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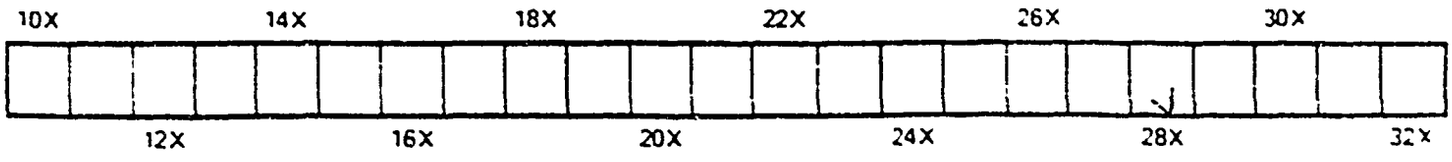

Canadian Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

VOL. IX. Subscription Can. & U.S. $1 per year Great Britain 5/ MONTREAL, SEPTEMBER, 1892. Single Copy, 10cts. No. 9.

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LATE "DOMINION DRY GOODS REPORT,"

A Journal devoted to textile manufactures, and trade in dry goods, clothing, men's furnishings, ladies' wear, etc.

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Review of Trade.

The harvest has now been gathered practically all over Canada, and the anticipations of last month in this regard have been fully realized. The quality of the Manitoba and Northwest grain has, as a rule, never been better, while the damage from frost reported in a few narrow sections has been almost nil. One authority estimates that there will be 20,000,000 bushels of wheat for export from the Canadian prairie regions. The prices, it is true, are low, but the people are in a cheerful frame of mind over the great bounties bestowed on them by a kind Providence, and well they may be.

In anticipation of the early results of the harvest,—for it is expected, in view of the lesson taught to the farmers who held back their grain for higher prices last year, that grain will be run into market early this season,—orders from the retail trade are pretty frequent and of fair volume. Payments are also improving, which is a good sign. Domestic cotton and woollen goods are both firm in price, and the mills are in almost all cases fully engaged on orders, some of them for months ahead.

The millinery openings of Toronto and Montreal this month were very largely attended, and trade in that branch is brisk.

The American silk manufacturers have combined in an exhibit of their products at the Chicago Fair, and are to have 18,000 square feet of space. About fifty manufacturers are to be represented.

Although the raw silk of China is intrinsically the best in the world, yet owing to primitive and faulty methods of preparing it for market, the Chinese make no progress, while the Japanese growers making a study of the subject, and devoting great care to the preparation of their silk, are actually beating the Chinese with a silk naturally inferior. The Chinese will not change their methods of work, no more than their social customs. The modern Japanese are eager for education and enlightenment on all subjects. A bill has just been introduced into the Japanese parliament providing for training schools in the silk trade, and financial aid is to be given by the government to exporters of silk goods.

The outlook in the silk trade seems gradually to be improving, especially in the ribbon branch. Late advices from Lyons, France, state that the looms of that important silk centre are fully engaged on bengalines, failles, changeables, and other weaves of silk. The Crefeld manufacturers are well supplied with orders. There is an improved demand for velvets in both Lyons and Crefeld. St. Etienne, Zurich and Basle are turning out vast quantities of ribbons. In the United States the Paterson firms are turning out very large quantities of goods, but the profits of manufacturers are cut very close.

The *American Silk Journal* announces that representatives of the silk workers from all the principal silk centres in the States will convene at Allentown, Pa., on the 8th of October. It is announced that important action will be taken on matter of great interest to the silk industry of the United States, and that the present condition of all employed in the craft will be thoroughly investigated. Delegates from open unions and Knights of Labor are to be admitted, which we take to be a wise step on the part of those concerned.

We mentioned some time ago the formation of a company in London, called the London Fabric Printing Co., to operate a new process, whereby fabrics such as carpets, cretonnes, etc. could be printed in any number of colors by one operation and with a speed hitherto unattainable. We see by the Kidderminster *Shuttle* that the company has held its first regular meeting to report operations. The president, who is W. H. Smith, mayor of Kidderminster, says a difficulty has been to get girls who can acquire the skill necessary for the work of cutting the blocks of color which is of a delicate character. For the present, the company will confine their work to the production of cretonnes. Whether it has been proved to be unsatisfactory on carpets does not appear.

It is said that the Vladikavka Caucasus Railway contemplates, with the assistance of two Russian banks, to start the direct export of Russian cotton, and has been authorized by the Government to establish special cotton stations with hydraulic presses at Tashkand, Kokan, and Samarcand.

An interesting report has been received by the British Foreign Office on cotton growing in Zanzibar. Experiments have proved that this portion of British Africa is well suited to cotton raising, and not only that, but the valuable sea island cotton, the supply of which is so scant compared with the common varieties, grows there prolifically. With the introduction of machinery and skilled labor England will have here a most important new field for the supply of raw cotton within her

own empire. Comparative independence of the United States in the supply of this staple may be achieved within the lifetime of the present generation.

British and American Cotton Trade.

There is a rather marked contrast in the tone of the reports on the cotton trade from England and the United States.

Returns just received from Fall River for the past quarter show that the mills there are now enjoying the most prosperous season ever known in cotton manufacturing of that leading cotton mill centre of the States. Corporations representing 46 mills have paid dividends of 853-, 880 on a capital of $18,123,000. The total dividends paid for the corresponding quarter of last year amounted to $223,250 In addition, the mills have added as much more to their surplus or reserve funds, and most of the mills have unburdened themselves of debts and interest accounts, and have made extensive alterations and additions. The demand for goods has not only absorbed their accumulated surplus of some months, but is beyond the present ability of the mills to take care of. Contracts are now made that will extend into October, 1893. The average mill which was paying 2 per cent. quarterly is now yielding 7 per cent. upon the selling prices of its shares.

On the other hand, the reports from the great cotton manufacturing centres of Lancashire are at the present most depressing. A writer in *Blackwood* for July, W. A. Abram, draws a particularly gloomy sketch which has agitated the trade considerably. He says,

"Taken in the bulk, it may be said that north and west of Bolton the spinning branch of the trade has been steadily going backward these twenty years. In the towns of Preston, Blackburn, Burnley, Darwen, Accrington, Haslingden, Rawtenstall, Bacup, Colne, Clitheroe, Padiham, Great Harwood, Oswaldtwistle, Chorley, Wigan, Warrington, Lancaster, and numerous populous villages between, one may look in vain for a new cotton spinning mill built since 1875, whilst a large number of old spinning mills having been burnt down are not rebuilt and many an old mill has had its machinery cleared out and sold as old metal, and been demolished as useless. The number of spindles running in Blackburn and Preston has been diminished by hundreds of thousands. In two of the smaller towns cotton spinning has threatened to become extinct by the suspension of business by owners of existing mills and the impossibility of securing fresh tenants even at the lowest rentals. Observers at a distance imagine that cotton spinning in Lancashire must be doing well, and point to Oldham where numerous spinning mills of the largest size have been reared, filled with the most improved machinery, and started since 1870; but Oldham alone no more suffices to show Lancashire trade flourishing than one swallow makes a summer. When and where is it to stop? We are told that the whole of the trade with India, China, and Japan in the coarser counts of cotton yarn up to 24's twist is regarded as already gone; and it is anticipated that in counts of yarn up to 30's that trade can and will be taken entirely by Bombay before half a dozen years have passed. Lancashire is not able to bespeak much sympathy in its continuous losses of foreign, colonial, and Indian trade from the country outside its own borders; perhaps because other interests, in other provinces of the kingdom, are also suffering more or less severely, and are quite absorbed in their own peculiar difficulties and troubles"

Mr. Abram refers to the competition of the Bombay cotton mills as carried on under conditions that are manifestly unfair to English mill workers. There has been the most scandalous overwork. People in the Indian mills have worked from sunrise to nightfall, and the wages earned were from 7d. to 8d. per day, or about a sixth of what would have to be paid under the same conditions to a Lancashire power loom weaver! England's trade with the British East Indies, in cotton piece-goods, in the year 1891, shows a decrease of £1,844,203 on a total value of £18,065,907. That is an immense decrease to have taken place in a single year. Ten years of this rate of diminution would suffice to wipe out the trade altogether, and to complete the ruin of so much of the staple Lancashire manufacture and industry as subsists by the supply of the markets of India—equal, roundly, to one-third of the entire export of cotton piece-goods. But whilst the trade of Lancashire with India in these fabrics has been falling off with such startling rapidity, within the years 1885-90 the number of cotton-mills in India has increased from 87 to 137; of spindles from 2,145,646 to 3,274,196; of power-looms from 16,557 to 23,412; of operatives employed from 67,186 to 102,721; and the quantity of cotton used in the mills of India from 2,088,621 cwt to 3,529,617 cwt.

Such is the cloudy picture drawn by Mr. Abram, but happily his views are not shared in by all, even of those in the trade who are suffering most from the present stagnation. J. C. Fielden, himself a Lancashire manufacturer, has an article in the August *Blackwood* in which he shows that the total output of goods has increased 20 per cent. in the past twelve years, and that "there is no fear of overtaking the world's real requirement in these goods seeing that it would take an extra crop of at least 10,000,000 bales of raw cotton to get a supply to the rest of the world equivalent to our home consumption of goods." The markets of India are only a small section of the world's market, and when that trade is supplied by the native mills other markets can be found. He does not see anything dreadful in Indian competition. The disturbance of trade there will be only temporary, and he contends that the very growth in Eastern Asia "is the true basis upon which a constantly expanding and profitable trade can be secured, and that if such efforts be directed in the paths for which India's resources and people are especially adapted, then untold benefits will accrue both to them and to us."

Mr. Fielden founds his faith on the future prestige of Lancashire in the unrivaled skill of the English operatives, the consummate organization of the industry, and the climatic advantages which Lancashire possesses. On this last point he cites a report of Colonel Shaw, late Consul in Manchester for the United States, to the effect that the advantage of climate in Lancashire over Lowell was quite equal to a protective duty of 7½ per cent. The high protective tariffs of other nations tend to restrict the possibilities of trading, but he shows that the £1,500,000 of the British annual export trade to America consists of such high-class goods as cannot be produced in that country, and cannot be excluded by her tariff. "So far as competition is concerned—viz., the competition of two parties in a third or neutral market, Lancashire," says Mr. Fielden, "has practically no rival. Now and again excessive stocks of foreign goods, fostered and developed under Protection, find their way into a neutral market; but after having examined several such cases—notably from Belgium and the

United States—I can safely state that such competition is very transitory, and has no element of permanency."

Another thing which has contributed to the present depression in Lancashire has been the fluctuations in the value of raw cotton. In 1890 the American cotton crop was poor in quality, but exceptionally abundant. The result was a serious drop in prices, and spinners who had been accustomed for several years in succession to do well by buying cotton early in the season have, during the past year, been caught, and have had to face a falling market for the raw material and a stagnant market for the manufactured article.

This much at least seems evident, that whatever effects the McKinley Tariff may have had on the woolen and other industries of Great Britain, that measure has not created the present prosperity in the New England cotton mills nor the present depression in the Lancashire trade.

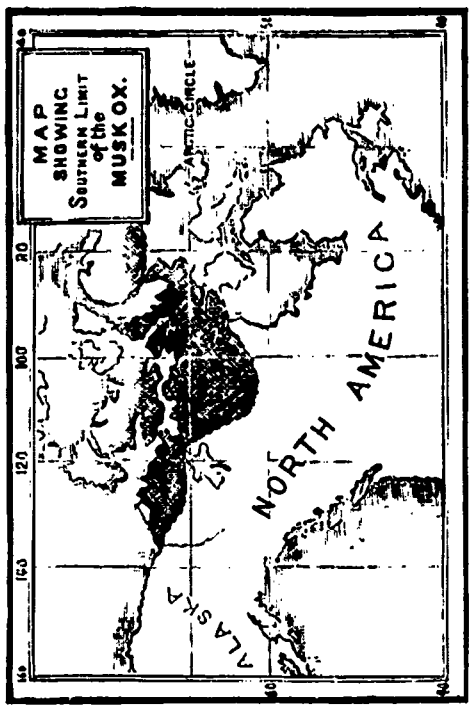
The Musk Ox.

For the benefit of our readers we have much pleasure in reprinting from the *Popular Science Monthly* part of a valuable and interesting article on the musk ox from the facile pen of Mr. Horace T. Martin, Montreal, whose articles on the beaver have been much admired, and whose book "Castorolo gia" on that subject is to appear next month.

Our first introduction to the musk ox (*Ovibos moschatus*) carries us back over one hundred and fifty years when Mr. Jeremie made his voyage to the northern parts of our continent, and returning to Paris took with him a sample of wool obtained from an animal he called the *bœuf musqué*. This name was also employed by Charlevoix, writing from Canada in 1744.

Scientists were thus made aware of the existence of a large mammal, which impressed them at once with its economical value; yet has it refused to come within the range of their keen observation with a persistance unequaled by any animal of its size and importance. It was many years later that the first scientific description appeared, given by Thomas Pennant from a skin sent to England by Samuel Hearne, and all acquaintance with the creature was derived from the Arctic explorers (Drage, Dobbs, Ellis, Hearne, Parry and others), who in general terms describe its appearance and give meagre accounts of its habits. Dr. Richardson in 1829 sums up the available information, and adds a few remarks of his own, which refer principally to the specimens then exhibited in the British Museum. Audubon in his valuable history of the Quadrupeds of North America, published in 1854, is confined almost to a literal copy of Richardson's account; whilst so late as 1859 Spencer F. Baird, in his ponderous volume, the Mammals of North America, dismisses the subject with a reference of barely twenty lines. His words, however, are significant; for, while he admits that the animal furnishes a most interesting study, he laments our scant knowledge of this sturdy Arctic inhabitant.

The special inquiry made three or four years ago by the government of Canada, as to the resources of the Great Mackenzie Basin, furnishes data of utmost value; the enterprise of the modern press in ferretting out and bringing to our notice every item which concerns itself with the great questions of commerce and social economy, and the progress made in polar research during the last thirty years, contribute many facts in connection with the study of the musk ox; and we are enabled by the gathering and arranging of these to give in a more complete form the history of this animal.



The musk ox is gregarious; and although all early statements agree in estimating the herds as composed of from twenty to fifty individuals, later information greatly increases these figures, and frequent mention is made of herds numbering from two hundred to five hundred.

As recently as 1859 Baird says that, owing to the extreme scarcity of the musk ox, he knows of but one specimen to be found in all the museums of the United States. This scarcity, however, might be accounted for more by the fact of obstacles in the way of entering the territories inhabited by the musk ox than by the actual rarity of the animal. From the evidence of fossil remains, it is clear that the musk ox long ago roamed westward to Siberia, and found its way westward even to the British Isles; but the accompanying map, the shaded parts of which mark of its present range, shows how restricted is its distribution. In the regions of perpetual snow it wanders making its way northward in summer, being found at the highest point our expeditions have reached, and returning in winter to its southern haunts which seldom touch latitude 60. Over the rugged wilds the creature loves to ramble, and although its appearance indicates awkwardness of locomotion, it is said to run fast, and to climb precipitous cliffs with wonderful ease. Its home is the "barren grounds" wherein vegetation is limited almost to a few lichens and the stunted spruce to which they cling. On this meagre diet the musk ox fattened and lived free from the assaults of almost every enemy, for the Eskimo alone penetrated its domain, being urged thither by hunger and the desire to obtain the valuable pelt.

The flesh is much coveted by the Eskimos, and the explorers speak in the highest terms of the relish afforded by the meat of the cow and the calf, although the meat of the bull is pronounced as offensively musky. Till within the last five years, in

our markets, the pelt was worth fifty dollars, and was accounted a rarity; but the extreme demand had led to more systematic methods of obtaining it; and whereas the total annual collection of pelts gathered by the Bay Hudson Co. had not exceeded a few dozens, the figures have suddenly risen till the annual collection now is counted by thousands.

With the last remnants of the mercilessly slaughtered bison still in our markets, and the air filled with protestations of theorists as to what might have been done to preserve those noble herds that thronged our prairies, we have history repeating itself under our very eyes in the case of the musk ox, and it is not venturing too rash a prophecy to state that the present ratio of increasing the catch will exhaust the supply within a decade.

The Canadian Textile Directory.

We have the third edition of this work from the publisher, E. B. Biggar, Fraser Building, St Sacrament Street, Montreal. This work gives an alphabetical list of cotton, woolen, cordage, carpet and paper mills in the Dominion of Canada, together with a valuable list of the retail dealers in the British American Dominions. It also contains a large amount of other miscellaneous information with respect to the Canadian trade with the United States, the tariff of Canada, the fur industry and the Dominion Trade with Great Britain. To Americans who have commercial relations with Canada or who desire to establish them, this book will possess great value.—*Textile Record of America*

Many persons imagine that the electric light gives no heat, and are much puzzled when told that the electric arc is the highest temperature known at the present day. It is perfectly true that arc lights are cool for illuminating purposes, for the actual mass raised to so high a temperature is extremely small for the enormous amount of light given out. It must also be borne in mind that arc lamps give off noxious nitrogenous fumes which are very noticeable in confined situations. Incandescent lamps emit absolutely no fumes, since they are hermetically sealed in glass globes. *On the other hand, they produce a considerable quantity of* heat, but far less than gas or oil lamps, light for light; and difficult as it may be to believe, wax candles give more heat, light for light, than either of the latter illuminants.—*Electrical Age.*

Amazon Velvet Skirt Facing.

The history of the velveteen trade shows a constant movement towards improvement in make, finish, and infinity of purposes to which it can with advantage be applied. Not only in this country but throughout our Colonies, on the Continent, and in America, "Manchester velvets" are much appreciated. For ladies' costumes they are noted as one of the richest and most durable fabrics produced. For embellishing other materials they are at all times largely in demand; while the lovely art shades now dyed find a ready market as a decorative furnishing fabric of rare beauty, and are almost indestructible. The difference between the heavy, clumsy production once known as velveteen, and the fine supple material which drapes in lustrous folds in the modern garment, is most marked; while the amount of hard wear which can nowadays be obtained is equally noteworthy. The latest purpose for which velveteens have been adapted, and for which the improvements we have detailed especially fit, is the facing of the bottom of ladies' skirts. This novelty is being manufactured and introduced by a Manchester firm of high standing in the trade, and is supplied through every wholesale and shipping house under the registered trade mark and name of the "Amazon" velvet skirt facing. As already pointed out, one of the greatest advantages is the durability of the material. Every lady knows the annoyance caused by the wearing out of the old-fashioned skirt braid, causing the dress to have a shabby appearance, while still good in other respects, and rendering necessary frequent re-bindings. The "Amazon" facings are cut on the bias, and will not ravel; in most cases it will outwear the dress itself. In point of neatness it is sure to be much appreciated, the pile of the velvet giving a smart finish to the bottom of the skirt; and while worsted bindings are apt to rub a fine kid shoe, the "Amazon" not only does not injure it, but the shoes would be more likely to gain by coming into constant contact with it. Dressmakers and costumers will undoubtedly soon note its advantages, anything that assists them to improve the appearance of their work being a decided gain. To the draper it is an easily saleable article and well worth attention, being conveniently put up in lengths of three yards, just sufficient for one skirt; while the width is exactly what is required. If it were wider it would be heavy and clumsy, and a narrower one would not answer the purpose. One dozen pieces of a shade are put in a box, while every fashionable tint to match dress fabrics is included in the range. In America it has already secured a large sale, and is greatly appreciated. With so many advantages, which have been briefly summed up by the manufacturers under the headings of durability, neatness and economy, we can hardly press upon our readers the desirability of stocking this useful acquisition of modern dressmaking. Its popularity is assured when once thoroughly introduced to the wearers, and the drapery trade as a rule is not slow to realize the excellence of an article so well calculated to advance their own interests. The distributer gets the material ready cut, which enables him to show a full range of colors without much outlay for stock.—*British Warehouseman.*

Evolutions in Fashion.

Nothing is more strange, writes the Paris correspondent of the *Warehouseman and Draper*, than to watch the evolutions of fashion the birth, growth and fall of each new idea, or its gradual transformation. Nowadays fashion proceeds by gradual development rather than by fits and starts, as it used to do, and those who care to study the productions of all seasons will find therein the germs of future styles as well as the reflection of those that have preceded it. Thus, in the materials prepared for early winter, we find chameleon-like combinations of colors which may easily be traced back to that most successful novelty of last season, the Velours Russe, which was, on its side, an outcome of the ribbed cloths and crepons on the one hand, and of shaded and shot silken fabrics on the other. At the same time, the vogue for plaids, which increases as the summer wanes, has had a marked effect on the fabrics brought out for autumn and early winter. One class of woolen shows these plaids in their usual brilliant tones and broad outlines, whereas another exhibits them in a soft and blending form, recalling the shaded and shot tissues of last spring. But even the former are not servile imitations of those that have gone before; British tailors and others—especially dressmakers, who provide the costumes of our little folk—will use a certain amount of tartan more than commonly, doubtless, but the choice of the majority will fall in preference on the new French adaptations of the plaid form. These consist for the most part of the materials striped in wide bands of black and navy blue, black and bottle green, or of dark green and blue interwoven with crossed lines of bright colors, scarlet and yellow predominating, with now and again a narrow line of white. The texture itself affects the corded style. We have here woolen reps, Lyons poplin, poplins proper and Sicilienne, both of French manufacture. As for the crossed lines, they are sometimes of wool with a satin finish, but more often of silk thread, which adds to their brilliance. The less severe styles of plaid made of the softly-blended tones deserve special attention from their greater novelty. At times the semi-defined plaid appears as a background to equally misty stripes, detached patterns of a very simple order of design and diagonal weavings. Now the stripes will be composed of dotted lines, now of consecutive bands made up of several shades. The patterns are generally woven in relief, often in silk, and will exhibit a rudely formed spot, star, or flowerlet; while the diagonal interweavings are usually little ribs or shaded twilled lines, running right across the material in a sloping direction, and are similar to those that appeared in the chevrons of last year, when the lines met in a single point in the centre of the breadth, or were carried from selvedge to selvedge in zigzag. In some cases the relative position of the two designs is reversed, and the plaid stands out more or less clearly on a mottled, curiously shaded chevronne or diagonal background. Somewhat the same effects are reproduced in silk, prominent stripings of which pile, or satin overlaying ghostly-looking tartans or plaids, lines cutting up fancy materials into large squares. The great idea seems to be to introduce as many colors as possible, the result, so far as woolens are concerned, being that the general tone is soft and restful to the eye: the silks, though brighter, are equally harmonious, being iridescent or of metallic radiance. Shaded velvets have suggested shaded woolen and mixed fabrics, the shadings, as in the former, growing from light to dark every six or eight inches. Many of the new woolens are rough, and there seems to be a tendency also to make them thick. Thin plain cloth will be reserved for special purposes, and no longer used as a dress material, its place being taken by coarse grained serge and a hairy make of Indian cashmire, both of which are produced with running lines of color and floral sheevings, as well as plain. Among the rougher woolens are some interwoven with dotted lines formed of knotted threads, but influenced by this general tone of fashion they follow a certain order and comprise sketchy stripes and plaids.

Foreign Textile Centres.

MANCHESTER.—There has been an abnormally small demand for raw cotton, but owing to the action of speculators the prices have been marvellously well maintained. There are at present a million more bales in stock than last year at this time. It seems, however, that the experience of the past two years has done something, though not a great deal, towards opening the eyes of the trade to the wiles of speculators. The season so far we believe to have been again highly favorable, says a contemporary, and our present estimation is to advance upon the estimate of eight million bales we gave some few weeks ago. The circumstances of the crop at the moment justify it. It will, however, be much safer to forecast the out turn towards the middle of November, because in the meantime the crop is liable to considerable contingencies arising from atmospheric conditions. At present the prospects favor the estimate we have made. Trade in the yarn and cloth sections is as unsatisfactory almost as it is possible to make it. The demand for yarn continues wretchedly bad, but owing to the holidays and the fact that spinners have reduced values so far that stopping their machinery is preferable to making further reductions. Prices are steady, especially in warp yarns. Weft yarns are in abundant supply, and are excessively bad to sell. Many spindles in both sections, spinning both sorts of yarns, are either being stopped or are to be put upon reduced working hours. The disposition in favor of an extensive resort to short time is rapidly growing. In cloth there is only a quiet demand, with considerable irregularity in values. Business continues to be put through in retail parcels, but the aggregate of these do not come anything near supplying the requirements of looms. Large numbers are standing idle, and the prospect affords no hope of an early resumption, much less of an accession to their numbers. A very depressed feeling prevails here regarding the outlook for the coming winter.

OLDHAM.—The Oldham cotton spinners complain loudly about the state of the trade. No attempt at organized short time is taking place, though it is expected that ere long, unless an improvement sets in, many employers will put it into practice. Indeed, it is reported that one or two coarse spinning mills in the town are about to close for a time. The Employers' Federation second circulars for a 5 per cent. reduction do not seem to be creating much interest in the town, although it is anticipated that the circulars will be filled up in the affirmative. The limiteds for the most part keep announcing losses, and more of the kind are expected to be declared this week and during the next few weeks. Indeed, directors say they are working now at a positive loss of ¼d. per lb. Out of 92 companies 52 possess adverse balances and 10 credit balances; 69 have "nil" standing against their names, and 40 paid dividends at their last stock-taking.

BRADFORD.—The wool market has undergone a change for the better, and confidence is gradually being re-established. Staplers continue to operate with caution, but sales are not forced. The prices for English wools continue firm, but Colonials are at very low rates. There is little change to report in the dyed worsted coating trade and worsted goods in suitings and trouserings. The demand is keeping up well, and there is a large business doing in these goods. In the fancy classes they are likely before very long to affect the sale of Scotch goods, which for the American market at least, are not now so much in favor as formerly. The taste is growing more pronounced for goods of the worsted descriptions, which in designing and colouring are more pleasing to the eye. These goods are quite a specialty of Bradford and Huddersfield. As ladies' dress goods invariably follow the taste and fashion in men's wear, it is well for merchants at least to keep this in view, as it is just possible that next year there may be a change, and that at least in the fancy classes in cheviot makes the demand may not be as large as at the present time. There is still no improvement in the cashmere trade. Prices remain very low, and the demand slow, but an improvement may be looked for during next month. There is a decided improvement in the blanket and flannel departments. It is evident that the trade in these goods is yearly increasing, and that Bradford is becoming more and more the acknowledged market for them. And this is very natural, as most classes are made in this neighborhood, saving a considerable cost in carriage to more distant distributing centres.

HUDDERSFIELD.—Business continues slack. With the exception of a few makers, who are engaged in the production of the finer classes of fancy cloths, the great bulk of manufacturers are without substantial orders, and are unable to provide their workpeople with full time. Complaints are still heard as to the keenness of competition, even in the case of the best cloths, and prices are so cut down that they have reached a ruinously low point, and seriously decrease the actual profits. Wools have not been selling very freely, but prices are well maintained.

LEEDS.—The woolen cloth trade is not in a very satisfactory state. Manufacturers are fairly well employed on old orders, but new orders, both for the coming winter and next spring, arrive only slowly. For heavy woolens there is not much demand. Fancy worsteds are a trifle lower in price because of over-production in certain quarters and a temporary cessation of demand on the part of Canada and America. Producers of serges are fairly well employed on new patterns suitable for next spring and summer, and for some of the rarest novelties in this kind of goods. Continental orders have been booked to a fair extent. Shipments to South America continue to increase, so that fuller employment is now found for producers of mixture tweeds, union satinets, diagonals, twills, and meltons. The German orders for delivery early next year are rather above the average. Travelers who are in Italy seeking to cultivate a trade for the summer of 1893 send home poor reports. They find not only orders scarce, but money as well.

LEICESTER.—Little improvement is to be reported in the wool market, although there are indications that the depression is passing away. The consumption is rapidly reducing the supplies in the hands of spinners, but they buy only to meet absolute requirements. The business done is at unprofitable prices. Choice Shropshire wools are a little more sought after. Long wools are very depressed, and rates continue at the lowest point. Lambswool, fancy and cashmere yarns are in fair request at steady prices. The yarn market is slowly recovering, but the business doing is at prices which leave only a fractional profit. Hosiery fabrics sell more readily, and deliveries for the autumn are being pushed forward, and stocks have been greatly reduced. Elastic web fabrics sell slowly; but cords, braids, and dress banding specialties are in good request for home and export.

NOTTINGHAM.—The lace trade is quiet, the demand for plain and fancy goods being small and prices low. A number of the best Lever's machines are still engaged in making the Irish guipure and purl varieties of lace, and there is also a steady demand yet for goods of the Valenciennes class, but the aggregate demand is insufficient to afford employment for all frames. The home trade shows little sign of improvement, but the export demand is, perhaps, less depressed. Maltese, torchon, and Brabant laces are slow of sale. Makers of curtains, window-blinds, and goods of a like character are restricting production. A steady business is being done in the various made-up goods. The plain net department shows no improvement. Scarcely anything is being done in stiff foundation goods, and the demand for bobbin nets is quiet. Spotted nets are not much wanted, and silk tulles are depressed. In the hosiery trade, black and colored cashmere and merino goods are selling to a fair extent, and there is also a steady demand for pure woollen goods. Cotton hosiery continues to meet with a dull sale. Gloves are in slightly better request, but silk hosiery is quiet.

KIDDERMINSTER.—In Kidderminster and district business all around still continues in a very dull and disheartening condition, the Brussels portion especially so. It is very doubtful whether such dull times have previously been known in the trade, and unless there is a decided improvement before the winter sets in the distress among the unemployed will be very serious. During the past week three more manufacturers have found it necessary to resort to short time in order to curtail production, and with one or two exceptions, the mills are only running four days per week. Nearly every week weavers are leaving the town for America, but whether they will find affairs there much brighter than here is very doubtful, as the bad state of the carpet industry is not confined to Kidderminster alone, other districts being similarly situated. Very few orders are coming to hand, and no very great alteration can be expected in this direction until the new patterns for the forthcoming season are placed before the buyers. No change can be reported in the Axminster branch, business is gradually declining and a large number of looms are practically idle. A few repeat orders have come to hand, which have not made any appreciable difference to employment, as it has been found, in the majority of instances, that the stock on hand has been equal to the demand. Complaints are also made as to the scarcity of new orders in the rug trade, but so far the decrease is not serious, and the looms are fairly well employed. Business in our wool market still continues to be unsatisfactory, and there is no change to report in prices. In the yarn trade there is nothing better to be reported. Spinners are complaining strongly for want of orders, a large number of spindles have been stopped, and two of the principal mills are now running short time. It is the general opinion that we may look forward to a more healthy state of business in the course of a month or so.—*Correspondent Warehouseman and Draper*

BELFAST.—The linen trade, if not to be described as active, is at least in a fairly satisfactory condition as far as most of the leading branches of it are concerned. Linen yarns, though being only dealt in from hand to mouth, are going into consumption at a rate about equal to the production, and stocks, which are extremely low, do not increase. Fine line yarns are very scarce in the market and hard to buy, while some medium counts can be purchased at rather cheaper rates. Fine tow yarns are also a shade easier in the market. Light and light medium linens in the setts suitable for makers-up are selling freely at full rates, the gradually improving home demand supporting a market already strong from the heavy orders received from the United States and the Continent. The Berlin makers-up have been wiser in their generation than their British brethren, who have been for the past eighteen months patiently waiting for lower prices in a market that has continued slowly but steadily to advance. The Berlin manufacturers, a considerable time ago, booked heavy contracts for the leading setts of plain linens at very low rates, and these are still being executed, more to their advantage than to that of the sellers. The United States demand is well sustained and the home trade orders are increasing in number and value as the season progresses.

DUNDEE.—The market is again quieter. Jute, which stiffened quite 5s. a ton, is again offering at £10 15s. a ton for ordinary firsts, Rallis Block D at 12, and RFC at £13 for late shipment. On the spot the market is also easy, and as the days now diminish rapidly when the new crop will be here the anxiety of sellers of spot jute increases. Yarns are this week also rather easier to buy. There is no quotable change, but the turn of the market is in favor of the buyers. For 8 lb. common crop the price is 1s. 2½d. to 1s. 3d., for extra quality in 7 lb. the price is 1s. 7½d. So with hessians. Ordinary Dundee goods are 13d. for 10½-40 in. The better qualities, especially in wide widths, have no relation to this price, but are as different in value as is good yarn from ordinary. Heavy yarns are wanted, and from day to day orders drop in, sustaining the price. Flax is easier to buy. Tows also are the turn cheaper, and the trade refuses to accept even low offers. Linen yarns are also a shade cheaper, and this applies to all the qualities, but especially to the commoner kinds. Linens are dull with a drooping tendency. The looms in Forfar and Brechin are not running full time. Arbroath goods remain very quiet. Heavy linens are difficult to sell, even at the low prices now current. The Dundee fancy jute trade is still depressed, only the very best makers being busy. Twines, cords, and ropes are in excellent demand, and this trade extends.

SOUTH OF SCOTLAND.—Reports from the South of Scotland tweed districts are not quite so satisfactory. Goods are low in price just now, and the present seems a good opportunity for laying in some reserve stock.

BERLIN.—Some orders have been received from England, where the business is, however, still very weak. The American business has this year concentrated itself in fewer hands than usual. Several firms have got some good orders to carry out for Canada. In the making-up branches the question is being continually asked as to what Paris is bringing out in the way of novelties for the winter. Paris has introduced no new fashion, but any quantity of novelties. Jackets, capes, collars, rotundas, long and half long paletots are being prepared in Paris for the coming winter. Velours changeant, velours deux hauteurs changeant, ottomans changeants, mattelassé, brocaded stuff, elegant esquimeaux and vicunia stuff, vicunias with damassé patterns (of mohair), vicunias and velours of narrow cut and shiny stripes have been made up in Paris. Elegant wadded mantles are not wanting; they are generally supplied with Turkish embroidery. Even the Burnus mantles so modern some years ago, are being introduced once more. We see at once that a regular fashion is wanting, and that for this reason everything has been patterned in the hope that everything which is pretty will be bought. In jackets a fashion has been introduced with an opening, which commences at the side seam and can therefore not be seen in front. This jacket is tight-fitting behind, with a treble seam at the back and cut with deep rock folds. The tight-fitting worked borders are trimmed with the new ostrich feather trimming, collars and jags are also trimmed with the same material. The model is of cloth stuff and wadded, but it has been copied in velour changeant with felt insertions lined with damassirte silk, has embroidered figaro jags, and also the jacket embroidered deep down in front with iris beads. Jackets with pelerines are oftentimes to be seen at Parisian model makers. The shoulder collars are somewhat puffed, are worked with high shoulders, and also ornamented with marabout, as is the whole tight-fitting jacket. The sleeves of the Parisian jackets are very broadly puffed up at the shoulders, and end up in very narrow cuffs. These jackets are to be seen in velours changeant with ottoman sleeves. In capes there is one model with a double puffed shoulder pelerine. At the back there is a loose double watteau fold. For ornamentation either a feather trimming or a marabout is used. This fashion is made either short as a collar or long as a cape, of silk plush or of plush changeant. Another cape model, lined with cloth, has long back insertions of lace and vest kind of border of velour changeant with bead embroidery. This fashion is tight fitting at the back and cut with deep fan folds going out from the figure. The arm portions are cut in one piece with the back, and fall down loosely from the shoulders in front. Another cape which is also made as a short collar, of cloth or velour changeant, is worked with shoulder collars. The borders are pointed in front so that the collar, that is the cape, is shorter at the sides than it is either in front or behind. A fan kind of watteau fold is also introduced. Shoulder collars and capes are ornamented with a feather trimming.

Chinese and Japanese Matting.

In the trade straw matting is an article of such importance that a few facts correcting erroneous impressions created by the "romancing" of those who never saw the straw growing or a loom working, yet pretend to know, may now, on the eve of a new season, be both interesting and instructive. Without giving the botanical names in Latin of the species of semi-aquatic plants used by the Chinese, Japanese and minor Oriental semi-civilized nations in the fabrication of the cheapest floor coverings ever produced, they may be simply described as of two families. In one of these the straw is round and in the other it is triangular in shape. In making what is called by the trade in this country "China matting" the triangular variety has been invariably used. Anything made of round straw is called "Japanese matting."

Just here it is well to say that in all countries where straw matting is woven, both the triangular and the round straws are used by the natives. The nationality of matting can't be said to depend on the straw out of which it is made. It can't be indicated by it. This is true because the identical varieties used in China and Japan are to be found in all tropical, semi-tropical and temperate latitudes the world over, this country being no exception.

It is idle and trivial to say matting is excellent because it is Chinese, or worthless because it is Japanese. It may be Siamese or Singalese. There is no worthless matting. Its value depends on its fabrication and its beauty to the eye. The length of time it wears depends on the amount of abuse and neglect to which it is subjected. It can be destroyed in a week. It has been known to last ten years. Both varieties of straw are cultivated. They can be, like rye and wheat, grown side by side under the same conditions.

Proper cultivation and irrigation produce in a given number of days a given height, which must exceed 40 inches when ready for the looms.

The fineness of the woven fabric depends on the size of the straw. The size of the straw depends chiefly on the density of the growing crop.

The height of the plant depends on the richness of the soil and the amount of water it obtains. At all times the ground, while the plant is growing, must be covered by a seething, stagnant sheet of water, from which the grass springs in some places to 6 feet without lateral branches.

When the crop has reached a proper height, the water is drawn off and reaping begins in the most primitive way. Men and women with hooks in their hands, while up to their knees in mud, slime and decayed vegetable matter, cut it handful by handful. Typhoons and storms of less violence destroy much by breaking and packing it down. Excessive rainfall greatly injures and impairs it. Warring clans and fighting neighbors destroy each other's crops by driving bulls or cows hitched to logs back and forth, crushing everything in contact.

On account of the excessive manual labor required from start to finish the stock can never be grown in this country and prepared fit for weaving.

The round straw is used as grown. The triangular straw while green or freshly cut is split from the bottom to top, and in drying the edges will curl over and sink into the pith, producing various irregular forms, but chiefly concave.

When woven the split triangular variety presents a much more uneven surface than the round. The tensile strength of the triangular sort far exceeds the round.

When cut and cured under the most favorable conditions its strength is surprising. When entirely devoid of moisture both are brash and wear away readily. Moisture is the life and strength of both.

The weaving is done in the far East entirely by hand, with both warp and filling in a damp state. It is a slow, tedious process, and results in great irregularities, which most persons fail to comprehend, but which can never be quite overcome.

During the last six years great improvements have been made in the manufacture of matting for floor coverings. For ages all the Asiatic nations have made mattings of grass or rushes, to stand, sit or recline on, for covering their roofs, their merchan-

dise, and for the sails of their boats. It was usually in short pieces, with poor selvage or none at all. Adapting these to the requirements of foreigners by producing a selvage and increasing the length to 40 yards is all that had been done up to 1886.

In that year the trade of this country was made acquainted with a variety of beautiful effects, the result of a foreigner's personal supervision and direction in the interior of Japan. These new styles for fineness of texture, smoothness of surface, complicated weaves and exquisite effect on the floor had never been equaled, and were a revelation. They depended chiefly on the natural smoothness and uniformity of the round grass used in their construction, no such result being possible with split triangular grass, out of which, as before mentioned, all the so-called China matting is made. Round grass has been tried repeatedly before, and shipments of matting composed of it had often been made to Europe and this country in small quantities as trials, all of which were failures.

The Japanese did not know how to make and finish it fit for the use of foreigners, and no one appeared to teach them until the time spoken of.

Most of the men still live who on its appearance in this country denounced it as worthless trash, unfit for use, a contemptible rival of China matting and a risky purchase for any dealer or consumer who fancied it.

They ceased talking in this way some time ago—about the time they had some to sell.

Thus is the value of many things made manifest, and in this way the doubts of many dissolve. For the use to which matting is put in this country that made from triangular straw, so-called "China matting," will always excel the round light weight in resistance to wear, and for this reason will be preferred by many.

Both the round and the triangular straws are excellent, each having qualities that have a claim on the dealer, who should use his reasoning faculties in buying. In both all expectations founded on reason can be realized. Both, like all other floor coverings, are now cheaper than at any period heretofore.—J. Crawford Lyon, in *Carpet and Upholstery Trade Review.*

Garment Dyeing and Cleaning.

(From the Dyer and Calico Printer).

(*Continued*).

DYEING OF WOOLEN GARMENTS.

A very large number of recipes may be given for the dyeing of woolen cloths, ladies' dresses or gentlemen's clothes or other articles; but to multiply recipes would serve no useful purpose and would unduly increase the length of these articles. A careful selection of proved recipes will be given, which will serve as hints to the garment dyer, and show him the lines on which he can work.

It may be pointed out that three principles underlie all methods of dyeing wool. The first of these is dyeing in a neutral bath, to which may or may not be added Glauber's salt or even salt. This is applicable to the use of the basic coal-tar colors and to the Congo series of direct dyeing dye-tuffs. Although practically dyed on wool by the same method, it is not advisable to mix the dye stuffs of the two series together with the idea of forming compound shades, but the dye-stuffs of each series may be mixed together in any proportion; thus Magenta and Auramine may be used to produce a scarlet or Benzopurpurine and Chrysamine to produce an orange, but Magenta and Chrysamine cannot very well be mixed together.

The second principle is where the dyeing is done in an acid bath. The coloring matter used is essentially of an acid character and most of those used belong to the great series of azo dyes, derived from coal tar. Only one dyestuff of a natural origin, indigo carmine, really belongs to this series. The dye-bath is best made with about 10 per cent of the weight of the goods of Glauber salt and 2 to 3 per cent. of the weight of sulphuric acid with the required quantity of dyestuff. One point worth noting: many of the acid colors will not dye unless some acid is added to the bath. This may be taken advantage of by not adding the acid until after the goods have been entered into the bath and worked therein, so as to get them thoroughly impregnated with the liquor, then the acid may be added. Working in this way, a more even dyeing is the result.

The third principle is where, owing to the nature of the dye-stuff, the wool requires to be mordanted to properly develop and fix the color on the fibre. The mordanting is done usually with chrome, iron, or alumina compounds, rarely with other metals. It may be done first, a proceeding which is applicable to all mordant dyeing colors, or it may be done after the treatment with the dyestuffs. This is commonly known as the stuffing and saddening method, and is only applicable with success to logwood, fustic and other natural coloring matters. The coloring principles of these have some affinity for the wool fibre, and will combine with it directly. The subsequent saddening develops and fixes the color. The dyeing and mordanting may be done in one bath even, and in this and the first case the mordant dyestuffs may be mixed with the acid group to form a variety of compound shades. In any case the combination of the dyestuff and the mordant is a matter of time, and unless this be given it is impossible to obtain a fast and even color on the goods. Examples of the application of the principles here laid down will be found in the recipes given below. Space does not admit of a fuller discussion of them.

57. *Prune on Woolen Dresses.*—The dye-bath is made with ¾ lb. indigo extract, ¼ oz. picric acid, ¼ oz. Acid Magenta, ½ lb. salt, 3 oz. sulphuric acid; work at the boil for 30 minutes, rinse and dry.

58. *Claret on Woolen Dresses.*—Prepare the dye-bath with 1¼ lb. cudbear, ¼ oz. Acid Magenta, ¼ oz. indigo extract, ¼ oz. Atlas Orange, 3 oz. Glauber's salt, 2 oz alum, and 1½ oz. tartar; work at the boil to shade, rinse in water, and dry.

59. *Crimson on Woolen Damask.*—For 50 yards. A fine shade of crimson can be dyed on woolen damask by the following process, which of course is applicable to other woolen goods. The dye-bath is made with 2 lb. cochineal, ½ oz Acid Magenta Blue Shade, 6 oz. Glauber's salt, 4 oz. cream of tartar, and ½ pint muriate of tin. Work in this for 30 minutes at the boil; then lift, rinse and dry.

60. *Wool Damask for Scarlet.*—For 50 yards. Clean in the usual way. Then dye in a bath made from 1½ lb. cochineal, ½ oz. Acid Yellow, ¾ lb. tartar, ½ oz. oxalic acid and ½ pint muriate of tin. Enter the goods while the bath is hot, and work at the boil to shade This will take about 30 minutes; then lift, wash well and dry.

61. *Wool Damask for Maroon.*—For 50 yards. The dyeing is done in a bath made with 1½ oz. Acid Magenta, 2 oz. Acid Orange, 8 oz. indigo extract, 8 oz. Glauber's salt, and 4 oz. sulphuric acid. The bath is kept at the boil for about 30 minutes, then the goods are lifted, rinsed well and dried.

62. *Bronze Brown on Cloth.*—The cloth is mordanted by boiling for 1½ hours with 2 lb. alum, ½ lb tartar, and ½ lb. bichromate of potash. Lift and dye in a liquor made from 10 lb. fustic, 1 lb. logwood and 3 lb. madder; work the goods in this at the boil for 1 hour, lift, add 3 oz. copperas; re-enter goods and work for 1 hour longer; then wash and dry.

63. *Dark Brown on Wool.*—Prepare the dye-bath with ¾ lb. indigo extract, ½ lb. fustic extract, ¾ oz. Acid Yellow, 1 lb. cud, bear, ½ lb. alum, and ½ lb. argol. Boil until the shade is developed then rinse well and dry.

64. *Dark Brown on Woolen Goods.*—Prepare a bath with 5 lb. fustic, 1 lb. logwood. 8 lb. sanders wood, and 2½ lb. sumac; enter the goods and work for 2 hours at the boil, then lift, add ½ lb. bluestone, enter goods, and work for 45 minutes at the boil, lift, add 1 lb. copperas and work 30 minutes longer, lift, wash and dry.

65. *Cherry Brown on Woolen Dresses.*—Boil the goods in a mordanting bath made with 1½ lb alum, ½ lb. tartar, and ½ lb. bichromate of potash for 1½ hours; then lift and dye in a fresh bath with 6 lb Brazilwood and 2½ lb. fustic; work in this for 1 hour then lift and add 1 lb. logwood; continue the dyeing for 1 hour longer, then lift, wash and dry.

66. *Seal Brown on Woolen Dresses.*—Prepare the bath with ¾ lb fustic extract, 7 oz. cudbear, 1½ oz. copperas, 2 oz. logwood, and 1 oz. blue-tone; work the dresses in this for a few minutes, then heat gradually to the boil and work for 30 minutes longer; lift and hang in the air until cold, then rinse well with water, and dry.

67. *Dark Brown on Woolen Goods.*—Prepare a bath with ½ lb. bichromate of potash, ½ lb. tartar and 3 lb. alum; enter the goods and work at the boil for 1¾ hours, then lift and dye in a fresh bath with 10 lb fustic and 3 lb. Brazilwood; work the goods in this for 1 hour at the boil, lift, add 1 lb. logwood, and work for 1 hour longer; then lift, wash and dry.

68. *Bronze Brown on Woolen Goods.*—Boil the goods with 2½ lbs. alum, ¾ lb. bichromate of potash, 1 lb. tartar and ½ lb. bluestone for 1½ hours, then lift and dye in a decoction of 10 lbs. fustic 5 lbs. Brazilwood for 45 minutes; lift, and boil in a bath of 2 lbs. logwood.

69. *Medium Brown on Woolen Dresses.*—Prepare the dye-bath with ½ lb. fustic extract, 5 oz cudbear, 1 oz copperas (sulphate of iron), ¾ oz. bluestone (sulphate of copper), enter the dresses at a hand heat, work for 30 minutes, then raise to boil and work 30 minutes longer; lift, allow to cool in the air, then rinse and dry.

70. *Bright Blue on Woolen Goods.*—Dissolve 3 oz. Alkali Blue 5B in boiling water, add 10 oz. soda crystals or 10 oz. borax, and enter the goods, working for 45 minutes at the boil; lift and run the goods through a bath containing ¾ lb. sulphuric acid to develop the blue. See the remarks made when treating of the

dyeing of silk with this blue which are equally applicable in dyeing of woolens.

71 *Fast Navy Blue on Woolens*.—First mordant the wool by boiling in a bath containing 10 oz bichromate of potash and 8 oz. tartar for 1 hour. Then dye in a bath containing 4 lb. Alizarine Blue SW and 2 oz. acetic acid. Enter the goods in the cold, work for 30 minutes, then raise the bath slowly to the boil, and continue for 1½ hours, then lift, wash and dry.

72. *Navy Blue on Woolen Tweeds*.—The following quantities are calculated for three suits: Clean with 2 lbs. soda, taking care that all grease stains are removed; then mordant by boiling for 1 hour at the boil with 8 oz. bichromate of potash and 4 oz. tartar; lift and dye in a fresh bath containing a decoction of 1 lb. cudbear and 4 lbs. logwood; work at the boil for 30 minutes, then rinse and dry.

73. *Blue on Woolens*.—Prepare the dye-bath with 1 lb. Fast Blue and ¾ lb. tartar; enter the goods at a hand heat, and work at the boil to shade; lift, wash and dry.

74. *Dark Blue on Woolens*.—Prepare a bath with 2 oz. sulphuric acid, 1 lb. Glauber's salt and ½ lb. Indulme; work at the boil for 45 minutes.

75 *Light Blue on Woolen Damask*.—For 50 yards. Scour well, then dye in a bath made with 1 lb. extract of indigo, ¾ lb. alum, 8 oz. cream of tartar, 4 oz. sulphuric acid, work at the boil for 40 minutes, lift and rinse in water, then dry.

76. *Peacock Blue on Woolen Dresses*.—Make the dyebath in 1½ lb. indigo extract, 6 oz. Glauber's salt, 3 oz. sulphuric acid, and ⅜ oz. picric acid. Work at the boil for 30 minutes, rinse and dry.

77. *Navy Blues on Woolens*.—Dye at the boil for 40 minutes in a bath made with 1½ lb. indigo extract, 1 lb. cudbear, 2 oz. sulphuric acid and 5 oz. Glauber's salt.

78. *Olive on Woolen Goods*.—Prepare a bath with 12 lbs. fustic 2½ lbs. logwood, 1 lb. madder, 1 lb. sumac and 1 lb. tartar; work the goods in this at the boil for 1½ hours, then lift, add ¾ lb. bluestone; re-enter the goods, work for 30 minutes, lift, add ½ lb. copperas, re-enter the goods and dye to shade; lift, wash and dry.

79. *Olive on Woolen Dresses*.—Prepare the dye-bath with 2 lbs Glauber's salt, 10 oz. sulphuric acid, 1¾ oz. Fast Yellow, 2¼ oz. Naphthol Yellow S, 1½ oz. indigo extract; work the goods in this at the boil for 45 minutes, lift. If not right shade, add a little orchil and more indigo extract.

80. *Olive on Woolen Dresses*.—Boil the dresses in a bath of 10 oz alum and 10 oz. sulphuric acid for 1 hour, then lift, and add 13 oz. picric acid, 12 oz. indigo extract; re-enter the dresses, work for 30 minutes, lift, add 2 lbs. orchil, again re-enter the dresses, and dye to shade; lift, rinse well and dry.

81. *Nile Green on Woolen Dresses*.—The dye-bath is made with 2 to 3 oz. Acid Green, 10 oz. sulphuric acid and 1 lb. of Glauber's salt, dyeing at the boil. Shade if necessary with Naphthol Yellow S

82. *Steel Green on Woolen Dresses*.—Prepare the dresses by boiling for 1½ hours with 8 oz. bichromate of potash, 9 oz. tartar and 1 lb. alum. Dye on a fresh bath with 10 oz. extract of logwood, 3 oz. extract of fustic; work for 1 hour at the boil, then lift, and add 1½ lb. indigo extract; re-enter the dresses, and boil for 45 minutes longer; lift, wash and dry. By varying the proportions of the three dyestuffs, different shades of green can be obtained.

83. *Sage Green on Woolen Damask*.—For 30 yards. The dye-bath is made with 1 lb. extract of indigo, 1 oz. picric acid, ¾ oz. Tropœoline Red Shade, 8 oz Glauber's salt, ¼ lb. sulphuric acid, dyeing at the boil for 40 minutes.

84. *Dark Green on Woolen Dresses*.—Prepare the dye-bath with 1½ lb. indigo extract, ½ lb. cudbear, 1 oz. picric acid, 3 oz. sulphuric acid and 4 oz. Glauber's salt, dyeing at the boil to shade.

85. *Light Green on Woolen Damask*.—For 50 yards. The dye bath is made with 1 lb. indigo extract, 1½ oz. Acid Green, 1½ oz. picric acid, 5 oz. sulphuric acid, 12 oz Glauber's salt, dyeing at the boil for 1 hour.

86. *Medium Green on Woolen Damask*.—For 50 yards. The dye-bath is made with 1½ lb. indigo extract, 12 oz. sulphuric acid, 12 oz. Glauber's salt, 2 oz. picric acid, 1½ oz. Acid Green, working at the boil for 1 hour.

D. H. Bastelo has bought the stock of furs of Bastedo & Co., Toronto.

A new company has been formed in Toronto for the construction of electrical street cars. The company has a capital of $80,000, and among its directors are two old wholesale dry goods merchants—Henry W. Darling of Toronto, and Charles Morton of Montreal. Several Montrealers and two or three New Yorkers are interested, and among other directors is M. D Barr, for several years the popular manager of the Edison Company in Canada. Mr. Barr is well known in electrical circles, and the new company has bright prospects of success.

A Defence of Shoddy.

The following vigorous defence of shoddy is made by an American firm of manufacturers, in reply to some of the recent speeches in Congress:— "It is surprising how little intelligent men in public life, and, for that matter, people in general, know what shoddy is, and the prejudice against the use of shoddy in woolen goods is simply a result of this ignorance.

The term of shoddy is applied to all fibres that have been carded from a fabric, no matter of what grade or quality. This is the first mistake. All wool fibres obtained from cloth are called mungo. These, again, are subdivided into new and old mungo. Old mungo is used only in the very poorest class of woolen goods—in satinets and cheap beavers, and there is no deception in making these. Everyone knows what goods they are.

If the clothing manufacturer wants a pound of goods for 40 cents or less, labor and all expense included, he must know that he cannot obtain cloth in which even new mungo has been used, and if there is a demand for that class of goods the supply will be forthcoming.

New mungo, made from fine all-wool cassimeres and from blue, black and brown new worsted dippings, is a choice fibre, and will equal fall Texas and California wool in length and strength, as the fabric has been but little pulled and not worn.

The term shoddy, however, applies to fibres obtained from fabrics which have not been fulled at all, viz., flannels and knitted goods. The lady, when she discards her opera hood or fascinator, does not dream that she will wear that same article again transformed into a fine cloak. Her fascinator was crocheted from pure fine Berlin zephyr yarn. She has not injured it at all. It has been a subject to very little wear, and when it is picked back into the yarn from which it was made, and that yarn opened up by cards into a wool fibre, it will take a very fine wool to compete with it.

It is ridiculous to assume that all this material should be burned up and new wool used in its stead, especially when new wool cannot even compete with this class of stock unless of very choice grade.

The same applies to the ladies' dresses. Many a gentleman wears on his back a part of the dress his wife discarded—that dress being made from the best Australian combing wool. Worked up again, it retains its character, is, of course, shorter, and cannot be combed again, but the fibre being used with new wool in fulled goods will make as serviceable a garment as could be desired.

And what shall we do with all the new cuttings and yarn wastes from specimens, etc.—ship them to England and re-import them in broadcloth and west of England coatings and beavers? We are importing white flannel cuttings from France at 45 cents per pound, including 10 cents duty, and these white cuttings made into shoddy to sell at 50 cents will in character distance a great deal of Texas and Territory wools and make a better fabric.

To classify such stock in the same category with old mungo and call it all shoddy will appear very ludicrous. The fact is, that these better qualities of shoddies are used as wool in the highest class of goods, and the consumer obtains full value—just the same as if he wishes to buy a suit all fitted for $6, he will get it, but there will be neither shoddy nor wool in it, except the wool contained in old cloth (mungo) and some cotton to help spin it."

The writer then shows the absurdity of the McKinley duty on shoddy:—

There is as little sense in placing a duty of ten cents per pound on stock worth but ten cents in Europe as there is in a prohibitory duty on thread and ring waste, as it deprives the domestic manufacturerer of just the stock he needs to compete with the foreign manufacturer, hence good shoddy comes high, and the consumer pays the price, without any protection having been afforded anyone."

Crompton, Applebee & Co. have bought the dry goods stock of Brown & Co., Brantford.

J. M. Thacker & Co. have opened a steam laundry at Vancouver.

Beaton & Pyke, general store, South Westminster, burned out.

The old London firm of Leaf Sons & Co. have amalgamated with Rawson & Co., and the new concern will retire from the Canadian dry goods trade altogether. This firm was one of those who sold direct to the retail trade of Canada.

Says the *American Carpet Trade* of Philadelphia:—The Canadian carpet factories are still watching the customs closely, but nothing final has yet been achieved. A member of the Armstrong Carpet Co., of Guelph, said to one of our staff last month that an increased duty was hoped for on all kinds of carpets and rugs. He further remarked that Canada required nothing less than a "McKinley bill," and that all the manufacturers there would rejoice to see it.

J. W. Harvey, dry goods, Westminster, B. C., announces that he will retire.

The W. E. Sandford Manfg. Co. have moved their Toronto office from Wellington st. to 50 Bay st. They are represented in Toronto by W. S. Alley and Geo. D. Hamilton.

E. Senior, late lessee of the Campbellford woolen mills, is now somewhere in the States, and the owners of the property are trying to rent the mill. Mr. Senior left the affairs of the mill in pretty bad shape. Benson & Co, who brought an action on a wool account, lost their suit and the ordinary creditors got nothing. Mr. Senior's fault was that he never produced goods like the sample he showed, and Messrs. Geo. D. Ross & Co. gave up his agency in disgust on this account. From that time all was chaos with Mr. Senior.

We are pleased to hear that Mr. Richard Ranson, formerly and for many years with Wm. Green & Sons, has been engaged by the Carpet Manufacturing Company (Morton & Radford) to represent them as their travelling agent in Canada, where he is well known to those in the carpet trade.—*Kidderminster Shuttle.*

Manufacturing Department.

SEVEN YEARS' APPRENTICESHIP IN A WOOLEN MILL.

A DETAILED ACCOUNT OF THE BUSINESS FROM THE FLEECE TO THE FINISHED FABRIC, BY GEO. DAMON RICE, JR.

[Author of "Treatise on Woolen Textile Manufacture," "Worsted Manufacture," "Designing Woolen and Worsted Goods," "From Apprentice to Superintendent," "The Structure of Textiles Fibres," "An Essay on Wool Carding and Spinning," "An Essay on Finishing Woolen and Worsted Textiles," etc.]

ARTICLE 4.

FELTING PROPERTY OF THE WOOL FIBRE.

The serrations on the fibre of wool are plainly evident to a sensitive touch, and it is mainly owing to their existence that comprises a difference between wool and all other materials used in the manufacture of textile fabrics; to their existence in the fibre is also due the felting power of all woolen fabrics. It is the important factor which causes the fabric, when exposed to the pressure, moisture and heat of the fulling mill, to mat and felt and shrink in length and breadth, and increase in thickness.

The excellent felting properties of the Australian wools are well known to manufacturers of woolen goods. A single fibre of this wool is found to contain as high as 2600 serrations in an inch, an even greater number is found on a fibre of the world-famed Saxon merino wool. The fewer they are, the nearer the substance approaches the state of hair; although fulling and felting depends largely on the serrations for shrinking and matting the fabric, other less important and minor features have been added by nature, which act as auxiliaries to its scaly surface. These qualities combine elasticity and strength. Therefore, the felting property of the woolen fibre is attributable to the mechanical formation of it and of its strength and elasticity. The essential properties of all wools intended for cloth manufacture consist in elasticity and strength of fibre, a tendency to felt, a good clear whitish color and a fine, soft feeling staple. Fabrics composed of wools of this description will possess all the necessary qualifications of a perfect cloth.

The wavy and twisted character of the wool fibre is caused by the unequal contraction of the outer scales, and depends in a great measure upon the hygroscopic nature of the wool. The amount of curl or twist in different qualities of wool is very variable, being, as a rule, greater in the finer grades, and diminishing as the fibre becomes coarser. The diameter of the wool fibre varies from one five-hundredth of an inch to one two-thousandth of an inch, and the number of curly, twisted formations from two or three to as high as thirty to an inch. This curl is of considerable importance to the spinning process as it favors the production of a much finer thread than could possibly be obtained if this property was absent. By reason of its greater development in wool than in cotton it is possible to spin yarn of a lesser number of fibres with the former than with the latter.

The finest grade of wool is procured from young lambs, but as the exceedingly high cost of this wool prevents its general use in any but fine and expensive cloths, it is comparatively but little used. This excellent wool is sheared from the young lambs when five or six months old, and is generally known as lamb's wool. A single pound of this fine staple is frequently carded and spun to the remarkable length of 19,200 yards, being equal to 15 run yarn.

THE SECOND CLIP

is obtained some six months later, and is longer in staple, not quite so fine, and is called "yearlings." From this time on, the sheep is sheared every spring and fall, the wool thus procured being designated as "fleece wool." This clip like the second cannot compare with the first growth, either in fineness of fibre or softness of handle; it is also somewhat coarser than "yearlings." However, it is a good wool, and is frequently utilized in the construction of a large variety of woolen fabrics.

PULLED WOOL

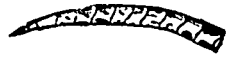
is procured from the tannery. The skins of the sheep are steeped in a strong solution of acids, which tend to loosen the wool from the skin, thus facilitating its easy removal by hand; the wool is then washed in a mixture of soap and water, and dried, and compressed in large bales, and shipped to market.

Pulled Wool, although adaptable to the majority of fabrics is inferior to fleece wool when a clear white cloth is required. It is also difficult to obtain a soft, delicate color on it, for the reason that the chemicals used in the bath at the tannery have somewhat altered the former features of the fibre.

For the manufacture of cassimeres, colored knit goods, flannels, blankets, etc., pulled wool is very desirable.

DEAD WOOLS

are obtained from animals slaughtered for food. It is considered inferior to wool of the same quality clipped from the



A FIBRE OF DEAD WOOL (magnified).

living animal, hence its market value is proportionately decreased. In the manufacture of cheviots and goods requiring a medium class of wools, this grade may be successfully used in combination with better qualities.

SELECTING WOOLS.

In selecting wools for manufacturing cloths, the first point to consider is to what extent will the goods require fulling. If broadcloths, heavy beaver goods, or flannels are to be made, it is important to employ a wool of soft, sound, fine texture in which are indications of good felting powers, and containing a uniform distribution of animal grease.

For the manufacture of fine worsteds and dressed or boiled-faced goods, a very fine long stapled wool is required, which can be procured only by the worsted combing process, by which method all the fine, long, lustrous fibres are mechanically extracted from the coarser and shorter ones.

For cassimeres, cheviots and similar goods where the felting properties are of secondary importance, a good, sound, elastic fibre is required.

For the manufacture of doeskin goods and felt cloths for billiard table covers, the finest Saxony wools are preferred, for the reason of their excellent felting features.

Blankets, tweeds and other coarse goods are made of wools

of a moderately thick fibre, such as the half-bred New Zealand, California, Montana and Texas wools.

Dress goods, ladies' sackings, and cricket cloths require a fine stapled wool, as the yarn used in the weaving of these fabrics that are made is usually drawn to about 9600 yds in length, equal to six run. It is also important that a fine wool should be employed in the fabrication of this class, for the essential reason that a smooth uniform finish is absolute.

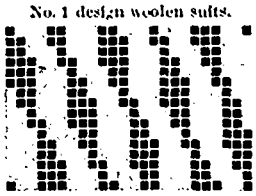
Union goods made of cotton warp and wool or shoddy filling are generally woven with a low priced woolen fibre, intermingled with shoddy or mungo for filling. Frequently a fine woolen face is produced in the loom on the goods, and a backing of clear shoddy is put on. Such fabrics are of an inferior quality, and lack elasticity and durability and all the prominent features of the all wool goods.

(Continued.)

Woolen Suiting Designs.

Dark indigo blue 6,144 yards per pound, middle shade blue same length, chocolate 4,700 yards per pound, 8 shafts, 24 end draft, 16 picks of filling to the round, 20 dents per inch, 3 in a dent, 56 picks of filling per inch, 68 inches in reed to finish 56 inches. Warp pattern 2 indigo blue, 1 orange and white twist equal to 6,000 yards per lb., 2 middle shade blue, 1 orange and white twist, filling all chocolate. Second pattern, 3 dark brown, 3 drab, filling all dark blue.

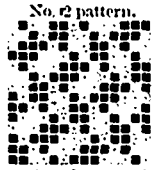
No. 1 design woolen suits.



Draw.

Chain plan.

No. 2 pattern.



Second design 14 harness, 14 to round straight draw, 10 dents per inch, 4 in a dent, 40 picks per inch of filling, 68 inches wide, to finish at 56 inches. Orange and light blue twist 5,000 yards to the pound, dark brown same length per pound, filling purple 4,000 yards per pound, gray same length.

Warp pattern 2 orange and light blue twist, 2 dark brown, filling 2 gray, 2 purple; every repetition will give somewhat of a different effect, because the pattern of warp and filling being 4 will not divide into 14 ends; the draft, consequently the warp and filling of the shade materials fall in different relations to each other.—Pendle in *Am. Wool Reporter.*

Wool bleaching was formerly done almost entirely with sulphurous acid, though the bleach was not permanent, and the wool resumed its color when the acid was taken out by soap or other means. Now peroxide of hydrogen is used with better results, 5 per cent. solution of 12 vol. per oxide is mixed with a weight of sodium silicate (a solution 30 deg. Tw.), equal to 5 or 10 per cent. of the weight of the wool. The wool is soaked for ten or twelve hours in a bath of this.

For thousands of years the only raw materials of textile fabrics were from the animal and vegetable kingdoms—such as wool, hair, flax, silk, cotton, jute, etc. Within the past quarter of a century the mineral kingdom has furnished a remarkable fibre in asbestos, and now the sea itself is yielding up a material for the spindle and loom. The pinna, or wing-shelled bivalve, found in several parts of the world, but chiefly on the coast of Sicily, is a veritable silkworm. It spins fine silky filaments at will, which it uses to attach itself to favorable positions. The fibres are extremely fine, and after being washed are spun in the ordinary manner and woven into fabrics of much delicacy. The fibre is called Bysens, and is of course necessarily expensive owing to the small quantities obtainable. It is new, and yet old, for its use was known to the Egyptians, who employed it in the manufacture of the fine mummy-cloths, some of which are to be seen in museums.

Regarding the new Indian crop of jute, which is of special importance in view of the state of the trade in Scotland, the *Indian Textile Journal* of July says .—The area under the jute plant this season has been estimated at from ten to fifteen per cent. over that of last year. The plants are growing well, and although retarded by the want of rain three or four months ago, the later showers have given them a satisfactory impetus. From what can be seen at present, the quantity and quality of jute which will be obtainable from the present crop will both be much superior to that of 1891. A supply of ten million cwts., available for export, is the estimate at present, so that Dundee can look forward to relief from the shackles of short supply and prohibitive prices which have had her in their grasp during many months.

In the fire which destroyed Hodleyville, a suburb of Quebec, this month, several rope makers, including the brothers Drouin, were burnt out. These two brothers were formerly employed by the Hedleyville Rope Works, and when that factory was sold out to the Consumers' Cordage Co., and closed up, they were thrown out of work. Not having the means to move away to seek employment, much less to build a rope-walk for themselves, these brave fellows, with the industry and courage characteristic of the French Canadian race, set to work in an open field and made ropes by hand. For aught we have heard they were still working on in this way when their dwellings were burnt down the other day. If they have lost their all in this fire they should not want for friends now, for men who are possessed of such a spirit of sacrifice and perseverance would make the best kind of employees.

A cable of 5th inst. says: For the year ending August 1 Egypt's cotton crop amounts to 4 270,000 cwt., the yield being 15 per cent. over that of the preceding year, which had the highest record. Next season is expected to fully equal this, but the market value of cotton is so low that there is little profit to cultivators. Twenty four thousand bales have been exported, to the United States, which has taken largely increased amounts of cotton during the past few years. The use of Egyptian cotton has increased so largely indeed that some McKinleyites are now demanding a duty on raw cotton. Considering that the demand for Egyptian cotton is because many American mills have gone into the manufacture of new lines of goods which cannot be successfully produced without this particular grade of raw material, the cry for the duty is even more unreasonable than that in relation to raw wool.

The raw fur market of Montreal is strong. Enquiry among the trade elicits the fact that the stock of Persian lambs and other Russian furs in Canada is extremely light. It happens also that the stock in New York and other American fur centres is also light, and as no new furs are coming here from Europe, this class of goods is rising in price. The truth is, there were no buyers having Canadian relations in attendance at the last Nijni Novgorod fair, and the uncertainty of things in that quarter throws doubt upon the future of the trade. The immediate tendency in the Canadian home trade—whether the rage will be for curly furs, dyed goods or natural furs—this fall and winter has not yet been determined, but it seems at least likely that there will be an advance in many lines of raw furs.

Some of our contemporaries have become needlessly excited over the importation of rags, and the danger from cholera arising therefrom. One usually well informed journal is under the impression that cholera germs would be conveyed in cloth containing a proportion of shoddy made from infected rags. Whatever danger there may be in the rags themselves, there is absolutely none in the shoddy made from them for no disinfection could be more complete than that to which woolen rags is subjected under the action of the acids and chemicals that are necessarily used in their conversion into wool stock; and by the time it is made into finished cloth no article could be more free from germs that would convey disease. Any one who knows the process of making shoddy need not be told this, but it may be repeated for the benefit of those who do not know. The same remarks apply to cotton, jute and linen rags that are made up into paper. Doubtless there is danger in infected rags before they are digested in the chemicals, but even this danger might be overcome by supervision in their importation. However, the fact stands that rags for paper mills are now scarce in Canada and the States, and it is said the mills at Holyoke, Mass., are to close down for want of them. The Canadian mills are foraging for them, and the price has gone up about ten per cent. within the past month. The American Government appears to have prohibited the importation there of rags from Canada, at least the railways have refused to carry them; while no embargo is placed on American rags coming here. In the case of woolen rags, though they are firm in price, no actual advance has taken place in this market, and as stocks are believed to be fairly good, no marked rise is likely to take place unless the cholera scare is prolonged.

For the past ten years the possibilities of the ramie fibre as a textile has been the subject of almost constant discussion in the trade papers and of experiment among scientific men connected with textile manufactures. There is no more lustrous vegetable fibre than the ramie, while at the same time it is the strongest of all textile fibres, so that its desirability as a material for fabrics is conceded on all hands. The plant grows prolifically in semitropic countries; and the only difficulty about it is the one of separating the fibre from the gum of the plant and preparing it for spinning. This unfortunately has been a most obstinate difficulty, and has hitherto only been partially overcome. One firm in the United States recently spent $100,000 on it, and gave it up at last as a failure. One or two firms in Europe, however, have at last succeeded in putting ramie yarn on the market, and now an American firm announces that it is preparing to furnish yarn to manufacturers. The latter firm have appointed B. L. Nowell & Co., 14 Nazareth st., Montreal, as their Canadian agents, and Mr. Nowell has placed a sample of the fibre in the office of this journal. It is certainly a most brilliant and beautiful fibre, whether in the dyed or bleached state, and the samples we have are far ahead of those submitted to us about three years ago by Mr. Toppan, of Salem, Mass., whose work was described at the time. If this fibre can be supplied here in the shape of yarn it will certainly be a great boon to many manufacturers. These yarns, of course, should come in duty free as jute and other yarns that are not made in Canada are brought in for the use of cloth manufacturers. Those interested in this trade should communicate with Mr. Nowell.

A despatch to the *Freeman's Journal* from Belfast, dated Sept. 12th, says the depression in the linen trade has caused the suspension of a firm in that city with liabilities amounting to £30,000. Another firm in the same trade has failed with liabilities of £20,000, and more failures are expected. The despatch does not state, but we infer that the failures alluded to are among firms depending upon the home trade and not on foreign trade.

As indicated in previous notes, the labor troubles in the English cotton trade have not been settled by the recent compromise. The depression in the trade has at last forced the spinners to carry out their much talked of reduction in wages, and a five per cent. reduction has been decided on by the Master Spinners Federation over 80 per cent. of the mills favoring the step. The workmen who contend that a restricted output, or a reduction of hours of work, would serve the trade as well as a cut in wages, propose to strike against the reduction.

The new American linen mill at Sioux Falls, South Dakota, is finished and in partial operation. The stockholders feel confident that the enterprise will be a success. The superintendent is a man of 25 years experience in Belfast, and the machinery is also Irish. Both wet and dry spinning is done, and the goods to be made are Turkish towels and like goods.

According to the thirteenth census bulletin issued at Ottawa, there were in 1891 2,495 persons employed in the cotton mills of Canada, of which number 1,450, or a little more than half, were women and children. In 1871 there were 745 hands employed, and in 1881 there were 3,527, there being at the latter date about 80 per cent. women and children. The average wages paid in 1881 was $227 per year, and in 1891 $280, showing an increase of 23 per cent.

Commenting on the alleged processes of fireproofing cotton L. M. Norton asserts in the *Boston Journal of Commerce* that cotton cannot be made fireproof, and it cannot be treated so that it will not burn. It can only be rendered less liable to easy ignition by chemical treatment. Various treatments have been suggested, of more or less merit, but it is said a solution of 3 parts of borax, 2¼ parts of Epsom salts and 20 parts of water is the most effective. The alum water alone will have some value, but the efficacy of the treatment will be greatly increased by the use of gelatine. Among other solutions is one containing ammonia salts and borates. A number of good receipts are to be found in Harris' Dictionary of Insurance Chemistry. Paper is now being made fireproof, and is extensively used in the construction of dwellings. It can be made of any color desired, and can be polished and worked like most woods.

Those concerned with the fur trade will be interested in knowing that by the new game law of Ontario, no beaver, otter or fisher may be killed till the year 1897. Squirrels, hares and rabbits may only be taken from the 15th September to the 15th December; moose, elk and reindeer or caribou are not to be killed till 1895; and deer may only be shot from the 15th Oct. to the 15th November.

One of the first trade journal editors who has had the honor of a seat in the Imperial Parliament is J. W. Benn, editor and proprietor of the *Cabinetmaker and Art Furnisher* of London.

It is likely that at last the customs department will have he uniform system of appraising for which the dry goods trade have long contended. That foreign dry goods should be allowed to enter Canada under one head and at one rate of duty at Peterboro, and under another head and a different rate of duty at Moncton, is absurd as well as unjust, and the wonder is that such a state of things has gone on so long.

The Germans, in their efforts to retain their hold on the American trade in cotton hosiery since the McKinley tariff came into force, have hit on the clever plan of sending their goods to the States "in the grey," and having them dyed and finished by American firms. By this means they were able to avoid the higher duty, and by reducing the cost of production they have held their own all along, much to the chagrin of the Philadelphia manufacturer.

The new cotton crop is beginning to come in, but it is difficult to form a correct estimate this year as to the magnitude of the crop. Even the official reports from Washington cannot be depended on as usual this year, because of the anxiety of holders of old cotton and growers of new to avoid further fall in the market. Private advices lead us to think that the crop will prove larger than has generally been supposed, whatever may be said as to quality. With the quantity in store in England and the States from last year, and with a pretty large new crop coming in, it is unlikely that there will be any general rise in raw cotton or in manufactured goods, while it is just possible that an actual fall may take place. Growers, however, complain that the present price barely covers the cost of raising.

The gold that the Chinese use for embroidery consists of paper gold, but of course we must not think of our paper. Both the Chinese and the Japanese know how to make out of silk waste a paper which is far more tenacious than leather, and is far more durable than the thin threads wrapped round with gold which were used for the European embroidery of the Middle Ages. This paper is covered with pure gold by means of a gum, then it is cut into very fine strips, and these strips are wrapped round a silken thread. The gold thus prepared is variously toned, having bluish, yellowish, and reddish shades, and this variety of gold contributes not a little to the effect obtained by Chinese coloring. Occasionally this gold is put on paper, which is strong enough to be cut into strips; the lustre is more dazzling, but the durability is not so great as in that which is wrapped over a thread.

A despatch from London states that a circular has been issued calling a meeting of the shareholders of the great Bradford manufacturing concern, Sir Titus Salt, Sons & Co. (Limited) to consider a proposition to wind up the company. The circular states that the English plush trade generally, in which the company have been largely engaged, has fallen off to about one-tenth of what it was before the McKinley tariff went into effect in the United States. Since the above was written the meeting has been held, and it has been decided to wind up the business. The liquidators will work up the material now on hand and fulfil all contracts, and they are also empowered to consider any scheme brought forward for reconstructing the business.

Cost of Transporting Cotton.

It is interesting and suggestive to note the comparative cost to England and the New England States of raw materials for woolen and cotton goods. Owing to the heavy duties and the increased cost of transportation, New England pays very much more for the foreign wools which it uses than England does, as is very well known. This of course handicaps us at the start, and prevents us from producing woolen goods, in which wools like Australian are used, as cheaply as Great Britain. In the case of cotton, however, it is entirely different. Cotton grown in our southern States can be landed in Liverpool practically as cheaply as in Boston or Fall River, there being only a very few cents per bale difference in our favor. Cotton that is shipped from many interior southern points to Liverpool, from such points as Memphis and St. Louis, can be landed in the English market as cheaply as in Boston. We have actually seen two bills of lading, which show that a certain amount of cotton was taken from Memphis to Liverpool at 27d per hundred lbs, and that it cost 55½c. to land the same amount of cotton from Memphis in Fall River. In this case Liverpool actually secured her cotton at a trifle less cost than Memphis.—*Am. Wool and Cotton Reporter.*

The hands of the Star woolen mill, Hespeler, held their annual picnic to Hamilton Beach.

The Gillies woolen mill at Carleton Place is advertised for sale among other property of the estate of the late John Gillies. The announcement is made by James Gillies as executor.

The other day at Moncton a boy named Frank Tower, son of Cyrus Tower, while at work in the cotton mill, fell from the third story of the building through the elevator, breaking his thigh bone.

It is reported, says *Wade's Fibre and Fabric*, that the American Spool, Bobbin & Shuttle Co. of Boston, which is a combination of many of the spool, bobbin and shuttle works of New England, is fast breaking up, and local shops are being leased and started

A remarkable theft is reported from Stratford, Ont. A farmer in the township of Ellice had his flax crop pulled from a field of nine acres, and had left it on the ground to be retted by the dew. When he again went to the field he found the whole crop had been stolen. No trace of the culprits has been found.

About two months ago, reports the St. John *Sun*, John D. Smith arrived in that city on a visit for his health. After staying a short time at the Royal hotel he accepted an invitation to stay with his relative, Frank Smith. Instead of regaining his lost health, he gradually began to decline, and two weeks ago his daughters arrived from Paterson, N. J., and were with him when he died on Sunday, Aug. 28th. Mr. Smith came to St. John from England in 1854, and after being in the employ of Mr. Lawton in the dry goods business for a time started a tailoring establishment in Germain street. About thirty years ago he went to Paterson, N.J. He was instrumental in starting the first silk factory in Paterson, and at the time of his death was manager of the Phœnix company. His remains were taken to Paterson.

The CANADIAN JOURNAL OF FABRICS, on the subjects cognate to its sphere,—and it confines itself strictly to these, invariably speaks with a fullness of knowledge and at the same time a moderation that must of necessity win respect. It has a large field for its enterprise, and fills it worthily. To its other excellences it adds the by no means slight one of being thoroughly British-Canadian in tone—*Orillia Packet.*

Mr. N. L. Chrestensen, of Erfurt, Germany, has removed his London office from Newgate street to Little Britain, Aldersgate street. This move has been rendered necessary by the extension of his English trade, which is under the management of Mr. G. Walker. The new premises are much larger than the old, and have now a fine stock of natural grasses, rare flowers, mantle and fire place ornaments, etc., which are the specialties of the firm.

Progress of Lachute.

A representative of the JOURNAL OF FABRICS paid a flying visit to Lachute the other day, and was struck by the continued evidences of progress apparent in that picturesque town. Near the railway station a large brick hotel is in course of erection and will probably be finished before the end of the year, while in another quarter a fine new building for the Lachute Academy is being built. This Academy is one of the best conducted in the Province of Quebec, and the new building will be very completely equipped. Mr. J. C. Wilson, proprietor of the Lachute Paper Mills, himself an old school teacher, has shown his public spirit and his interest in the cause of education by offering to furnish the principal's office in the new building.

The most important feature of the progress of Lachute's industries is the large additions that are being made to the paper mills, which are the largest of all Lachute's industries and which are in fact, the largest mills in Canada devoted to the production of manilla and similar paper. The mill is built of solid blue limestone of excellent quality all quarried on the spot, and rests on a solid rock foundation. It is 560 feet long by 130 in its widest part, and has three stories, including the basement. It has a large new office of cut stone now in course of completion; and the central part of the main structure is surmounted by a stone tower, which is not merely an ornament but serves a useful purpose in holding an immense tank of water for fire extinguishing purposes. The appliances which Mr. Wilson has introduced from time to time to provide against fire have gradually reduced the insurance rate till it is now the lowest of its class. By this wise foresight he has saved enough in insurance premiums to more than pay interest on his outlay for these provisions—a fact which our manufacturing readers should make a note of in their own interest, and which proves what this journal has contended, that every provision against the risk of fire is a good investment in the manufacturer's own interest. At the west end of the mill a large new wing about 100 ft long, of solid stone, is rapidly going up, and will ere long be ready to receive its equipment of machinery. A new paper machine of the most improved type will be erected here, with room for another and the output of the mill will then be fourteen tons of manufactured paper per day. The manilla papers manufactured here are made from jute and other vegetable fibres combined with manilla paper stock, and it may be worth noting that already Mr. Wilson's mill uses more jute stock than all the other mills in this class of paper combined. While these extensions are going on the motive power will be improved by the erection of a new wheel house with flume and wheel pits. The new flume will be 12 × 17 and 240 feet long, and the wheel house 55 × 30 ft, three stories high, the upper story to be devoted to machinery. The new wheel pit will contain four wheels now being made to order in Pennsylvania. The mill will then have 400 horse power. A number of new machines for making paper bags, etc., will be added.

The production of envelopes, boxes, bags, etc., of this firm is already far greater than any factory in Canada, for it has in Montreal a large establishment 61x130 feet, eight stories high, equipped with 25 printing presses, 8 envelope machines, one machine for making and printing address tags, 3 machines for making, rolling and perforating toilet paper and many other machines for making boxes, etc. At the city factory and warehouse, which is on Craig st., 225 hands are employed, and when the new machinery is installed here there will be 100 hands at work. A large part of the paper bag machinery is here, however, and there will be 15 bag machines soon in operation, some of them turning out 200 finished bags per minute. The new flour sack machines, the only ones of their kind in Canada, will produce 60,000 perfectly made flour sacks per day, and the daily productoin of paper bags will be 1,000,000. In one week this factory will turn out a paper bag for every man, woman, and child in Canada, and leave four or five hundred thousand over. Workmen are now engaged in laying a second railway track in the mill yard and when the new improvements are completed the paper mills of J. C. Wilson & Co will form a model establishment. The enterprise of Mr. Wilson has made a remarkable transformation in this part of Lachute. A resident informed the writer that when Mr. Wilson came here twelve years ago the land around was completely overgrown with pine and oak trees. Now the ground is cleared and beside the great industry here carried on, many a small dwelling, surrounded each with its garden, graces the place. Although Mr. Wilson has built up an immense business, in which his sons are now being educated—and who, by the way, work as steadily and faithfully as the humblest employee—he does not forget the principles by which he gained his first advances in the trade. His aim was to lay a good foundation, not only in supplying a good article to the trade and dealing fairly with his employees, but in looking after what are called the "small economies" of the business. For instance, old hoops, bars, etc., instead of being thrown away, are piled away, and when a large lot is accumulate are sold for old metal, and so in other departments everything is turned to account. When the new extensions are made to the mill it will produce not only the plain and glazed manillas and papers for the dry goods trade and hosiery and woolen manufactures which are now among its specialties, but will make fancy colored manillas and box boards for their own factory use and for the trade in general. The firm employs 21 travelers, and its products are sold from Victoria on the west to Newfoundland and St. Pierre Miquelon on the east.

Another staple industry of Lachute is the woolen mills of Hamelin & Ayers, which are situated down the river from the paper mill. This well-established mill produces etoffe s, tweeds, blankets and serges for the trade, but one of its specialties is felt sheets and endless felt for paper and pulp mills, in which they have gained quite a reputation. They have recently produced for Mr. G. De Sola, manufacturers' agent, Montreal, a novelty in the shape of a felt lubricator for railway car axles, which will doubtless do away with the present system of lubricating car axles by cotton waste, as it is more scientific as well as more economical. This mill recently filled a considerable order from the Government for toe cloths. "What is a toe cloth?" the reader may ask. It is a kind of serge woven into 60 yard lengths and then cut into pieces one yard long. These pieces are used by the Indians of Manitoba and the North West to wrap around their feet instead of stockings Used in connection with moccasins it is said they afford more warmth to the feet. Messrs. Hamelin & Ayers have a unique method of conducting their business. They are perhaps the only firm in Canada who have no partnership accounts as between the individuals of the firm. Whenever Mr. Ayers wants money for his household or other private purposes he takes it, and whenever Mr. Hamelin needs some he does the same, and there is never a question as to one "getting ahead" of the other. Of course to render such a state of things practicable there must be perfect confidence between the partners and modesty in their individual demands.

Another thriving industry situated near the woolen mill is the Lachute Bobbin and Shuttle Works, conducted with much enterprise by John Hope & Co. When Mr. Hope took hold of this business after the Hambleton failure he put in the most approved machinery, and to-day there is no factory of the kind more thoroughly equipped. The firm are now busy on orders for bobbins, spools and shuttles of various kinds, and they have several specialties which are highly spoken of by the trade. A new feature they are now adding is the manufacture of picker sticks for looms.

H. Samuel, the well-known dry goods merchant of Sherbrooke, has recently built an extension to his store. It is now 144 feet long from front to rear, and probably exceeds in length any retail store in Montreal.

R. Calsat, a well-known dry goods merchant of St. John, who retired about three years ago, died at his home a few days since, at the age of 69.

Biron & Begin, who are now starting a corset factory in Sherbrooke to take the place of the Eastern Townships Co., are old employees of the E.T. Company who believe they can do well for themselves as well as the town by starting on their own account.

The B. C. *Commercial Journal* says that R Bergoff & Sons, Emporium clothing house, Vancouver, are closing out the retail business and contemplate going into the importing and wholesale trade. They will import cloth, blankets, etc., from European markets and manufacture at Vancouver.

The Wool Market.

The September series of colonial wool sales opened in London on the 13th inst., and cable reports state that prices are on a par with the closing rates of the last sale. This is very satisfactory in view of the doubts felt as to the effect of the cholera epidemic on the trade. Many were under the impression that the cholera scare, combined with the dull state of trade in England, would bring about a collapse of the market. Latest advices from Australia state that the new clip will be about the same as that of last year in amount, and that only the Riverina wools will be inferior in quality.

Quotations in the Montreal market for Capes are 14c. to 16c. for greasy wools; Buenos Ayres 33c to 39c. At present there is scarcely any Australian in this market.

In the Toronto market rejected is quoted at 15c., combing at 16½c. to 17c., clothing wool at 20c. and pulled super at 22½c. to 23c. There is some enquiry from the States for Ontario wool.

Prunella.

At the Criterion Theatre, in the latest of Mr. W. S. Gilbert's upside-down dramas, a very familiar old fabric puts in a fresh and unexpected appearance. There are, of course, some whimsical ballads to be sung, and once a young lady laments, in most melodious numbers,

> The rain pours down on my brand new dress
> And boots of thin prunella.

A rhyme was evidently required for "umbrella," which occurs at the end of the next stanza, and that is the only reason, if reason could be desired for Mr. Gilbert's Bab-blings, for giving a fresh run of popularity to prunella. Pope, we may remember, wrote prunello,

> Worth makes the man, and want of it the fellow,
> The rest is all but leather and prunello,

and that is the correct form of the word, if general use when the stuff was commonly worn counts for anything. "Prunello" we find in Bailey, "a kind of silk" with a derivation from "Brignolles," which is not easily accepted. Prunello, according to Dr. Johnson, "a kind of stuff of which clergymen's gowns were made." "Prunellos" is what the material is called in *England's Advocate, a rare tract of 1699. Afterwards it becomes "prunellows,"* a stuff of combing wool, and "prunella" in 1772, and from the manufacturing point of view it was a kind of shalloon, It was largely used for the uppers of ladies' boots and shoes, as lasting was likewise. The exact rendering of Pope's couplet may be left an open question, but Booth, in 1822, gave an explanation of it which will be new to most readers. The fabric had by that time become "prunella," and as such was then said to be little known, but formerly "universally worn as an upper dress, or gown, by the clergy; and therefore Mr. Pope has immortalized the term in his famous couplet by contrasting such robes with the leathern jerkins of the peasants."—*Warehouseman & Draper.*

Chemicals and Dyestuffs.

The cholera scare has caused an extraordinary demand for materials used for disinfecting purposes, and the English alkali combine has put up the price of bleaching pounder and chlorate of potash. Carbolic acid has also advanced from the same cause, but the advance will not probably be of long continuance. The demand from the Canadian mills for chemicals and dyestuffs is now very brisk.

The following are current quotations :—

Bleaching Powder	$2.25 to $3.25
Bicarb Soda	2.17½ " 2.25
Sal Soda	0.90 " 0.95
Carbolic Acid, 1 lb. bottles	0.30 " 0.35
Caustic Soda, 60 °	2.45 " 2.50
Caustic Soda, 70 °	2.65 " 2.75
Caustic S da, 48 °	1.55 " 1.60
Chlorate Potash	0.20 " 0.22
Alum	1.35 " 1.45
Copperas	0.75 " 0.80
Sulphur Flour	2.50 " 2.75
Sulphur Roll	2.25 " 2.50
Sulphate of Copper	4.00 " 4.50
White Sugar of Lead	0.08 " 0.10
Bich. Potash	0.10 " 0.10
Sumac, Sicily, per ton	65.00 " 70.00
Soda Ash	1.50
Chip Logwood	1.85 " 2.00

With fair weather the Montreal Exposition of 1892 will eclipse even that of last year, both in point of numbers of exhibitors and of attractions for visitors. The programme is a most varied and elaborate one, and with the cheap excursions that prevail the attendance bids fair to be immense.

The millinery openings of the end of August and beginning of this month were very successful. For millinery trimmings, fancy feathers have been in demand, along with ostrich tips, mounts and sprays, but ostrich feathers do not yet seem to have gained the victory over their fancy rivals. On this subject, however, the September number of the N. Y. *Millinery Trade Review* says: "A month ago fancy feathers apparently had it all their own way. Whips and mephisto styles held the supreme position. Already ostrich feathers are claiming fully as much recognition, and are growing on the millinery mind. They are used largely in conjunction with the fashionable fancies." Silk ribbons and silk goods are reported to be rising in value, and are to rise still further. Velvet is understood to be the material for really fine millinery for the winter; while there is a growing demand for double-faced satin ribbon. Jet continues to be largely used; while in laces. Irish cut point and point Gène, made in imitation of old Venetian lace, are prominent features. Hats of Canadian manufacture have had an exceptionally good run in the millinery rooms this fall.

Literary Notices.

We are indebted to the *Century Magazine* for the first authentic illustrated report on the great falls of Labrador, regarding which so much curiosity has been excited in Canada. It is well written by Henry G. Bryant a member of the adventurous expedition which penetrated the mysteries of these falls last year. The Columbus papers are continued, and among the poetical contributions is one by W. W. Campbell, the Canadian poet.

The September number of the *Lake Magazine* contains a sketch of the much-admired Indian poetess, Pauline Johnson. Among the most entertaining articles of the issue is "A Habitan Hercules," in which J. Macdonald Oxley recounts the adventures of Montferrand, whose doings call to mind the heroism of Samson of old.

Undoubtedly the ablest and most extensive writer in Canada on numismatics is Mr. R. W. McLachlan, of Montreal. His "Canadian Numismatics" and "Canadian Communion Tokens" are monuments of perseverance, industry and thorough research, while his miscellaneous magazine articles on the subject show that he is possessed of a good literary style and a large grasp of questions cognate to coins. His latest essay is a paper on "Coins struck in Canada previous to 1840," prepared for the International Congress on Numismatics recently held in Brussels, and now reprinted in pamphlet form at 25cts. Mr. McLachlan gives instructive notes on the development of coinage in Canada from the early days when beaver skins, wheat, tobacco and other commodities were considered legal tender, to the days when "card money" was made by cutting playing cards in two and writing promissory notes or bons on them; and on down to later periods, when French, Spanish, Portuguese, and finally English coins prevailed. He tells how later still private firms coined coppers, in some cases for tokens redeemed by business firms, and in other cases to be circulated as counterfeits—a breach of law winked at in some periods owing to the great scarcity of circulating currency. The author gives an account of each coin struck in this country before 1840, with interesting notes on the circumstances of its issue.

It has been suggested that a Canadian historical exhibit be made a feature of the Canadian section of the Chicago World's Fair. The idea is a good one, especially as this country has relics of much greater antiquity and of more intrinsic interest connected with the colonization of the continent than the United States. The name of Mr. R. W. McLachlan has been mentioned in connection with the organization and curatorship of this department. We do not know of a better man for the work, for he is discriminating, industrious and thoroughly versed in the early history of the country, especially of Quebec, the cradle of our history.

In the September number of the *Dominion Illustrated Monthly*, Douglas Brymner gives us a most entertaining sketch of Beaumarchais, and tells how the United States was indebted to France, through the genius of this man, for its success in the revolutionary war. It is rather remarkable how little gratitude the Americans showed towards the man who saved the 13 colonies from failure in their revolt. "Social Life in Halifax" is another entertaining sketch in this number, from the pen of Mr. Tremaine. We are pleased to see the tribute paid to the late premier of British Columbia, Hon. John Robson, whose portrait forms the pictorial supplement to this number.

Mr. R. A. H. Marrow, the author and publisher of the "Story of the Springhill Disaster," found such a sale for his graphic sketch of the great Nova Scotia colliery calamity of last year, that he has issued a new and enlarged edition. This book is not merely a faithful account of the Spring Hill disaster, but makes the subject clear by illustrations, and embraces a description of mining operations in general, with an explanation of mining terms. Mr. Marrow confirms the story, current at the time, that "Mother Coo." a fortune teller of Pictou, predicted the fatality, and in fact it was her prediction which led the men to ask for the inspection of the mine held a short time before the accident, when all was pronounced right. This work is one of permanent value, for the author gives us a more comprehensive idea than we get in most books of the vastness of the mineral resources of Nova Scotia. The price of the book is only $1 in cloth binding, and may be had at 59 Garden st., St. John, N.B.

The special number of the *Dominion Illustrated* recently issued describing Halifax contains the most comprehensive sketch we have yet seen of that historic Canadian city. The unique manner in which it was founded, and the romantic incidents in its development, are graphically told. The sketch is from the pen of Mr. J. P. Edwards, editor of the *Dominion Illustrated Monthly*. Mr. Edwards, by the way, has taken over the editorship of the *Canadian Militia Gazette*, which has been removed from Ottawa to Montreal, and which will now be known as the *Canadian Military Gazette*. The first number under the new management shows a decided improvement, the excellent illustrations being a marked feature of these improvements.

F. M. Baker, of Alexander & Anderson's, Toronto, was presented the other day with a gold locket and chain on the occasion of leaving the firm.

J. G. Steaire, traveler for James Johnston & Co., wholesale dry goods, was presented by his fellow employees with a handsome case of cutlery on the occasion of his marriage this month with Miss Donnelly, a St. Catharines lady.

The wholesale dry goods business of Bourgouin, Duchesneau & Co., Montreal, will be hereafter carried on by George Bourgouin as Geo. Bourgouin & Co. The head of the firm is now in England. Mr. Joseph Duchesneau will take a cousin into partnership and start a new wholesale fancy dry goods business as Duchesneau, Duchesneau & Co., about January next.

Water in Fulling.

It has always been a source of surprise to us that since so much has been written and said about the soap, the friction, the pressure, and the time in the fulling and scouring processes, so very little is ever said about the water. Incidentally we have touched upon this part of the subject, but we have never yet given it the prominence which it really deserves. When we think of the great influence which the water and its condition exerts upon not only the finish and feel of the fabric, but upon the actual condition of the fibre itself, we will be more apt to realize that the subject is often too much slighted in the finisher's thoughts and knowledge. To watch a fabric all through the wet department, to observe the action and results produced by water of different kinds and in different conditions, we venture to say is a task which very few finishers indeed ever undertake. However, such a study cannot help but give good results and lead to changes, perhaps, in our methods which will influence the output of the mill.

To understand the action of water upon the wool fibre we must notice the construction of the fibre. It is a well-known fact that the thread-like fibre of wool is not perfectly smooth on its outside surface, as we would suppose it to be, but it is covered with a coating of scales which overlap one another in layers much as we see it in some kinds of plants. Before the wool fibre will shrink or felt these scales must be partially loosened up, so that the inside body, or felting part of the fibre, can get a chance to move. This will give some notion of one of the offices which devolves upon the use of water in the wet-finishing room, and more particularly in the fulling process.

Some kinds of water are better adapted for this purpose than others. Soft water is specially useful for this purpose, and indeed hard water has little that can be said in its favor at all upon this point. The difference in the effects produced by using hard and soft water is very marked, and even in departments other than our own we find it particularly so. The dyer will notice the difference at once when he is attempting to match colors, and if one has been made in a bath of a little harder water than the other it will be almost impossible for him to bring about successful results. In every case of dyeing, the water must be taken carefully into account, or a difference will result which cannot possibly be remedied. In the finishing room the fuller will notice that the cloth does not full as quickly with a hard water as with a soft, and he will find, too, that the cloth has a sort of a shiny feel which is very disagreeable, as well as a clouded appearance. In the washer the goods lather up very indifferently, and small specks of clotted soap appear on the goods and upon the surface of the rinsing and scouring bath. This residue, if it works into the cloth, it is almost impossible to remove, and it invariably imparts an odor that lasts as long as the goods The main reason why water has such an effect is on account of the soap which is used with it. Just according to the way in which the soap acts upon hard water when applied alone, so will it act when it is used upon the cloth which has been run in hard water, or which is being treated with hard water. In order, then, to understand how hard water is going to act upon woolens in the wet-finishing department, it will be necessary to study its effect upon hard soap. In the first place that which makes a water hard is the presence of some salt, such as carbonate of lime or magnesia, in its composition. These substances, under proper conditions, leave the water and combine with any other substance which is brought in contact with them for which they have a greater chemical affinity. This is exactly the case when soap is applied to hard water. The soap breaks up, and instead of a soda or a potash soap we have resulting a lime or a magnesia soap, and it is difficult to find anywhere a more injurious substance than either one of these upon the wool fibre. This, then, is the chief difficulty in using a hard water with soap, and in every part of the work which the soap is expected to do in the wet finishing the hard water exercises an evil influence. Now, as we have shown in previous "Chats" upon fulling, the office of the soap is to produce the moisture required to keep the friction from wearing the fibre away, and to exercise its action in loosening and breaking up the dirt and grease that is upon the wool, so as to admit of its being carried off by the water subsequently applied. Here we have two principal offices which the soap is to fulfill. The lubricating in the first is brought about by means of the fat or grease which is present in every soap, and the cleansing is effected by the alkali. Now the carbonates that are present in a hard water are specially well calculated to break up the soap and exert an influence upon both these elements which together constitute its life and usefulness The result is, that under these circumstances the felting capacity, or the aid which the soap lends to the felting, is wanting, and in the other case the cleansing action of the soap is so impaired as to destroy its usefulness. It is by no means difficult to understand, then, how it is that hard water does bad work in the fulling mill and washer and it is equally easy to see why it is necessary to guard as much as possible against its presence and use if we wish to produce results that will tell toward the good reputation of the mill. The disastrous effect of hard water upon soap can be seen at every step in the process, and even when the soap is in process of solution and preparation If a soap is made of the ordinary components, with the aid of a hard water instead of soft, a certain amount of breaking up of the resulting soap must and does take place. For obvious reasons, however, it is hardly noticeable at this stage. The excess in the amount of soap over and above the amount of water effects this, does away with any great danger of destroying the soap. But if we wait till the soap is considerably diluted and the amount of water considerably increased, we then observe how quickly the decomposing effects of the hard water upon the soap ingredients is manifest. The result is at once evident if the cloth which is treated with a soap and a hard water is examined. Its feel will disclose the fact that the softening and lubricating effect of the fat or grease is largely wanting, and its condition as regards cleanliness or rather uncleanliness, will disclose the fact that the action of the lye has been counteracted.—RANDOLPH, in *Boston Journal of Commerce.*

Recipes for Dyers.

FAST GREEN ON WOOL.

Mordant the wool by boiling for 2 hours in a bath of 2½ per cent. bichromate of potash and 8 per cent. of alum, then dye in a fresh bath of 1½ per cent. fustic extract, 6 per cent. indigo extract, 1½ per cent. logwood, work for 1½ hours; lift, add to the bath ½ per cent. logwood, ¼ per cent. fustic extract, boil 30 minutes longer, wash and dry.

GOLD OLIVE ON WOOL.

Mordant by boiling for 45 minutes in a bath of 3 per cent. bichromate of potash, then dye in a new bath of 75 per cent. fustic for 30 minutes at the boil, lift, add 1½ per cent. logwood, and ½ per cent. copperas, re-enter goods and work to shade.

DARK CHERRY BROWN ON WOOL.

Mordant by boiling in 3 per cent. bichromate of potash and 2½ per cent. tartar. Dye in a new bath with 1 per cent. Alizarine Blue SN in powder, and 6 per cent. Alizarine Red S. Enter the goods in the cold, work 30 minutes, then raise to the boil and work 1½ hours, lift, wash and dry.

ORANGE ON WOOL.

The dye-bath is prepared with 1½ per cent. Orange II, 6 per cent. oxalic acid, 2 per cent. tin crystals, and ½ per cent. flavin. Enter the goods at 170 deg. F., work 15 minutes, then raise to the boil, and work for 45 minutes longer.

ASH GREY ON WOOL.

The dye-bath is made with 1 per cent. sanders wood, 6 per cent logwood, 1 per cent. fustic, and 6 per cent. sumac. In this bath the goods are boiled for 1½ hours, then saddened by adding 1 5 per cent sulphate of iron, and brightened by boiling 30 minutes in a bath of 2½ per cent. indigo extract, ½ per cent. Fast Brown, $\frac{1}{10}$ per cent. Azo Yellow, and $\frac{1}{100}$ per cent. Orange II.

COFFEE BROWN ON WOOL.

Prepare the bath with ½ per cent. Cloth Red B, 4 per cent. myrabolams, 10 per cent. fustic extract, boil for 1½ hours, then allow to cool, add 4 per cent. copper sulphate, boil 45 minutes longer, then once more cool, and sadden with 1 per cent. sulphate of iron, boil 30 minutes, wash.

DARK OLIVE ON WOOL.

Mordant by boiling for 1½ hours with 3 per cent. bichromate of potash and 2½ per cent. cream of tartar. In a new bath, dye with 7 per cent Cerulein, 2 per cent. Anthracene Brown and 15 per cent. Gallotlavine, working in the usual method for dyeing alizarine colors.

BORDEAUX BROWN ON COTTON.

Dye in a boiling bath with 15 per cent. Glauber's salt, 5 per cent. soda, 1 per cent. Diamine Brown V, and 3 per cent. Diamine Fast Red F, working for 1 hour.—*Dyer and Calico Printer.*

The machinery is now being put into Z. Paquet's new fur factory at Hare Point, Quebec.

Messrs Gemmell & Co., of Port Elmsley, are asking for tenders for their new woolen mill to be erected in Perth.

Three new boilers are being put into the cotton mills at Magog. New gearing is being put on the water wheels at the Magog Print works.

The entire plant and stock owned by the late D. C. Brown, loom reed and harness maker, of Lowell, Mass., was sold last month by order of the executors of the estate.

Canadian Textile Directory.

The third edition of this work is received from the publisher and covers a wider field than ever before. In addition to the previous scope of the work, a directory of the furniture and upholstery trades and laundry establishments is published, and valuable statistics concerning the textile trade of Great Britain, together with a full text of the McKinley tariff compared with the previous tariff, is published, and what is of special value is the Canadian customs tariff, which is given in full where it concerns the textile and paper trades. The information contained in this work concerning the textile manufactures and dry goods industries of Canada is most exhaustive. E. B. Biggar, publisher, Fraser Building, Montreal. Price $3.00 per copy.—*Textile World.*

Cheviots: How to Finish Them.

As these goods are receiving considerable attention just now in the market, a few words on the subject of finishing them may not be out of place. As a matter of fact it is considered by many that almost any one can finish cheviots, but if one would take the trouble to look at the various lines, as represented in the market, he would surely come to the conclusion that there is a vast difference between the finishing even as simple a fabric as the cheviot generally is. The burling of this class of goods need not be as thorough and elaborate as on cassimeres, still, they should receive a pretty fair going over. The mending will naturally depend largely upon the styles; some styles will show imperfections more readily than others, and especially so if bright colors are used for effect. Of course these must be looked after, that the pattern may show up intact in the finished product.

Now in cheviots a practice has crept in which in former days was never known. We have now two kinds of cheviots, the rough finished, or as it may properly be called the original cheviot, and the close finished. On the latter the threads are supposed to show up plainly almost like a cassimere, being in this respect the opposite of the rough finished fabric, still going under the name of cheviot. Too much felt is not desirable on these goods, as they are more of an open nature, therefore one and a half hours fulling ought to be sufficient for them. With a fair bodied soap this ought to make the goods feel sufficiently firm and still leave them pliable enough for good handling. Having a good bodied soap, that is, a soap with rather more consistency than is actually needed for the fulling process, will serve two purposes: first, the goods will handle softer and feel better when finished, and second, it will not be necessary to add any more soap in the washer. This latter item is one of great importance, and will be treated in a subsequent issue under the head of "Scouring Woolens."

After the goods are fulled to width and length they are taken to the washer, and having the right kind of soap in the fulling process, we will simply add warm water here, in sufficient quantities, say eight or ten pails to a piece and they will lather up beautifully, making it at once apparent that no grease or foreign matter will find any chance whatever of remaining in the goods.

They should run about ten minutes in the first water, and by this time the heaviest dirt has become loosened. It is best to draw this off, for there is no use in having the goods come in contact with this mess any longer.

After drawing off, the gates should again be closed and another dose of water given the same as the first. The lather will be perceptibly cleaner on this second water, and the goods run in this about 20 minutes.

Then the soap should be drawn off and the rinsing water turned on, giving the goods sufficient time in this to clean them thoroughly.

If burr dyeing is necessary, and it generally is, now is the time to do it. Allow the goods to dram, and after closing the gates, add the dye according to the needs of the goods, being careful to have it cold, to pour it in a steady stream, and to have the goods in motion while pouring the dye in. Run fifteen minutes in the dye, then rinse for 20 or 25 minutes.

To soften the goods as much as possible, and also to guard against burr dye crock, a solution of fuller's earth applied now will be found of great benefit. After taking them from the washer they should be carefully rolled up and laid down flat over night. Some prefer to extract the goods first and then roll them up and let them stand on end over night. Of the two plans I favor rolling the goods as they come from the washer, for I believe that the more moisture the goods contain at this operation, the easier it will be to remove the wrinkles. However, this is perhaps only a matter of opinion, and whatever may seem to give or does give the best results, should be adopted. I have seen good results obtained by simply taking the goods from the washer to the extractor and from there directly to the dryer without any rolling whatsoever. On the whole on cheap goods this may be the best plan, especially if the goods contain any cotton, for if they have any cotton in them at all, the sooner they are dried the better, the goods will look brighter for it.

After drying they are ready for the shear, no matter what may be said to the contrary. Even the rough finished goods will look all the better for a run or two on the shear. Just simply square up the long fibres, no more, and it will materially aid the looks.

The laying brush should be used very lightly, as it is not advisable to have the fibres laid as on napped goods.

On close finished goods, of course, the shearing must be continued until the threads show up according to the requirements. These latter should also be brushed both before and after pressing, which on the rough finished goods must be omitted. Press them face to the roll and steam on the press, after which inspect, measure and roll up for market.—*Textile World.*

Bleaching of Woolen Fabrics.

In decolorizing woolen fabrics two agents are commonly employed: these are sulphurous acid and hydrogen peroxide. The use of these substances is by no means a modern innovation. Indeed, the first goes back as far as the Christian era, and the second almost as far, certainly to the time when the cloth was laid out in the air and bleached by natural agents.

In the natural method of bleaching, it is commonly supposed that the element which accomplishes the discolorizing of the fabric resides in the sun's rays. But chemical research has shown that this is erroneous. A substance called ozone has been separated from the atmosphere, and it has been demonstrated that this is the element which has to do mainly with the process. This subject is always present to some extent in country air at all times, and it is a fact that cloth exposed to the bleaching action of country air is always more perfectly whitened than when it is exposed in the closer, more confined atmosphere of cities or towns. To facilitate matters, then, it has been the aim of chemists to obtain this element in quantities sufficiently large to enable manufacturers to do their bleaching in less time and at less expense. As yet, the use of peroxide of hydrogen cannot be said to be as common as it might be, but it is steadily growing in favor. This is but natural, since it gives a purer white upon wool than sulphurous acid, and one which is more permanent and clear. The great obstacle to its more extended use as a bleaching agent is the fact that it has not yet been produced on such a scale as to bring its price within the range of economy.

In using hydrogen peroxide, it is necessary to apply a little ammonia, and this has the effect of neutralizing which is always present. This acid is employed in the manufacture of the agent, and is left with it in order to keep it from spoiling, which it is sure to do when left in its natural condition. The goods to be bleached are passed through a solution of peroxide, slightly wrung and gradually dried. This is sufficient in many cases; but where the condition of wool requires it, it may be necessary to repeat the process two or three times before the desired whiteness is attained.

The second method employed in bleaching woolens is that in which sulphurous acid is the agent, and it is probably the most common of all. The operation is undergone in a compartment constructed for the purpose, called a stove or oven, the material used is brick lined with wood, and in the lining all nail heads, hooks, etc., are carefully concealed. The reason for this is that by the action of the gases disengaged during the process upon the iron, sulphate of iron is formed, which drops upon the cloth and makes a spot that cannot be removed.

The woolens to be bleached by this process must first be thoroughly scoured, after which they are soaped with a neutral white soap. The whizzing must be as complete and perfect as possible, so that no loose water shall remain in the folds or creases of the cloth to prevent the uniform action of the gases upon all parts of the cloth alike. When thus prepared, the cloth is hung in the bleach house or oven, and there an amount of roll sulphur equal to about one-tenth of the weight of the goods is placed in an iron vessel and set on fire by means of a red hot iron. The doors are closed, and over this the cloth is allowed to hang for several hours. The goods quickly absorb the gases, and the coloring matter gradually neutralized. After the time necessary, which will is vary, of course, with the nature of the goods, has elapsed, the cloth is removed, washed, and dried. There is usually an odor present in goods thus treated, which arises from the fact that all traces of the acid have not been thoroughly removed. It is difficult to do away with this altogether, yet, where bleached yarns are to be woven with colored, unless they are removed, there is sure to be an evil effect upon all colors which come in contact with the white. The acid may be removed by first washing as clean as possible in pure water, and then running the cloth through a dilute solution of hydrogen peroxide. The sulphurous acid is thus connected with sulphuric acid, and easily passes off.

The third method adopted in woolen bleaching is known as

liquid bleaching, but as a process is confined more especially to loose wools than to woolen fabric. It is valuable as a process for bleaching loose wools, but it is less difficult to manipulate loose wools in liquid than in the other way, but it is not so powerful a bleaching agent as the gas, nor is the process altogether satisfactory in other ways.

The actual bleaching process is due in every case to the destruction of the yellow coloring matter naturally inherent in the wool This destruction is brought out by means of the chemical action of the agent employed. But it has to be admitted that in no case is the reduction of this matter complete or permanent, since frequent washing in an alkaline solution has the effect of counteracting the influence of the bleaching agent and restoring again the original yellow of the wool. This effect is noticeable in flannel underwear or blankets, which, though pure and white when they are taken from the store, soon begin to color up as they are exposed to the alkaline action of the soap used in washing.—*Textile Record.*

Testing of Indigo-Dyed Goods.

To learn whether a piece of blue-dyed goods has been dyed with a pure indigo blue, the following tests may be applied: (1) Boil the goods with water, which should not become colored in any way. (2) Boil with alcohol, which should not extract any color; if any aniline dyestuff has been used in the dyeing of the goods the alcohol will become colored. (3) Boil the goods with a solution of borax; a pure indigo imparts no color to it; if the borax solution be colored red, then logwood has been used in the dyeing of the goods, while if it be colored blue, then an aniline blue, an indigo extract, has been used. (4) Boiling with weak soda does not affect indigo dyed goods, but Prussian blue is turned brown, and alkali blue is discharged. If the goods are subsequently passed into an acid bath, then the color is restored in each case.

Wolfe Goldberg, rag dealer, of Hamilton, failed last month.

A boy named Pelletier had his hand crushed in the machinery of the Canadian Rubber Co.'s works, Montreal.

Daniel J. Carey, formerly dyer at the Canada Mills, Cornwall, is now boss dyer for the Manchester Cotton and Woolen Mills, Manchester Mills, Texas.

Mr. Robt. Kerr, of Fergus, died on the 11th August. Deceased lived in Galt some thirty years ago, and was employed at Thompson's (now McKay's) woolen mill. He removed to Guelph many years ago, and afterwards to Fergus.

A fire broke out in the tag store connected with Loeser's shoddy and flock mill, Toronto, on the night of the 31st ult. The stock was destroyed to the extent of $1,000. This fire was attributed to spontaneous combustion.

The Clyde Woolen Mill, Lanark, closes for repairs this month while the new boiler is being put in. Mr. Boyle, head dyer in this mill, has left for Chambly, Que., where he takes the situation he left vacant some months ago.

Dame Delia Gold, wife of Robert Cohen (separate as to property), R. Cohen and Israel Cohen, doing business as J. Cohn & Co., clothing manufacturers, Montreal, have dissolved partnership, and a new partnership has been formed by Dame Delia Gold, Robert Cohen and Jacob Franklin under the name of D. Cohen & Co.

A special meeting of the stockholders of William Parks & Co. (Limited) was held in St John the other day. A sub-committee of the directors submitted a report regarding a trust deed with the Imperial Trusts Company, and it was decided to issue $400,000 of preferred stock. A financial statement submitted to the meeting made it appear that since the business has been in the hands of a receiver, about two years, the profits have been nearly $160,000. The money to be raised is to be used, it is understood, in paying claims against the company.

Wm. Crabb & Co., Newark, N. J., manufacturers and importers of parts of textile machinery and general mill supplies, report business as good. It has been the policy of this company to retain their skilled workmen year after year, and by this means results have been obtained not possible where the skilled help is constantly changing. Following are a few of the specialties handled by this concern: Bagging loom reeds, cotton banding, card clothing in leather, card clothing in wool, card pins, circles, comber needles, comb pins, drawing frame pins, fallers, feed rollers in brass shells, gill brass, gills and gill bars, hackles, hackle pins, jennie pins, needle pointed goods, picker teeth, porcupines, rivets, rotary gills, spreader pins, stele springs, steel wire, tentering pins, waste machine clothing and teeth, weavers' combs.

Newlands & Co., Galt, are putting in three flat knitting machines for making Jersey cloth and glove linings.

Mr. David Morrice, of D. Morrice, Sons & Co., manufacturers agents, left at the end of August for a trip to England. Mr. Morrice will be gone a month or two.

The Dominion Wadding Co. have just put in a new hose reel and an equipment of hose for the protection of their own premises from fire.

Mr. Frank Paul, of the firm of Belding, Paul & Co., silk manufacturers, Montreal, has been for the past two months or more traveling through Europe. He is expected back this month.

The Ontario Cotton Mill at Hamilton, now the property of the Canadian Colored Cotton Mills Co., will have some extensive alterations made this fall. A new smokestack will be built, and some improvements made to the arrangement of the buildings, but there will be no increase in the capacity of the mill. The alteration will cost about $10,000.

We understand that R. McD. Watson son of James Watson, president of the Strathroy Knitting Mill, lately burnt, contemplates starting a new knitting factory on his own account. The proposed factory will be smaller than the old one,—probably two sets of cards—and will be erected in Hamilton.

Mr. David Morrice, jun., of D. Morrice, Sons & Co., has returned home after his sojourn in Europe in search of health. Mr. Morrice, though still somewhat weak, is gaining in strength, and his many friends in the trade will be glad to welcome him once more in their midst.

The new building for the Paton Manufacturing Co.'s worsted branch is complete, and a large part of the machinery is already installed. It is expected that this department will be fully in operation next month, and will make a specialty of worsted yarns for the knit goods trade and fingering yarns for the dry goods trade. We hope to give a description of this large establishment in our October number.

Mr. James Leslie has got settled in his new factory in St. Paul street, Montreal, and is running full swing. He is now prepared to fill all orders for card clothing, loom reeds and harness heddles, and general mill furnishings. He is putting in some new machinery, reference to which will be made in another issue. It is creditable to the character of Mr. Leslie's work that he received an order recently from Lima, Peru, to fit out a convent which is starting the manufacture of cloths there.

The Yarmouth, N. S., woolen mills, the Yarmouth Duck and Yarn Co., and the Yarmouth knitting factory are going to exhibit at the World's Fair.

Peter, second son of Mr. John Livingston, of the Listowel flax mill, got his hand caught in some part of the machinery at the mill the other day and had his forefinger taken off at the middle joint. The next finger was also badly crushed. The young lad had a narrow escape from losing his hand.—*Standard.*

The Consumers Cordage Co., of Montreal, gave their employes their thirteenth annual picnic on the 27th ult. to Mississquoi Park. About two hundred took part in the outing, and the day was spent in games, dancing, etc. Mr. A. W. Morris, M.P.P., managing director of this company, has been spending a few days on a yachting expedition in eastern waters with Mr. Fulton of the National Cordage Trust.

The Lakefield correspondent of the Peterboro *Review* says:—T. J. Bird since selling out his drug business has formed a partnership with David Mann, of the Lakefield Woolen Mills. The firm will in future be known as Mann & Bird. Mr. Bird takes charge of the financial department, while Mr. Mann superintends the factory.

When Harry P. Davies, of Toronto, went to England a few weeks ago, he left his young wife in excellent health. While he was on his way across the ocean she took ill with congestion of the spine and before he reached home she was dead and buried. She was only 22 years of age, and was much esteemed for her hospitality and vivacity. Mr. Davies is a hosiery manufacturer, having succeeded J. M. Statten on Yonge st.

The *St. Croix Courier*, some time since, published an account of the great work done in one of the rooms of the cotton mill at that place. The Marysville men set out to do better and have accomplished it. In one week three slashers dressed 3,786 cuts of pattern work, sixty-three yards to a cut. The slasher men were:—James Hovey, James and Wesley McConaghy. John Heron made the size, helved the slashers and attended the web drawing. This is far ahead of what the St. Croix mill did, yet Marysville has not as yet done its best.—Fredericton *Herald.*

Shaw & Grundy, merchant tailors, Guelph, have dissolved. Mr. Grundy retires and Arch. Turner succeeds him, the new firm to be known as Shaw & Turner.

The Count d'Euran, who kept a general store at Northfield, B C, is reported by the *Commercial Journal* to have assigned.

Says the Peterboro *Review*:—The part of the Hilliard property known as the Blythe Mills, which includes the flour, saw and woolen mills, and a couple of houses, taking in the water power and the property east of Water st., has been sold to a syndicate composed of Messrs. James Kendry, H. A. Mulhern and James Stevenson. This valuable property, it is understood, was sold for about $36,000. The woolen mill will be enlarged and the saw mill and other property overhauled and put in first class order. The Grand Trunk siding will be continued across to the mills to improve the facilities for shipping.

Mr. Marriott, till last month superintendent of the Chambly Woolen Mill, Chambly, has been appointed superintendent of the Auburn Woolen Co., of Auburn, New York. This is a 21 set mill, and Mr. Marriott receives a salary of $3,500 a year. He obtained the situation through the ability with which he solved some knotty problems put forth in one of the American textile journals. His answers to some of these questions and his corrections of mistakes made by some other writers, attracted the attention of several mill owners, and led to two or three offers from American mills, that from the Auburn mill being accepted. The moral to this is, write for your textile journal. You do not know what advantage may fall to yourself, while you are doing a little to benefit others.

J. W. Harvey, dry goods dealer of Westminster, B. C., announces his retirement from business.

John Bennie, proprietor of the Jubilee Carpet Works, Kidderminster, has assigned, with liabilities of about £36,000. The general depression in the English carpet trade is given as the cause.

Ink for Marking Bales.

Best gum arabic	10 lb
Logwood liquor sp. gr. 1.09	3 gals.
Fustic extract	1 lb.
Nitrate of iron solution, sp. gr. 1.37, set over	20 fluid ozs.
Bichromate of potassium	2½ ozs.
Water	q. s.

Dissolve the gum arabic in one gallon of water, strain, and add the logwood liquor, mix thoroughly, and let it stand twenty-four hours. Then stir in rapidly the bichromate, dissolving in 8 quarts of boiling water. Then add the nitrate of iron and fustic extract. If too thick for use, add lukewarm water until reduced to the proper consistency.

The above directions will make, if carefully followed, a jet black ink that will leave an indelible mark and will dry quickly.

If a blue black is desired, omit the fustic extract, and substitute 4 ounces of indigo extract.

When no appliance is at hand for determining the specific gravity of the logwood and iron liquids, a sufficiently near approximation of the strength and proportions required may be ascertained by a few colorimetric trials. The logwood liquor may be conveniently made by dissolving the extract in water, and the strength can be easily regulated.—*Druggist's Circular.*

J. N. Pyper is removing his dry goods business from Stratford where he succeeded McNair & Hamilton, to Seaforth.

J. H. Simpson, merchant tailor, Victoria, has sold out to J. C. Leask.