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Canadian Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XIV. TORONTO AND MONTREAL, JUNE, 1897 No. 6.

Victoria Dei Gratia Regina.

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

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

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

E. B. BIGGAR { BIGGAR, SAMUEL & CO. PUBLISHERS } R. R. SAMUEL

Agency in Europe: Polsue Bros., 30 Poppin's Court, Fleet St., London, Eng.
Toronto Telephone, 1392 | Montreal Telephone, 2589

Business correspondence should be addressed to Montreal but cuts, news items and editorial correspondence to Toronto cuts from abroad should be sent by post wherever possible, not by express; changes of advertisements should be in our hands not later than the 0th of each month to ensure insertion.

CONTENTS OF THIS NUMBER:

Editorial.

The New Clip.

The new clip was received with enthusiasm by the dealers and came on the market at 21 to 22 cents per lb. for fleece, washed. The high prices were caused by the anxiety felt by the wool buyers to secure entrance to the United States market under the present rate of duties. However, hardly a week elapsed before the dealers had come together and reduced prices. At present 18 to 19c. is being paid. In spite of reduced prices wool continues to come on the market freely. As sheep have come through the winter well the clip is fully up to the average in quality and quantity.

Wool in the U.S

Wool shows much less activity in the United States market recently. The decline in prices which followed the free trade policy of Cleveland had been one-third recovered when the Senate's amendments to the resolutions of the present House of Assembly had been made public. A proposal to reduce the wool rates of the House bill 25 per cent., coupled with an elimination of the retroactive clause, naturally had the effect of weakening the market. Wool which had been purchased under the expectation of a high protective tariff lost a part of its value as soon as the intention of the Senate was made known. The wool market of the United States is in an uncertain position, and the feeling in the trade is not favorable to the maintenance of present prices.

Cotton Prospects.

The cotton market is not marked by any very special features. Shipments have been going forward to Europe and Great Britain in the usual quantities for this time of year, and the demand for cotton by United States spinners has been steady, but light. Quotations are fairly steady, but are influenced by unfavorable crop reports from the cotton sections, which, while showing a slight increase in acreage, are unfavorable when compared with last year. In the lower Mississippi region planting is progressing rapidly on the heels of the receding waters, and is in consequence some two to three weeks late. The crop has also been hindered by cool nights and ravages of cut worms, whereas last year in the same localities at this time the stand was favorable and the crop had an exceptionally good start. In central and northern Texas the crop is also from two to three weeks late, which makes it probable that the old crop situation will be very strong before the new cotton can be received in quantities sufficient to relieve the strain.

The Thread Combine.

Thread is an interesting subject to the Canadian trade at present. The British thread combine, which is represented in Canada by the Central Agency, advanced prices considerably when the combination was first organized, but it has been compelled to make several reductions since. The Belgian manufacturers are making a determined effort to secure the control of the Canadian market, and an agent recently spent some time in Canada in the effort to induce Canadian whole-

sale houses to act as agents in distributing the foreign product. To meet this the combine proposes to adopt the "additional rebate" system familiar to the trade in the sale of other commodities. This method of giving a rebate to the firms who handle exclusively the goods of the combination is not generally regarded as in the best interests of trade. Although it may not come within the letter of the law, as unduly restraining trade, it certainly has the effect of interfering with the freedom of trade. The thread combination is one which cannot be broken down by the provision in the tariff bill against agreements as to the illegal restraint of trade. The provisions of the new tariff are, on the contrary, in favor of the monopolists. If Belgium is not accorded the privilege of preferential trade, then the one interest which offers at present any serious opposition to the British thread combination will be handicapped by a substantial discrimination against its goods.

Uncle Sam has it Worse.

The writer was under the impression that the Canadian woolen manufacturers were just a little bit worse off than any class of manufacturers on the continent at the present time, but a conversation he held the other day with a gentleman who has had very large connections with the textile trades all over the United States for many years past, would go to show that the American woolen manufacturers are really worse off than those of Canada. Between 80 and 90 per cent. of the woolen mills of the Western and Pacific States are closed down, and those that are running are only such as are making the better grades of goods. Even these would be utterly unable to run at a profit were it not that most of them ship their products to New York and Boston commission houses, who re-ship the goods again to the west and south as goods of eastern make. The western woolen mill that is fitted up for cheap goods only is simply not in it. This applies to many mills as far east as Ohio—and in fact to many throughout the Eastern States. For instance, a Cleveland mill with a capital of $300,000, which five years ago made a profit of $28,000, came down in 1895 to a profit of $1,800, and is to-day either closed down or running virtually at a loss. Many mills of large capitalization and large capacity are simply unable to pay their current debts, and to show that they are anxious to meet their obligations they offer urgent "duns" the chance of taking their accounts out in "trade." Indeed this is a ditch into which hundreds of mills are driven. Mills by the score in the United States now keep their employees in partial employment by making up stock and then employing hands to work up that stock into ready-made clothing, and selling the clothing to retail dealers or private customers. Many of such mills send out circulars into the country giving the farmer or other private consumer instructions how to measure for a suit and guaranteeing to make a "fit" at prices varying from $6 or $7 up to $15 a suit. The extent to which this expedient has been adopted among American mills can be judged from the fact that the *American Wool and Cotton Reporter* recently issued a special "Apparel Number," and devotes more or less space regularly to matters relating to styles in men's clothing. What the regular New York and Chicago clothing manufacturers have to say to this new invasion of their field our informant does not say, but if this system increases, or even continues on the present scale, it must bring marked changes, perhaps of a disastrous kind, to both classes of manufacturers. All this is due partly to tariff changes in the States, and partly also to the policy of the manufacturers of Yorkshire, England, who, when they found that for once they had sadly miscalculated on the big demand for English goods which would be brought about by pending tariff changes, unloaded their surplus not only on the American market, but on the Canadian market, at a positive loss. Goods have been laid down here at 6d. a yard, which cannot be produced in England itself for nearly double the money, and are sold on this side at the price almost of the raw wool from which they are made. The remarkable feature of the situation in the United States is that, while the price of wool last year touched the lowest point on record, and while woolen mill supplies, such as dyestuffs, chemicals, etc., have fallen to such low figures that the makers of these also are at their wits' ends, this cheapening in the cost of the woolen manufacturers' raw materials does not appear to help their case.

Free Textile Machinery.

That paragraph of last month's article dealing with free machinery as an element in the tariff situation, has met with general approval from manufacturers. The more the matter is looked into the more important will it be to the woolen and cotton manufacturers. Mr. Dufton, of Stratford, Ont., puts the case in a very concrete form. A woolen mill of the capacity and character required to put a good grade of fabrics on the Canadian market, and fitted up with modern machinery, would cost $100,000. Now with free textile machinery such an outfit would cost only $65,000. Allowing $10,000 as the cost of such parts as would not be exempt, or which could be had at a favorable price in Canada, we have still a saving of $25,000 on the equipment—a saving which, in these days of close competition, would be equivalent to many years' profits on the fullest output of a mill. To him that hath shall be given, and this scriptural philosophy is applicable to the textile machinery trades. In these days of specialization every valuable patent in cotton, woolen, carpet, and other branches of textile machinery finds its best market in Great Britain. Operators in our textile mills are quite equal to those of other countries in inventive talent, but for the reason just stated their inventions are comparatively valueless in the Canadian market—some would not repay the cost of making the patterns for the machines if confined to this market—while the patent in Great Britain would be worth a large sum. This is because Britain supplies textile machinery not only to her own immense textile industries, but to the textile mills of almost the whole world. Even

the United States, with its high tariff on this line of machinery, finds it impossible to keep out certain kinds of British machinery. While this is the case, there are some lines of the less complicated machines used in woolen mills which can be and are produced as well and as cheaply in Canada as in England or anywhere else—such, for instance, as the cloth washers, fulling mills, etc., manufactured by firms like Young Bros., of Almonte, and bobbins, spools and shuttles, etc. made by Ker & Harcourt, of Walkerton, and Hope & Co., Lachute, whose products are well known through the columns of this journal. The duty can well stand on these lines, which are as well made in this country as need be; but specific exemptions could be made for looms, Jacquard machines, spinning frames and other expensive and complicated machinery, which is not now made in Canada and not likely to be. Even carding machines, which were once made to a considerable extent in this country in the days of the "custom" mill, are now practically extinct as a product of Canadian machine shops since the modern English system of carding is come into vogue. In adopting this course the Government would only be doing what they have done in the mining interest, which, under the second revision of the tariff just announced, is aided by specific exemptions of machinery not now made in Canada. So by naming such and such machines as exempt from duty, the textile industry of the Dominion could be immensely assisted, while no existing interest in Canada could be injured. Such a plan would afford this great advantage to the Canadian woolen industry: it would bring the necessary capital to re-equip many a mill now struggling hopelessly with out-of-date machinery, and when new mills might be started in the future they would come into the field prepared to meet the makers of German and other foreign goods with their own weapons. You cannot expect a regiment armed with flint-lock muskets to successfully meet an opposing regiment equipped with magazine rifles and gatling guns. Give the Canadian woolen and cotton manufacturer the chance of acquiring these modern industrial arms, and he will give a good account of himself in the struggle. If the Dominion Government did this they would have the credit of recreating the textile industry of Canada, while not hurting a single other industry with which the textile manufacture comes in contact, which is more than can be said for almost any other proposition of tariff reform.

SIMULTANEOUS DYEING OF SEVERAL COLORS ON PIECE GOODS.

The present advanced state of the tinctorial art enables the dyer to undertake work not even dreamed of formerly. To this belongs the dyeing of several colors at the same time in piece dyeing, be it either in one bath or in several baths, used in succession. It is one of the latest methods in Europe that is rapidly being adopted in the dyeing establishments. The method is based on the varying absorptive capacity of the several fibres when treated with certain mordants and dyes, and on the different behavior of dyes, especially the tar colors when brought into the presence of different mordants, or on the capacity of a number of them to form color lakes with metallic oxides, and only to fix in this manner upon the fibre material.

Let us first examine the various absorptive capacities of several fibres. If we leave out of account the substantive colors, there are but few dyes that tinge wool, silk and cotton equally with the same preparation. The one or the other remains undyed, according to the kind of fibre and method, and may be dyed subsequently with another dye by employing a method suited to both. The trifling quantity of dye mechanically precipitated upon the undyed fibre must be stripped first, however, but in such a manner that the color lake formed upon the dyed fibre is either not at all, or at most very little, attacked. If it concerns dyes fast against soap, weak baths of either soda or soap are proper; feebly acidulated baths are to be used for colors fast against acids. A simple boil in condensed water or in a weak bath of acetate of ammonia suffices frequently.

Two-color half woolen weaves are generally produced in such a way that the wool is dyed first; the cotton is then mordanted with tannin and antimony, or antimony salt, and dyed with basic dyes from cold to warm. Many dyes color wool and cotton from cold to boiling in one or two baths, after having previously mordanted the cotton. Cotton and silk behave in a similar manner. It happens occasionally that cotton and wool, or cotton and silk, the former invariably mordanted first with tannin and antimony, must be dyed with basic and acid dyes, which naturally always require an addition of acid to the bath, to fix the dye upon the wool or silk.

Differences of temperature also influence frequently the fixation of a dye upon one of the fibres, and its indifferent behavior to the other. For instance, the so-called changeable effects upon piece-dyed gloria. These fabrics generally consist of woolen warp and silk filling, and both fibres are dyed in a different color, say, the wool red, the silk green; wool garnet, silk blue, etc. The wool is dyed in a boiling bath with orange II., or orange GG, with an addition of tartar preparation; the dye adhering to the silk is stripped by treatment for 30 minutes with boiling water, and the silk is next dyed in a cold bath with solid green and thioflavin, with an addition of acetic acid. Or else the wool is dyed at a boil with naphtha green, with an addition of a tartar preparation. The silk is then stripped, as above stated, and dyed in a cold bath with safranine G, with an addition of acetic acid. Or, the wool is dyed boiling with ponceau 2 R, with an addition of a tartar preparation, stripping with acetate of ammonia (boiling for 30 minutes), after which the silk is dyed cold, with new methylene blue, with an addition of acetic acid.

In a similar manner may weaves of cotton and silk

be dyed in two colors in the piece. Let us also illustrate this method by an example. If such a fabric is dyed with diamine B H and a little diamine orange in as short a bath as possible, with an addition of Glauber's salt, soda and soap, rinsed in lukewarm water with a small quantity of soda, diazotized in the known manner, and developed with diamine, next soaped at a boil, and again dyed with an addition of sulphuric acid at 176° F., the dyer will produce a weave effect of black and red colors. The silk may also be dyed with acid green, cyanol extra, or formyl violet in the same way as with brilliant-croceine.

Another still more interesting kind of this style of dyeing is the production of multi colored effects in piece upon the same kind of fibre material. The greater part of the wool dyes requiring mordant, color unmordanted wool, while the greater part of the basic cotton dyes color untannined cotton either not at all, or else only imperfectly. When now a woolen weave mordanted with a metallic salt, such as chromate of potash, fluoride of chrome, alum, sulphate of iron, etc., is dyed together with unmordanted material, say, according to the requirements of certain pattern effects, and when this weave is then dyed with a color requiring a mordant, the mordanted material is dyed only, while the unmordanted absorbs no dye, or, at best, takes a feeble tinge only. This can next, after having been stripped of the dye mechanically clinging thereto, be dyed with another color fixing upon unmordanted material. This will partly tinge the already dyed material, but this contributes in many instances to still increase the difference between the shades. The following is an example:

A material mordanted with chromate of potash is used together with one in an unmordanted state. When, now, the weave is dyed in a strong logwood bath, the mordanted wool colors black, but the unmordanted is tinged but slightly. When next the dyed fabric is topped with a suitable violet dye, for instance, methyl violet, a weave colored black and violet is produced.

Still better adapted in this regard are the alizarines, because, after dyeing, the bath is so thoroughly exhausted that it can at once be used for dyeing the second direct color, which is furthermore aided by the portion of acid still present in the bath. A blue-red or green-yellow weave is obtained by dyeing first with alizarine blue, next with ponceau or tartrazine. Similar conditions also prevail in cotton dyeing.

If, for instance, a cotton yarn mordanted with tannin and antimony has been utilized together with an unmordanted yarn, and the weave is treated with a red basic color in the known manner, the mordanted part only will become dyed, while the unmordanted absorbs little or no color. When next the weave, after having stripped the unmordanted fibre by drawing through a weak soap bath, is dyed with a direct-dyeing yellow cotton color, for instance, chrysamine or cotton yellow, a bordeaux and yellow fabric will result. When it is next considered that many mordant dyes furnish different colors, according to the mordants used, it will become possible to produce in this way more than two colors. For instance, alizarine red gives a bordeaux upon chrome, a high red upon alum, and lilac upon iron. Consequently, by weaving together yarn treated with these three mordants, and dyeing the weave in an alizarine bath, a triple colored weave will be the result, and in case unmordanted yarn was also used, a fabric of four colors will be obtained. Again, the cotton dyer can, with different mordants, produce different shades of the same color. For instance, the tone of many colors dyed upon a sumac differs from that upon tannin-antimony, or antimony. Yarn treated with these two mordants and woven together with unmordanted, next dyed in two baths, gives a triple colored weave.

Finally, multi-colored weaves can be obtained by using different fibres treated with different mordanting and dyeing methods. It is just here where the dyer has an extensive choice, but he must consider at the same time that the method becomes more complicated, and in many cases too complicated to offer any economy. The more simple ways have been fully treated above, and there is every reason to suppose that they will sooner or later be universally adopted. One thing only is required, viz., the dyer must study the different styles of behavior and remedy of treatment of the principal fibres.—*Translated.*

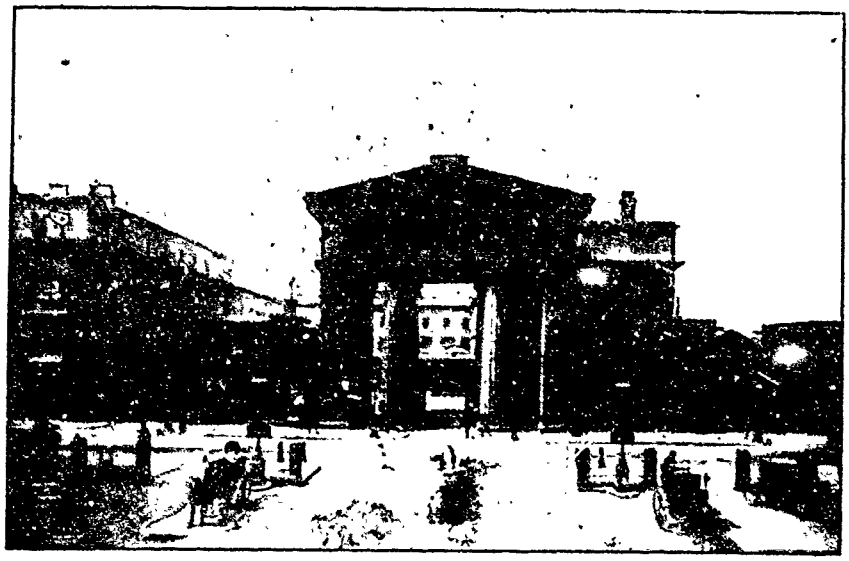
A NEW COTTON MILL.

We are pleased to state that the announcement that the Montmorency Cotton Company, Ltd., has in contemplation the erection of an immense mill on the St. Francis River, at Drummondville, Que., which was made in the daily papers a short time ago, is substantially correct. The power will be developed on the St. Francis, and Thos. Pringle, C.E., is now engaged in making the necessary surveys and estimates for the proposed works. It is expected that the new mills will be ultimately most extensive, and 1,000 looms will be placed in position before it is opened. The question as to where the output of this great industry is to be disposed of naturally arises, and it will be interesting to learn that the management have turned to foreign countries for customers. It is the intention to manufacture on an elaborate scale for the markets of China and Japan. A careful personal inspection of these markets by the agents of the Montmorency Company has convinced them—and they in turn have convinced the management—that an immense field for trade lies undeveloped in these countries. The Montmorency Cotton Company is a strong corporation, and is able to carry out any project that may be decided upon. The manager, C. R. Whitehead, although a young man, is known in Canadian commercial circles as an able and enterprising business men.

BRITISH RAILWAY ENTERPRISE.

Correspondence of THE CANADIAN JOURNAL OF FABRICS

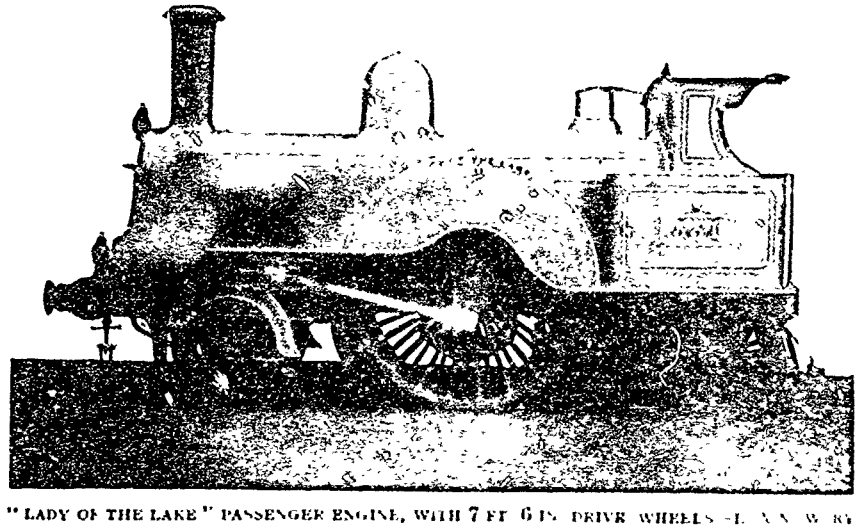
Before the writer set foot in England he was inflated with the idea common to Americans (using this word in a continental sense) that we were ahead of the world in railway enterprise and railway management. A few journeys over Great Britain and a short study



ENTRANCE TO EUSTON STATION, LONDON AND N.-W. RAILWAY.

of the two systems will dispel that idea as an illusion. It is true that the American tourist will, generally speaking, miss his convenient system of baggage checking, and will see the faults of the compartment system of passenger cars; but if he travels by the London and North-Western Railway, he may have the American system applied to his baggage, with the American feature of "baggage smashing" omitted, and if he is travelling on a through train he will find dining cars, sleeping cars and parlor cars on a modified American plan, quite as luxurious, quite as convenient and affording easier riding than any in the United States. But assuming that this splendid Americanized special service on the London and North-Western did not exist, the unprejudiced American will find on investigation that the system in use in the United States and Canada could not be wholly applied to Great Britain without depriving it of some of those distinctive points which make it on the whole the most efficient and best managed railway system in the world —for in the three great essentials, solidity of construction, average speed of trains, and safety of passengers, the railways of Great Britain stand unequalled. On a previous visit to England the writer remembers reading the annual report of the London and North-Western. Out of over 25,000,000 passengers carried that year by this company, not a single passenger's life was lost! Think of the efficiency, the care, the regularity and intelligence this means. No such record has been known in any corporation of like dimensions in the history of American railways. Then as to speed, it is true that the "Empire State" express on the New York Central now holds the record for the fastest train in the world, but that is an exceptional performance, and the average speed of the New York Central expresses is below that of the leading English railways. Taking a late time table of the London and North Western, I find that the six expresses running daily from London to Carlisle make an average of 45.4 miles per hour, and on the return to London the eight expresses make an average of 44.5 miles per hour, while the New York Central's four expresses from New York to Buffalo make an average of 43.6 miles per hour, and returning from Buffalo to New York the average is 42.9. The difference is nearly two miles per hour in favor of the London and North Western, though the grades on the English road between Crewe and Carlisle are much more severe than those on the New York Central.

Although the area of Great Britain is so small compared with the United States and Canada, and although it has been for years covered with a network of rails, while vast regions of America are still unserved, the mileage of new roads was relatively greater during the last year under review (1895) in Great Britain than the United States, and what is still more remarkable, the British roads return better dividends. In 1895



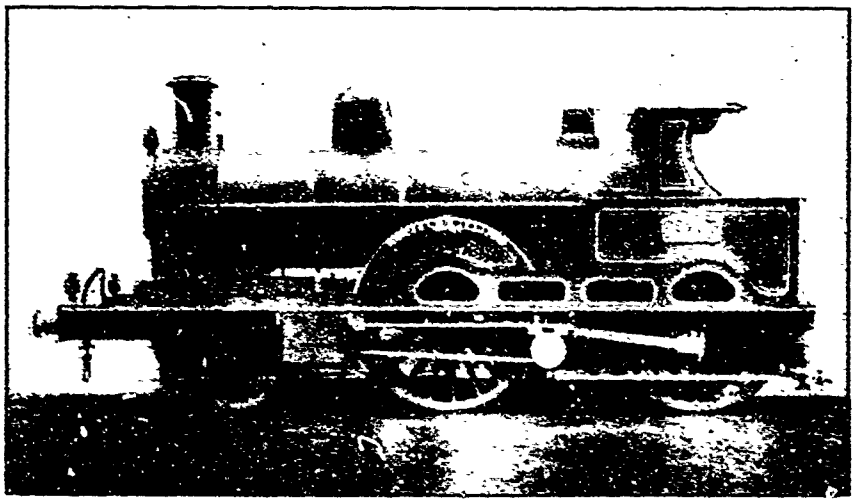
"LADY OF THE LAKE" PASSENGER ENGINE, WITH 7 FT. 6 IN. DRIVE WHEELS—L. & N. W. RY.

there was added to the United States railways 1,925 miles, while in Great Britain the mileage added was 270. In the same year the railways of the United States earned a dividend of 2.94 per cent., while those of Great Britain earned 3.95 per cent. In both

cases the dividends are less than in former years; partly due, no doubt, to the increasing use of the bicycle, and in the case of the United States to the growing competition of the electric railways in some States. In addition to this, the widespread depression in the United States has, no doubt, put a check on new enterprises, and new roads are not built for the benefit of

INTERIOR OF SALOON CAR, LONDON AND NORTH WESTERN RAILWAY

contractors so much as they used to be. Anyone travelling over Great Britain is struck with the solidity of the permanent way, the substantial character of the stations, the numbers of solid bridges, viaducts, culverts, archways and tunnels—all built to last for ages. The English railway builder goes through a mountain, the American goes over it. The cost of construction of British railways is about double those of America, but the receipts of British railways in 1895 were over three times those of the United States, being $19,220, against $6,170 per mile. British railways are operated more economically than American, for of the gross receipts of the United States railways 70.30 per cent. were absorbed in expenses, while in Great Britain the expenses are 50 per cent. of the receipts. About a quarter of the revenue of the United States railways is derived from passenger traffic, while the passenger traffic of Great Britain is 40 per cent. of the whole. The total freight handled in the United States, in 1895, was 703,750,000 tons, while Great Britain, with one-ninth of the mileage, handled 334,000,000 tons. In the last ten years $72,500,000 were spent on new railways and improvements in Britain, there being 1,842 miles built in that time; and the total capital now invested in the railways of these islands is £3,005,000,000. The average annual increase in the passenger traffic is 23,000,000 passengers, though the increase in 1895 was only 19,750,000. The enormous amount of passenger traffic handled in England, and the admirable order with which the vast crowds are carried on special occasions, such as holidays, is one of the marvels of British railway traffic. In Yorkshire and Lancashire, the factory population hold what are called "wakes," the annual summer holidays, when thousands swarm to the seaside or mountains, having saved up by means of "going away clubs," sufficient for the festive occasion. Last summer, in the town of Oldham alone, a total of $750,000 was drawn from the funds of the "going away" clubs, and half of this big total was spent at Blackpool, the popular seaside resort of Lancashire. This attractively situated seaside town is reached by the London and N.-W., and on the occasion of the last Oldham "wakes," no less than twenty special trains were required to convey the holiday-seekers of that town to Blackpool. On the last bank holiday, twenty-seven special trains had to be provided to take holiday seekers from Liverpool to Southport—another seaside resort of Lancashire fed by the L. & N.-W. Though this was nearly double the number that had been calculated on, the extra traffic was provided for without hitch or accident. Altogether, on that single day, the L. & N.-W. ran 150 special trains into Blackpool alone, yet not a mishap was reported, and the regular service went on with nearly its usual regularity.



"THE JEANIE DEANS"

Within a comparatively short time, on that day, the booking clerks (ticket agents) of the L. and N.-W., at Liverpool, made change for 9,219 passengers and took in £2,449; while at Birmingham, the same day, they sold 24,978 tickets, and took in £6,608. On the day before this, at Euston Station, London, the sum of

£8,414—say, $42,070—was received for passengers' tickets. To supply all these tickets, give the correct change instantly, as they must do, to keep account of the cash, and answer enquiries, implies a combination of alertness and coolness which seems almost supernatural to the lay mind. Yet the same trained intelligence is required in the engineer, the signalman, and the other employees who have to cope with work requiring such lightning-like activity, and who have so many thousand lives dependent on them.

Two samples of London and North-Western express engines are given in this letter, these being of the class that will carry the tourist from Liverpool to London—a distance of 100¾ miles—in less than four hours and a-half; and they can easily run over a mile a minute. The L. & N.-W. have over 3,000 engines, all built at their workshops at Crewe (which will be referred to in another letter), and the value of these engines is over $25,000,000. One of them, the old "Cornwall," having a drive-wheel 8 feet 6 inches in diameter, has just been laid off after 50 years of service. Every five days a new engine is turned out from these shops, and 2,000 come in each year for overhauling, there being an average of 330 in hand at a time. The "Jeanie Deans" compound express engine, which hauls the Scotch express from Euston, frequently takes 18 to 20 cars, including the heavy dining-cars. The "Greater Britain," another recent engine built at Crewe, is perhaps the most powerful locomotive in existence. Though heavier than any other on the line, it does not put any more steam on the permanent ways or bridges, owing to having an extra pair of small wheels underneath the foot plate, these wheels having half an inch of side play. The front wheels have a patent radial axle-box—designed by F. W. Webb, the company's mechanical engineer—so that the engine, though of great length, can travel safely over curves. The engines on the L. & N.-W. consume over 3,000 tons of coal per day. In my next letter I shall speak further of this company's great shops at Crewe.

FATS IN SOAP WATER.

METHODS PRACTISED FOR THEIR RECOVERY.

The utilization of a large number of the residues, or by-products, in many manufactures, which were formerly valueless for the lack of application, has become a field for work, and a source of profit in modern industry, writes W. Levy in *Les Corps Gras Ind.* In this work of turning waste substances into valuable products, unlooked-for results have been obtained. Native molasses, the residue in making beet-root sugar, has furnished mountains of potash and lakes of spirits of wine. Oleic acid, a residue of stearin making, has become one of the best and most abundant of raw materials for soap manufacturers. An almost inexhaustible mine of the salts of potash and of soda has been found in the mother waters of salt marshes. The tarry residues of the gasworks have yielded the most diverse products, and the richest of colors. Finally there has been found in the waste liquors in which wool in the grease has been scoured a copious supply of potash and fatty matters. This last application of the idea is quite modern, for a short time back the soap liquors in which wool had been washed were simply looked upon as valueless, and run off into the drains. As a matter of fact, this amounted to a very considerable loss of valuable fat, and this loss was so much out of the pocket of the great wool industry.

If ordinary soap waters only contain a small quantity of fat, on the contrary, the quantity of it is enormous in this case as compared with the volume of the liquor. It has even to be noted that the finer the fleeces, the more grease they contain. The common qualities yield 20—30 per cent. of their weight; in the medium and superior grades the amount reaches 40 or 50 per cent. Therefore, as our woolen factories handle annually more than 300,000 tons of raw or merely washed wool, it is easy to figure the enormous mass of fatty matter wasted by the industry for want of a use of it.

Perhaps in reality this waste was to be attributed to the absence of a rational method of recovery. The attention of chemists, nevertheless, was directed to the question, for they knew that in the multiple uses assigned to it by domestic economy, in the arts and in the textile industries, soap acts principally by its base, and the greater part of it remains in solution in the water. From this it was evident that by treating these waters with an acid the soap would be decomposed and the fatty acids would be set free, and might be used afresh to make a new soap by saponification with alkalies—that is to say, by soda or potash lyes. To M. Houzeau Muiron, of Rheims, is due the first industrial application of this theoretical idea, for his process of extraction of the fatty matters contained in the soap liquors, in which wool in the grease or suint has been scoured, rests essentially on their treatment with an acid. This treatment of soap waters has experienced a rapid expansion in the last twenty or thirty years. The fats found in commerce under the name of "Rheims grease" and "Tourcoing grease" have no other origin. Their extraction from the residual liquors is simply the consequence of the progress that chemistry introduces day by day in the industrial arts. Thanks to the method of treatment of these waters with acids, the fatty bodies extracted from them may, as it were, be transformed indefinitely into soap, since it is merely necessary to eliminate the fatty acids from the suds with an acid, and saponify them afresh with soda or potash lye to regenerate the soap. Belgium, always on the alert for useful ideas, seems to have been one of the first countries to exploit this source of grease on a large scale. Greater efforts and heavier sacrifices have been made in Belgium than in any other country to foster and bring to a full growth this new industry. In the neighborhood of Verviers there is a large soap factory, where nothing else is used in the way of fats but the greasy matters recovered from the soap liquors of the important woolen factories of the town, which is one of the most industrious and most prosperous in the country.

This new industry owes its origin altogether to the splendid researches of Chevreul into the chemical constitution of soaps. Moreover, as a matter of fact, that illustrious chemist, having shown that the soaps are salts formed by fatty acids combined with an alkaline base—soda for hard soap, potash for soft soap—it was easy to deduce from this that by saturating the base with an acid the fatty principles would be set at liberty. A few words will explain, then, the actual treatment of soapy waters. They are run off as they are produced into large wooden vats lined with lead, which are filled up only to four-fifths of their capacity, in order to leave enough space for working operations. This being done, very weak sulphuric or hydrochloric acid is poured slowly in to saturate completely the alkaline base. The saturation point is obtained when the liquor in the vat reddens litmus paper. To accelerate the reaction and make the operation easier, the contents of the vat are constantly stirred during the whole of the operation. In a few hours the fatty acids from the decomposed soap form a more or less thick layer of grease at the top of the vat. This is skimmed off, and when a sufficient quantity is collected its purification is proceeded with. To this end a copper is about three-quarters filled with the material, and it is melted by heat. In a few hours, under the influence of heat, it divides into two layers. The upper layer is fluid and limpid, and is pure fat, which can be converted immediately into soap, as is ordinarily done. The lower layer, which forms a muddy deposit, is a more or less fluid mixture of water, foreign matters, and grease. To separate out this last the residue is put into woolen bags woven closely enough to retain the sediment, and these are submitted to two pressings. The first, done in the cold, makes the more fluid oil run off; the second is done by placing the bags between heated plates and submitting them to heavy hydraulic pressure, and this extracts all the oil or grease that remains in the residue, the elevation of temperature rendering it fluid. After a washing in hot water, which completes its purification, this grease also can be turned into soap. Nevertheless, the first-mentioned recovered grease seems to give the better results in soap-making, and this latter, which is richer in solid fats, is perhaps more suitable for candle making by distillation, and it is often put to this use.

It is to be noted that there is a more rational method of treating soap liquors. It consists of collecting the soap to begin with, and decomposing it at the boiling point with very dilute sulphuric acid. In this process the waters are treated with a saturated solution of sea salt in a proportion determined by experience, and the mixture is energetically beaten up for some time. Under the action of the salt the soap becomes insoluble; it forms in lumps, which floats on the surface of the liquid, from which they are skimmed off. A special plant has been made for this work. The principal operation is done in an immense mechanical churn, similar to one of those used in butter making. From 15 to 20 hectoliters of soap water is treated with salt at one operation, and the stirrers are set in motion by any sort of a motor. In 20 minutes, at the longest, the operation is complete. The contents of the churn are then run off into vats, where after 24 hours' rest, the whole of the soap has collected on the surface and is ladled off. This is then decomposed with a very dilute solution of sulphuric acid at the boil, and the fatty principles are thus set free.

In the Vohl process, the waters are treated with a solution of calcium chloride. In this way the fatty matters are precipitated in a state of insoluble calcareous soap, which is collected and washed. It is then decomposed with hydrochloric acid, and chloride of calcium is formed, which may be used again while the fats are set free. These recovered greases have augmented the sources of supply of the soap works, and lessened the cost of the product, while at the same time their recovery and utilization have greatly benefited the industries which formerly looked upon their soap liquors as hopeless waste.

THE QUEEN.

God save the Queen! The hymn and prayer resounds throughout the world. It is echoed from a greater number of lips and hearts than any invocation or national cry since mankind began to band themselves into nations. Her name is beloved and revered, not only by her subjects, now numbering 350,000,000 people, but by millions in other nations, who, rightly reading the history of the time, know our Queen to be a lover of peace, and to be animated by the spirit of goodwill to all peoples. Millions of citizens of the United States, though owning the rule of an elected sovereign, will join the prayer for long life to the Queen, and are to-day almost as much interested as we ourselves in this jubilation for the longest reign in English history, and the longest reign of any noted sovereign of a nation prominent in the history of the world.

In the eloquent outpourings of love and devotion that will thrill through the tens of thousands of presses and pulpits this month, it is quite possible to exaggerate the personal power and the personal attributes of our Queen. Beloved though she is, we have to acknowledge that she is but human. She has no doubt made mistakes, and yet there has been no important crisis in the Empire's history where her judgment has not been guided by sound sense, and in no instance—God bless her!—has her record been tainted by an act or expression of cruelty or oppression. Those who have read her "Reminiscences of Life in the Highlands," or her other books, must see internal evidence of a pure mind and simple life. Her spontaneous utterance when, as a young girl, she received the announcement that she was Queen of Great Britain—"I will be good"—was the natural expression of her heart's desire.

Now the remarkable thing about Queen Victoria's call to the throne is this: that if it had been a case of election by the people she would inevitably have been passed over. The nation would have fixed on some

more striking and dramatic figure—not an inexperienced maiden of negatively good qualities, but a lady of some pronounced mental qualities with something of the dash of Queen Elizabeth. Yet, as our young Queen grew into a woman, it was seen that the very absence of those dashing and brilliant qualities was the evidence of a truer greatness. It was her common sense and that excellent balance of intellect that was to make her reign far outshine the glories of the age of Elizabeth. Time alone, in the ordering of Providence, could develop the high nobility of her character, forged in the fire of personal affliction, by bereavement, widowhood and all the moulding "changes and chances of this mortal life," through which she has passed. Thus no plan of popular selection of a ruler could have brought about a reign so long and so glorious, or so abounding with mutual affection between ruler and people.

And so all hearts may join in the stirring anthem composed for this special occasion by a Canadian, the Rev. G. J. Low, of Almonte :—

A NEW NATIONAL ANTHEM.

O Lord, our God, to Thee
All praise and glory be,
Thy power we own.
For Thou hast heard our prayer,
Her life in health to spare,
For three-score years to wear
This Empire's crown.

To-day, throughout the world,
In every breeze unfurled,
Her standard's seen :
From India's coral strand,
From Afric's golden sand,
Resounds the anthem grand,
God Save the Queen.

And Canada that links
The two great oceans' brinks,
Repeats the strain.
To keep our own wide land
Part of that Empire grand
We'll work with heart and hand,
With might and main.

Her Empire's vast increase
In power, in wealth and peace,
Her reign has seen :
Of ev'ry race and creed,
From all oppression freed,
Her subjects ever plead,
God Save the Queen.

TEACHING DESIGNING TO THE YOUNG.

The following interesting plea for the instruction of the young in the principles of art and design was addressed to James L. Hughes, public school inspector in Toronto, by Jas. P. Murray, of the Toronto Carpet Manufacturing Co.:

As the association with the beautiful is productive of good, so should the association with art refine our ideas and improve the morals. Further, if not only the association of thought, but competition in thoughts pertaining to the development of an idea, then must good results follow. Thus we find nearly all Hungarians natural musicians, the son of the master of the hounds, though a child, yet a huntsman, etc.

Now, by making it an attraction to the children to emulate the good they see before them, their thoughts will be refined by the daily reminders brought to their notice, which will not only have a great moral effect, but make each one of more monetary value to himself and the country.

Maynard, a graduate of the Massachusetts School of Technology, having given great thought to the question of improving the beauty of the manufactures of the country, has concluded that the taste of the consumer must be educated, if we are to expect better things from the producer. Trade in manufactured articles is governed by the demand, and the demand is according to the taste of the people.

As we may presume that many of the children of our schools to-day may be employed in our manufactories in the future, the knowledge they would beget from continued association with others having the same thought for improvement, would necessarily benefit the output of their hands.

To the idea adopted in an institution in Bruen, Austria, I am indebted for the thought of having the school children take up the question of self-education in art. Entering this room you would think it a great library, with works dating back to 1856. Each volume is labelled "England, Spring, 1866," "France, Spring, 1866," "Germany, Spring, 1866," City, Spring, 1866," and so on for every year, and "spring" and "fall." On opening one of these volumes you find it filled with patterns of every kind of textile, having a new feature in weave, design, color, etc., for each season, lighter weights and colors for spring, darker and heavier for fall. It is a great education to a designer to look through this room.

Now, what art student is there who does not consider it a privilege and also a necessity to be able to study the works of great masters, and so with our pupils, induce them to study the objects around them with this view of bringing their specimen as an example of their idea, and you will soon find a marked improvement in their judgment.

When it is remembered that all the carpets, wall-papers stained glass, lithograph advertisements and the hundred and one things we see every day around us, but possibly ignore, are all the result of considerable study, labor and expense by designers, who have probably spent years perfecting themselves in schools under able teachers, studying rare examples of art, it will not be necessary to spend money for examples. Had we in Toronto some large public benefactors who would put aside some of their surplus wealth for the education of the masses to finer ideas in art, the proposal offered might not have been deemed necessary. A museum of art such as Warner's gift to Chicago, the art museum of Cincinnati, and other gifts of a similar kind to the people by men, would do more to further a knowledge of it than months of lectures.

The effect of the proposal would not only be felt by the pupils, but would be taken up by their parents, and as it is understood the board has already commenced the encouragement of a trade for floriculture, it should follow it up by adopting some plan to carry further the good work.

I am not quite prepared to say as to what would be the best method to adopt to introduce the idea; whether it is better to take several classes and allow a pupil to choose which class in which he would wish to compete. This would necessitate a large number of prizes to each school, and would not be as general in its results or advantages. Probably the most satisfactory way would be to adopt the first idea and allow so many points for each line of judgment in the value of the example, for instance, specimen a piece of wall-paper:

Points given for value of design	4
" " " color	3
" " as suitable to room chosen..... .. .	8
	15

points as the value of that example, and the pupil aggregating most points in his final collection of ten samples would earn the first prize.

During the term the pupils may keep their specimens at home after they have been appraised by the teacher, and if during the year a pupil can bring a specimen that will earn more points than a previous specimen, it may be substituted therefor. No pupil to bring more than one specimen at a time. Specimens to be submitted the first and third Fridays in the afternoon.

It may be argued that perhaps the teachers may not be competent to value the article. Then I think members of the "Art League," "Architectural Sketch Club," "Woman's Art Club," "Ontario Society of Artists," "The Technical School," "School of Art and Design," would all contribute members who would spend the half hour it might take to appraise what specimens are offered.

It is not probable that more than half the pupils would enter the competition, as the youngest children would not understand it, though if any scheme to encourage them when they come out of the kindergarten class could be suggested, it would be better. Again, not more than half of those who have entered would bring a specimen each appraising day.

The various classes of design would further help the pupils in history and geography, as we learn in Styles, The Middle Ages, Empire, etc., Byzantine, Celtic, Moorish, Persian, etc.

Probably the first term or two may not produce the most satisfactory results or best system, but there should be some means to develop it for the great benefits that would surely flow from it.

The largest production ever turned out from the Brantford cotton mills in any one month was that of four weeks recently. Since the presentation of the tariff the mill has produced 330,000 yards from the looms.

WHAT THE MANUFACTURERS THINK OF THE TARIFF.

The following are some of the replies received by THE CANADIAN JOURNAL OF FABRICS in response to questions asked the manufacturers when the tariff was first announced:—

Mr. Dufton, of Dufton & Sons, who have woolen mills at Stratford and Mitchell, Ont., are manufacturing a special line of cheviots which have a large sale, but which are made on a close margin. Mr. Dufton, who is a close observer, corroborates the views expressed in THE CANADIAN JOURNAL OF FABRICS as to the difficulties thrown in the path of Canadian woolen manufacturers by the policy of the wholesale dry goods trade. The Dufton Brothers are not only experienced as woolen manufacturers in Canada, but have the advantage of acquaintance with the methods pursued in England, where they learned their business. In conversation with a reporter of this journal, a member of the firm pointed out the serious handicap imposed on the Canadian manufacturer by the immense variety of patterns demanded by the trade. In former times hundreds, yes thousands, of pieces would be ordered of a single pattern, while now many will order a single piece of one pattern, and are never satisfied with the range of patterns, which run up into the hundreds. Mr. Dufton and his designer spend five weeks twice a year, getting up samples of new patterns. This means a period of ten weeks in a year spent in producing new designs, and there is not only this large amount of time spent, but the great quantity of material wasted for samples, which all the wholesale houses must have. In proportion to the orders given, the waste of material for samples is enormous. As is well known, many British manufacturers run, year in and year out, on a single specialty, involving no waste of time and material for samples. One can easily see what a vast advantage the British manufacturer has, and it is here that Mr. Dufton thinks a reasonable amount of protection is called for in behalf of the Canadian mill. Give the Canadian manufacturer the advantages enjoyed by the British and German manufacturers in cheap raw materials, and their large market for each line of goods, and the Canadian can hold his own with any of them. As compared with the American, the Canadian woolen manufacturer is superior in skill, an opinion that Mr. Dufton has formed after visits to various textile centres in the United States. The Canadian woolen mill owner only wants fair treatment. The inconsiderate cancellation of orders is an evil that is not diminishing, but, of course, this is a grievance from which the wholesale man also suffers at the hands of retailers. Mr. Dufton also believes that the placing of textile machinery, such as looms, spinning frames, etc., on the free list, would be an immense advantage to our manufacturers. It means that a mill which now costs $100,000 to equip, could be equipped under such a free clause for $65,000.

Newton Bros., formerly of Limehouse, now operating the Sarnia woolen mills, consider the outlook

very bad under the present tariff for small mills, working on cheap goods. They also favor free machinery as a compensation for their present disabilities.

Editor CANADIAN JOURNAL OF FABRICS.

SIR,—Referring to your P. C. asking my opinion of the new tariff, I might say that as far as I understand from what I have seen in the papers so far, it is still a protective tariff on a great deal of the goods imported into this country. I think, however, that the Government has made a great mistake in interfering so much with the woolen manufacturers. We are well aware that during the past few years the woolen industry has not been in a too healthy condition, and such radical changes as they have made on the bulk of goods manufactured in this country will do a great deal of injury to some of the mills. As far as the duty on knitted goods is concerned, we think that socks and stockings should have been left as they were before, viz , 35 per cent. and 10c. per dozen pairs. There has been no change made as far as shirts and drawers are concerned, but when the preferential clause comes into effect it will reduce that down to about 26¼ per cent.; this you will see will be the means of letting in a large quantity of the cheap goods from foreign countries, and it will have the effect of creating a great deal of uneasiness in the trade here and ultimately cause the reduction of wages to employees engaged in the manufacture of woolen goods.

I am, yours truly,

J. HEWTON,
The Kingston Hosiery Co., Ltd.

Kingston, Ont., May 11th, 1897.

Editor of THE CANADIAN JOURNAL OF FABRICS.

In reply to your P. C. of 7th inst., our woolen mill is 48 x 48 cards, one Davis & Furber automatic spinning machine, four looms, all good new machines, making yarn and homespuns. As this is on a small scale we are not in a position to give evidence as a test case. But from actual experience and observation we think the profits under old tariff were not such as to make "bloated millionaires," and probably the woolen tariff in its most advantageous circumstances would not make completely successful millionaires of the humblest type. This is positively our impression.

Our woolen mill will close, and I shall be on the market for a position elsewhere, after twenty-three years' residence here.

Very truly,

G. R. DAWSON, Mgr.,
St. Croix Woolen Co.

St. Croix, N.S., May 18th, '97.

Editor CANADIAN JOURNAL OF FABRICS.

SIR,—In answer to your card, asking "what I think of the tariff," would say that I am disgusted with it. It is the worst muddled up tariff that was ever inflicted on any country, and the longer it is kept in force the worse and more complicated it will become. To suit the woolen manufacturers, the tariff should be as it was previous to 1893, viz., 10 cents per lb., and 25 per cent. ad valorem. Before that we had all we could do, and since the tariff was altered to 5 cents per lb. and 25 per cent., we have been slack, and now we expect to have nothing to do.

* * * * *

Yours truly,

W. D. VAN EGMOND.

Seaforth, Ont., May 10th, 1897.

A prominent Ontario manufacturer advises us that he is preparing a full statement of the case of the woolen industry, to be published later on.

FINISHING.

It is generally supposed that woolen goods receiving the same treatment in the finishing room would come out uniform, but it is a fact which has troubled many a man that this is not always the case, says a writer in the Boston *Journal of Commerce*. There are, however, a multitude of reasons why goods do not always look alike when finished, even if they have received nominally the same treatment, as also why goods do not always finish alike, that is, act the same under the same treatment. We believe that in this we have one of the knottiest problems which it falls to the lot of the finisher to solve. The finishing room is naturally the first place anyone would hold responsible for this state of things, but it is not always that the finishing room is to blame. Of course, most of the trouble of this kind is found on fancy cassimeres, for on these goods the slightest variation in either shade or finish becomes at once painfully manifest

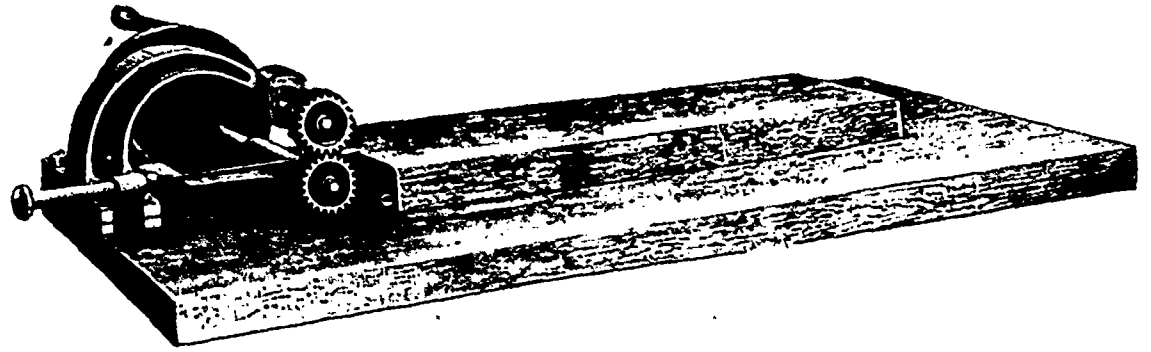
Examining the finishing department critically with a view of lessening this evil as much as possible, we have come to the conclusion that it is impossible to entirely overcome the obstacles, on account of the close relations the other parts of the mill bear to this, and the decided influence some of the previous operations have upon the after process However, the causes directly due to finishing must be enumerated before we look for causes outside of the department. The fulling mill is responsible for much of this difference in finish, for if two pieces are put in the mill, one on each side, and they are allowed to run indiscriminately until they are supposed to be up, there is apt to be a difference when they are examined. This may be trifling in itself; say, perhaps, half an inch in width or half an inch difference in length, and the goods are let go as being near enough for all practical purposes. Of course, they are near enough right if it were not for the demands of the buyer, but he is generally the man who puts a veto on the "near enough" business. The goods must be watched carefully so that both sides come up alike. The friction on the rolls is quite a considerable item, and must be carefully attended to, so that one side of the mill does not get more pressure than the other. There are always some styles which are more sensitive in regard to shade than others, especially when there is a strong contrast in colors. If such styles as these could all be fulled in the same mill it would be worth all the trouble it occasions in the better results obtained, provided they are carefully treated alike, even in the same mill. Great trouble is found when mills are placed near doors which frequently open and shut, for it will be found that the side next to the door will full slower, no matter what we do, on account of the draft incident to the opening and shutting of the door. If that side is given a little more pressure and the cover kept down, and the cover on the other side raised a trifle, things may be equalized somewhat, but it will take considerable study to arrive at the best results. Finishers are too apt to overlook little things like these and then wonder at the difference in results.

The amount of soap put on the goods also plays quite an important part, for if one piece receives more soap than another there is sure to be a difference in the looks of those pieces. It may not be a great difference, but sufficient to make a different shade, so that if a buyer wants six pieces of exactly the same shade one of these will not be fit to send at least. The usual practice is to put on so many pails of soap to a piece, but if one piece should be a yard or two longer than the other it is evident that the longer piece has less soap than the shorter. The best way is to calculate to have a dipper with which to dip the soap into the pail of about two quarts capacity. Find how many yards of goods that amount will properly soap, and then figure on the piece. It takes only a little practice to make the fuller practically perfect in this respect, and it will also be found that this works well from an economical point of view.

In the washing or rinsing of the goods, especially where warm water is employed, there are many chances to produce changes, and therefore the temperature of the water used must be carefully watched. While it is generally conceded that the use of warm water in the rinsing of woolen goods gives the best results, experience teaches us that the use of cold water solely will certainly give the evenest results on fancy cassimeres at any rate

Leaving now the mills and the washer, we come to the gigging and find that here also are numerous chances to change the same style of cloth into two or three different looking pieces. The moisture in the goods plays an important part, but if one piece is moister than another the results will not be the same. Just so with the teasels, one piece gigged with cheaper work than another is going to make a visible difference. Happily this part of the work is now uniformly done on the new napping machines in

universal use, and if the goods are dried before gigging the other difficulty may also in a measure be done away with. That there may be a difference in shade produced in the shearing we are certainly more or less familiar with and it remains only to mention. Burr dyeing is a prolific cause of making different shades. If possible we should aim to get as many styles as possible to burr dye at once, and here comes in the great usefulness of an 8-string washer over the 2-string contrivance of the past. Due care must be exercised to have the dye applied evenly and to have the goods in motion while it is being applied. Then, also, the dye should be applied as quickly as possible, and, therefore, plenty of pails should be provided, so that the whole amount may be put in the pails carried to the washer and then applied, giving the washer tender a man to help him pour the dye in. If the washer tender is left to do this alone the chances are that the results will be anything but satisfactory, for it will take too long to pour it all in, even if he has pails enough But to expect a man to do good work here with one or two pails is simply out of the question. The man takes two pails of dye and pours them into the washer one at a time, then goes off and gets two more pails, often having to travel quite a distance, which he also pours on, and so on until all the dye is on which to a set of eight pieces takes quite a long while. Another source of unevenness frequently met with is the practice of leaving a certain amount of water in the bottom of the washer before the dye is put in This is surely the poorest way to burr dye imaginable and should never be employed. Get the dye the correct strength by the careful use of the hydrometer and apply as above stated, and the bad results of burr dyeing will be reduced to its lowest limits These are the most important points in the finishing room where off shades are produced, and in a future paper we will consider the causes outside of the finishing room.



SEWING MACHINES.

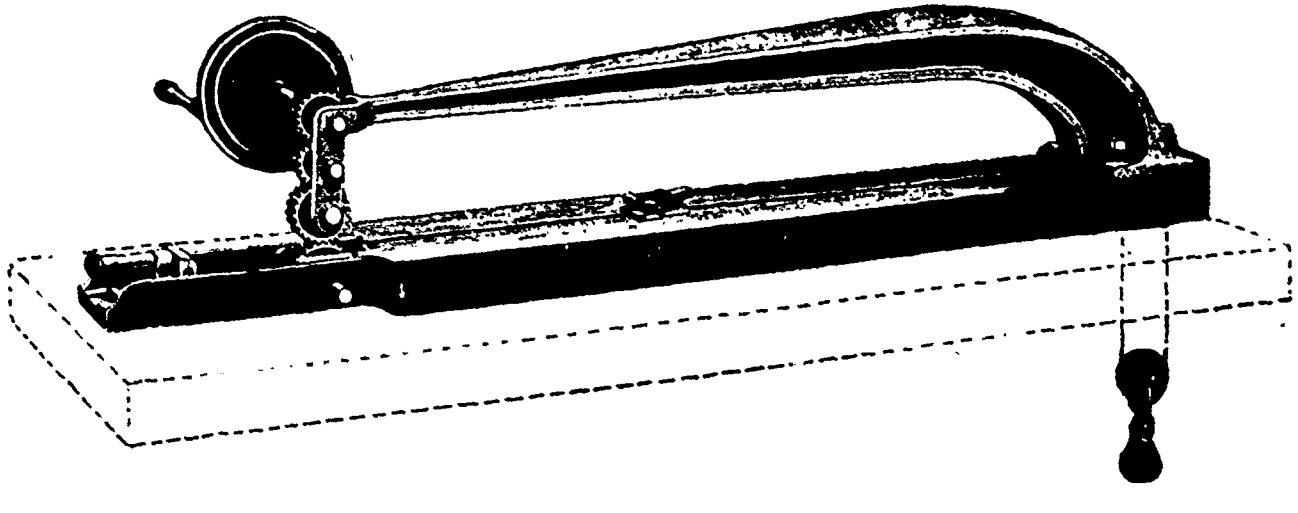
The sewing machines for bleachers' use are an important part of mill equipment. Those made by W. H Harrap, Manchester, are very widely employed Sewing machine No 1 is fixed on wooden bed, iron wheels, hand wheel, and needle holder for one needle This machine is also fitted with brass wheels.

Sewing machine No. 2 is made with strong cast-iron bed and arm, brass wheel, hand wheel, needle holder, and cloth holder, for 40-inch cloth, for 50-inch cloth, for 60-inch cloth, for 96-inch cloth. This type of machine is largely used for sewing together any width of cloth, say up to 100 inches, for bleaching processes. The sewing will withstand great tension without tearing the cloth, and the thread is easily drawn out after the operation of bleaching is completed.

A WOOLEN COMBINE.

The latest I have been able to learn about the new movement to make the big merchants and manufacturers independent of the small men, is that an office for the transaction of the Union's business has been opened, says the *American Wool and Cotton Reporter's* Chemnitz correspondent in a recent letter. Over this preside Messrs. F. and A. Wilhelm, both by all odds the very best men for the work, for they suffered most from the system inaugurated a few years ago of selling direct to American buyers. The following is a fair, if easy, translation of an article announcing the above. It appeared in a local paper:

Stocking Export Protective Union. Opening of a business bureau in Chemnitz, Brauhausstr. 6. Business managers, F and A. Wilhelm. When one considers how important the hosiery export business is for Chemnitz and the surrounding country, notably Stollberg, Lichtenstein, etc., one cannot but have noticed that the entire knitting business has been in a bad way for years. Depressed prices, overproduction, losses, etc., are the common causes of complaint These, those have heard who bother themselves in any way about business, but the awful effects of an ever increasing competition, of slaughter prices or of the ruin of hitherto honorable, hard-working houses, none but those have heard who have had to bear the brunt of the battle. For a long time everybody felt that something must be done to save the falling fortunes of the hosiery houses. Just what this something should be nobody knew. It took the merchants and manufacturers a long time to make up their minds that a protective Union would be the best means by which to make headway against the system under which so many suffered. Now that success, so far as organization goes, seems to



have crowned the efforts of those most of all interested, Chemnitz is to be congratulated on having found such able leaders and managers as the men who, in spite of so many different opinions and interests, have undertaken the work of guiding the new organization. There were two special evils to fight: (1) The evil that grew out of manufacturers and factors (men who made for manufacturers), who formerly delivered to large export houses here, selling to American and other foreign buyers direct, selling cheaper (?) to those people than to the home houses, who were struggling to keep up prices and rates of wages. (2) Overproduction. This was one of the great weaknesses of the entire system. It ran down prices and kept them so low that recovery became impossible. The Export Protective Association's object is to wipe out these evils. It is to work both for houses here and for the little people who are either powerless or not well enough posted to be able to protect themselves. To do this, it must get a good idea of just how many firms are to export, and how many are to furnish said export houses with hose. The old, or large export houses, do not want the factors who sell to them to sell also direct to foreigners. To this end they sent out a circular asking the factors willing to agree not to sell to outsiders, to sign an agreement to that effect. It is said that 99 per cent. agreed. (But between agreement and execution is oftentimes a long way.) To carry on the Protective Union's work, the bureau under the management of the Messrs Wilhelm has been opened. Both men were for a long time in business for themselves, hence they have not only a knowledge of how hosiery is made, but both are well acquainted with buyers and sellers. The purposes for which the bureau was opened are: (1) To help the factors to dispose of stock lots, by letting the manufacturers know when there are any on hand. The names of sellers and buyers are to be held secret, this to secure safer and better business for both. A small commission on such sales is to help cover expenses. (2) To send out orders, free of charge, from manufacturers to the factors. (3) To help in the sale of yarns, machines, etc., etc. (4) Information free, as to amounts of stock on hand, in the market, etc., etc.

In a word, the bureau is to serve as a centre of information in regard to the hosiery trade, and it is to help as much as possible in putting it back on a basis similar to that of ten years ago. When one thinks of to-day's prices and those of ten years ago, and of the changes that mark a transition from exports worth $10,000,000 or $12,000,000 to exports worth only $4,000,000 to $5,000,000, one wonders that the union was not organized before.

Foreign Textile Centres

MANCHESTER.—The home trade has brightened up, as a result of the fine weather which has so tardily arrived. In at least one instance terms have been offered "as July," in order to encourage retailers, and it is hoped that during the short period that remains before the Jubilee is upon us distributors will be able to compensate themselves partially, if not in full, for the dullness which unfavorable weather conditions have hitherto produced, "as August" will no doubt soon be given. Agents for linens and other heavy goods do not appear to be doing much, and some of them speak of the home trade as being almost dead. The mills are said to be busy shipping goods for New York, but this statement is not confirmed by the Liverpool Customs returns, which indicate to some extent the condition of the American trade in linens. Where exports from the Mersey have ranged from 1½ to 2½ million yards a week, the totals have fallen to less than 900,000 yards—speaking, that is, of the United States market. Colombia is credited with good takings, but there is reason to believe that exports which pass, in transit, through Colon (the Caribbean Sea terminus of the Panama railway) are erroneously entered as shipments for Colombia, thus repeating the official deception by which British imports of Swiss goods are credited to countries other than the place of origin. Swiss embroideries appear to have been in fair demand. To some extent the recent depression in the home trade has been intensified by the unsatisfactory condition of the cotton industry. Yarns and textile fabrics showed a steady shrinkage throughout the first quarter of the year—a fall of a million in January, of a million and three-quarters in February, and of a quarter of a million in March. This refers to textiles generally. Cotton has been bad both in the spinning and weaving branches, and in Burnley almost daily additions are made to the number of idle looms, a sign of dullness in the calico printing trade. Nelson is dissatisfied with the demand for sateens and jeans The Indian trade is so bad that for four months hundreds of looms, usually weaving shirtings for the Dependency, have been stopped owing to the low prices offered. A manufacturer cannot stop plant without incurring the loss which the payment of permanent expenses involves; but to accept the prices which have been sent home from India would mean a greater loss still, and machinery, therefore, has been allowed to lie idle. The bursting of the monsoon, upon the character of which so much depends, is awaited with some anxiety. Data, the result of scientific observation, placed at the disposal of the Indian Government, suggest that a good rainfall is not unlikely To Calcutta over 16½ million yards of cottons were shipped last week from Liverpool; to Bombay, less than a million yards Local makers continue to transact an astonishingly large business in textile machinery, the exports of which for the first four months of the year exceeded £2,252,000. When these returns were first published some four years ago the trade only slightly exceeded five millions per annum. Last year it was about seven.

LEEDS.—A moderately good trade is being transacted in Leeds both on home and export account, but the latter is hampered somewhat by fresh doubts as to the issue of the Eastern question; while Continental orders are being rapidly completed to prevent any countermanding. Summer cloths are selling fully up to the recent good average turnover, but fancy coatings barely so Selections of black twills, fancy tweeds, and silk mixtures are making more money, and manufacturers have satisfactory advices from Australia. There are large stocks on offer of very cheap worsteds, and not much improvement in mantles and costumes, while the melton trade is unchanged.

BRADFORD.—The periodical sales of colonial wool in London usually exercise a dominating influence on the wool market in Bradford, but in the case of the last series the course of prices in London was not at all closely followed by the market here on account of business being taken from its natural course by unusually large purchases on American account. In the present series, also, in spite of the spirited competition and hardening rates in London, and the considerable part that Bradford buyers are taking in the competition for wool in London, the consumptive demand in Bradford continues to be quiet, and users do not yet seem prepared to buy at the prices ruling in London, notwithstanding the fact that stocks of all classes of raw material are unusually light In wools of the fine merino character there is still some demand on American account, and as these wools are commanding distinctly more money in London, and stocks are light, makers of good 60's tops here are asking more money from consumers, but are only finding a very slow response to their demands. In crossbred wools prices are hardening, and holders are very firm in their quotations, as they believe that a settlement of the war in eastern Europe would at once improve the demand from the Continent for twofold yarns, which are to a large extent made from this class of wool and in which a large export business is done when trade is normally good. The upward movement in raw mohair, which followed on the improved demand for mohair braid yarns, seems to have stopped for the present, although spinners continue well employed, and are quite firm in their prices. In worsted yarns, spinners report that export merchants are not able to improve upon the very low offers for two-fold yarns which they made last week, and which, if accepted, would have entailed certain loss on the spinner, however well he had bought raw material. In the home trade the demand also continues quiet, except for a few specialties such as crepon yarns. Bradford people are also taking to the embossing craze. Some very choice embossed worsteds are on view in the Manchester warehouses. It is surprising to what perfection the art of embossing has been brought. It must be confessed that the

preparations for the Jubilee functions are not benefiting the Bradford dress trade to the extent expected, and even the London shops are suffering from the traditional belief that a lady can be more perfectly dressed in Paris than anywhere else in the world. The continued uncertainty as to the time at which the new American duties will come into force is giving exporters confidence, and the later orders for dress goods will probably be shipped in time to get through the bonding house in New York at present rates. The buying of the wholesale Canadians in Bradford for the coming autumn season has so far been disappointing, and the China and general Eastern trade continues to be very quiet. There are, however, signs of improvement in the South African and Australian markets, and the home trade are operating more freely in dress goods for next autumn.

ROCHDALE. Manufacturers are fairly well employed, but they are dissatisfied with the high prices of wool at the current London sales, they having calculated upon a reduction and booked their orders on this basis It is too soon yet to have a full report from merchants whose travellers have gone upon their rounds, but it is found that the stocks left over on drapers' hands are not more than usual A normal demand may therefore be expected.

KIDDERMINSTER.—A good steady trade is passing in carpets, delivery and repeat orders having come to hand pretty freely. Axminster and rug makers are busy on upholsterers' account. The yarn market is again the turn firmer Many of the inequalities of the market have disappeared, and spinners do not listen to the throwing-away prices talked off a month or so ago Although little business has been done, it becomes evident that there is a bottom to the market.

NOTTINGHAM.—Business has recovered in manufacturing and distributing branches and is now in good swing Elaborate arrangements have been made for the supply of goods specially designed for wear during the Jubilee week, and the demand for these proves to be enormous As a consequence, the lace trade has an opportunity for increasing its sales of specialties The demand for Valenciennes laces, edgings and insertions is specially large and the qualities and prices cover a wide range The goods are asked for in white, ivory, cream, grass lawn and butter shades, and occasionally with two-tone effects. Oriental laces in white and butter are also in strong request here and big consignments of foreign articles are constantly arriving in the country Cotton and linen Maltese and torchon laces, on the other hand, have declined, but there is still a fair business doing in white, ivory and butter. The bobbinet branch is as active as ever It continues to do an extensive business both for the home trade and for abroad, with prices up to the highest level and firm at that Mechlin, Brussels and other light tulles are selling in large quantities, and mosquito and corset nets are also in request. Hat, Paris, Paisley and other stiff foundation nets are slow, and prices are lower Special qualities of silk Chambray and Mechlin tulles and Chantilly nets are selling extensively for millinery and embroidery purposes. Business in plain, fancy and chenille nets and veilings is fairly good, but competition at home and abroad keeps profits down to a very unremunerative level Chantilly and other silk edgings, laces and nets sell moderately well, especially the novelties, though these are not so numerous as usual. Here again we hear of the damage done by severe competition, the offenders in this instance being the French. Guipure laces and insertions, in white, cream and natural colors, move freely In Irish trimmings, Swiss embroideries, crochet edgings and everlasting trimmings business is poor, and shows little sign of mending Honiton braids, cotton and linen tapes and purls and beadings are in moderate demand The same may be said of the crochet, American and ordinary warp laces For lace curtains, window blinds and furniture laces few new orders are coming in, and machinery is far from fully occupied Some big orders are, however, in process of delivery Distributors in London and the provinces speak of a fair demand for Mechlin, Valenciennes, Chantilly and other laces, alone or in combination. For some markets light effects on a net ground promise to have a good run

LEICESTER.— In the hosiery industry there is a good influx of repeat orders, which keeps stocks of light fabrics low New business is also offering more freely both for home and export, and prices are firmer Specialties are in very good demand. Elastic web specialties sell freely for home, colonial, and continental markets The yarn market is more active, deliveries are of fair extent, and larger contracts are offering, but spinners are holding out for better prices, as old rates are unprofitable. Any further upward movement in the raw material must be at once followed by the establishment of higher rates for yarns of all kinds. Lambs' wool, cashmere and merino yarns are decidedly firmer, but cottons are a small trade.

SOUTH OF SCOTLAND —With a continuance of good weather, trade in the retail drapery establishments is steadily improving. There has been a decided run this week on light dress goods and other summer apparel. All that is wanted to make a good season is a moderate spell of bright, warm weather. The holiday season begins in June, and warehousemen expect to have a satisfactory turnover, just previous to the departure of tourists for the season The Ayrshire lace trade is reported to be in a very satisfactory condition. There is a steady demand from home distributors, and the prospects for the season are considered very good At present makers are busily engaged designing new patterns for the next season. Very little trade is being done with America, and inquiries from Canada are also disappointing. Good reports are to hand with reference to the trade in the Kirkcaldy district. Linen manufacturers have good orders on hand, and the outlook is considered most satisfactory. The boom in the linoleum and floorcloth industry continues.

BELFAST.—There has been no material change in the linen trade. Yarns have been in slightly better demand, but prices continue extremely low. In the brown cloth market there has been a fair number of inquiries, and although there have been several substantial contracts entered into, the amount of fresh business is about the same as in previous weeks. Manufacturers generally are busy working to order, and prices continue firm. Thirty eight-inch power-loom linens are still in demand at late rates. For boiled-yarn makes several large orders have been placed at current prices. Cloth for dyeing and hollands have been in steady demand at unaltered prices. Town-made goods are selling quietly and steadily. The orders all round are rather unimportant. For damasks and for linen cambric handkerchiefs there is a gradual improvement in the demand, and prices are firm at late rates. In unions a steady business is passing at full prices. There is a fair sale for woven-bordered linen handkerchiefs and for hand-loom linens for bleaching. In bleached and finished linens business has been about the same as in previous weeks, but there are indications of an improvement in the near future. The shirt, collar and underclothing factories are taking large quantities of white linens, both power and hand-loom, but makers-up are hardly taking all that was expected. Considerable shipments continue to be made to the United States Some of these are doubtless of a speculative character, but a large portion of them are direct orders from the importing houses. Stocks in the United States are said to be still rather under than over the average. Continental trade is somewhat better and prices are steady. Business with Australasia is healthy, but with South America and the West Indies it is dull. Stocks locally are small, and prices firm. There is a good demand for white linens and for the finer classes of woven-bordered linen cambric handkerchiefs. Piece cambrics are in moderate request.

LYONS.—The demand for silk fabrics at Lyons for ready consumption is decreasing, but is still good for the light tissues of the muslin family, plain and printed gauzes, etc. Changeable taffetas continue to sell and a fair business has also been done in check and plaid taffetas, tulles, grenadines and other seasonable fabrics. Cotton-back satins in black and colors are well ordered ahead, and the looms have work enough on these for some time to come. Silk and wool goods have also been the object of advance orders. Some moire effects also find buyers. Paris buyers have placed some orders for future delivery in satin duchesse and a fair business has also been done in novelties for fall. The condition of the industry is unchanged, and as the demand has been more favorable throughout to the cheaper goods, power looms have benefited at the expense

of the hand looms. There seem to be barely enough power looms to execute the orders for all lines of medium to cheap classes of goods; piece-dyed goods give plenty of employment, while yarn-dyed fabrics have been more slow. An improvement in the latter and in the conditions of employment of the hand looms seems to have commenced, but it has been of short duration. The sale of high-class novelties in Paris has been to some extent interfered with by the fire in Paris at which many leaders of fashion lost their lives, and by which mourning goods have taken the place of the bright colorings of the silk novelties Quite a number of hand looms are idle. The ribbon market continues fairly active with a good demand for plain goods, in which the cheaper silk and cotton qualities seem to be better liked than the better all-silk goods. Gauze and muslin ribbons are selling Fancy goods, stripes, checks and plaids are in demand. Velvet ribbons are rather quiet Velvets are unchanged and the demand for them is of small proportions.

CREFELD.—The demand for silk fabrics has decreased, and after a few weeks of great activity it has fallen to proportions such as it might be expected to show toward the close of the season. Retailers are buying with caution, and only for actual needs, and as far as goods for spring are concerned, it is too late for advance orders to be placed with manufacturers. Even for novelties, manufacturers have to be satisfied with selling whatever they have ready for delivery. Export business is not brisk, and while a fair business is being done for the continent, the demand from England and America could have been better. In staple silks business has been done for ready delivery and actual requirements only. In cloaking silks the season has almost closed, and has not given very bright results, but linings sold well for the cloak trade until recently. In the industry conditions remain unchanged, but with the lessening of spring demand the dress silks branch commences to experience some shortness in work, for which the fall orders thus far placed are not sufficiently large to compensate. Production in the silks continues active on fall orders, although these have not been as large as was expected. In the umbrella silk branch conditions are unchanged. The demand for parasol silks has been active, but has slackened. Velvets and plushes are quiet.

ZURICH.—The raw silk market is quiet, prices are unchanged and show no weakness. Some buying is being done in Milan by the syndicate which operated in March, but this buying is of little importance and seems to be intended to prevent a decline in prices by taking out of the market parcels that are in weak hands. In Japan silk prices are slightly firmer. The total registered at the Zurich Silk Conditioning Works in April last was 92,040 kilos, a decrease of 1,700 kilos, compared with April, 1896. But in other centres the figures registered in April this year are larger than in the same month of 1896, showing the following increases. Milan, 132,605 kilos; Lyons, 31,235 kilos; Basle, 22,502 kilos.

COTTON MANUFACTURING PAST AND PRESENT.

It will probably surprise many, says the *Record*, to learn that there is historical evidence to prove that long before cotton was grown in the South, it was raised in Delaware, Maryland and other places in the Middle Colonies, and was first manufactured in Philadelphia Cotton is alluded to in some early publications referring to these Colonies merely as an "ornamental plant grown in gardens;" but Dr. Emerson, in his work (published some years ago) entitled "Cotton in the Middle States," shows that many families in Maryland, who came from Sussex county, Delaware, wore clothing made of cotton of their own raising, spinning and weaving. The growing of cotton so far north as Maryland and Delaware ceased to be a profitable industry as compared with the more abundant yield obtained further south; and its cultivation, therefore, declined and finally died out altogether; even the recollection of this early industry has almost faded away. The first record of the exportation of cotton from America was in the year 1787, when a little shipment of 300 pounds was made to England from Charleston, S.C. Truly, this was a small beginning of a gigantic industry; for the South now raises over 80 per cent. of the entire cotton crop of the world, or about four billion pounds a year.

Those of us who are accustomed to believe that the South does not seriously undertake to manufacture the cotton which she grows, will be surprised to learn that there are now nearly five hundred cotton mills in operation below Mason and Dixon's line Yet the production of cotton is so large that five thousand immense mills would not suffice to manufacture more than one-half of the entire crop. In an article entitled "Expansion of Trade Necessary," the *Textile Excelsior*, May 8th, says:

"We are yearly manufacturing a larger percentage of our cotton crop. . . . To a large extent America clothes the world, as the people of the temperate and tropical zones comprise by far the largest proportion of the one and a half billion human beings on the earth, and cotton fabrications are their chief covering The four billion pounds of cotton now raised every season in our Southern States furnishes clothing for our teeming millions of people, not only in our own country and elsewhere in the Americas, but in the remote parts of Europe, Asia, Africa, and the isles of the sea. Great is King Cotton!"

Although the cotton manufacturing industry in the South is of very recent birth, statesmen of the earliest period of the Republic anticipated that the time would come when the South would make the clothing for the continent. Even before the Revolution Alexander Hamilton said in a pamphlet (published in 1775):

"With respect to cotton, you do not pretend to deny that a sufficient quantity may be produced? Several of the Southern colonies are so favorable to it that, with due cultivation, in a couple of years they would afford enough to clothe the whole continent As to the expense of bringing it by land, the best way will be to manufacture it where it grows, and afterwards transport it to the other colonies. Upon this plan I apprehend the expense would not be greater than to build and equip large ships to import the manufactures of Great Britain from thence. If we were to turn our attention from external to internal commerce, we would give greater facility and more lasting prosperity to our country than she can possibly have otherwise

In 1774 the British Government enacted stringent laws prohibiting the exportation to America of textile machinery; and it is not generally known that the first spinning jenny ever seen in the New World was secretly brought from England and exhibited in Philadelphia in 1775 It is a still more interesting and but little known fact that in the same year a manufactory of cotton, linen and woolen goods was established in this city. The Hon. Carroll D. Wright, the United States Commissioner of Labor, tells us that the efforts of the association which erected this mill constitute the first actual attempt to manufacture cotton goods by new methods in the United States. The *Pennsylvania Magazine* in 1775 described and illustrated "a new invented machine for spinning cotton or wool," which was constructed by one Christopher Tully, of Philadelphia. The well-known name of Oliver Evans is also identified with early improvements in making "card teeth" for cotton and woolen machinery. Worcester, Mass., was the second place to undertake the manufacture of cotton goods, and the business grew apace, keeping step with woolen manufacturing. General Washington kept a diary during his tour through the Eastern States in 1789, and mentions the weaving industries particularly.

One of the curious and unexpected effects of modern methods is revealed in the United States census report, which show that while there were 1,095 establishments engaged in the manufacture of cotton as long ago as 1860, there were only 905 in 1890; but the average product in 1860 was only 106,033, with an average of only 4,799 spindles per establishment. In 1890 the average product was $296,112, with an average of 15,677 spindles—an increase of 179 per cent in the product and of 227 per cent. in the number of spindles per establishment. The capital invested increased from $98,585,269 to $354,020,843, or 259 per cent., and the value of product from $115,681,774 to $267,981,724, or 132 per cent All of these figures will be enormously increased by the census of 1900, as the growth of cotton manufactories since 1890 has been phenomenal. The trade papers which are devoted to, or in any way connected with, textile manufactures or interests, are now unanimously pleading for increased export facilities through favoring legislation and through improvement in the character of our Con-

sular reports on the subject It seems eminently fitting that the city of Philadelphia, in which the first attempt to manufacture cotton goods on any important scale was made, should have been selected for the Pan-American Conference which is to take place next month, and which is expected to accomplish much in building up our export trade with South America. It is also a subject of proper congratulation to the indefatigable originators and managers of the Commercial Museum and of pride to the citizens at large, that Philadelphia has now in successful operation the first educational industrial institution established in this country Thus we may claim for this city the double honor of being the pioneer in the cotton manufacturing industry and the leader in modern business methods

NEW DYESTUFFS.

NEW ALIZARINE COLORS

Alizarine Cyanine Green —This is a new wool dyestuff of a clear green shade, hitherto unobtainable by any other alizarine green, it is said, and which on account of its great fastness to light will be of considerable interest in wool dyeing. It may be dyed in any of four methods :—

1 Like any ordinary acid color with Sulphuric Acid and Glauber Salt, in this way it may be combined with Fast Yellow extra, Quinoline Yellow, Azo Fuschine, Brill-Alizarine Cyanine 3 G extra; all are light fast.

2. Dye acid and chrome, after with Fluor Chrome; for combinations, Alizarine Yellow 3 G Powder, Alizarine Red 2 AB Cloth Red, Brilliant Alizarine Blues and Victoria Blacks are suitable.

3 Dye acid and chrome, after with Bichromate of Potash; for combinations, Diamond Flavine G, Alizarine Red 2 AB Sulfon Cyanine, Diamond Blacks, etc, are suitable.

4. Dye on a chrome oxalic acid or chrome and tartar mordant; usual combinations with other alizarines can be made, alizarine blues, cyanines, chrome yellows, anthracene browns, etc.

The shades produced by these four methods do not differ materially one from another Nos. 1 and 2 methods give brightest shades As regards fastness, the different methods do not differ a great deal. The fastness to light is exceedingly good, and in this respect greatly excels coeruleine and similar alizarine green dyestuffs Fastness to acid and alkali is sufficient for all general purposes, fastness to milling is also good It stands the finishing process well. Considering that shades of great fastness to general wear can be produced with alizarine cyanine green in one bath, the product is undoubtedly interesting This method of dyeing offers so many advantages in respect to saving of steam, labor, time, etc., the material also being in better condition, that it is scarcely necessary to emphasize these points here. For new shade card and color samples address Dominion Dyewood and Chemical Co, Toronto.

Diamond Flavine G (Pdr) Since 1891 this color has been in great demand in paste form, it is now offered in powder form. The powder has this advantage although being five times stronger, is far cheaper in price, on comparing value for value. The properties are well known, viz, easily soluble, dyes very level, of great fastness, etc. May be dyed in combination with all dyestuffs, working on a chrome mordant, same as with the paste

Brilliant Alizarine Blue D. (Paste) —This is a new alizarine blue of great fastness to milling and light, but differs from the ordinary alizarine color in that it has to be developed with soda hyposulphite, a specially suitable brand of which is manufactured by the Farbenfabriken Company, and is offered to the trade by the Dominion Dyewood and Chemical Company, Toronto

NEW ANILINE COLORS.

Phenol Black SS —This is very similar to the well-known naphthol black Its main points are dyeing very level and cheapness. It also has an advantage over Diamond black and the Victoria blacks in not tingeing white cotton selvages This color also suits well for navy blues in combination with other colors. Phenol Black SS is a full bluish black. For a good navy use 2 3 per cent Phenol Black SS, 2 per cent. Acid Green BBN; 1. 6 per cent Acid Violet 3 B, extra, 10 per cent. Glauber salt, boil half an hour and add 2 per cent acetic acid, boil for another half hour and add 5 per cent soda bisulph, and finish by boiling half an hour longer The whole operation takes 1 ½ hours, which is not too long for a full shade.

Double Ponceau, 1 R, 2 R and 3 R —These resemble double Ponceau 4 R, but are yellower in shade. They are cheap brands, easily soluble, cover well and are faster to washing than the ordinary ponceaus. Silk dyes best from a broken soap bath.

Acid Green 3 B.—This can be exhausted well from a neutral bath, a property useful in dyeing half woolens. In other respects this new brand resembles the older brands of acid greens

Acid Violet 3 B —This dyes easily level, and is claimed to possess further the advantage of remaining in clear solution in a sulphuric acid bath and not forming a tarry scum; shade is somewhat redder than 5 B and 4 B extra.

NEW COTTON COLORS

Benzo Chrome Black Blue B This is the latest brand of the benzo chrome colors. It does not green in the air like aniline black, fastness to acid and alkali are good. May be dyed in several ways, may even be topped with aniline salt, producing a color which will compete well with aniline black

Induline 5 R.—Indulines are much in use for bottom shades, for shoddy with logwood topping, and this new product is particularly suitable for combination with soluble blue. This color is also of importance in silk dyeing, produces a shade fairly fast to water and fairly fast to light.

New Fast Grey.—This dissolves and covers well. Shades produced on cotton previously mordanted with tannin and tartar emetic are very fast to light. Shade not altered by alkalies or organic acids; fast to washing. New fast grey scarcely tinges white a strong alkaline bath. The shades are also fast to perspiration.

New Grey P. (Paste), similar to the above product, but faster to light

ALIZARINES ON LEATHER.

Alizarine colors in leather dyeing are only suitable on chrome tanned stock. The process is very simple, and the shades produced are faster than any other colors. Prepare the bath with about 2½ gallons of water, ¼ oz. acetate of soda (or the same amount acetate of ammonia), and work for 1 to 1½ hours at a temperature of about 135° F. After dyeing, rinse well and work skins in a bath containing 9 ozs Marseilles soap and 3 ozs. olive oil. This operation is best performed in a milling vat. The following colors are of special service, and a range of tans and browns from yellow to chocolate may be produced with Anthracene Brown G, Chrome Yellow D., Chrome Orange.

KATIGEN BLACK BROWN N.

A new brown dyestuff, fast to light, which dyes cold without a mordant. On loose cotton a full brown can be produced with 40 per cent. color. Wet out well, enter cold work a few minutes and let stand over night. In the morning, wring out and rinse well. This color is very cheap and will eventually be produced in more concentrated form By topping with other colors, many new shades can be produced of great fastness to milling and light. By topping with basic colors a full jet black is wrought. Preserve the color in closed vessels, as it is hydroscopic, and in dyeing it is advisable to use rubber gloves, as being strongly alkaline it injures the hands if not protected.

New shade cards, dyed skeins and color samples may be obtained from the Dominion Dyewood & Chemical Co, Toronto, sole agents in Canada for the Farbenfabriken, vorm Friedr Bayer & Co., Elberfeld, Germany.

THE Japanese are now making underclothing of their finely crisped or grained paper. After the paper has been cut to a pattern, the different parts are sewed together and hemmed, and the places where the button holes are to be formed are strengthened with calico or linen. The stuff is very strong, and at the same time very flexible After a garment has been worn a few hours it will interfere with the transpiration of the body no more than do garments made of fabric. The stuff is not sized, nor is it impermeable. After becoming wet, the paper is difficult to tear. When an endeavor is made to tear it by hand, it presents almost as much resistance as the thin skin used for making gloves.

Textile Design

In view of the approaching preparations by worsted and woolen cloth designers for new styles for next winter season, we supply a number of designs for plain and mixture coatings and overcoatings, with particulars of settings suitable therefor, and the weights per yard of the finished cloths. This is a type of the effects most in vogue for cloths of this description, viz., small spots of warp and weft arranged so as to show either no twill at all, or, as in the example given, a very indefinite twill broken up by cross twills, so that a certain amount of twill effect is visible in several different directions, but none very clearly defined or decidedly dominating over any other.

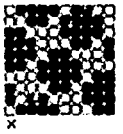
The following are the weaving particulars:

YARN.

All 2/20's Botany worsted woven in the grey and dyed in the piece, regaining in dyeing the weight lost in scouring.

Total number of threads in warp	4,088
Number of dents per inch in slay	14
Number of threads in each dent.....	4
Length of warp, in yards.....	60
Number of beams.....	1
Number of shuttles	2
Width in loom, in inches.....	73
Number of picks per inch in loom.....	52
Length of finished cloth, in yards..	50
Width of finished cloth, in inches.....	60
Weight per yard, 60 by 37 in.....	26¼ oz.

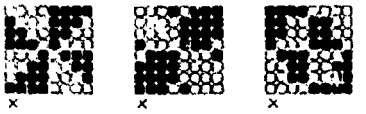
Straight draft on 10 shafts



DESIGN AND PEGGING PLAN 1.

If woven in mixture yarns the shrinkages in length and width would be less and the loss in weight greater, owing to the omission of the process of dyeing; consequently the finished weight per yard would be affected considerably, giving about a 23 oz. cloth. This design would allow of a few more picks per inch, and by adding, say, 6 per inch more, the weight might be brought up to 24½ oz. per yard.

The following designs might be used for the same setting and



Design 2. Design 3. Design 4.

counts of yarn, and giving about the same weight per yard.—*The Textile Manufacturer.*

GUTTA PERCHA.

Crude rubber is obtained from the milky juice of certain trees and different varieties of climbers. South America is the principal source of supply—Brazil, of the many states producing it, leading in quantity and quality, and having in its great forests sufficient to meet twice the wants of the world. The best is Para (fine, medium and sernamby), from the great basin of the Amazon, where more than eighty thousand seringueiros (gatherers) are engaged in the dry season in collecting gum. White Para "virgin sheets," a new variety in three grades, comes from Matto Grosso. Since its importance first began to be felt, writes Clarke Dooley, in an article on "India Rubber and Gutta Percha" in *Scribner's Monthly*, this gum has exerted an increasing influence upon the spread of civilization, especially along the Amazon and Orinoco and their tributaries, and the great streams which pour out from the interior of the dark continent. Para, formerly an insignificant village, has grown to be a city of a hundred thousand inhabitants, with modern features, and Manaos, up the river, is following it India rubber is the mainstay of the northern Brazilian States, Bolivia, and eastern Peru. Brazil has a great advantage in its immense waterway; ocean-going steamers run twelve hundred miles up the Amazon, whereas every African river except the Congo has a bar at its mouth and cataracts not far distant from the coast line It is, besides ivory, about the only commodity produced in the interior of a tropical country that will bear the expense of transportation, often on the heads of natives along tangled man paths, to the seaboard. So in many places it has been the basis of first commerce.

Gutta percha, like India rubber, is obtained from the juices of certain trees and climbers. The best is produced by a tree, the Isonandra gutta, of the order Sapotaceæ, which formerly abounded at Singapore and in all Malaysia, but which now tends to disappear under the ravages committed by gatherers. Gutta, in Malay, signifies gum or lime; percha signifies scrap. Incisions are made in the bark, as on rubber trees, and the liquor flows of perfect whiteness, darkening at contact of air. Coagulation takes place spontaneously in a short time. Like rubber, the liquid forms a film on top. This cream is removed, kneaded into a large lump and plumped into boiling water. Under the action of a high temperature it softens and forms the cake usually found in commerce. Other trees in Malaysia and Farther India, in Cambodia and Cochin China, produce good gutta. In Hindustan different grades are mixed by the natives. Chinese merchants, in their depots, mix and manipulate to give a good superficial appearance to the product, as the price is constantly advancing. As the gatherers do not scruple to add vegetable debris, earth or sand, it has become difficult to secure a pure article. An inferior quality is obtained from trees and climbers in Africa and Madagascar, and, with the development of those countries, more may be expected.

TECHNICAL EDUCATION IN GERMANY.

(*From the Report of the Belgian Government.*)

The State of Prussia does not hold in Germany the first rank, from the point of view of trade instruction. Nevertheless, it expends annually for this purpose about £120,000. It has established six special schools for machine construction (five towns have established a school or class for the same object), a school for bronze industry, one for steel and ironmongery, one for navigation, two for modelling, one for porcelain, one for painting on glass, and one for bleaching.

All these schools have been founded under its auspices. It pays the greater part of the expenses, and the communes pay the rest These are only a part of the trade schools, the greater part are the work of trade companies.

In Prussia there are 248 of these schools, with 11,000 pupils. For small industries, painters and plasterers have 32; shoemakers, 9; tailors, 16; bakers, 20; locksmiths, plumbers, masons, wood-workers, bookbinders, and potters, 2; paperhangers, 3, builders, 5; saddlers, glaziers, coachmakers, pastry-cooks, drapers, and basket-makers, 1; chimney-sweepers, 3, etc

This enumeration, although incomplete, indicates that each occupation has its school. Instruction which always unites theory with practice, replaces more and more the system of apprenticeship, of which the value in Prussia, as with us, is increasingly diminishing. Families are too desirous that their children should bring home wages, and do not trouble themselves enough about the necessity of making them learn their trade thoroughly.

If all these schools exist in Prussia, those situated in Berlin must not be overlooked. There is the weaving school, the school of architecture, etc. None of the other towns are teaching all the various industries. The city of Berlin devotes more than £14,000 yearly to this instruction, paid partly by the state, and partly by trade companies.

Bavaria, besides adult schools of industry, technical schools, schools of architecture, of commerce and industrial art, has 45 trade schools, with 2,682 pupils. The technical schools have sections which form (1) mechanics, machine builders, fitters, designers,

foremen, etc., (2) workers in chemical industries, (3) architects, cabinet makers, carpenters, and (4) commercial employees.

The kingdom of Wurtemburg has a number of weaving schools, and others for bleaching and dressing, and at the same time it has introduced new industries. By the aid of travelling instructors the state has introduced embroidery on linen to the feminine population of 120 communes. It has made sewing and embroidery machines known everywhere, and has sold these machines at a greatly reduced price, in consideration that the possessors show and explain them to persons interested in them.

The Grand Duchy of Baden, with only 1,600,000 inhabitants, expends £50,000 annually for trade instruction. Besides these schools of the industrial arts, architecture, commerce, clock-making, etc., it has founded a school for carving ebony, and another musical instruments.

The Grand Duchy of Hesse has 1,000,000 inhabitants. The trade instruction is distributed amongst one school of architecture, one for ivory carving and allied branches, two for industrial arts, nine artisans' schools, 82 schools of design, and 41 adult manufacturing schools.

Lastly, to crown the whole, comes Saxony. It is there that instruction is the most developed of any country in Europe. We may be pardoned for enumerating the schools that this country of 3½ millions of inhabitants has organized.

We do not think it possible to have done more, 3 schools of industrial arts, 3 higher manufacturing schools, 111 trade schools for special branches, amongst which we may mention tinware, typography, drugs, tanning, flour milling, trimmings, hosiery, etc; 12 schools of design, 18 house-keeping schools, 28 for lace, 3 for straw platting, 30 trade schools, 10 for horticulture and agriculture, 40 for commerce, 2 schools of mines to prepare foremen and superintendents, and classes for engine drivers and stokers.

Saxony marches at the head of all the German States. It would seem impossible to do better. We could not dream of comparing our country, we do not say with Saxony, but with any of the States we have briefly reviewed. How many things have we to introduce in order not to be far behind this organization! How many useful inications we might borrow from these institutions, both to implant new industries in Belgium, and to consolidate those we already possess.

WORLD'S TEXTILES.

In *Kuhlow's*, published at Berlin, we find the following:

The production of raw material for the manufacture of textile fabrics has increased very much during the past forty years. In 1850 the quantity of wool grown in Europe, the United States, La Plata, the Cape and Australia, amounted to 806,000,000 pounds; in 1870 to 1,371,000,000 pounds; in 1880 to 1,577,000,000 pounds; and in 1895, according to the "Annual Report of the President of Permanent Commission on Customs Valuation," to 2,334,000,000 pounds, or nearly three times as much as that available for manufacture in 1850, 70 per cent more than in 1870, and 45 per cent. more than in 1880.

The increase in the quantity of cotton available for commerce, and which increase goes on from year to year, has also been marked. It is estimated that the amount yielded by the United States, India, Egypt and other countries was 930,000,000 pounds in 1830, 1,192,000,000 in 1840, 2,301,000,000 in 1860, and 4,039,000,000 in 1880. According to the report of the president of the valuation commission, the world's cotton crop in 1895 was 18,200,000 bales of 400 pounds, or about 7,280,000,000 pounds. This is eleven times more than in 1830, six times more than in 1840, three times more than in 1860, and 80 per cent more than in 1880. The above-mentioned report states "the consumption cannot keep pace with the production," but if the retail price should fall many consumers would become large purchasers. The report adds "that spinners never had such an opportunity of stocking at a low price, but that the year was less advantageous to the weavers than to the spinners." Of the 18,200,000 bales produced in 1895, 10,500,000 bales (those of 450 pounds) were from the United States, 2,600,000 bales (of 400 pounds) from India and 934,000 bales (of 717 pounds, or nearly two ordinary bales) from Egypt. In the United States alone the area of land cultivated with cotton amounts to upwards of 20,000,000 acres.

The report of the valuation commission deals, in the third place, with silk. In 1895 the quantity of raw silk produced and put on the market was 35,000,000 pounds, in 1894, 30,250,000 pounds; and in 1893, 33,000,000 pounds. Europe and Asia Minor supplied from 35 to 36 per cent. of the whole, the far east from 64 to 65 per cent., but China is still the chief exporting nation for this raw material, having sent out in 1895, 13,500,000 pounds. Japan is progressing rapidly; she produces already as much silk as all the European countries together, and is continually increasing her mulberry plantations. Although the yield increased in 1895, there was also a very evident rise in prices. For some time silk manufactures have been making great progress in the United States, and the establishments of that country, according to the report, are in the first rank as regards the amount of silk worked up, viz., 9,372,000 pounds, as against 8,008,000 pounds in France, 5,610,000 pounds in Germany, 3,652,000 pounds in Switzerland, and 5,610,000 pounds in Russia.

With regard to flax, hemp and other materials, the report does not state the amount of production at the disposal of the industries of the world, owing, doubtless, to the difficulty of obtaining information on this point. The production of flax in France has not ceased to decline, in spite of the very high bounties granted, and the area of land cultivated with flax in that country does not exceed 89,000 acres.

BROADCLOTH.

It will be necessary before giving the details of the finishing of superfine broadcloth, to state the leading principles which are the most conducive to the production of a fine and full bottomed surface, and a permanent finish.

It is absolutely necessary to cleanse and wash the cloth well from soap or grease after the process of milling for the credit of the colors when dyed in the cloth, and for the reception of a good lustrous finish. After the cloth has been well washed and scoured it should be cuttled or folded up close, and be allowed to lie in a horizontal position in a shed for a few days, says "Yorkshire" in the *Textile Manufacturer*. The cloth which has to remain a considerable time in the bulk state should now be well straightened on the tenter and dried, but it should never be stretched much on the tenter, either in length or in breadth.

After the cloth has been tentered and dried it should be thoroughly wet on the face side with soft water and folded up close, and should be allowed to lie in that position a day or two; then it should be well raised either by hand or by raising gig, or both; then washed off and dried.

The cloth has to be cropped or sheared the first time, and should receive two or three light cuts on the cutting machine, and the nap should be raised up lightly with a machine brush each time. The cloth should now be well wet with soft water on either side, and folded or rolled up very close, and allowed to lie in a horizontal position from one to three days; it should then be raised well a second time; then tentered and dried. The cloth is now cut a second time on the machines, and the nap turned up lightly with a brush each time over and nicely cut several times; it should then be brushed a little either with or without steam. The cloth is now hot pressed a few hours, then turned and pressed again, as a necessary preparation for steaming in a box, boiling or heating in water.

The cloth is now wound upon a round wood or copper roller, either with a plain surface or perforated with holes, and covered close with a boiling wrapper to prevent any damages. The cloth should now be steam boiled in a cistern full of water about eight hours during the day; then it should be taken out and well cooled until the following morning. The cloth should then be wound on another roller, in an inverted position. Then steam boil it again a second time seven or eight hours, and repeat this once or twice if necessary.

The white cloth that has been manufactured of undyed wool, and also the woaded or light blues, have now arrived at the state ready for dyeing. In all piece dyeing the cloth must be kept open, and the reel well turned from the time the cloth is entered into the liquor until it is taken out, for if this is neglected the color will be spotted or uneven.

When the cloth has been pressed and boiled sufficiently for fixing the lustre, it should be raised a little on the raising gig either in a wet state or with steam applied to the face side of the piece, it should then be washed well with cold water off the gig, and then tentered and dried. The cloth has now to be cut a third time, and must be cut very light and very fine until the nap is as short as required—it is then well brushed and is ready for burling.

The cloth has now to be well burled or inked; it is then perched, and all holes found in the cloth should be well drawn up by a fine drawer, the lists wet with water, and pressed with a hot iron, which makes them look smart It should now be well brushed and steamed ready for pressing. The cloth is hot pressed between heated plates in a hydraulic press from five to ten hours; it is then turned and pressed again about the same time. After the cloth has been well pressed, it is polished and finished with a moderate pressure of steam on the steaming mill; it is now ready for the warehouse.

Well manufactured cloth that is finished in the above style is rendered full on the bottom, very soft to the touch and lustrous to the eye, and its durability is fully secured. In dry weather the nap is so short and completely laid that the dust will not penetrate it, and in rainy weather it will not absorb water like a piece of flannel, nor will it spot or shrink.

In making it up it will not mark or shrink either with wet or under hot iron, and until the garments are completely worn out it will have the appearance of newness, especially so when it has been thoroughly wet and brushed a little.

This is the way superfine broadcloths are manufactured, and by this method and this method only can the necessary qualifications be obtained—that is a cloth which is full and soft in the hand, nearly waterproof, having a nap on the face as fine and as close as the best of velvet, and a lustre that lasts and wears just as long as the cloth, which is often for many years.

FABRIC ITEMS.

Clayton & Son's retail clothing store and factory, Barrington street, Halifax, N.S., was destroyed by fire May 22nd. The wholesale section of the building was saved by the fireproof walls between it and the retail and manufacturing building. The firm's bicycle department on the lower floor, facing Barrington street, contained $5,000 to $7,000 worth of bicycles, nearly all of which were saved. The retail building, in the three upper floors of which was located the manufactory, was completely wrecked. The loss on building, stock and machinery is roughly estimated at from $90,000 to $100,000. The entire building was worth $35,000, on which there is $18 000 insurance. The wholesale and retail stock and machinery were of an aggregate value of $150,000, insurance on which amounts to $75 000. Machinery to the value of $15,000 is lost From 200 to 300 women and girls were employed in the clothing factory, and a large number of clerks in the retail store, and hundreds of women worked outside the building for the firm, which is one of the large clothing concerns of Canada.

In the annual report of Dominion Department of Fisheries the value of the Canadian fisheries for 1896 is computed at $20,199,338 being a decrease of over half a million dollars as compared with the previous year. The fur sealskins are valued at $713,590. The Canadian catch was 23,115 skins less than that of the previous year.

By the death of August Gutheil, which occurred recently, the German colony in Montreal and the German Lutheran Church lose one of their oldest members. Mr. Gutheil, who was seventy-two years of age, was born in Germany, and emigrated to this country in 1873. He and his son, Hy. R. Guthiel, worked together in the fur-dressing business, their establishment being known by the name of the Excelsior Fur Dressing and Dyeing Works.

A member of the departmental store firm of Siegel, Cooper & Co., of New York and Chicago, informed a Toronto dry goods merchant, who was in New York some time ago, that they were about closing the purchase of land in Toronto for the erection of a departmental store, which they would most assuredly open in the fall of 1898.

A fire in Moncton, N.B., recently destroyed the dry goods store of Greno Forbes.

The British Government Blue Book, containing the views of Prof. D'Arcy Thompson and his associates, who studied the Behring Sea question in behalf of Great Britain and Canada, has just been published. In concluding his report Prof. Thompson says: "Our observations show that the alarming statements made in recent years, giving accounts of the immense decrease of the herds, and prophesying their approaching extinction, are overdrawn and untenable, but there is still abundant need of care, and prudent measures of conservation in the interests of all concerned. The annual birth rate is estimated at 143,000, which is not great compared with the drain upon the stock. There is a loss of over 20,000 pups from various causes before emigration to the sea. The dangers that are then met are unknown, but it is certain that the risks are great and the loss considerable. Adding together the measured loss in infancy and the unmeasured loss in youth and age, with the toll taken by the islands and in the sea, it is easy to believe that the margin of safety is narrow, if not already to some extent overstepped. We may hope for the perpetuation of the present numbers, but cannot count upon an increase. It is my earnest hope that recognition of mutual interests and regard for common advantage will suggest measures of prudence which will keep the pursuit and slaughter within due and definite bounds."

Among the Mills

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

The Mildmay, Ont., woolen mill is for sale.

The Wallace knitting factory, Beeton, Ont., is running full time.

Wm. Comstock is running his woolen mill at Smith's Falls, Ont., full time.

Ferguson & Co., laundry, Ridgetown, Ont., have put in a steam plant recently.

Howard Fraleigh has bought the flax mill at Forest, Ont. It is operated by steam power.

A joint stock company is spoken of for Wellesley, Ont., to operate the flax mill property there

The wholesale clothiers of Hamilton, Ont., held an excursion to Buffalo, N.Y., Saturday, June 12th.

The Ontario Tailoring Co., Toronto, is supplying the Toronto firemen's summer clothing at $13.20 per suit.

Joseph Boothroyd has secured the position of boss finisher in the Paton Mfg. Co 's mill, Sherbrooke, Que.

On a recent Sunday the shoddy mill at Port Elmsley was broken into, and some of the machinery damaged.

The fire loss recently in Burrows' carpet factory, Guelph, Ont., was $17,551. The damage is rapidly being repaired

J L. Cockill, formerly manager of the Streetsville, Ont., woolen mill, but now of Carleton Place, Ont., is visiting in England.

W Green, employed in the carding room of the Guelph, Ont., Woolen Mills Company, met with a serious injury by his knife getting caught and flying into his face. He was badly cut in the face, and was taken to the General Hospital.

The by-law granting a bonus of $6,000 to the Bowmanville Rubber Manufacturing Co was carried, 41 majority, May 22nd.

The Jubilee contingent of the Canadian militia now in London was supplied with new uniforms made by the Sanford Co, Hamilton Ont.

The Tillson Company, Ltd, has purchased the Waterhouse woolen mills Tilsonburg, Ont Proceedings have been taken to set aside the sale.

The factory of the Penman Manufacturing Co., at Metritton, Ont., whose tax exemption has expired, is applying for further municipal favors

David Marchbank, proprietor of Montrose Mills, near Charlottetown, P.E.I., is opening a new custom carding mill and fitting it with machinery

Nettie Rosegen, employed at the woolen mill, Preston, Ont, caught the index finger of her left hand in the loom recently, mutilating it severely.

H. E Sykes, recently superintendent of the Globe woolen mills, Montreal, has been engaged as superintendent for the Passaic Woolen Co, Passaic, N J

David Shirreffs, of the Hawthorne mills, Carleton Place, Ont. has invented an attachment for looms, for which much is claimed in light and steady running

James McDougall, son of P. McDougall, woolen manufacturer, Blakeney, Ont, has taken a position in Sherbrooke, Que., with the Paton Manufacturing Company

Newton Bros., formerly proprietors of the woolen mill at Limehouse, Ont, are now operating the Sarnia woolen mill, till recently owned by Smith Bros The mill, which has been idle for some time has this month started up in tweeds.

J M Masson, who has been superintendent of the Vassalboro woolen mills, North Vassalboro, Me., for the past eighteen months, has been succeeded by Geo W. Taylor, formerly superintendent for the Millbury Woolen Mills Co, Millbury, Mass.

James Giles, who has been employed in James H. Wylie's flannel mill, Almonte, Ont, for some time, has gone to Wakefield, Que, where he has secured a position in the woolen mill there. Alex McPhail, from the McDougall mill at Blakeney, Ont., will take his place in Almonte.

Wm Whitman, of Harding, Whitman & Co., New York, the managing director of the famous Arlington Mills, is a Canadian, and was born at Annapolis, N S, May 9, 1842, and is a descendant, in the eighth generation, from John Whitman, of Weymouth, Mass, a United Empire Loyalist.

The Investigation Commission appointed for the Kingston Penitentiary by the Dominion Government, reported: "The tailor shop is over-supplied with the convicts for the work done. The cost of this department is excessive The binder twine factory is likewise over-supplied with convicts"

The Perth, Ont, *Courier* says recently W. F. Latimer, late superintendent in the Gemmel woolen factory, closed down, has secured the position as designer in No 1 woolen factory, Cornwall, one of the largest woolen factories in Ontario. Mr. Latimer has been one of the best citizens of Perth since he came here five or six years ago, and his many friends here will greatly regret his departure

A correspondent states that a good many farmers in western Ontario have been gradually going out of sheep raising owing to the destruction of the sheep by dogs The compensation given by a number of the municipalities is not sufficient to cover the loss, and between that and the low price of wool obtained from the mills, sheep raising seems to be giving way to cattle raising for dairy and beef purposes.

W. J. Matheson & Co., Ltd., have recently placed before the trade a new discharge paste for diamine colors, which is claimed to have yielded better results, in many cases, than the ordinary Tin-Crystal Discharge. This alkaline tin-discharge possesses the advantage of not injuring the fibre upon prolonged steaming, and of allowing the use of albumen-dyestuffs for the production of colored discharge effects.

From the Berlin *News-Record*, we learn that at a meeting of the directors of the Waterloo Mills Co., held in Waterloo, Ont., recently, there were present six gentlemen of the board, John Shuh, George Randall, George Moore, W. Young, W. Wells, and W. R. Brock, who have been the directors of the company for twenty-three years continuously. This is a record probably never excelled in this country.

Robt. Moran, formerly boss finisher for the Paton Manufacturing Co., Sherbrooke, Que., with his wife and family, have been visiting friends in Almonte and Carleton Place recently. Previous to leaving Sherbrooke, he was the recipient of a gold-headed cane, which was presented to him by the overseers and employees of the mill. A flattering address accompanied it Mr. Moran goes to Dedham, Mass., to fill an important position.

H. R. Ridout died recently in Montreal. Deceased had not yet reached middle age, but had already built up for himself a very considerable business as a broker and manufacturer's agent. He leaves a widow and three children. Deceased was a son of Thomas Ridout, a civil engineer in the service of the Dominion Government. His father was manager of the old Bank of Upper Canada, and his grandfather was Receiver-General of Upper Canada about 100 years ago.

The annual meeting of the Canadian Colored Cotton Mills Company, Ltd., was held in Montreal recently. Among those present were A. F. Gault, president; C. D. Owen, vice-president; and T. King, D. Morrice, jr., directors. There was a good representation of the stockholders, including J. Vaillancourt, Leslie Gault, James Crathern, W. B. S. Reddy, L. H. Archambault, C. E. Gault, Geo. Smithers, Jac. Grenier, R. Macdonald, C. E. Spragge, James Wilson, jr., S. Finley, Wm. Weir, E. Lichtenheim, A. Roy, J. B. Clearihue, Wm. McMaster, A. Skaife, A. C. Clarke, F. G. Braud, W. J. Morrice, H. L. Henderson, P. R. Gault and Hon. A. A. Thibaudeau. It appeared from the statement submitted that the net earnings of the company for the year were $21,000, that a considerable amount had been expended on improvements in machinery, and that the sales of product during the year showed a decrease. The goods on hand at the present time showed a value of something like $600,000, for which there was said to be no market.

It was mentioned last month that Messrs. Long & Bisby, wool merchants, of Hamilton, were among the principal shareholders of the reorganized MacPherson shoe factory in that city. The new company is called the John MacPherson Co, Ltd., and is under the financial management of W. S. Duffield, with Jas MacPherson as manager of the works. The factory is a building 142 x 72, four stories and a basement, and is now equipped with the latest machinery used in the shoe manufacturing trade. Though this is not strictly a textile item, it will interest our readers to know that Canadians are the inventors of some of the remarkable machinery used in boot and shoe manufacturing, Reece, of Quebec, being the inventor of the button-holing and barring-off machine, and Woodward, formerly an adjuster in the Wanzer Sewing Machine Works, of Hamilton, being co-inventor of the "Union Special" machine

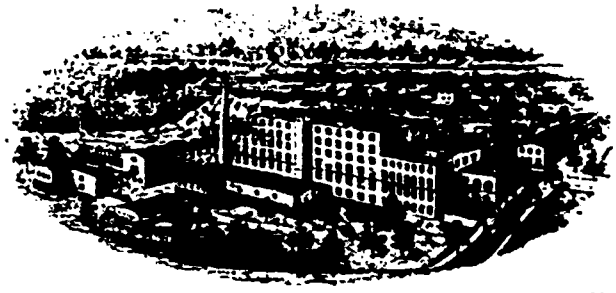
for making an elastic lock chain stitch. Mr. Cote, of L. Cote & Bros., of St Hyacinthe, is also the inventor of several ingenious machines used in the boot and shoe trade. Another interesting matter in connection with this factory is that Mr. Long is considering a scheme for applying the principle of profit-sharing, by which every employee will have a share of the profits in successful years.

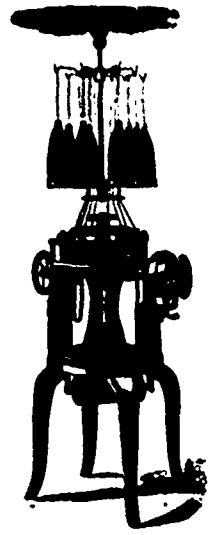
TEXTILE IMPORTS FROM GREAT BRITAIN.

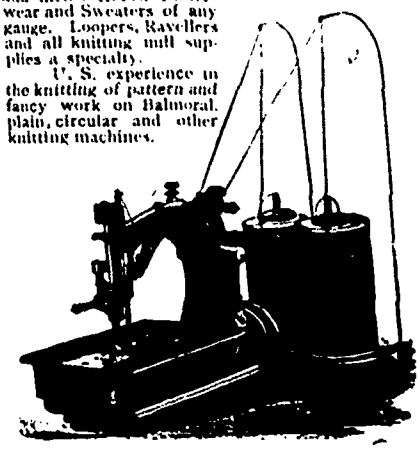
The following are the sterling values of the textile imports from Great Britain for April, 1896 and 1897, and the four months to April, 1896 and 1897:—

	Month of April.		Four months to April.	
	1896.	1897.	1896.	1897.
Wool	£ 1,829	£ 5,252	£ 5,211	£ 7,924
Cotton piece-goods.	27,374	27,606	214,213	162,112
Jute piece-goods	9,454	6,544	47,967	33,282
Linen piece-goods	7,886	7,441	65,567	43,109
Silk, lace	492	345	4,951	2,393
" articles partly of ..	2,018	1,136	12,051	7,141
Woolen fabrics	12,910	8,219	90,212	79,765
Worsted fabrics	27,865	26,753	216,057	204,645
Carpets	14,736	7,441	99,445	72,252
Apparel and slops	25,406	30,741	133,312	100,473
Haberdashery	13,382	11,692	68,254	64,681

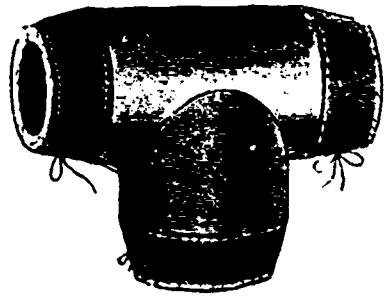
THE British Silk Association is back of a movement for a public subscription throughout all England for the purchase of a magnificent carpet to be presented to the Queen on the completion of the sixtieth year of her reign. The design will include the different national insignas of Great Britain, Canada, India and other British dependencies. The order for the carpet has been placed with Messrs. Bontor & Co., whose exhibition of silk rugs attracted so much attention at the recent World's Fair. The weaving is to be done at the mills of H. & M. Southwell, of Bridgenorth, Shropshire. This is only one of the numerous and beautiful tokens of esteem which are in active preparation to celebrate the diamond jubilee.







CROSS CLOSED.



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LONDON WOOL SALES.

At the London wool sales which closed some few days after our last issue, prices tended rather to weaken than otherwise, in spite of a larger attendance throughout the sales. America taking a quantity of good Australia and South African wools, continental and home buyers could not appreciably compete for these lines. Prices closed as follows as compared with close of last sales.

AUSTRALIAN.

Merino Fleece, superior	par
" ordinary	par
Scoured Merino, superior	½d to 1d. higher
" ordinary	par to ½d. lower
" inferior and faulty	½d. lower
Greasy Merino, superior	1d. higher
" " ordinary	½d. lower
Greasy Cross-bred, fine	1d. higher
" " ordinary	par to 1d lower
Scoured Cross-bred and slipe	par

CAPE FLEECE

Snow white, superior	par
" and Scoured, ordinary	par
Combing Greasy	par to ½d. lower
Clothing Greasy	½d. lower

CHEMICALS AND DYESTUFFS.

Prices remain steady with very little doing The following are current quotations in Montreal :—

Bleaching powder	$ 2 00	to	$ 2 10
Bicarb soda	2 25	"	2 30
Sal soda	0 75	"	0 80
Carbolic acid, 1 lb bottles	$0 32½	to	$0 35
Caustic soda, 60°	1 80	"	1 90
Caustic soda, 70°	2 25	"	2 35
Chlorate of potash	0 15	"	0 20
Alum	1 35	"	1 50
Copperas	0 70	"	0 75
Sulphur flour	1 75	"	2 00
Sulphur roll	1 75	"	2 00
Sulphate of copper	6 00	"	7 00
White sugar of lead	0 07	"	0 08
Bich. potash	0 10	"	0 11
Sumac, Sicily, per ton	55 00	"	60 00
Soda ash, 48° to 58°	1 25	"	1 50
Chip logwood	2 00	"	2 10
Castor oil	0 09½	"	0 10
Cocoanut oil	0 06½	"	0 07

LITERARY NOTES.

The *Canadian Magazine* makes a most important announcement in its June issue. The same facts are stated in a slightly different way in *Massey's Magazine* for June. The point brought out clearly in both statements is that there is only room at present in Canada for one literary periodical of this kind, and that the *Canadian Magazine* is to be the one. The magazines have been combined, and, beginning with the July number, the *Canadian Magazine* will be sent to the subscribers to *Massey's* till the expiry of their subscription. There can be no doubt that the publication of a magazine of such excellence as *Massey's* could not be other than a losing venture at the nominal price of ten cents a number, and the publishers are to be congratulated upon their decision to amalgamate with their more expensive rival, rather than cease to publish. The June *Massey's* contains much that is of interest and much that is charming. Perhaps that which has most of these is a short description of a tour in Northern Spain by Mrs. Reid, which is accompanied by a number of beautiful drawings by Mr. Reid. The June *Canadian Magazine* is distinctively a Jubilee number. The chief topics discussed are "Canada's Progress in the Victorian Era," by the editor, J. A. Cooper; "The Queen's Horses and Carriage," by Mary Spencer Warren, "The Childhood of the Queen," by Fritz Hope; "English Principles of Canadian Government," by J. G. Bourinot.

The *Century Magazine* for June pays a compliment to things British by devoting a large amount of space to the subject of the Jubilee. There are a number of interesting and exceedingly well written articles on the Queen and the events of her reign. The design of the cover is in itself a most pleasing evidence of the interest taken by the citizens of the United States in an event which is of such importance to the whole Anglo-Saxon race. Two medallions on the front cover show Her Majesty, 1837, 1897. The Century Jubilee number is specially worthy of preservation as a record of the union of ideas and sympathies which exists between peoples who are only politically severed.

The *Glovers' Directory of the United States and Canada* for 1897 contains a list of glove manufacturers, leather dressers, and glovers' material houses and wholesale glove and notion houses, and also a list of the large departmental stores with their buyers' names. Published by the *American Glover*, 84 Gold st., New York, U.S.A.

THE WOOL MARKET.

The high prices which marked the first few days of the season were not maintained. The new clip brought 21 to 22c. for merchantable fleece at the opening, but buyers now quote 18 to 19c.; unwashed, 16c., rejects, 11c per lb.

MONTREAL. There is very little to note in the Montreal market. Sales of fine wools are small, as the manufacturers are not getting orders, and consequently most mills are not running full; no change in prices. Some large sales of foreign wool have been made in the United States recently at an advance of about 5 per cent. We quote Greasy Cape, 14 to 16c; B.A. washed wool, 28 to 30c., snow white Capes, 33 to 36c.

WOOLEN DUTIES.

In bringing down the tariff amendments the Minister of Finance, Mr. Fielding, said "Worsted yarns and worsted tops are dealt with in items 375, 376 and 377. We have had some difficulty over these owing to the conflicting interests of the various woolen mills. There are a few woolen mills in Canada which make worsted yarns, and there are a considerable number which do not make them, but which use them in the manufacture of cloth. In the resolutions brought down the item fixed the duty at 15 per cent. on worsted yarns costing 20 cents per pound and under. This does not express what we had in mind. Instead of under it should read over. Worsted yarns costing 30 cents per pound and upwards will be dutiable at 20 per cent. That is an encouragement to the woolen mills which do not spin these yarns. A reduction to 15 per cent., we think, would be perhaps a pretty severe reduction to those who are making these yarns. The amount decided upon will, we think, give them a chance to continue the spinning, and not make the yarns too expensive for the large number of mills that want to use them in order to make a better quality of cloth. Worsted tops we propose shall be dutiable at 15 per cent. when made from wools of a similar character to those grown in Canada; when made from other wools they shall be on the free list. This item has given us considerable trouble, owing to the conflicting interests of the different branches of the woolen trade. I do not suppose we can compliment ourselves on making it wholly satisfactory, but I hope it will be reasonably so to the different interests."

AGENCY WANTED.

A responsible firm of manufacturers' agents in St. Johns will be glad to hear of two or three leading manufacturers in the textile and kindred trades, who wish to be represented in Newfoundland. Address S. & S., care of "Canadian Journal of Fabrics," 82 Church Street, Toronto.