), and present it to the library of the society of which I am an associate, viz., the Incorporated Accountants (Eng.). It is high time that British traders and accountants awoke to the necessity of adopting decimal coinage and measures. Enclosed please find $1 (Canadian), to cover your expenses for as many copies as the remittance will pay for. Trusting you will be able to assist our efforts on this side to foster "intercolonial and home-country" trade, and lessen the tide of German competition, which is a danger to all the English-speaking countries, if Germany gets the upper hand (both politically and socially), and assuring you of the awakening of the British to their surrounding dangers of subsidized continental competition.—L. Woodroffe, 121 Stapleton Hall Road, Stroud Green, London, England.

Please accept my thanks for the Metric System Charts.

The adoption of the Metric System must shortly take place, as everything is to be said for it and next to nothing against it. As to the chart, I consider it is a valuable one, and one which every progressive citizen ought to have in his home. The mass of information, which it explains, is handled in such a simple manner that anybody can understand it without becoming in the least confused as to the use of the different terms, which is the only drawback, that I know of, to the Metric System. There is no doubt though that, if the system were adopted, the terms would be abbreviated to suit the rapid business methods this side of the Atlantic. I expect that a number of people, to whom I have shown the chart, will be calling upon you for copies of it ere long, as they have already expressed intentions of doing so.—Dermot McEvoy, Mechanical Engineer.

THE SHEAR AND SHEARING.

The original style of shear, as compared with the improved machine of to-day, was a very crude affair. Although the cutting arrangement was similar, the blades were light, and the fly blades in the revolver were few in number, and the cylinder correspondingly light. The machine was made with a large drum, upon which the cloth was wound after it passed the blades to be run back on to the front roll before receiving another run. This style of shear was called the drum or run-back machine, and aside from the limited capacity in other respects much time was lost in the repeated running back of the cloth. It has been nearly forty years since the rotary machine was first introduced, and with all the improvements that have been made since that time, we now have an exceptionally perfect and valuable machine.

One of the most important improvements of the modern machine is the list saving rest, which has been frequently improved since its first introduction, until it now seems to be as nearly perfect as human skill can devise. Working as it does, automatically, it seems almost to act intelligently in relieving the operator of the care and attention formerly required to accomplish the same result. Other improvements include the arrangement for using an open or straight belt for operating the revolver, the elevation of the back roll giving more room for folding the cloth, as well as bringing in sight of the operator the shipping rod and dial screws for regulating the depth of cut. Aside from these improvements, many of the parts are so constructed and adjusted that in case of a breakage they can be easily replaced without taking the machine apart.

With all its advantages, the shear is often abused by forcing the work, and trying to do more than it is capable of, or by improper treatment in the endeavor to keep it in good running order. Sometimes the manufacturer finds he has too much work for one machine, and not enough to warrant his having two, and the consequence is that the work is forced, to the detriment of both the machine and the goods. By the use of the double shear, which consists of a machine with two sets of blades, double the amount of work can be done, with no additional expense for labor, at a much less cost to install, and with a saving of room over two single machines. Even where one machine is sufficient to do the work required, it is often the case that the work is hurried, causing the nap to be crowded into the blades, so as to cause them to pull and do inferior service.

The blades should be lowered very gradually, especially where the nap is very heavy, and never allowed to cut lower than will result in a good, clean, level cut all the way across the cloth, and upon some goods it is often desirable to give the cloth two or more runs at one point, especially when the work is nearly completed. By hurrying the work the cloth is sometimes sheared too closely, as several runs to finish, say one or two notches higher, will often bring out the pattern just as clearly, and yet leave a slight nap that will add very materially to the "soft feel" of the goods. Great care should be taken not to force the cloth too hard against the raising brush, thereby turning the nap entirely the reverse from the way it was gigged. It should be adjusted so as to have the nap stand as nearly straight as possible on the cloth, so that the blades can do good service. When the brushes are badly worn, so that they do not do good or uniform work all across the cloth, they should be cut so they will strike the cloth uniformly all the way across, or refilled, as the case may be. Upon face finished goods or fancies having a heavy nap these points are of great importance in securing good results. The flocks should not be allowed to accumulate in the receptacles around them, so as to be forced back into the brushes, and a frequent cleaning of the brushes will avoid the possibility of their surfaces becoming caked or clogged, to the detriment of the work. The tension of the cloth often varies, and should be adjusted to suit the weight or character of the goods. This is easily regulated by the adjustment of the friction plate on the draft roll shaft. Sometimes the effect of this friction is destroyed by not taking proper care of it. In the mind of the writer it should never be oiled in the ordinary way, if at all, and usually it works well without any oil. Sometimes the leather on the friction plate will get too hard and dry, when it may be improved by taking off and rubbing into the leather a small amount of good oil to soften it; but to oil the friction in the ordinary way of oiling will often destroy its usefulness, and it should often be removed and cleaned and care taken that the oil from the roll bearing does not work through into the friction wheel. The trouble that sometimes arises from electricity, causing the cloth to wind up on the back roll, may be obviated by moistening the cloth cover on the roll.

It is important that in sewing the ends of the cloth for shearing, the stitches be fine and regular to avoid wrinkles, as it is quite impossible to avoid cutting the cloth or making shear marks if the cloth is allowed to wrinkle. A mill sewing machine is very valuable in this connection.

The shearer should always be supplied with samples of all the styles he has to shear, and shear to match the sample as nearly as possible. Especially is this important upon fancy cassimeres, as it is impossible for the shearer to carry in his mind exactly the appearance required, and on account of a possible variation in the weight of the goods or the density of the nap, it is impossible to depend upon any rule by which to govern the work, either as to closeness to shear or number of runs to give the cloth. By the use of correct samples and the exercise of good judgment only can good results be attained. In the matter of uniformity of shade, much depends upon the careful work of the shearer. Not that the shearing can change or regulate the shade as relates to the colors, but in the clearness with which the colors are brought out by shearing and the effect of the light upon a long or short nap, together with the prominence of the threads or pattern, the shearing may result in what would be termed in the market a variation in shade or "off shade." Often the density of the felt, resulting in a corresponding density of nap, will render it necessary to give an extra "notch" or run or two, in order that the pattern may show up as clearly as in the sample.

Another important matter is to see that the two sides of the cloth shear exactly alike, so that they may shade alike. If there is any variation, it should be discovered as soon as possible, and corrected before the cloth is sheared down to the finishing point; otherwise, in trying to correct it after one side is sheared closely enough, there is danger of getting that side sheared too much before the result is attained. The two sides and the mid-

dle of the cloth should be compared and kept uniform, and the finishing made to compare with the original sample as nearly as possible. In shearing cheviots, meltons and similar goods that have not been gigged, it is best to give several runs after the blades have been lowered to the finishing point; for the raising brush cannot raise all the fibers the first time, as it does where the nap has been uniformly laid by gigging. In fact, as the free fibers lie in all directions, the brush is as likely to lay as to raise them; but acting in conjunction with the laying brush which works in the opposite direction, all the fibers will be sufficiently raised after three or four runs. By observing this method, there is less likelihood of the cloth roughing up after being made into garments. Should it appear that a piece of cloth is insufficiently gigged, it should be sent back to be gigged over with as much of the original nap on as possible, as any attempt to "clear it up" by shearing will, if in a measure successful, produce a hard, "wiry" face, and if re-gigged after shearing closely, there will be danger of getting the cloth tender.

Should the selvages be very slack, so that they cut in spite of the list-saving attachments, the correction should be made in their construction in the loom, either in the weave or the quality of the stock. But as a temporary benefit, the tension of the cloth may be increased by adjusting the friction plate on the draft roll, thus tending to take up some of the slack in the selvage.

We have given some points of importance in running the shear, but this part of the work devolves largely upon the shearer, while matters of greater import rest upon the finisher in keeping the machine in perfect running order. Many a finisher has lost his position through his lack of knowledge in this particular, and not a few young men who have become familiar with the processes of finishing find their advancement to a better position rendered impossible on account of a lack of knowledge and experience in grinding and keeping the shear in order. To keep the parts pertaining to the cutting operation of the shear perfectly true, and in good cutting condition, and to avoid their abuse, requires a knowledge that the operator of the machine does not have the opportunity to acquire, except through the aid of the man who does that part of the work. The man with a mechanical turn of mind may "catch on," but it were better if a few points were given him in order that he may not be obliged to pay for them by installments of unpleasant experience. In another article we may have something to say regarding the care of the shear.—"Cassimere," in American Wool and Cotton Reporter.

IN THE DAYS OF GEORGE III.

C. F. Hardy has collected and published, under the name of the "Benenden Letters," some interesting reminiscences of the days of George III. Among the writers of these old letters was M. Caulier, a French tutor, and General Fitzroy, whose descriptions are very graphic, especially when he deals with the fashions and customs of the time.

He walks in the evening in St. James' Park, where a camp has lately been formed in consequence of the Gordon riots, and is much flattered by a bow from the beautiful Duchess of Devonshire, then (July, 1780) only twenty-two. He goes to the Court ball the same summer, where the ladies wore such large hoops "that when the Princes wanted to do the Allemande they could not touch the ladies' hands." This fashion he thought very foolish.

Another contributor to the collection tells about the domestic linen industry, which formed a part of the education of a girl then.

"It was the custom for the daughters of a family to spin linen for themselves previous to marriage, an event which it was always supposed would take place—hence the term spinster. My mother's industry formed part of her marriage portion. When this fine linen was woven it was bleached 'in the springtime.' Shakespeare knew all about it as well as I do. The linen was in slips, with loops of tape sewed on each side. These slips were pegged tightly down with small wooden pegs on the sweet daisy mead. During the day the linen was watered with clean spring water. This process, at the age of five or six, I watched with great interest. More than that, it was a never-tiring amusement to run between the linen on the narrow space of grass. Small as my feet were, it was not easy to accomplish this without sometimes swerving on the linen. If I did, the maids were out in a moment, threatening I should not be allowed to run between the slips any more. This made me careful, and I became exceedingly expert in my favorite pastime. How perfectly I remember seeing my sockless and stockingless feet incased in pretty green shoes, while I was taking heed to my steps in the narrow pathway. If modern ladies consider spinning an employment beneath a gentlewoman, they are mistaken. Fine spinning was the lady's department. To spin fine thread required delicate and flexible fingers. Their wheels were costly, being beautifully carved. To form the fine thread evenly the forefinger was dipped in rosewater contained in a small silver or porcelain cup suspended at the right side of the machine. A pretty foot appeared to great advantage on the board that turned the wheel, and the general attitude was exceedingly graceful. Those who could sing often did so while spinning, and a flirtation could be carried on charmingly during the hum of the wheel."

We may take leave of this pretty little picture of the olden time, and a happy and contented middle class, satisfied with their own station and their own pleasures, almost in the words of "Gray's Elegy," 'Let not ambition mock their useful toil," etc. They were the backbone of England once.

APPLIED SCIENCE IN TEXTILES.

BY W. W. CROSBY, IN TECHNOLOGY QUARTERLY, BOSTON.

There is no department among the industries of the world where there has been a greater lack of well-trained minds than in producing the countless varieties of fabrics with which we clothe ourselves and beautify our homes. To be sure, it is not so very long a time since there was nothing but the crudest form of hand machine to clean the fiber, make the yarn, or weave the cloth; and until the cloth itself could be constructed there was obviously no chance to even attempt to beautify. The tapestries of the olden time and the fabrics with their intricate designs were made by the slowest process of hand work, and were therefore so costly as to be beyond the reach of the masses. When power machinery was introduced, the quantity of the output was increased, a uniformity of product secured, and a great reduction in price made, although none but the plainest of goods were produced. This was the first great step forward, but in a work on cotton manufacture, published no longer ago than 1836, it is stated that "the plain loom is running well, and great hopes are entertained that there will soon be a power loom for weaving fancy goods." There have been great difficulties for the manufacturer to overcome, and there has been, accordingly, the greatest tendency for him to continue with a given line of goods, so long as a market could be found, changing only when necessary to keep up the trade.

The apprentice system was good, and it turned out men who managed these enterprises in a masterly way, but who *shall say that it might not have been better? It is not in* the power of every one to impart knowledge, and the young man who depends entirely upon his own quickness of percep-

tion, and what he may acquire by chance from others, is most surely handicapped in the race with the elements, as compared with him whose mind is directed by those selected for their capability and skill in whatever line it may be. There is not a lack of properly developed artistic ability to blend form and color in perfect harmony; this has been in the world for centuries. It is the mechanical means to reproduce these things that has been lacking. Who can estimate the uplifting influence of the numerous photographic, lithographic and other printing processes in scattering broadcast, and bringing within the reach of the poorest the best art in the world? While this may have its effect upon civilization, people are not compelled to look at such things, as they are compelled to look upon their clothes, carpets, and hangings, which contribute primarily to their comfort, and yet have been well-nigh hideous to the sight. Here we meet the serious question of mechanical devices to further our ends.

Wonderful results have been obtained, but the field is wide for conquest. Even now many processes are crude, but the means for study and investigation are increasing fast. Foreign countries are far ahead of us. Germany in particular has a most elaborate system of schools in direct touch with nearly every department of industry, and is, accordingly, occupying an enviable position with relation to the world's affairs, though according to our standards their schools are chiefly trade schools.

A piece of plain fabric, long a standard product of our mills, is worth, as raw stock, some eight or nine cents per pound, and only eighteen cents per pound as print cloth; to this additional nine or ten cents are charged the pay roll, repairs, taxes, insurance, depreciation, waste, and a very small profit. A bit of Swiss muslin is worth but little more in the raw stock, yet with the same pound of cotton in twenty yards of fabric will sell for $8 or $10. Is it not time that we were alive to the situation?

In developing the higher grade of goods, particularly with color added, we must take advantage of almost all the research of modern science; at least, we must appropriate something from every department, for the degree of precision attained demands an application of skill in a continuously increasing quantity. The question of trade schools and of how far science may be applied to art without losing its identity has been long a subject of discussion. It needs no extended argument to prove the value of the application of the principles of pure science to the production of tangible results. The gap between pure science, particularly in mathematics and physics, on the one hand, and applied science on the other, has been in many cases as great as between science in general and the so-called practical part of the world; and it is even amusing to a disinterested spectator to note the apparent astonishment on the part of certain speculative mathematicians, whose great delight is in the 4th, 5th or nth dimensions of space, when they are shown tangible results that can be laid off and measured with a foot rule, emanating from many-fold integrals.

If we admit that material progress is dependent upon a perfectly secure footing in the principles of science, we must not leave any stone unturned until these fundamentals shall be as surely established as is the rock of Gibraltar. One man or set of men must enunciate and substantiate the purely theoretical part of the work, and another must take up so much of that as may be necessary to the completion of their ends, for it is obvious that no one man can live long enough to dominate both fields. While not discrediting the trade school, so called in the strictest sense of the word, one should look with some suspicion upon it, if it does not make use of the latest and best methods of science—not depending upon the result alone, but enquiring carefully into the correctness and reliability of all the elements. It is not enough in many cases to give a man a general training which will enable him to understand the deductions of the purely theoretical side, leaving him to find an application for himself. True, there will always be a demand for a large number of these men, but there will be an equally great, if not greater demand, and for a larger number of men who are one step further removed from the purely theoretical side, and at the same time are more strictly in touch with the material or result-yielding portion of the community.

There is invested in the State of Massachusetts in the textile industry about one hundred and sixty-seven million dollars. While there is a question in the minds of some as to whether the cotton industry will survive the competition of the South, there surely is not any need to fear a very immediate removal. There are certain features of the case which will eventually change, so that the question of labor, taxes, insurance, and others closely allied, will doubtless soon settle themselves. With all this capital invested, it can safely be taken for granted that if we cannot make the coarser grade of goods, we will make the finer. It is, then, no wonder that hitherto the large proportion of our cotton crop should be sent abroad, manufactured into the finest goods, sent back here and sold over the counters of our stores; for we have not been providing the means to properly train our own people, who should have been employed in manufacturing these goods, while across the water every possible means has been brought forth. Long ago we found ourselves solving well some kindred questions. More recently we have taken up the problem of the application of science to the textile world, and we find that the further we travel, the higher we climb, just so fast does the horizon, which seems to mark the limit of attainments, recede.

The leading manufacturers of Lowell long ago realized the necessity for meeting this problem, and after much study organized as the trustees of the Lowell Textile School. In this school they have collected such machines as are in use in the production of the fabrics of the present day, and have assembled a corps of instructors who are entirely familiar with the practical running of these machines, and at the same time, so far as possible, are thoroughly well grounded in the theoretical side of their several branches. It was seen early that such a school must, first of all, produce as good results as were attained in the best mills, and when this point was attained, all the research of modern science must be brought to bear if any advance was to be made. The work soon developed into the laboratory method, the instructor first covering the ground by a lecture, and afterward causing the student to produce the tangible result upon the machine. When it is realized that at the present time almost endless numbers of effects in the finished goods are produced by combinations of fibers, chemical changes, etc., it is not hard to see how extensive an equipment is necessary to handle such work. The school already has complete equipments for producing the different varieties of cotton, woolen, worsted and other yarns, making the designs, ornamentations, and harmonizing the colors for the fabrics, weaving the same, as well as handling the chemistry and dyeing which may be necessarily connected therewith. The school has been in operation a sufficiently long time to observe the results attained to some extent, and it is found that these results have been good; for everywhere the manufacturer is realizing, as never before, that he must have trained skill in and about his mill; and on the other hand, it is seen that science alone is of small avail if it be not applied.

Wm. Young, one of the oldest and best known citizens of Waterloo, Ont., is dead. He was a large stockholder and a director for 27 years of the Waterloo Woolen Mills.

NEW DYESTUFFS.

Acid Cyanine B and R.—These two new colors are dyed in the same manner as other acid wool colors, with the addition of Glauber's salt and sulphuric acid. The B brand when dyed a dark shade closely approaches our Sulfon Cyanine G R extra. The R brand, however, is of a somewhat more reddish tone down and over-hand, possessing at the same time more brightness of shade. Both these new products are easily soluble. The chief features of Acid Cyanine B and R are their considerable resistance to light and steaming, their fastness to rubbing and perspiration being also good. Their fastness to milling, however, is not as good as that of the Sulfon cyanines. Both brands are especially adapted for the dyeing of piece goods, particularly for the production of very fast navy blues.

Toluylene Orange R.—This new dyestuff is dyed in the usual manner with Glauber's salt and soda, but dyed direct it is of little use in cotton dyeing owing to its being not sufficiently fast to storing. However, developed with Berzo Nitrol or Paranitraniline it produces very bright chestnut shades of considerable fastness to washing. It is well adapted for combining with or shading brown developing colors such as Benzo Nitrol Brown, Pluto Brown, etc. Toluylene Orange R developed with Benzo Nitrol will undoubtedly be principally employed for the dyeing of cotton yarn and fancy woven goods. Dyed direct it also produces very useful shades on half-silk. Dyed direct the color can be discharged a very good white with tin crystals or zinc powder, and sulpho-cyanide of zinc discharges it a cream color. Shades which have been afterwards treated with Benzo Nitrol can only be discharged a white with zinc powder.

Katigen Chrome Blue 5G.—This color when dyed direct produces a green shade very similar in tone to our Katigen Black 2B, and when afterwards treated with bichrome and copper sulphate is changed into a very bright and fine greenish blue which is extremely fast to light, washing and boiling. The methods of dyeing and after-treating are exactly the same as employed in working with other Katigen colors. Katigen Chrome Blue 5G is very well adapted for the dyeing of loose cotton, cotton hanks and pieces, and owing to its excellent fastness to light can be used to advantage in dyeing curtain and upholstering material. It can also be employed on account of its bright shade, for mercerized goods.

Tartrazin.—The patent for this well-known dye-stuff has now expired, and we have taken up the manufacture of the article and are putting it on the market under the same name. Our product is quite identical with that of the Badische's color. It is very fast to acids, light and washing. It dyes wool in the ordinary manner with Glauber's salt and sulphuric acid, producing fine chrome yellow shades extremely fast to light and washing. It also dyes silk from acid baths; but the shades produced are somewhat inferior to those on wool.

Samples, instruction circulars and shade cards will be mailed gratis to interested dyers upon application to the Dominion Dyewood and Chemical Co., Toronto, sole agents in Canada for Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany.

ACID CHROME COLORS.

A new range of colors is being placed upon the market which seems to meet a long felt want. This refers to a range so called Acid Chrome Colors, from the fact that these colors are applied to wool in one bath; first, using as assistants, acetate ammonia, acetic acid, Glauber salt, sulphuric acid, etc., according to the color in process of dyeing; and after boiling requisite time a small percentage of bichromate potash, ½% to 1½%, or fluoride chrome, 2 to 4%, is added to the boiling bath, and the process continued another half hour or so. The resultant colors are remarkably fast to fulling and light, comparing very favorably with results obtained in two bath method, using alizarine pastes and powders on bichrome mordant.

The Society of Chemical Industry have placed upon the market a splendid range of these colors under the following names: Chrome Fast Black F, R, BB; Cloth Fast Blue G, L, BR, R; Anthracene Acid Yellow G, Green, Red and Brown G, W, R.

The Chrome Fast blacks can for particular attention, being far superior in fastness both to fulling and to light, particularly the latter to the finest grades of hematine or logwood. The increased cost over hematine of dyeing these blacks is slight compared with the immense advantages gained in fastness, and without any doubt these blacks will prove of great interest to buyers to whom the greatest fastness at the smallest cost is a matter of importance.

Anthracene Acid Yellow G takes the place of fustic dyeing, a shade almost identical with fustic, but giving a result much superior in fastness, and cheaper.

Cloth Fast blues give a range of colors equal to the best alizarine blues, the cost of dyeing being very markedly cheaper. These blues together with Anthracene Acid Yellows and Anthracene Acid Red, give a range of olives and browns fast and brilliant in tone.

Anthracene Acid Green is a brilliant emerald green shade.

Anthracene Acid Red a bright scarlet.

Anthracene Acid Browns a range of three shades, being brighter than shades obtained by two bath method and much cheaper.

All these acid chrome colors can be used together or in conjunction with alizarine colors in chrome mordant, giving equally good results, whether dyed single bath or two bath method. All particulars, etc., and any shades will be gladly matched on loose wool yarn or cloth in order that colors may be tested freely. Watson, Jack & Co., Montreal, sole agents for Canada.

DIRECT PYROGENE BLUES.

The Direct Pyrogene Blues, sample cards of which have been sent out by Watson, Jack & Co., Montreal, are recommended as being the only products yet offered which will produce faster and cheaper shades than those obtained with pure indigo. The manufacturers say: Our Direct Pyrogene Blues dye shades which will stand the strongest household washing, and possess, at the same time, the valuable property of fixing indigo in an equally good way. It results, therefore, that while pure indigo loses its intensity through washing, and in bleeding into the white, a similar shade of indigo with a bottom of Direct Pyrogene Blue is quite fast to the most energetic washing. We have sent you dyed patterns of 1° and 2° Direct Pyrogene Blues at 3 to 5%, topped with 0.3% Methylene Blue G, and 3° Direct Pyrogene Blues at 3 to 5%, topped with indigo, which you may submit yourself to a test in washing the dyeings which have been topped comparatively with a hank of indigo of your own dyeing, and with the shades obtained in passing our patterns of Pure Direct Pyrogene Blue in the cold or warm indigo vat. The results which are obtained will fully confirm what we say of the fastness of our products. The process of dyeing is very easy. It is done with an addition of sulphide of sodium and soda crystals, without any after treatment, and will last less than one hour. Our direct Pyrogene blues may also be employed in such

cases where no indigo is used, and will give very good shades of greatest fastness. In topping them with Methylene Blue G, Fast Blue M D and Fast Blue R S, brighter shades of equally good fastness will be obtained.. Further information can be obtained from Watson, Jack & Co., St. Helen street, Montreal.

FABRIC ITEMS

F. C. Wheeler has registered, in Montreal, as a clothing manufacturer.

Wener & Margelius, Montreal, have registered as manufacturers of clothing.

The New York Manufacturing Co., clothing manufacturers, London, Ont., have assigned.

Ald. R. Soper, of Hamilton, the well-known tent and sail manufacturer, dislocated his hip by a fall from his sail loft this month.

G. R. Blythe & Sons, a dry goods firm of Ottawa, are seeking an extension of time. The liabilities are $155,000. The building of new premises, at a cost of $75,000, is said to be the cause of the shortage.

The following articles, when used as materials in Canadian factories, have been put on the free list. Fly felt, damper felt, hammer rail cloth, back check felt, catch felt, thin damper felt, whip cloth, bushing cloth, hammer felt and back hammer felt.

The young woman whose body was found floating in the Ottawa river has been identified as Maria Poyner, of Stratford, Ont., who has been employed as traveler during the past seven or eight years for a London, Ont., corset company, and who has for the last few months resided in Ottawa.

E. L. Rosenthal, the founder of the Beaver Rubber Clothing Co, Montreal, which was turned into a joint stock company some time ago, has separated from the company, and is starting, in Montreal, a new rubber clothing factory, called the Strathcona Rubber Co.

The partnership between W. M. Campbell, H. C. Boulter and W. H. Stewart, of Toronto, as manufacturers of ladies' and children's clothing, under the name of "Boulter & Stewart" (whose recent difficulties have been noticed in a former issue) has been dissolved. The business will be carried on under the same name by Effie Amanda Boulter and Georgina Rodger Stewart.

Five tons of binder twine offered for sale at Belleville, Ont., has been seized, under the amended Weights and Measures Act, for not bearing a tag with the maker's name, and the number of feet per pound in the ball. The owners claim the seizure is unwarranted, as the twine was imported before the statute came into effect last October. The matter has been reported to Ottawa.

Alfred Porter, for 24 years a member of the firm of the S. Carsley Co., Limited, Montreal, for which he was chief foreign buyer, died at his residence, 62 St. Luke St., on the 18th inst. He had been ill for upwards of a year, the greater portion of which time he spent in England. He returned to Canada about six weeks ago, and two weeks later took to his bed, since which time he has been steadily failing.

The National Corset Manufacturing Company, of Quebec, at the demand of the People's Bank of Halifax, has assigned, with assets of $14,825, and liabilities of $36,266. The principal Quebec creditors are G. N. and R. P. Boisseau, $20,252, and indirect, $1,608; People's Bank of Halifax, Que., $8,000; the Singer Manufacturing Co., $304. A meeting of creditors has been fixed, and the guardian, Geo. Davreau, has been granted leave to continue working the factory in the meantime.

The Hamilton Herald says: Out of the ruins of the estate of Jno. Calder & Co., have grown two large enterprises that will be of vast importance to this city, both commercially and financially. The Toronto firm of Coppley, Noyes & Randall, which purchased the stock in trade of the late firm of Jno. Calder & Co., will remove its Toronto establishment to Hamilton, taking up its headquarters in the premises so long occupied by Calder & Co., and will manufacture clothing. John Calder, who is fast regaining his health, will not likely remain long out of the business to which he has devoted so many years of his life. It is said that an arrangement has been entered into with the firm of Arthur Horsfall & Co., large manufacturers at Montreal, looking to the removal of that institution to this city, and the formation of a new company with John Calder at its head. It is said the necessary capital has been secured. We may add that a suit has been entered by Mrs. John Calder against the assignee of the estate of John Calder & Co., to recover about $50,000, which she claims was her own personal estate. Mrs. Calder is a fighter, and is likely to make trouble in the camp.

E. A. Small, a well known business man, in Montreal, of the firm of E. A. Small & Co., wholesale clothiers, was drown in the Jacques Cartier river, on the 5th inst., while on a fishing trip with some friends. Mr. Small decided to bathe in the river, and after undressing, sat on a ledge of rock in shallow water, just under a waterfall, where the stream fell upon him like a shower bath. He suddenly slipped and glided into deep water. Knowing that Mr. Small was unable to swim, the boatman and a friend ran to grasp the hand of the struggling man. The friend, in his eagerness, lost his balance, and falling into the stream struck some object, and was stunned in the fall. He soon regained consciousness, however, and regained a firmer footing, but meanwhile Mr. Small was carried away by the current and was not seen again until the body was discovered four days later, about three miles lower down the river, where nets had been placed across. Mr. Small, who was born in England, 62 years ago, came to this country while a young man, and early in his career entered the employ of Shorey & Co. He subsequently became a member of the firm of Shorey & Co. In 1886 he withdrew, and started a business of his own, under the name of E. A. Small & Co., and revolutionized the ready-made clothing business by introducing improved methods of cutting and fitting, selling his goods under the name of "Fit-Reform" clothing. He was connected with many other enterprises, being a director of the Montreal Woolen Mills Company and other businesses. He leaves a widow and several children.

JUTE INDUSTRY IN INDIA.

The jute industry is next in importance to cotton in India. Jute like all vegetable fibers is a compound of cellulose, but is distinct in its properties from cotton and linen, specially in It is interesting to find the concentration of both to the east and west of the peninsula, almost about the same latitude. regard to the action of chlorine gas or strong solutions of bleaching powder. This fiber is an exclusive growth of Bengal, of which it forms fully a third of the exports. For the whole of India it forms no less than a sixth of the total value of the exports which represent over sixteen crores of rupees annually. The industry is capable of a good deal of expansion, the principal stumbling blocks being the internal land carriage charges and the proverbial apathy of the people. Unlike ot-

ton, the industry is concentrated wholly within the limited area of Bengal only, where jute is grown in abundance. Another noticeable as well as instructive feature about this industry is the fact of its being principally in the hands of foreigners. The growth of jute was known long long before the advent of the English, and it is a pity to find it remaining unthought of and neglected until about thirty years ago, when there were hardly half a dozen mills started by the enterprising Britons. It has gradually progressed since that time, and employs at the present day over 130,000 laborers of all denominations, turning out upwards of 370,000 tons of manufactured goods in the shape of gunny bags and cloth. The number of looms working 20 years ago was just over 4,000 against 14,000 at the present day, consisting of 8,000 narrow and 6,000 broad looms. Of the total exports worth sixteen crores, the value of raw materials is something like ten crores odd. This fact offers subject for reflection to Indian capitalists. A third of the raw material exported goes to Dundee, where a variety of useful things are manufactured from it in marked contrast with gunny cloth and bags of Bengal. There are twenty-six jute growing districts in the Bengal province within a limited area, outside which the cultivation is insignificant. The normal area under jute cultivation now amounts to about 2,200,000 acres, with an average outturn of nearly 66 lacs of bales. Of late a good use has been found for the jute waste in the production of a new yarn, in which the fibers of this plant are mixed with either cotton, wool or silk. At first the fiber is thoroughly opened and cleaned of non-fibrous material, dust, dirt, etc. It is then boiled from six to twelve hours in a solution of various chemicals, after which it is thoroughly washed and bleached. It is then lightly opened again and formed into a lap, which is then mixed on a finisher machine or condenser with either cotton or wool, ready for spinning.—The Indian Textile Journal.

THE WOOLEN TRADE CONDITIONS.

To the Editor, The Canadian Journal of Fabrics.

Sir,—It is beyond denial that the Canadian woolen trade is in a precarious condition; for though here and there good reports are heard from the mills, yet, as a rule, short time and reduction of staffs and other evidences of hard times predominate. By admitting British goods at reduced rates, the preferential tariff has contributed materially to produce the present state of affairs, and imports have risen enormously. But it is open to question whether the tariff must bear all the blame. The discussions on the present state of affairs seem to admit that there may be other causes. The old storage system is one of them. By this system the transportation of frozen meat has created an enormous market in Europe for beef and mutton from the colonies and elsewhere. Australia, New Zealand, South America, all sheep-grazing countries, have found that meat pays better than wool. But as the finer breeds of sheep that formerly produced the merino wools are of little value for the meat market, these breeds have been replaced by larger animals more satisfactory as mutton producers, but bearing coarser wools. This class of wool, the clip of which each year from the vast flocks in the southern hemispheres must reach an enormous total, comes into the wool market in direct competition with the wool from more northerly countries, Canada being one of them, where the coarser breeds of sheep prevail; with the inevitable result of lowering the price of the raw material to such a point that the woolen manufacturers find it difficult to manufacture at a profit. This result is visible not only in Canada, but in Great Britain and the United States. The price of wool at the present moment is such that the sellers do not care to sell, and the buyer with heavy stocks of cheap wool on hand is in no hurry to buy. It is impossible that this state of things can be without its effect on the Canadian woolen trade. The general public, meanwhile, rejoices in cheap mutton and cheap clothing, but the manufacturer finds it a difficult problem how to finance his business in a successful manner. Then again "Fibre and Fabric" points out another condition that has a bearing on the question: It is the continued use of antiquated machinery rendering it impossible to produce perfect goods, "increasing the cost of manufacture and creating dissatisfaction among the operatives whose earnings stop when their machines are being 'fixed.' Mills that have made the most money have kept a scrap iron heap or have sold, as second hand, machinery that has passed out of date. Other manufacturers have plodded along with their old apparatus, not even keeping posted as to what new improvements have come into use, and at last have been brought to failure by not discarding the old for the new. In these days of rapid mechanical progress it takes but comparatively few years for high speeded machinery to become deficient in earning capacity or to be replaced by improved devices, and then its use keeps a mill at a disadvantage in competition with plants that are equipped with the latest inventions. The passing of valuable machinery into old junk is inevitable, and the mill owner or manager who fails to recognize it is behind the times." It cannot be denied that there is machinery of this class in use in Canada; and we can realize the difficult task the owners set themselves when they endeavor to compete with mills possessing the latest and most scientifically equipped plants. Troubles do not come alone, and it is possible that the tariff, the cheap wool crops, and the conditions of machinery, may each furnish a share to the Canadian wool manufacturer's unfortunate position. The future under the circumstances does not look bright.

ONLOOKER.

THE WOOL MARKET.

The Canadian wool market, in spite of the new clip, has little or no change to record. There is no export trade at all; the South American arrivals having checked demands from the States; and the price of English crossbreds, Lincolns being quoted as low as 5d., has effectively closed the English market. As to the home trade, transactions are almost nil, buyers and sellers differing too widely in their views for trade purposes. In consequence, the new clip will be stored away until a change in the market takes place. The prices offered are, for washed fleece, 13c.; unwashed, 8c.; supers, 16-17c.; extra supers, 18-20c.

Our Montreal report states: Foreign fine merinos are firm, with an advance of about 5 to 7½ per cent.; crossbreds are also better, although no advance is noted in them. Canadian fleece is selling very low at 13½ to 14½c.; unwashed, 9c. B.A., washed, is enquired after for good merino qualities at 31 to 33c. A little greasy Australian is here for which 16 to 18c. is asked. Cape greasy may be quoted at 13 to 15c.

In the Winnipeg market, says the Commercial, Manitoba wool is worth 7½c. per pound. Offerings are almost nil, and the new clip of Manitoba wool, owing to the neglect of sheep raising, will not exceed 35,000 lbs., while that of the North-West Territories will be about 600,000 lbs. Buyers now in the Territories are doing no business, as they say holders want too much money for their wool. A letter, which appeared in a leading city daily, from a writer in the sheep district, reiterating the erroneous statements of the Territorial Department of Agriculture, as to the amount of wool annually clipped in the Territories, and placing the value at an entirely fictitious figure, has had the effect of making it still harder to do business with ranchers, as they have been given a false

idea of the wool situation, consequently buyers say that they will have to leave the wool where it is. It might interest those who hold these distorted views of the wool market to know that a large portion of the wool, for which 13c. was paid last year at Territorial points, is offering to-day in Eastern markets at 11c. per pound without finding a purchaser. At Vancouver, B.C., the new clip is offered at 6 to 10c.

Quotations for wool, in the following Ontario towns, are given in late local papers, as follows. Arthur, 13 to 16c.; Beaverton, 12 to 13c.; Bradford, 14 to 15c.; (unwashed, 8 to 9c.); Brockville, 20 to 25c.; (unwashed, 15 to 20c.); Clifford, 14 to 17c.; Clinton, 13 to 14c.; Drayton, 11 to 14c.; Dundas, 12 to 13c.; (unwashed, 6 to 7c.); Egansville, 15c.; Elora, 9 to 14c.; Fergus, 12 to 14c.; Galt, 15 to 18c.; Guelph, 12 to 13c.; (unwashed, 8 to 9c.); Hamilton, 13½ to 14c.); (unwashed, 8½ to 9c.); Kingston, 12 to 16c.; (unwashed, 8c.); Lindsay, 12½ to 14c.; (unwashed, 7 to 8c.); Listowel, 16 to 18c.; London, 12 to 14c.; (unwashed, 7 to 8c.); Mount Forest, 8 to 14c.; Perth, 14c.; Renfrew, 15 to 20c.; Sarnia, 12 to 12½c.; Welland, 14c.; (unwashed, 8 to 9c).

The fourth series of the London wool auctions opened on July 2nd, the quantity for sale amounting to 326,000 bales, to which total must be added about 2,000 bales Falkland Islands, and 8,000 bales Punta Arenas wool. Early prices were slow, and bidding only became at all spirited when 5 to 15 per cent. reduction was accepted. Then for fine merinos the prices rose again to 5 per cent. above opening bids. Merinos and superior crossbreds were eagerly sought for by American buyers, who also took medium crossbreds at irregular prices. Continental buyers were keen contestants with the Americans, and for some superior Geelong greasy merinos, the price rose to a shilling. Capes and Natals sold freely, some snow whites going at May prices. Scoureds sold well for the Continent. The arrivals for the next sales, on September 17th, already to hand, are about 300,000 bales.

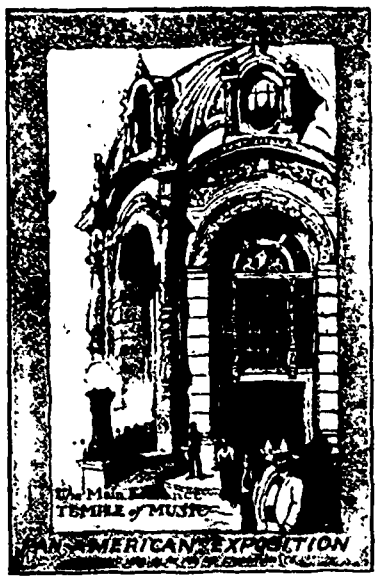
THE PAN-AMERICAN EXPOSITION.

(Correspondence Canadian Journal of Fabrics).

Although not ambitious in its conception as the Columbian Exposition at Chicago in 1893, the Pan-American, now in

progress at Buffalo, is an exceedingly creditable exhibition so far as the ground it was intended to cover is concerned. The Chicago Exposition drew from the world, the Buffalo Exposition is, as its name indicates, confined to the American continents, and is intended as an object lesson of the progress made in the New World during the century just closed.

Buffalo is a very suitable city for such an exposition. Easy of access, both by land and water, with extensive railway facilities, on the main route of tourist travel, close to Niagara Falls, which must always be a great resort, and with immense electrical power derived from that never failing source of



energy, the Bison City offers all advantages which could not be overlooked. Of course the inception and carrying out of such a project rested largely with its own citizens, but the executive, to whose keeping was entrusted the working out of the plans, are entitled to every credit for the success which

has attended their labors. The public park, a portion of which, with adjoining territory, furnished a suitable site, is well laid out, easy of access and in all respects suitable for the purpose intended. In this respect the general plan is an improvement on that followed at Chicago.

As might be expected, in these days of progress in elec-

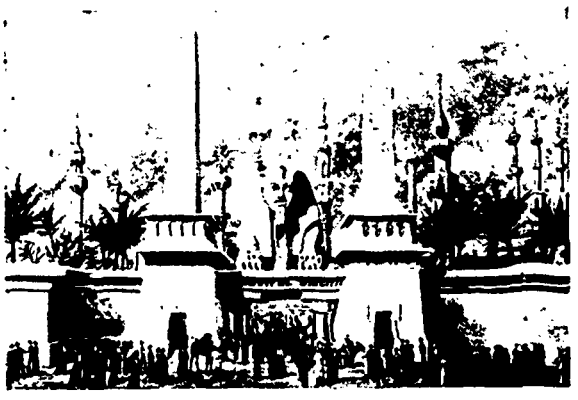
trical science, one of the most interesting features of the exposition is that connected with that department. The energy which sets in motion all the machinery in operation on the grounds, as well as the current which produces the very beautiful and striking illumination, is brought from Niagara Falls

The illumination is on a more extensive scale than has heretofore been attempted, and is worth a long journey to see. Half a million lamps are employed in outlining the buildings while the effects of the electrical tower, over four hundred feet in height, which stands in the centre of the grounds, is a study in electrical decoration. The building devoted to electricity is one of the most interesting on the grounds.

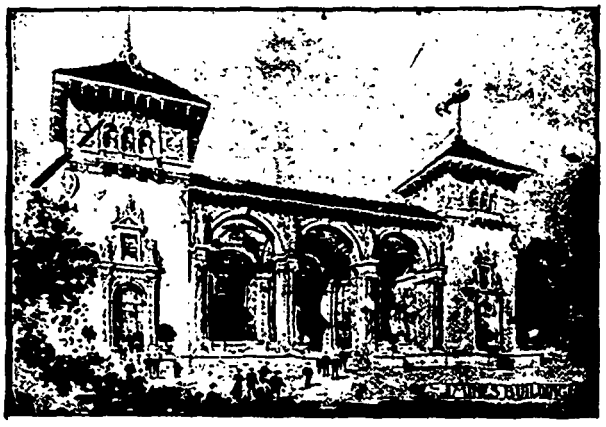
In a country where textile manufactures have reached such a high degree of development there must be much in that line to interest. These branches are well illustrated by many of the exhibits in the Manufacturers' and Liberal Arts Building, while the machinery employed to produce such results is shown in operation in the Machinery and Transportation Buildings.

Agriculture, horticulture, the graphic arts, forestry, ethnology, the fine arts, mining, dairying, etc., are all represented in their respective buildings. The United States Government has put forth a special effort to show how the functions of government are carried on in a building well designed for the purpose. The live stock exhibit will come later in the season. The Aboriginal tribes which inhabited America are to be seen in the practise of their arts before and since the advent of the white man. The cultivation of music is carried out in a splendid temple under the direction of some of the best masters of the art, and the desire for amusement in general is catered to by the concessionaries on the Midway, which has come to be such a prominent feature of all expositions.

The Pan-American, which certainly reflects great credit on all who had to do with its inception and development, cannot fail to be a most useful object lesson in showing the vast improvements which are taking place in all branches of art and manufacture.

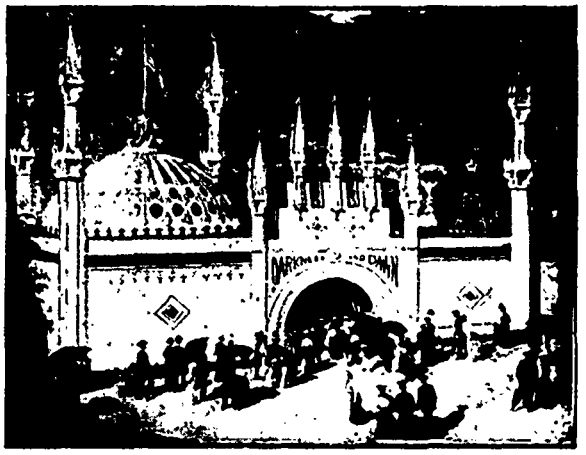


Ramie fiber is displayed in the Louisiana state pavilion in the Agricultural Building. Ramie was first introduced into the United States in 1855 from Japan. It will grow in any soil where the winters are not too severe. A temperature of



32 degrees, however, will kill it. The yield is from fifteen to twenty tons to the acre. The fiber is made from the inner bark which is cut in strips four feet in length. Samuel B. Allison of Galveston, Texas, invented and built what was said

to be the first successful machine for separating the inner from the outer bark. This machine was taken to Galveston by Mr. Allison and was destroyed with its inventor during the disastrous storm of last fall, with all data regarding the specifications of the invention The outer bark is of a resinous nature and in Japan is separated from the inner bark by hand, each stalk being handled separately and the two layers of bark separated with a knife. All the fiber now used in this country is procured from Japan, Louisiana having no machinery to produce the fiber, and labor being too expensive to compete with the cheap Japanese labor. Ramie can be made into



cloths of various textures and will take any dye. It has a silky appearance and when interwoven with silk it is next to impossible to discover the ramie fiber. The sails of the "Shamrock" and "Constitution" and nearly all the racing yachts are made from ramie fiber. Ramie is, perhaps, the strongest vegetable fiber known. A good grade of plush is made from it The reed grows profusely throughout Louisiana without any cultivation whatever. It grows to the height of from four to eight feet, four feet reeds being the most desirable for use. It is of rapid growth, sometimes producing as many as five crops a year. The Louisiana commissioners say that state produces enough ramie to supply the United States, and are anxious to interest capital in the production of it.

GLUT OF COARSE WOOLS.

Dealing with the conditions of the wool market a London, Eng., wool firm issues a circular dealing with the glut of coarse wool in the world's markets. It says: "The first half year now drawing to a close, has not proved to be a period of either conspicuous or growing activity in trade. The severe depression developed for coarse qualities of colonial wools during the past six months, each successive series having witnessed a further fall, until prices have now receded to a point never previously imagined, has naturally occasioned a good deal of misgiving, both as to the immediate cause of such a collapse and the relative status of colonial and other coarse grades. In 1895 Leicester hoggetts and wethers were quoted at 10¼d., now the market value is 6¼d., a reduction of 39 per cent. Lincoln wethers, which in 1895 were quoted at 12¾d., now stand at 5½d., a decline of 56 per cent., while Irish wethers declined from 12½d. in 1895 to 5¼d. this year, a drop of 50 per cent. Half-bred hoggets of fair to medium qualities dropped from 10½d. in 1895, to 6¼d. at present, and Southdown, fair to medium, from 10d. to 7½d. From this it is at once apparent that not only all coarse, but all medium wools have immensely fallen in value during the past seven years. All these various developments had reasonable and direct causes, and a warning voice to growers that an immense increase in coarse crossbreds would eventually have but one issue. The unprecedentedly low basis now reached is that issue. Fine Victoria wool alone maintains the position it held seven years ago. What has happened this year, a new and disturbing feature in coarse qualities, has been a severe crisis in South American markets, where continental houses have been unable to handle the huge supplies of River Plate crossbreds on their accustomed scale. This in itself has accentuated the depression everywhere else. This has been most recently exemplified at Liverpool on June 12, where, of 5,200 bales of River Plate wool, chiefly crossbreds, catalogued, 3,032 bales passed the hammer at a decline of 10 to 15 per cent. on the auctions held there in April."

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.

A. Lomas & Son, Sherbrooke, Que., are running overtime and have orders ahead.

Benjamin Lee, boss weaver at the Kunhardt Mill, Lawrence, Mass., is dead. He was formerly overseer at the Globe Mill, Montreal.

The Mississippi Woolen Mills, Appleton, Ont., were closed for a short time to allow for changing of some machinery and new flooring.

The ratepayers of Paisley, Ont., voted two by-laws to establish a carpet factory and a bicycle and brass goods and automobile factory.

Harry Finney met with a serious accident at Westwood's Carpet Factory, Bloomingdale, having two fingers severed at the first joint by a hoop saw.

George Morrison, boss carder in the Canada Woolen Mills, Carleton Place, Ont., and Miss Addie Douglas, bookkeeper in the same, were married recently.

Peter Casey, who was in charge of the indigo dye house of the Dominion Cotton Mills, Magog, Que., for several years, has resigned. He will still reside in Magog.

Robert Fasacker, boss weaver at the Dominion Cotton Mills, Halifax, N.S., which are now closed on account of a breakdown, has taken a position with the Merchants Manufacturing Company, Montreal.

At a meeting of the Chamber of Commerce, Manchester, Eng., Mr. Helm, the secretary, announced that an automatic loom is being perfected in America, which may revolutionize the weaving machinery of the world. With this invention one man could attend to twenty-four such looms.

Thomas Hope, for a number of years designer at the woolen mills of the Cornwall Manufacturing Company, left on a two months' trip to the old country, accompanied by Mrs. Hope. On the day of his departure the foremen of the different departments presented him with a gold monogram ring.

The Wm. Firth Co., of Equitable Building, Boston, report that they are very busy with their new line of cotton machinery. One of the largest New England mills, after placing a small order and operating the machinery for six months as a test, have just placed a very large order for cards, combers, ribbon and comber lap machines. The whole of the above will be of Asa Lees & Co.'s make.

The picker house of the Dominion Woolen Mfg. Co.'s mills, Beauharnois, Que., was damaged by fire recently together with a quantity of stock.

Factory Inspector Barber has resigned his position, and the Ontario Government has appointed J. T. Burke, of Stratford, to the vacancy. The position carries a salary of $1,000.

W. C. Caldwell's woolen mill, Lanark, Ont., was damaged by fire last month. Loss, $2,000 to $3,000; partly covered by insurance. It is being rebuilt, and some machinery has been bought for it from the old Baird mill, Almonte.

The Wm. Firth Co. have received a large order for speeders from the Merchants Cotton Co., Montreal, Canada, these machines being of the well-known make of Asa Lees & Co., Oldham, England.

Patchell & Eavenson, of Philadelphia, have placed an order with the Wm. Firth Co., Equitable Building, Boston, for Creighton openers, these machines being of Asa Lees & Co.'s make. Wm. Firth & Co. are Canadian agents for these machines

The promoters of the new Cordage Company recently organized at St. John's Que., have received a provincial charter. It will be called the Richelieu Cordage Company, capital $75,000, and the directors are M. E. Agar, H. Black, W. A. Campbell, F. L. Hall and F. C. Chubb.

J. E. Molleur, whose underwear factory was recently destroyed by fire, has applied to the town council of St. John's, Que., for a gratuity of $25,000, claiming this amount as a compensation for the loss he sustained, and for the large amount of manufacturing done by him in past years.

A New York syndicate, headed by J. Spencer Turner & Co., has bought out all the preferred stock held by W. D. Long, J. Knox, J. J. Scott, J. M. Young, of Hamilton, in the Imperial Cotton Company. These gentlemen, however, still remain directors and stockholders. The New York shareholders will find a market for the manufactured goods.

Dan McLaughlin, an employee at the Perth Flax & Cordage Co.'s mill, Stratford, Ont., was seriously hurt while fixing his carding frame. His arm was drawn under the revolving cylinder, the pins of which tore the flesh away. The machinery had to be taken apart to release the man's arm, which was drawn in past the elbow.

By the purchase of the Worcester, Mass., Carpet Company's factories and business, Matthew J. Whittall becomes the largest individual carpet manufacturer in the world. The former owners have dissolved partnership, and Mr. Whittall will enlarge the business and employ about 1,000 men in the new purchase and his own adjoining factory.

A disastrous fire destroyed Bain & Co.'s woolen mill, Elora, Ont. A portion of the cloth and wool was saved, but the mill burned so rapidly that it soon became unsafe to attempt any further rescue. The machinery was all burned, and while the loss is several thousand dollars, the insurance on everything was only $2,000. The mill is not likely to be rebuilt.

The recently organized Canadian Cordage and Manufacturing Company, of Peterboro, Ontario, has engaged W. T. Clarke as manager. Mr. Clarke has been in the employ of the McCormick Harvesting Machine Company, of Chicago, Ill., the Pearson Cordage Company, of Boston, Mass., and the Hooven & Allison Company, of Xenia, Ohio. The company will erect two buildings, one 300x90 feet and the other 150x50 feet.

The representatives of thirty-seven of the largest American knit-goods mills have decided to continue the temporary organization formed a short time ago until October 1, 1901, and to name it "The American Knit Goods Association." The association has decided to maintain the prices and terms of the schedule adopted May 7, in effect until August 1, 1901, when another advance will probably be made.

It is proposed to turn the old woolen mill building at Weston, Ont., into a tannery.

The Jones & Moore Electric Co. are building a 250-light incandescent dynamo for the Schofield Woolen Co., of Oshawa, to replace the old plant.

John H. Parks, late head of the cotton manufacturing business of his name in St. John, N.B., has started business as a dry goods commission house in the same city.

Alex. Gibson, jr., of the cotton manufacturing firm of Marysville, N.B., has been renominated as Liberal candidate in York county, N.B. He was unseated last year.

T. B. Caldwell has just returned from a trip to the United States, where he has been buying new machinery for his woolen mills at Appleton and Lanark.

F. Taylor Smith is in charge of carding and spinning at the J. H. Taylor Co.'s mill at Chatham, which is now running on tweeds, yarns and blankets.

Alexander F. Macdonald, secretary-treasurer of the cotton mills, Cornwall, was recently married to Miss Catherine McPhee, daughter of the late A. D. McPhee, of Alexandria, Ont.

A fire, whose origin is not known, broke out in the Montreal Cotton & Wool Waste Co.'s warehouse, Nazareth street, Montreal, the other day. S E. Lichtenheim, the proprietor, estimates his damage at $10,000, fully covered by insurance.

It is reported that a company of New York capitalists are about to buy the 30,000 acres of woodland owned by the Nova Scotia Electric Light Co., at Gaspereaux, and will start a pulp and paper mill at White Rock, King's county.

The Kingston Penitentiary, Kingston, Ont., sold its binder twine for the years 1897-8 to the Hobbs Hardware Company, of London, Ont., and John Connor had an arrangement by which he was to receive one-third of the profits from the sale of the 1,000 tons sold. It is alleged that Mr. Connor did not receive what he was entitled to, and suit has been begun to have an accounting of the profits.

Wm. Hartley, who for the past 26 years has been employed at the Auburn Woolen Mills, Peterboro, Ont., and who has been with the present company for 22 years, left to take a position in the Moyer Woolen Mills, Marseilles, N.Y. Mr. Hartley has steadily risen at his trade and for the last five years has been foreman of the finishing department. His fellow-employees presented him with a gold-headed cane and an address.

General Ballington Booth, commander-in-chief of the Volunteers of America, is planning the establishment of a volunteer settlement in the southern part of Georgia. It will be known as "The Volunteer City," and will comprise a tract of land covering some 15,000 or 20,000 acres in the cotton belt. A cotton manufactory will provide the principal occupation of the settlers.

Wm. Henry Ashworth, one of the earliest hat manufacturers of Ontario, died in Toronto a few days ago. Mr. Ashworth, who was born in Manchester, was in his 81st year, and came to Canada in 1830, settling at Quebec. Twenty years later he came to Toronto, and was in the hat manufacturing business for seven years. In 1857 he removed to Newmarket and continued his business there until his retirement in 1891. For a number of years Mr. Ashworth was reeve of Newmarket. His wife was Miss Jane Murray Johnston of Quebec. She survives him, with seven children.

The following yarns will be admitted to Canada free of duty, viz.: Botany yarn, single in numbers 30 and finer, on mule cops, dry spun on what is known as the French or Belgian system, not doubled or twisted in white only, when imported by manufacturers of cashmere socks and stockings to be used exclusively for the manufacture of such articles in their own factories.

A notice has been issued that the Master-in-Ordinary of the High Court will on the 9th Sept. at his chambers, Osgoode Hall, hear the report of the liquidators in the case of the Imperial Woolen Mills, Ltd., of Streetsville. The liquidator is J. P. Langley, McKinnon Building, Toronto.

The by-law to grant a bonus and exemption from taxation for ten years in favor of W. J. Webster, of Newport, Ont., who proposes the establishment of a woolen mill at Edmonton, Alberta, was passed on the 2nd inst. Mr. Webster has purchased looms and machinery for a three-set mill, and will commence at an early date.

A traveling correspondent of the Textile Manufacturers' Journal of New York, writing about a number of Ontario tweed and knit goods mills he recently visited, says they "produce goods which will compare favorably in quality, texture and finish with those produced anywhere in the States. This shows a high order of skill and practical general results."

The Standard Carpet Co., of Guelph, Ont., which was negotiating with the town of Welland for a loan of $5,000 with a view to establishing a carpet factory in that town has withdrawn its application, and is now waiting for the town of Forest to pass a by-law for a $7,000 loan for the same purpose. Employment will be found, it is said, for 35 hands.

The machinery and plant of J. and G. H. Young & Co., hosiery manufacturers, Montreal, who recently assigned with liabilities of $18,750, will be sold on the 24th inst., at the premises, St. Peter street. The stock of yarns and manufactured goods is valued at $5,698; machinery and plant, $6,987; furniture and fixtures, $464; book debts, $4,782.

The mill at Milltown, N.B., belonging to the Canadian Colored Cotton Mills Co., is now running 800 looms, and expects to run full time. The reserve stock is smaller now than during any year since starting. This will be good news to the employees, many of whom have scattered since stoppages became frequent.

The Chambly Manufacturing Company has entered an appeal from the judgment of the Superior Court, Montreal, in its action against the Stillwell-Bierce and Smith-Vale Company. The company has also entered an appeal from the judgment in the action taken against it by S. T. Willett, woolen manufacturer. The litigation is in connection with damages incurred by the breaking of the dam last year.

Last year some flax from the Argentine Republic was sown as an experiment in North Dakota, and the result was so satisfactory that 6,000 bushels have been sown this year on about 12,000 acres of land. This flax is larger, plumper, and is said to contain several per cent. more of oil than the native flax. The seed used in Argentina came originally from Russia. Canadian flax growers should watch the result of this year's experiment in Dakota.

The weavers in the Cornwall Manufacturing Company's woolen mill went on strike on the 12th inst., and the weaving department closed down. The strikers want their scale of wages arranged so that all weavers will be guaranteed a minimum of $1.25 per day. The company contends that some of the weavers are not worth this sum, on any kind of work, and that many of them make an average of $1.50. There are 170 hands employed in this mill, but all are working except the 40 weavers.

A party of thirty skilled cotton factory hands from Yarmouth, N.S., under charge of Henry Allan, who has been in the employ of the Yarmouth Duck & Yarn Co. for seventeen years, have emigrated to Hamilton, Ont., to work in the new Imperial cotton mills, in which Allan is to take charge of the finishing department. Others had previously gone and more are to follow.

M. McLelland, of Goderich, has closed his woolen mill for the summer, as the water is low, and gone to Washburn.

The Canada Woolen Mills, Ltd., are installing a new pump for fire service in their Waterloo mill. The old pump will be sent to the company's mill at Markham.

John Crawford, of Doon, Ont., has been appointed manager of the Floradale, Ont., flax mill as successor to the late John Walker. Mr. Crawford was one time manager of the Conestogo flax mills for Perine & Co., Doon.

It is understood that the Canadian Colored Cotton Company's two mills at Cornwall, Ont., which have been on half time for a couple of months, will resume full time in August. This will be welcome news to the 1,600 employees of the two big cotton mills.

W. D. McKenzie, who has for several years been in charge of the folding department of the Galt Knitting Company, is leaving that institution to embark in business for himself. His fellow-employees presented him with an address, clock and tea set.

Notice has been given by the Dominion Cotton Mills Co. at Brantford, Ont., that on the 20th of this month, the Holmedale Wincey Mill may close down indefinitely. In the busy season this factory employs about 190 hands, the majority of whom are women and girls.

Harry Heywood, just out from England, has joined the rug manufacturing firm of Jones & Crosland, St. Catharines, referred to in last issue, and the style of the firm has been changed to the Smyrna Rug Mnfg. Co. Some new machinery is being added to the works.

Judge Barker made an order for the foreclosure of the mortgage held by Keltie Jones, and others, against the Parks Cotton Co., St. John, N.B. The amount of liabilities is between $50,000 and $200,000. The two cotton factories have been idle several months.

A judgment of importance to all manufacturers has recently been given by Justice Loum at Toronto. The town of Markham, Ont., entered action against Aurora to have two by-laws of the latter place set aside. The by-laws granted a bonus of $10,000 and free water and no taxation to Underhill & Sons, shoe manufacturers of Markham in order to induce them to remove to Aurora, and Markham claims that it is contrary to the provisions of the recent act of the Ontario Legislature prohibiting the bonusing of established industries. The action was dismissed on the ground that the firm had declared their intention to leave Markham before negotiations were entered into with Aurora.

There has been a noticeable movement towards equipping woolen mills with machinery for weaving and finishing worsteds made from imported yarn. Some time ago the Excelsior Woolen Mills of Montreal added a worsted annex, and now the Auburn Mills of Peterboro, and John Dick (late Dick, Ridout & Co.), Cobourg, are fitting up new machinery for winding worsted yarns and weaving and finishing worsted. This is made possible by the placing of certain classes of worsted yarns at a low rate of duty, namely, 15 per cent., but it is rather hard on the worsted spinning mills which had equipped themselves with costly machinery for the very purpose of spinning these yarns.

J. R. Walker, ex-Mayor of Westmount, and Mrs. Walker, celebrated their silver wedding recently. In connection with the event the Rev. Mr. Winfield, Dr. J. M. Elder and other office-bearers of Melville church, waited on Mr. and Mrs. Walker, and in the name of the church, presented Mr. Walker with an illuminated address, which set forth the acceptable manner in which he discharged the duties of the office of presi-

dent of the congregation. Mrs. Walker was then presented with a silver candelabrum. The members of the deputation then conveyed to Mr. and Mrs. Walker their sincere congratulations and good wishes. Similar feelings were expressed towards Frank Walker and his newly-married wife, who were present. Mr. Walker is head of the Montreal Blanket Co., and of the well-known firm of woolstock manufacturers conducted under his name.

A sad drowning accident happened on the 21st ult., at Chambly Canton. Stanley Willett, aged 24, a son of Brock Willett, of the Richelieu Woolen Mills, with his wife, aged 21, went out driving. They had a spirited young horse, and when about a mile and a half from the village, the horse bolted, and swerved into the canal. Mr. Willett was thrown out and was found some time after lying unconscious on the bank. His young wife remained in the buggy and was dragged down to the bottom of the canal. Help was soon on the spot, but too late to do anything for the lady, whose body was taken out of the water less than half an hour after the drowning. The occurrence was soon known throughout the village, and caused deep sorrow, for the Willett family are highly esteemed, and the young woman who met such an untimely end was deservedly popular with all. Her husband recovered consciousness after a time, but was still in a half dazed condition, and remembers nothing that happened from the time the horse jumped from the road.

LITERARY NOTES.

No war in history has given rise to a greater body of literature than the Boer war, and no country has loomed so large in the world's eye during the last two years as South Africa. Books on the war waged to preserve the Empire in South Africa have appeared by the hundred, and more are coming, but works describing the present conditions, resources and future prospects of that country are not so numerous; therefore the work entitled the "New South Africa," by so competent a writer as W. Bleloch, and published by Wm. Heinemann, 21 Bedford street, London, Eng., will have more than ordinary claims to attention. This should be particularly the case with Canadian readers, because Mr. Bleloch's work gives what we want to know in view of the early revival of that trade in which Canadian merchants and manufacturers are competent to take a large share, unless they let slip one of the golden opportunities of the age. At the time the war broke out, this journal gave a mass of general information on the condition of South Africa, and our readers may recall the fact that some very interesting notes on the mineral wealth of the Transvaal were quoted from Mr. Bleloch himself, who had contributed magazine articles on the subject. I. the present work, which extends to 435 pages, with a number of geological maps and illustrations, the author describes the wonderful mineral wealth and other natural resources of the Transvaal, Natal, the Free State, Cape Colony, Rhodesia, Bechuanaland, Swaziland and Zululand; he tells us about the climate, soil, transportation facilities, agriculture, stock raising, fruit culture, etc., the social and political conditions, and what reforms are needed in the new order of things that will be set up when the war is over. The present writer, from a five years' experience in South Africa, is fully convinced that Mr. Bleloch's forecast of the future greatness of the South African dominion is a reasonable one, and, in the main, is certain of fulfilment. His work is worthy of the careful study of everyone interested in the trade and general prospects of the country.

The July Century is a summer fiction number, with stories, long or short, by Mary E. Wilkins, Frances Hodgson Burnett, Irving Bacheller, Seumas McManus, Josephine Dodge Daskam, Anne Douglas Sedgwick, Stewart Edward White, and Elliott Flower, the creator of Policeman Flynn. Ex-President Cleveland, in this number concludes his account of "The Venezuelan Boundary Controversy," Mrs. Anna Lea Merritt, describes her experiences in gardening in her "Hamlet in Old Hampshire," Louis Dyer writes of "The Millenary of King Alfred at Winchester," with a full-page reproduction of Thornycroft's statue, soon to be unveiled, and a reproduction of a hitherto unpublished vignette of Alfred from a manuscript of Matthew of Paris in Corpus College, Cambridge.

TEXTILE PUBLICATIONS.

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

Loom Fixing; a handbook for loom fixers working on plain and fancy worsteds and woolens; containing chapters on shuttles and bobbins, and their management; head motion; putting in warps; filling; adjusting and starting new looms; chain building, etc.; 104 pages, by Albert Ainley $1 00

Technology of Textile Design; explains the designing for all kinds of fabrics executed on the harness loom, by E. A. Posselt 5 00

Structure of Fibers, Yarns and Fabrics, the most important work on the structure of cotton, wool, silk, flax, carding, combing, drawing and spinning, as well as calculations for the manufacture of textile fabrics, by E. A. Posselt 5 00

Textile Machinery Relating to Weaving, the first work of consequence ever published on the construction of modern power looms, by E. A. Posselt..... 3 00

The Jacquard Machine Analyzed and Explained; explains the various Jacquard machines in use, the tying up of Jacquard harness, card stamping and lacing, and how to make Jacquard designs, by E. A. Posselt..... 3 00

Textile Calculations; a complete guide to calculations relating to the construction of all kinds of yarns and fabrics, the analysis of cloth, etc., by E. A. Posselt.. 2 00

Wool Dyeing; an up-to-date book on the subject, by E. A. Posselt 2 00

Worrall's Directory of Cotton Spinners, Manufacturers, Dyers, Calico-printers and Bleachers of Lancashire, giving the mills of the British cotton district, with number of looms and spindles, products of the mills, cable addresses, etc $2 00

Worrall's Directory of the Textile Trades of Yorkshire, comprising the woolen, worsted, cotton, silk, linen, hemp, carpet, and all other textile mills, giving looms and spindles, and the various lines of goods manufactured, etc $2 00

Worrall's Textile Directory of the Manufacturing Districts of Ireland, Scotland, Wales, and the counties of Chester, Derby, Gloucester, Leicester, Nottingham, Worcester, and other centres not included in preceding works, with capacity, products of mills, cable addresses 2 00

The Wool Carder's Vade-Mecum, by Bramwell; third edition, revised and enlarged: illustrated; 12mo..... 2 50

CHEMICALS AND DYESTUFFS.

Business during the last few weeks very quiet, owing to the dullness among the cotton and woolen mills. No change to report.

Bleaching powder	$ 2 75	to	$ 3 00
Bicarb. soda	2 00	to	2 05
Sal soda	0 75	to	0 80
Carbolic acid, 1 lb. bottles	0 50	to	0 60
Caustic soda, 60°	2 35	to	2 60
Caustic soda, 70°	2 60	to	2 85
Chlorate of potash	0 13	to	0 15
Alum	1 35	to	1 50
Copperas	0 65	to	0 70
Sulphur flour	2 00	to	2 50
Sulphur roll	2 00	to	3 00
Sulphate of copper	6 00	to	6 25
White sugar of lead	0 08	to	0 08
Bich. potash	0 11	to	0 12
Sumac, Sicily, per ton	75 00	to	80 00
Soda ash, 48° to 58°	1 30	to	1 40
Chip logwood	1 90	to	2 00
Castor oil	0 09	to	0 10
Cocoanut oil	0 10	to	0 11

—The British Cotton & Wool Dyers, Ltd., a Bradford combine floated last year, appears to be in a bad way. Customers had fought shy of the combine on account of increased prices, and the year had been disastrous. Nine of the establishments in the combine had been closed.

—New method of wool scouring demonstrations of which have been made at Bradford, Eng., has been very successful. The process is the invention of Frederick Turney, of Nottingham, and the paterts have been secured by the Bradford Wool Company, Ltd. Spirits of petroleum is the scouring agent, and water is altogether abolished. The wool passes along a feeding lattice into the wool washer in the ordinary way, which is closed in order to prevent evaporation. Passing through the machine and being cleansed as it goes along, it is carried automatically into the dryer, and having passed through this the wool leaves the machine perfectly clean and dry. The wool is said to be in no sense broken up or the least spoiled, and is found to be in better condition for carding than after passing through the ordinary wool scouring machine.

TEXTILE EXPORTS OF GREAT BRITAIN TO CANADA.

The following are the values in sterling money of the exports from Great Britain to Canada for May, and the five months ending, May, 1900-1:

	Month of May		Five months ending May.	
	1900	1901	1900	1901
	£	£	£	£
Raw Wool	2,004	887	23,327	12,630
Cotton Piece-Goods	32,141	32,263	317,593	288,917
Jute Piece-Goods	14,512	10,497	64,851	62,041
Linen Piece-Goods	9,822	10,881	88,678	73,256
Silk, Lace	964	95	8,695	1,673
" Articles partly of	3,699	3,061	23,353	24,780
Woolen Fabrics	14,351	19,587	170,833	178,894
Worsted Fabrics	22,087	28,594	251,204	271,539
Carpets	12,341	10,136	142,105	124,991
Apparel and Slops	13,116	14,496	120,910	112,749
Haberdashery	7,775	7,623	72,661	59,524