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Canadian Journal of Fabrics

THE JOURNAL OF THE *Textile Trades of Canada.*

Vol. XI. TORONTO, MARCH, 1894 No. 3

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

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

Offices: 62 Church Street, Toronto, and the Fraser Building, St. Sacrament Street, Montreal.

NOTE.—All remittances and business correspondence should be addressed to the Toronto office, and all correspondence connected with news or editorial should be addressed to E. B. BIGGAR, Publisher, Montreal.

Agency in Europe. Polsue Bros., 30 Poppin's Court, Fleet St., London, Eng

Toronto Telephone, 1392 | Montreal Telephone, 2589

WHY SOME AMERICAN WOOLEN GOODS ARE INFERIOR TO ENGLISH.

A worsted or a woolen that is well finished has several qualifications that commend it to the notice of every buyer. Some countries seem to get hold of certain plans in treatment, too, which make it seem almost as though certain kinds of finishes were monopolized by certain localities. And in this connection "Randolph," in the Boston *Journal of Commerce*, makes an interesting comparison between the goods made in England and America respectively.

In some lines of woolen goods England, he says, enjoys a supremacy which is almost universally conceded to her, and for some reason or other it seems almost impossible for other places to come up to or transcend the standard she has set. There are some, indeed many, Americans who are unwilling to admit candidly that the English do better work in the line of worsteds, meltons and beavers, and yet we think that there is certainly something more than mere sentiment in an impression which is so widespread, and which is sustained by such good authority.

The construction of the goods, the stock employed in their manufacture, and the finish, are the three great points which conduce to the production of a perfect piece of cloth. And in all three of these particulars the English manufacturer, as well as every other manufacturer, must take very special care if he would have his goods come out in such a condition as to silence and defy all competition. Now with regard to the construction of the goods, so much depends upon circumstances of stock, quality, and surroundings, that we are unable to give any definite rules that will be of great use. It is our province to deal more especially with points in the finishing. However, we may say that so far as the grade of stock employed is concerned, a very important item may be noted, and that is, that in our country there is such a great tendency to economize and make as much as possible of whatever is going to add to the cost of production, that oftentimes the quality and appearance of the cloth is sacrificed to cheapness. A stock which will make up nicely into a medium yarn is made with us to go into a so much finer yarn that the whole result is affected. A yarn that is best fitted for a No. 40 should never be made to go a No. 50, because if it is, there is certain to be an inferior piece of goods produced which will not take the feel or finish that it would otherwise stand. Of course it is natural to suppose that if a 50 can be made of a stock that has always been used for a 40, we have saved just that much in the cost of our goods, and so make quite an advance in the line of economy. But in the long run this will certainly be found to be a mistake. It is a mistake, too, that affects the finisher not a little, for he can never give the same finish to an over-worked stock that he can to one that has not been worked to death before it gets into his hands.

Now, to come more directly to the finishing as it affects the desirableness of the appearance of a worsted. We do not intend to go into detail in all the points that might be taken up; our intention is merely to note a very few of the outstanding items which always have a direct and important bearing on the finish of the cloth, and which act more especially upon its permanence and value. In finishing a worsted, one of the greatest and most important points is the steam blowing or cleaning, as it is called: and the thoroughness with which this is done has not a little to do with the value of the finish and the general style of the goods. In most of the large mills of the present day the steaming is done upon the steam gig, where the operation is much more simple and less expensive. Now, here we have cropping up again what we considered the prevailing weakness in the finishing of the day; that is, the sacrifice of actual results to economy and speed. In the rush of large mills there is no time to do the work as it should be done, and in the market of the day goods properly treated would be so expensive that they could

not compete with others of a cheaper grade, which might have for the time quite as good an appearance, but whose inferiority would only be evident after the goods had been more or less in use.

First, now, in steaming a worsted, it may be run into a vat of boiling water, where it is completely wet up through and through. It is then wrapped on the perforated cylinder and covered with a canvas sheet, which is securely tied. When this is done, from five to eight minutes of steam is given until the goods are thoroughly steamed through. After this steaming the goods may be scoured, and, if need be, dyed. When the dyeing is over the goods are put through the rest of the finishing. Now, in the whole operation of steaming the important point is, that the cloth shall be under the influence of the water and steam long enough to get permanent effects, and yet not so long as to overdo the matter and destroy the whole thing. The old operation of boiling the goods in a closed tub had very good results, and the process of steaming only carries out the same plan in a different way.

Next to great care in scouring, boiling and steaming, the pressing comes in for a great share of attention. A worsted, to be finished properly, cannot be treated any better than by means of the old plate pressing. However, this plan has gone much out of style. There is a press made at present which works in much the same way, but it does not give the same results because the cloth passes through it so much more quickly, and is under the influence of the pressure for so short a time. However, the plate press, by which great pressure is brought to bear perpendicularly on the face of the goods, instead of by the rolling motion of the cylinder press, is much more effective in giving a good finish to the cloth.

We consider that if the American worsted is inferior to the English, it is mainly due to the very few points we have mentioned—the stock and the steaming and pressing. Any innovation in the treatment of these goods which hurries the process, is sure to lead to imperfect and unsatisfactory results. The only way to get a permanent finish on a worsted is to take plenty of time for these important processes. Steaming at the brush follows pressing, when the goods are ready for the market.

ELECTRICAL LOOMS

A continental textile publication calls attention to an interesting experiment lately tried with considerable success at the weaving factory of C. G. Hoffmann, at Neugersdorg. About eighty looms are driven by electricity, which is furnished by steam driven dynamos, each loom having its own electric motor. A number of doubling and twisting machines are also worked in the same way. The construction of the loom is in no way altered. Only instead of the fast and loose pulleys hitherto requisite for the strap arrangements, only one fast pulley is necessary, the diameter of which must be adapted to the number of beats of the lathe. The electro-motor is so stationed beside the loom that its pulley stands vertically under the pulley of the loom. The strap driving the loom is consequently very short—so short, indeed, that it could not drive the loom were it not constructed in a peculiar manner, in accordance with a patent by the firm of Siemens & Halske. The result, however, is a simplicity previously unknown. A weaving establishment fitted up according to this system comprises the boiler, the steam-driven dynamo, the other electric apparatus and conductors, and the electrically propelled looms and other machinery. All shafting is dispensed with, and there is nothing above the looms but the roof of the building or the ceiling in the room. In no case are there vertical shafts—hitherto often used to the sorrow of all concerned. The place of these is taken by a few wires, which can be carried from one story to another along a wall or in a corner. That this method of transmitting power thus seems to be essentially more economical than that hitherto effected by means of shafts, ropes and straps, needs no demonstration. Another advantage of this new arrangement, which will come out more clearly as experience increases, is the uniformity of working of each loom, on account of its having its own motor, and being therefore no longer liable to variations through irregularities in the movements of the straps or the shafts.

As for the cost of this new method, it is admitted that it is too great to be readily applied to existing establishments, and that even new buildings cannot be fitted up without increased expenditure, although cases may occur in which the new plan costs less than the older one. It is also urged that the additional cost may in the case of a new factory be met by diminution of the building expenses, consequent on the absence of shafting, which the builder has not taken into account. It is also claimed that the electric motor costs less in the working. This last claim, however, will need a good deal of proving.

REVIEW OF TRADE.

The dry goods trade during the past month has been decidedly flat, and there are few houses which can show an improvement on the same period last year, either as regards volume of trade done or payments received from customers. The Provinces of Ontario and Manitoba are perhaps more depressed than any other section of the Dominion, and a number of good substantial houses have succumbed during the past three weeks. Quebec City and Province have held their own perhaps better than any quarter of the Dominion. There has been an impression for the past twelve months that business was very good in the Maritime Provinces, but this impression has attracted the notice of wholesale houses and manufacturers, and in consequence the Maritime Provinces have been almost drummed to death, until trade is almost as bad there as in other sections.

Of course, when Canada is compared with the United States and most European countries, we have the greatest cause for gratitude, but we are well off only by comparison. In other words, while times are bad at home, they are far worse abroad, and we have only to possess our souls in patience.

FRANCE exported of silk goods in 1893 to the value of 212,137,000 francs, against 249,220,000 francs in 1892, and 245,712,000 francs in 1891.

MANUFACTURERS of rubber toys in Germany have formed a combine and advanced the price of all goods 20 per cent. There are large importations of these goods from Germany to this country, and this step will materially increase their cost. An Italian firm, however, is now offering the same sort of articles for the prices which ruled before the formation of the German combine, and this will no doubt result in a large falling off in the importation of German rubber toys.

THE following is the resolution brought forward by Geo. E. Drummond, and passed unanimously at the meeting of the Canadian Manufacturers' Association, held last month: That this association views with alarm the establishment by the Governments of the Dominion and the Province of Ontario of factories within their respective prisons for the manufacture of binder twine; thus bringing prison labor in direct competition with that of honest free men; and this association respectfully submits to these Governments that instead of doing this it would be better to employ their convict labor in industries not now in operation in Canada.

JUST at present the upholstery trade are looking for a fabric to take the place of chenille, and in the opinion of a well-known upholstery buyer there is a fortune awaiting the person who invents and introduces a substitute for chenille. Chenille has for the past five years been absolutely king in the upholstery market. In the history of the business there has been no one fabric that has been so universally admired and employed in household decorations, such as curtains and table covers, as chenilles; and it is absolutely without a rival when cheapness and attractiveness are considered. When a buyer looks through the European markets for a substitute, he is confronted with many difficulties. The nearest approach to chenille suitable for decorations is a cotton fabric known in the manufacturing world as Derby cloth.

DR. LEWKOWITSCH, of Leeds, read a most interesting paper on "Soaps Most Useful for Scouring Woolen Goods" before the Dyers' and Colorists' Society, at the Bradford Technical College, with Mr. Robert Holliday in the chair. Dr. Lewkowitsch described in detail the characteristics of the soaps made from the different raw materials used for the purpose. Olive oil he declared to be the best possible material for soap making for trade purposes, because the resultant soap was absolutely neutral. Even if the quality of the olive oil was inferior, it was the best material for soap making. In regard to woolen goods he supposed that soap was used in three stages: first, for scouring raw wool; secondly, for scouring the woven fabric; and, thirdly, for milling and fulling. Put in a sentence, the answer to the question as to what was the best soap for the trade, was that any soap which was neutral, free from excess of alkali, and well saponified, not containing any unsaponified fat or matter, resin oil, mineral oil, or other unsaponified substances, would be good to use.

AN exhibition will be held at the Imperial Institute, London, Eng., during the summer, of artistic and decorative pottery, china and glass manufactured in the United Kingdom, with which examples from India and the Colonies will be included. All exhibits, fittings, etc., must arrive at the Institute not later than the 9th of May next, and communications should be addressed to the secretary of the Pottery, China and Glass Exhibition (1894), Imperial Institute, London, S.W.

UNEASY lies the head of the American manufacturer, writes the *American Silk Journal*. He seems to be regarded as a fair and legitimate target for the "slings and arrows of outrageous fortune." Take the silk manufacturer for instance. He is always being eaten up by the greedy, unscrupulous commission merchant, or taxed to death on every spindle and loom he dares to run, or is threatened by despotic Labor (always with the biggest possible "L"), or subjected to heavy losses through the frequent fluctuations in the price of raw material, or shaken over the pit by pestilent tariff reformers—all, doubtless, as a punishment for being a manufacturer in a country where to be a successful mill owner and employer of labor has come to be regarded as a crime. Just at present, what with the striking operatives on one side and adverse tariff legislation on the other, he is between the upper and the nether millstones, and must be enjoying himself almost as well as a toad under a harrow, or a pig under a fence.

A CORRESPONDENT to the JOURNAL OF FABRICS, who is paying a visit to Newfoundland, with the idea of starting a woolen factory there, says that the whole country is politics-ridden. Everything depends upon politics, and even a business proposal depends for favor not so much upon its merits as upon the party to which its originator may happen to belong. Throughout all the country, and in every department of industry, influence and monopoly flourish, and the middle classes are practically ignored. Our correspondent, who has been for some time at St. John's, says that considerable building operations are going on in that city, and there are already several schools and colleges. He thinks it will be some time, however, before both sides of Water street are completed, as business is limited, and there is an absence of speculation or enterprise to start factories. At present there are no woolen mills in the Island. There can be no doubt, however, that the establishment of such a mill would be greatly to its interest, and we hope before long to hear better news regarding the present attempt to start one.

THE spring millinery openings at Montreal and Toronto, which took place on the last two days of February and the 1st of March, are pronounced by wholesale men to have been highly successful, good business and good prices reigning beyond their expectations.

GEORGE T. ANGELL, President of the American Humane Education Society, has ascertained that in a match factory near Boston not one of the sixty hands employed there had ever had the grip, though they included old and young and male and female. The inference is that sulphur will prove a specific for this complaint. He recommends that a little powdered sulphur be placed in the stockings and an occasional teaspoonful of the old dose composed of a mixture of sulphur, cream of tartar and molasses, be given. Considering the ravages of grip during the past three years, the subject is well worth investigating. Some time ago we referred to the fact that none of the employés in a certain dye-house in Scotland had ever had the grip, and it may possibly be that the use of sulphur or sulphuric acid accounted for the immunity.

AT the Y. M. C. A. Hall, Montreal, the other evening, a very interesting lecture on the subject of dry goods was given by George Sumner, of Hodgson, Sumner & Co., the occasion being a reception given to the young men of the dry goods trade. Mr. Sumner gave a very entertaining sketch of dry goods history, but through not being a constant reader of the CANADIAN JOURNAL OF FABRICS, he will go down to the grave with the burden of some enormous mistakes in dates. Mr. Sumner said that the first cotton mill was opened in 1869, with eighty looms, whereas a cotton mill of 1,200 spindles existed in Canada a quarter of a century before that date. This mill was started in Sherbrooke in 1844, and was described in a past number of this journal. Possibly Mr. Sumner really meant the first cotton mill in Montreal, but even here he is quite wide of the mark, for Montreal's first cotton mill was started in 1853. Pretty full details of this mill, which was started by F. W. Harris, were given in a sketch of the cotton trade in this paper last year. Though Mr. Sumner, owing to the disadvantages above hinted at, may be astray in historical facts, he has struck the right chord when he advocates the establishment of technical schools, as he did in his address. This is a step which the JOURNAL OF FABRICS has for some years advocated, and we are glad to see that the idea is taking hold among dry goods men as well as among manufacturers. The CANADIAN JOURNAL OF FABRICS has a small museum of textile fibres and other curiosities, and whenever such a school is founded this collection will be handed over to the management as a nucleus for a museum.

A RECENT patent, taken out by O. B. Amend, of New York, describes a new process of dyeing textile fabrics, which is particularly applicable to wool. A bath of 40 grm. of chromic acid and 30 grm. of hydrochloric acid for every kilogramme of material used is made with enough water to work the materials easily. This bath is kept at a temperature of 20 to 30 deg. C. The time of immersion is not given. The goods are pressed so as to squeeze out any excess of the liquor, and passed into a bath containing 100 grm. of aniline salt and a proportionate quantity of ferric chloride or other suitable salt which can act as an oxidant. This is used cold, and the goods are kept immersed until they have acquired a certain color, when they are taken out and exposed in an ager to the combined action of air and steam at a temperature of 80 deg. C. until a black is obtained. This will withstand all the tests required of the best blacks; presumably, therefore, it will not green. The inventor claims to have discovered a new principle in the dyeing of aniline black on animal fibres, *i. e.*, that chromic acid in the presence of hydrochloric or acetic acids (or of acids which will not produce a secondary oxidation of the fibre) partially oxidizes them, and partially produces chromium-fibre compounds which, in the subsequent dyeing operation, are decomposed by the aniline salt, with the production of black dyed fibres and chromium chloride. Sulphuric acid and nitric acid cannot be used in this process, as they exert, according to the patentee, an oxidizing reaction on the wool. This process is applicable to fabrics composed of wool alone or to mixed wool and cotton tissues.

THE rapidity with which rabbits increase under the favorable conditions offered by the Australian climate, has long since been a matter of grave concern to the Government. Enormous sums are expended in bounties, no less than $1,000,000 being paid out in the last seven years by the Government of New South Wales alone. In addition to the bounty there is a ready market found for the skins in London, where they are shipped in bales, each bale containing 200 skins, the receipts every six weeks averaging 2,000 bales. When used for felting the skins are plucked by hand. The fine blue fur which is left on the pelt is then pared away from it by machinery so delicate that when the last particle is cut off the fur sometimes hangs in one filmy section. This is worked up into felt. The English rabbit supplies the best fur, then comes the New Zealand rabbit, and then the Australian. By means of a new invention, described by *Textile Industries*, the hair of animals, especially the hair of rabbits, can be spun into strong threads of any fineness, though it has not previously been employed for the manufacture of woven and knitted fabrics, because the spinning of this material has been impossible. By this method a woven or knitted fabric of pure animal materials, formed by threads of any fineness, is produced, giving a product of a softness and flexibility superior to the most beautiful fabrics of wool or other animal material which have yet been produced. We can only hope that the demands of commerce will come to the aid of the Government, and reduce the number of the rabbits, as the demands of fashion have done only too well in the case of some birds.

We mentioned in last number the advice of W. Ogilvie, of the Geological Survey, to the effect that there should be a close season for all fur-bearing animals, especially the wood buffalo and musk-ox, and that the export of skins should be limited to such a number as would not exceed the probable rate of increase of the animals. We understand now that the Minister of the Interior will shortly introduce a bill into Parliament, having for its object the protection of fur-bearing animals in the northern territories of Canada, including the Peace River and Mackenzie River districts.

A new industry has been established in America. According to the New York *Sun*, William Baumgarten, a gentleman of New York, came a year or two ago to the conclusion that tapestries could be made as well in America as in Europe. He immediately put his idea into execution, visited the Gobelin works in France, and brought back with him a few expert workmen. He then, secretly, had built three looms, an exact reproduction of those at Gobelin, and established them in an old house on the bank of the river Bronx, near Williamsbridge. When you once know how to do it, tapestry making is one of the simplest things in the world. An oil painting is made of the design that is to be carried out. It is placed under the cotton threads which run across the loom, and then is copied in silk threads that are woven upon the surface of the cotton threads. If the design contains a human figure or any object that requires delicate shading, an expert weaver can copy two or three square inches a day. The work is to a great degree mechanical, but it requires a good eye for colors even to the finest shades of difference. The first piece of figure work that was made took four months. It was about two feet wide and five feet long and represented a woman holding flowers aloft. It is said by experts to be as fine a piece of work of its kind as was ever made in the Gobelin works. Mr. Baumgarten has arranged with an orphan asylum to take some of the older boys as apprentices and teach them how to weave tapestry. It takes from one year to eighteen months to learn it sufficiently well to be able to copy simple designs. As soon as these apprentices have advanced far enough to do good work, Mr. Baumgarten intends to build more looms, and in this way he hopes the tapestry industry will in time attain the position in America which it now occupies in France.

Since our last number there have been some new developments in the present binder twine matter. It will be remembered that John and Thomas P. Connor, formerly proprietors of the Binder Twine Factory at St. John, N.B., obtained the contract for erecting the machinery and plant which the Dominion Government are erecting at Kingston Penitentiary. When the collapse occurred in the binder twine trade four or five years ago, owing to over-production and the shortage of the crops, a new company formed chiefly through the efforts of A. W. Morris, of Montreal, under the name of the Consumers' Cordage Co., succeeded in purchasing every large cordage factory in the Dominion, and among these was the mill operated by the Connor Brothers. Those who remember our article on the cordage trade, of last year, will not accuse us of being blind supporters of combines, and we are free to express the opinion that in selling their factory out as they did the Messrs. Connor did an unpatriotic act toward their native town and to the trade in general. But having sold their factory and made a bargain, they ought at least to stand by it. In selling out their factory they agreed not to enter into competition with the Consumers' Cordage Co., or to start the manufacture of binder twine within a period of ten years. In undertaking this contract at the Kingston Penitentiary, they are distinctly violating the spirit of that agreement, if not the letter of the agreement as well. We can only repeat with emphasis the opinion expressed last month, that the Dominion Government are doing a moral wrong and carrying on an illegitimate business in establishing this binder twine factory, especially under present circumstances, and they are doing a still greater wrong in letting out the contract in the manner they have done to Connor Bros. The Consumers' Cordage Co., in taking action against the Connor Bros. for damages, are only half doing their duty. They ought to bring an action against the Dominion Government as well, and if they won such an action the opinion of nine Canadians out of ten would be "*Serve them right.*"

HEATHER AS A DYESTUFF.

Heather contains a yellow coloring matter which is known as "ericin," and is obtained by keeping the plant at the boil for half an hour with 1 part of alum to 10 of the plant and 30 of water A German chemist has examined the blossoms, leaves, stalks, and roots of the plants separately, and has made dye-trials on mordanted cotton, with the following results:

On cotton mordanted with a strong iron mordant, the blossoms gave a reddish grey-brown or dark mode color, the stalks a yellowish drab, and the roots a light red drab. On cotton mordanted with a weak iron mordant the blossoms gave a reddish grey; the leaves a yellowish grey; the stalks a very light yellowish chamois; and the roots a reddish grey medium chamois. A strong alumina mordant gave with the blossoms a reddish medium mode color, with the leaves, a yellowish mode color; with the stalks, a very light reddish cream color; and with the roots, a flesh color. A weak alumina mordant gave, with the blossoms, a drab; with the leaves a light reddish yellow mode color; and with the stalks, a very light reddish cream; while the roots gave a light flesh color. The blossoms dyed on chrome-mordanted cotton a full chamois shade, and the whole plant, a yellow drab. The author is of opinion that an extract of the leaves and blossoms could be used in dyeing and printing.

On wool no mordant is required, and creams, chamois, and flesh colors are produced according to the part of the plant used. The use of chrome as a mordant results in the production of more intense shades; it may be added direct to the dyebath.

Rumors have been circulated for some days with respect to a proposed amalgamation of the business of Carsley Bros., retail dry goods merchants of St. Catherine street, Montreal, with that of S. Carsley, Notre Dame street. A meeting of the creditors of the first named firm was held the other day, when the assets were taken over by Samuel Carsley, who will pay all liabilities and run the east end branch in connection with his establishment on Notre Dame street. All overdue notes will be paid in full at once, and notes not yet due, whose holders prefer to realize, will be taken up at 12 per cent. discount

Foreign Textile Centres

MANCHESTER.—During the last few days the Levant market has shown some signs of activity. Orders for Mexican T-cloths and extra hard yarn in some quantity have been given out. Other minor markets have also exhibited more life, but these will not keep the spindles and looms of Lancashire engaged. The large Indian and China demand is still to come. Complaints about goods, as might be expected in a falling market, are in evidence lately, and some trouble from this source is possible Manufacturers of anything in the nature of fancy goods continue well engaged. It is much to be regretted that the bulk of producers occupy themselves only in producing plain fabrics, which are so easily made, and so unremunerative as a rule. A change in this direction is very desirable. Meantime, the state of trade here may be summed up as quiet, although not despondent. The home trade remains quiet, but here again little is required to revive business, says the *Draper's Record*. No one expects demands to go by leaps and bounds, yet it cannot be denied that week by week the thousands of our working classes are, fortunately, increasing their spending powers, and becoming no mean factors in the commercial community as consumers. Printing cloth sellers complain of small sales, and the same experience is shared by makers of heavy goods. The market is supported almost wholly by the orders secured during the last quarter of 1893, and these are running down. Yarns are steadier and nominally 1-16d. higher, due to the rise of 1-16d. per lb. in Liverpool. Spinners cannot make progress with orders.

HUDDERSFIELD.—The attendance of buyers in the market has again been small, and very few orders have been placed Trade generally is in a very depressed condition, and the signs of improvement have again proved disappointing. Merchants engaged in the home trade are exceedingly cautious in giving repeat orders for goods of all kinds, and the shipping trade moves very slowly both for the Continent and for America. Competition between some manufacturers has cut prices down to a ruinous level, and there seems to be an almost total lack of buoyancy and confidence in trade. While it is still true that some few manufacturers are busy, the majority are far from being so, and are unable to run their machinery and keep their hands employed full time. Yarn spinners are doing little at prices which leave a very narrow margin for profit. Wools are selling slowly, and prices are barely maintained

BRADFORD.—The improvement in the wool market here is well maintained, and business is fairly active. Staplers are firm in their rates, and hold their stocks well. There has been, perhaps, a little better inquiry for English wools, and prices are firmly maintained for lower sorts. Cross breds are improving and mohair is steadier. Alpaca is unchanged. The yarn branch of business is improving slightly. For twofold 30's there has been a better inquiry, but the condition of affairs is nothing like it ought to be. Mohairs have recovered somewhat, and on the whole business is much better in this branch The piece trade is also brightening a little, though slowly. Orders are coming in more freely, but prices are the cause of great complaint. There is a rather more hopeful feeling in the flannel trade, which will probably be sustained, as the effects of the coal strike are passing away, and drapers' stocks must be light Lower-class flannels are, however, much interfered with by the increased use of flannelettes—a trade which is likely to suffer very little from the crusade against the name "flannelette." Tweeds are still much wanted, and nearly everyone is behindhand with orders in these goods. There seems every probability that the end of the season will arrive before all the orders for tweeds can be fulfilled. High-class costumes are still selling in crossover styles, and the leading dressmakers are reported to be taking very kindly to dresses composed of fabrics woven in this way, but it is still questionable whether the fashion will really take on with the million. I have nothing to add to my previous remarks in reference to the styles being prepared here for the coming autumn season, except that some high-class cheviot tweed costumes are being manufactured with a rougher and more frieze-like finish than I have previously seen, and the result is certainly both striking and handsome.

LEICESTER.—The wool market is firm, although the turnover shows very little increase in either home grown or colonial wools The consumption is fairly heavy, and holders decline to part with their stock unless at full rates, it being impossible to replace on better terms. Skin wools are cleared off as fast as they come to hand, and all lots of long staple command better prices. The yarn market is only moderately active, but users are compelled to pay full rates. Cashmere yarns are being used up freely. A heavy business is doing in black hose, and lambs wool underclothing and wool and silk combined shirts and pants are in better request, but cotton goods are quite neglected. Elastic web fabrics are in better demand, while a fair business is doing in cords, braids, and beltings

NOTTINGHAM.—There is no improvement in the lace trade, and orders come to hand but slowly. The Irish guipure style is still the most favored, but there is also a tolerably sustained inquiry for Valenciennes. A little demand is experienced for duchesse, point de Venise, and other good qualities No improvement is apparent in the sale of tattings and trimmings. Demand for silk laces is quiet, but a steady trade is being done in veilings. Although the aggregate business doing in curtains is large, individual manufacturers are very indifferently employed. Moderate quantities of plain nets are being disposed of, and prices are about the same. There is a little better home demand for hosiery, and for some foreign markets more business is being done, but the trade, as a whole, is not encouraging.

KIDDERMINSTER.—Several of the firms are fairly well occupied, and there is improvement all round. Trade continues to get a little better every week, and orders now come to hand more freely. As the general trade revives the local carpet industry feels the returning prosperity, which, though small at present, shows signs of steady growth.—*Shuttle*.

LEEDS.—A better feeling prevails in this market, and during the past week there has been a good number of buyers in the market. Some large assortments of novelties in worsteds and serges were required by London and other buyers It is rarely that so much business is done on the day of the opening of a fresh series of London wool sales. Together with large selections from present stocks of coatings, suitings, and trouserings, inquiries were frequently made after the new fabrics in preparation for the late autumn. Improvement in the substance and finish of beavers and naps for that purpose is quite evident in the patterns now exhibited, and, finding prices little different from what in the past they have been accustomed to, buyers have for the time of year placed orders rather freely. On Continental account, too, a fair extent of this kind of business is going on, and also in the new designs of costumes and mantle cloths. Only the lower descriptions of both plain and printed meltons are selling at an average rate. The ready-made clothing trade is improving, but there is now so much competition, not only on the spot, but with London, Midland, and Scotch firms, that prices are cut down to the lowest point.

GLASGOW.—Dull trade is the universal cry from the south of Scotland tweed manufacturing districts Orders for winter goods are extremely limited, and the season has every appearance of being a very short one A large number of factories are working short time. There are hardly any inquiries for spring and summer goods. The price of wool and yarns continues firm. The hosiery manufacturers are reported to be busy A quiet tone prevails in the cotton yarn market, and buyers are holding off.

DUNDEE.—The jute market is still depressed and sales of goods are very slow. The raw material continues to decline in price. In the linen sections a steadier tone prevails, and deliveries are being taken off more freely.

BELFAST.—There has been no alteration in the manufacturing end of the linen trade worthy of mention, except that in housekeeping goods the demand has settled down to a pace which, though slow, is fairly steady. Stocks in merchants' hands are being closely watched, and small sorting-up parcels are the order of the day. The idea is prevalent that the approaching decision by the American

Senate upon the question of the tariff, whatever it may be, if only the verdict was known, will unloose the bonds which for the past seven or eight months have interrupted the course of business with this country, and that a renewal of buying will begin immediately. A better feeling is reported in the general export trade, more particularly with the French and Spanish markets. Enquiries for damasks are not numerous, but there is an improved demand for linen handkerchiefs, and, taken all round, there is a strengthening recovery from the sickly condition of business in the chief centres of distribution The production of linen fabrics for dress purposes is receiving a greater amount of attention than formerly. Some years ago, when there was a boom in these goods, they were turned out in large quantities in an unfinished state, without much regard to their destination or the purpose they were meant to serve. Now, when the great rush for foreign markets no longer exists, more time is devoted to provide materials which will not only be attractive when first worn but being manufactured with more economical purposes in view and thoroughly shrunk, will be more durable in undergoing the more trying process of the laundry. In matters of design, and in the production of a more extensive variety of delicate colorings, progress is also apparent, and the hope is indulged that a permanent place may be secured for these goods in the leading centres of fashion. Irish looms have been kept too long at work upon the old lines, and it is high time that the native workmanship and skill which exists should find an outlet in this direction, and enter into competition with the Continental manufactures. It is, at least, satisfactory to note that during the last year or two attempts are being made to strike out with new ideas, and leave the hard-worn track.

MILAN.—*The Dry Goods Economist* reports that the raw silk market seems to have reached the lowest of the descent, and prices, while showing no disposition to advance, have become stationary. In cocoons a reaction has even occurred, and prices of these show an improvement of from one-fourth to one-half lire, but this advance movement has not yet extended to raw and thrown silk. Buyers have shown more willingness to make purchases and more business has been done, which has also tended to make prices more regular. The decline in the premium on gold makes export business more difficult and is equivalent to an advance in the cost of the raw silk. The situation, on the whole, is so far improved that the worst time is over, but that there is room for greater improvement is seen by the low level at which prices now are.

LYONS —There is no increase of activity for the looms and the manufacturing situation generally does not show much of an improvement, the low prices of the raw material not being sufficient inducement for manufacturers to make goods which they are not certain to sell Some preparations are being made for fall, but, so far, the orders for next season have not materialized, the uncertainty as to what will be worn being too great for buyers to order at such early stages Consuming markets, while they are improving, are not in a temper to facilitate the early development of the demand on advance orders, and until these are placed the manufacturing activity cannot increase much. There is a good undercurrent of demand in this market, with a request for spring re-assortments, which shows that consumption of silk fabrics is good.

CREFELD.—The manufacturing situation shows some improvement, but not sufficient to be worthy of comment. As wholesale houses are not selling much, their reassortment orders with manufacturers are not heavy. In some lines also existing stocks, while not too heavy, are sufficiently abundant to meet all demands. This is the case for cheap piece-dyed goods. But in the better grades the activity of the looms is increasing. In umbrella silks few orders for summer fancies are received. Tie silks show a little more activity. Cheap ribbons are out of demand, while the better grades of ribbons find a market in moderate quantities. Satin-back velvet ribbons also find buyers. Piece velvets are slow.

ZURICH —The demand for silk fabrics keeps up fairly, but the weeks follow without resembling each other, and some give less satisfactory results than others. As far as the European continent is concerned, there is little to complain of in the general consumptive demand for silk fabrics, retailers having operated rather freely in making their purchases for the spring. But the same cannot be said of the export trade, and the absence of orders from countries outside of the continent is felt.

TEXTILE EMPLOYEES IN EUROPE.

In Germany, there is a comprehensive industrial code which, instead of being a series of detached statutes, has the advantage of being a collective law. Since the Berlin labor conference several amendments have been introduced, the object and effect of which have been to increase the protection of women and children, an improvement in the means of settling trade disputes, and the establishment of a complete scheme of compulsory insurance against sickness and accident. It is estimated that the number of persons employed in industrial pursuits in the German empire is about 7,000,000. The greatest aggregate number of textile workers in any one district is found in Saxony, where the hosiery trade combined with the other branches of textile work, finds employment for a large number of hands. The wages paid in the different districts vary considerably, and it will be necessary to make allowance for the difficulty of classification. In the textile trades it is not necessary to say that the mere amount of wages paid or hours worked does not settle the question as to the most economical production, which may be the greatest in the case of districts where both of these factors are apparently most unfavorable.

As the question is a very wide one, it will be advisable to deal with it in sections, and we shall restrict our remarks in the present issue, says the *Textile Recorder*, to the subject of the hours of labor. It is not alone in England that the movement toward shorter hours is observable, but wherever industry is organized the same tendency is noticed. The demand for an eight-hours day is being made all over the continent, although its realization is, perhaps, far distant. Still the fact remains, and it is significant that on the part of workpeople what is practically a simultaneous demand is in existence. It is, moreover, well established that the movement of which this particular phase is most in men's minds is bearing fruit in a general tendency toward shortened hours. In different parts of Germany the hours of labor vary considerably, but instead of the hours of 12 and 13 per day, which only a few years ago were common, it is now more usual to find the majority of concerns working less than 11. The more highly organized the industry the commoner it is to find the hours on the lower rather than on the higher scale. In Alsace the most usual period is 12 hours per day for six days a week, but this is longer than that which exists in other districts, and even in that province is not universal. It is stated in a report by Mr. Whitehead, made in August, 1891, that in "two cases where the number of hours were reduced from 72 to 60 per week, the alteration was found satisfactory alike by workmen and employers," and many other cases are reported in which "the hours of work have been successfully reduced at the initiative of the employers without loss." In the grand duchy of Hesse, out of 264 factories, no less than 148 worked less than 11 hours per day, and of the remainder 85 worked 11 hours only. From Madgeburg, during 1890, it is reported that 62 1 per cent. of 1,002 factories, employing 35,986 work-people, worked 10 hours and under, 32.2 per cent. 11 and over 10, so that only 5.7 per cent. worked longer hours. The general tendency is for a working day of from 10 to 11 hours. It is, perhaps, worth noting that the inspector of factories for Baden emphatically expressed himself, in 1889, in favor of legislative regulation of the maximum working day, on the ground that individual employers did not dare to make the reform unless assured that their competitors would also do so.

In France the law at present existing limits the working day to 12 hours, but within the last few years a determined effort has been made to get this limit reduced to 10. Eventually this measure will probably be passed, but it may be remarked that the ostensibly free republic of France compares very unfavorably with other continental countries in which the government is conducted on more "despotic" lines. The industrial history of Italy is a comparatively brief one, dating only from the establishment of the united state in 1860, and there has been so far little evidence of

any movement toward shorter hours. In textile factories these range from 11 to 12, which, doubtless, compare favorably with the hours previously worked by the peasants who have since been trained into textile operatives. At present the class of fabrics made in Italy is of an inferior character, and industrial conditions will require to develop very considerably before any great advance takes place In the more highly organized trades, especially those connected with engineering, shorter hours are worked than those stated. In Austria, in the districts in which cotton manufacturing is mostly carried on, 11 hours per day is the prevailing custom, with a universal Sunday rest. In other parts of Austria, and in other trades, the hours are much longer, but it may be remarked that, as in Italy, the more highly organized the trade the lower the hours of labor. In Russia there is no law dealing with the working hours of adults, and the consequence is that great divergences exist, but in 80 per cent. of the cases the hours of daily labor are 12 or under. Of these only 36 per cent. work 12 hours. A law passed in 1885 prohibits the employment of children under 12 years of age, and up to 15 to no longer than 8 hours per day, or 4 hours at once, can be worked. This has since been modified by an extension of the working hours of children to 9 and 4½ respectively, but the conditions of labor in Russia, so far as the working day is concerned, are very onerous. In the Netherlands, by a recent law, the hours of labor of women and young children are limited to 11 in any one day.

It is freely admitted that Switzerland and Germany are the two continental countries which are the most active competitors of England, and it is also conceded that the Swiss workman is one of the most industrious in the world. Switzerland is, moreover, governed by a system which is so wonderfully democratic that any labor movements which take place there possess a double interest. The working day in that country is regulated by a law made by the federal council in 1887, which limits its duration to 11 hours The law was vehemently opposed by the employers, and, on being submitted to a popular vote, was only passed by a majority of about 10,000 votes. Experience has shown that none of the evils predicted have come to pass. Mr. Charles S Scott, the British minister at Berne, says. "Taking the figure 100 to represent the average annual production of a cotton mill under inspection in 1883, it was ascertained that the average annual production of the same mill in the five years immediately preceding the introduction of the legal limit of the working day, had been equivalent to 102.0, and in the four years following the introduction 103.5, and that the wages of the workmen had not suffered any diminution, nor have the export returns of the years following 1879 showed any weakening of the competing power of Swiss industry." The law, it may be added, provides for a working day of 11 hours, and of 10 hours on the eves of Sundays and holidays. It is also remarkable that in the important trades of watchmaking, metal-working and machine embroidery, a day of ten hours has been practically universally adopted, and that in certain departments of cotton spinning, owing to the high speeds of the machinery, the same length of day is being adopted. Mr. Scott says: "As soon as the majority of the employers in Switzerland have in practice adopted the 10 hours' limit, it will at once take the place of the present limit in the factory law."

A careful consideration of the facts thus presented will show that in spite of the ever increasing complaints of outside competition which are heard in every country, no matter how long the hours worked or how poor the wages paid, there is an unmistakable tendency toward shorter hours throughout the European continental industrial districts. It is, moreover, most marked in those countries where the skill of the workpeople is greatest, and the experience of England is being paralleled wherever high speeds and modern systems of working machinery are adopted. There is a limit to endurance on the part of the human machine, and when that limit is passed by reason of the higher rate of working the instrument employed, a curtailment of working hours is inevitable.

J. S Fry, of the old dry goods firm of Glover & Fry, Quebec, received many congratulations the other day when he celebrated his golden wedding.

NOTES ON WOOL AND WORSTED MANUFACTURE.

Twist. An even thread requires less twist than an uneven one As twist always runs into fine places, and leaves coarse places soft, extreme draft is to be avoided. The twist factor given for any number of yarn may be correct, but a spinner will be compelled to vary the twist many times to suit the material The great secret in good spinning is knowing what is wanted and how to make the best use of what we have. The slightest variation in the grist of a quantity of yarn will cause a deficiency when a certain amount is required, therefore, in order to bring out a proper weight of spun material, the roving must be the required size. This point is, in many cases, not considered, or it is neglected, and fine and coarse will be spun off the one bobbin. The uniform roving will give smooth, even, elastic yarns, which will always command a market, but a woolen thread spun any way is a process of the past In face-finished fabrics, where the sale depends upon the quality of the materials used in the production, the coarser the counts the less drawing is needed. Spinning from different cards requires constant reeling, because one card may vary a count or more, so that the tops and bottoms ought to be used separately, bottoms come off the cards heavier; cylinders are at times out of line, and bound up in the bearings, the rim band becoming tight, due amount of twist cannot be put in, on account of the band slipping, and the further result of this is bad, soft, spongy yarn, and if the cylinder bearings are not kept clean and well oiled, strained yarns, uneven and weak, will occur There is a certain amount of tension or "drag" on mules for the purpose of drawing out snarls and thick places, and for the twist to run up equally in every part of the stretch. This drag is constructed so that it can be regulated to suit any number of spun yarn, and is governed by the amount of twist put in. Soft, slack twisted yarn will require more bevel and less drag on the carriage, but hard, wiry twisted yarn, less bevel with more drag In spinning a very soft-twisted, coarse thread, the surface velocity of the carriage is less than the rollers, but finer yarn requires the carriage speed equal, and, in some cases, more than the speed of the rollers This is done while the spindles are twisting and the carriage making the stretch

Defects. - The following defects very often take place and cause a loss of time, expense and waste, if not prevented, says *Textile Industries.* Carriage out of square will cause a great deal of cut yarn. It should be squared as often as possible, because the bands drawing out the carriage are continually stretching. Scroll bands may be too tight or too slack, and should be set so that the mule, after backing off, can start in without a jerk, and, when getting into the beam, the check ought to hold the mule from striking in too hard, or cut yarn may result, particularly at the ends of the frame. If the check is too tight the mule cannot get in, and sometimes causes the cam to change before the fallers have properly unlocked, breaking down all the ends and cutting the yarn. If the rim band runs too slack, the mule will start with a spring, and, making a pause, the mendoza weight will often slip a tooth and break the teeth in the drag wheel. Fallers locking too soon or too late will break down the ends as the mule begins to go in. In a defect of this kind, back off very slowly by hand and watch if the fallers go down slower or faster than the uncoiling of the yarns from the spindles, and set the backing-off chain properly The mule running into the beam and being late in unlocking will coil the yarn on the spindles too close, and, if unlocked too soon, snarls will take place at the spindle point, moving the block that strikes the dagger point The carriage knocking out too hard, or rebounding, strains the yarn. This may be remedied by pulling the scrolls on the back shaft over a little, so that the drawing out bands will shift on to the smaller part of the scroll, and the carriage will then strike more gently. By no means must the scroll be pulled over too much, or the carriage will slip off the catch, the fallers get locked, and, in unlocking, if the yarn is not lifted clear of the spindles, broken ends will wrap around each other when the carriage goes in. There are many other causes of bad spinning—unlevel fallers, sickles and wires, counter belts too tight, saddle wires too long, back weights too high, too low, or twisted, careless doffing, and slack bands—all these call

for close attention and vigilance. No spinner can afford to overlook the smallest detail, or pass it by idly. The best men are those well versed in "taking a stitch in time." Such men are at the head of their craft and a valuable acquisition to their employers. The "taking care of big things and allowing small ones to slide" is a principle generally ending in failure.

Wool spinning is often measured by the indicator attached to the mules, but there is quite a possibility of devising means to operate the indicator without a single draw of the mule, and in this way cause serious results in calculations. To check this a good plan is now and again to weigh a set of bobbins. To get accurate weight in woolen yarns is of the utmost importance, so as to correspond with previous calculations. Many overlookers have a fixed time for reeling yarns, so that operatives who are dishonest try every means to have the yarn reel light, the quadrant is turned down so as to strain the yarn all it will stand, and more weight is placed on the faller than at any other time, and, in spinning for a reeling, a favorite scheme used to be to place leather under the cap of the roller bearings and screw it down to make the rollers stop quicker.

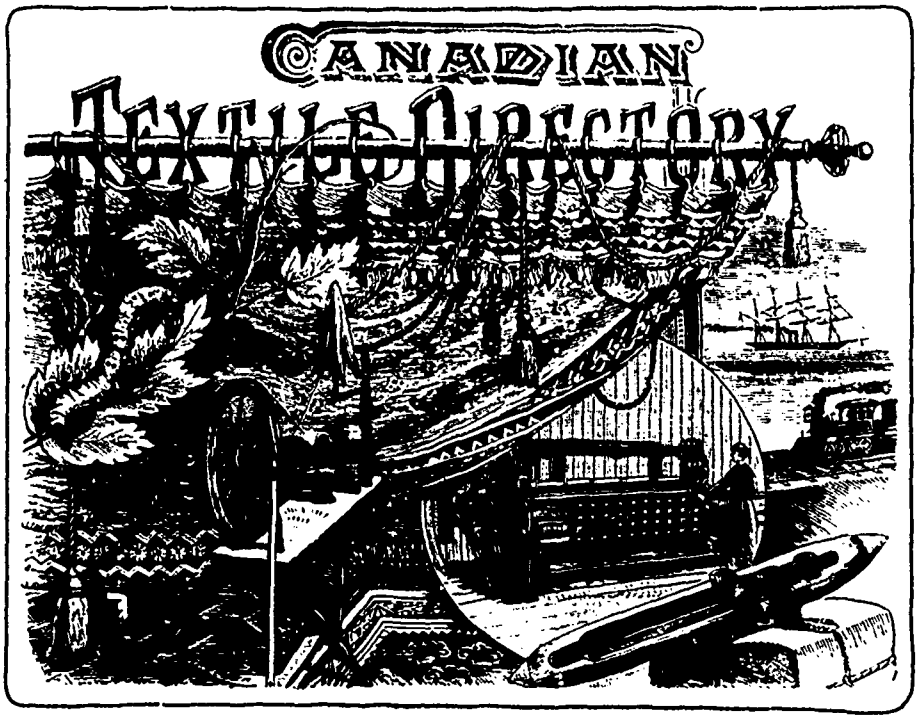
Waste.—A very great amount of waste might be saved if operatives could be persuaded to stop the machinery every time six or seven ends are down. Bobbins get out of shape or become soft. If the yarn breaks at the bobbin, uneven spindles are a cause, and it is best to have the bobbins about one-half inch below the rollers, and, when the carriage is in, the distance between the rollers and spindles ought not to be more than two inches at the most. If the carriage comes out too fast, the yarn will break between the bobbins and rollers, and if the cylinder band is too loose the same result will follow. When an end breaks down and is caught on the roller, then in one or two stretches it will be wound around the roller, breaking down the one next to it, and so on; thus there is more waste made than ought to be, and merely through negligence and want of cleanliness in the rollers. A very little trouble would save yarn, work and time. Hard, snarly waste is the worst of all waste. When we consider that money has been spent upon the material through every process up to spinning, and it is not properly completed at this stage, then the money so spent is as much lost as if thrown away, and this through gross neglect. There is wasting of waste by using it for cleaning purposes, where clean cotton or other rags would be more suitable and less expensive, and the frames would be much cleaner. Any manufacturer, with the least idea of justice to himself, ought to strictly prohibit either woolen or worsted waste being used as stated.

Ring Spinning.—This is the latest development in spinning machinery. The rate of speed, and, of course, greater production, has caused it to supersede the fly system. A very moderate amount of attention in operating ring spinning of worsted will suffice. It may not be considered equal to "cap" spinning, but as a twister it is superior to anything yet invented. The spindles of a ring frame revolve, the small pulleys being fastened upon the spindle; the bobbin, therefore, receives its motion from the revolution of the spindle, but does not rise and fall as on the cap and flyer frames. The lifter is called the ring rail—it is the ring which forms the principal feature in this system of spinning. The ring of steel has a flange top and bottom. On the top one, the "traveller" is placed. This is a small half-round wire of the best tempered steel, with the ends closed slightly together so that a gentle pressure is required to force it on the ring. For worsted yarn a clearer is mostly used for the purpose of brushing off any fibres that would retard the movement of the traveller. The yarn passes under the traveller, and, as the spindle revolves, the yarn is twisted round and twist put in. Neither the spindle nor bobbin can vary in speed, and, as the bobbin fills up, the speed of the traveller changes a little, and, as it winds the yarn on the bobbin, the drag is affected by the speed at which it travels. The higher the speed, the greater the drag for the size of a given traveller. The larger it is, the more power is needed to pull the yarn around, and, of course, the greater drag on the yarn and the tighter the winding on the bobbin. When the size of the traveller is reduced as far as possible, the drag becomes extremely light, so that fine yarns can be produced. The disadvantage is that the drag will vary, and considerably so, according to the position of the ring rail. We may suppose four inches long, then, with the rail at the bottom, there is a length of four inches of yarn more to pull at than if the rail was at the top; the tendency to fly off from the axis of motion of this extra four inches in weight added to the drag increases unduly the amount of tension. Numerous improvements or inventions to obviate this have been failures, and it would be a waste of time and space to describe any one of them, further than to say that they merely removed one difficulty to create many. The spindle puts in the twist, and the bobbin is removable, but the twist would be put in all the same if there was no bobbin. The traveller will snarl or break the yarn, if the spindle has the least variation in its motion The rings must be concentric with the spindles and kept in position, or the traveller will not have an even drag, or, to complicate matters, it may refuse to drag at all. Then we have the thread guides, which must be in the centre, or a very hairy thread is made, if it is not broken down, but when once the frame is got into good order, smooth yarn can be made at a great speed For lustre wools there is a machine which may be considered a ring and cap frame. The spindles are stationary, and fixed, as in a cap frame, to the lower rail; on the spindle are a small pulley and a tube for carrying the bobbin, and on the top of the spindle a cap is placed. The upper rail bears the ring and traveller. The principal claim to utility is the position of the ring with respect to the lower lip of the cap. The yarn is really spun on the ring system, but the projecting fibres which would be disposed at right angles are, in passing underneath the cap, laid along and twisted into the body of the yarn. For heavy yarns, a speed of 5,000 revolutions per minute can be run. For lustre and mohair yarns, this frame is very popular, and, no doubt, useful, but for other classes of either worsted or woolen yarns, it would scarcely be of any advantage.

ANNUAL MEETING OF WM. PARKS & SON, LTD.

The annual meeting of the shareholders of Wm. Parks & Son, Ltd., cotton manufacturers, was held last month in St. John. The directors' report of the business of the past year and the financial statements were read and approved of. The shareholders were pleased with the progress of the company, and passed a vote of thanks to the directors for their services. The output was over half a million dollars and the profits $55,000. All the payments on account of Jones & Turnbull's mortgage were met. A glance through the mill showed that the production was being improved, and the output of one of the mills had been increased one-sixth during the past few months. Preparations are being made to put a new bleaching plant in the Courtenay Bay Mill. The present output of this mill is 93,000 to 100,000 yards per week, and the average production of each loom is 314 yards per week of goods running 3.44 yards to the pound. A new boiler was put in this mill last month, making now a fine battery of five boilers. It was incidentally mentioned that the entire losses in trade during the past year were only $10. Thomas McAvity, Robert Blair, S. J. Harding, William Pugsley, and John H. Parks were re-elected directors. After the adjournment of the annual meeting the directors met and elected John H. Parks, president; Thos. McAvity, vice-president; William Parks, secretary, and Adam P. MacIntyre, accountant.

W JEANS, who recently commenced the manufacture of gloves in Acton, received communications from business men in no less than half a dozen municipalities, pointing out the great advantages which would accrue from settling in their respective towns. The *Free Press* ventures the statement that these bids will have little weight with Mr. Jeans, inasmuch as Acton has always been disposed to treat her manufacturers liberally and has never been slow to give substantial evidence of this in the way of exemption, or partial exemption from taxation, whenever it was shown that the volume of labor employed and business transacted would warrant it.—*Acton Free Press.*



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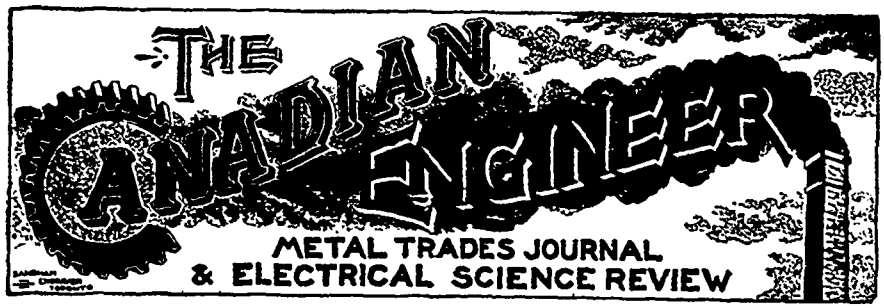

Published simultaneously in Toronto and Montreal.
Subscription, $1.00 a year.

THIS Journal is devoted to the interests of Mechanical, Electrical and Mining Engineers; Stationary, Marine and Locomotive Engineers, Sanitary Engineers and workers in the metal trades, Machinists and Iron and Brass Founders, and generally to Mill-owners, Manufacturers, Contractors and the Hardware trade.

The *Canadian Engineer* has been received in the most flattering manner by the press and people whose interests it serves. Among the many press notices are the following:—

"There are some suggestive editorial notes, besides descriptive and technical articles and a wealth of short Canadian notes. It fills a distinct place in colonial journalism."—*Electrical Engineer, London, Eng.*

"The paper is brightly written, neatly printed, and replete with news of interest to our Canadian cousins"—*Electrical Power, New York.*

"Every article has a practical purpose, and it gives a great deal of Canadian news of interest to the trades concerned"—*Water and Gas Review.*

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A SERIOUS riot among the striking silk weavers of Patterson, N.J., took place at the beginning of this month. It began owing to the action of one of the strikers in going back to work. Had it not been for the aid of the police he would probably have been severely or even fatally injured The strike has now become general throughout the district, and the business houses and factories have to be guarded day and night.

THE future of the Swiss silk industry is regarded with considerable anxiety, owing to the high rates of the French, German and Russian tariffs on Swiss fabrics of silk The development of the silk industry in the United States will further tend to decrease the exports to that country, while the treaties recently concluded with Austria, Hungary, Italy and Spain are not considered by the trade as likely to advance their business relations with those countries.

WE regret to announce that John Martin & Co, wholesale furriers and dealers in military equipments, Montreal, have, owing to the bad state of the fur trade, been obliged to assign to the Bank of Toronto. The firm had lost $18,000 by failures and d debts during the past year Liabilities $62,000, about half of which is owed in England, assets, $80,000 Hitherto the firm has consisted of Lt.-Col. Martin alone, but it is possible the business will in future be carried on by his two sons.

THE tailoresses of Toronto employed by the wholesale clothiers have formed an organization called the Wholesale Tailoresses' Protective Association. Miss Carmichael is the president.

THE *Textile Mercury* of Jan. 27th reports the appearance there of the following buyers from Canada in the dry goods and fur trade: John Martin, of Gillespie, Ansley & Dixon (hats and furs), Toronto; J. Birmingham (Thouret & Fitzgibbon), Montreal; Chas. Cockshutt (woolens), Toronto; Mr. Edgar (Greene, Sons & Co.); Montreal; A Mackie (G B. Smith & Partners), Toronto; R. Begg, woolen buyer (John Macdonald & Co.), Toronto; S. H Bethune, woolen buyer (Gault, Bros. & Co), Montreal; Geo. Priddis (Priddis Bros.), London, Ont.; J McDougall, Woolens (J. McDougall & Co.). Montreal; Jas. A Ogilvy (Jas. A. Ogilvy & Sons), Montreal; M. Murphy (J. & M. Murphy), Halifax, N. S. The following Canadian buyers who are here are retailers. A number of them have combined for the purpose of forming a syndicate, their European purchases being made through Messrs Heron, Dixon & Co, of Glasgow:—J. J. Grafton, Dundas, Ont.; John Murphy, Montreal; A. McLaren, St Catharines, Ont.; G B. Ryan, Guelph; T. Ritchie, Belleville J. B. Smallman (Smallman & Ingram), London, Ont.; G. W. Kennedy (W. A. Murray & Co), Toronto; A. Murray, of Hamilton; C. J. Catto, Toronto; R. F. Scott (James Scott), Toronto; S. C. Lacroix (of Z. Paquet), Quebec.

Textile Design

The following design is given in the *Boston Journal of Commerce* for producing a low grade twill :

A. B. C.

Regular twill. Every other thread. 24-inch twill.

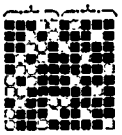
In section A is shown the regular eight-harness twill. Every other thread is taken from this and marked in section B. Then the whole is gathered up and put into section C, thus completing the design, and making a low-grade, or 27-inch twill, all ready for use.

The following design for a herring-bone stripe is said to be quite new :

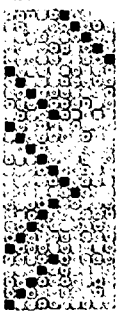
Doeskin. Herring-Bone

The Chain.

Herring-Bone Doeskin.



Harness Draft.



ABOUT SILK.

Silk yarns may be divided into two distinct classes according to their method of production—(1) reeled yarns ; (2) carded yarns.

Reeled Yarns.—These again may be sub-divided into three classes according to the processes they pass through after the reeling operation. They are usually produced from the cocoon of the common silkworm, which is the larva of the moth *Bombyx mori*. This was originally an inhabitant of China, but has been domesticated in Europe, and now large quantities of cocoons are produced in France, Italy, and the southern parts of Europe.

China also exports a large amount of silk cocoons to Europe, as also does India, but not in such large quantities as China. The silk moth, before arriving at maturity, passes through four stages, termed respectively the ovum or egg, the larva or caterpillar, the pupa or chrysalis, and the imago or moth. It also moults its skin five times during the larval stage. The egg is round and has a yellow color, but when the time for hatching is near—if the egg is kept under suitable conditions—it becomes a very dark grey, and a microscopic appearance shows the worm coiled up in the egg. After a time the worm comes forth, and commences to eat the shell of the egg which enclosed it. It is then fed by the silkworm rearer on the leaves of the mulberry (*Morus alba*), and rapidly increases in size until the fifth to the seventh day of its existence, when it creeps completely out of its skin, and at once commences eating ravenously until it reaches a certain size. It then changes its skin again, eats ravenously, changes its skin again, and so on—repeating these operations five times.

The mouth contains two sets of jaws, and between them an underlip, which can completely close it. At the end of this lip there is a small projection pierced with a minute hole, and through this the silk fibres issue.

The silkworm commences spinning by emitting a single drop of liquid silk, which it places on the nearest object it then moves its head away and draws the drop of silk into a very fine thread. The thread is then pressed against the next projection, to which it immediately adheres on account of its gummy nature. The first threads are for the purpose of fixing the cocoon, and are termed the "floss or refuse silk," and this refuse silk is made until there is only a small oval space, about three-quarters of an inch to an inch long, remaining in the centre of the mass. The worm then commences the cocoon proper by placing threads of silk on the inside of this in coils, each coil representing a figure of 8. This inner coating is very compact on account of the fineness and gummy nature of the threads, due to the exhaustion of the silkworm from want of food during the spinning operation.

The largest and best cocoons are reserved for breeding purposes; the floss or refuse silk is torn off the remainder, and the chrysalides (or pupæ) in them are killed, in order to prevent the piercing of the cocoons by the moths. At the completion of the cocoon, the enclosed silkworm, if undisturbed, changes into a chrysalis, and after a time the skin of the chrysalis splits and the silk moth crawls out.

The moth, after issuing from the chrysalis, discharges from two glands in its head a small quantity of an alkaline liquid, which dissolves the sericin, or silk glue, which causes the silk fibres in the cocoon to adhere to each other. The silk threads are thus loosened—not broken as was at one time popularly supposed—and the moth is able to push itself through without any of the threads being injured. The cocoons are arranged by the rearer in rows, so that the moth after its exit may cling to the opposite cocoon and dry its wings. The moth is of a creamy white color. The first operation the cocoons undergo after the killing of the enclosed chrysalides is the sorting. This consists in removing double, soiled and pierced cocoons, and separating the cocoons of different color. The double and soiled cocoons—*i. e.*, the waste cocoons—are reserved for the production of carded yarns. The cocoons after being sorted are boiled with water in the copper basin of the reeling machine in order to soften the gum. The water is then allowed to cool, several loose fibres from each cocoon caught by a brush of small twigs, and shaken until one single thread from each cocoon has been obtained. Five or six of these threads are put together to form a staple, and two of the staples are twisted together, untwisted, and made into two separate hanks. This twisting together tends to make the threads smooth and round. Eleven to twelve pounds of cocoons yield one pound of these reeled hanks, which are made up of what is termed "raw silk." The method of silk spinning was first introduced into England by Sir Thomas Lombe, who visited Italy in order to obtain the requisite information. It is stated that the Italians were so much annoyed concerning the partial loss of their trade that they sent agents to England to poison him.

The silk from the reeled hanks may be spun into three qualities, as previously stated—viz., tram, organzine, and singles The tram is prepared by twisting two or more threads together, and is used for weft in the best and most expensive silk fabrics. Organzine is produced by twisting together a number of singles in an opposite direction to that in which the singles are twisted, and is used for warp in the best silk fabrics.

Singles, or sewing silks, are prepared by twisting one of the reeled threads, in order to give it strength and firmness Sewing silks are, however, at present usually made from carded yarns

The chief characteristics of these yarns are lustre, strength

and solidity, and in these properties they excel all known yarns. They are only used for the production of the best silk fabrics, being too expensive for general use. For many purposes they have now been replaced by yarns produced from the waste and soiled cocoons, which will be described under the head of carded yarns.

When a thread of organzine is examined under the microscope, it is seen to consist of two or three strands of silk fibres twisted around each other. When using a low power this twisted appearance is very distinctly seen, but the individual threads or strands seem quite solid; with a higher power these threads or strands are themselves seen to consist of fibres arranged in parallel order. The threads are semi-opaque, and have, comparatively speaking, no loose fibres on the surface; and a comparison between the microscopic appearances of wool and silk threads would give anyone, without any previous knowledge, a very good idea of what the properties of the cloth or fabric ultimately produced from each will be. The appearance of the silk fibre would suggest the production of a lustrous, strong thin fabric with a smooth surface, whereas that of the wood fibre would lead one to suppose a thick, loose, warm and heavy cloth with a large number of loose hairs on the surface would be the most suitable fabric to produce from it. This is found to be the case practically, and in order to produce a particular make of fabric, a yarn having the special properties of that fabric must be used. A typical wool or cotton fabric, *e.g.*, could not be produced from a silk yarn. The counts of reeled silk yarns are calculated according to several systems which are not very definite. This has led to much confusion, as a silk thread of a given weight per yard in one district may be called a certain count, whereas in another district, on account of a different method of calculation, it may be given a totally different count.

A SCRUTINY OF SPRING STYLES.

The costumes with which the fashionable women of the metropolis will greet the first bright days of spring, are full of historic suggestion. It seems as if the designers with whose creations seekers after spring novelties are now being delighted, had retired from the world for a time to study the costumes of the fashion-making epochs of French history, and had then come forth into the world to present to womankind a variegated assortment of models, nearly every one of which is based upon the dress of past ages. Besides the galaxy of Henri II. capes, Anne of Austria collarettes, Marie Stuart bonnets, long-skirted French coats, we have the Louis III. model, which differs from the coats of the past season in that its long basque is wholly cut away in front, showing the softly-folded serpentine vest or the glove-fitting waistcoat with its frill of lace.

Some of the spring models of tailor-made gowns show the back of the jacket cut with flaring basques, with fronts in Eton shape opening on a soft corded silk waist, under the belt of which is an added basque that has the effect of a short circular overskirt or tunic. This style is particularly becoming to slender women.

A great variety of shirt waists have been prepared for the coming season. Cloth waists are in some instances trimmed on the revers, epaulettes and sleeves with narrow bands of black velvet ribbon. More expensive waists in serpentine shape are made of silks and satins. The blouse bodice is still more or less popular for house wear, and is not likely to make way for other favorites for some time to come. One very pretty style is a garment made of silk with a yoke and belt of velvet. Encompassing the yoke is a pointed frill of silk muslin, this latter material being used also for the very full, straight sleeves, which are finished with cuffs not too tight. The cuffs are covered with guipure embroidery, which is also used on the front of the garment, where it is applied in the shape of three broad straps, reaching half way from yoke to belt and having pointed ends.

A very pretty Parisian cape is made of blue material almost covered with soutache and embroidery. It forms a deep cape in the back, and is cut up in front with long tab points. Worth collar effects can hardly be looked upon as very novel now-a-days, but the Worth idea has been used with excellent effect in this design. The modified Worth is very much smaller than its prototype, and is arranged in wave-line folds with pointed ends in front and back. The front of the garment extends to a point slightly below the waist, the tabs being, of course, proportionately longer.

Skirts of dove-colored coating, gored on the front and sides, are worn under the long covert coats of Russian blue, dark green or claret-colored cloth that are made with large-topped sleeves and Puritan collar elaborately braided. These coats are double-breasted, and have semi-loose fronts and close-fitting back. The skirts flare considerably, and are open up the back.

Black lace insertion, gimps and insertion braids are used on garments suitable for Eastertide. Many of the new designs are purposely shaped to cover bretelles, revers, cape collars, circular pieces and tabs, and to form sleeve-caps, girdles and cuffs.

A cloth coat of admiral blue has a prettily designed rever collar, the latter being made of black velvet overlaid with lace-like passementerie. Passementerie-trimmed velvet is used also for the cuffs and pocket lapels. The garment has a tight-fitting vest which hooks at the side, and which is surmounted by a plain round collar of the material. The sleeves are full to the elbow, and then narrow. An ornamental button is placed on either below the concave end of the rever. The coat is tight-fitting in back, with the open vest front mentioned above, and the skirt should be made full.

A blue taffeta walking jacket is edged with black moss trimming. The front of the basque is slightly full, while the back is laid in plaits. The extremely wide revers are supplemented by double pointed, moderately wide over-revers of black corded silk, within which appears the white silk shirt front. A high round collar and very full sleeves gathered below the elbow and then spreading out, are edged like the body of the garment.

The evolution of the sleeve for the past two years has been quite an interesting study. Commencing with a few gathers at the top, it has become more elaborate, until it has now reached what would seem to be the acme of conspicuity. The high shoulder effects which made some women look so ridiculous have given place to a lower arrangement which causes the extreme width to come just below the shoulders, and which many women consider more graceful than the style by which it was preceded.

A recent design is a silk waist of red and black tartan, which is cut slightly full, and to which is attached a basque, sleeves and collarette of red cloth. The graceful sweep of the collarette lends much charm to this simple design. The sleeves, collarette and basque are trimmed with black cord. The small pointed yoke is of the same material as the bodice.

A long-skirted French coat, tight-fitting in back and loose in front, has turned cuffs, turn-down collar and wide pointed lapels of black moire. The full sleeves droop from the shoulder. The coat is single breasted, closing with buttons under a fly on the left side. The skirt of the coat widens gracefully, the intention being to have its fulness slightly greater than that of the skirt over which it is worn.

A spring costume for street wear is made of blue and brown camel's hair striped goods, trimmed at the foot and on either side with rows of dark blue soutache. The coat-like basque is pointed in front, and behind it is slashed up the middle of the back and laid in double box plaits. The revers are turned back from a shirt of white linen. Two-toned basket weaves of domestic manufacture are used for inexpensive walking and travelling costumes for spring. Fancy iridescent twill is another material that is being used more or less extensively.—*Cloak Journal for March.*

THE dry goods championship in hockey, which has created a deal of interest in Montreal, was on the 8th inst. decided at the Victoria Rink in favor of Gault Bros. & Co., who beat James Johnston & Co. by 1 to 0.

A WOOL-GROWERS' association has been formed at Edmonton, N.W.T., with N. McCauley, president; T. G. Hutchings and W. H. Stephens, vice-presidents; and J. T. Turnbull, secretary. It has been decided to find out the number of sheep in the district and then advertise its advantages for the opening of a woolen factory.

WOOL STATISTICS.

C. Ford, Chief of the Bureau of Statistics at Washington, has sent to Congress an elaborate report upon "Wool and the Manufactures of Wool." From this it appears that the domestic wool clip in the United States in 1844 was estimated by Mr Lynch to have been 337,500,000 pounds. The imports in that year were 78,350,651 pounds. In 1893 the domestic clip had increased to 364,152,666 pounds, and the imports had increased to 175,636,041 pounds. In that period population increased about 20 per cent, and the consumption of wool nearly 30 per cent. The increase in production in foreign countries, especially in Australia, South America and Africa, has been far greater, so much greater as to overshadow with their product the world's market, while the American clip has trebled. Since 1860 the Australian clip has increased ten fold, that of South America nine fold, and that of South Africa five fold. The report shows that the year 1892 gave the wool-producing interests of even the most favored countries, as Australasia, a set back. It says:

"That the sheep-raising interests of the world are passing through a period of depression is not to be denied. The low prices of wools have reacted upon the production by reducing profits derived from wools, and diminishing the temptation to extend the production. Were this depression local, local remedies would apply; but it is general, and affects those countries where the advantages for sheep-raising excel, as well as those whose wool growing is a secondary matter and even a by-product rather than an industry. In 1880 the number of sheep in the United States was 35,192,094; and in 1893, 47,273,553. Compare these percentages with the increase of sheep in what is the great sheep country of the world—New South Wales. From 1880 to 1890 the number of head increased from 35,398,121 to 55,980,431—or 58.1 per cent. In 1891 the number of head of sheep had risen to 61,831,416; and in 1892 had fallen to 55,445,219—or lower than it was in 1890. Nor is this economic evidence of depression confined to New South Wales. In 1890 Victoria contained 12,692,843 sheep, and in 1891, 12,928,148—an increase of 1.7 per cent. From 1891 to 1892 the increase was merely nominal—only 37,158 head. South Australia returned 7,050,544 sheep in 1890, 7,745,541 in 1891, and 7,152,017 in 1892. In the two years the number of sheep was hardly increased Western Australia has suffered even more heavily. In 1890 the highest number was reached—2,524,913 head. In 1892 it had fallen to 1,685,500 head, a decrease of one-third.

"Nor is the result different when the quantity of wool exported from these countries is taken as a basis for estimate, instead of the number of sheep. In 1891 the exports of wool from New South Wales reached its maximum--340,691,382 pounds; a quantity 37,000,000 pounds larger than the total clips of the United States. In 1892 the exports fell to 323,052,014 pounds, or about ten million pounds less than the wool clip of the United States in that year. The exports of wool from Victoria slightly increased, from 164,805 907 pounds in 1891 to 165,590,377 pounds in 1892. South Australia sold in the markets of the world 66,977,216 pounds in 1891, and 63,868,922 pounds in 1892. Tasmania also gives its evidence on the point under discussion, exporting 9.378,173 pounds in 1891 and 8,437 931 pounds in 1892. New Zealand increased its exports by 12,000,000 pounds, Queensland by 15,000,000 pounds and India by 1,400,000 pounds. Against these may be placed a decrease in the exports from the Cape of Good Hope - 5,200,000 pounds, and from Natal more than 6,000,000 pounds. No better proof could be adduced of the general depression affecting sheep-raising as an industry the world over. It should further be considered that these figures are based upon the returns for 1892, and do not show the still greater narrowing of demand and markets that the progress of the depression developed in 1893."

Two dry goods houses in Guelph, Ont., have failed recently, viz., J. D. Williamson & Co., with liabilities of $55,000, assets, $50,000; and A. J. Little & Co., who, a month or two ago, sold their stock for $6,500. Finding that this would not be sufficient to pay their creditors in full, they have now assigned.

THE LONDON WOOL SALES.

The shipments from Australia for the whole season of sales are expected to show the small increase of only 4½ per cent., while supplies after the May sales (with the exception of New Zealand), will show a great falling off on 1893. A London correspondent writing on February 24th, stated that the stock to be sold at the London February-March sales consisted of about 245,000 bales, made up of 80,000 bales Sydney wool, 59,000 bales Port Philip, 38,000 bales Queensland, 2,000 bales Swan River, 27,000 bales Adelaide, 500 bales Tasmania, 18,000 bales New Zealand, 15,000 bales Cape, and 5,000 bales Natal:

On the opening day, Tuesday, February 27th, there was a good attendance, and the bidding was spirited. The home trade and continent purchased freely; 5,500 bales were offered The sales of greasy wool were as follows:

New South Wales.....	2,000 bales at 5½d. to 9½d
Queensland.....	1,500 bales at 5¼d. to 9d.
Victoria.....	700 bales at 5½d. to 11½d.
New Zealand.....	600 bales at 6¼d to 10¼d
Cape of Good Hope and Natal..	100 bales at 5¼d. to 6d

On March 2nd there were 5,400 bales offered, chiefly merino, of which French buyers were the largest purchasers German and home trade buyers operated with caution. Melbourne and Victoria sold well, lambs' wool selling up to 4s. Greasy wools sold as follows:

New South Wales.....	1,000 bales at 5d. to 9d.
Queensland.....	1,000 bales at 5¼d. to 7¾d.
Victoria.....	2,000 bales at 5d. to 1s. 0½d.
West Australia.....	50 bales at 5½d.
Tasmania.....	100 bales at 7½d. to 8½d.
New Zealand.....	600 bales at 7½d. to 10d.
Cape of Good Hope and Natal.....	500 bales at 5¼d. to 6½d

On March 3rd, 7,700 bales were offered, principally New South Wales and Queensland wools, which were briskly competed for, and Crossbreds sold spiritedly.

On March 5th, 6,000 bales were offered. There was a moderate showing of crossbreds, and competition was spirited, especially for the better grown fleeces. Inferior merino sold slow, with the tendency slightly in favor of buyers. Crossbreds were in better demand by the home trade, and brought full prices. American buyers operated moderately. March 7th, 6,850 bales were offered. Competition was spirited, especially for crossbreds, which were bought mostly by the home trade. Prices gradually eased off. Medium and lower grade merinos declined. Scoured wools averaged ½d. and Cape of Good Hope and Natal ¼d. to ½d. lower On the following day there were 6,400 bales offered, mostly of medium quality. On March 9th the offerings were 7,900 bales, chiefly merinos, of which the continent purchased freely. Prices averaged well, and the demand was good. A few lambs' fleeces included amongst the offerings sold well. Fifteen hundred bales of Cape of Good Hope and Natal sold for 4¼d. to 8d.

On March 12th, 6,650 bales were offered. New South Wales clothing and combing wools were in good demand, and some lots brought outside prices. Some small lots of Queensland wools sold well to continental purchasers, especially Russian.

In Montreal, orders have been coming in very slow, and a few small hand-to-mouth sales of Cape have taken place. Some extensive parcels of United States wool have been received which are said to be equal to fine Canadian supers, and have been delivered to mills in the West at 19½c., one mill taking thirty tons at that figure. The United States market still remains strong, although sales are somewhat limited. The mills still continue to open up slowly but surely. The following is our list of prices:—Greasy Cape, 13½ to 16c.; Canadian fleece, 18 to 19c.; B. A. scoured, 28 to 34c. In pulled wool, 20 to 21½c. is quoted for supers; extra, 23 to 26c.; Northwest wool, 11 to 14c as to grade; and British Columbia, 11 to 12½c.

LITERARY NOTES.

The *Trade Review* has undergone a change. Henry Harvey has taken in M Charles Foley as partner, and the firm will now be known as Henry Harvey & Co. We have already noticed the improved typographical appearance of the *Trade Review*, and we are pleased to note this further improvement in our esteemed contemporary's business prospects. Mr. Foley is well known and well liked in the business community, and will be a valuable addition to the staff.

A. & H Lionais are booming *Le Prix Courant* in grand shape. They have just issued a special number containing ninety pages in a highly decorative lithographed cover, and loaded with advertising. The typography is excellent and the contents varied and instructive.

The *Dry Goods Review*, of Toronto, has also issued a handsome spring number, well illustrated and well patronized by the wholesale trade.

LUBRICATING OILS.

The true principle of lubrication, or the use of suitable lubricating oils, if not imperfectly understood, it would seem as if but little attention were given to this subject by the average mill owner in the selection of suitable oils such as are best adapted to the various machines upon which it is to be used, writes C. E. Tompkins in a contemporary. The proper function of an oil when used to lubricate is to lessen friction and thereby prevent wear, and by lessening friction a saving of power is effected, and by preventing wear a saving in the cost of repairs is also effected, besides prolonging the life and usefulness of the machine. Therefore the more perfect the oil or lubricant used, or, in other words, the better it is adapted to the purpose for which it is used, the more perfect and satisfactory will be the results. Notwithstanding all that has been said upon the subject of lubricating oils, it is a fact well demonstrated by experience that to obtain the best results different classes of machinery require different classes of lubricants, and that while one may be well adapted to one class, the same is totally unfit for the other.

The practice of purchasing a barrel of oil and using the same upon all the machinery in the mill, although quite a common one, is not always the best, especially where the outfit is composed of both heavy and light machinery. The true principle of lubrication is accomplished when the lubricant is of such a nature as to form a film between the surface of the journal and the box, so as to prevent the two surfaces from coming into intimate contact with each other.

If a drop of pure sperm oil be placed under the microscope will be found to be composed entirely of small round globules resembling fish eggs. These globules form, as it were, a series of rollers, upon which the journal moves without really coming in intimate contact with the surface of the box, and so long as these globules continue unbroken the oil on the journal will remain clear; but after a time these globules become broken up and the two surfaces come in contact; then it will begin to turn black, which is caused by the small particles of metal detached from the box or journal, or sometimes both, and when such is the case the journals should again be replenished with fresh oil.

All the oils derived from the fat of animals contain more or less globules, but with some oils another substance is found that resembles gelatine. This is found more abundant in common whale oil, which renders it so liable to gum that it is unfit to use upon machinery, except the heaviest, for the reason that the gelatine evaporates and unites with the globules after being broken up, forming a sticky mass, which soon hardens into a species of gum, which destroys all its lubricating qualities. It is said, however, that by mixing these gumming oils with some of the many products of petroleum, this tendency for gumming may be in a great measure prevented, and it is thought that many of the heavy lubricating oils that are found in the market are thus compounded, but such oils should never be applied to anything except heavy machinery, which requires a heavy oil. For instance, a heavy shaft carrying a number of heavy pulleys or gears must necessarily require a heavy oil, otherwise the weight would have a tendency to press out the oil from between the surfaces, and the journal and box would come in intimate contact with each other, and if heat and abrasion are not the result, unnecessary wear would be the natural one. On the other hand, on light running machinery, where the journals are small and the pressure upon the boxes light, a thinner and more limpid oil should be used, otherwise the resistance from the oil would be such that more power would be required in overcoming that resistance than would be consumed in performing the work. For instance, in a cotton mill where thousands of light spindles are used and consequently require frequent lubricating, it is well known that heavy oils are totally unfit for this purpose, and while the resistance from one spindle is but a mere trifle, yet when that resistance is multiplied into thousands it becomes a matter of serious consequence.

DYEING RECIPES.

FROM FOREIGN SOURCES.

Stone Drab on Wool.—For 100 lbs of wool—Mordant by boiling in a bath containing 1 lb. potassium bichromate and 1 lb. argol. Dye in a fresh bath containing 2 oz. Anthracene Blue WG, 2 oz. Alizarine Orange R, 1½ lb. Galloflavine W, and 2 pints acetic acid.

Gold Brown on Half-Wool.—For 100 lbs. half-wool goods—Make a dye-bath with 3 lbs. Congo Brown G, 1½ oz. Cotton Brown N, 20 lbs Glauber's salt. Work for 45 minutes at the boil.

Grey on Half-Wool—For 100 lbs. half-wool goods—Prepare a dye-bath with 9 oz. Direct Yellow 2R, 6 oz. Diamine Black BH, ¼ oz. Sulpho-Azurine, 3 oz. Croceine Orange and 20 lbs. Glauber's salt. Work at the boil for one hour.

Dark Blue on Wool.—For 100 lbs. wool.—Prepare a dye-bath from 15 lbs. Glauber's salt, 3 lbs. sulphuric acid, 2½ lbs. Chromotrop S, 1½ lb. Water Blue, work for 20 to 30 minutes at the boil, then lift, add to the same bath 2 lbs. potassium bichromate, re-enter the goods and work for 15 minutes at the boil; then lift, wash and dry.

Dark Olive on Wool—For 100 lbs. wool—Prepare a dye-bath with 10 lbs. Glauber's salt, 5 lbs. bisulphate of soda, 2¼ lbs. Anthracite Black B and 2 lbs Anthracene Yellow C, working at the boil for 30 minutes; then lift, wash and dry.

Dark Green on Wool.—For 100 lbs. wool—Mordant by boiling for 1½ hours in a bath containing 2½ lbs bichromate of potash and 2 lbs. argols. Dye in a fresh bath made with 1¾ lbs. Mordant Yellow, 1½ lbs. logwood extract, and 1¾ lbs. acetic acid. Enter cold, then raise slowly to the boil, and work for 1½ hours; lift, wash and dry.

Fast Bismarck Brown on Carpet Yarn.—For 100 lbs yarn—Mordant by boiling for 1½ hours in a bath of 3 lbs. chrome and 1 lb. sulphuric acid. Dye in a fresh bath of 10 lbs. Gambine R Enter cold, giving four turns, then slowly raise to boil; continue for an hour, turning all the time; lift, rinse and dry.

Cherry Brown on Wool—For 100 lbs. wool—Mordant by boiling for 1½ hours in a bath of 3 lbs. chrome and 1 lb. of sulphuric acid. Dye in a fresh bath at the boil for an hour, with 12½ lbs. Gambine Y and 2½ lbs. fustic extract.

Lilac Grey on Woolen Yarn—For 100 lbs. woolen yarn—Mordant by boiling for 1½ hours in a bath of 2 lbs. bichromate of potash and 1½ lbs. tartar. The dyeing is done in a fresh bath of 3 oz. Alizarine Blue SW. 3½ oz. Alizarine Black SW, 1½ oz. Alizarine Red WB, 1 pint acetic acid, and boiling for 1½ hours: then lift, wash and dry.

Silver Grey on Woolen Yarn.—For 100 lbs. woolen yarn—The dye-bath is made with 10 lbs. Glauber's salt, 5 lbs. bisulphate of soda, and 2 oz. Anthracite Black B, working at the boil for an hour.

Dark Salmon on Wool.—For 100 lbs. wool—Prepare a dye-bath with ¼ lb Fonceau 2R, 1 oz Mining Yellow O, 2 lbs. sulphuric acid, and 4 lbs. Glauber's salt.

Heliotrope on Silk.—For 10 lbs silk—The dye-bath is made with ¼ lb sulphuric acid, 2 drams Patent Blue, and 1½ drams Rhodamine; work at a gentle heat to shade, lift, rinse and dry.

Wine Red on Half Wool.—For 100 lbs. half wool goods—Prepare a dye-bath with 2 lbs. Diamine Violet N, 1½ oz. sulphonazurine, and 20 lbs. Glauber's salt, work, and then boil for an hour allow to cool, add to the bath 2 lbs. Rhodamine B, and 2 lbs. Diamine Scarlet B, work again for ¼ to ½ hour at 100 deg. F to shade; lift, wash and dry.

Slate Grey on Wool.—For 100 lbs wool—Prepare a dye-bath with ½ lb. Sulphon Brown R, 1 lb. Sulphocyanine 3 R. ½ lb. Chrysophenine, 5 lbs. acetate of ammonia, work at 180 deg F to shade: wash and dry.

RECENT CANADIAN PATENTS.

Calvin Jackson and James H. Sternbergh, both of Reading, Pa., have patented a method of strengthening or uniting textile materials by means of wire. The process consists in permanently combining a coiled wire with the fabric by rotating the coil and passing its pointed end successively through a series of punctures made in the material. They have also patented a machine for doing the above.

E. J. Frank, Philadelphia, Pa, has patented a knitting machine in which the pivotal bar has its extremities connected with pawl bars, the centrally pivoted link having one extremity in engagement with the pivotal bar. The driving drum is loose on the shaft, and provided with a recess, and there is a spring-controlled pin carried by the handle and adapted to ride on the cam surface and snap into the recess. There is a thread controlling device having clamping and take-up arms, and there is also automatic reversing mechanism with tippet arms, and a link and bar connected by a bell crank furnished with an adjustable back stop.

Simon Christiansen, New York, has patented a garment fitting pattern. It comprises a series of plates adapted to be held on the wearer's body, one alongside the other, each plate being provided with an adjustable strip adapted to fit with its outer edge the free edge of the adjacent plate, so as to form a drawing edge for marking on the goods to be cut. There are articulated connections between the strip and the corresponding plate, to permit of moving any part of the strip inward and outward in order to properly fit the strip with its outer edge on the adjacent edge of the plate next following.

E. Blanchard, I. P. Jacobson and A. Hendricks, all of Logan, Utah, have patented a washing machine, in which there is a series of reciprocating rubbing bars attached to an arm, and each having a number of laterally projecting studs or pins, the studs on adjacent bars being arranged alternately with relation to each other.

Victor Witte, London, Eng., has patented a sewing machine, arranged to produce either a lock-stitch, a chain-stitch, or locked chain-stitch.

A. W. Cummings, Dunkirk, N. Y., has patented a machine for forming turn-down linen collars, mechanism which causes the required forward movement of the forming jaws to be obtained from a downward pressure at the front end of the foot-step, the weight of the several parts causing the forming jaws to move away when the pressure on the foot-step is removed.

J. R. Leeson, Boston, Mass., has patented a winding cop and bobbin which, besides possessing a series of thread guides, of guides for driving the cops, shafts, a shaft for driving the thread guides and gears between the cop-shafts and the shafts for driving the thread guides, has means provided for imparting to one of the shafts a movement independent of that imparted to the gear.

The new Branston Sewing Machine Co., London, Eng, has patented a two-reeled sewing machine.

John Keats, Bagnall Hall, Stafford, Eng., has patented a box for thread holders, consisting of two circular shells fitting the one into the other, and formed with inwardly projecting centres for gripping the thread holder, one of such centres being fitted with an axle, which can be rotated by the thread holder. The periphery of the shells is notched to provide for the exit of the thread from the closed box and put a regulated drag on the thread as it is being drawn off the rotating holder.

James Lyall, New York, has patented a new kind of fabric for elastic wheel tires, in the shape of a strip of canvas or duck threads woven with weft threads and longitudinal warp threads that are longest in the middle portion of the strip and proportionately shorter towards and at the edges and there are means for securing the strip of such material to the elastic or other wheel tire when drawn around it. The warp and weft threads are corrugated or crimped nearly uniformly when it is being folded to form the edges of the tubular wheel tire ring, but it is so adapted as to lie flat during the calendering operation or when the rubber is applied to its surface.

A *trade-mark* has been taken out by John Dewhurst & Sons (Ltd.), Skipton, Eng., for cotton yarns, sewing cotton on spools or reels, and cotton thread not on spools or reels.

NEW BLEACHING COMPOUND.

H. Y. Castner has patented in England, under the name of Soda Bleach, the production of a combination of peroxide of soda with magnesium sulphate or magnesium chloride, or other dry neutral salts of the alkaline earths The product is quite dry and perfectly stable when kept so On mixing with water a reaction sets in, resulting in the precipitation or formation of the hydroxides of the alkaline earth which is employed, sodium chloride or sulphate and hydrogen peroxide. The liquor so obtained may be used at once for bleaching almost any kind of textile fabrics, either cold or hot, in the latter case the bleaching being much quicker. The liquor will have slight alkaline properties, but of too slight an action to have any deleterious effect on either wool or silk. It should be mentioned that the products are mixed in equivalent proportions. It is quite possible that silk and wool bleachers will find this new product of some service to them.

A COMPANY is applying for incorporation under the name of the Alaska Feather and Down Company, having for its object the *manufacture of down and feather goods, and all sorts of bedding.* Its capital stock is $20,000, and its headquarters at Montreal

GEORGE WHYTE, T. A. Whyte and A. G. Allan, of Toronto, are applying for incorporation for a company to be known as the Whyte, Allan Company, who purpose to manufacture woolen goods, fringes, crepes, dress trimmings, brauds, tassels, etc, for the use of upholsterers.

T. THOMPSON & SON (Ltd), Toronto, have applied for incorporation as a joint stock company. Their business will be to manufacture and deal in dry goods, ladies' and gents' clothing. The capital is to be $95,000 in 3,800 shares of $25 each The same applicants want incorporation for another company, with headquarters at Toronto, to carry on a clothing and dry goods business Capital stock, $95,000.

AN important ruling on demands of assignment was made in the judgment rendered by Judge Taschereau in the Montreal Practice Court the other day, in the contestation of such a demand brought by Wm. Carsley, merchant, against Perrin Freres, glove manufacturers, the latter having made a demand of assignment which the plaintiffs decided to contest, and made a motion before the Practice Court to compel Perrin Freres to furnish costs In rendering judgment the court remarked that there was only one precedent in a similar motion, which had been granted by Judge Loranger, on the ground that a demand of assignment, being liable to contestation, constituted a first process introductory to further litigation. Judge Taschereau differed from the judgment rendered by his learned colleague, and on consulting several others it was agreed that a demand of assignment was nothing more than a request of abandonment of one's estate, and that this request in no way created a first process in law His Honor therefore rejected the motion.

CANADIAN TRADE WITH FOREIGN COUNTRIES IN TEXTILES AND TEXTILE MATERIALS.

This table shows the countries from which various goods and materials are imported, and, in a few cases, the provinces for which they were entered. The figures are from the Trade and Navigation returns for the year ending June 30, 1893. It is to be observed that the amounts credited to each country do not necessarily represent the goods of that country used in Canada. A great part of the French and German goods, for instance, are put to the credit of England, because they are imported through English houses, and not direct from the country of origin. In other words, the statistics show the direct trade done between foreign countries and Canada. The abbreviation "N. E. S." signifies "Not Elsewhere Specified."

IMPORTS.

BAGS (FILLED WITH FINE SALT).

	No.	$
Great Britain	112,968	8,851
United States	102,137	2 319
	215,105	11,170

Chiefly to Quebec.

BELTS AND TRUSSES, SURGICAL.

	$
Great Britain	5,509
United States	14,463
France	340
Germany	181
Italy	11
	20,504

BLUEING, LAUNDRY.

	Lbs.	$
Great Britain	124,586	13,589
United States	11,950	2,668
	136,536	16,257

BOOKS, PERIODICALS AND PAMPHLETS.

	$
Great Britain	211,192
United States	419,552
Belgium	114
China	65
France	56,705
Germany	1,400
Iceland	68
Italy	19
Japan	25
Russia	35
Switzerland	86
British West Indies	202
British Africa	16
Denmark	41
	689,529

AMERICAN REPRINTS OF BRITISH COPYRIGHT WORKS.

	$
Ontario	4,775
Quebec	967
Nova Scotia	250
New Brunswick	39
Manitoba	5,383
British Columbia	1,704
Prince Edward Island	12
	13,130

BIBLES, PRAYER BOOKS AND HYMN BOOKS.

	$
Chiefly from Great Britain, also France and United States	160,004

BOOT, SHOE AND CORSET LACES.

	$
Great Britain	25,883
United States	10,039
France	82
Germany	6,748
	42,752

BRACES OR SUSPENDERS, OR PARTS OF.

	$
Great Britain	36,139
United States	30,992
Other countries	1,321
	68,452

BRASS WIRE CLOTH.

	$
Great Britain	6,063
United States	9,683
Other countries	1,637
	17,383

BRITISH GUM, DRESSINE, SIZING CREAM AND ENAMEL SIZING.

	Lbs.	$
Great Britain	104,949	4,317
United States	297,517	12,717
Germany	133,469	4,311
Other countries	9,091	420
	545,026	21,765

BRUSHES AND BROOMS

	$
Chiefly from United States, France, Germany, and Great Britain	110,724

BUTTONS OF VEGETABLE IVORY AND HORN.

	Gross.	$
Great Britain	8,114	9,130
Germany	7,020	1,501
Austria	993	409
France	2,751	1,859
U. S.	1,237	5,756
	20,115	18,655

BUTTONS, ALL OTHER, N.E.S.

	$
Great Britain	89,864
United States	114,195
Austria	34,647
France	15,157
Germany	38,669
Other countries	34
	292,566

CARPETS AND SQUARES, N.E.S.

	Yds.	$
Great Britain	162,448	76,280
United States	15,064	7,944
China	60	47
France	2,818	2,418
Germany	176	216
	180,506	86,905

CASES FOR JEWELS, CUTLERY, ETC.

	$
Chiefly from G. B. and U. S.	9,228

COCOA MATS AND MATTING.

	$
Chiefly from Great Britain	2,131

COLLARS OF COTTON, LINEN, XYLONITE OR CELLULOID.

	Doz.	$
Great Britain	30,890	28,824
United States	13,852	19,120
Other countries	2,003	2,078
	46,745	50,022

COMBS FOR DRESS AND TOILET, ALL KINDS.

	$
Great Britain	35,163
United States	16,458
France	2,693
Germany	11,569
Other countries	187
	66,070

COPPER WIRE CLOTH.

	$
From United States and G. B.	761

CORDAGE, ALL KINDS, N.E.S.

	Lbs.	$
Great Britain	202,447	19,175
United States	542,470	56,542
Other countries	3 671	326
	748,588	76,043

CORSET CLASPS, BUSKS, BLANKS, AND STEELS OF ALL KINDS.

	Lbs.	$
Chiefly from Germany	1,720	1,127

COTTON GOODS.

COTTON SHEETINGS, DRILLS, DUCKS, ETC., BLEACHED AND UNBLEACHED, BUT NOT STAINED, PAINTED OR PRINTED.

	Yds.	$
Great Britain	536,930	47,054
United States	935,884	104,684
Other countries	1,162	118
	1,473 976	151,856

GINGHAMS OR PLAIDS, DYED OR COLORED.

	Sq. Yds.	$
Great Britain	219,270	22,026
United States	32,232	3,972
Other countries	4,072	438
	255,574	26,436

DENIMS, DRILLS, BED TICKINGS, CANTON FLANNELS, FLANNELETTES, TENNIS CLOTH, DUCKS, CHECKED AND STRIPED SHIRTINGS, COTTONADES, PANTALOON STUFFS, KENTUCKY JEANS, ETC.

	Sq. Yds.	$
Great Britain	2,141,521	247,924
United States	682,733	96,769
Other countries	55,352	7,839
	2,879,606	352,532

PRINTED OR DYED COTTON FABRICS, N. E. S.

	Yds.	$
Great Britain	19,974,748	1,473,464
United States	3,293,193	247,369
Other countries	263,147	27,687
	23,531,088	1,748,520

JEANS AND COUTILLES FOR CORSET MANUFACTURERS.

	Yds.	$
Chiefly from United States	748,086	74,387

COTTON DAMASKS, PLAIN, BLEACHED, UNBLEACHED AND COLORED.

	Yds.	$
Chiefly from Great Britain	78,408	13,187

COTTON HANDKERCHIEFS, PLAIN OR PRINTED.

	$
Chiefly from Great Britain	112,863

WADDING, BATTING, WARPS, ETC., BLEACHED, DYED OR NOT COLORED.

	Lbs.	$
Chiefly from United States	17,055	3,261

KNITTING YARN, HOSIERY YARN OR OTHER YARN, NO. 40, NOT BLEACHED OR DYED.

	Lbs.	$
Great Britain	5,693	1,503
United States	13,312	2,526
Germany	13	16
	19,018	4,045

WADDING, BATTING, WARPS, ETC., DYED OR COLORED.

	Lbs.	$
Chiefly from U. S.	51,237	10,189

KNITTING YARN, HOSIERY AND OTHER YARNS, DYED OR COLORED.

	Lbs.	$
Great Britain	11,200	4,633
United States	14,583	3,725
Other countries	837	945
	26,620	9,303

COTTON WARP, NO. 60 AND FINER.

	Lbs.	$
United States	2,600	246

WARP ON BEAMS.

	Lbs.	$
United States	168	90

SEAMLESS BAGS.

	Lbs.	$
Chiefly from U.S. and Great Britain	101,206	18,937

SHIRTS OF COTTON.

	Doz.	$
Chiefly from Great Britain	2,675	15,538

SEWING THREADS ON SPOOLS.

	$
Chiefly from Great Britain	328,255

SEWING THREADS IN HANKS, BLACK, BLEACHED OR UNBLEACHED, 3 AND 6 CORD.

	$
Chiefly from Great Britain	219,042

COTTON SEWING THREAD, N. E. S.

	Lbs.	$
Great Britain	16,121	8,145
Other countries	3,080	1,163
	19,201	9,308

ALL OTHER COTTON THREAD, N. E. S.

	Lbs.	$
United States	11,493	4,115
Great Britain and elsewhere	3,725	2,487
	15,218	6,602

BED COMFORTERS, OR QUILTS OF COTTONS, NOT INCLUDING WOVEN QUILTS OR COUNTERPANES.

	No.	$
Chiefly from Great Britain and United States	3,268	5,599

DO., WHITE, WITH WOVEN COLORED BORDER.

	$
Chiefly from Great Britain.....	18,761

COTTON CLOTHING OR OTHER MATERIAL, N.E.S., INCLUDING CORSETS AND ARTICLES MADE BY THE SEAMSTRESS OR TAILOR, ALSO TARPAULIN, PLAIN OR COATED.

	$
Great Britain..... ...	192,857
United States	152,366
Other countries.....	40,364
	385,587

COLORED FABRICS, WOVEN, OR DYED OR COLORED COTTON YARN, OR PART JUTE AND PART COTTON, OR OTHER MATERIAL EXCEPT SILK.

	Yds.	$
Chiefly from Great Britain 1,385,231		198,292

COTTON BAGS MADE UP BY THE USE OF THE NEEDLE.

	$
Chiefly from the U. S.....	1,641

COTTON NETTING FOR LINING OF BOOTS, SHOES AND GLOVES.

	$
Chiefly from G. B. and U. S....	42,523

COTTON BELTING.

	$
Great Britain	8,826
United States	8,107
	16,933

LAMP WICKS.

	$
Chiefly from Great Britain and U. S.	4,256

PRUNELLA FOR BOOTS AND SHOES.

	$
Chiefly from Great Britain.....	9,180

COTTON SHAWLS.

	$
Chiefly from Great Britain.....	528

COTTON SOCKS AND STOCKINGS.

	Lbs.	$
Great Britain	50,228	41,481
Germany	50,914	38,932
Other countries	2,617	2,397
	103,759	82,810

TAPESTRY LAP-DUSTERS, ETC., NOT EMBROIDERED.

	$
Chiefly from G. B. and U. S....	5,919

TOWELS OF COTTON.

	$
Chiefly from Great Britain.....	34,192

UNCOLORED FABRICS, VIZ :—SCRIMS, CAMBRIC CLOTHS, MUSLIN APRON CHECKS, BRILLIANTS, CORDS, PIQUES, DIAPERS, LENOS, MOSQUITO NETTINGS, SWISS JACONETS AND MUSLINS AND LAWNS.

	Yds	$
Chiefly from Great Britain	2,851,09	226,241

VELVETEENS AND COTTON VELVETS AND PLUSH.

	Yds.	$
Chiefly from Great Britain	890,168	212,713

WINCEYS OF ALL KINDS, N. E. S.

	Yds.	$
Chiefly from Great Britain	130,928	7,257

WINCEYS, CHECKED, STRIPED OR FANCY COTTON WINCEYS, OVER 25 IN. WIDE.

	Sq. Yds.	$
From Great Britain	17,775	1,390

ALL OTHER COTTON MANUFACTURES, N.E.S.

	$
Chiefly from Great Britain....	210,172

CRAPES OF ALL KINDS.

	$
Chiefly from Great Britain....	49,603

CUFFS OF COTTON, LINEN, XYLONITE AND CELLULOID.

	Pairs.	$
Great Britain	35,428	4,238
United States.....	23,027	4,560
Germany	3,192	364
	61,647	9,162

CURTAINS MADE UP, TRIMMED OR UNTRIMMED.

	$
Chiefly from Great Britain and the United States.....	314,085

ACETIC AND PYROLIGNEOUS ACID FOR USE OF DYERS, CALICO PRINTERS, ETC.

	Gals.	$
From United States	331	76

MURIATIC AND NITRIC ACID.

	$
From United States and Great Britain	1,175

SULPHURIC ACID.

	Lbs.	$
Chiefly from United States	172,422	2,367

MIXED ACIDS.

	Lbs.	$
From United States..	200,833	6,503

ALL OTHER ACIDS, N. E. S.

	$
Chiefly from Great Britain....	33,646

EMBROIDERIES, N. E. S.

	$
Great Britain.....	90,755
Germany	14,018
Switzerland	29,326
United States	16,041
Other countries	13,192
	163,332

EXCELSIOR FOR USE OF UPHOLSTERERS.

	$
Chiefly from Great Britain	2,198

BEAD ORNAMENTS.

	$
Chiefly from Great Britain and France	27,051

BRAIDS, BRACELETS, CORDS, FRINGES, TASSELS, ETC.

	$
Chiefly from Great Britain and United States	530,462

ARTIFICIAL FLOWERS.

	$
Chiefly from Great Britain	200,276

FEATHERS, OSTRICH AND VULTURE, UNDRESSED.

	$
From Great Britain and France..	337

FEATHERS, OSTRICH AND VULTURE, DRESSED.

	$
Chiefly from Great Britain	54,203

FEATHERS, ALL KINDS, N. E. S.

	$
Great Britain	15,163
United States	23,702
Other countries	1,627
	40,492

LACES, LACE COLLARS, NETTING AND SIMILAR GOODS OF ALL MATERIALS.

	$
Great Britain	510,309
France	42,054
Germany	21,365
United States	16,839
Other countries	17,020
	607,587

MILLINERY, N. E. S.

	$
Great Britain..	2,246
United States	470
Other countries	28
	2,744

FELT FOR ROOFING.

	$
United States	100

FELT, ALL OTHER, N. E. S.

	$
United States	1,837
Great Britain	4,400
	6,237

FIBREWARE, INDURATED AND VULCANIZED, ALL ARTICLES OF SIMILAR MATERIAL.

	$
United States	7,462

FLAX, HEMP AND JUTE GOODS.

CARPETING OR MATTING AND MATS OF HEMP OR JUTE.

	$
Great Britain	81,756
Other countries.....	9,079
	90,835

CARPET LININGS AND STAIR PADS.

	$
Chiefly from United States	2,271

CANVAS OF FLAX OR HEMP FOR BOATS' SAILS.

	$
Chiefly from Great Britain.....	7,755

SAIL TWINE OF FLAX OR HEMP FOR BOATS' SAILS.

	Lbs.	$
Chiefly from Great Britain and United States	12,889	2,479

DAMASK OF LINEN, OR COTTON AND LINEN, BLEACHED, UNBLEACHED OR COLORED.

	Lbs.	$
Great Britain	1,667,032	305,551
Germany	20,283	4,049
Other countries	23,511	4,998
	1,710,826	314,598

FLAX FIBRE, HACKLED.

	Lbs.	$
United States	38	11

TOW OF FLAX, SCUTCHED OR GREEN.

	Lbs.	$
Chiefly from U.S. ..	2,550	112

LINEN AND JUTE HANDKERCHIEFS, PLAIN AND PRINTED.

	$
Great Britain	134,188
Other countries	5,772
	139,960

TOWELS, LINEN OR JUTE.

	$
Great Britain.....	177,437
Other countries.....	6,608
	184,045

(To be continued.)

THE COTTON AND WOOLEN TARIFF.

A Montreal *Herald* "special" from Ottawa, January 10th, gives the following account of the last deputation of cotton and woolen manufacturers to Ottawa: Delegations from the cotton and woolen manufacturers were in the city again to-day. As stated in this correspondence last evening, A. F. Gault and D. Morrice, of Montreal, had arrived, and immediately upon arriving here called upon the Hon. Mackenzie Bowell, at the Russell. To-day they appeared before the tariff committee, composed of the Minister of Trade and Commerce, the Minister of Finance and the two controllers, who are holding regular sittings with the view of framing a new tariff bill.

The cotton representatives, like the woolen men, do not care to be interviewed upon the nature of their business. It is, however, understood that they will be willing to allow a considerable reduction on the protection now afforded the industry. The *Herald* asked a member of Parliament, who has been in the habit of defending the cotton tax, how this could be done when the companies had been declaring no dividends lately. That, he said, was due to the fact that they had spent over half a million dollars in new buildings and improvements during the year. It is understood that the delegates from the cotton industry gave some figures and other necessary information to the tariff committee, so as to enable the latter to deal with the matter when making the necessary changes.

When the woolen men, a couple of weeks ago, interviewed Mr. Foster, the latter asked them to appoint a committee from their number so that he might be able to communicate with them when he desired to do so. This was done, and they were summoned to the Capital to-day. To-morrow they will appear before the tariff committee, as the time of the latter to-day was taken up in dealing with the cotton industry.

One of the woolen men told the *Herald* that they had prepared a large batch of statistics showing the extent of the business in Canada and its growth, as well as how it was now affected by the tariff. This they intended laying before the committee. He said that none of them had the slightest intention of what the committee intended doing in regard to their industry. They did not have, in his opinion, any too much protection now. The representatives of the woolen industry who are here are: A. Millichamp, Toronto; J. R. Kendry, Peterboro; J. F. Morley, Waterloo; B. Rosamond, Almonte; W. Rosamond, Cobourg; G Pattinson, Preston, and R. W. Heneker, Sherbrooke. They were closeted together all day at the Russell discussing the question.

TENDERS are advertised for summer uniforms for the Montreal firemen.

LOUIS BLANCHET, merchant tailor, Montreal, has assigned. Liabilities, $7,000.

FAGUY, LEPINAY & BROTHER are opening a dry goods store in St Johns suburbs, Quebec

LETELLIER & GENEREUX, dry goods merchants, Quebec, have assigned. Liabilities, $15,000.

LANG & MCKEICHAN, dry goods, Winnipeg, have dissolved partnership and wound up the business.

S. F. MCKINNON & Co., millinery and mantles, Toronto, expect to be in their fine new building in time for the fall trade

R. SIMPSON, dry goods merchant, Toronto, has had plans prepared for the construction of a fine new six-storey building.

FRANCŒUR & ST. MARIE, hatters and furriers, Montreal, are offering 50 cents on the dollar. The liabilities are $9,300.

THE directors of the Toronto Rubber Company, at a meeting recently, decided to enlarge their factory and employ a hundred more hands.

BOWER & Co., dry goods and general merchandise, Brandon, Man., are selling their stock, the value of which is estimated at $17,400.

MOTT, HORN, SOMERVILLE & MILLER, employees of the late firm of Daniel & Boyd, St. John, N.B., have bought the latter's stock and will carry on a wholesale dry goods business.

THE American Consular Agent at Bushire says that the Persian wool trade is steadily increasing with Europe, and he understands that a good deal of Persian wool is re-shipped to the United States from Marseilles and Liverpool.

SPITTAL, BURN & GENTLEMAN, one of the largest retail dry goods firms in London, Ont., have assigned for the benefit of their creditors. This business was formerly carried on by T. Beattie & Co., Mr. Beattie now being the principal creditor.

JOHN HALLAM, wool dealer, Toronto, is now on his way to Europe.

ONE hundred cubic feet of wall requires a cord of stone, three buckets of lime and a cubic yard of sand.

TOUISSANT DERAGON and Joseph Fernet, manufacturers of collars, Montreal, have joined together in partnership, under the firm name of Deragon & Fernet.

GODSOE BROS., proprietors of the American laundry, St. John, N.B., are constructing a new building, which they hope to inaugurate early in May.

IT is said that the best handles of small tools are made from the wood of the apple tree, which is extremely hard when dry, and possesses a fine grain. Moreover, it does not crack easily after it has been dressed.

THE analysis of a sample taken from a meteorite which fell recently near Beaver Creek, in British Columbia, and which weighed about 25 lbs., showed 78·72% iron and small quantities of nickel, silica and magnesia.

THE skin of a black fox, an animal which has almost become extinct, was exhibited in Chatham, Ont., last week. The animal was trapped by Indians near Palmyra. It is valued at $100.—*Amherstburg Echo.*

W. H. JAGO & SON, glove manufacturers, of Rockwood, Ont., are talking of moving the tannery department of their business to Guelph. If the tannery is located there it will only be a question of time, the *Guelph Herald* thinks, when the glove works will follow suit.

MR. B. J. SMITH, after several experiments with wooden wind mills, has now purchased a 16-ft. steel geared wind wheel which he intends erecting on a tower 50 feet above his store building at Coaticook, Que., for the purpose of running his elevator. He has also bought a grinding attachment with the wheel, with which he intends grinding provender. This enterprise, says the Sherbrooke *Examiner*, is being watched with interest, and his example will doubtless be followed by many who would find a way to turn this sort of power to advantage.

A CORRESPONDENT of the *British Trade Journal* writes that the cotton-growing capabilities of China are rapidly expanding, and large quantities of raw cotton are being exported to Japan. Many Japanese firms are now established as cotton merchants, and they have done much to develop the cotton-growing industry by the introduction of a cheap, simple, and efficient hand-power cotton gin, which is the invention of a Japanese mechanic. This gin is quite popular amongst the Chinese cotton growers, who, as a rule, now gin their own cotton at home, thus saving the seeds for making oil, and the oil-cake for manure. The demand for the hand-power cotton gins has been so great that the Japanese have not been able to supply the market to its full extent; therefore a great many Chinese are now engaged making these cotton gins in Shanghai, and some foreigners have asked for permission to import steam-power gins and to establish cotton-ginning mills in China. Application for this permission was made to the Chinese Government by the Doyen of the Corps Diplomatique at Pekin, but was most unwisely refused. The refusal is nothing strange. The Chinese never yet granted us anything willingly. It might have been better to have imported the machinery and set it up; and the Chinese would have thought twice before pulling the mills down.

THE WOOL MARKET.

TORONTO, March 16th, 1894

The wool market shows no change since our last report. Business has been quieter, if anything.

A purchase by a Toronto dealer of about 10,000 lbs. Canada fleece at 17c. is reported.

The sales to the mills are chiefly small lots, but the aggregate is fairly up to the average for the season of the year.

There is a steady demand for all descriptions of low-priced wools, foreign and Canadian.

P A.'s and other foreign fine wools are unchanged.

CHEMICALS AND DYESTUFFS.

Spring inquiries have commenced. Soda crystals are easier, also caustic soda and soda ash. Gambier is *firm at the advanced* figure.

The following are present quotations.—

Bleaching powder	$ 2 50	to	$ 2 75
Bicarb soda	2 40	"	2 50
Sal soda	0 90	"	1 00
Carbolic acid, 1 lb. bottles	0 30	"	0 35
Caustic soda, 60°	2 50	"	2 60
Caustic soda, 70°	2 75	"	3 00
Chlorate of potash	0 22	"	0 25
Alum	1 40	"	1 50
Copperas	0 80	"	0 90
Sulphur flour	2 00	"	2 10
Sulphur roll	2 00	"	2 10
Sulphate of copper	4 00	"	5 00
White sugar of lead	0 07½	"	0 08½
Bich. potash	0 10	"	0 12
Sumac, Sicily, per ton	75 00	"	80 00
Soda ash, 48° to 58°	1 50	"	2 00
Chip logwood	2 00	"	2 10
Castor oil	0 07	"	0 07½
Cocoanut oil	0 07	"	0 07½

RAW FUR MARKET REPORT

Montreal, March 15th, 1894.

The spring sales are still in progress in London; cable reports arrive daily. The all-round tendency is for much lower prices, the decline reaching in many cases 50 or even 60 per cent. lower than last March. The general outlook is most unfavorable for the spring trade. The following are some of the prices:—

Beaver, per lb	$3 00	to	$3 50
Bear, per skin (large)	10 00	"	15 00
Bear, cub, per skin	2 90	"	4 00
Fox, red "	1 00	"	1 25
Lynx, "	1 00	"	2 00
Marten, "	0 80	"	1 00
Mink, "	1 00	"	1 50
Muskrat, "	0 10	"	0 12
Otter, "	8 00	"	12 00
Raccoon, "	0 50	"	0 75
Skunk, "	0 25	"	1 25

SULPHUROUS ACID IN WOOL DYEING.

It must not be supposed that artificial coloring matters will always enable the dyer to obtain the same shade at all times because these dyes are always obtainable of the same quality: there remain a number of other factors that must be taken into account, such as the difference in the power of the wool in taking up color, the uncertainty in the net weight of the goods; the various qualities and strength of the pieces, etc. It is therefore always left to the practical man to decide whether the coloring matters will produce the shade required, and to judge by the eye whether they do so—a not over-reliable method—and often the result is not a success, the goods frequently coming out deeper in shade than is required, and the mistake being only found out when it is too late to be remedied.

Under such conditions every dyer will gladly avail himself of any means, safe and easy, of remedying the damage, says the *Textile Mercury*. Sulphurous acid may be regarded as such a means, and deservedly so, for it is by far the best product for this purpose, since it will make the color lighter without in any way affecting the material. The most remarkable results are, of course, obtained with such colors as are not fast to acids, but those that are fast, as for instance the alizarine colors, may be partly removed when potassium permanganate is used. Sulphurous acid has shown itself specially useful with all colors or shades produced either partly or wholly with natural coloring matters, as its application is an easy one. A trial on a small scale (which can be carried out in a few minutes) will show whether satisfactory results can be obtained with any particular shade or color. If such is the case a treatment in a more or less dilute cold bath is all that is required, and the fault is thereby corrected. In most cases a few quarts of an ordinary aqueous solution of sulphurous acid will be sufficient. This quantity is quite harmless, for it must be remembered that, to obtain a sulphur white on wool in the wet way, as much as two-thirds of the weight of the wool of this aqueous sulphurous acid is used, and this quantity does not injure the fibre.

Of the shades produced with the natural dyestuffs, those obtained with logwood are the most sensitive. All brown and olive-green colors (especially such as those that have been saddened) become paler and browner. Blue and black from logwood are easily reduced, and as it removes any uncombined dyewood it prevents the goods from rubbing. Use may be made of this fact in the dyeing of logwood blacks on goods that will not stand much rinsing, by giving them a rinse in a sulphurous acid bath, which fixes the color and shortens the process.

CAMPBELL & Co., men's furnishings, New Westminster, have moved their establishment to Vancouver.

Among the Mills

Alton, Ont., Woolen Mills are now lighted by electricity

Coaticook, Que., Cotton Mill will probably run on half time for some weeks.

Additions are being made to Ferguson & Pattinson's woolen mill at Preston, Ont.

Grant's Felt Mill at Woodstock, Ont., will re-open in April, with Joseph Phiphee as carder.

The Kingston, Ont., Hosiery Company are putting in an entirely new plant of improved design.

A Campbell's Carpet Works at Markham, Ont., have been fitted with a new rolling machine.

The Worsted and Braid Co., Toronto Junction, are making some additions to their machinery for worsted braid

The *Waterloo Chronicle* reports that the flax mills at Wellesley finished scutching during the first week of this month.

The Toronto Carpet Company are asking for concessions from the city to aid them in building extensions to their factory.

The new woolen mills which John Routh is building at Campbellford, Ont., will give employment to about eighty hands.

The Empire Carpet Works, St. Catharines, Ont., James H. Etherington, proprietor, now has 30 looms operated by electricity.

J. B. Sorley, secretary-treasurer to the Weston, Ont., Woolen Manufacturing Company, died a few days ago after a protracted illness.

The Westminster, B.C., Woolen Mills have been leased to Charles Bozer & Co. for the term of four years. They will be re-opened shortly.

The Standard Woolen Mill Company, Toronto, have been making several additions and improvements, among which are four 115-inch blanket looms.

The gentleman who proposes to start a woolen factory in Mission City, B.C., is A. McCracken, owner of the Temple Woolen Mills, Kildare, Ireland.

Mr. Myles, of the Woodstock, N.B., Woolen Mills Company, has returned from Lowell, Mass., where he has been purchasing new machinery for his factory.

The extensions which T. A. Code contemplates making to his woolen mill at Perth, Ont., will be of stone, two storeys high and about sixty feet in length.

The wages of operatives in the Kingston, Ont., Cotton Mills have been reduced by 10 per cent. The mills were closed down for a few days recently for repairs.

The Watson Mnfg Co., St. Catharines, Ont., will increase their capacity by adding new machinery. Their present capacity is 100 dozen articles of knit underwear per day.

A. W. Meadows recently added to his woolen mill at Woodstock, Ont., a Sargeant burr picker and two twisters. The mill will start up soon after some necessary repairs have been made.

Edward Crawford, Guelph, Ont., is now fitting up his mill for the manufacturing of shoddy and will commence operations as soon as possible. John Thompson, of Glen Williams, Ont., has accepted the position of superintendent with the same.

John Hooper, an employee in the Hamilton Cotton Mill, met with a serious accident there last month. He was looking down the elevator shaft, when the hoist ascended more quickly than he had reckoned on, and he was caught by the chin and carried to the ceiling before the machinery could be stopped.

S. Sayers, hitherto salesman for the Etherington Carpet Factory at St. Catharines, Ont., and M. Gates, of the Woodstock Carpet Works, are proposing to join in partnership and move the Woodstock factory to St. Catharines. They would employ at the start from 43 to 60 hands, and are asking the city for aid in the shape of free water and exemption from taxation.

The Chambly Canton (Que.) Cotton Mill is replacing eighteen bag looms with duck looms

A fire, originating in the hot air furnace, broke out in the basement of the Embroidery Company's Works, at Toronto, a few nights ago, and owing to the smoke, the stock was damaged to the extent of about $1,000.

Cobourg, Ont., woolen mill has started up again, after being closed down a fortnight for repairs and improvements One old set of cards has been replaced by a modern set of Davis & Furber 60-inch cards

T. H. Taylor & Co., Chatham, Ont., are making extensive alterations in their woolen mill. They are adding a hydro-extractor, fulling mill, cloth washer, and a steam-power press. Two sets of cards and twelve looms are at present operating on full time

At the Sarnia, Ont., Woolen Mills several improvements have been made recently. One set of 40-inch cards has been replaced by one of 60-inch cards, and new spinning machinery has been added. A fireproof picker room, 30 ft by 30 ft., has also been built.

At the annual general meeting of the Cornwall Manufacturing Company the following were elected directors Andrew Allan, president; W. M. Ramsay, vice-president, Frank Stephen, managing-director; Sir Donald A. Smith, A. T. Paterson, Hugh Montagu Allan and John Turnbull.

The annual meeting of the Canadian Rubber Company was held the other day in Montreal. The reports presented were considered satisfactory. The old board of directors were re-elected as follows: Andw. Allan (president), Hugh McLennan (vice-president), W. J. Withall, Francis Scholes, H. Prevost, A. A. Allan, W. H. Benyon, J. B. Learmont, H. M. Allan

Some imaginative Quebec correspondent is building industries at Montmorency Falls at a very rapid rate. First he had a new cotton mill, then a new glove factory, and this was followed by a wall paper factory, to which he has just added a new tapestry carpet factory. His reports have been faithfully copied by our trade contemporaries, but the only basis of fact in all these items is the building of the new Riverside Cotton Mill at Montmorency Falls, particulars of which were given in this journal three or four months ago.

Mr. Robert Glasco, carpenter to the Cornwall Manufacturing Co.'s mill, had a narrow escape from a serious accident a few days ago. He was employed at a lathe when a bolt broke and a five-pound cog, which was being driven at a great rate of speed, struck him on the back of the head, inflicting an ugly cut —*Standard*

The Consumers' Cordage Company have instituted a suit which may jeopardize the existence of the new binder-twine factory in Kingston Penitentiary. They claim that John and T. P. Connor, who are putting in the plant, and who are to run the Government factory, made an engagement, when they sold the St. John factory to the former company, not to engage again in the same business. The outcome of the fight will be eagerly looked forward to. As at present proposed, the new binder twine factory will start up next month.

The Slingsby Manufacturing Company, Brantford, Ont., manufacturers of woolen goods, capacity, six sets of cards and 18 looms, have lately put in new machinery, consisting of four sets of cards, three sets being Davis & Furber's and one Jas Smith's, all 60 inch, four Davis & Furber mules, nine Knowles looms, one Davis & Furber napper and other finishing machinery; also a 150 horse-power water wheel. Four sets of machinery are operated at the present time, and as soon as the work which is now in progress at the dam is finished, the entire machinery will be operated. The main mill, which was recently built, is a fine brick structure 90x54 feet, and three storeys high. The finishing department is 90 x 30 feet and three storeys high There is also a dye-house and a fine office and sample room. The entire plant is fitted up with all the modern improvements. John Slingsby is superintendent.—*Canadian Manufacturer.*

ORIENTAL CARPETS.

CHARACTERISTICS OF CERTAIN MAKES.

For design, color and workmanship the Persian carpet looms of Ispahan and Teheran claim the pre-eminence over all others; but Bagdad, from its geographical situation, was enabled not only to produce but to import the best materials. It had direct communication with Syria and Persia; it was surrounded by a fertile tract of country. Silk was plentiful; kermes, pomegranate and other dyestuffs abounded. The trade with foreign countries must have been extensive Its art, too, was varied, being influenced at different times by different races, first by Tartars and Mongols, then by the Persians, who held possession of the city several times. It had also a great reputation for fabrics in which gold and silver were introduced.

Marco Polo mentions the fine quality of these stuffs in his day, "richly wrought with figures of birds, beasts, etc." Of ancient European imitations of Oriental work there are several interesting and beautiful examples. A Pole, of Warsaw, visited Persia and India and brought back with him to Warsaw native workmen, with whose aid he produced some fine fabrics from Oriental designs which he had imported. Gradually Western designs were mixed up in these reproductions, but a permanent influence remained, which cannot be mistaken.

In Spain some splendid imitations seem also to have been made in the seventeenth century, and Charles V. furnished his cloister at Yuste from the manufactory at Alcraz. In La Manca, the wool was said to be almost as fine as that of Meshed, and then, too, kermes was to be had with which to dye it. A Sarakhs mosque carpet of the eighteenth century work is a marvel of clearness and brilliancy. The ground is a tawny yellow with peculiar cloud-like streaks of a darker shade. It is not known how this dye was produced, as modern chemists have failed to discover it by any known process of analysis. In the centre is a medallion with a conventional flower pattern geometrically arranged. The corners are filled out, and the prevailing tint is a fine—but not dark—peacock blue. There is a narrow border repeating the colors of the centre medallion, and, to finish off, a band of the unique, tawny yellow.

In Shirax, 4,000 or more feet above the sea, were fed the flocks which produced some of the finest fleeces of the world. The rugs from this secluded part of the world are remarkable for clever design, far beyond our very best efforts. There is a centre square with an orange and red pattern on dark blue, the ground being a light Venetian red; on this are grotesque animals mixed with a running pattern of flowers, all in harmony and due proportion; the corners are filled in square, so as to make the centre in the form of a cross; curious birds sit on the branches; the border is broad and handsome, in dark blue and orange, the proper equivalents of each. It is a mixture of Persian and Mongol styles; the general appearance and color bloom is indescribable in ordinary or extraordinary language. William Spottiswoode, London, is the fortunate possessor of one of the finest specimens of the textile art in this rug. A very beautiful and interesting specimen is a combination of Persian, Mongolian and Arab features.

The bird several times introduced into the design is the roc or angka of the Arabs. It is represented struggling with a Mongolian dragon. The twisted floral ornament is Persian; the foundation silk, which is also used in the outlines and gives intense brilliancy of effect; the centre part is covered with medallions of different shapes. They are bright in coloring and stand out distinctly on the cream colored ground, which itself is covered with a delicate floral pattern. The border is wide, with superb arabesques or plaques, the ground being a lovely tint of celestial blue. This carpet resembles a fine fifteenth century manuscript; those from Meshed have large free designs with glaring colors. Kurdista carpets have more sober tints.

Among the Kurds the carpets are generally woven by the women in a rude loom placed in a sort of underground tent. This affords the occupants shelter from the weather, and is reached by an incline or some clumsy steps. These nomad tribes employ goats' and camels' hair largely in their manufactures, and take advantage of the different tawny shades to produce the neutral tint without dyeing They have also sheep with yellow wool and others of a fine brown, and very lustrous. The pasturage is one mass of sweet scented flowers, and it seems to have some quality which makes the fleeces peculiarly soft.

One of their carpets in the South Kensington Museum, London, is supposed to belong to the early part of the present century. All the colors are primary ones, and the strong contrast of a yellow, red and blue pattern on a black ground is extremely pleasing to those who believe the use of tertiaries marks the decadence of art. The ground of the border, which is unusually broad, is a dark, rich yellow; but scarcely strong enough in color for the back of the centre.

An example from Afghanistan is in strong contrast to that from Kurdistan; the design is also more elaborate, delicate and satisfactory. Here we feel the influence of Persian refinement added to a sort of barbaric splendor. The stripes of shading in the green ground, and of the border, are particularly happy. The same sort of tinting is repeated in the fine red of the groundwork of the centre Nearly all the old carpets made in Afghanistan were woven on a silk foundation, which can only be seen by cutting into the fabric Mulberry trees were abundant, so that the silk worm was extensively cultivated.

The pile is generally made of sheeps' wool, though occasionally of goats' hair. The carpets of Herat have always maintained a high position, even in the East, for their brilliancy and durability. The manufacture existed until the sack of the town by the Persians in 1838 The modern Indian examples are mostly in shades of yellow and red, and the effect is sunshiny and pleasant; no dark color is introduced—a good hint to those whom it may concern—patterns are formal, one having six distinct lines of borderings.

Perhaps the most attractive and ethereal of all these reproductions is a delightful and fortunate combination of light peacock blue and a darkish pink, they are counterchanged cleverly between the centre and outside portion. The border is narrow, of a dark cream color, the same shade as the large foliage which appears on a rich blue ground. Shields bearing the arms of Charles V. are introduced at proper intervals, this carpet is a wondrous display of the designer's skill and a "distinctly precious" example.—*Kidderminster Shuttle.*

ENAMELLED FABRICS.

A process employed in France for applying a coat of real enamel to woven material is described in a recent issue of *L'Industrie Textile.* It entails three operations—the making of the special enamel, the preparation of the cloth to receive it, and its application.

The Enamel.—A square of fine porcelain is covered with a light couch of chalk. A design in finely ground enamel is laid down on this after the fashion of ceramic work, taking care to leave a slight space between the colors so as to prevent them from running together in the subsequent baking. This operation is effected in an open muffle furnace, as in enamelling on copper, and when completed the enamel detaches itself completely from the tile. It is washed free of chalk in acidulated water, and finally washed thoroughly in fresh water and dried.

Preparation of the Fabric.—A satinette, or any colored tissue that may appropriately be decorated, is treated with many successive coats of caoutchouc in solution until it is completely impermeable. It is then allowed to dry. The caoutchouc is dissolved in benzine to a syrupy consistency.

Application on the Stuff.—A solution of caoutchouc in benzine is made, but much thicker than before, almost a paste being made. The enamel is glued on to the cloth with this preparation, taking care to leave a slight space between the different elements of the design. The outer circumferences of the enamels are cut by hand or with a stamp after the fashion of braid, and finally sewn on to the cloth with gold thread or silk, or any other decorative material of the sort.

THE LACE TRADE.

The state of affairs in the local lace trade is not calculated to give satisfaction, and certainly no one foresaw the dulness which characterizes operations at such a time of the year as this. Independently of variations in fashion, the trade has been hampered by the condition of business in the English, German and American markets, which have not given and repeated their orders in the usual way. A certain amount of discouragement is therefore visible in the town, although of late there has been a slight improvement Some orders have been received from the United States, and if that market has not bought its usual quantities the fact justifies the expectation of a resumption of activity, inevitable though tardy. The Continent still hesitates, but orders commenced to arrive some weeks ago. Paris appears desirous of doing more, and although some restraint is shown by merchants there, the change noted is looked upon as an indication that the season is about to become busier.

We are still without novelties of a sensational kind, although some designs in fine cotton laces, perfect imitations of real, in various points, promise to find favor amongst buyers Beyond this article, which is not, properly speaking, a novelty, seeing that it was produced formerly under similar aspects, there is nothing to note beyond the great diversity of designs No design stands out boldly from the rest to coax the market, and Calais, it must be confessed, is at the moment beaten by Plauen and Nottingham, which are trying to monopolize the season's trade. Local producers are blamed for not making efforts adequate to meet the opposition of such serious opponents. The close study of real lace, of the collections shown in foreign museums, and of decorative art, offers valuable suggestions to manufacturers St. Gall and Plauen are constantly working in this way, striving incessantly to produce novelties which will compel their acceptance on the part of the capricious arbiters of fashion

Chantilly was in fair demand during January Chantilly for making up purposes and for volants are, however, dull. Soie d'Irelande is increasingly neglected. Cotton descriptions are, however, in better demand. Brussels application, on a black, cream, and butter ground, find ready buyers, especially in the last-named shade. The same remark applies to silk and cotton entredeux.

Guipure meets with support for confections Espais qualities are the favorites. Bourdon is still inquired for in the ordinary qualities, in which, owing to the keen competition prevailing, prices are cut down to a very low level. Bourdon with a coarse ground also enjoys the favor of buyers The orders are large, and principally apply to low-priced goods Medium grades of good quality are, however, inquired for.

There is very little change in voilettes. The trade here will not be much until local houses come up to Lyons. Chenille voilettes, for instance, might be made here as well as in the south The creation of novelties only calls for a small pecuniary sacrifice. Even admitting that Chenille voilettes have about had their day, it is incontestable that Lyons will again be able to produce another novelty, as it does each season

A hopeful view is taken by some. If the season is late, they say, it will last all the longer —*Textile Mercury.*

THE Customs House officials, Montreal, seized a quantity of goods consigned by J. Newman & Sons, corset manufacturers, New Haven, Conn., to Perrin, Freres & Cie., on the ground of undervaluation The matter, we believe, was satisfactorily explained between Mr Newman and the Controller of Customs

KEFERSTEIN'S BLEACHING PROCESS.

We have noticed in these columns Keferstein's process of bleaching, the essential feature of which is the employment of ozone in conjunction with bleaching powder Another patent specification of the same inventor lies before us, describing an improvement in the original method, effected by soaking the goods before they are placed in the ozonising chamber in 1 part of ammonia to 100 water, or an emulsion of ammonia and turpentine made by mixing 100 parts of ammonia with 20 parts of turpentine and 2,000 parts of water, or in the ordinary turpentine of commerce, or in 20 parts of an ammonia resin soap dissolved in 1,000 parts of water, or in 1 part of ammoniacal indigo solution in 4,000 parts of water After being steeped the materials are placed in the ozone chamber, when a quantity of thick white fumes are produced These increase the bleaching action, and there are produced oxidation, products of the ammonia and turpentine in the form of nitrates and nitrites which increase the solvent action of the subsequent chemic bath on the coloring matters and impurities of the fibre which is being bleached This effect can be produced by placing on the floor of the ozonising chamber – ammonia, or ammonia turpentine emulsion, or turpentine. After being in the ozonising chamber for 3 to 6 hours, the materials are treated for 10 hours in a solution of chloride of lime containing 0·0007 per cent. of chlorine This is a very weak solution, corresponding to about 2 parts of bleaching powder in 100,000 parts water, and the effect of it on the cloth must be small The operations are repeated if required Of the merits and value of the process it is impossible to speak, as it cannot be judged from a mere perusal of patent specifications —*Dyer and Calico Printer.*

THE Winnipeg dry goods firm of Lang & McKeichan is undergoing a change Mr. McKeichan and Mr Switzer (a silent partner) are retiring, and Mr Strachan, traveller for Bryce & Co., and C J Redmond, will become partners, and the style of the firm will be "Lang, Strachan & Co"—*Commercial*