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Canadian Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XX. TORONTO AND MONTREAL, MAY, 1903. No. 5.

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CONTENTS OF THIS NUMBER.

THE BRITISH INDUSTRIAL COMMISSION.

When the present Prince of Wales returned from his tour round the world—or to speak correctly round the British Empire—he told the British manufacturers and merchants that they must "wake up" if they wished to hold their position in the world. The advice has not gone unheeded; and one of the signs of this waking up is to be found in the results of a commission equipped and sent out to the United States at the expense of a private individual, Alfred Mosely, a spirited London merchant, who called the secretaries of the principal trade unions to his aid in making the investigation. It appears that the woolen industry was not represented on this commission, but the cotton branch of textiles was represented by T. Ashton, of the Amalgamated Association of Operative Cotton Spinners, and W. H. Wilkinson, of the Northern Counties Amalgamated Association of Weavers and extracts from their reports will be given in next issue. The Manchester Guardian, which has given a good deal of attention to recent developments in the United States in cotton manufacturing processes and machinery, makes some interesting deductions from the report of the Commission now published. It says that the few English firms who have kept abreast of the times have concealed the fact, with the result that the rank and file of manufacturers have not kept pace with their leaders. "In the United States, on the other hand, improved machinery and methods and every kind of successful industrial achievement are loudly and widely proclaimed, with the result that new ideas are quickly disseminated throughout the trade concerned and technical progress is more level and regular than here. Other influences have promoted this development in America. A new and very large country, with a vast population rapidly increasing both in numbers and wealth, demands a constantly increased production of manufactures; this means the constant building of new factories, every new factory equipped to the best of its owner's ability in the most modern and efficient way. The new factories set so hot a pace in the industrial race that their older competitors must either be modernized or shut up. It is thus inevitable, other things being equal, that technical progress should be greater in a country with a rapidly expanding trade than in one whose trade is stationary or expanding more slowly. But in the case of England and America other things are not equal. The contrast between the secretive habit of the English manufacturer and the open, boastful habit of the American has already been noticed. The aggregation of industrial capital into huge groups is another factor which has promoted the levelling up of administrative efficiency in America, for it has been accompanied by a pooling of brains and experience. It seems to be agreed, moreover, that Americans are really fonder of business for its own sake than we are; it is their hobby. 'Business,' again, inasmuch as it offers to Americans careers of the most

coveted distinction, attracts the best brains of the nation; politics, the civil and fighting services, letters, the law and the other learned professions do not there compete with it in this respect as they do in England. Finally, the American nation has been, and is still, so largely recruited from the most adventurous and independent men and women of the Old World that it has in its blood a tendency to experiment and take risks which contrasts with the more conservative tendencies of Europeans, and, while it does not make for immediate commercial and financial stability, does unquestionably make for technical progress.

DRY GOODS TRADE BETWEEN CANADA AND THE UNITED STATES.

The Dry Goods Economist for May 9th is a Canadian number, and is largely taken up with a consideration of "The Dominion of Canada as a market for American Dry Goods." It is illustrated with views of a number of the leading dry goods houses of Canada, exterior and interior, portraits of some of the most prominent dry goods business men, and other views, including a Spring Afternoon on Victoria Square, Montreal, while the front cover has the Dominion Coat of Arms handsomely produced in colors, with Uncle Sam lifting his hat to Miss Canada, and probably saying, "Will you walk into my (trade) parlor, 'said the spider to the fly.'" Dealing with trade questions, the Economist tells us that Canada is one of the best customers of the United States. During the seven months ending with January, 1903, she imported from her neighbor to the South $67,000,000 worth of merchandise, against $32,000,000 worth from the United Kingdom, and $21,000,000 worth from all other parts of the world, and this despite the preferential tariff. In dry goods, however, the United Kingdom has the lead, the figures on the principal articles being as follows: Wool manufactures, United Kingdom, $6,047,284; United States, $251,551. Cotton manufactures, United Kingdom, $3,203,476; United States, $1,154,680. Flax and Hemp manufactures, United Kingdom, $1,824,238; United States, $238,362. Silk manufactures, United Kingdom, $1,100,185; United States, $322,112. Fancy articles, United Kingdom, $715,065; United States, $241,105. Nevertheless the imports to Canada from the United States are growing. The Economist sets forth the reasons briefly as follows:

As a general rule, the prices of dry goods in America are equal to the cost of the European article, plus a goodly portion of the duty imposed by the United States tariff. Goods that are of a staple character, therefore, can be imported into Canada from Europe to better advantage than from the United States. In the case of novelties, however, the desire of Canadian consumers for something that is new and attractive is sufficiently strong to overcome the obstacles created by higher prices. The United States producer is originative, inventive and progressive. He is always reaching out for something new. In this respect he has far outdistanced his European competitors. This is especially true in regard to the manufacturers of the United Kingdom, from which country, as a result of the preferential duties, Canada draws a large portion of its dry goods supplies. It is the constant complaint of Canadian merchants that the English manufacturer is so slow to bring out new ideas and novel forms of merchandise. The Canadian, therefore, prefers to buy in the American market those classes of dry goods in which design plays a prominent part. Thus, in the case of printed cottons, considerable quantities of United States goods are bought, in addition to the supplies drawn from Manchester, solely because the United States mills are always to the front with new styles and novel patterns, while the Englishman is content to run his machinery on old designs. The same holds true of ready-made garments for women. Such merchandise can be bought more cheaply in Germany than in America, but the Canadian merchants have found that the products of Berlin workrooms do not compare in point of style and fit with those of the factories of New York, Cleveland and other United States centres. As a result, Canadian department stores, in spite of the higher cost, are now buying considerable quantities of American-made suits, jackets, coats, waists, skirts and muslin underwear. The same holds true of women's straw hats, fancy leather goods, corsets, neckwear and some other lines. The Economist urges the importance of cultivating this market by fostering commercial intercourse between the two countries.

The quantity and value of carpets and rugs exported to Canada is thus given in the Kidderminster Shuttle: For March, 1902, 356,900 yards, value £30,567; for the three months to March 31st, 1902, 1,091,100 yards, value £104,504. For March, 1903, 468,900 yards, value £44,748; for the three months to March 31st, 1903, 1,406,000 yards, value £134,979. These figures show a substantial increase in 1903 over 1902.

While the Continent of Europe has established many technical schools, and especially Germany, they are not always successful. Thus the weaving school at Embeck has been closed on account of lack of pupils, and there are others which are kept open with difficulty. This doubtless arises more from want of appreciation than because they are not necessary.

—Canada is wise in seeking to push its export trade in a systematic manner. It has resident commercial agents in France and South Africa and P. B. Ball, who has had considerable experience in business in Toronto, has been sent to open an agency in Birmingham, that city being selected because of its central location. It is probable that in a short time London and Glasgow will also have commercial agents. Mr. Ball is placing himself in communication with the various Chambers of Commerce in the Midlands, and soliciting their views as to the best way of extending the trade between the two countries, and he will also place his services at the disposal of manufacturers and consumers.

Keen competition has been going on for some time between Liverpool and Manchester with regard to the importation of cotton from the United States. It is admitted, even in Liverpool, that Manchester is rapidly becoming a serious rival, and that thousands of bales of cotton are now being shipped direct to Manchester instead of via Liverpool. This is, of course, a serious loss to the shipowners in the older port, and they are tempting the Manchester spinners to have the cotton forwarded by rail to their mills, so as to save dues and other charges. Manchester is alarmed, and the Cotton Association of that city has drawn the attention of the Master Cotton Spinners' Association to what it terms a determined effort on the part of Liverpool to check the direct shipment of United States cotton to Manchester. The Lancashire cotton trade is being stirred up to fight Liverpool's action and endeavoring to get the spinners to insist upon direct shipment. The fight between the two ports is an interesting one.

The strike among the mill operatives at Lowell, Mass., has entered upon its seventh week and it is estimated that wages to the amount of over $600,000 have been lost by the operatives, but there are no figures to determine the amount lost by the mills. The mill owners state there is absolutely no change in the situation so far as they are concerned, and in speaking of one of the mills starting up independently of the others, they declare it to be entirely out of the question. The city is losing its population every day. Real estate is paralyzed, hundreds of houses are empty, the savings banks are not lending a cent, as they require all they have on hand to pay withdrawals, and business men are looking with apprehension at their list of debtors. There are about 23,000 idle looms and 17,000 idle operatives. The product of the mills affected ranges from the coarsest of grey cotton to the finest of dress goods, going through all grades of print cloths, sheeting, shirting, sateens, dimities, blankets, towelling, table linen and silk warp goods. The State Board of Arbitration and Conciliation has held an investigation and is of the opinion that the textile corporations cannot afford to pay their help the 10 per cent increase demanded. Organized labor is with the operatives, and circulars have been sent out appealing for help, which has been promised not only from towns in the United States, but from Canada, from which many of the operatives are drawn. It is a stubborn fight with both sides very determined, so that it is difficult to see where it is going to end.

THE BUDGET SPEECH AND ITS EFFECTS.

Although the budget speech at Ottawa, delivered since the last issue of The Journal of Fabrics, did not announce any material changes in the tariff as hoped for by the manufacturers, relief to some extent from the disabilities under which they labor is to come in another way. The manufacturers have been asking for increased protection, but the Government announces that it does not consider there is anything in the condition of the country which calls for a general revision of the tariff. Manufacturers have held the home market and their shipments to foreign markets have increased. It may be desirable at an early date to make further changes, but their character will depend upon the attitude of certain countries towards Canada. The British Government is being urged to give Canada a preference. If this should not be done it may be advisable to modify the preference which Canada now gives to British goods, the operation of which is one of the grievances against which Canadian manufacturers have to contend. But Germany discriminates against Canada, and for five years our Government has been endeavoring to bring about a better understanding, but in vain. The colonies of France give the Mother Country a preference under their tariff just as Canada does Great Britain. The Portuguese and Spanish colonies have done the same, yet Germany made no such discrimination against the products of any of those colonies, but when Canada undertook to accord similar privileges to Britain, Germany at once set into operation the maximum tariff against our products. The Canadian Government has, therefore, determined to copy the example of Germany, and as respects dutiable goods will enact a clause that when any foreign country treats the imports from Canada on less favorable terms than from other countries, there shall be imposed upon the goods of such foreign country a surtax equivalent to one-third of the general tariff. Germany will be immediately affected by this provision.

No branch of trade in Canada will be as largely affected by the surtax as dry goods. While the importation of groceries from Germany is larger than of dry goods, this is due to the one item of sugar, of which we imported last year $3,500,000 worth As we can get our sugar elsewhere, and are now making considerable quantities at home from beets, it would cause little inconvenience if the German supply was to be cut off, but in dry goods the trade is general in character, and the effect will be felt directly by those in the trade and by the consumer.

The dutiable goods imported from Germany last year amounted to $9,078,402, and on these the average duty was 30 per cent With the surtax added the rate will be 40 per cent. Under the preference the duty on British goods is about 20 per cent., so that German goods will pay a rate 100 per cent. higher than British goods. Our manufacturers have had to complain that foreign goods, largely German, have had the advantage of the preference by merely passing through Britain, where a small proportion of the finishing was done. Greater vigilance will now be necessary to prevent this, and the means employed will doubtless be pretty effectual.

In dry goods and fancy goods we imported from Germany last year to the extent of nearly two and half million dollars worth. They are classified as follows, and for the purpose of comparison, we give also the figures of five years ago, which show that our trade in fabrics with that country has been a growing one:

	1898	1892.
Wool and manufactures of--		
Cloths	$ 19,902	$ 46,202
Clothing, ready-made, etc	355,442	302,946
Fabrics composed wholly or in part of wool or worsted	230,453	169,546
Felt not filled or covered by or with any woven fabric	117,725	121,609
Knitted goods, including knitted underwear	34,706	20,427
Socks and stockings	41,737	45,091
Yarns	47,369	75,130
All other manufactures of wool	30,190	103,065
Cotton and manufactures of—		
Clothing	10,438	27,394
Embroideries	3,897	10,127
Fabrics, printed, dyed or colored	57,853	25,219
Hosiery	13,843	59,305
Socks and stockings	23,118	45,341
Velvets, velveteens, etc	5,328	37,415
All other cotton and manufactures of	14,383	39,018
Curtains	872	3,726
Embroideries	4,983	5,378
Silks and manufactures of—		
Fabrics	101,929	248,282
Ribbons	32,542	43,300

Velvets	23,538	50,022
Other lines of silk and manufactures of	19,312	19,522
Umbrellas, parasols	4,745	2,402
Furs, skins, wholly or partially dressed	175,854	359,019
Gloves and mitts	176,829	165,848
Hats, caps and bonnets	3,936	826
Buttons	21,952	37,334
Carpets, rugs, etc	2,697	9,097
Collars and cuffs	6,852	16,375
Fancy articles—		
Bead ornaments	4,491	7,243
Boxes, fancy, ornamental, cases, etc.	6,549	14,266
Braids, bracelets, cords, fringes, etc	85,176	109,366
Laces, lace collars, etc	50,015	84,126
Toys and dolls of all kinds	110,664	160,828
All other fancy goods	17,642	16,532
	$1,857,422	$2,483,329

The surtax came into effect of course as soon as the budget speech was delivered, but provision is made for importation, at the old rate, of goods ordered previously and which are brought in by the 30th of June. The latter date may possibly be extended, as it may be impossible to make delivery by that time of all goods ordered previous to the announcement of the change, and it would be unjust to subject goods contracted for under the old regulations to the increased tax.

It is likely that Germany will retaliate Already means are being considered for doing so. There is a provision in the German tariff for the imposition of a duty equal to the full value of the goods in the case of countries which discriminate against German goods. This will probably be employed against Canada, but as we buy five times as much from Germany as we sell to her the balance of injury will not be against us. If our natural products are shut out of the German market we can readily find new markets. We have learned this by experience in recent years and we do not need to worry. Our imports from Germany are a little over $10,800,000, of which all but $1,744,611 are dutiable, while our exports to Germany are a little over $2,600,000. One of the effects of the surtax will doubtless be to increase our trade with the Mother Country, and it will have a tendency to exclude German wares which now enter into competition with our home manufactures.

In the matter of binding twine the manufacturers asked to have the duty which was taken off in 1897 re-imposed. Relief is afforded in another way *Binder twine is made principally from two materials*, manila and sisal. The former comes from the Philippine Islands, the latter from Mexico. Both enter free of duty. Upon the manila used by Canadian manufacturers there is, however, a substantial impost The United States, true to the ingenious protectionism which manifests itself in their every enactment, have utilized their possession of the Philippines to give American manufacturers an advantage. An export duty of three-eighths of a cent a pound has been imposed, and a rebate is allowed to American manufacturers equal to the duty. This practically amounts to a bounty to the American manufacturer to the extent of that duty In the case of binder twine manufacturers in Canada this works a particular hardship. While he has no advantage whatever in our tariff, the American competitor, besides being aided by this bounty, has free access to our market. This is a condition of affairs which calls for some action, and the Government announces that before the close of the session legislation will be introduced by which Canadian binder twine manufacturers will be compensated for the disadvantage under which they suffer on account of the export duty on manila

In some other respects relief is to be afforded to Canadian manufacturers but we have indicated as above those relating to textiles.

While the budget speech brought a measure of disappointment, the Government has contrived, without disturbing the tariff, to give a certain measure of relief, and so far the effect of their action is in the right direction

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The Almonte Knitting Co. has added a new knitting machine to its plant.

Foreign Textile Centres

Belfast.—Little actual change in demand or value, but market characterized by well-sustained buying in all departments. Flax sowing late. Spinning end firm and product promptly bought up. Damasks and dress linens in improving request. Manufacturers doing a good business in most descriptions. Prospects good.

Dublin.—Irish poplin industry is expecting to benefit by the approaching royal visit, as it did when the late Queen visited Ireland. A command was issued then that the ladies who were to attend the Drawing Room should appear in poplin, and it is confidently expected that the same thing will occur again. Manufacturers are preparing for it.

Dundee.—Market for jute without any movement of importance. Jute on the spot without change in value, and sellers of new for Aug.-Oct. are not pressing, as reports from Calcutta tell of drought. Yarn market flat. Heavies unchanged. Fancy, in twists and goods better. Hessians dull but best qualities firm. Orders though not large are numerous. Flax of good quality a shade firmer. Tows scarce and dear, with lower qualities cheaper. Tow-yarns market better and large business doing. Flax yarns little enquiry. Linens in slightly better demand.

Kidderminster.—Business fair. Prices unsatisfactory as advance in raw material leaves little margin for profit. Special goods for spring trade have kept those who received them well employed. Spinning trade dull, so far as new business is concerned, as buyers will not listen to advanced prices which spinners are forced to ask for yarn. Indications point to higher prices.

Kirkcaldy.—Linoleum and floorcloth makers doing a good amount of business, and the position of the industry is encouraging. Owing to dearth of raw material, yarn prices, at present high, are on the increase, and, even in such small advances as linen manufacturers have been able to secure, margin of profit has been reduced to a very fine point. In present state of things United States and Canadian buyers hang back, and the home market is also very dull.

Leeds.—No material improvement in the woolen trade, and all the more important branches are lacking orders. Probable that merchants will presently be more disposed to operate, as wool values have an upward tendency. The clothing factories are in want of work. Consumption of ready-mades in some of the larger industrial fields has materially fallen off. In the shipping branch there is little to compensate for dullness at home. Canada is the best over-sea market. Australia's wants are comparatively small. Less business in being done with the Cape in ready-mades.

Leicester.—Hosiery is active, Colonial requirements are above the average. There is a full average trade in yarn, and new contracts are at higher rates.

Manchester.—Active market in cotton. American futures advanced 3 to 4 points. Egyptian futures declined 6 to 7 points Yarn in abundant supply but prices hard to maintain. Considerable enquiry from abroad for cloth but prices irregular. Substantial improvement required before manufacturers will be getting back their own with any surplus.

Nottingham.—Hosiery trade bad in almost all departments. New orders coming slowly. Prices against manufacturers especially in lower kinds of hosiery wool. The coming advent of paper stockings, to replace the knitted article, which has been foreshadowed by newspaper paragraphs,

has not created any great amount of consternation in hosiery circles, but the report of the invention of a new mercerizing machine which is to revolutionize the cotton yarn industry throughout the world has created some interest. The machine is said to be capable of mercerizing any cotton yarn, and is so expeditious that, operated by two youths, it can turn out 5,000 lbs. of mercerized skein yarn in ten hours.

HEATING AND VENTILATING A COTTON MILL.

The Hope Mills Mfg. Co., of Hope Mills, N. C., has equipped its mill throughout with the "hot-blast" system of heating and ventilation. All steam-coils are concentrated in a heater in the basement through which the air is drawn by a fan and distributed to the several rooms through galvanized iron piping and brick flues. The fan is driven by a direct-connected horizontal engine, which exhausts into a section of the heater. The remainder of the heater is of such capacity, that, using exhaust steam from the mill engines, the buildings can be heated to a temperature of 70 degrees F. when the temperature is 10 degrees above zero out-of-doors. The finishing building and the weave shop each contain two stories, and in addition, provision has been made for furnishing enough heat to the first story of the storehouse to prevent the freezing of the automatic sprinkler apparatus for fire protection, while the second story is to be heated to 70 degrees F. The guarantees are based upon the use of fresh outside air, although when warming up in the morning the air may be drawn from the interior, thus saving a considerable amount of steam. Live steam at 90 lbs. pressure is to be used at night, but, as above stated, the pipe capacity of the heater is sufficient to permit the use of exhaust steam from the power-plant of the mill in the day-time. The equipment has been designed and installed by the B. F. Sturtevant Co., of Boston.

LITERARY NOTES.

The Canadian Magazine for May keeps up the reputation this publication has achieved. For frontispiece there is a fine picture of the King and his grandchildren. The Canadian celebrity dealt with this month is C. M. Hays, general manager of the Grand Trunk Railway, and there is a biographical sketch of the late Dalton McCarthy. The history of the war of 1812 is continued. Among other striking articles are, Tree Planting on the Plains, Muskoka, with illustrations, and a story by W. A. Fraser. The usual monthly current notes, book notices, etc., are of interest. We are pleased to note the continued success with which the Canadian Magazine meets.

Guild and Lord, Boston, the enterprising publishers of the Textile World (now the Textile World Record), have just issued a new book entitled, "Manual of Weave Construction." This is a translation from the work of Ivo Kastanek, professor of designing and weaving at the Koyal Textile College, of Brunn, who is probably the leading authority on that subject in Europe. It has been translated and arranged for American and English practice by Samuel S. Dale. It contains over 500 illustrations of cloth and diagrams. The object of the work is to give in a systematic way a comprehensive treatise on weave construction, and it is alike useful to the student, practical weaver, designer and superintendent. Price is $1.50. We understand this is one of a series of such handbooks to be issued, and they should do much to educate textile workers, not only in the United States but in Canada, where they will no doubt have a great circulation.

The Textile Record of America, published at Philadelphia, and which made a specialty of the technic of knitting, has been amalgamated with the Textile World, of Boston, under the name of the Textile World Record, the publishing company under the new regime, being the Lord & Nagle Co., of Boston and Philadelphia. Samuel S. Dale will be editor, but E. A. Posselt, who edited the technical department of the Record, will continue to conduct that department of the new journal, the subscription price of which will be $2 a year. The size of page is now 7½ x 10 in., and the first number of the new series contains 250 pages of most instructive matter to textile readers.

The June Delineator is especially strong in fiction, and presents the usual charming display of fashions.

The May Century has four full-page reproductions in color of water-color drawings by Arthur Schneider, the American artist, who was instructor and intimate companion of the Sultan of Morocco from November, 1900, to March, 1902. Mr. Schneider's story of his unique experience in Morocco will be illustrated further from numerous sketches in black and white. This number has also, apropos of the Emerson centenary, a full-page woodcut, engraved by Timothy Cole, of Ralph Waldo Emerson, and editorial discussion of "Our Inheritance in Emerson." The block from which the page is printed is an example of the great wood-engraver's earlier work, and the print is a reproduction of one of the best photographs of Emerson.

Heywood & Co., Ltd., 150 Holborn, London, publishers of our instructive contemporary, the Dyer and Calico Printer, have rendered a valuable service to the textile trades, by issuing what may be termed a practical cyclopedia of "Mercerization." This work will be in two volumes, the first of which, now issued, makes a volume of 250 pages, with a portrait of the late John Mercer, from whom this remarkable process of treating cotton takes its name, and to whom, by the way, a monument is being erected in his native town, Great Harwood. This volume gives numerous illustrations of machinery used in mercerizing, and the details of the process appear to be very minutely given. In this important respect it appears indeed to be a model for other handbooks in the technical arts.

THE MANUFACTURER.

A woman bought a cloth skirt ready made of a reputable firm. After wearing it for several days she discovered damaged spots in the front breadth. She took it back to the shop where she had bought it and was told that the error would be cared for. "It is not our fault, however,' said the foreman, "and we will have to send it to the factory from which we bought it. It is up to them to make it good." "And upon whom will they fall back?" "On the manufacturer from whom they bought the cloth." "And he?" "Well, I suppose there would be no one but the sheep for him to blame, so he will have to bear the loss."—N. Y. Press. The manufacturer carries the whole burden—all the worry, trials and losses; wonder why he never kicks.

At the Montreal Cotton Company's mills at Valleyfield, John Monette was standing against the wall behind the elevator, when all at once the elevator moved, and as the shaft opened an arm of the machine caught him, crushing him into a space of a few inches. He was cut in two from the shoulder to the stomach and died almost instantly.

STEAM IN DYEHOUSES AND BLEACHING ROOMS.

Much has been written on this subject, and all sorts of complicated and costly arrangements have been proposed, which are either total failures or produce an effect which bears no proportion to the expense incurred. The only plan of any real value is to warm the room to be freed from mist and steam. Double doors and even walls, with the internal space packed with a non-conductor, have been tried at great expense, and expensive stoves and heating pipes have been used, with ventilators in the walls just below the roof, to afford an exit for the steam. All these contrivances fail, or only partially succeed, because they are based on an imperfect comprehension of the true principle. Now, every dyehouse and bleaching house has drying rooms attached to it, and to save transport, as near to it as possible. The air in these drying rooms has to be constantly renewed, if the drying room is to deserve its name. We have here the solution of the problem, viz., to supply the dye or bleaching house with air which has passed through the drying room. Exhausters may be employed to draw the hot air from the drying room and to discharge into the dyehouse, where holes in the wall, close up to the roof, permit its escape into the open air. It does not matter in which direction the air passes through the drying room, i.e., whether the exhauster takes the air from the top of the heaters or from the bottom, or vice versa. This method answers perfectly and the expense attending its adoption is very small. Even if the drying rooms are at a little distance, a suitable flue will bring the air from them with very little loss of heat.—Leipziger Farber Zeitung.

CROMPTON AND KNOWLES LOOM CO. VS. HOFFMAN.

In the November number of The Journal of Fabrics a report was given of a judgment by Judge McMahon, at Stratford, in the case of the Crompton and Knowles Loom Co. vs. Hoffman, in which the plaintiffs' claim was allowed and the defendants' counter claim dismissed. The case was appealed, and judgment has just been given on the appeal. The report states the case as follows. Action to recover the price of a goring loom and fittings which plaintiffs agreed to manufacture and deliver to defendants for $662.63 payable one half cash, one quarter on 1st December 1900, and one-quarter on 1st April, 1901, the property to remain in plaintiffs' possession until paid for. Counter-claim for damage for loss of profits by reason of the defective condition of the machine supplied, for the time and labor expended in endeavoring to make it work, for the material it spoiled, and for the services of an expert, etc. Held, that plaintiffs agreed either that the loom and fittings should be shipped to defendants on or about 25th June, 1900, or else that it should be shipped within a reasonable time from the giving of the order, and, looking at all the circumstances, it is not unreasonable to hold that it should have been shipped so that defendants might, had it been complete and properly constructed, have been able to work profitably upon it by the 1st of August. But plaintiffs never in fact supplied all the fittings they had agreed to supply, and they never supplied a loom properly constructed to do the work required of it by defendants, and to do which plaintiffs well knew the machine had been ordered. There was an implied, if not an express, warranty that it should be fit for the purpose of making web similar to a piece furnished to plaintiffs by defendants. When a plaintiff sues for the price of a machine, a defendant may rely upon a breach of warranty to reduce the claim, even although the property had not passed to him. The plaintiffs cannot say that, although the machine sent by them was a defective one, yet a competent mechanic could have set it right in a few days, the fact being that a competent mechanic was not to be found in the country, and one had to be imported from Buffalo for the purpose. Defendants used their best endeavors, in good faith, from the time the loom reached them to make it work; it would not work, owing to inherent faults which they used every means to discover and correct. It was plaintiffs' fault that defendants did not, for a considerable time, earn the profits from the use of the machine which plaintiffs knew when it was ordered they expected to earn, and they are liable to make these profits good. Defendants were justified for at least six weeks in waiting for the parts which plaintiffs had not sent, and in looking about them for the proper means of setting the defects right, and should be allowed $180 for loss of profits, in addition to the $69 allowed them by the judgment appealed against. Judgment reduced from $495.63 to $315.63, and the latter sum to bear interest from 1st October, 1900, and defendants to have the costs of this appeal set off against plaintiffs' debt and costs. In other respects judgment affirmed.

SIZE—ITS APPLICATION TO YARN.

Size is applied to yarn to give it strength to resist the chafing and straining to which it is subjected during weaving. The quality of the size is a matter of great importance, for if a poor quality is used the object sought in sizing will be only partly attained, and in many cases the yarn is injured. Not only is it necessary to use good ingredients, but they must be mixed in proper proportions. The materials used may be divided into five kinds—namely, adhesives, softeners, deliquescents, antiseptics, and weight-giving materials. The adhesives are for the purpose of binding fibres together more firmly by filling up the minute spaces between each, thereby making a firm, compact thread. The adhesive materials used consist of wheat flour, and corn, sago and potato starches For strengthening the yarn at the least cost, potato starch is the favorite, as it gives the greatest strength with the least weight of material used Wheat flour requires about 50 per cent. more weight than potato starch to size the same weight of yarn, besides losing nearly 25 per cent. in weight during fermentation. These two qualities make it more expensive than potato starch The binding together of the fibres makes the use of other ingredients necessary, as starch, if used alone, would form a hard crust on the yarn after drying, which would render the yarn unfit for weaving.

To prevent the formation of a hard crust, a softening material is used. This may be tallow, wax, castor or palm oil, paraffine or glycerine, but whatever is chosen care must be taken to prevent an excessive quantity being used. Tallow is the favorite, although wax, paraffine and glycerine have their advocates. If starch and some softener were the only ingredients used in the size, the heat that the yarn is subjected to in drying, which drives out the natural moisture, would leave the yarn dry and brittle. To obviate this some material that will absorb moisture is mixed with the size. Chloride of magnesium is generally used as a deliquescent, and the moisture it absorbs from the air, after the yarn is dried, restores the yarn to a natural condition so far as moisture is concerned. There are other chemicals with deliquescent properties that may be used. The use of starch

as an adhesive and beef tallow as a softener makes the use of a fourth ingredient necessary as they will cause mildew in the cloth under certain conditions. To prevent this an antiseptic material is necessary. Chloride of sodium, alum and chloride of zinc are used, but the zinc salt is the favorite.

The first object of sizing is to strengthen the yarn, and to do that the starch must be of a good quality. Potato starch, if of a good quality, will be free from lumps when cooled after boiling fifteen minutes. Paste made from it will absorb more water than when the quality is poor. A sure sign of pure potato starch is that it becomes watery and brittle soon after cooling.—Boston Journal of Commerce.

BLEACHING COTTON WITH TURKEY-RED OIL.

It has long been known that ordinary chlorine bleaching has an evil effect on the fullness and brightness of many dyes, but something has to be done to prevent the natural color of the fibre from interfering with light shades, especially in Turkey-red or Turkey-pink dyeing. The Farber und Wascher describes a new process by which a pure white can be got with bleaching powder by the use of Turkey-red oil. The goods to be bleached are impregnated with a solution of Turkey-red oil of from ¼ to 10 per cent. strength, according to the natural color of the cotton and its fastness, wrung and centrifuged, to get rid of the excess, and then dried. The goods are next boiled for six hours under pressure with from 1½ to 2 per cent. of caustic soda, rinsed, slightly scoured, rinsed again, passed through a very weak soap bath, again rinsed and then dried. If the cotton is very pure and easily bleached, the process may be simplified by putting the Turkey-red oil into the boiler with the lye. Yarn thus bleached is said to be perfectly white and of unimpaired strength. It is free from oxycellulose and lime salts, and hence excellent for alizarine dyeing. This bleaching process differs essentially from the usual preparation in Turkey-red dyeing, because in the latter process the oil must remain on the fibre, and remain an essential ingredient of the mordant. In the bleaching process the oil is removed from the fibre before the dyeing begins. Hence, in bleaching by this process and then dyeing Turkey red, the Turkey-red oil is used twice. The process has special importance for bleaching maco yarn, as that yarn, so largely used for the finer counts, has been hitherto very difficult to bleach, requiring strong baths of chloride of lime.—Textile Record.

IN THE DYEHOUSE.

Soluble calcium sulphide may be prepared by heating 50 parts of flowers of sulphur, 50 parts of lime, and 1,000 parts of water. If zinc sulphate be mixed with this, zinc sulphide will be precipitated together with calcium sulphate and some free sulphur. By heating the mass to 300 degrees C. the sulphur is driven off, and the product quenched in water is sold under the name sulphofon.

While commercial tannic acid is now on the whole a fairly pure product, yet it is liable to adulteration with dextrine, starch, epsom salts, and other products. A good quality of tannic acid should be freely soluble in water, giving a pale brown solution which will not be colored with iodine or give any precipitates with acidified solutions of barium chloride and silver nitrate. It should not contain more than five-tenths to one per cent. of ash; anything beyond that should be considered adulteration,

True aniline black or nigraniline is a black substance insoluble in ordinary solvents, and is obtained by adding an oxidizing agent such as bichromate of potash to a solution of aniline salt. Concentrated sulphuric acid, certainly dissolves it, but on adding water to this solution it deposits greenish flakes of emeraldine, which are retransformed into aniline black by the addition of alkali. It is impossible to produce aniline black as a direct dye. A less indirect method was at first attempted, by treating the fibre in an acid bath of aniline with the addition of bichromate, but with its rapid development the black had not time to fix itself perfectly on the fibre. By this means a black was obtained of which the greater part was lost by being precipitated on the fibre in the form of powder.—Textile Manufacturers' Journal.

A NEW FLAX TWINE PROCESS.

According to a western exchange, Mr. Wolverton, of the Brandon, Man., Binder Twine Works, has developed a new process of retting and preparing flax, so that this fibre can be used in making binder twine. One difficulty in working up flax into cloth in Canada is the shortness of the Canadian autumn, which is hardly long enough for the most important process in the preparation of flax before its spinning. This process, technically called "retting," is carried out in various ways. The "dew retting," which consists in spreading the straw on the fields, and leaving the morning dew to dissolve a certain glutinous substance, which must be got rid of, is not successful here. The "pond" retting is equally impossible in this country. It consists in sinking the straw down in shallow ponds, and weighing it with stones. For both these or any other natural grasses, the Canadian fall is too short.

Mr. Wolverton has hit upon an idea of spinning twine from unretted flax. For obvious reasons Mr. Wolverton refuses to divulge the technical details of his new process, which is said to be the first method of treatment which can be considered a financial success. But to a selected few on board the Tunisian he revealed his secret a few days ago.

"It has been my experience," he said, "that unretted twine will answer very well as long as it remains dry. But as soon as it becomes damp its breaking strain is immediately reduced and it becomes worthless. The glutinous substance that remains in unretted flax diminishes the cohesion between the strands, and the twine pulls apart. This has been the chief difficulty we have met with in using unretted flax. By a certain bleaching process this objectionable substance has been done away with and excellent twine has been made. As far as cost goes, I believe it can be reduced to a minimum, making the operation highly profitable." He is now working on a machine into which the unretted flax can be fed in "slivers," and, after undergoing a series of baths and dryings, emerge at the other end as twine. And—what is more than any one expected—a twine which has no attraction for mice, the so formidable enemy of flax manufacturers.

By the merest coincidence Mr. Wolverton met a traveller who has spent years in India, and who knew of a solution of chemicals which will make all fabric, especially flax and jute, impervious to mice. The soft silken strands of twine, the fine dry flax, is an ideal lining for a mouse's nest. The loss by those little pests to twine manufacturers is a much heavier one than could be credited by persons who have not suffered by them. This most important obstacle has apparently been overcome.

This machine, which promises to excel one now in use

in the United States, and the property of one of the only successful manufacturers of twine from unretted flax, also solves the question of utilizing the refuse of the process. The husks are to be compressed and sold as kindling, and the glutinous substance will be condensed in cake form and make an excellent fertilizing medium. This latter idea occurred long ago to Mr. Wolverton, as he noticed that on the fields where dew retting had been done the growth of crops subsequently raised was very rich and rapid.

Not long ago a Mr. Anderson, of Glasgow, claimed to have a process up his sleeve whereby unretted flax could go straight from the "sliver" to the bobbin. He offered to come to Canada and show the manufacturers here all about it for a trifling consideration of $25,000 a year. The desperate conditions of the binder twine people almost drove them to accept the Scotchman's offer, but now that gentleman remains at home, and the Canadians pocket the $25,000 themselves annually. The intertwining of jute with flax, which has so far been considered a failure on account of the great difference in contraction when wet, is also said to be made a possibility and practical success, The machine does away with another and perhaps the most objectional feature of flax manufacture by turning the foul smelling and dangerous glutinous by-product into a clean commercial article, making an occupation which previously was a very unpleasant one full of cleanliness and perfect safety to health.

The machine consists of a series of cylinders which force the flax after its "breaking" and "scutching" through several successive baths. In these both the fibre is deprived of its sticky substance and the flax washed as well as finally saturated with the anti-vermin solution. Then the continuous stream of sliver flax runs repeatedly over a large heated drum, emerging finally into the spinning machine and ultimately winds up on the bobbin. Chemical solutions have previously been used in twine for the purpose of reducing the appetite of mice and rats, but though these ends have been reached, the cattle frequently become ill from eating stumps of the chemical twine accidentally mixed with their feed. This latest discovery is harmless.

THE MARGOLIUS FRAUDS.

The preliminary investigation into the charge against Maurice Bachrack, Wm. Blakeley and Abraham Levy, of Toronto, for conspiring with George Margolius, to defraud his creditors, has been concluded, and they have been committed for trial at Montreal The story told by Margolius, if true, reveals an extraordinary plot to defraud. He states that he bought several thousand dollars' worth of goods on credit, and sold them to the accused at half the wholesale cost for cash. A quantity of goods purchased from A. E. Ray & Co., Toronto, he had shipped to himself in Montreal, from where he re-shipped them to the accused in Toronto. He said that he had been sent to Ray & Co., by Bachrack, to purchase the goods, and he had no intention from the first of paying for them. Margolius said that there was an undertaking between himself and the accused that he was to purchase all the goods he could on credit, and they would purchase them from him at half-price, paying him cash. There is scarcely a dry goods or tailoring wholesale house in Toronto or Montreal which escaped, although in some cases the goods were never shipped. Among those who supplied goods to Margolius are, the Canada Woolen Mills Company, the Canada Underwear Company, the Canada Woolen Manufacturing Company, the New York Silk Waist Company, the Strathcona Rubber Company, the Persian Skirt and Waist Company, the Beaver Rubber Company, the London Rubber Company, the Empire Manufacturing Company, the Star Suspender Company, and A. E. Ray & Co. The scheme was also tried in New York, but did not work. Bachrack and Levy acted in that city, Margolius says, as his travellers. In some cases he says Bachrack went with him and selected the goods he wanted, but sometimes Margolius bought less quantity than he had been told us he did not want, so he says, to "stick" the firms. Bachrack, he further says, promised that after he had run as long as he could, he might settle with his creditors at twenty-five cents in the dollar, and that he would afterwards look after him and start him in the jobbing business, either in Montreal or Toronto, with one of his own boys.

In his cross-examination, Margolius said that other merchants had taken advantage of the cheap goods he had for sale, and made a further statement that Bachrack had told Gault Brothers that he (Margolius), was selling goods at 50 per cent. of their value, the object being to prevent him from getting credit there. He also got considerably mixed as to dates, and contradicted himself in many particulars. He claimed that Bachrack had told him that he had the same dealings with a man in Kingston, who was in difficulties, and who sold him at fifty cents on the dollar for cash.

A note for $225, signed by J. Vise & Co., Toronto, is also in evidence, and it is said to have been forged, and the prospect is that Margolius will be prosecuted in connection therewith.

The story of Margolius, who, it will be remembered, left Montreal rather hurriedly, and was arrested in Chicago, is a most extraordinary one, and it can scarcely be credited that supposed reputable business men car have been mixed up in such a dastardly attempt to defraud.

A commission will go to New York to take evidence for the trial

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The Consumers' Cordage Company's employees, at Montreal, struck on April 6th for an advance in wages. On the following day they resumed work, advances of ten and twenty per cent. having been granted to about two hundred employees.

The Bat Wing Binding Company, in Perth, is contemplating the introduction of more machinery so as to turn out the finished article more rapidly. The binding is made from a line of felt which is manufactured by the Perth Woolen Mill, and is cut into long strips and finished by machinery run by electricity. The finished product is rolled on large spools and packed in boxes. The binding is put up in different shades, so as to match any color in dress materials.

A bleaching process for the removal of oil stains from cotton goods has been proposed to the Society of Mulhouse by a competitor for a gold medal. At a meeting of this society the process was approved by a committee, under whose directions tests had been made. There are three modifications of this process. The first consists in the addition of Turkey-red oil to the lime solution; washing in hot water before souring. In the second method the addition is made to the lime and soda, or caustic potash solution. In the first case, the oil is mixed in equal parts with colophonium before adding to the solution. In the second, one quart of the oil is added to each 26 cubic feet of caustic solution, standing at 2 degrees B. Lastly, the goods can, after singeing, be saturated with the oil and steam for 1½ hours, at a pressure of 1½ atmospheres, then washed in boiling water and bleached in the usual way.—Hosiery Trade Journal.

TEXTILE PATENTS.

The following patents relating to textiles have been issued in Canada since the publication of our last list.

Paper Box. Michael J. Kane. St. Paul, Minn.

Cap for Shade Rollers. W. D. Janes, Saginaw, Mich.

Hat Grip. R. D. Harris, Savensisters, Wales.

India Rubber Composition. Wm. Prampolini, San Luis Potosi, Mexico.

Apparatus for Dyeing Slivers wound into Tops or Cheeses. Chas. M. Hanson, Peace Dale, R.I.

Flax Harvester. David L. Wellman, Frazee, Minn.

Garment Supporter. Adolph H Cohn, New York

Elastic Stocking. W. F. Ware and W R. Cartledge, Philadelphia, Penn.

Apron E. C. Moore & Son, Detroit.

Apparatus for Distending Textile Fabrics. Wm. Mycock, Spring Mill, Whitworth, Rochdale, England.

Machinery for Separating Wool or Hair from Skins. W P. Griffiths, Bradford, England.

Garment Fastener. S. J. Cox and C. L. Ackerman, Luna, Ohio.

Garment Hanger. Wm. H. Durant, Concord, and Adelaide L. Merrill, Rumney Depot, N.H.

Bandage. Clara J. Higgins, Wanatah, Ind.

Measuring Machine. C. B. Carver, Elk Rapids, Mich.

Placket Fastener. A. H. Thomson, New York.

Window Shade. Margaret Ann Allen, Longmount, Col.

Sewing Machine. E. O. Blackwell, Wynyard, Tasmania.

Process of Producing Endless Cards for Weaving. La Societe des Inventions, Jan Szczepanik & Co., Vienna, Austria.

Take-up Mechanism, Pull-off Mechanism and Tension Mechanism for Sewing Machine (3 patents). Joseph L. Kieffer, Montreal.

Spring Shade Roller. Frank M. Vickery, Boston, Mass

Hose Supporter. H. E. Crandall, New Britain, Conn.

Dress Shield. Leta M. Ferguson, Washington, D.C.

Garment Fastener. Jas. F. S. Gunning, Toronto.

Textile Fibre Manufacture. Jas. Y. Johnson, 47 Lincolns Inn Fields, London, England.

Fur and Glove Sewing Machine. Morris Hashfield and Herman Allbrook, 54 Redcross street, London, England.

Clothes Clamp. Samuel Brown, Waterloo, Ont.

Girdle and Suspender. Edith M. Sharpe, Ottawa.

Mourning Band. S. W. Carter, Sydney, C.B.

Garment Support. Byron L. Bargar, Columbus, Ohio.

Device for Water Marking Paper. E. R. Behrend and O. F Behrend, Erie, Penn.

Leather Sewing Machine. J. L. Kieffer, Montreal.

Lace Rack. Max M. Savlan, Petoskey, Mich.

Board for Holding and Shipping Cloth. John Louke, Brooklyn, N.Y.

Cloth Blocking and Measuring Machine. W. A. McDougall and Martha McGillivray, London, England.

Thread Cutter for Sewing Machines. E. Michaud and E. J Bricker. Address not stated.

Show Stand for Dressmakers. Chas. Dargie, Fitzroy, Victoria, Australia.

Registering Cloth Board John W Carrier, North Troy, Vermont.

Suspender. H. G. MacWilliam, New Rochelle, N Y

Garment Supporting Webbing. Celia A. Spurgin, Des Moines, Iowa.

Pocket Umbrella. Frank L. Jones, Stratford, Ont.

Yarn Package for Dyeing. S. W. Wardwell, Providence, R. I.

Manufacture of Cellulosic Articles. The American By-Products Co., New York.

Machine for Shredding Plastic Materials. Thos E. Edwards and Geo. F. Allmendinger, Ann Arbor, Mich.

Ankle Protector and Arch Supporter. Benj. A. Nathan, New York.

Window Shade. S. H. Martel, jr., Montreal.

Skirt. Mrs. Augusta Adler, Tacoma, Wash., U.S.

Curtain Fixture and Process of Making the same. H. E. Keeler. New York.

Art of Dyeing Yarn, etc. S. W. Wardwell, Providence, R.I.

Method of Slitting Leather Belting for Splicing. Jas. D. McArthur, Brockville.

Belt or Strap Splicer. Robt. E. Cain, Platte City, Missouri.

Garment Stiffener. Harry Feder, Manhattan, N Y.

SHEARING CLOTH.

Cloth is sheared to remove the shaggy appearance, give a smoother face and bring out more distinctly the peculiar texture of the cloth. No definite instruction can be given in regard to the duration of the process.

A patent for a shearing machine was granted to Everett

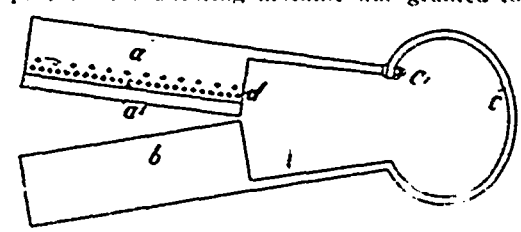

Fig. 1.

& Harnar, an English firm, about the middle of the 18th century, but it was far into the 19th century before machines were extensively employed for this process Improvements of hand shears were patented in England as late as 1820. Fig 1. shows the construction of a hand shear. a¹ is the knife screwed to the plate, a, the other plate. b, passed underneath, served for a rest. On the under side of the rest, b, there was a hook on which to hang a weight, which varied according to the power of the spring, c, by which the two plates were bound together Fig 2 represents two men shearing cloth by hand. The cloth was held by hooks and drawn over a table covered with leather or cloth. The nap was brushed up before beginning the shearing The workman stood next to the rest b, and, after adjusting the shear to the cloth, drew the knife towards him According to statements of old hand shearers, a good workman could shear from six to eight yards of cloth per hour It was necessary to go over the cloth several times before the process was

completed. While the result attained would fall short of satisfying the finisher of to-day, the old hand workmen are loud in their praises of the excellence of hand shearing.

Although, as already stated, a patent for a cloth shearer was granted in England about the middle of the 18th century, no serviceable machine was constructed until 1815, when Price and John Lewis built a shear with a rotary spiral cylinder. That this English machine had not been introduced

Fig. 2.

generally into Germany as late as 1830 is proved by the decree of the German Government on April 11th, 1830, granting to W. Jansen the exclusive right to operate and lease shearing machines of an American model. On these machines the cloth is sheared crossways, or in the direction of the filling. They have been discarded in many mills, while

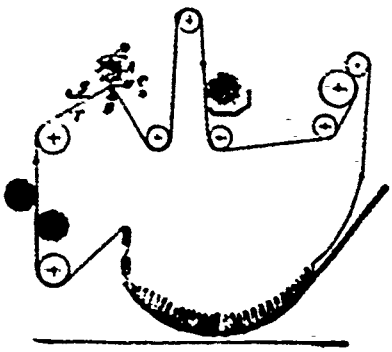

Fig. 3.

a few manufacturers occasionally order new shears of this character. The cutting parts move across the cloth, which is advanced with each traverse of the machine. It is possible to shear cloth closer on the cross shears than on the longitudinal shears; it is nearly impossible to shear certain diagonals and long ribs with the longitudinal, as the blade cannot reach the low places in the cloth. On these machines the cloth moves lengthways or in the direction of the warp, and the shearing apparatus consisting of a rest, shear blade, and revolver, remains stationary. It is much superior to the cross shear as regards production, and is now in general use throughout the world. Fig 3. shows a section of a longitudinal shear; A is the cylinder or revolver; B, the rest; C, the shear blade; D, the swab, which rests on the revolver, and is kept saturated with oil. This swab is made either of leather perforated with holes to allow the oil to work its way down to the revolver, or several thicknesses of cloth. The revolver is placed close to the shear blade, C, and, as the former revolves from five to six hundred turns per minute, the shear blade would become hot and be ruined very quickly if not kept well oiled. If the oil is applied unevenly, or in too great a quantity to the revolver, it will get on the goods and cause streaks which it is often very difficult to remove. (g) is a box placed near the revolver to receive the flocks as they are cut from the cloth, T. Usually the selvage on woolen cloth is somewhat thicker than the cloth itself. If the selvage passes between the rest and the blade adjusted for shearing, it would be cut and destroyed. To prevent this, a part of the rest is made adjustable, so that, by turning a handle, the workman can lower it at the sides. Formerly this operation requires two operators, one on each side, but in recent machines both sides of the rest can be adjusted with one handle.

The speed of the cylinder of a longitudinal shear varies from five to six hundred turns per minute. On a cross shear the speed of the cylinder is about one thousand turns per minute.

A German shear has been built, in which there are two blades for one cylinder. It has not met with much success, and it is doubtful if such a device will displace the ordinary form, since in the latter the goods can be examined much more easily during the shearing process.—Condensed from Textile World.

METAL THREADS—HOW THEY ARE MADE.

Metal threads used in selvages and in ornamental fabrics are made by winding metal spirally around a thread of cotton. The want of flexibility of these threads is a drawback to their use in the loom or in embroidery, and the writer, by a process patented in Great Britain, produces metallic threads by coating or impregnating thread with an adhesive substance and drawing it through powdered dyestuff or a bronze powder, or through a bath of one or the other in suspension in a colloidal substance.

The following is a description of an apparatus, given by the Dyer and Calico Printer, that may be employed for the purpose. On a frame a number of reels are attached, which carry the thread material to be impregnated and coated. Next to the reel frame is a vessel containing, for instance, a bath of agar-agar and bronze. The mixture may consist of 500 grams agar-agar and 750 grams glycerine dissolved together in 10,000 grams water, to which are added 500 grams of bronze, selected according to the purpose in view and the color desired. At a temperature of from 60° to 70° C., this bath is liquid, and necessary heating can be effected by means of steam coils or the like. To prevent the bronze from being deposited instead of remaining suspended in the liquid, a stirring apparatus is provided in the vessel if required. It is sufficient to allow about 1 yard of thread to dip into the bath. After it has passed through the impregnating bath the thread is completely dried, for which purpose a hot-air chamber can be provided behind the vessel. For hardening the agar-agar addition a vessel containing a 35 to 40 per cent. formaline bath is arranged behind the hot-air chamber. If desired a small quantity of bronze is added to the formaline, and kept in suspension by means of a stirring apparatus When the threads have passed through the formaline bath they are again dried in the air, or in a hot-air chamber. In this condition the thread is dull, which is desirable for certain purposes. If, however, a brilliant and transparent gloss is to be applied to the thread, the method will be completed by arranging a receptacle following the drying chamber and containing a 1 per cent. solution of celluloid in acetone with amyle acetate or also a collodion solution. In this case, too, the solution can contain some bronze in suspension.

and a vessel can also be placed in the apparatus filled with a pure celluloid solution. It is of advantage to add about 1 per cent. castor oil to the celluloid or collodion bath, in order to make the last coating very supple. After passing the threads through the baths the threads are dried in a hot-air chamber. The threads are wound on to reels arranged in a convenient frame. At those points where the threads enter and leave the vessels and also in the bottom of the vessels, and also at the entering and leaving points of chambers, means for conveyance have to be applied. Easily rotating rollers extending over the whole effective width, may be arranged, close to which a comb is placed, the teeth of rods of which keep the threads apart, so that they do not become entangled.

The impregnated material can be at once placed on the market and meets with all requirements expected of a textile product. It offers perfect resistance against soap solution, acids, alkali, salts, and also against mechanical influence. It does not lose color, nor can changing of colors occur under normal conditions, as long as the protecting coating is applied.

The above, of course, gives only an example of working the method on a large scale, without being limited to the indicated mixing proportions and the succession of baths. A further very advantageous method for treating is as follows. The material is first passed through a solution of 5 per cent. agar-agar, or 10 per cent. gelatine, 5 per cent. isinglass and 10 per cent. glycerine in water with the addition of the required quantity of coloring powder or bronze, then twice one after the other through a formaline bath, from which coloring powder or bronze is excluded. The material is then dried and passed twice through a 1 per cent. celluloid or collodion solution bath with bronze stirred up therein and finally through a pure celluloid or collodion bath.

The glittering metallic coating which is given to the thread by the treatment has to be extremely thin for most purposes, so that the structure of the thread is still distinctly visible. If this is, however, not desired for special purposes proportionally stronger baths are applied or the dipping repeated, in the same manner as threads, ribbons or wide fabrics, made of either spun thread material or natural fibre, can be supplied with a more or less thin coating by this method

TEXTILES IN THE FAR EAST.

The Textile Excelsior's foreign correspondent recently visited the leading weave works of the principal cities of Japan, and tells what he saw in an interesting way. What he says of the woolen mills is of special interest by way of contrast to the methods employed in America. "I found," he says, "that nearly all were very busy manufacturing different lines of cloths. Among the most prominent cloths made at the present time in the lines of woolens is a hair-line effect, produced by running white lines through a dark ground. These hair-line cloths seem to sell rapidly to the tailoring trade of the country, but very little of the cloth is exported. In fact, American and other foreign mills could make a good thing out of it by shipping light woolens here in larger quantities. The domestic goods are necessarily manufactured too narrow, due to the narrow proportions of the Japanese looms. You can go into any of the weave shops of the country and you will find narrow looms in operation The widest I saw in the shops could weave less than 24 inches of woolen from list to list. When washed and fulled these cloths shrink a few inches, thus reducing the width. The woolens of the Japanese empire are not notable for their finish, and the imported sorts bring much higher prices as a result, although the woolen stock in the domestic may exceed in worth the stock in the foreign. The woolen goods manufacturers of Japan usually use the best grades of wool obtainable. They have an abundance of sheep to draw upon as a rule and the ruling prices for wools are low as compared with values in the commercial world in general. There is an opening here for wool buyers, for up in the hills in the interior there are thousands of sheep running wild with no one to shear them for the sake of the wool, which, if cut, could be exported and good prices obtained. The Japanese are negligent about these matters. They will procure as much wool as is required for immediate wants, and that is all.

The crudeness of the machinery employed in making woolens would seem to prevent the Japanese from making suitable clothes, but these Japanese cloth makers are very ingenious. I did not find any fully equipped woolen mills in the country, but discovered many portions of mills distributed throughout a town. That is, in one house they would do the wool picking, in another the carding, in another the spinning and weaving and so on, so that finally the woolen cloth would be finished and ready for market. Very many of the woolens are light weight, although I saw some made on the beaver plan, with backings, the face being good stock and the back shoddy. There are shoddy works here in which the old rags and refuse wool stock of the country is worked into a fibrous condition and put into shape for re-manufacture into threads for weaving cheap and heavy cloths. The work of weaving these backed goods on the crude hand looms requires considerable training on the part of the weaver. In some cases head motions have been purchased from other countries and attached to the hand loom, and a boy is employed to operate this head motion with the harness. I saw some jacquard heads put on hand looms and run by two persons. The resulting fabrics are very beautiful indeed, but the labor of weaving is tedious. A delay occurs at every thread which is inserted by the shuttle. But the weavers and their assistants are employed for a trifle per day, about 20 cents for the first weaver, 15 for the second and 10 cents for the third assistant.

The designers of woolens in this country are certainly gifted with an idea of plain beauty and attractiveness. They know how to cater to the Japanese trade. They make a fine line of dark goods without much pattern work, and in addition lines of fancy cloth liberally decorated with stripes and checks. The Japanese designer first secures numerous patterns of cloths from other countries. Then he selects floral effects from nature, and from wall papers and even pictures. I visited a number of woolen cloth designers in Nagasaki and was much interested in their schemes. One designer had a photographing device by which he could photograph combinations of patterns into a single design in one color, and get from the combination an idea of how certain selections would appear in one. Most of the designers had several boys working away promiscuously at daubs and designs, in hopes that the little fellows would by chance fall upon some original plan effect which might be used in a complete figure. I was told that these boys in the course of a week or more usually produced an idea each, which could be utilized as a complete effect or as part of another plan.

What the Japanese lack here is proper finishing machinery. The plan of washing the goods by hand does not fill the bill Woolen goods require proper degrees of fulling in order to get the desired results with the fabric, and if this is not done, the goods turn out to be soft, flabby and unfinished. I saw great lots of goods unfinished simply because of lack of the required apparatus. Some of the manufacturers merely wash the goods, then press them. Others often sell the goods direct from the loom and the buyer has to do the washing. I have seen some of the woolen goods people down at the river banks beating the goods with stones and sticks in order to get the felting and fulling processes started. Some fulling, washing and general finishing machinery would sell readily here. Then as to raising the nap on the finished goods, this is done in a peculiar way here, and often with bad results to the goods. Wood, hair, bristle, and even steel brushes are used by hand-power to scrape up the nap on the face of the goods. Even in the hands of a skilled finisher, the raising process becomes exceedingly difficult. As some of the finishers are not competent, it often happens that holes are scraped through the goods, while it is nothing unusual to see great tears in the textures. Again, parts of the cloths are often missed by the raising devices and the finished portion looks bare. Next, we have the shearing off of this raised fibre so as to get the face finish level. This is done by revolving blades arranged on a cylinder in bearings in some of the work shops, while in others sharp knives and even scissors as of old, may be seen in service. The consequences are, the finish of the goods is poor, uneven, and often retards the sale of the goods The pressing is done by means of greasy papers or cards spread between the folds of the goods, and then the package is placed in a press, the platten of which is forced down and kept there 24 hours by means of a spiral screw. Steam heat is applied through pipes.

After describing the silk manufactures, he goes on to speak of other lines of fabrics manufactured in Japan

Ramie has been raised in Japan with profit during the past few years and you can see some beautiful patterns wrought with this fibre The ramie fibre is worked almost entirely by hand processes, which are slow, but as before stated, the low price of labor justifies the handling of almost any of the fibrous products of the islands by manual labor The ramie is colored all the shades of the rainbow and may be seen on sale in various forms in the markets of Nagasaki. Considerable of the ramie cloth is shipped to other ports, and is also sold to the buyers of textiles for other countries.

Fancy cotton combination threads are on sale in all of the small ware stores of the country, being the product of the thread mills Most of the threads are from cotton fibre products, but one may see threads which are manufactured from the fibre of the pineapple and the cocoanut There are also bamboo split stock threads, made by coolies splitting the strips of wood into very fine strands These strands are worked down till smalled in size by rubbing with materials such as sand and by buffing When the thread is worked down to a very small diameter it is blessed by means of tallows and other fats, and it is then very firm and somewhat elastic Then the threads are colored as desired, the ordinary wood dyes being employed Finally the thread of thin wood is twisted about other strands of different colors and sometimes of different fibre, such as wool, silk or cotton, resulting in a combination which may be used for many purposes in the manufacture of fabrics or in the production of yarns in skeins or on spools.

The Philippines are constantly shipping large quantities of cocoanut products into this country The meat of the cocoanut is sent here in the form of "corpa," which is the contents of the cocoanut cut into shreds and dried When this part of the cocoanut arrives here it is pressed and the fat secured from the meats is used for making dressing materials for the preparation of threads for warp making. The husk portion, which is dried and prepared previous to shipment, is worked into a fibrous strand by hand devices and is finally wrought into a fabric. The fibres are twisted chiefly by hand wheels and the weaving is done on the hand looms. Some very unique cloths are manufactured from the cocoanut fibre. They have a way of bleaching the fibre so as to make it nearly white, so that the stock can be colored reds, yellows, blues, etc.

Probably the most attractive fabrics of the country are those resulting from the weaving up of yarns manufactured from the pineapple fibre. The fine interior fibres of the stalk of the pineapple plant are suitable for the production of the most exquisite fabrics I ever saw. I once worked in the fancy goods mills of America, and supposed that some of the fancy cloths made in these mills were not to be excelled in fineness and finish. But some of the cloths resulting from the weaving of strands of pineapple warps and fillings excel anything yet produced on looms They excel in the delicacy of construction of the texture, in the general feel of the fabric, in the brightness of the colors, which are not possible to secure on other stuffs, in the closeness of the weaver in the evenness of the warp and filling lay, and in the attractiveness of the whole piece. The patterns are also remarkably fine, and contain some of the best exhibitions of domestic skill one can imagine. Evidently these cloths would find an excellent market in America is some one would go to the trouble of establishing an agency here for collecting and buying the goods and importing them in regular lots. Occasionally visitors here buy up a lot of the goods, for they are very cheap as compared with American values of fancy fabrics and ship them to friends in the United States Often the thing is done in quite a wholesale way, and some of the pieces are disposed of at greatly advanced rates upon reaching America I am told that pieces of 44 yards in length and 28 inches wide purchased here for $6 gold, have been readily disposed of in America for $20 gold Of course, there are the duties to pay but the amount required for this purpose is small, as compared with the advance gained in the cloth by transporting it from a market in which labor and material are very inexpensive, to a market where both material and labor are high Some day some one is going to come to these shores and enrich himself by handling these fancy cloths and yarns of the Chinese in the proper manner There is certainly money in the venture

COST OF MANUFACTURING IN A WOOLEN MILL.

This article refers to mills buying their raw material, carding and spinning, weaving and finishing their goods. In former times when a mill ran year after year on a few fabrics of similar construction, and when profit margins were large, to arrive at a safe selling price was a comparatively easy matter. The law of average suited very well. To day very few mills run on a standard product. The average mill is forced to make a rather large variety of fabrics, and to obtain the cost of manufacturing this diversified product is a problem which taxes many mill owners and agents. To-day margins of profits are often very small, and under such conditions the system of averaging becomes dangerous. Many claim that there is no method of accurately calculating costs under such conditions. It may be difficult, but it is not impossible. The lack is of a trained man, a man who has a thorough knowledge of mill work, combined with an accountant's training. Such a man's practical knowledge enables him to thoroughly investigate governing conditions. No circumstance which affects the operation and production of the plant escapes his notice. Having gathered his information regarding production and relative expense, his training as an accountant enables him to put into proper form the results of his investigations There is no haphazard work about it. No 'I think so', no 'I guesses. It matters not to such a man whether there are five or 50 different fabrics being produced. Each is apportioned its rightful share of expense. We are now in touch with a man prepared to do this work. He will attend upon any manufacturer who thinks that he would be benefited by having his mill's affairs investigated and systematized. The whole method of arriving at a basis upon which to calculate costs would be explained step by step, and a convenient and ready table of information compiled which would enable any one readily to arrive at an accurate estimate of the cost of manufacturing any fabric he wished to produce in his mill. This man offers to do such work under condition that no fee will be charged if anyone is not satisfied with the result. Personal expenses only would be expected.—Fibre and Fabric.

WHITE INDIGO.

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

A VALUABLE FIBRE-PLANT.

At a time when capitalists and others in India are striving to introduce rhea and other fibres into the market the wonder is why the fibres from those extremely common indigenous plants, calotropis gigantea and calotropis procera, are ignored. It cannot be because the quality of the fibre from them is known and that it would not find a sale, for a short time ago a partner in the firm of one of the best brokers in London, and one who, it is understood, reports for the Secretary of State on the market value of fibres generally, quoted £90 per ton as the price of samples of combed calotropis fibre that were submitted to him for report—a quotation which dispels all doubts on this score. The real reason why the fibre remains unexploited is probably because of the amount of manual labor involved in separating the fibre from between the bark and the wood of the stems. It is, however, probable that the structural resemblance that the calotropis bears to the rhea might suit it for treatment in the well-known Faure machine that has been successful with the latter plant. It is believed, however,

that machines which are utilized for decorticating rhea would suffice for removing the fibre from calotropis gigantea and calotropis procera, and it is recommended that they should be tried.

Sir George Watt, reporter on economic products to the Government of India, writing under date 29th August, 1899, stated . "I am by no means opposed to the view that calotropis can be made a profitable new textile. It is all a question of cheap machinery to clean the bark fibre, of special machinery to weave the floss, and perhaps of a cheap chemical process to extract the india rubber from the waste material obtained in cleaning the stem fibre, to make calotropis highly remunerative. All these products are of the greatest possible value. If they can be turned out successfully there is no reason why a large industry should not spring into existence." The recorded opinion of such a high authority should encourage capitalists..

It is probably because both calotropis procera and calotropis gigantea are so common that the economic uses of the plants have been overlooked. In the Konkan, for instance, the wild tribes of the forest are unaware that these plants yield any fibre, nor do they know that charcoal can be made from the roots of both species. Some charcoal so manufactured was exhibited recently at the Ahmedabad Industrial Exhibition, as was also some of the uncombed fibre. If desired, samples of the latter can be obtained through this journal, provided the actual cost of collection be paid. In addition to the fibre, however, the floss from the follicles is very valuable, and those taking up the cultivation of calotropis might do well to plant an area for exploiting the fibre and another for exploiting the floss and india rubber. It is scarcely necessary to recapitulate the many virtues and hardy nature of both calotropis gigantea and calotropis procera, and the facility with which both are reproduced from seeds, as well as the rapidity with which new shoots spring up after cutting. Once sown, no more labor is needed, for the plants will thrive even in seasons of very deficient rainfall, and possibly bear two crops a year in good soil.

During the severe famine of 1899-1900, when almost all vegetation in the affected localties was withering and dying (the teak tree over large areas, it may be mentioned in passing, died out almost completely,) calotropis gigantea was seen to be growing luxuriantly. This is due to the fact that the plant, through its leaves, possesses the property of storing moisture. Calotropis has advantages which may be summed up as follows :—

It will grow anywhere up to altitudes of 3,000 ft., whether near the sea or in the interior, on waste land, in the jungle (with sufficient light), and on salt ground. In Sind when the temperature is 124 deg. in the shade, or in the same district when the air is several degrees below 32 deg. F., it is capable of giving two crops of cuttings in a year, and its three merchantable products, rubber, floss, and fibre, offer a very promising enterprise. Its resemblance to rhea may permit of its use as a substitute for that plant, of which the supply does not now meet the demand of the rhea mills of Europe.

Calotropis, although at present only a wild plant, would probably give a large return per plant if cultivated. That is to say, if planted like aloe or other fibrous plants. Whether it needs irrigation remains to be seen. Although its use is quite unknown among fishermen along the western coast of India, the calotropis furnishes lines and nets for the fishermen on the Indus. The fibre is fine, lustrous, and durable, it readily spins into yarn, bleaches well, and assimilates with cotton, and it may be that the superior qualities and yield per acre of calotropis fibre may enable it to take the place of the long-staple cotton which growers have so far failed to produce in India.—Indian Textile Journal.

JOHN KAY, THE INVENTOR OF THE FLY SHUTTLE.

The Textile Mercury remarks that its readers must be pretty familiar with the unhappy history of John Kay, of Bury, Lancashire, the inventor of the fly shuttle, an invention that has had a greater influence upon the development of modern civilization than probably any other mechanical device of the preceding twenty centuries. The invention has prospered even beyond the wildest dreams that Kay could possibly have indulged in, and far beyond the puny imaginings of his persecuters, who hoped by mere physical violence to make an end of him and his fly shuttle. Kay himself, however, fared badly enough at their hands, and his memory has been but indifferently honored by five generations of humanity who have thrived exceedingly on the outcome of his invention. That many people in Europe and America do not even know the name of this supreme genius may perhaps be explained, if not excused ; but that hundreds of thousands born and bred in his own county are similarly ignorant, is a fact as discreditable to Lancashire as it is deplorable. During the past dozen years we have in these columns repeatedly suggested that some memorial should be raised to this Columbus among mechanical inventors, as Sir William Bailey very happily calls him ; and at last his native town, Bury, is taking the initiative to make amends in this respect. At a public meeting convened by the Mayor, and presided over by the Earl of Derby, it was unanimously resolved that such a memorial should be erected in Bury, and a committee was appointed to carry out the project and to receive subscriptions. It is but just to record that, while Kay's own townsmen, as a community, have hitherto neglected his memory, a leading firm of loom-makers, Robert Hall & Sons, have for many years had a statue of the inventor in a niche over the entrance to their works. The public memorial will probably also take the form of a statuary monument. The tale of the fly shuttle and of its inventor's life will bear retelling ; but suffice to say here that, although a mob of angry weavers surrounded his house at Walmersley, and that Kay barely escaped from them with his life, yet the craft confiscated and adopted his improvement ; and later, when he returned to claim his rights therein, refused to pay him royalty for its use Indeed combinations called shuttle clubs were formed among the weavers, to defend individual members who might be proceeded against for infringement of the inventor's rights, and so determined was their resistance that it is very questionable whether Kay ever reaped the slightest pecuniary benefit from his invention. He died in France, but his resting place there is unknown. How differently the French have treated their Jacquard!

THE SILK WORM AS A DYER.

Two Roubaix chemists are endeavoring to persuade the silkworm to dye its own silk. The ordinary cocoon is white, yellow, or sometimes green. The question to be solved is why different colors should be produced by similar species, and whether it is the direct result of the food taken by the worm. If this coloring matter comes from the leaves fed to the worms, Messrs. Conte and Levrat consider that it should be easy to color their food artificially and thus secure different shades of cocoons, although several naturalists have attempted to prove the impossibility of coloring matter passing from the intestines of the worm into the silk-producing glands. The American Consul at Roubaix, who sends this report, says the worms which served for the experiments were placed on branches of privet washed over with red. They ate the leaves without prejudice, and when the larvæ began to spin the cocoon, the silk was a bright red. When fed on leaves colored blue, the silkworms produced a slightly bluish silk, while the species that produces ordinarily a yellow cocoon, when fed upon leaves colored red brings forth a deep orange.

WATER PROOFING COMPOSITION.

A new composition suitable for treating calico for making what is known as "oil-clothing" has recently been the subject of a patent. It is made up of 1½ gal. of boiled linseed oil, ½ gal. castor oil, 2 oz. of sulphur, and 2 lb. of the dryers usually used by painters. The ingredients are mixed together in a suitable vessel and boiled from three to five minutes. The mixture is then allowed to cool slightly and a first coat of the composition applied to the material. This is then hung until dry, and if necessary is rubbed down with pumice to remove any roughness in the fibres of the material which may have worked up in the application of the composition, the object being to give the material when finished a smooth surface. A second coating of the composition is then applied, in the same manner as the first, and the material again hung to dry, when a third coating of the composition is applied in the same manner as the first and second, and the material again hung up

to dry, when it is ready for use. The proportions of the ingredients should vary according to the nature of the material used and the result desired to be obtained. For instance, the ingredient sulphur has the effect of stiffening the material, and therefore, if the waterproof material is to be extremely soft and flexible, the proportion of sulphur in the composition can be reduced to ¼ oz. Upon the other hand, if the waterproof material is desired to be stiff, the proportion of sulphur may be increased up to 3 oz. The castor oil in the composition has the effect of making the resulting material elastic and springy, and prevents the surfaces of the material from sticking together or cracking The proportion stated (½ gal.) is found the best in practice, but it may be used in the proportion of from ⅛ to ¼ gal. If, however, more than ¼ gal. of castor oil is used (the quantities of the other ingredients remaining as above set forth), difficulty is experienced in drying the composition. The dryers in the composition can be reduced to 1 lb. or increased to 3 lb., the time occupied in drying depending to a very great extent upon the proportionate amount of dryers used. The proportion first mentioned gives the best results.

NEW LINEN INDUSTRY.

The new linen industry at Swow's Falls, Paris, is the only one of its kind in the world, the results of an invention of B. C. Mudge, a student of the Massachusetts Institute of Technology, whereby the waste product of the straw of the vast flax fields of the west that has been burned upon the field is now converted into linen fibres, one a coarse fibre that is manufactured into linen cloth, and a finer one into bank-note paper. What has required six months under the old process to get the fibre from the straw is now done in six hours. This will reduce the price of linen fibre some 30 or more cents a pound. The company propose in the near future to erect a large factory in the west, where there is grown for the seed alone 2,000,000 acres of flax, which is threshed upon the field and the straw burned.

SHINY STAINS IN WOOLEN GOODS.

These stains are mostly the result of decatizing, and are defects which it is comparatively easy to avoid, but which, once produced, it is almost impossible to get rid of. As a rule the drain pipes in the decatizing room are out of order, so that water is carried by the steam in splashes on to the goods. The trouble is specially likely to arise with the older and simpler forms of decatizing apparatus, with hollow upright cylinders from the interior of which the steam passes. Such cylinders should be kept thoroughly drained.

If the stains are noticed directly the decatizing is finished, they can be removed by a thorough washing with Fullers' earth, and in difficult cases by a light milling with soap, the finishing process then having to be repeated. If, however, the goods are dyed before the faults are discovered, their removal will have become almost impracticable. The stains now have not only their original shiny appearance, but they have taken up more dye than the rest of the fabric, and are, therefore, darker. Shearing does not remove the stains, as there the pile lies down and escapes the knife. Some good might be done by milling such goods with soap, and then re dying them a darker shade. In this way the difference between the stains and the rest is lessened, so that they become less conspicuous, but it is only in the rarest cases that the treatment gets rid of them altogether.—Dyer & Calico Printer.

DIRECT COTTON COLORS ON WOOL.

Many colors belonging to the direct cotton series of dyestuffs are of great service to the wool dyer owing to the easy methods of application of the dyestuffs and to the comparative fastness of the shades produced with them. They comprise an extensive series of coloring matters, producing shades varying in stability from the fugitive Congo Red (which, however, is considerably faster on wool than on cotton) to Diamine Fast Red F. A useful property pertaining to the direct dyes is that of covering burls, especially when dyed in neutral bath just under the boil, thus dispensing with the necessity of carbonizing. This feature is, however, more than counterbalanced by their dyeing cotton lists and checking threads, and should these be required to be left white, the use of direct cotton dyes should be avoided.

The direct cotton or Congo dyestuffs, as they are sometimes called, are dyed from neutral Glauber's salt bath or one containing a small percentage of acetic acid. Sulphuric acid is seldom, if ever, used, except to exhaust the bath with some colors, e.g., Benzo Fast Red. A general process for pale shades is to dye with 10 per cent. Glauber's salt and 5 per cent. ammonium acetate. The well-dissolved and filtered color is added to the bath, and the goods entered at a medium temperature. The bath is raised gradually to the boil, and after boiling about half an hour an addition of acetic acid is made in order to exhaust the bath. In dyeing dark shades, start with 10 per cent. Glauber's salt and 5 per cent. acetic acid 8° Tw., and, after boiling half an hour, make a further addition of acetic acid to exhaust the bath. A point to observe when dyeing wool with direct cotton colors is that once the shade is uneven, it is of little use to try to level up by boiling, and consequently it is advisable to open out the goods well until the greater part of the color has been taken up.

The shades produced with the direct cotton dyes on wool are, as a class, of good fastness to light, neutral milling and stoving, though few are excellent in all respects. They withstand the action of milling much better than acid color, but are apt to bleed on to white wool and cotton, more especially the latter. When subjected to the more severe alkaline milling, the bleeding is much more pronounced.

Although such a large number of Congo dyes are on the market, many are unsuitable for application to wool, and even amongst those giving useful shades on this fibre comparatively few are used largely in practice. The properties that a dyestuff should possess are good shade, affinity for the wool, fastness to milling with little tendency to bleed, good leveling power, and fastness to light, stoving, etc.

Amongst the direct cotton reds that are used in wool-dyeing are Benzo Purpurine 4B, Diamine Fast Red F, Hessian Purple, Deltapurpurine (By.), Diamine Bordeaux S, and Diamine Scarlet B and 3B. Hessian Purple is useful for mixtures as well as for self shades, owing to its excellent leveling and exhausting properties. It is not, however, particularly fast to light.

The direct oranges and yellows suitable for application to wool include Congo Orange G and R, Toluylene Orange, Diamine Orange B, Chrysophenine, Thioflavine S and Diamine Fast Yellow A and B, Diamine Orange B and Chrysophenine can both be used in mixtures, being particularly useful for shading browns to the yellow side. The Congo dyes are singularly deficient in bright greens, blues, and violets. Diamine Green B and G are very useful, but only dye olive green shades. Amongst the blues may be mentioned Chicago Blues (Act.), Diamine Blues, Diamine Sky Blue, and Diamine Dark Blue B.

As regards the dyeing of blacks, milling blacks are preferably dyed with mordant or acid mordant dyestuffs, since, although several direct cotton blacks are applicable in wool dyeing, they are more suitable for the production of grays, dark slates and blues; Nyanga Black Zambesi Black D (Act.) and Diaminogene and Diamine Jet Black OO, are dyestuffs answering this description. Neutral Gray G (Act.) and Diamine Gray G, besides being suitable for self colors, are also useful for toning down bright shades.

As previously mentioned, the direct violets at the service of the wool dyer are few in number and only include reddish and rather dull shades, e.g., Diamine Violet N, Oxy-Diamine Violet B and Hessian Violet. None approach the acid violets in brightness or blueness of shade, and consequently they cannot be expected to substitute them. They are, however, useful in dyeing mixtures, as, for example, Oxy-Diamine Violet B may be used to shade reds to the bluish side.

There are a large number of direct cotton browns that dye useful shades of good fastness on wool, e.g., Congo Brown G and R (Act.), Diamine Brown 3G, B and M, and the Benzo Browns and the Benzo Chrome Browns (By.)

Many direct cotton dyestuffs give shades on wool that are improved considerably in fastness by after-treatment with metallic salts The salts used are for the most part bichromate of potash, chromium fluoride and sulphate of copper. Chromium fluoride is suitable for pale shades, and bichromate of potash is to be preferred for deep ones.

Chromium salts improve the shades in fastness to milling and bleeding into whites, whilst coppering causes a considerable change for the better in fastness to light. The alteration in shade varies with the dyestuff, but generally the saddened shade is flatter.

Some colors are considerably changed in tone without any perceptible alteration in fastness. Others, again, are scarcely affected either in shade or fastness, and for these reasons it may be well to note some that are increased in fastness by after-treatment.

Amongst those to which chroming is beneficial are Diamine Fast Red F, Benzo Fast Red (By.), Brilliant Geranine B (By.), Carbazol Yellow (B.A. & S.F.), Benzo Chrome Brown G and R (By.), Diamine Brown 3G, B, and M, and Diamine Green G. Some of these after-chromed shades are exceptionally fast, e.g., Diamine Fast Red, Diamine Brown M and Carbazol Yellow.

After-coppering effects an improvement in the fastness of Brilliant Azurine 5G (By.), Chicago Blue RW (Act.), Diamine Blue RW and 3R, Diamine Dark Blue B, Diamine Sky Blue, the Sulphoncyanines (By.), Diamine Black BH and HW, Diamine Brown 3G, M and B, and Congo Brown G and R (Act.). Many of the after-coppered shades are of eminent fastness to light, some even rivaling Alizarine colors in this respect, and in the case of after-chromed shades, the objectionable tendency of bleeding on white wool and cotton when milled is reduced to a minimum.—Franklin W. Walker in Dyer and Calico Printer.

FABRIC ITEMS.

Another train load of silk passed over the C.P.R. on its way to eastern markets.

An advance of about 5 per cent. is looked for in the price of silk goods in the United States.

Some United States makers of wool blankets are holding for an advance in price of 2½ to 5 per cent.

Canadian made dress goods have been in exceptionally heavy demand lately, the mills are far behind with orders. The west has bought particularly heavy for fall.

There is an active demand for summer underwear. Some difficulty may be experienced in deliveries on repeat orders, as the mills are full of orders. Prices are firm.

It is interesting to note that of the cotton imports into the Philippines, 51.8 per cent. is received from Great Britain, while the United States supplies only 4.5 per cent.

Staple cotton and woollen goods are firm at Canadian factories. Prompt delivery is not to be had in many lines. Mills are not increasing their capacity in the meantime.

The Rubber Association has decided there shall be no auction sales of rubber shoes this year, either on the part of manufacturers or wholesalers, a step which is expected to improve that business considerably.

Everything in cotton has gone up, linens and silks too have advanced. This is partly because of scarcity of raw material, but more because of the demands of union labor, cutting down the hours and advancing the rate of wages.

A bill introduced at Ottawa to regulate the sale and provide for the inspection of textile fabrics, and intended to prevent the sale of shoddy as pure woolen, by providing for marking each class of fabric, with penalty for infringement, has been ruled out of order on a technicality.

J. Edgar Tripp, commercial agent for Canada in Trinidad, draws attention to a commodity known as manjak, which the West Indian Islands are now exporting in great quantities to Great Britain and the United States. Manjak is a substitute for India rubber. Mr. Tripp will be glad to forward samples to Canada for the benefit of any manufacturers who care to experiment with it.

It is rumored that another large glove factory may be started at Brockville, the promoter being a Montreal man and the manager Mr. Edgar, a practical man from the Ontario glove works.

Upon a cloth board from which the goods were recently removed in a Lanark store was found the following writing: "L. D. Grenville, Dublin, Ireland, will accept a job in colonies as salesman. Write above address."

Lenz & Leiser, of Victoria and Vancouver, are about to establish a garment making industry of large proportions. Shirts, pants and overalls will be the leading lines manufactured. Later ladies' blouses will be added.

Gault Bros., Winnipeg, are making a 52-foot addition to their warehouse, which will then be 100 x 152 feet, and raising the whole two stories, making it six in height, besides the basement. An electric passenger elevator is also being added.

The Eclipse Whitewear Co. has now a fine building 60x186 feet, four stories high, with basement, on the corner of King and John Streets, Toronto, in which to carry on the manufacture of ladies' and children's whitewear. The lighting, heating and ventilation have been specially attended to.

A German firm has made extensive preparations for the manufacture of uppers for boots and shoes from paper. They have been engaged in tests for some time, and report that the material they have now decided to use will lessen the price in shoes considerably, will increase the present wholesale and retail profits, and will give good results to the wearer.

Great inconvenience was recently experienced in Toronto supply houses by the action of the batting manufacturers in Montreal. Through the collapse of a few batting manufacturers the business had almost entirely gone into the hands of one firm, which was reported to have let its stock run out until the demand could not nearly be supplied. Some wholesalers were quite unable to fill their orders.

In 1733 the fly shuttle was invented by John Kay, of Bury, England. Previously the weaver passed the shuttle through the shed by hand, and in weaving wide goods a weaver must stand at one side of the loom to throw and catch the shuttle to and from the weaver at the other side. Like many other inventors of great improvements, Kay died in poverty, but it is now proposed to erect a fitting monument to his memory.

W. A Southgate desires to establish a clothing factory at Berlin, and the town council has agreed to give him $200 to pay the cost of moving his machinery from Toronto, and to transfer the exemption of the Berlin Shirt and Collar Co., provided he takes 25 hands with him. If he increases his business to employ 100 hands, a by-law to give a free site, or a loan for ten years, free of interest, will be added. He states that he will use the union label, and that in his business career of many years he has never had any trouble with his employees.

Ready-mades for men is now an important department with the general wholesale dry goods houses. Salesmen in charge of these departments say there is a very great increase in the turnover of smocks, jumpers, overalls, cotton, union and wool pants. One large house in London, Ont., which formerly kept an entire department of Canadian and other tweeds, has abandoned it altogether because of the altered conditions. The tweeds that were once shipped in loads to retail men, who sold them by the yard over their counters are now purchased as ready-made pants, suits, etc., and heavy piles of woolen tweeds and cottonades, formerly held by the storekeepers, are gradually diminishing in bulk.

The call for pearl buttons is almost phenomenal.

The state of Missouri has decided to have a prison twine factory. The initial cost is expected to be $175,000.

Cool weather has been checking the sorting business in dry goods at Ontario centres. Retailers are well stocked.

The annual meeting of the New England Cotton Manufacturers' Association was held at Boston the last week in April.

The quality of the furs coming from Alaska this year will be superior because of the very severe winter weather which has prevailed.

The Minnesota state prison has already sold 4,000,000 lbs. of binder twine this season. The total output is expected to be 7,000,000 lbs.

Geo. H. Hees, Son & Co., expect to be in their new factory, Davenport Road, Toronto, by July 1st. They manufacture muslin, ruffled and lace curtains.

W. R. Johnston & Co., of Toronto, clothing manufacturers, who recently decided to establish a branch in Hamilton, will, it is said, pay out about $1,000 a week in wages.

The Cassella Color Co. has issued the following sample books: The Dyeing of Cotton Piece Goods; Dyeings on Cotton Yarn Fast to Acids; Red Diamine Colors on Cotton Yarn; Anthracene Chrome Brown D.

A Canadian mill which has lately been quoting flannelettes at lower prices for fall delivery has withdrawn these quotations as there has been such an accumulation of orders as will not be cleared up before the season is over.

Advices from the south note the increasing scarcity of raw cotton, and predictions are made of a curtailment of production by inability to secure the raw material. That such curtailment will be adopted generally is not generally believed, for it is regarded as hardly probable that manufacturers will allow their organization to be disarranged, even though they are compelled to run at a loss for a period.

The Crown Tailoring Co. is suing the city of Toronto for having cancelled the contract for police clothing awarded to them and then taken away through the influence of the journeymen tailors' union, because the company proposed to use the Garment-Makers' Union label. Special legislation will be required to enable the council to insist on the union label being on all clothing or other articles purchased.

A correspondent of the Dry Goods Review suggests that manufacturers should insert in each piece of goods a tape with the measurement marked thereon. It would save much labor during stock-taking, if in each piece of dress goods, flannelette, cottonade, and, in fact, everything blocked, there was such a device as this. The tape could be made of thin, strong linen paper, or something equally inexpensive, and would cost but a trifle. The retailer will not object to paying for it if the manufacturer will introduce it.

A recent innovation in hotels is to furnish every guest on his arrival with slippers, which are made of paper. The soles are of pasteboard and the rest of white or brown paper, stitched with heavy cotton to prevent tearing. There are various qualities. The most expensive is made of an extra good quality of white paper. The cheapest is made of common brown straw paper. These paper slippers are so cheap that new ones can be furnished to each guest. An attempt is being made also to introduce them in hospitals and public institutions, as they would add much to cleanliness and form another preventative of contagion, since each pair could be thrown away or destroyed as soon as the wearer had done with them.

Crawford Goffatt, of Orillia, recently shipped a large quantity of furs to New York and Paris. Among the lot were two beautiful silver gray fox skins, which are very rare and valued at $500.

The price of binder twine manufactured at the Kingston penitentiary has been fixed for the season as follows: Pure manila, 656 feet, 11½c.; pure manila, 600 feet, 10¾c.; Kingston special, 525 feet, 9½c.

The Canadian Cordage and Mfg. Co., Ltd., Peterborough, Ont., has a representative in the west at present looking for business, principally in binder twine. T. Burrowes Ross is the gentleman's name, and his headquarters are at the Seymour House, Winnipeg.

Because no longer popular, Alaska bear skins have fallen in value from $25 to $50 one year ago to $10 and $12. There is little sale for them, the effort of San Francisco dealers to have them take the place of buffalo skins in this country and Europe having failed.

E. & S. Currie, wholesale men's furnishers, Toronto, use a unique system of acknowledging the delivery of parcels addressed to their travellers. With each parcel, a slip with a duplicate is sent, and the traveller is required to fill in date, place of receipt, his name and what the parcel contains, and mail the duplicate to the home office. In this way errors are avoided and the firm know exactly where their employee is.

There is a prospect that there will be a scarcity in low-grade blankets next fall on account of the burning of two large mills engaged in their production. The mills doing business are filled with orders and cannot accept any more for November delivery. The rush of emigrants to the North-west will make a market for thousands of blankets. Prices will, of course, advance, as labor and chemicals are higher and shorter hours prevail in the mills.

A seamless fashioned stocking knit from a single thread on a single set or circle of needles is secured by a recent invention. Tuck stitching is formed in the fashioned or widened portion of the stocking, and plain mesh in the other portions. The stocking is adapted to conform to the shape of the leg. During the process of knitting a single thread is laid against the shanks of the needle and ordinary loops are formed after which every alternate needle in the second row is prevented from casting off the loop, but receives thread in. In the next course all loops are cast off.

An all linen ball was held at Belfast, on March 27th. One object of the promoters was to bring prominently before the public the superior qualities possessed by linen as a dress material for ladies; and also to demonstrate that it is suitable for purposes other than its stereotyped use as shirts and collars. Toward this end the whole decorations of the hall were formed of pure linen as well as the whole of the ladies' costumes; and as far as possible, those of the gentlemen. The great variety of shades as well as texture was a surprise to those who hitherto only knew the fabric in its more conventional form.

Quite a change is evident in the wholesale clothing trade. A much finer class of goods is now being made, both as regards material and workmanship. This improvement has been going on for some years, but has been accelerated of late years. The new lines of clothing now being put on the market are the best yet shown in Canada, and will undoubtedly tend to popularize the demand for ready made clothing. A few years ago the competition in clothing was towards cheap lines. Now it is quite different. Quality is the goal towards which the leading clothing houses are aiming. Of course cheap goods are in demand for a certain class of trade, but the more important demand is for the better class of goods.

The cultivation of flax in the State of Tlaxcala, in Mexico, has proved so successful that the project of establishing a linen factory convenient to the fields and readily accessible from the Mexican and Inter-Oceanic Railways, both of which intersect the State, is being seriously considered. There are already two linen factories in Mexico, one in the capital and the other near Cuarnavaca.

The situation in binding twine has been disturbed by a strike at one of the largest twine producing plants in the world, which has closed. As the output for the season was expected to amount to 100,000 tons, a strike in a mill where one-fourth is made, must affect matters seriously. It is believed, however, that the amount can be partly made up by using mills which are now idle or which will complete existing contracts by June 1st.

An advance in the price of rubber footwear took effect May 15th. On that date the discount on 1903 list became 25 and 3 per cent., instead of 25, 5 and 3 per cent. Orders placed at the lower prices must be delivered before October 1st, as after that date the new prices will apply. The reason assigned for this advance is that within the last few months the different items which go to make up the cost of manufactured rubber footwear have advanced considerably.

Sheep scab, a disease peculiar to sheep, has broken out in the County of Wellington. The Government inspector being called in, has quarantined some twenty-three farms, and sheep will not be allowed, dead or alive, to be taken from these places. It is supposed to have been imported from Manitoulin. The disease is contagious and mostly fatal to sheep attacked. In outward symptoms it is a scab which comes pretty much all over the affected sheep.

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 suspender factory at Sarnia is now in operation with a staff of 30 hands.

The Elmira Felt Co., Elmira, Ont., are building an addition 100 x 50 feet and two stories high.

The Colonial Weaving Co. has secured the premises formerly occupied by the Peterboro Underwear Co., and will fit them up for a factory as speedily as possible.

A proposal is before the Brandon city council by a Southern Manitoba man, who has had years of experience in that line, to establish a woollen factory. The assistance asked is in the form of exemption from taxation.

The New Brunswick Woolen Mills Co., which is applying for incorporation, will take over and carry on the woolen mills at Golden Grove, near St. John, belonging to Alex Willis & Sons. H. N. Sharp, S. W. McMakin and G. A. Kimball will be the first directors of the company, which will have a capital of $15,000.

Within two weeks one factory, the Canadian Cordage and Manufacturing Company, Peterboro, sold 400 tons of binder twine in Chicago. This is carrying the war into Africa, and is probably the result of the bounty offered by the Canadian Government as a set off to the export duty imposed by the United States Government on fibre exported from the Philippines.

The Waterloo, Que., Knitting Mills are running night and day

The knitting mill industry which Renfrew was looking forward to, has fallen through.

The Perth Woolen Co. have bought a building from the Creamery Co., and will move it to their own premises to be used as a storehouse.

The Doukhobors in the Northwest take great pride in showing new arrivals the flax mill and linseed oil press, which among other works they have erected.

Weir & Weir have leased their flax mill in St. Mary's, Ont., for a term of years to Clark & Co., flax manufacturers, who have been using a part of the mill nearly all winter because their own mill was burned.

John J. Smith, who was at one time a resident of Almonte, and who has lately been at Alton as superintendent, has purchased the woolen mills at Smith's Falls, from J. H. Gould, and will add some new machinery.

The Fringe & Tassel Co., the chief owners being Matthew and John Adams, had a fire recently in their premises at Guelph, which did about $1,000 damage, on which, however, there was an insurance to that amount.

Another rubber factory is to be established at Berlin, Ont., a company, to be known as the Merchants' Rubber Co., having been organized, with a capital of $100,000 of which over $60,000 has been subscribed, mostly by people of Berlin.

A recent despatch from London, says: "Hundreds of Lancashire cloth weavers are preparing to emigrate to Canada, where they have been promised work in the mills. American competition is annihilating certain kinds of weaving in Lancashire."

Charles Fleming, a carpenter, while making some repairs in the dyeing room of the Galt Knitting Co., took a drink from a pitcher which contained what he supposed was water but turned out to be sulphuric acid. His mouth and throat were badly burned.

The town of Valleyfield has levied a $2 tax on all employees of the Montreal Cotton Mills residing outside the town limits. The parish council has retaliated with a tax on outsiders doing business in the parish. The Valleyfield council has decided to enquire into the legality of this tax.

James A. McArthur, formerly of Eganville, and Chris. Miller, of Renfrew, have purchased from John Ferguson, the Ferguslea woolen mills, water power, etc., known as Reid's Mills, about five miles from Renfrew. They have not decided whether they will operate, rent, or sell the property.

A despatch from St. Hyacinthe, Que., states that the plant of the Canadian Woolen Mills there, which for the last year or so has been operated by the John S. Mainville Co., of New York, has been purchased by the Penman Manufacturing Co., of Paris, Ont. About 800 hands are employed in the mill. The Coaticook mills, which are also owned and operated by the Penman Mfg. Co., may eventually be transferred to St. Hyacinthe and operated under one management.

A fire occurred in the factory of the United Mineral Wool and Asbestos Company, St. Henri, caused by the overheating of the woodwork around the ventilator The process of drying requires excessive heat, and the wool is blown into a room over which there is a ventilator covered with a wire screen. The wool lodged against the wire netting preventing the circulation of air, and the heat set fire to the pulleys and woodwork of the ventilator and roof. The damage amounted to about $1,200.

The Gordon woolen mill, at Athens, Ont., is now open for business.

Henry Reeves, for stealing cloth from the Montreal Woolen Mills Company, has been sentenced to six months in jail.

Louis Lavoie broke his leg while working in the establishment of the Colonial Bleaching & Printing Company, Montreal.

A worsted yarn factory is projected in Canada, and Laidlaw, Kappelle & Bicknell, barristers, Toronto, who are acting for the promoters, have been making overtures to Cornwall. They want a loan of $50,000 and the people of the town to take $25,000 stock, and intimate that about 100 hands would be employed. On those terms there is not much enthusiasm to secure the factory. There is some talk in Cornwall of the woolen mill being purchased and opened.

William Holdway has resigned his position as boss carder at the Canada Woolen Co.'s mills, Carleton Place, Ont. George W. Kendry, formerly overseer of weaving at Cheshire mills, Harrisville, N. H., and other mills in the States and recently at Cushman's mills, Monson, Mass., has accepted the position of assistant superintendent. The mill has in operation 11 sets of cards and 45 Crompton & Knowles broad looms.

There is a proposal on the part of a large ready-made clothing firm in Toronto to establish a branch factory at Berlin, and W. A. Southgate has been in that town looking at properties. The factory recently vacated by the Berlin Shirt & Collar Co. was found to be suitable. Exemption from taxation is the only concession asked. At first some 50 hands would be employed, a dozen or so experienced ones being brought from Toronto. This number would be steadily increased from year to year. The firm manufactures all kinds of ready-made clothing, smocks, overalls, etc.

Robert W Mallette, book-keeper at John Hall's Woolen Mills, Trenholmville, disappeared from the Lachine hydraulic works, where he had been working, in January last. Early in April a body was found floating in the St. Lawrence at Sorel, and after an inquest it was buried as an unknown. Representatives of the Oddfellows, of which deceased was a member, heard of the matter and had the body exhumed, when it was identified and the insurance of $1,000 in the Oddfellows and $750 in the Ontario Accident will be paid to his aged mother, who resides in England.

The Standard Carpet Co.'s mill, at Forest, Ont., is now being run by the town, with a reduced number of hands, to save it from being closed entirely, till some arrangement is reached by which it may be kept in operation. It was established by Messrs. Day, McGregor, Anty, Walsh, and McPhail, of Guelph, about a year ago, the town of Forest giving them a loan of $7,000 and exemption, to get the industry started. Want of capital has led to difficulties, and the town has taken it over in the meantime. The mill is now for sale.

The binder twine factory at Chatham, Ont., has been sold to a company composed of local and New York men. It was built by a company of farmers, who could not agree, and spent all their money in litigation. Only a few tons of twine were made on the completion of the factory about a year ago. The building and machinery cost $40,000. It has been sold for $21,000, of which $10,000 will go to pay off a mortgage and the balance will be divided among the shareholders of the original company. The factory will be put into operation at once.

Isabella Bradley, proprietress of the carding mill at Ottawa, has disposed of her interest to the Ottawa Woolen Mills Co.

The plant of the Montreal Cotton Co. at Valleyfield, Que., is to be increased by the erection of another building to cost $90,000.

The Dominion cotton mills have contracted with the Montreal Light, Heat & Power Company, for 2,000 additional electric horse-power from Shawinigan Falls.

Walkerton binder twine factory has closed for the season. The price for the twine has been fixed at 11½ to 14 cents, according to quality, but it is expected it will be raised a cent after the 1st of June.

At the annual meeting of the Dominion Cotton Company, the financial statement on the debit side showed the interest on debentures to be $65,175; dividend on preferred stock, $4,260; written off for bad debts, $3,697; balance, $699,556. On the credit side the balance to credit was placed at $481,207, and the net profits at $261,477.

The employees of the woolen mills at Hespeler went on strike recently for a decrease of five hours per week. Some 500 hands stopped work on Thursday at noon, and did not resume till Monday. The difficulty was arranged and the hands now commence work at 5 minutes to 7 a.m., and quit at 6.15 p.m., and stop work at 12.15 on Saturday, making 57 hours a week.

Owing to the extremely high price of raw cotton, the selling agents of the Montreal Cotton Company and the Dominion Cotton Company have issued a circular by wire to their travellers not to accept any orders for delivery beyond the first of September, except at value—that is, whatever prices the goods are valued at at that date.

The Kingston hosiery mill had a narrow escape from destruction by fire, on the morning of May 16th. The wool in the bin in the carding-room took fire, it is supposed from spontaneous combustion. The blaze was kept in check by the automatic sprinkler and the chemical engines until the fire brigade arrived. The principal damage was done by smoke and water.

B. H. Wetherbee, of the Knoxville Woolen Mills, Knoxville, Tenn., writes: I am glad you sent me one of your journals, it is the first one I have seen, and I am well pleased with it and wish to have it sent me every month. I have only looked it quarter through, but have found some very valuable information to me. Wishing you the very best of success with your up-to-date journal.

The knitting factory at Walkerton is now a reality. Negotiations were several times broken off, but at last all the agreements were signed, and the factory is almost ready. Mr. Williams will take a number of experienced hands with him from Collingwood. It is understood John Henderson will be business manager. One traveller has been secured for Manitoba and the Territories, and another will be engaged for Ontario.

An interesting little ceremony took place in a quiet way at Perth, a few days ago, when the corner-stone of the big addition to T. A. Code's knitting mill was laid by Mrs. Code, aided by her little son. In the presence of the workmen and a few friends, Mr. Code deposited in the centre of the stone a brass box, containing a short sketch of the proprietor and his ancestors, a list of his employees (some 155 in all), some photographs, list of officials, newspapers, coins, etc. A pleasing feature of the ceremony was the spontaneous and hearty manner in which the workmen toasted the health of Mr. Code and his family, and expressed the best of good wishes for him in his business, which was commenced in a humble way in 1876, and has been expanding ever since.

The following are the full particulars of the case of Traplin vs. Canada Woolen Mills Co., briefly referred to in the last number of the Journal of Fabrics as having been tried at Milton: The plff., Thos. H. Traplin, of Hespeler, for many years an employee of the defts., brought action for $5,000 damages. The plff. alleged that last October he had occasion to take a small piece of broken machinery from the second floor of the factory to the machine shop, situated on the ground floor, that he and another employee got on an elevator which was used by all connected with the factory, and which was unsafe, and that on pulling the cable to start it, being out of repair, it dropped between 20 and 25 feet to the lower floor, and that plff. sustained injuries which have crippled him ever since and may cripple him for life. Plff. and the man who fell with him told the story of the accident: Drs Locke and McIntyre gave evidence as to the effect of the accident. They agreed that plff., who is 40 years of age, had been a healthy man up to the time of the accident, that the injury he sustained was concussion of the spinal cord, that it caused temporary paralysis of his lower extremities, and that though the paralysis had passed off, deft. had been disabled for any kind of work from the time of the accident, that it was possible that he would never be able to work, and that the best that was to be expected was that he might regain half his earning capacity, which at the time of the accident had been $2.75 per day. The machinist of the factory testified that the elevator had been out of repair for some time and in a dangerous condition, that he had been frequently called on to repair it, that he had informed his employers that it needed a new shaft and running gear, but that they had not been put in until after the accident. He explained that the cage had dropped because the wire cable for lowering it had unwound from the drum on account of the shaft continuing to revolve after the cage had reached the ground on the trip next before the accident. The key had come out. He said that the cage had fallen in a similar way once before. A number of other witnesses were examined, those on behalf of defts. to show that the accident had been due to the coming out of the key, that this was not due to the gear being out of repair and was something that could not have been foreseen or easily prevented. Judgment for plff. for $3,100. Hugh Guthrie, K.C., for plff.; G. F. Shepley, K.C., for defts.

Business Notes.

The Canadian Colored Cotton Co. declared a quarterly dividend of 1 per cent., payable 15th April.

The will of the late W. A. Murray, dry goods merchant, Toronto, whose death was reported in the last issue of the Journal of Fabrics, disposes of an estate aggregating $22,214.36.

R. A. Knight, with Belding, Paul & Co., for many years, has been appointed western representative for the Dominion Carpet Co., Sherbrooke, and will have charge of the territory from Lake Superior to the Pacific, with headquarters at Winnipeg.

Greenshields, of Montreal, wholesale dry goods merchants, will establish a branch house in Winnipeg, as soon as the necessary building can be erected, for which a site has been secured. The building will have a frontage of 75 feet, and will be six stories high.

The Toronto wholesale dry goods houses have decided to close their warehouses at 5 p.m. during May, June and July, to enable their employees to enjoy more fresh air and sunshine.

C. E. Stevenson & Co., dry goods merchants, of Ladysmith and Nanaimo, B.C., have been incorporated as a joint stock company, under the name of Drysdale-Stevenson, Limited.

Letters patent have been issued incorporating R. Muir, C. C. Castle, John McRae, S. Edwards and D. Horn, of Winnipeg, and H. S. Lewis, of Fort William, as The Modern Laundry & Dye Works Co., with a capital of $80,000.

The Canadian Silk Company, with a capital of $40,000, headquarters at Toronto, has been incorporated. The charter members are: W. R. Walton and J. R. Shaw, manufacturers; F. W. McLean and W. E. L. Hunter, barristers-at-law, and Jennie G. Walton.

W. R. Brock & Co., Toronto, have bought a block in Montreal, fronting on Notre Dame, St. Helen, and Recollet streets, for a price reported to be about $200,000, and will spend from $60,000 to $80,000 in improvements, making it one of the most extensive wholesale dry goods warehouses in Canada.

The Cobourg Matting and Carpet Co. has been incorporated to carry on the matting manufacturing business conducted by the late Wm. Mitchell. It is composed of John Dick, of Toronto; Samuel Clarke, John D. Hayden, A. J. Armstrong, and E. W. Hargraft, of Cobourg. Its capital is $50,000.

The New Method Laundry has been incorporated to take over and carry on the Townsend Laundry and the New Method Laundry of Toronto. John O'Neil, James O'Neil, John J. Sheedy, and H. A. Sprague, of Toronto, and Matthew Sheedy, of Montreal, compose the company, which has a capital of $50,000.

The Patent Clothboard Manufacturing Company, of Parry Sound, is to be wound up. E. R. C. Clarkson has been appointed interim liquidator. The company was incorporated in 1897, with an authorized capital of $30,000, $17,000 of which was paid up. The principal indebtedness is to the bank, which is secured by liens on machinery and stock.

The Farnham Corset Co. has been incorporated with a capital of $12,000 to carry on a general business as manufacturers of corsets, and dealers in veils, knitting, and other similar goods. The charter members are: J. B. Nadeau, J. A. Decelles, C. C. Poulin, Alexandre Gaurette, Louis A. Beriau, of Farnham, and Edward Juaire, of Notre Dame de Stanbridge.

The Canadian Rubber Company, at a recent meeting, elected as directors H. Montagu Allan, J. B. Learmont, C. F. Smith, A. A. Allan, J. O. Gravel, A. Piddington, Hugh A. Allan, F. C. Henshaw and H. Markland Molson. They subsequently chose as officers for the ensuing year: President, H. Montagu Allan; vice-president, J. B. Learmont; secretary-treasurer, E. A. Wright; general manager, D. Lorne McGibbon.

John W. Peck & Company have been incorporated, with a capital of $750,000, to engage in the purchase, importation, manufacture and sale of woolen, cotton, and fur goods of every kind and description, of merchandise generally, and particularly dress and dry goods of every kind and description; head office, Winnipeg. The company is composed of John W. Peck, A. B. Bethune, David E. Williams, Robert Stewart and James Mundie.

Long & Bisby, wool dealers, Hamilton, have been incorporated, with a capital of $100,000. The members are W. D. Long, George H. Bisby, H. J. Long, Jane A. Bisby, and Charles E. Newberry.

Morris Bachrack Benjamin Bachrack, Solomon Bachrack, Jennie Bachrack, and W J McWhinney, all of Toronto, have been incorporated as The Bachrack Company, with a capital of $40,000, to take over the business of Bachrack & Co., dry goods dealers, Toronto.

The Montreal Rubber Co. is the name of a new company incorporated to take over, as a going concern, the undertaking of the Montreal Rubber Company, now carried on at Toronto, and to manufacture and repair waterproof garments and carry on the business of dealers in rubber goods generally. The capital is $20,000, the head office is to be at Toronto, and Frank C Roberton, George McClure, John Stock, Leon Garneau, and A. H. Vineberg, of Montreal, compose the company.

PERSONAL.

Alex. Bradshaw, wholesale dry goods merchant, Toronto, died suddenly of heart disease.

W. T Clark, manager of the Canadian Cordage Co., at Peterboro, has resigned and gone to New York.

S. H. C Miner, president of the Granby Rubber Company, has been appointed a director of the Eastern Townships Bank.

Geo. Bramhall, an employee of the Dominion Cotton Mills Co., at Magog, up to about a month ago, died suddenly at Montreal.

James Craig, of McCrum, Watson & Mercer, the well-known Belfast, Ireland, linen firm, died in New York of apoplexy, while on a visit.

S. G. Claxton has severed his connection with the Dominion Cotton Mills Co., at Magog, and has gone to Montmorency Falls to fill a more lucrative position there.

C G La Frenaye has severed his connection with the Dominion Cotton Mills Co., at Magog, and has taken a position with the New York Life Insurance Co., at Sherbrooke.

P. P. Martin, wholesale dry goods merchant, Montreal, is dead at the age of 81. He was in the retail trade for some time before embarking in the wholesale business. He occupied the same premises for over fifty years.

The death is announced of William A. McLeod, traveller for the Dominion Carpet Co., of Sherbrooke, Que. Paralysis was the immediate cause of death, brought on by pneumonia. Deceased had been for several years in the employ of Gordon & Keith, house furnishers, Halifax.

Alex MacPherson, manager of the Toronto branch of the Canadian Rubber Co. for the last five years, has removed to Montreal to take a position in the office there. Previous to leaving he was tendered a farewell dinner at McConkey's, by the Wholesale Shoe Association.

James W. Mills, who died recently, was well known in the wholesale dry goods trade in Montreal. He was for many years with Gault Bros., and afterwards of the firm of Mills & Hutchinson, dealers in Canadian woolens. Recently, with his son Frank, he represented the firm of W. Wingate & Johnston, of Liverpool, England

Miss Mary Currie, for over thirty years an employee of the Ontario Glove Works, at Brockville, has been obliged by ill-health to give up her position, and is going to live with a brother in Chicago. On leaving, her fellow employees presented her with a gold-headed umbrella, a wrist chatelaine bag, and an appreciative address.

John McIntosh, formerly of Toronto, is the dyer at the Tilton mills, Tilton, N.H.

Richard Marsden, editor of the Textile Mercury, one of the leading journals of its class in England, has been obliged by ill-health to give up his editorial duties, and seek complete rest for a time. It is proposed to present him with an illuminated address and a purse of gold, and the subscriptions received show the high esteem in which Mr. Marsden is held.

W. F. Lowe, who has been in the employ of the Rosamond Woolen Co., Almonte, for a number of years, has severed his connection with that firm and gone to Lawrence, Mass., where he has secured a more advanced position. Before leaving, he was the recipient of many substantial tokens of respect; the hands in the card room gave him a pipe, his brother bosses another pipe and a fountain pen, and the A.O.U.W. a handsome locket, the gifts being accompanied in each case by an address.

WOOL MARKETS.

The third series of wool auction sales for the year opened in London, May 5th. The offerings were heavy, numbering 12,345 bales. Prices were higher. The offerings of merinos were light, but crossbreds were in large supply and they were taken principally by the home trade. Suitable parcels of medium grades were bought for Americans. Cape of Good Hope and Natal sold freely to the home trade and Germany. Lambs sold readily and there was a good demand for slipes, which advanced 7½ per cent. Scoureds sold well at 10 per cent. rise. Punta Arena grades were firm and in good demand. Merinos advanced 5 per cent. Subsequently Americans secured a good many parcels of merinos and crossbreds. Competition continued keen, and prices showed a disposition to harden. The sale was to continue till the 23rd, giving 17 selling days. The total number of bales to be offered is 208,000, as compared with 240,000 bales at the corresponding sales last year., Sales so far show an advance of from 5 to 15 per cent.

In Boston, the market, after considerable activity, quieted down. There have been fewer manufacturers in the market, and those who have been in, with one or two exceptions, have taken only small lots. Attention is taken up with the prospect for the new clip, which is being bought up in a number of sections as fast as offered, at prices which indicate confidence in the future of wool. The views of buyers, however, are generally below that held by producers. Prices are quoted:—Texas, 16 to 18½c.; California, 15 to 18c.; territory, 14 to 18½c.; pulled wools, 20 to 34c.; scoured wools, 25 to 58c.; miscellaneous, 9 to 19c.

Montreal.—Since the opening of the London sales, more enquiries for wool have been made, but although an advance is asked, manufacturers are not inclined to give it till they are obliged. The manufacturers are in the market offering their spring sheets for 1904, and are asking an advance, but are not so far, meeting with much success. We quote prices as follows:—Greasy Cape, 17 to 17½c.; B. A. 30 to 40c. Unwashed Canadian, 8 to 9c. Washed fleece, 14 to 15c. Pulled wool, 15 to 16c., and extra pulled, 18 to 19c.

Toronto.—Market steady, with a strong feeling. The new clip is beginning to come in. Fleece, 15c. for washed, and 8c. for unwashed. Pulled wools in steady request, and sales fair. Quotations are 19 to 20c. for extras, and 15 to 16c. for supers.

Winnipeg.—Manitoba wool, 6½c. Unwashed fleece, 6 to 7c., delivered here. Last year the quotation for unwashed was 6½c.

THE STEVENS' SINGLE TRIGGER ACTION GUN.

The J. Stevens' Arms & Tool Co., of Chicopee Falls, Mass., have placed on the market a single barrel shot gun which is novel in its mechanism, and we believe embodies features that will enter largely into fire arms of the future. The top snap is dispensed with, the trigger serves to open the gun as well as discharge it. When the hammer is down,

pressure of the trigger pulls back the locking bolt, and the gun is opened; the hammer must be down to accomplish this. The cocking of the arm is independent. The solid locking bolt prevents the gun getting shaky, even with severe and long use. The hammer of this gun is so fitted in the frame that the working parts are thoroughly protected. The main spring and locking bolt spring are made of specially tempered coil spring wire, so arranged as to give a reliable, smooth, and easy working mechanism. They are specially designed smokeless powders. All parts are interchangeable.

The Boyd Caldwell & Co., woolen mills, at Appleton, closed one day to allow the employees to attend the funeral of a daughter of one of the employees.

—The belting house of D. K. McLaren has just completed what is stated to be the largest belt ever put together in Canada. It is for the St. Lawrence Sugar Refining Co. It is built of English oak leather 36 inches wide, and ⅞ of an inch thick, which means that it is three-ply. The weight is 782 pounds.—Montreal Star.

The Imperial Paper Mills Co., at Sturgeon Falls, hope to be turning out 45 tons of paper per day, by the end of May

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It is expected that the new pulp mills at Metabetchouan, in the Lake St. John district of Quebec, will be in operation next autumn.

The Brompton Pulp & Paper Co., whose large brick pulp mills have been in construction at Brompton Falls, Que., are creating quite a village at that point on the St. Francis river. This company, which is controlled by the same men who are principal owners of the Odell Manfg Co's mills at Groveton, N. H., propose to go on this summer with the erection of the paper mill contemplated in connection with the pulp mill.

A Perth firm recently advertised a pair of Platt mules for sale, deeming it unnecessary to explain that Platt mules are machines used in spinning. Imagine the surprise and amusement occasioned on the receipt of the following letter in reply to the advertisement. "Please let me know the price and color of the mules you offer for sale in the ——, also the height of them, and whether they are kickers or not, as I would prefer quiet ones to take in the car along with my other stock. I am going to Manitoba and want a pair of good strong mules not too old."

The Bat Wing Binding Company, which has been in operation at Perth for only a few weeks, finds the demand for the binding steadily growing, so much so that it contemplates the introduction of more machinery so as to turn out the finished article more rapidly The binding is made from a line of felt which is manufactured by the Perth Woolen Mill, is cut into long strips and finished by machinery run by electricity. The finished product is rolled on large spools and packed in boxes. The braid is put up in a number of shades so as to match any colorings in dress materials.

V. R. Prymus, the inspector and instructor at the Union Hat Works, Brockville, is quite a linguist, and can read, write, speak and translate German, Polish, Russian and Bohemian into or out of English. Men wearing hard felt hats the world over owe something to Mr. Prymus, as it is owing to his invention of invisible sizing that the old plan of glueing and covering the inside of hard felt with canvas,

well remembered by many, has been done away with. The Union works are overstocked with orders, and are contemplating plans for increasing their output.

Joseph Insen, by his father Alfred, is suing the Hamilton Cotton Company for unstated damages for the loss of three fingers in the company's mill.

—The linoleum industry is closely associated with the cork trade, the material being made of cork scraps and cuttings mixed with linseed oil. Invented by Frederick Walton, in England, it was first brought out under the name of Kamptulicon, but the improved product received the name of linoleum. There are some fifty establishments in all for its manufacture in Europe, of which thirty are in the United Kingdom, employing 2,500 hands, with a capital of over £1,000,000, ten in Germany, a few in France and Russia, and one in Italy. This last is at Narni, in Umbria, where a Lombard company, with large capital, buy up cork cuttings and the soft cork which is taken from the younger trees which grow in the groves by the seashore. They make a linoleum which is about half cork, and consume about 150 tons of cork annually.

—The John Wanamaker departmental store in Philadelphia is to be rebuilt at a cost of $5,000,000. The work will be done in four sections, each of which will be completed before operations are commenced upon the next section, so that business will be continued without interruption. The new store will be the most costly ever erected by a single individual in the city. It will be of fireproof construction, steel frame, with granite, brick and terra-cotta exterior, 250 by 479 ft., twelve stories in height, with basement and sub-basement, making in all fourteen stories. The total height will be about 200 feet and the foundations will reach about 45 feet below the street level. The first story will be 22 feet high, the second 16 feet high, and those above about 12 feet high. The delivery service will be entirely by automobiles, and elevators will carry them to the different floors for loading direct from the various departments. There will be 62 elevators, and as many stairways. The finish will be hardwood, mahogany, tile, marble, etc.

—A few years ago the United States exported all its cotton. Last year, out of a total crop of 9,000,000 bales, it kept for home manufacture over 4,000,000.

RELATIVE COST OF BLEACHING MATERIALS.

In all processes of bleaching textile fibres the active ingredient is the element oxygen, and, so far, no effective bleaching agent has been found which produces a perfect bleach unless it leads to the generation of oxygen. Some years ago Hunter carefully compared the cost of producing a unit weight of oxygen from many well-known bleaching agents which were used, or had been used, in the treatment of various textile fibres, and he obtained the following figures

Bleaching powder	1.26
Potassium chlorate	1.88
Permanganate of potash	3.20
Bichromate of potash	6.80
Barium peroxide	30.00
Hydrogen peroxide	93.20
Red prussiate of potash	164.40

—It is reported that fifty per cent. of the sheep of Utah, Southern Idaho and Eastern Nevada have died from a new malignant disease which has appeared among them and from the severities of the past winter

—A trust has been formed in the United States of all but one of the glove clasp manufacturers, and prices have been advanced from 40 to 50 per cent. on the manufacturers. The one concern not included is a small one With advanced prices in leathers, buttons and silks, there will probably be an advance in gloves next fall.

—Excellent results have been obtained in the after-treatment of sulphur colors by using alkaline oxidizing solutions instead of acid ones, and thereby preventing the tendering of the yarn. Oxidizing agents which may be so used are potassium ferricyanide (red prussiate), permanganates, peroxides and hypochlorites.

—Recent attempts says the Dyers' Bulletin, to produce Anilin Black on wool are said to be highly satisfactory. In one process the wool is soured first, in another chlored, and then saturated with the liquor oxidized and chromed as if it were cotton. The idea may be practical, but we believe the same difficulties will have to be overcome as with cotton goods, viz : the mechanical difficulties which prevent the use of Fast Black on any material but pieces and hosiery. Wool cloths usually have to match a given shade, and it looks as if dyers would prefer to stick to the usual acid and alizarine blacks, which are now almost perfect in their working qualities, rather than take up a process which is capable of giving only one tone of black.

—There were at the end of 1902 in the United States 23,500,000 cotton spindles, of which Massachusetts had 8,598,340, and Pennsylvania 358,307. South Carolina was second to Massachusetts with 2,526,946. At the same time there were 690,272 looms, of which Massachusetts had 228,239; South Carolina being second with 64,577 Pennsylvania had 58,488.

CHEMICALS AND DYESTUFFS.

Business continues good, and enquiries numerous, all lines; heavy chemicals firm; advance expected daily on caustic soda:

Bleaching Powder	$ 1 80 to $ 2 00
Bicarb. soda	2 00 to 2 05
Sal. soda	0 85 to 0 90
Carbolic acid, 1 lb. bottles	0 40 to 0 50
Caustic soda, 60°	2 35 to 2 60
Caustic soda, 70°	2 60 to 2 85
Chlorate of potash	0 10 to 0 11
Alum	1 35 to 1 50
Copperas	0 70 to 0 80
Sulphur flour	1 70 to 2 00
Sulphur roll	1 90 to 2 00
Sulphate of copper	0 06 to 06½
White sugar of lead	0 07 to 0 08
Bich. potash	0 7½ to 0 08
Sumac, Sicily, per ton	50 00 to 58 00
Soda ash, 48° to 58°	1 30 to 1 40
Chip logwood	1 90 to 2 00
Castor oil	0 08 to 0 09
Cocoanut oil	0 10 to 0 11

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