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CANADIAN JOURNAL OF Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVII.

TORONTO AND MONTREAL, OCTOBER, 1900.

No. 10.

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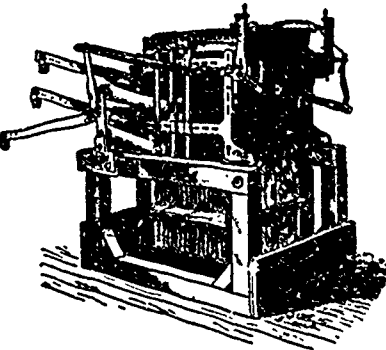
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Canadian Journal of Fabrics

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THE CANADIAN TEXTILE DIRECTORY

A Handbook of all the Cotton, Woolen and other Textile manufactures of Canada, with lists of manufacturers' agents and the wholesale and retail dry goods and kindred trades of the Dominion, to which is appended a vast amount of valuable statistics relating to these trades. Fourth edition Price, \$3 00

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WILD CLOVER FIBER.

Canada grows wild hemp, wild flax, and a number of other wild fiber-producing plants, but so far, none of them have been utilized on a commercial scale. Among the common weeds of Quebec and Ontario is the sweet or wild clover, which grows rankly and yields a fiber of some strength, but not equal in fineness or strength to flax. A year ago, Edward Kenny, of St. Vincent de Paul, near Montreal, sent the editor a sample of this, roughly treated by hand, and another sample retted and twisted into cords of strength sufficient at least to make a very good quality of binder twine. We sent these

samples on to two manufacturers of twine, in Ontario, and they reported that if the material could only be laid down to them in sufficient quantity and at a reasonable price, they could work it up successfully into binder twine. Mr. Kenny also sent, through the Minister of Agriculture, samples to the Imperial Institute, London, to be reported on. These were taken in hand by Professor W. R. Dunstan, F.R.S., director of the Scientific Department of the Institute, who has made the following report:

A sample of sweet clover fiber, *melilotus alba*, received by the curator of the Canadian section of the Imperial Institute from the Minister of Agriculture, Ottawa. The sample as received has been somewhat roughly prepared; it had not been cleaned and apparently had not been treated by the retting process (consisting in steeping the fiber in water for some time), which is usually carried out in preparing a fiber for commercial purposes. As received, it was submitted to a complete examination, but the results were not wholly satisfactory, chiefly owing to the method of preparation and especially to the absence of retting. Since, however, the fiber appeared to be strong and particularly satisfactory in its length (6 to 18 inches), a rough approximation to the process of retting was conducted in the laboratory, the fiber as received being soaked in water for a week at a temperature of about 18° Cent. After this it was dried, recombined and hackled. The fiber now showed very much better results when submitted to our usual examination, and it appears very probable that if properly treated it might be worth while to put this product on the market, as I conclude, from the letter addressed to the Minister of Agriculture by Mr. E. Kenny, of the settlement of St. Vincent de Paul, that the plant is very abundant, in fact almost a weed, in some districts of the province of Quebec. I therefore suggest that information should be obtained as to the proper method of treating the fiber in the manner alluded to and that other samples so treated should then be submitted to this department. They shall then be chemically examined, and a commercial valuation obtained from our expert referee on this subject.

Mr. Kenny writes us that he has treated further quantities this year, and says: "I am satisfied that a commercial value can be arrived at, though owing to want of time and not getting the necessary encouragement, I did not attempt to place it on the market this year. Yet I did not neglect to continue experimenting. If you can find a market for it, I will be in a position next year to have collected a large quantity. I am just preparing a small quantity at the request of a French

company, who claim to have a new process of retting. All reports received from good authority claim the fiber to be valuable when properly treated." Mr. Kenny deserves credit for his perseverance, and if only the fiber can be placed in the hands of our manufacturers at a price to compete with sisal or manila, large quantities can be consumed for binder twine, as we understand it only requires a readjustment of the drawing and spinning machinery to work it up.

FLAX PRODUCTS.

North Dakota sowed last year 600,000 acres in flax, and the yield of flax seed was 7,200,000 bushels. Owing to the high price of the seed, the farmers found the crop a remarkably good-paying one, and to turn their attention still more to this crop, a company from Boston and London sent representatives to the State to examine the fiber, in order to see if it cannot be used in the manufacture of linen paper by a new process of theirs. The result was the erection of a flax fiber mill at Fargo, capable of working up 1,000 tons of flax straw per month. This will give farmers a market for what has hitherto been a waste product. From these facts the Minneapolis Tribune concludes that "if such papers can be made from the straw grown in this region, all kinds of linen fabrics can be also. There is an unlimited demand for linen fabrics, and there is no reason why, when American capital and energy and skill are directed to this branch of manufacture, American linens may not equal in quality the most famous manufactures of any other country." Very wholesome food, such, for instance, as maizena puddings, can be made from corn meal, but it does not follow that equally nutritious puddings can be made from corn cobs. Yet the Dakota people will find corn cob puddings quite as much a success as the manufacture of high-class linens out of flax that is grown for seed. When flax is grown for seed, it is sown sparsely and the plant branches out, and all its substance goes to seed, while the fiber is short and broken. When it is sown for fiber, as in Ireland, Holland and Russia, it is sown thickly and the stalk grows straight and comparatively branchless, resulting in a clean, long and unbroken fiber. You cannot have the two results in the same crop. However, the manufacture of paper is a different thing, and there is no reason why a successful linen paper industry could not be established in Canada working on the new process referred to. The straw from the flax grown in Ontario is worked up into upholsterers' tow and dressed line for low-class linens, and for twines. The upholsterers' tow and the dressed line, produced in Ontario, is chiefly exported to the States, but in Manitoba, where flax is largely grown for seed, the straw is burned up. This is a sad waste of a really valuable material; and as flax can be grown over a vast

area, not only in Manitoba, but in the Territories, far beyond the wheat-growing belt, this industry could be developed in the Canadian West into a most important one.

ARSENIC IN FABRICS.

The first legislature in America to deal with the question of arsenic in textile manufacturers and wall paper, is that of Massachusetts. The textile and paper industries of this State are larger than those of any State in the Union, and the new Act, which comes into force, on the 1st of January next, is exciting considerable interest in the American trade. Representative Gale, of Natick, who introduces the bill, is a civil engineer, and was formerly a college professor. He was led to interest himself in the subject of arsenical poison because the wife of a friend of his was poisoned from arsenic in a dress which she wore. From enquiries among physicians he became sure that many women were poisoned from garments, hence his action. The text of the new law, which has only three sections, is as follows:

Section 1.—Any corporation, person, firm or agent, who directly, or by an agent, manufactures, sells, exchanges, or has in his custody or possession, with intent to sell or exchange, any woven fabric or paper containing arsenic in any form, or any article of dress or of household use, composed wholly or in part of such woven fabric or paper, shall, on conviction thereof, be punished by a fine of not less than \$50 nor more than \$200; provided, however, that this section shall not apply to dress goods or articles of dress containing not more than one one-hundredth grain, or to other materials or articles containing not more than one-tenth grain of arsenic per square yard of material.

Section 2.—The State Board of Health shall make all necessary investigations as to the existence of arsenic in the materials and articles mentioned in Section 1 of this Act, may employ inspectors and chemists for that purpose, and shall adopt such measures as it may deem necessary to carry out the provisions and to facilitate the enforcement of this Act.

Section 3.—This Act shall take effect January 1st, 1901.

CALCULATING THE WORK OF LOOMS.

The following method of calculating the efficiency of looms is recommended by the Textile World, and it is said that though the process may seem complicated, it is not really so, as the "constant" is the same as long as the speed and running time remains the same. Many mills calculate each week the percentage of efficiency of the looms, as this is the only way by which one can know how well the looms have been running. The average number of picks per inch in the weekly product is

obtained from the mill records. Then a calculation is made, to show how many yards would be produced if the looms had run constantly. The proportion which the actual yardage bears to this theoretical yardage is the percentage of efficiency. This calculation involves considerable labor. It is the only means by which loom product can be fairly measured in a mill, where picks per inch vary from week to week. The method spoken of by the Textile World has been devised by a manufacturer, and is as follows: The cuts, as they are measured, are entered in the mill books in the usual way with the picks per inch opposite each cut. At the end of the week these figures, representing the picks per inch, are added together, and this amount is divided by the number of cuts. This gives the average picks per inch for the entire product. This average is multiplied by the number of yards woven, and the product is divided by a number which we call the "constant." The result is the percentage of efficiency. This constant is determined by the number and speed of the looms and the running time, as follows: The number of looms is multiplied by the picks per minute; this result is multiplied by the number of minutes running time per week; this is divided by 36, which gives you the "constant" for your looms.

PATENT MEDICINES.

We have received a circular from the Proprietary Articles' Trade Association of Canada—which means the association of owners of patent medicines—asking us to use our influence to defeat a bill to be introduced into the Ontario Legislature, by W. M. German, to regulate the sale of patent medicines in the province. The request for our influence in behalf of this business is founded on the following reason, as given in the circular: "It is felt by the proprietary people that the newspapers are vitally interested in this matter and we trust in drawing your attention to the necessity of prompt and energetic action we may have the full advantage of your assistance against the enactment of a law unjust in principle, a wrong to vested interests, as well as an embargo and hindrance to an important branch of commerce."

It is unfortunately true that the great majority of the newspapers of this country are interested to a greater extent than they should be in patent medicines. These dealers know that they cannot do business without advertising in the newspaper. The publisher, to the great injury of his confiding readers, allows these quack medicines, as a rule, to find a place in his columns at about half the rates he charges the local merchant or dealer in some legitimate article of necessity. If he reversed the rule and charged the nostrum vendor twice what he charges the respectable merchant, he would still have nothing to boast of, as a public teacher, when he admits to his columns the

announcements of some of those concerns whose abominations are put forth under the guise of medicines. When these firms can so easily impose on the average publisher, in the matter of advertising rates, it is little wonder that they coolly assume that they can command his submission to their request that he shall aid them in trying to defeat Mr. German's bill. As to the merits of the bill, we fail to see why it is any more of an interference with vested interests to require a license from such a business, than it is to require a license from those who traffic in intoxicating liquors. As a matter of fact, it is well known that many of these patent medicines—advertised, by the way, in Church papers, as well as country weeklies—are composed of 5 to 30 per cent. of alcohol in its various forms, and their so-called "tonic" effects are due solely to the stimulus of the alcohol in them.

The proposed bill provides for the appointment of a Registrar, who shall have power to grant or renew licenses, and to enforce the provisions of the Act. The amount of the license fee is \$1,000 a year, and only the holder of a license may advertise patent medicines. Another provision, which is certainly a good one, provides that "No person shall advertise any medicine, in respect of which a license has been granted, by any advertisement: (1) Which consists in whole or in part of any surgical picture or representation; (2) Which is of a nature to suggest the means of committing any crime; (3) Which is offensive in its language or suggestion; (4) Which is calculated to hold out false hopes of prevention, alleviation or cure of any disorder of the functions of the body; (5) Which is, having regard to the formula or prescription filed, fraudulent or misleading in its statement of the curative properties of the medicine."

There may be one or two clauses which would require amendment in this bill, but its general principle should be heartily endorsed by the best and most thoughtful people of this country; and we trust that the newspaper publishers will see that in the end it will prove that their higher interests will be served by sacrificing a few dollars a year for the sake of keeping their sheets free from the defilements of a class of advertisements of "medicines," some of which are probably more injurious to the bodies and souls of their readers than the vilest class of intoxicating liquors. For our own part, we may say that for several years we have refused to insert patent medicines of any kind whatever, and we do not think that in the long run we have suffered by the loss of such patronage. At all events, this Journal holds up both hands for the German bill.

—Of all the textile industries of the United States, silk manufacturers have developed most in the last ten years. In 1890 the capacity of the United States silk mills was 20,822 looms, and 718,360 spindles, while

this year the capacity amounts to 48,246 looms and 1,426,245 spindles. The consumption of raw silk is 11,000,000 lbs. per year, or about the same quantity as France consumes. But here comes in the difference in the results of French skill, that, whereas, the manufactured products of United States looms are worth a total of \$8,000,000, those of France are worth \$12,000,000. In other words, the superior skill of French silk manufacturer takes the same quantity of raw material and makes it 50 per cent. more valuable when finished. Franklin Allen, secretary of the American Silk Association, attributes this to the results of French art and technical schools. While no systematic efforts appear to be made to revive the once thriving, but now decaying, silk industry of England, the United States silk trade appears to develop through the combined results of protective tariffs and the invention of high class machinery. While Switzerland was using hand looms, the Americans adopted power mills, and the exports from Switzerland to the United States dropped one-half. In St. Etienne the use of hand looms was continued for its ribbon industry until it discovered, a decade ago, that the City Council must put in electric motors in order to meet the competition due to the increase of ribbon manufacture in the United States. France, which once furnished America with one-half of its consumption of silk, has found its markets lost by the development of American industry. It is the opinion of one writer that if the silk manufacturers of the United States improve their designs, before another ten years they will be exporting silk to every country in the world.

—American Consul Hughes, of Coburg, Germany, calls attention to Professor Koechlin's method for the bleaching of cotton and other vegetable fibers by passing them through a bath of 100 litres (26.4 gals.) of water, 10 kilogs (22 lbs.) of lime, and 50 kilogs. (110 lbs.) of bisulphite of soda. They are then steamed for an hour or two under a pressure of from one to two atmospheres, rinsed again, and dried. The bisulphite can be replaced by hydrosulphite of lime. The cotton or other fiber may be boiled in the bath for a few hours instead of being steamed. Another process is to subject the goods for six hours under a pressure of two-thirds of an atmosphere to a liquid composed of 1,000 litres (264 gals.) of water, 10 kilogs. of dry caustic soda, 10 kilogs. of soap, 1 kilog. (2.2 lb.) of calcined magnesia, and 30 litres (7.9 gals.) of peroxide of hydrogen; then rinse, scouse, rinse again, and dry. The white obtained is said to be much better than can be had with hypochlorite, and, best of all, does no damage to the fibers or fabric.

Warner & Son, Alvinston, Ont., are putting in another broad loom into their woolen mill.

FINISHING AGENTS.

In the production of textile fabrics a great variety of demands are made upon the finisher. All sorts of qualities are required, and every degree of appearance and feel is at different times necessary. It is sometimes even required to take one kind of a textile fiber and treat it in such a way that it will have the appearance and feel of an entirely different fiber. Experiment and constant investigation are always revealing new methods and new results that may be obtained by old methods, so that the finisher must always be conversant with the various materials that are employed in this class of manipulation, and must know somewhat the result of their action on different fibers and in different kinds of fabrics. It is quite evident that to understand thoroughly the action and effect which these many materials bring about in their use, is no small or trifling accomplishment, and if we were to attempt a full and explicit description of all these materials and their various actions on different fibers under different conditions, it would take us far beyond our limit, writes Textile in the American Wool and Cotton Reporter. But a few of the more important and more commonly employed may be mentioned. Certain of these agents are absolutely essential, and a knowledge of their use is indispensable to good work.

The Starches.—Perhaps the most ordinary class of such materials is the starches that are employed on various kinds of textiles and in various details of the process of operation. There are several kinds of starches that may be mentioned; potato, corn, wheat, etc. It is the character of potato starch to give a distinctly hard feel to the fabric, and since potato starch contains a very considerable proportion of gluten in its make-up, it is quite common to use it in connection with China clay, as a material for filling purposes. In any class of fabric where considerable stiffness is required, together with a good, permanent solid finish, potato starch is the material selected. Corn starch acts in a similar method, but not so vigorously or so satisfactorily, and can never give the same results, but on goods where a slightly lighter finish is required, the corn starch will serve the purpose. The wheat starch gives a pleasant, full finish, rather milder in its character and stiffness than either potato or corn. Another grade of starches that are sometimes employed are those such as dextrine, syrup and glue, but these materials are not so common as those formerly mentioned. China clay, as was hinted above, is made to act as a filler for light goods that are expected to weigh heavy, and is depended upon to produce weight and body rather than stiffness. Another demand sometimes enters in, in connection with that of stiffness and hardness of feel. It is quite frequently necessary to finish goods with a certain amount of lustre, as well as hardness, and the rough feel which is the result of the use of China clay and starches alone. In order to bring about this lustre, animal fats must be employed in connection with the other agents. The most ordinarily used for this purpose are perhaps tallow and lard, then the oils, such as palm, cocoanut, bees-wax, paraffine and magnesium chloride. When tallow is used, the result, that is, the required lustre, varies according to the way in which the tallow is employed, and the feel of the goods is at the same time made less hard and harsh. Palm oil has the effect of producing perhaps a milder finish than the tallow and may be used either bleached or unbleached. The lustre which is effected, is of a mild, agreeable and lasting kind. When using cocoanut oil, the appearance produced will perhaps not vary noticeably from the palm oil result, but the difference is, that a larger amount of cocoanut oil is required to do the same amount of work. One of the most difficult materials to use with sure and satisfactory results is lard. The finish which is

produced is very desirable and pleasant, being almost in its softness and beauty equivalent to silk in its effectiveness, but it can only be employed in small quantities and with the most judicious care. Lard can never be used unless it is completely and thoroughly boiled in with the starch. The wax products always give a hard, glossy finish, and soap of various kinds generally produces a mild feel and a moderate degree of lustre. One of the peculiar materials for use in this connection is magnesium chloride, and like lard, it must be carefully used, since cloths that have been finished with it are very apt to get soft and flimsy and lose their finish entirely if they are exposed to moisture. It may be used in connection with China clay. But as hinted before, it must not be employed where the cloth is expected to retain all its stiffness and lustre for any great length of time, since it does not require very much exposure to the moisture of the atmosphere to rob the goods entirely of its effects.

In our study of the various agents employed in finishing we must mention a few that perhaps are of minor importance, and yet which occasionally come up for the finisher's attention, and call for some knowledge of their qualities and uses. There is, for example, the material which is known as senegaline. It is used in small quantities, and is added in this manner to the different finishing agents that are employed under certain peculiar circumstances. Senegaline is in fact a starch disintegrated by soda lye, and then subsequently neutralized by the use of hydrochloric acid. We understand that in Germany this material is used quite extensively. It has the faculty of dissolving quite thoroughly when it is boiled in water for about five minutes and is completely transparent. It also possesses the very necessary quality of combining quite readily with the other finishing agents, and of being free from any danger of attacking the colors that may be present in the goods. If it should happen that the material has been kept or stored for any length of time, or if it is maintained at a low temperature, it becomes harder, and is rendered somewhat opaque. Whenever these conditions do obtain, it is only necessary to boil the solution a little longer, and the result will be all that is required. The use of senegaline in textile fabrics produces a very pleasant, pliable, soft feel. It also has the advantage of giving a lustre, and if goods are to be finished with the calender, it will be found of considerable value by reason of its lustre producing quality, and because in addition to this, it always prevents cracking or breaking in the finish of cloths that have been very considerably weighted with china clay.

In the use of all the starches the question as to their preparation requires some attention and the mere item of the boiling of the starch is of more importance than would at first appear. Naturally there is a diversity of opinion. Some say that starch ought to be boiled quite a length of time, even though it is well thickened and apparently quite ready for use. Others say that the starch should not be boiled excepting long enough to have it begin to thicken in its consistence. Perhaps the best way to settle the matter is in the way of a kind of a compromise. If a cloth is to be very heavily calendered, and is not expected to be very flimsy, it will be well perhaps to boil the starch for some time longer than under other conditions would be required. On the other hand, if the cloth is to be weighted to any considerable extent in any way whatsoever, it is advisable perhaps to boil the starch paste or liquor a shorter time than we would in the case above referred to. The boiling of the starch paste is usually accomplished in a copper or wooden kettle by the use of direct or indirect steam. Suppose, for example, a finishing mixture something as follows: Fat, china clay, wax, etc. is to be boiled. The procedure will be something resembling this order. The china clay is first dissolved in lukewarm water, the wax, soap or fat is then

added to the solution, and the whole is poured into the boiling kettle. The liquor is then raised to the boiling point, and boiling is continued until it is evident to the observer that the different substances are entirely dissolved. To reduce the temperature of this mixture to about 120 degrees F., cold water is added. Now at this stage the starch which is to be employed is dissolved by mixing it in luke-warm water, and passing it through a sieve. This solution is then poured into the boiling kettle along with the material that is already there, and the whole is brought to a boiling point again, during which time the mass is carefully and constantly stirred. Another method that may be employed is to boil the china clay separately, and then add it to the starch mixture, heating the whole mass to 120 degrees F., and then afterwards adding the fat or other ingredients, and boiling the mixture until the proper degree of subsistence and clearness has been reached. When using starch in finishing operations, it is not always necessary that the very best quality should be employed. On certain grades of goods, such as black and gray lining, for example, where the weighting seems to be the principal factor, a starch of a second grade may be employed. If, however, a first grade starch is used, it may be mixed with a little china clay.

THE TREATMENT OF KNITTED FABRICS.

After the fabrics have passed through the preliminary stages of manufacture, and finally assumed their form of stockings, pants, jackets, etc., they have to be treated in various ways, bleached, scoured, dyed or finished, before they acquire a salable form and are ready to be put before the buyer. Now, if there is one feature a knitted fabric should possess as perfectly as it is possible to possess it, it is elasticity, and every one concerned should use his best endeavors to secure this end. While the knitter may do much to promote the obtaining of the greatest amount of elasticity by attention to various little matters, we are concerned here only, says a writer in the *Dyer and Calico Printer*, with such operations as the fabric passes through after it has been knitted, and which, according to the care or carelessness with which they are carried out, may have a considerable influence on the degree of elasticity the finished fabric possesses. Now, these various processes are oftentimes but indifferently carried out, the operator either does not know, or does not trouble to know, in what manner the quality of the goods he is handling is affected by the manner in which he scours, dyes, or finishes them. He may, perhaps, have only regard to the appearance of them and neglect the real feature, elasticity, which they should possess, and which really has a very important bearing upon the wear and life of the goods.

The first treatment the goods undergo is that of cleansing or milling, and in this they may suffer greatly. Before the wool can be spun and knit, it must be oiled or lubricated, and while knitters are apt to regard the oiling as a secondary feature in the process, yet largely upon the care with which it is carried out, and the quality of the oil used, much depends. It has to be remembered that whatever oil is put in must be taken out again before the goods can be bleached, dyed or finished; now there are, roughly speaking, two kinds of oils, those like olive, cotton, lard are saponifiable, and hence are easily scoured out by means of soda, and those which, like the mineral oils derived from petroleum and paraffin, are not saponifiable, and are only with difficulty scoured out. In the saponifiable oils may be included oleic acid. Now, unfortunately, the mineral oils are very much cheaper than the saponifiable, and to those wool manufacturers who have an eye for cheapness there is a great temptation to use these oils, or mixtures of them, with the saponifiable oils. Oil merchants are constantly offering low grades of wool oils; now these contain very much mineral oil.

and if freely used, no amount of scouring will remove it without killing the elasticity of the garment.

In order to keep the elasticity of a knitted garment as perfect as possible, it is essential to prevent any felting taking place. Now, if there is anything that will tend to promote felting of knitted wool fabrics it is treatment in an alkaline or soap bath at a high temperature. If a good, easily saponifiable oil has been used in oiling the wool previous to spinning and knitting, then a light soaping with a good, neutral soap will answer very well, and the oil will be fully extracted, leaving the goods soft and elastic, and very little harm will be done, but in the case of a mineral a very vigorous treatment has to be given and much soap and alkali, either potash or soda, used, and then the elasticity and softness suffers, for the alkali always causes the production of a harsh feel on the wool, while the vigorous treatment tends to bring about felting, which impairs the elasticity. In the end, probably, the value of the goods is reduced by as much or more than the difference in the value of the oil used and of a good saponifiable oil.

To prevent felting it is a good plan to treat the fabrics with a small percentage ($1\frac{1}{2}$ to 2) of chlorine, but too much must not be used, or otherwise the goods will acquire an unpleasant yellow color and a harsh feel. If the oil be not all extracted before the goods pass on to the dyer, it is very liable to cause spotted effects in dyeing; the shades come up uneven with patches of dark and light spots, and the dyer is blamed for defects which he has not produced, and which are not due to any fault of his. The quality of the soap used has also some influence. It should be good, pure and neutral. If the condition of the goods demands the use of alkali, let the scourer add this himself. The soap should be well made, free from any unsaponified fat or grease, and any soaps containing the latter ought to be rejected, for these may get on the goods and lead to stains in the after dyeing processes. The degree of scouring should be made to depend upon the quality and condition of the goods. The object of the scouring is to remove all the grease, oil and dirt in the goods. The character of these will depend almost entirely upon the previous treatment of the wool. If the wool is in the first instance simply washed and then dyed in the form of loose wool, the knitted garments will contain the oil added before carding and spinning, and any dirt collected during those operations and that of knitting; in general these are not difficult to remove if a good oil has been used. Sometimes the yarn is spun and then scoured and dyed before knitting, in which case but little scouring is required, particularly if during the knitting care be taken to see that little dirt collects on the goods. Then one need not fear any or much deterioration in the elasticity and softness of the goods. Sometimes wool is taken in its raw condition, carded, spun and knit. Then it will contain much grease and dirt, and requires a good deal of scouring to cleanse it, but if care is taken in using a little potash along with the soap in the scouring liquor, but little deterioration in the elasticity of the goods need be feared. Generally acids are used in the processes of dyeing, or if the newer direct dyes are employed, a Glauber's salt bath is used either with or without an acid, and as acids have no felting action on wool, little need be feared as to any loss of elasticity during the dyeing operations.

In all processes of treatment always allow plenty of liquor so that the goods can be kept well open and not compressed together. It is when squeezed up into as small a space as they will occupy that the risk of felting is greatest, and such a condition of things should be avoided. Reference has been made to the property which chlorine possesses of preventing felting. This has been taken advantage of in the following manner: The goods are previously subjected to a scouring operation, for it is essential, in order to secure a uniform and successful result,

that they should be free from grease or dirt. They are then well wetted out. Next, they can be passed through a bath of hydrochloric acid of 5 deg. Twaddle strength, by which means they become more or less acidified. Now a liquor is made from chloride of lime (bleaching powder), allowing $2\frac{1}{2}$ lbs. to $3\frac{1}{2}$ lbs. for every hundredweight of goods to be treated. It is not advisable that the whole of this should be added to the bath all at once, but at intervals, as the goods are entered in and taken out of the bath. It is important that it should be clear, and free from any undissolved particles of the bleaching powder. Into this bath the goods are quickly entered, left in to two or three minutes, then taken out and well rinsed, when they are finished. The action of the chlorine is very rapid, and so a long immersion in the chloride bath is not necessary while it might be injurious in that it may give a yellow stain to the goods and make them harsh. Using the quantities given above there is not much bleaching action exerted by the chlorine, so that even dyed goods may be treated.

SPINNING WOOL IN A WET STATE.

The greatest disadvantage of an insufficient cleaning of the material before oiling, picking and carding, can be stated in a few words: First, the dust and dirt left in the wool will absorb part of the lubricant, and diminish the beneficial effect of the latter upon the fiber. The mixture of dirt and oil is a sure means of clogging the card clothing, and thereby deteriorating the effect of carding. Not alone is the clothing gummed up and rendered unserviceable for an efficient operation, but the material is also glued together, in which condition it is difficult to smooth and lay it straight in the card, and it remains sticking everywhere to the working surfaces of the engine. The doffing of the lap is also rendered difficult. Next, it requires more labor and detergents to cleanse the yarn and cloth, while at the same time the operation presents many serious difficulties.

A frequent cleaning of the machinery is required, which entails a loss of time and diminution in production. There is much waste, and uneven and lean yarn. This, also, as well as the cloth, becomes boardlike when washed, and calls for the employment of stronger lyes. These are the natural consequences of an insufficient cleaning of the wool before carding and spinning; they present a further argument against the working of the material in a wet condition, because it stands to reason that the dusting of the wet wool is out of the question.

Only after a thorough cleaning and dusting of the dry material should it be lubricated. The object of this is to make the fiber pliable and yielding to a certain degree, so that it can more readily be smoothed and laid in the carding and spinning processes. The quality of the lubricating material is a matter of great importance, and two circumstances especially must be considered in its choice; first, its adaptability for spinning purposes; and, second, its behavior in washing and milling; that is, the cleansing of the yarn or cloth.

A lubricant for wool or spinning purposes must be of a superior quality in order to make the fiber pliable. Numerous "wool lubricants and compositions" are at present found in commerce which contain oil only in homœopathic doses, but in place of it aqueous solutions of alkalies and decoctions of various kinds. All are ill adapted for softening the fiber in fact, they have the opposite effect. The small pecuniary benefit resulting from the purchase of such cheap substitutes (for they are all cheap, a fact which should make the purchaser suspicious) is counterbalanced by the trouble and inconvenience experienced in spinning and milling the manufactured goods, which, in fact, contribute to make them doubly dear.

Wool requires a certain percentage of good oil for spinning. Above all things, it should not become resinous, which is

the case with most vegetable oils, and which makes the wool sticky, the carding more or less imperfect, and the yarn hard and stiff. The vegetable oils used formerly—for instance, olive and rape seed oil, especially the latter—had this defect. Yarn spun with good oil can be stored for some time without becoming sticky or stiff. Although the animal fat called oleine, which is now being very extensively used, does not show this tendency still it is generally acid, especially the cheaper kinds, in consequence of which it wears the card clothing. Good oleine, however, contains so little acid that its influence upon the card teeth is barely noticeable. It can safely be asserted that oleine, provided it is pure, and not adulterated with mineral oil, as it often is, is the best lubricant, as it saponifies very readily. It saponifies with weak, cold, soda lye easier than any other oil. Its other qualities, especially its large percentage of fat, make it very suitable for the spinning mill, so that the few disadvantages it possesses are hardly worth considering. Mineral oil cannot be considered as a wool lubricant, although it is not changed in the least by oxygen, does not become resinous, nor is it inclined to spontaneous combustion, like many other oils, but it is unsaponifiable, an objection which more than counterbalances all its other merits. Next to oleine, olive oil may claim to be the most suitable lubricant.

The percentage of lubricant required varies according to the character and purity of the wool material, and ranges between 10 and 15 per cent. In order to divide the oil more equally, and to heighten its effectiveness, it is often mixed with urine, the quantity of which also varies according to the degree of dryness and fineness of the material. Besides this, the addition of an alkali may also be made for the purpose of effecting a better saponification in washing. The use of soap as a binder is not to be recommended, because the lubricant is apt to become stiff and smeary. When working the wool in a wet condition, it is difficult to ascertain the mixing proportions of the lubricant.

After the wool has been freed from dust and dirt, it is first passed once while dry through the picker, so as to be opened and mixed uniformly. It is then piled in layers, and the lubricating agent poured over it. Then it is beaten with sticks or wooden forks, so as to accelerate the distribution and penetration of the lubricant, and then, according to circumstances, passed once or several times through the picker. On account of its usefulness, the picker has become a favorite machine in spinning mills; in fact, it cannot be dispensed with in any mill. It is suited for mixing oiled wool better than any other, and the excellent quality of the work is everywhere recognized. For the mixing, as well as blending, of different kinds of wool, several passages through the machine are advisable, in order to obtain a thorough blending of the material, as well as uniform division of the oil. In the manufacture of mixed goods every lot of the compound should be picked separately, especially when it is to be used for filling. Several pickings are highly advisable, not only for mixed goods, but also for single-colored ones.

The above described rather primitive style of oiling is still in use in many mills, and, if conscientiously performed, is sufficient to effect an equal distribution of the lubricant. More recently, however, so-called oiling-pickers of various construction have been introduced, by which the equal blending of the wool is made more easy. These machines generally apply the oil with a rotating brush, which, either moving within a receptacle takes up the necessary quantity of oil and sprinkles it over the wool, or else works underneath a sieve-bottomed basin, where it receives the oil and surrenders it to the wool. The speed at which the material moves, and the quantity of lubricant taken by the brush can be regulated at pleasure. It is not advisable to oil and pick too much material at one time, as it does not improve its quality to allow it to remain for any

length of time before being worked up. There are many reasons for this. First, by the storing of the wool the lubricant will draw away from some portions and settle in others, some portions, which are more exposed to the influence of temperature, will dry out more or less, again, lubricated wool, when stored for some time, is apt to become tough and sticky, thereby rendering an effective carding difficult; finally, the fiber is softened unnecessarily, and the objections mentioned when treating of wet wool arise. When, however, there are good reasons for lubricating a large quantity of wool at one time, the excess should be stored in a cool but dry room.—Textile World.

CARPET WEAVING IN INDIA.

(Concluded from last issue).

Let us now approach the weaving department. There we find a series of looms all so crowded together that one is amazed at the large number of looms accommodated in the space. Each loom consists of a couple of upright posts planted on the ground and supporting a couple of rollers upon which the warps are stretched in a vertical direction. Work is carried on against or near the lower roller which receives the finished carpet, while fresh warp is supplied from the upper roller and held taut by levers stuck in them and attached by a rope or chain. In this manner the work is kept to a suitable level for the boy weaver. There is no weaving with the shuttle but rather the making of a velvet pile by tying small pieces of colored woolen yarn to the warp with the ends projecting all on one side. The wool hangs on bobbins within easy reach of the operatives.

There are five to seven boys working at each loom according to the width of the carpet, and for each loom there is one instructor to direct and guide the boys when work proceeds. The six boys are divided into two groups, one attending to their right and the other to their left. The general design for carpet is such that the work on one side being exactly similar to that on the other, the instructor has to direct the three boys on one side, and his orders are promptly and systematically carried out by those on the other. He may be heard to say "No. 1 boy, two stitches scarlet, three yellow, seven green," "No. 2 boy, six stitches green, four yellow, three pink," "No. 3, five yellow, seven pink, two scarlet and one green," and so on, and the boy-weavers as ordered, pull at the end of the required bundle, put in the end under the marked thread from one side, bring it out at the other, give a knot and cut up the bundle end with a sharp knife and in this manner finish up the number of stitches. When a whole horizontal line is thus completed, the free ends of each knot are cut up to the required thickness of the stuff of the carpet.

The other details of weaving cannot well be described here, where we intend to give a general idea of the work carried on in these factories. The whole thing, however, is manipulated so quickly and cleverly that one may well wonder at and admire the skill of these boy weavers. The work thereby is done so economically that, considering the high prices asked by manufacturers, their profits may truly be envied by many a mill owner of Bombay or Ahmedabad. Each loom is worked under a contract with the instructor, who is responsible for the amount and quality of work done by the boys. One such instructor may have to supervise the work of two or three looms placed under his charge. He is paid at the rate of about Rs. 1-4-0 per square foot for the ordinary 7 x 8 quality; for superior qualities, wherein a greater trouble and time have to be devoted, the rate is proportionately higher, and he has to meet therefrom the wages of the number of boys under him. The poor boys are taken up as apprentices by these instructors, who pay a small monthly allowance to their parents. It has been computed that such a daily allowance to each boy averages two to

three annas per head at the utmost. It being all manual labor, the average daily amount of work done on a loom weaving a carpet 9 feet in width comes to about 3 inches to 4 inches, so that a carpet 12 feet by 9 feet takes about six to seven weeks to complete, taking absences and holidays into consideration. When the whole carpet is thus completed, it is got down from the loom, spread on the ground, well brushed and dusted and folded. Two or sometimes three of these are then packed into a bale and forwarded by rail to Bombay or Kurrachee for export to Europe.

Coming now to the cost of each loom, it may be easily conjectured that it cannot be heavy; in fact, its cost rarely exceeds Rs. 75 per loom*. To make a carpet 12 feet by 9 feet a quantity of warp of the thickness of 10 to 12 strings to an inch, weighing from seven to eight seers or 80 tolahs, has to be used. This costs Rs. 20 to Rs. 25 per maund (pucca.) The Pushm required for the above size weighs 30 to 35 seers and costs Rs. 30 to 35 per maund, dyeing costing about Rs. 10 per maund. Instead of the Pushm used for the weft, silk in various shades is sometimes substituted for the manufacture of richly woven carpets, orders for which may oftentimes be received from native princes. The whole working is altogether identical, the work is very slow, as no more than 1½ inches to 2 inches can be woven during the course of a working day of ten hours.

Besides the boy weavers and their instructors, the staff of a well managed carpet factory may consist of the under-mentioned hands.

Drawing Per Month.

One manager	Rs. 60 to Rs. 75
One designer	Rs. 30 to Rs. 40
One color filler	Rs. 20 to Rs. 30
One weaving designer	Rs. 15 to Rs. 20
One d. er	Rs. 20 to Rs. 30

besides Chaprasi, Chawkidars, etc.

The most important individuals in the above list are the dyer and the weaving designer, and carpet manufacturers experience considerable difficulty in securing the services of capable persons in this line. Another great difficulty to be encountered in the establishing of new factories, is the question of experienced weavers. The demand for them far exceeding the supply, they prove troublesome to the factory managers. Although their monthly wages are sufficient to meet their reasonable daily wants, the weaver class generally squander away their small income and incur debts which have many a time to be met by the proprietors of these factories, otherwise the debtor may be sent to prison and the work on the looms may cease indefinitely. When new hands have to be secured the proprietors have to advance sums of money to the instructors of the boys to pay off their debts at the last factory. Being not a steady class of people they oftentimes exchange berths from one factory to another. The weavers as a rule belong to the Mohammedan community, and so do not work on Fridays. On the whole this industry may be considered a well paying one and worthy of a favorable consideration by many a capitalist in Bombay.—Indian Textile Journal.

FANCY YARNS.

To spin knickerbocker filling an extra process is necessary, and the process of carding is different from that used for the production of ordinary yarn. The lumps or nubs that are the distinguishing characteristics of knickerbocker filling are formed by the introduction of wool noils or silk sweepings into the cotton during the process of picking. Before using they are bleached or dyed, and frequently they are dyed various colors

or shades to be used in the same lot of filling. The additional process consists of the proper perforation of the nubs for amalgamation with the cotton. When first received the sweepings may not be sufficiently curled or matted together; then it will be necessary to put oil on to make them mat. Generally when received at the mill they are thoroughly matted together and after application of the oil they quickly mat. In both cases the lumps are too large, and must be reduced in size by running them through a wool card. Once through the card is not sufficient and it is frequently necessary to run them through six or seven times in order to reduce the lumps to the desired size. The size of the lumps wanted will depend on the quality of the goods to be manufactured, the general rule being the finer the cloth the smaller the lumps, and the coarser the cloth the larger the lumps; but it is a matter that must be decided by those in charge with reference to each particular case. When there is no wool card that can be used for the reduction of the nubs an old cotton card can be fitted up for that purpose without much trouble or expense. Reverse the direction of the teeth of the flats by reversing the ends of the flats, and run the sweepings through the card with the flats in that position.

It may be necessary to run the sweepings through a number of times. Underneath the cards should be kept well cleaned, as the nubs to be used fall under the cards, and should be gathered up clean, which will not be the case if dirt is allowed to accumulate under the cards. The mass delivered at the front of the card is not to be used for nubs, as it is too large and soft, and is to be run through as many times as necessary to reduce it to the proper sized nubs. After a sufficient quantity of nubs of the desired size is produced, it is taken to the intermediate picker and sprinkled on the apron. The quantity used will vary according to the closeness of the nubs wanted in the filling. For a fairly nubby yarn, about 11 per cent. of the weight of the lap in nubs is sprinkled over the apron, and from that up to 18 per cent. is used to produce a close, nubby yarn. That is about the largest quantity of nubs that it is safe to use. When the laps on the intermediate are finished they are taken to the finisher cards.

The flats on the finishers must be lifted so that they will just straighten the fibers without carding them or taking the nubs. The amount that the flats are to be lifted will have to be decided by the carder after experimenting a short time, if he never ran this class of work before. From the finisher cards the sliver is carried to the drawing frame, and put through only one operation of drawing. Then the cans are taken to the slubber, and the sliver is reduced to .41 or .62 hanks, according to the number of filling wanted. From the slubber the roving goes to the fine speeder, and the .41 hank is reduced to two hank roving, and the .62 hank is reduced to hank and a half roving. The roving is now ready for the spinning frames. From this roving numbers ranging from 6s. to 22s. may be safely spun in the ordinary manner. When the nubs are of various colors, it gives cloth a variegated look that is pleasing to the majority of people. This filling is largely used on women's dress goods, and if the nubs are formed of wool noils instead of silk sweepings, it gives the cloth an appearance of being made of better material than it really is. It is not a favorite filling with the weavers, as the nubs often choke the eyes of the shuttles and cause a great amount of labor.

This filling is also spun in wool, and used for fabrics intended for both men's and women's wear. Another variety of yarn, sometimes called lug yarn, is used for both warp and filling, but largely for filling, and is spun in both cotton and wool. The characteristic of this yarn is an alternating of thick and thin places throughout its length. The thick parts are about of an equal length, and occur at regular intervals. This regular variation in thickness is obtained by removing one or more teeth from the gear of the front roller. This imparts an

*Rs means rupees. The nominal value of the rupee is 50 cts., but the current value, owing to depreciation of Indian silver, is only 30 or 35 cts.

intermittent motion to the front rollers, and as the major portion of rollers, when a tooth is removed from the gear of the front roller its drawn power is stopped for a space of time long enough to form a thick place in the yarn. That is but a natural consequence, as the other lines of rollers are constantly delivering roving, and the temporary check imparted to the front rollers by the removal of a single tooth is sufficient to allow a certain thickness to pass without attenuation. As this intermittent motion of the rollers occurs at least once during each revolution of the rollers, so a bug or thick place will occur at regular intervals. As the twist in yarn has a tendency to run into the thin places the bug or thick places contain less twist than the thin places, and will consequently be softer to the feel.

In colored work a variety of effects can be obtained by twisting a bug thread of one color with an ordinary thread of another color. If a black and a white thread are twisted together, they produce a blended effect of spots of black and white. A black and a blue thread, when twisted together, give a blend that is hard to describe. A great variety of effect can be obtained if three threads, each of a different color, are twisted together. When bug yarn is to be used for warps it is more economical to twist the bug threads with an ordinary thread, as it adds strength to the bug threads, and enables them to be woven with less breakage than when used alone. For filling twisting with other threads is not so important for strength as the filling is subjected to less strain than the warp yarn.

A number of fancy twist filling yarns are produced by twisting various sizes and colors of threads together at different tensions. These yarns are variously called "corkscrew," "snake," and "chain" twists. The simplest one is the corkscrew twist, which is produced by twisting two or three threads of ordinary yarn together under different tensions. One of the threads forms the core of twist, and the tension on that thread is the ordinary tension used in twisting. If only two threads are to be twisted together, the second thread has less tension than the core thread, and as a consequence it twists around the core. A third thread may be added and twisted with the same tension as the second thread.

Snake yarn consists of two or three threads twisted together under different tensions. The core thread is run under the ordinary tension, while the second has a little less tension, which allows it to twist around the core thread, while the third thread has less tension than the second thread, and is twisted around the other two. In addition to twisting around the other two, a device in the twisting frame curls it around the other two in loop form at regular intervals. The chain twist is also composed of three threads twisted together, one of which forms the core, the other two being twisted around it so as to form links like a chain.

These twists may be of one color and material, or they may be of different materials and colors. Silk, worsted and cotton threads each of a different color are twisted together to form the corkscrew, snake and chain twists, and this combination of materials produces some handsome effects when the colors selected are those that blend harmoniously.

In weaving it is of great importance that the filling twist should be of a different hand from the warp twist if the fabric is to have the best appearance possible, and this holds good for not only worsted and woolen weaving of fabrics in which the face of the goods is not finished with a nap or pile, but also in cotton weaving. When the twists are of different hands, the yarn lies closer in the interlacing, and gives the fabrics a finer and more finished appearance than when the twist runs the same way in both filling and warp. In colored fabrics this is especially noticeable, and more noticeable in woolen than in cotton or worsted fabrics. With the same design, the same

material and colors, a right and left-hand twist for filling and warp produces a better looking and better feeling fabric than the fabric woven with warp and filling of the same direction of twist. When any of the fancy twists are used to a large extent in a fabric, the lack of a finished appearance due to using warp and filling of the same twist is not so noticeable as when ordinary filling is used, except in the colors.

When the twist runs in opposite directions the colors appear brighter than when the twist runs in the same direction in both warp and filling. Fancy twists are largely used in men's wear and in cotton dress goods. When bug, snake, corkscrew and chain twists are made of woolen or worsted threads combined with silk or mercerized cotton, and woven in cotton dress goods, it gives them a richer and more costly appearance than can be attained by any other means. In honeycomb effect for dress goods, any of the above twists will be composed of part woolen or worsted and used to form the ridges of the comb gives the fabric an appearance of being wool. The prominence that the wool thread is thrown into by being used to form the raised surface of the fabric attracts the attention to it that it would not otherwise receive. When a proper blending of colors is used in the construction of the twist, this effect is further increased.—American Wool and Cotton Reporter.

THE ARTIFICIAL INDIGO AND ANILINE DYES INDUSTRY.

In a recent report to the Foreign Office the British Consul at Frankfort-on-Main, after referring to the fact that the production of natural vegetable indigo at present equals in value the entire world's production of artificial dyestuffs, said that the present artificial indigo of commerce represents almost pure indigotin. It is sold in the form of a 97 per cent. powder, whereas the indigotin contained in vegetable indigo fluctuates between 70 to 80 per cent. It contains no indigo red, no indigo brown, and no indigo blue. The lack of indigo red and indigo blue, which both seem to be of some importance in the relation of the dyestuff to the fiber are its special disadvantages. The indigo red seems to be of importance in the production of darker shades of color. There is no doubt that at some time not too far off it will be possible to produce this ingredient also. Artificial indigo is used by dyers in the same way as vegetable indigo. If it is possible to render the process of manufacture materially cheaper and thereby to considerably reduce the price of artificial indigo, the danger to natural indigo will be greatly increased; it is, indeed, to be feared that with the increase of chemical knowledge the same fate awaits this dyeing plant, which is extensively cultivated in British territories, as overtook the Krapp plant, the cultivation of which now-a-days no longer pays.

Artificial indigo affords a new example of the manner in which applied science interferes in, and revolutionizes the most varied spheres and destroys as well as creates great wealth. In the territories in which natural indigo is grown, the intensity and magnitude of the danger which lies in the advance of the artificial product ought not for a moment to be disregarded. The struggle between artificial and natural indigo has already commenced. The latter still shows some advantages inasmuch as its by-products, such as indigo blue, indigo red, etc., aid the dyeing process to some extent. If natural indigo is to retain its position, every effort must be directed towards the organization of its culture, towards the manner in which it is collected, and towards the way in which the dye is shipped. In order to obtain a favorable result the ablest experts should co-operate in this important task, for to-day the fate of East Indian indigo culture lies unfortunately in the retorts of the chemical factories. As far as the price is concerned, the manufacturers of the artificial article so far follow the plan of always keeping it a fraction

below that of the same quantity of the natural product yielding as much dyestuff in proportion. This method is observed, because so far only a portion of the world's demand of indigo can be produced by chemical process, and because, naturally, the factory which first succeeded in its manufacture is trying to make the greatest profit by the advantage it has gained over others. All this will be changed as soon as chemistry alone can supply the world's demand.

An important branch of the German chemical production is concerned in the manufacture of artificial dyestuffs in general. The endeavors of this branch are directed, generally speaking, to producing the organic natural products such as those of color plants, dye woods, insects, molluscs, etc., by artificial and even cheaper and purer means, and in a more serviceable form for dyeing; also to producing new colors, which not only approach in brilliancy and effectiveness the natural kinds, but even surpass them. Since the discovery was made in 1868, that the important dyestuff madder—alizarine—could be produced in an easy and cheaper manner from the carburetted hydrogen of coal tar, the use of dyestuffs obtained by coal tar distilling has gradually grown to such a degree, that in Germany about five times as many artificial colors are made as in all other countries combined. According to the last census on 14th June, 1895, there existed 25 factories for the manufacture of aniline and aniline colors, and 48 factories (with seven branches) for the production of other coal tar products (i.e., not only for colors, but also for other commodities, such as picric acid, etc.) The aniline works employ 7,266 hands, the latter factories 4,194; in all, 11,460 men.

THE RAW COTTON DIFFICULTY.

A Liverpool cotton broker enlightens the London Spectator on the cotton situation in the following letter: "Your article on the above subject in The Spectator of Sept. 22, is calculated to mislead the outside public as to the causes of the present embarrassment in the cotton trade. Briefly, the present scarcity of cotton is due to the simultaneous failure of last season's crop both of American cotton and Indian cotton; and the stocks of the world, relative to the consumptive requirements, have been reduced to a lower point than at any time since the American war. This scarcity is rendered more acute by the fact that the incoming American crop is a late one, and threatens to be again seriously short. A further aggravation of these untoward conditions was the recent devastating storm at Galveston, which wrecked the port and shipping, and delayed the shipment of the new crop of cotton to Liverpool. No combination of speculators could have exercised much influence apart from these natural and unavoidable causes. It is also very questionable whether the action of these speculators has been as malign as might appear, as the high price in Liverpool has attracted all the surplus stocks from all parts of the world, and yet there is an absolute famine! The writer of your article is not, apparently, acquainted with the trade, or he would not say 'one result of the present month's experience will be to develop the importance of other sources of supply, such as the Indian and Egyptian.' This country has almost ceased to use Indian cotton, not that the crops are smaller, but because we can more profitably spin American. The Egyptian cotton crop has more than doubled itself since the English occupation of Egypt, and the consumption of Egyptian cotton in this country has correspondingly increased. You further say: 'Surely it is not too much to expect that the leaders of the cotton trade . . . will take effectual steps to secure that in future the true character of the cotton crop in the United States shall be known to them and all concerned both early and accurately.' The Washington Agricultural Bureau announced

last October that the crop was a failure. This country did not believe it. The American spinners did, and secured their cotton. This country was left in the lurch. These are the unadorned facts of the present lamentable scarcity of cotton, and appearances indicate a straitened supply for some time to come. Some of us cotton people read your journal regularly for inspiration and guidance, and we may be pardoned for thinking it is quite excusable for a literary writer, in commenting on a large trade, not always 'to see it steadily and see it whole.'"

Foreign Textile Centres

MANCHESTER.—Regarding trade in the Manchester district The Warehouseman and Draper says: Business prospects do not improve in Lanca-shire towns, and short time and few days to the week is the order of things in most of the cotton manufacturing centers. The clothing trade reports badly of the orders taken for present delivery, and is particularly anxious for some "overcoat weather." Generally speaking, there is little fresh news to report concerning the staple industry of this centre. A good report of the cotton in the States is to hand, but notwithstanding it has affected the price of raw material very slightly. Yarns made from American cotton for home use have been in quiet demand. Spinners report few lines changing hands, except in odd instances. There has been rather more doing in the way of booking future orders, based, of course, on "future's" prices. In the cloth department considerable enquiry is going round for certain classes of goods, and, were it possible to arrange prices, there is no doubt that considerable business could be transacted. There is more going on for future delivery, and some lines of considerable magnitude have been booked. A feature of the market has been the revival in the enquiries from the Indian markets, and, though many lines have been placed, the bulk of the business offered has been at prices quite impossible to accept. It is reported that an alliance has been effected between the American Mercantile Company of the United States and a Yorkshire firm. The high price of cotton is causing a demand for some of the lower classes of wool and worsted yarns which are used in mixed fabrics. They are now as cheap and easily obtainable as the cotton warps, and give the satisfaction of being all wool.

BRADFORD.—The local industry continues to be in a very bad way, and there is no prospect of immediate improvement. The position is all the more regrettable, inasmuch as it is due, not to any change of fashion, but to an insane pushing up of prices at the close of last year. There was a good demand for stuffs made from botanics, and there being somewhat of a shortage in the supply of merino wools at the time topmakers felt confident that prices were bound to go up to at least 3s. a lb. On this basis raw material was actually bought in Australia, but the increased cost in the manufactured article, in consequence of the very rapid rise, turned the consumer against the goods, and throughout the whole of this year the demand for this particular class of article has been very small indeed. In the early months of the year there were those who confidently predicted that the falling-off would be only for a brief period, and they held out strong hopes of an almost immediate revival. Those who had accumulated large stocks of merinos also repeatedly tried to keep up values by withdrawing material from the market, but even these efforts to produce artificial values failed. The decline in prices has been not only sure, but also pretty rapid until to-day. Botany tops, which at the beginning of the year were quoted at 3s. per pound, can be actually bought at 19d. Nor is it considered by many that the bottom price has yet been touched. On the top of the difficulty in connection with botany has come the increase in the price of

cotton, which nowadays enters very largely into the manufacture of a good many manufactured articles. The supply at present is not very great, and the price is exorbitant, and in face of this fact, trade, which at this period should be pretty fresh with manufacturers, is, as a matter of fact, very low, and a good deal of machinery is standing. Neither is there any very decided indication as to what the fashion for next season will be, and the orders so far placed are of a very mixed and varied character. At one time it did seem as though there would be a rush on plain bright goods, and that figures had fallen into disfavor. Later, however, there has been more doing in figured goods, and everything points to a division of patronage between these two classes of goods next year.

LEEDS.—A most decided improvement has taken place in the ready-made clothing trade during the last few days, orders for winter garments having come well to hand. There is no rush in the factories, but they are much better off for work than they have been for several weeks past. The present activity will probably be maintained well into November, when the quietest time of the year is over, and orders for early spring delivery are then beginning to come in. The garments that are now wanted are overcoats for men's and boys' wear. In the juvenile department the Paddock overcoat is still much in evidence, and is a very fashionable style for boys of between eight and fourteen years of age. The S. B. Chesterfield is still the most popular shape for men's wear, if we are to judge from the orders that have just arrived. The firms that are making uniforms for the War Office are still working overtime, and are likely to be fully employed to the end of the year. Woolen manufacturers are still in a position to keep their machinery well employed, but the future of the trade is very uncertain by reason of the unsettled condition of things in the cotton market. As every reader of *The Warehouseman and Draper* knows, all wool fabrics are comparatively rare. Many cloths that by courtesy are called all-wool contain an appreciable mixture of cotton in the shape of a cotton warp cunningly concealed under a woolen welt for the confusion of the unwary. This statement need not startle anyone—the custom is ancient, and widely practised. There is now great difficulty in getting hold of these cotton warps except at famine prices, and it is absolutely impossible for the woolen manufacturer to get from his customers anything like an adequate increase in price for his productions. He does not like to say out point blank that on account of the rise in cottons he cannot sell at the old rates, what time his customer is drawing his attention to the fall in raw wool. Unless the cotton market settles down there is a possibility of a very large number of workpeople being thrown out of employment in Yorkshire as well as in Lancashire.

LEICESTER.—The hosiery industry continues fairly active in the leading branches and the production is well up to the average; but manufacturers of cotton goods have been compelled to postpone further production at present on account of high prices. Fancy goods and specialties are in fair request. Army and navy goods continue to be produced in large quantities. Canadian orders for heavy fabrics have of late been larger than usual.

NOTTINGHAM.—Lace of all kinds, but especially Honiton lace—hand-made—appears to be in high favor just now. The Queen's fondness for it is well known, and she has always preferred it for the wedding dresses of her daughters. Not so, however, with the generality of ladies, writes a correspondent. Brussels lace appealed rather to their taste, but with the new patriotic wave that has swept over the country the interest in British lace has been revived. A hundred new pupils have entered themselves at the Earl's Court Exhibition to learn the process, and the art seems catching on among women.

GLASGOW.—There are no signs of any improvement in the

South of Scotland woolen industry, and a good deal of machinery now lacks employment. It is hoped that things will take a turn for the better when the London wool sales are over, but in the meantime manufacturers are receiving very few confirmation orders, and altogether the outlook is anything but bright. Fortunately, hosiery manufacturers are fairly well off for orders, otherwise the outlook would be serious indeed.

DUNDEE.—The market is strong and healthy. Jute is rather easier in all positions, say 5s. a ton. The market, however, does not fall fast nor far, and the expectation of very cheap jute for this season vanishes. Jute yarn is strong. For 8 lb. common cop 1s. 8½d. is paid. The reason of this is universally ascribed to short production in the spinning mills, owing to irregularity on the part of the workers. Hessian warps are 1s. 9d. in bundle and 1s. 9½d. in spools. There is a better demand for fine qualities, and good yarn is 3d. per lb. Heavy cops are also very strong, and early delivery is difficult to be had. Hessians are again in much better request, and the whole tone of the market is better. In sackings, fine twills, and the like, there is a large and healthy demand. The fancy jute trade is also better, and the prospects of the autumn trade improve. Flax is in a stronger position. The reports of the new crop are somewhat contradictory, but recent advices from Pernau, Dorpat and Livonia, all give hopes of excellent quality. The price of Riga is named at £28 for K. On this basis some small sample orders have been given. It is worthy of special note that it is quite out of the question to expect to take this price out of yarns at present quotations. As it is now seen that flax is to be much dearer than last year the spinners refuse to go on at present rates. A rise of quite 1d. per spindle is therefore asked. This the manufacturers pay with much reluctance, but it begins to be acknowledged on all hands that advanced lists of prices must be issued. Linens are in better request. The buyers have convinced themselves that there is every likelihood of their having to pay more money later on; therefore they buy with confidence. The heavy linens for canvas and Government use are still in request, and all the best makers are deeply engaged in contracts for some time.—*Textile Mercury.*

BELFAST.—The improvement in the linen trade is as yet hardly perceptible, yet the tone of the market clearly indicates that matters are coming to a crisis, and an increase in the turnover is probable at no very distant date. Prices remain firm with an upward tendency. Manufacturers experience some little difficulty in getting the current prices, but they do not press for orders, as to-day's prices are based on the price of raw material, and afford only a fair trade profit. The lessened production has had a good effect in keeping prices steady, and few stocks on clearing lines are to be had. Reports from the States are of a most favorable description, and there seems a more decided inclination to purchase. However, no substantial improvement can be looked for until the Presidential election is over. The Colonial trade has been well supported, and, if anything, shows some slight improvement. The Cuban market is very inactive, whilst from the Home trade centres there is not much business passing except in sorting up parcels. In the yarn market business was the turn better. West lines have advanced 1½d., and even ~~low~~ are firmer, and spinners will not concede anything off current rates. The entire absence of stocks from the market has had the desired effect of keeping prices steady. The new flax is coming into the markets, but only in small bulk. Up to the present the quality, however, is not quite up to expectations. The prices range from about 6s. to 7s. 9d. per stone. Wholesale trade has been a shade quieter during the week, and the number of customers about were very much less than the previous week. The returns for September were not quite as good as anticipated, and it will require an extra effort this month to make up any deficiencies. The falling off in

returns is, however, confined to one or two departments, and will not, it is expected, affect the general returns to any great extent.

LYONS.—The Dry Goods Economist correspondent writes: The Lyons market is not very active, but a number of orders for spring have been placed. The manufacturing situation is slightly improved. As far as power looms are concerned, no improvement was needed, but for hand looms the orders recently placed will cause an increase in their production. This is already noticeable by the better employment of skein dyers. Among the favored articles continue to be light taffetas in the cheaper qualities. Mixtures of silk and cotton have also received some attention. Printed silks are favored and will be worn in all grounds. Good orders have been placed for mousseline with gold and silver effects, and manufacturers of these have plenty to do. A noticeable improvement has occurred in the demand for crepe de Chine. In fancied brocades with metal effects have been ordered. There is also a better demand for damasks in schappe warp and silk filling. The leading article on the looms continues to be mousseline. There has been an increase in the first eight months of this year of 12,000,000 francs in the value of all-silk tissues exported from France compared with last year, and this increase is directly traceable to the heavier exports of this fabric. The ribbon market is not very active, but a few orders have been placed in St. Etienne. Piece-dyed ribbons are slow. There is some demand for novelties, striped satins, plaids and printed warps. Velvet continues to give satisfaction. Piece-dyed panne does not seem to have met with great success and few orders have been booked recently.

CREFELD.—The improvement that had become noticeable in the demand for silks in Crefeld continues, and it seems as if at last the long period of dullness and delay was broken. Plain goods have sold in all-silk as well as in half-silk qualities. In the better grades of linings, taffeta plain, striped or checked, surah, merveilleux, etc., prices are fair, but in the cheaper grades and the half-silk qualities values continue depressed, owing to the large offering. The consumption of these cheaper goods in striped satins, serges, black diagonals, etc., is to some extent interfered with by that of cotton linings. The increase in transactions has, however, not yet freed the market of the features which have distinguished it thus far. These are the relatively large offerings, due to heavy stocks in some lines, and the disinclination of buyers to place orders for future delivery. This last fact is the peculiar feature of the situation at present, and does not tend to improve it as far as manufacturers are concerned. Cloakmakers have been buying readily velours du Nord and seal plushes, and there has been also a good business done in velvets suitable for cloak trimming purposes. In cloak-making silks, however, consumption has been small. For distributing trade business is still slow, and taffeta seems to be the only article liked. In other branches the same conditions prevail as previously. Cut edge ribbons give very little employment. The silks should be in full season at this time, but there is little activity. In umbrella silks production is fair, but more orders will soon be needed. The velvet and plush industry continue in good condition, although orders for delivery are not heavy. For ready delivery the demand is good for plain velvet as well as for panne. Velvet ribbons are in good demand and in small supply.

ZURICH.—There seems to be little desire on the part of Zurich buyers to place orders for spring and offered prices are so low as to discourage sellers. It is not believed that buyers can much longer delay their spring orders, but if these are not placed soon manufacturers will be obliged to run more looms out of warp. The stocks on hand are already large enough to meet requirements, and manufacturers may not be willing to add to them, although at the present cost of raw material they

would not run much risk in working for stock. Black damassés are in rather heavy supply and stocks of these are believed to be desirable. This of course, has affected prices, which are now very low. In this market conservative methods continue to be the rule, and there is no speculative feeling. The raw silk market has been a little more active, the low prices quoted for Italian silk having encouraged buying. Prices are weak.

THE COLONEL'S COMMENTS ON COTTON.

Colonel Alfred B. Shepperson, New York, publisher of Cotton Facts, returned a few days ago from an extended visit to Europe, where he studied the cotton situation carefully. He finds that stocks of all kinds of cotton in England and on the continent are very small. He estimates that on September 20 the stocks at Liverpool were only 105,000 bales of American cotton, against 700,000 bales last year, and of the supply on hand probably not over 40,000 bales were of the grades desired by spinners. The supplies on the continent amounted to not more than 700,000 bales against 2,200,000 bales a year ago. Mr. Shepperson in a recent statement says that after several years of depression, caused by overproduction of cotton, the consumption of the world has in the season just ended not only overtaken the production, but so reduced the reserves that the visible supply of all kinds last week was equal to only about four weeks' consumption of the mills of Europe and America. Mr. Shepperson estimates the consumption of American cotton last season at 11,000,000 to 11,200,000 bales. The increase of the capacity of American and European mills in the last year amounted to 1,600,000 spindles. It would not be wise to make an estimate of the present cotton crop at this time, he says, or to give serious consideration to the estimates of others. The weather conditions from now to November 25 can increase or diminish the yield by 20 per cent.

THE HUSBANDRY OF HORSEHAIR.

Horsehair is used extensively in the upholstery trade. Most of it comes from Russia and Siberia, and merchants, principally German Hebrews, go over to the Nishni-Novgorod Fair to purchase. What is known as English gathered hair—which grooms comb out of the horses' tails and sell to the marine store dealers, who in turn dispose of it to the manufacturers—sells at 1s. to 1s. 6d. per pound, but is usually much tangled and difficult to work up.

When the manufacturer receives the tails they are first sorted, black from gray. The longest hairs are used for weaving purposes, and make the horsehair for chairs, etc. What is not long enough for weaving is tied up into sticks and sold to the brush makers; and that which is too short for brush making is used for stuffing furniture and mattresses. Even the short clippings are useful in the garden for strewing on the surface of the soil to keep the slugs and snails off, for these creatures cannot stand the short pricking hairs when they attempt to cross a patch of garden on which it has been placed.

The curled hair is made by twisting the short horse-hair, mixed with cowhair and hoghair, into long ropes which are steeped in water, and then baked in an oven, then untwisted and put through a carding process. White horsehair is carefully sorted and bleached and used for hair and tooth brushes, soldiers' plumes, for fishing lines, sieves and various other purposes.

—The specifications for the United States army and navy underwear requires the overlock elastic seam and hem. The same seam is required by the German Government to be used on all underwear for the German army.

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.

Horn Bros., Lindsay, have recently added a broad loom to the capacity of their woolen mill.

Extensive repairs are being made to the flume and bulk-head of the Paton mills, at Sherbrooke, Que.

And. Dunlop, loom fixer, Almonte, has gone to Sherbrooke to take a place in the Paton mills there.

Chas. Wright, of the Clyde mill, Lanark, has been engaged as warper in the Carleton Place woolen mills.

T. A. Code, Perth, Ont., has completed his order for 22,000 pairs of heavy socks for the Dominion Government.

On October 16th the warehouse of the Sault Ste. Marie, Ont., Pulp and Paper Co., with contents, were destroyed by fire.

The Waterloo Knitting Mills Co., Waterloo, Que., have placed an order with D. K. McLaren for two sets of cards, felt face.

The Perth Woolen Co. has received an order for felt from the C.P.R. Co., for use in the manufacture of their refrigerator cars.

John H. Nelson, treasurer of the Wm. Firth Co., of Boston, special agents in textile machinery, has been paying a visit to Montreal.

The Merchants' Cotton Co., Montreal, have received delivery of 24 sets of cards, purchased from D. K. McLaren, textile mill supplies.

Mrs. Breckenridge, widow of the late David Breckenridge, superintendent of the Cornwall woolen mill, has gone to Toronto to live.

The Carleton Woolen Co., Woodstock, N.B., a short time ago purchased a complete set of cards from D. K. McLaren with other mill supplies.

The Dominion Wadding Co., Montreal, have recently placed an order for six sets of cards for the Foss & Peavy machines with D. K. McLaren.

E. W. Tobin, Liberal candidate for Richmond and Wolfe, has bought the Tessier seigniori, in Rimouski, with the intention of erecting pulp mills there.

J. A. Code, of the Mississippi woolen mills, Appleton, has gone to Rockwood, where he has secured a position as boss carder in Harris & Co.'s woolen mill.

The Canadian Colored Cotton Mills Co. have placed an order with D. K. McLaren, textile mill supplies, Montreal, for 20 sets of cards for their 45 and 50-inch machines. This is the third lot within twelve months.

T. J. Wagner, glove manufacturer, Drayton, Ont., has been interviewing parties in St. Thomas prior to locating in that town. If satisfactory arrangements can be made he will employ between fifteen and twenty men.

The action brought against the Berlin, Ont., Felt Boot Co., by Hugo Dolge for \$2,000 for breach of contract, was this month settled by agreement between the parties, the defendants paying Mr. Dolge \$200, and each party paying their own costs.

J. O. Buchanan, J. L. Morrison, W. J. McWhinney, Toronto, and Elizabeth Calvert and C. E. Calvert, Deer Park, Ont., have been incorporated as the Calvert & Dwyer Co., Ltd., to acquire the business carried on by C. E. Calvert, under the name of the Calvert & Dwyer Co.

The Toronto Woolen Machinery Co. has installed a large rag baling press in the rag warehouse of J. R. Walker, Montreal.

The Oxford, N.S., woolen mills report that they are now shipping tweeds to Montana and other points in the United States.

The Anchor Knitting Co., Almonte, has just installed a dynamo to furnish the factory with its own electric light. The machine has a capacity of 160 lights.

The Kingston cotton mill closed down last month for two weeks while a new engine was being installed and the machinery overhauled. The mill is running again.

Thomas N. Dunn, W. H. Murray, J. W. Cameron and James Ferguson, Strathroy, Ont., have taken over the flax mill at that place, and intend running it to its fullest capacity.

Work on the new cotton mill at Hamilton, is rapidly progressing; \$400,000 worth of machinery has been ordered from Howard & Bullough. The main building will have a tower 76 feet high.

G. F. Mercier has been making a tour through the eastern counties to secure operators for the cotton mills at Magog. Already 1,000 looms are in operation and in a few months all will be running.

Edward Taylor, manager of the Montreal Woolen Mills Company, who has resigned his office at least for a time, was presented with an address by employees of the company on the occasion of his leaving for England. His duties have been assumed by Joseph Horsfall.

Medicine Hat citizens are to vote on a bylaw for a ten-year exemption from taxation of the Western Canada Woolen Mill Co, formed to operate a woolen mill in that town. About \$15,000 worth of stock has already been subscribed, and \$65,000 of 7 per cent. preference stock is now being put upon the market in Toronto and Medicine Hat.

At a meeting of the Hamilton Board of Health complaint was made that the sewage from the cotton mills and the other sewer, was polluting the water in the bay. It was thought by some members that the whole trouble was caused by the dye-water from the cotton mills. Opinion was divided on the matter and an investigation is to be held.

Wylie & Shaw, Almonte, are closing out the business of the Almonte Blanket Co., which was carried on in the old Victoria Woolen Mills, formerly owned by Elliott and Sheriff. The machinery and power plant will probably be sold as it stands. This is the oldest woolen mill building in Almonte, having been erected by the late James Rosamond as a blanket mill.

J. P. Murray, of the Toronto Carpet Co., has been visiting Halifax on behalf of the Canadian Manufacturers' Association, which hopes to establish a branch there. Speaking to the Maritime Merchant Mr. Murray said the association has already accomplished some practical good. He mentioned several cases where foreign houses looking for agencies for manufactured goods in the United States had been induced to take Canadian agencies instead as a result of the efforts of the association in behalf of Canadian export trade.

Some local capitalists have bought over 60 acres of land near the Beauport Shore, at Quebec, and it is said that besides grain elevators they will erect upon the land a large worsted mill and other factories, at a cost of a million dollars. It will be remembered that years ago Quebec had a worsted mill which was purchased from the Quebec Worsted Co., by the Paton Manufacturing Co., and removed to Sherbrooke—at least what was left after the boiler explosion which wrecked part of the machinery. The present is an effort to revive the old industry in Quebec.

M. B. Perine & Co.'s, flax and twine mills, Doon, Ont., are now running overtime.

The Central Prison binder twine factory, Toronto, has turned out 25 per cent. more twine this year than last.

Frederick Talbot has entered an action against the Dominion Carpet Co., Ltd., Sherbrooke, for \$8,687.75 damages, and for money alleged to be due him.

Owing to damage caused by floods from the great storm in New Brunswick this month the St. Croix cotton mill and all the lumber mills on the river had to close down for several days.

A party of forty English immigrants who arrived by the steamer "Parisian," are going to settle near Brantford, Ont., to start a new industry—that of hemp curing. Sixty more will follow shortly.

Chas. Bates, son of W. G. Bates, of Carleton Place, who has been assistant superintendent in a woolen mill in Peacedale, R.I., for the past few years, is now superintendent of the Slingsby Co.'s mill, Brantford, Ont.

Attention is directed to the special announcement of the L. S. Watson Mfg. Co., of Leicester, Mass., on page 318 of this issue. This is one of the oldest heddle manufacturing firms in the United States, and they have a number of patented articles which have been received with general favor in the United States and Canada.

A fire took place in the Dundas, Ont., stair pad works on Oct. 16th. It originated in the lat department in one of the picker machines, a nail or some other piece of metal coming in contact with a tooth of the picker, making a spark, which soon caught in the soft, dry cotton. By good management the fire was extinguished and the loss, which will not be heavy, is covered by insurance.

The Wm. Firth Co., of Boston, informs the trade that it has severed connection with John Hetherington & Sons, Ltd., and has secured the agency for the United States and Canada of the old-established firm of Asa Lees & Co., Ltd., of Oldham, Eng., manufacturers of cotton and woolen machinery. The Wm. Firth Co. are to be congratulated upon securing the representation of a machinery firm of the world-wide reputation possessed by Asa Lees & Co., Ltd.

E. T. Carter, for thirty years in the employ of the late John Hallam, in whose service he rose from a subordinate position to be financial and general manager, has purchased the business of the firm and will carry it on in his own name. Mr. Carter has for many years shouldered the responsibilities of Mr. Hallam's large wool business, and has made many friends among the woolen manufacturers by his unflinching courtesy and fair dealing, so that in continuing the business in his own name he will have the fullest claim to the favor and good will of the firm's old customers.

One of the most brilliant functions that has ever taken place in Sherbrooke society occurred on the evening of the 17th inst., when W. E. Paton, of the Paton Manufacturing Company, and Miss Ethel S. Grundy, daughter of Frank Grundy, general manager of the Quebec Central Railway, were married. The ceremony took place in St. Peter's church, which had been most beautifully decorated by the ladies of the church, and was filled with the invited guests. The Rev. Dr. Dumbell, rector of St. Peter's, officiated. The bridesmaids were Miss Andrea Paton, sister of the groom, and Miss White, daughter of the Hon. Mr. Justice White, Sherbrooke. The groom was supported by Mr. Maurice J. Taylor, of Toronto. The wedding presents numbered about 200, and were magnificent. Among them was a presentation from the employees of the Paton mill, accompanied with an address.

Arthur Whittam, editor of the Textile Excelsior, Charlotte, N.C., has been appointed director of the new textile school which has been established in connection with the Mississippi Agricultural and Mechanical College.

The Brussels carpet weavers, who have been on strike for nearly eight weeks at the Guelph Carpet Company's works, have made a compromise with the firm. All the strikers returned to work under a new arrangement on the 17th inst.

The Thorold Lulp Co., Ltd., has been incorporated to manufacture, buy, sell and deal in wood pulp. Head office, Thorold; capital, \$30,000. Directors of the company, John Brown, Edward Herbert Morris, Elmer Ellsworth and Thomas Hugh Paterson.

On October 13th the employees of the Paton Mfg. Co., Sherbrooke, presented W. E. Paton with an address along with a glass silver mounted decauter, and a set of fish knives and forks, on the occasion of his approaching marriage. The wedding is referred to elsewhere.

James Dickson, while working about a loom in the Hawthorne mill, Carleton Place, had his right arm entangled in the belt somehow, causing a break between the elbow and the shoulder. The aged operative was removed to his home, and the injured limb is now mending nicely.

The Berlin, Ont., Record, reports that the old button machinist, of the J. Y. Shantz & Son Co.'s button works, and works building of that town has been bought by David Gross, will be reconstructed for a new factory. What the new factory will be devoted to is not stated.

A new binder twine company has been organized at Walkerton, Ont., with a capital of \$125,000. The building is being erected and the machinery has been ordered from a New York firm, and is expected to be in running order in December or early in January. Between 40 and 50 men are employed, and the building will be ready for the machinery in a few weeks.

City Clerk Leonard this morning received a communication from W. W. Wilson, of the Dominion Cotton Mills Co., Ltd., calling attention to the fact that the wincey mill has not been used for manufacturing purposes for several years, and on account of half of same being destroyed by fire they are desirous of obtaining a refund of at least a portion of the second instalment, \$227 taxes, on said property. He asks that the matter be attended to at once.—Brantford Courier.

The Toronto Telegram has this to say of the managing director of the Auburn woolen mills, Peterboro: James Kendry, M.P., and mayor of Peterboro, spent yesterday in the city, but political exigencies did not bring him here; it was business, which will always be more important to him than politics. James Kendry is a man who has risen from an ordinary employee to the position of manager of the great Auburn woolen mills in the eastern town. A strong National Policy Conservative, Mr. Kendry supports his party with all the time and energy at his disposal, but knowing ones declare he is anxious to get out of politics and attend to his woolen mill, which can bring him in better results in a day than the letters M.P. would in an entire Parliament. The convention takes place at Peterboro on Saturday, and Mr. Kendry may consent to sacrifice his personal interests and again contest the riding. He is by all odds the only man that the Tories can safely count on holding the constituency in line. Last January, in order to defeat J. B. McWilliams, an able Grit politician, the Tories had to get Kendry into the field in order to squelch the ambitions of McWilliams. Aided by Hon. J. R. Stratton's quiet support, Kendry won, but it was the hardest fight of his life. Kendry had been mayor four times previously, so the job is not new to him.

J. G. Reiner, Wellesley, Ont., is putting in a new twister, winder and cuff machine.

S. Myers & Sons, St. Mary's, Ont., are about to put four broad looms into their woolen mill, to be devoted to tweeds.

The New Toronto Wool Stock Co. are enlarging their plant by putting in another 60-inch garnett machine this month.

The Wm. J. Matheson & Co., Ltd., Foundling street, Montreal, have issued a new sample book of "immedial" brown dyes, manufactured by Leopold, Cassella & Co., Germany, whom they represent in this country.

Harry Leadley, manager of the Toronto Hide Company's Winnipeg branch, has returned to the city from a trip east. While away he visited Montreal, Toronto and other eastern cities. Mr. Leadley went to Toronto for the purpose of being present at the settlement of the affairs of the late John Hallam, head of the Toronto hide company. On behalf of himself and brother, A. Leadley, he submitted an offer for the purchase of the western branch of the business, which was accepted. It is therefore announced that they will hereafter carry on the business here under the name and style of H. & A. Leadley. The change will be received with favor by the trade here.—Winnipeg Commercial.

The village of Elmira having passed the bylaw for a bonus of \$5,000 to the proposed felt factory there, construction of the building has been commenced, and it is hoped that the company will be in a position to turn out goods by January 1st, 1901. The building, which is situated immediately opposite the station, will be of brick, 120 x 50 feet, three stories high. The boiler and engine room will be in a separate building. The stock of the company, which has a capital of \$50,000, is nearly all subscribed by business men of the village. It is expected the company will employ 75 hands. The manager is Aug. J. Kimmel, of Berlin, who has had 15 years' experience in the felt business. The company intend to manufacture felt shoes and slippers, and knitted socks, the former to be of a finer grade than hitherto made in Canada.

Among the candidates in the field for the forthcoming Dominion elections are several gentlemen connected with the textile trades. In North Lanark both candidates are woolen manufacturers. Bennett Rosamond, of the Rosamond Woolen Co., Almonte, who has represented the constituency with so much ability for years, is again a candidate in the Conservative interest, and T. B. Caldwell, of the Clyde woolen mill, Lanark, is out on the Liberal side. James Kendry, the popular present member for Peterboro West (to whom reference is made elsewhere) is again Conservative candidate for that constituency. S. F. McKinnon, Liberal candidate for Halton, is head of the wholesale millinery firm of S. F. McKinnon & Co., Toronto; W. R. Brock, Conservative candidate for Centre Toronto, is head of the drygoods firm of the W. R. Brock Co., and John Flett, running in the Liberal interest in the same constituency, is head of the wholesale fancy dry goods house of the Flett, Lowndes Co. T. E. Kenny, the Conservative standard bearer in Halifax, was head of the Halifax wholesale dry goods firm bearing his name.

Sherbrooke papers record the death there at the residence of Mrs. A. Paton on the 5th inst. of Wm. Drysdale, well-known in the wool trade. Mr. Drysdale had been in failing health for the past three or four years, but since May 24 had been stricken with apoplexy and paralysis. He was born in Tillicoultry, Scotland, 43 years ago, and when a young man went to London and learned the wool business in one of the leading houses there. He had been engaged in the wool business for about twenty years, and until recently was a member of the well-known wool-buying firm of Hick, Martin & Drysdale, with offices in London, England; Melbourne, Australia; Sydney, N.S.W.; and

Dunedin, New Zealand. He was well known in wool-buying circles in Boston, New York and London, England, and although comparatively a young man Mr. Drysdale had established a large business in Europe, the United States and Canada. He married a daughter of the late Mr. Andrew Paton seven years ago, by whom he is survived.

Since purchasing the Elmira Felt Works, Geo. Rumpel, of Berlin has submitted a proposition to the village as follows: Mr. Rumpel asks a loan of \$10,000 of which he proposes to pay back \$1,000 yearly without interest until all is repaid. In return he promises to employ not less than 25 hands for the ten years with an annual pay roll of not less than \$7,000, to put up a new building of a capacity of 75 hands, say 50 men and 25 boys and girls; to invest the said \$10,000 entirely in the plant here within a year from the passing of the necessary bylaw; to give a first mortgage on the new plant as security for the loan. It was further stipulated that \$5,000 of said loan should be paid over to Mr. Rumpel as soon as the new building is under roof, and the remainder when operations have begun in the new building; the assessment on the plant is to remain the same as at present for the ten years, Mr. Rumpel will pay the regular rate of taxes. The Elmira council will submit a bylaw accordingly. If it does not carry it is understood Mr. Rumpel will remove the works to Berlin.

The annual meeting of the Montmorency Cotton Mills Commissioning directors were present: C. R. Whitehead, H. M. Price, John T. Ross, Alex. Pringle, Thos. Pringle and L. G. Craig, party was held at Montmorency on the 15th inst., when the following shareholders: John Dillon, Hon. P. Garneau, Robt. Brodie, Wm. Brodie, Geo. W. Sadler, E. McDougall, G. Lemoine, E. Vadeboncoeur, W. D. Brown, N. Fortier, J. L. Hardy, F. Billingsley, S. H. Dunn, T. A. Piddington, E. W. Methot, L. C. Marcoux, F. G. Daniels, C. R. Whitehead, the president, was in the chair. The report of the year's business was considered satisfactory. The shareholders inspected the whole of the mill, as well as the new buildings, and appeared to be surprised at the size and capacity of the mills. The company have orders in hand for some time ahead, and the future is regarded as bright. The addition to the mills will be equipped with machinery and in full working order by the end of the present year. The new cotton shed is 245 feet long, by over 90 feet wide. The upper stories will also be used for manufacturing purposes.

Valleyfield appears to be drifting into mob rule. Following on the difficulties among the operatives of the Montreal Cotton Co. there some months ago, the workmen engaged on the building of the new additions to the same mill struck the other day, through the Valleyfield Laborers' Union, for higher wages. The company refused the demand, but as the hours of daylight were now getting short, offered to pay full wages for less than the 10 hours work. The strikers declined the offer, and going in a body to a barge where men were unloading cement for the company, forced them to stop work. In the same way they forced the men employed on two dredges working for the company to quit work. A correspondent of the Montreal Witness writing on the 23rd inst., says: "To-day a gang, seemingly organized, twice entered the main premises of the Cotton Company to take out men whom they thought should not work. Another gang entered the sawmill and stopped a lot of men from piling lumber. The authorities have taken no action, though the mayor was warned about the matter. As the case stands at present, these mobs of men can do anything they like in the town of Valleyfield—the town which is looking forward to shortly becoming a city. The saloons are all open, and it is unnecessary to say that, with several hundred men out of employment, the traffic in drink is a big one. It is a great pity that a thing of this kind should happen, as the Montreal

LITERARY NOTES.

Cotton Company was straining every nerve to get the foundations in for the new mill, which was to employ about eight hundred hands." Since the foregoing was written the mayor asked for military protection, and a detachment of the 5th Royal Scots from Montreal went out. On going to the mill they were attacked, while crossing a bridge in the dark, by strikers, and several were wounded. The riotous strikers paraded before the mayor's house, and that functionary and the magistrate disappeared out of the back door, and no one could be found to read the riot act.

FABRIC ITEMS.

The assets of the insolvent Fraser Cap and Fur Mfg. Co., London, Ont., have been sold to U. A. Buchner.

Manchester, Robertson & Allison, St. John, have just completed another addition to their already large warehouse.

Letters patent have been granted the Archibald Co., Ltd., of Truro, N.S., dealers in hats, caps and furs, increasing their capital stock from \$25,000 to \$50,000.

Work has been commenced on a mattress factory at Nelson, B.C. The machinery in the mattress factory at Trail, B.C., will be transferred here.

The stock of the Nova Scotia wool depot, Notre Dame avenue, Winnipeg, has been sold at 65c. on the dollar to W. Rodgers & Co., who have opened a store on Portage avenue.

Geo. D. Sutherland, who died at London, Ont., on the 8th inst., was an old dry goods merchant in that city, and previous to going to London was connected with the late Dundas Cotton Co.

A despatch from Yokohama, dated October 17, states that silk stock in store there up to Sept. 26 amounted to only 23,000 bales, which seriously embarrasses the resources of the producers and commission merchants.

J. H. Hamilton, Deseronto; R. W. Menzie and G. H. Kilmer, Toronto, have been incorporated as the Merchants' Shade Co., Ltd., to manufacture window shades, curtain poles and house furnishings; capital, \$100,000; head office, Toronto.

The bylaw to grant a bonus of \$800 to a whitewear factory at Berlin, Ont., last month, failed to pass. The reason assigned is that the bylaw was in bad company—namely, a bylaw to grant a big bonus to a second electric railway, which was defeated.

Geo. Steele, well-known in the dry goods trade as traveler for the old firm of John Robertson & Son, and afterwards with Robt. Simpson (the wholesale firm), and still later with Wyld, Grasett and Darling, died in Toronto a few days ago from pneumonia.

Crerand's Cloak Journal, New York, says the ladies' cloak and suit business is larger and better developed to-day than at any time in its history. This remark refers, of course, to ready-made goods, which branch of business, along with the men's clothing and furnishing trades, is almost exclusively in the hands of Jewish houses, who understand the business well.

The affairs of Charles Reid & Co., wholesale milliners, are still in litigation. The motion in the Toronto courts in the matter of Reid vs. Block, arising out of differences between the partners in the firm of Charles Reid & Co., was changed from one for an injunction into one for judgment. The judgment declares the partnership existing between Dora Block and Charles Reid dissolved, and refers it to the Master-in-Ordinary, Mr. Hodgins, to appoint a receiver and manager, and to take the accounts and settle the differences between the partners.

Among the special features of the autumn number of *The Warehouseman and Draper*, London, is a large supplement, giving a birdseye view of Huddersfield, while 16 pages of the paper are devoted to a sketch of the beginning and growth of the woolen and other textile manufactures of Huddersfield and its suburbs. This instructive history will interest many Canadian readers.

With its November issue, *The Century Magazine* begins a Year of Romance, during which many of the most famous living writers of fiction will contribute to the magazine short stories, novels, or novelettes. The reception accorded "The Helmet of Navarre," begun in the August number, indicates that the proposed departure will be a popular one, and with such names to conjure with as Rudyard Kipling, Mrs. Burnett, Bret Harte, Lew Wallace, Weir Mitchell, Miss Wilkins, Winston Churchill, Howells, James, Harris, Cable, Stockton, Page, Anstey and Ian Maclaren—to note but these few—the conductors of *The Century* are pretty sure to meet the tastes of all lovers of fiction. *The Century* means to make its November and December numbers the most beautiful issues ever published. Color printing will be largely used. There is only one magazine in the United States with an unblemished reputation and unbroken record of success, and that is *The Century*.

Recent Improvements in Textile Machinery Relating to Weaving, Part II. Philadelphia: E. A. Posselt, Author and Publisher. Price, \$3. This is a continuation of Part I., issued three years ago; giving descriptive illustrations of the construction and operation of the most modern makes of looms, jacquards and card cutting machinery, warpers, dressers, spoolers, etc.; also illustrating and explaining the latest improvements in shuttles, temples, pickers, reeds, heddles, harnesses, etc.; the various subjects being explained with over 600 illustrations. The object of the new book is to keep improved weaving machinery and such machinery as is used in connection with it, up to date before the public. The new book is not a reprint of Part I., but an entirely new book, starting to explain modern weaving machinery, etc., from where Part I. stopped.

The Dominion Commercial Travelers' Association of Montreal has issued a new edition of the admirable pocket hotel guide recently published under its auspices. This handy book gives the name of the city, town or village, the population, the names of the hotels in the place which the association can recommend, also the commercial rates, whether there are charges for baggage and bus, and whether the sample rooms are free, and if not free what rate is charged. The preface sets forth that the essential requirements of the commercial traveler are: Good, wholesome food; clean, warm and well ventilated sleeping rooms; satisfactory sanitary arrangements; proper fire escapes and well lighted and ventilated sample rooms. The reports of travelers who complain that any hotels on the list fail to come up to reasonable requirements will be treated as confidential. It is interesting to note that a number of hotels not on the first list appear in the new book, while a number of hotels, which failed to fulfil the requirements, have been dropped from the list. This is a reasonable method of protecting commercial men from imposition, and if persevered in should do much to raise the standard of hotels throughout the country. The list embraces hotels in every province, but does not yet assume to be complete.

Wm. F. Crerand & Co., 460 West Broadway, New York, publishers of Crerand's Cloak Journal, *The Woman's* and *Infant's Furnisher*, and Crerand's Telegraph Code, have issued a very neat pocket directory of the manufacturers of cloaks.

suits, wrappers, waists, ladies' furs, etc., of the chief manufacturing cities of the United States. The price is 50 cents.

We have received the new catalogue of the American Correspondence School of Textiles, established at New Bedford, Mass., with the object of giving instruction in textile work by mail. It has three departments: Cotton manufacturing, woollen manufacturing and the designing of textile fabrics in all these three branches. Details of the various methods and prices are given in the catalogue, which is mailed free to those interested. The head office is New Bedford, and the director of the school is C. P. Brooks.

WAR OFFICE ORDERS FOR CANADA.

The Globe gives an interesting list of the orders that have been placed in Canada by the British War Office since the outbreak of the Boer war. As textile fabrics make such a large part of the total we give the list in full.

Orders from the Imperial Government filled in Canada during 1900:

8,075 sets of saddlery	\$118,463
5,114 numnahs	16,109
2,000 numnah panels	4,410
30,000 greatcoats	180,180
50,000 pairs trousers, khaki.....	95,020
50,000 serge frocks, khaki	130,725
10,000 tent pin bags	5,460
50 transport waggons	18,375

\$568,742

For the Indian Government, China expedition:

33,675 greatcoats	\$268,341
43,300 pairs long stockings	23,841
29,000 leather moccasins	83,737
1,320 fur caps	3,118

\$379,077

The above are all of Canadian material, manufactured and shipped to Vancouver on October 3rd. Grand total, \$947,819.

Negotiations are going on for the following supplies:

2,200 wooden huts for South Africa	\$2,650,000
110 do. for China	132,000
2,000 tons firewood for China	4,000
300 transport waggons	105,000

\$2,881,000

Tents and boots—Samples have been submitted to the War Office, and large quantities will be required.

There has been also supplied, through the Agriculture Department, hay, oats, jam, etc., to the value of about half a million of dollars.

THE WOOL MARKET.

Montreal.—Since the opening of the Colonial Wool Sales on the 9th inst. there has been a decline on mostly all merino wools, of about 10 per cent.; mediums, no decline; the market is again hardening. The manufacturers here are mostly short of fine wools, and a good many sample lots are being sent out at fair prices. The opinion expressed is that the London Wool Sales will close higher than the last series. Capes, 14½ to 16½c.; Natal, 18½ to 20c.; B.A. washed, 30 to 37½c.

Toronto.—The market is dull, and nearly all of this season's clip is still in the hands of Ontario dealers, who are holding out against further reduction. When the Presidential elections are over a demand is expected to set in from the

United States, and the position of the market here will then be better defined. Quotations nominal are: Supers, 17 to 18c.; extras, 21 to 22c.; fleece, washed, 15 to 16c., unwashed, 9 to 10c.

The Commercial reports prices in Winnipeg at 8 to 8½c. for unwashed fleece, and 12½c. for washed.

The October colonial wool sales opened in London on the 9th. The offerings for the series were 366,000 bales, of which about 80 per cent. were fine wools. There was fair competition, but merinos declined 10 to 15 per cent.; medium crossbreds, 7 to 10 per cent., and coarse crossbreds, unchanged. Owing to the fact that selections offered in London were poor, and that the bulk of the domestic clip is consigned with the stipulation that it be held until after the United States' election, some numbers of the trade believe that the decline in London will have little immediate influence on outside markets.

THE MONTMORENCY COTTON MILLS DIFFICULTY.

The following account of the difficulties between the Montmorency Cotton Mills Company and its employees, which began during the month of August and continued throughout the month of September, has been sent by P. J. Jobin, correspondent of The Labour Gazette for Quebec city and district.

On the 13th of August, 210 employees of the Montmorency cotton mills were notified that after the 27th of that month their services would not be required by the company. August 13th was a Monday, and it is alleged by a number of the employees that on the Tuesday following several of them were summarily dismissed.

A meeting of the Montmorency Assembly of the Knights of Labour, to which many of these employees belonged, was called for Wednesday night, August the 15th, and on that date several more dismissals are alleged to have been made. A resolution was passed at the meeting of the Assembly calling upon all members to quit work in the mill on Thursday, Aug. 16, and on the following morning the mill opened, but owing to lack of hands closed down at noon.

A resolution was also adopted at the meeting on the night of August 15, in which grave charges were brought against the foreman and certain employees of the mills, and the management was called upon to dismiss the persons named. To this the company replied that the Assembly ought to be possessed of positive proof in regard to the charges made, and if they had such they should take legal proceedings. About a week later some of the employees of the factory filed a complaint against the foreman at the police court in Quebec.

During the time the mill remained closed the company's agents succeeded in having a number of families come to Montmorency to work in the mills. About 135 persons were induced to come, most of them being settled formerly in the Lake St. John region, as colonists. The mill reopened on September 3, with these people, but closed down again at noon on the following day. The services of quite a number of the old hands being secured, enabled a new start to be made, and each succeeding day has seen an augmentation of this number. Some of the men and women, upon their return, have signed a document agreeing not to have any connection with any labor organization and to forego all claims for damages against the company should they be instantly dismissed by reason of having joined any such organization. All of the employees, however, have not signed such a document, and some of them have not been requested to do so.

The number of employees in the mill before the difficulty arose, including women and children, was 589. At the end of September, the number of old hands who had returned to work

was 250. The number of old hands who left Montmorency village completely at that date was 116, and the number of hands still out and remaining in the village was 180. The 43 unaccounted for in making up the total of 589, are composed of children too young to be regarded as members of any organization and others who reside in little villages two or three miles from Montmorency, and have secured other temporary or permanent employment elsewhere, and have not reported. The number of new hands who have left their farms elsewhere and come to work in the mills is about 135, as mentioned above. It is quite probable that several of the old hands, who have not as yet been taken back, will leave the village altogether.

The Montmorency Assembly of Knights of Labour was first organized during the month of February of the present year, and on July 1 had a membership of 540. Most of the members were dependent entirely on their daily wages for the means of subsistence, and when the difficulty with the company arose the new organization had no funds to fall back upon. The Labor Unions of Quebec city came to their assistance, so as to furnish them with the necessaries of life while out of employment, and it is estimated that the total amount of money subscribed by the unions for this purpose was nearly \$1,000.

The company's statement of the cause of the difficulty is that was due to the action of certain of the employees in refusing to continue at the work upon which they were engaged. One of the female employees left because an increase in wages was not granted to her. Another female employee, who took her place, is said to have been notified by the Assembly of the Knights of Labour that unless she gave up this place she would be expelled from the organization, and that other members of the organization would refuse to work with her. She sent in her resignation to the organization and remained at work, whereupon others of the employees stated to the management that they would not continue to work if this employee were kept on. When the company refused to dismiss her, the forty others who were working in the same department, left their work, and it is stated that the work being stopped in this department, other branches were crippled, and it was impossible to keep the mill open longer.

WOOLEN MILLS HAVE NO PROTECTION.

To the Editor of Canadian Journal of Fabrics:

Sir,—As you bring before the public the injustice done to manufacturers generally by the present tariff, I draw your attention to the above particularly. First, all machinery used by Canadian woollen mills as established have been subject to a duty of at least 25 per cent., add to that the freight, etc., brings it to 40 per cent. Result, that a mill in Canada for plant alone costs 40 per cent. more than the same plant in Britain. Thus plant in England worth \$100,000, \$5,000 for interest at 5%. Plant in Canada, same machinery, costs \$140,000 at 6% = \$8,400 interest charge against Canadian mill, \$3,400 more per annum. Running expenses and fixed charges are very much heavier. Wages another serious item against them. Boy in England gets 5s. per week, \$1.25; in Canada, \$2.50. Man gets \$1 in England, \$1.40 in Canada for same work. Coal in England, \$2, in Canada \$3, taken at pit mouth. Under our present tariff I claim and am prepared to prove that Canadian mills have no protection whatever at present. Also that Canadian woollens are superior in wearing qualities to any English or German make in goods selling at 50c to 30c. per yard. Now, sir, are our Canadian woollen mills to be closed up and millions of dollars allowed to rust out, and thousands of operatives allowed to drift across the border for the blind ignorance of our present tariff makers, who cry "give the farmer cheap clothes" (which by the way he gets cheaper than his

English cousin and better made—see the emigrants who arrive on our wharves and you can prove it) Let our operatives go and Mr. Farmer will howl for a customer to buy his wool and gram, vegetables, etc. In justice to our woollen mills they require a clear 30 to 33 1/3 protection. Thus I would ask for 50 per cent. tariff, allow the 1-3 off to Britain, and 50 per cent. to be charged on all other countries. Britain is our best customer, and I would give them the 1-3 preferential. What does France, Germany, Russia or any European country buy from us that we should encourage them in selling to us what we can make ourselves. No, let us keep our woollen mills and thousands of skilled operatives in Canada, and build up all our mills of every kind. We can become as great a manufacturing country as our neighbors of the United States if we could only get half a chance. British capital will come pouring into Canada, but not for farming. Oh! no, but for manufacturing woollens, cottons, iron, paper making, etc. Millions will be spent in wages, part of which must go to the farmer for eatables. The more we get into Canada to eat up the farmers' produce the more the farmer will get for his product, for he will have a good home market, which should be his first care, and surplus for export for which he can always get market values. The farmer is not consulting his own interests when he tries to stamp out manufacturers. Trusting you will give this space in your valuable paper, yours truly,

SCOTCH CANADIAN.

—One report estimates that 400,000 bales of cotton will be damaged or destroyed by the recent floods in Texas.

—Henry Malmgren, Box 523, Houston, Texas, writes us: "I am looking for the heirs of Braddock Nyle, who is supposed to have lived in Toronto in 1844. Any information will be received with thanks."

TEXTILE IMPORTS FROM GREAT BRITAIN.

The following are the values in sterling money of the exports of textiles from Great Britain to Canada for Sept., and the nine months ending Sept. of this year as compared with last:

	Month of September.		Nine months to September.	
	1899.	1900.	1899.	1900.
Wool.....	£1,228	£3,193	£14,589	£33,336
Cotton piece-goods	40,688	44,971	412,211	536,269
Jute piece-goods.....	7,320	9,580	87,645	111,583
Linen piece-goods	12,794	13,573	134,361	154,705
Silk lace	1,211	841	12,123	11,965
" articles partly of	4,558	3,708	40,496	45,186
Woolen fabrics	31,953	28,137	259,017	368,188
Worsted fabrics.....	47,494	36,615	447,336	498,397
Carpets	21,730	17,149	156,210	195,023
Apparel and slops.....	33,971	26,549	186,156	221,302
Haberdashery	20,448	12,967	134,993	132,425

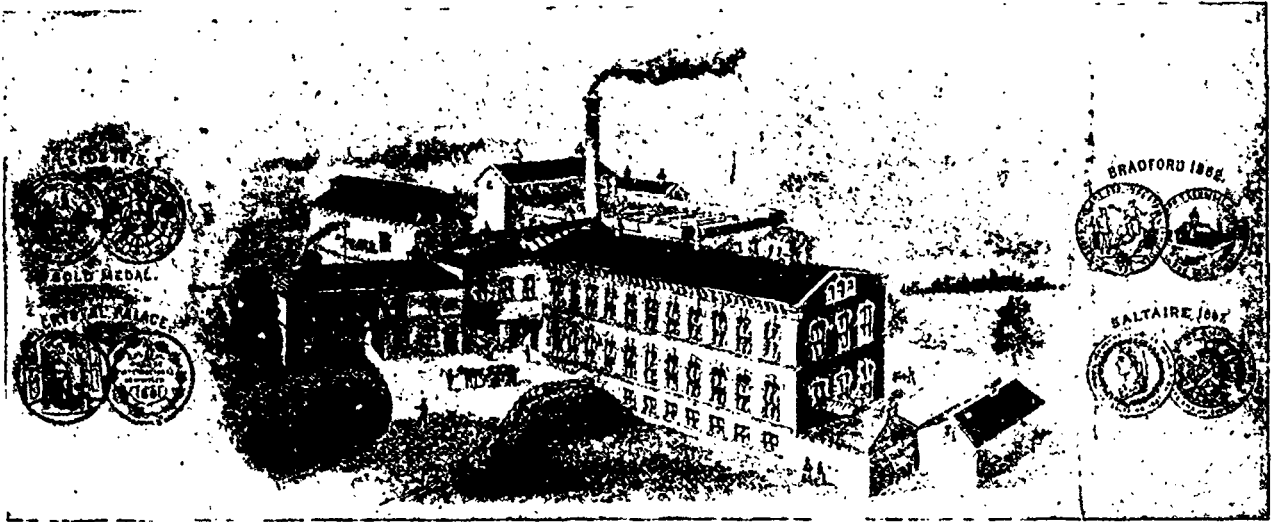
Among British imports from Canada for Sept. 1900, is wood pulp to the amount of £25,546 against £8,530 for Sept. last year. The total shipments of Canadian pulp to Great Britain for the nine months of this year amounted to £160,004 against £117,539 for the like period last year.

TO CAPITALIST.

Wanted capitalist, manufacturer preferred, to start a new line of woollen business in Canada. There is no mill to-day in Canada manufacturing these goods, and a good profitable business is assured. The right man, who thoroughly understands the business, is now in Canada and ready to start a company, acting as manager and superintendent. For full particulars address Box 21, Canadian Journal of Fabrics. 9-3

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for exposed situations.

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—German rubber manufacturers are crying out that their raw materials are too dear in comparison with prices received for finished goods. In other words British and American rubber

goods manufacturers are knocking them out. A Berlin authority reports that the German rubber industry is in bad shape, as the mill-owners are afraid to risk more capital in the business.

<p>No Duty to Pay.</p>	<p>Of the Highest Standard Only.</p>	<p>OLIVER FREE TYPE-BAR, VISIBLE WRITING Typewriter</p>
<p>Free From All Trusts.</p>	<p>IS THE</p>	

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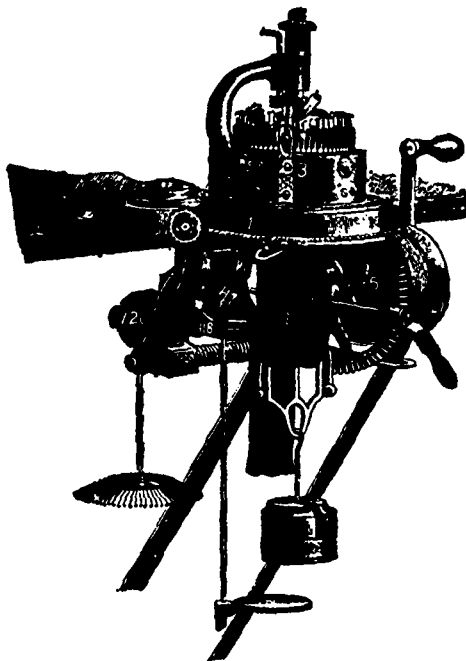
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We have had Success
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Why ?

Merit and Superiority in our Machines tells the story. Catalogue free.

CREELMAN BROS.
Manufacturers
GEORGETOWN, ONTARIO, CAN.

—Chief Justice Armour, in Chambers, dismissed an appeal from the Master-in-Ordinary's ruling that the Toronto General Trusts Company should be struck out as co-defendants in the \$20,000 action brought by the Paton Manufacturing Company, of Sherbrooke, against the L. E. Benjamin estate, and Samuel, Benjamin & Co.

—Female labor in factories in Ontario is just now in such demand that wages have reached high water mark, and in many of the smaller towns, where labor is scarcest, young women can earn from \$6 to \$10 a week. This scarcity of hands is said to be due to the rapid rate at which manufacturers have advanced. The sanitary conditions of factories is also much better than it was a few years ago, and for these reasons many young women are deserting the stores for factories. The Toronto World says that in one factory in Toronto there are two young lady medallists, who earn \$9 a week, and prefer it to store work.

TEXTILE PUBLICATIONS.

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

- Loom Fixing; a handbook for loom fixers working on plain and fancy worsteds and woollens; containing chapters on shuttles and bobbins, and their management; head motion; putting in warps; filling; adjusting and starting new looms; chain building, etc.; 104 pages, by Albert Ainley \$1 00
- Technology of Textile Design; explains the designing for all kinds of fabrics executed on the harness loom, by E. A. Posselt 5 00
- Structure of Fibers, Yarns and Fabrics, the most important work on the structure of cotton, wool, silk, flax, carding, combing, drawing and spinning, as well as calculations for the manufacture of textile fabrics, by E. A. Posselt 5 00
- Textile Machinery Relating to Weaving, the first work of consequence ever published on the construction of modern power looms, by E. A. Posselt..... 3 00
- The Jacquard Machine Analyzed and Explained; explains the various Jacquard machines in use, the tying up of Jacquard harness, card stamping and lacing, and how to make Jacquard designs, by E. A. Posselt..... 3 00
- Textile Calculations; a complete guide to calculations relating to the construction of all kinds of yarns and fabrics, the analysis of cloth, etc., by E. A. Posselt.. 2 00
- Wool Dyeing; an up-to-date book on the subject, by E. A. Posselt 2 00
- Worrall's Directory of Cotton Spinners, Manufacturers, Dyers, Calico-printers and Bleachers of Lancashire, giving the mills of the British cotton district, with

- number of looms and spindles, products of the mills, cable addresses, etc \$2 00
- Woolen and Worsted Loom Fixing. A book for Loom fixers, and all who are interested in the production of plain and fancy worsteds and woollens, by A. Ainley.. \$1 00
- Worrall's Directory of the Textile Trades of Yorkshire, comprising the woolen, worsted, cotton, silk, linen, hemp, carpet, and all other textile mills, giving looms and spindles, and the various lines of goods manufactured, etc \$2 00
- Worrall's Textile Directory of the Manufacturing Districts of Ireland, Scotland, Wales, and the counties of Chester, Derby, Gloucester, Leicester, Nottingham, Worcester, and other centres not included in preceding works, with capacity, products of mills, cable addresses 2 00
- The Wool Carder's Vade-Mecum, by Bramwell; third edition, revised and enlarged; illustrated; 12mo..... 2 50

CHEMICALS AND DYESTUFFS.

Business has improved and enquiries are good for all lines for delivery before close of Navigation. Bleaching Powder is much stronger and higher prices are asked. Sal Soda is also stronger and advanced 5c. per 100 lbs.

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Chlorate of potash	0 13	"	0 15
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Sulphur flour	2 00	"	2 50
Sulphur roll	2 00	"	3 00
Sulphate of copper	6 00	"	6 25
White sugar of lead.....	0 08	"	0 08
Bich. potash.....	0 11	"	0 12
Sumac, Sicily, per ton	75 00	"	80 00
Soda ash, 48° to 58°	1 30	"	1 40
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Castor oil	0 09	"	0 10
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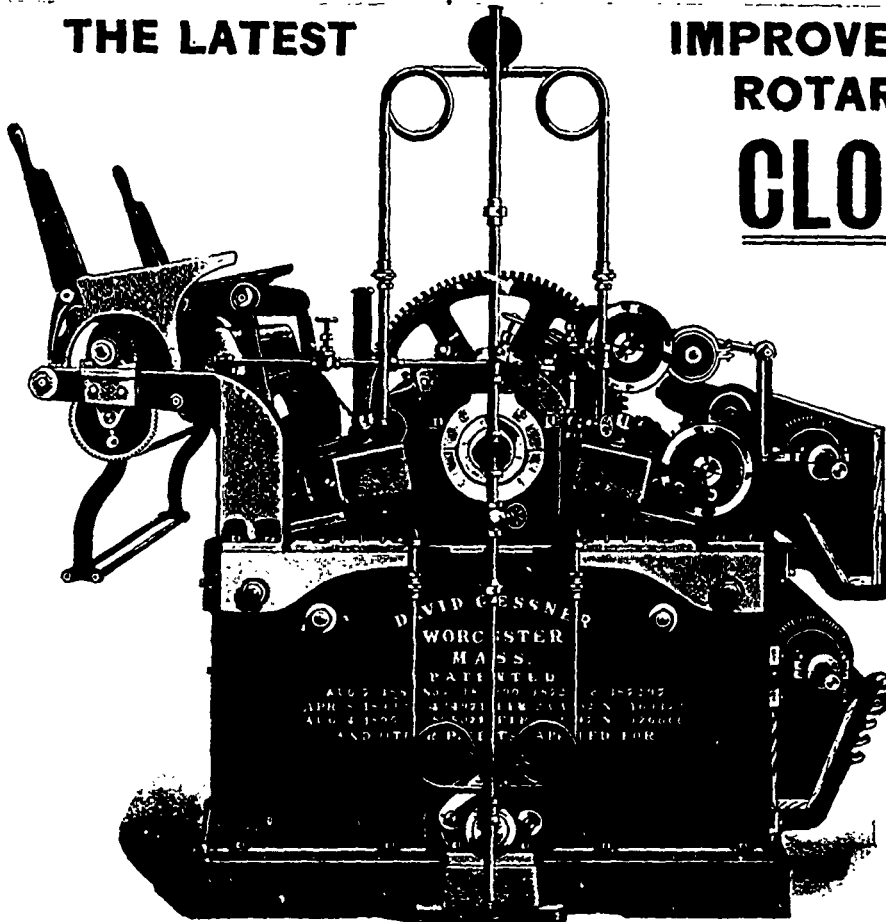
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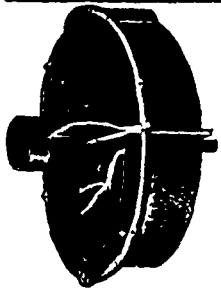
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—The following method of stripping rags with sodium peroxide is contributed to the Dyer and Calico Printer. For 100 lbs. carbonized rags, 100 gallons of water, 2½ lbs. bichromate of soda, 4 pts. sulphuric acid. The rags are entered, and the bath is raised to the boil. In 15 to 30 minutes the operation is complete, and the chrome is easily removed by water rinsing. The rags are now entered in a bath prepared as follows: 100 gals. water, 9 lbs. Epsom salts, 3¼ lbs. sodium peroxide. The sodium peroxide is added slowly with continual stirring to the Epsom salts and water. The rags are left immersed for, say, six hours at 110 deg. F., lifted, and rinsed in acid water. The shade produced is light enough for most re-dyeing work, and it can be further improved by a light soaping. Should a still lighter shade be required, some three hours' immersion in a freshly prepared sodium peroxide bath of exactly the same proportions will give excellent results.

—A recent number of The Lancet contained some remarks on the employment of poisonous dyes for articles of personal wear. Special reference was made to arsenic, which, it is said,

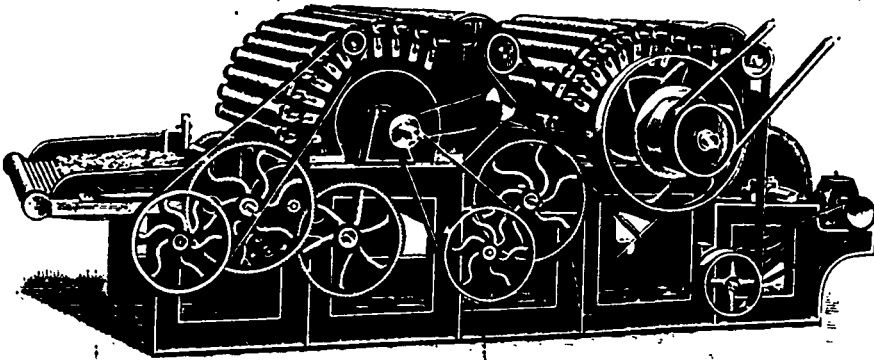
is largely used in colored dress fabrics as a mordant, that is, as a base for the precipitation and fixing of the dyes, and this material, it says, has been found in small quantities in colored fabrics mentioned. It is added, however, that experience based on the examination of some typical dress materials proves that the arsenic can seldom be detected in them even in the minutest quantity. This confirms our own opinion. We believe that the cases of blood poisoning attributed from time to time to the dye in stockings are much more probably the result of the introduction into the system of poison from other sources. The employment of injurious matters in the filling and finishing of fabrics has been almost if not entirely abandoned since the exposure some time ago of their use in the manufacture of flannelles and other fabrics. At all events, we have not heard of any complaints of this kind lately, and we hope if any cases should come to light they will receive prompt publicity. In the meantime our readers may rest satisfied that the flagrant use of arsenic common forty years ago has been entirely given up.—Warehouseman and Draper.

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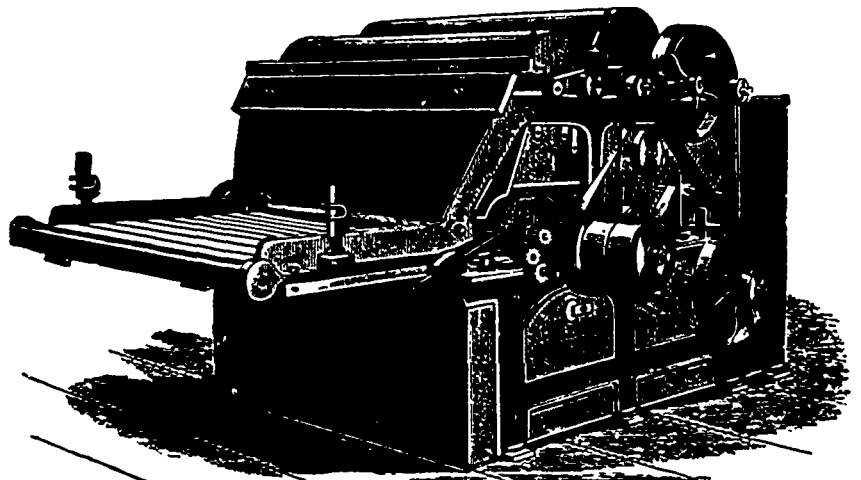


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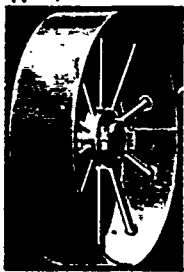


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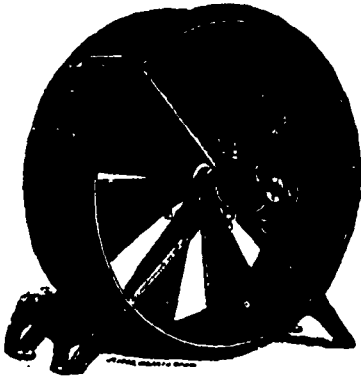


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--The Canadian Journal of Fabrics for August contains a very interesting article on sloyd work, written by W. W. King, classical master of the High School. Mr. King has given considerable attention to this subject, both from its practical and theoretical points of view, and those who take an interest in education in this country will find the article worthy of a careful perusal.—The Owl, Quebec.

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As an example of the information given in the various lists of manufacturers, the following shows the form of report of the Woolen Mills: Name and address of Proprietors, and names of the Officers (if a joint stock company), the capacity in sets of cards, looms and spindles, when established, whether water, steam or electric power, description of goods manufactured, whether the mill has a dye house, and names of selling agents, if any. Corresponding information is

given concerning the other mills, of which the following is a list: Asbestos miners and manufacturers, manufacturers of awnings, bathing (wool and cotton), bedding, binder twine, braids, buttons, caps, carpets (including hand loom weavers), children's wear, cloaks, clothing, collars, cuffs, cordage, corsets, cottons, embroidery, feathers, felts, flags, flax, fringes, furniture, gloves, hair cloth, hats (straw, felt and cloth), haberdashery, horse covers, hosiery, jute goods, lace, ladies' wear, mantles, mats, mattresses, men's furnishings, millinery, mitts, neckwear, oil cloth, oiled clothing, overalls, paper, pulp, pins, print goods, regalia, rope, rubber goods, sails, tents, shirts, shoddy, felt, straw goods, suspenders, tarpaulins, tassels, thread, tow, trusses, linens, umbrellas, upholstery, wadding, water-proof garments, webbings, window shades, worsteds, etc. The woolen mills include the carding mills, manufacturers of tweeds, blankets, flannels, yarns, homespun, and all other piece goods, carpets, felts, and all kinds of knitted fabrics. The cotton mills include all classes of cotton piece goods, yarns, wadding, batting, etc. There is also a complete list of the tanners and curriers, laundries, dyers, dealers in raw wool, furs, etc. Under each heading the whole of Canada and Newfoundland is included.

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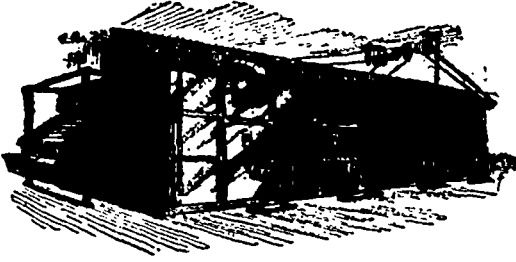
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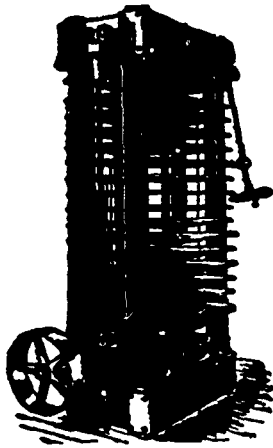
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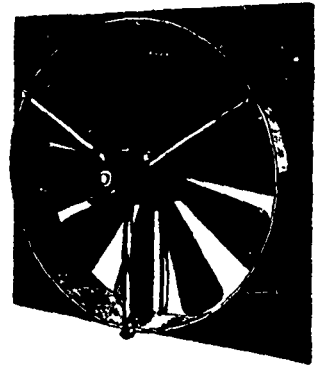
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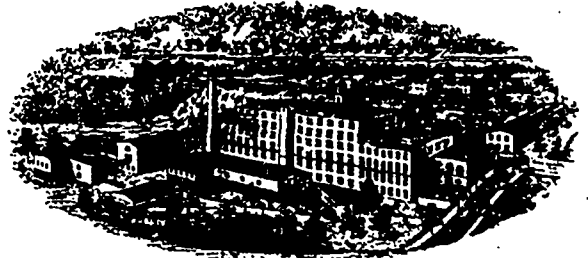
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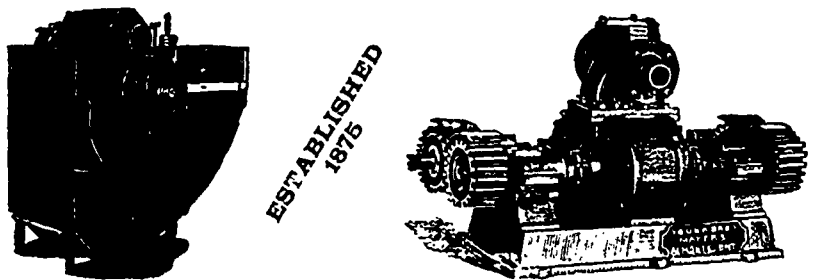
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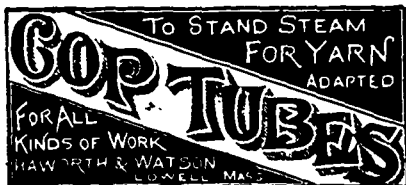
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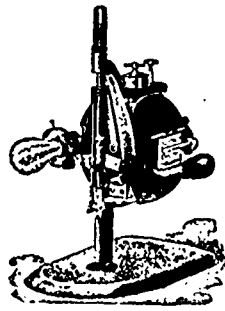
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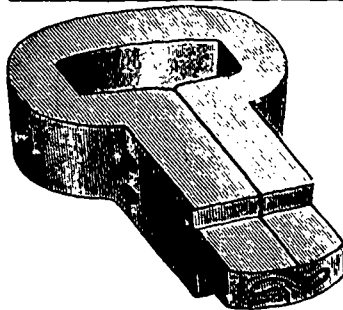
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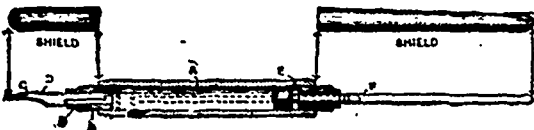
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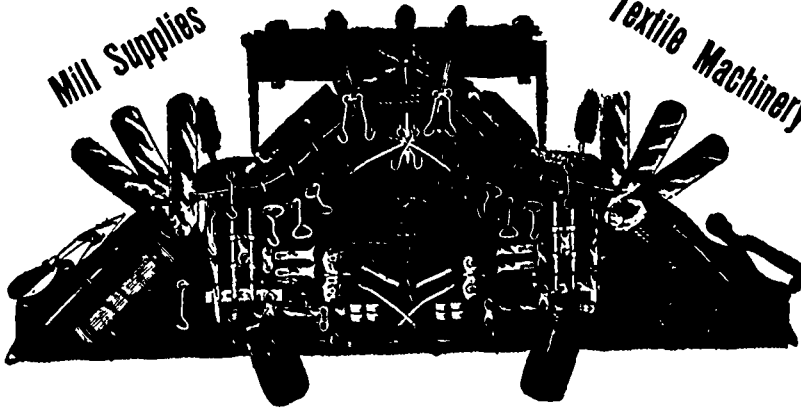
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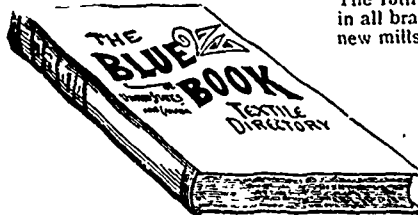
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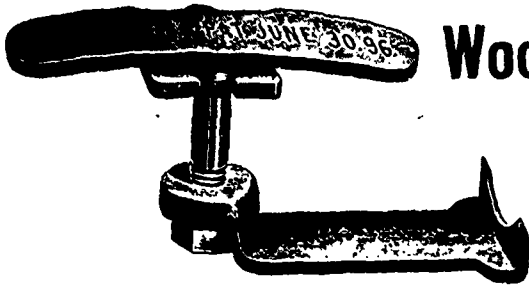
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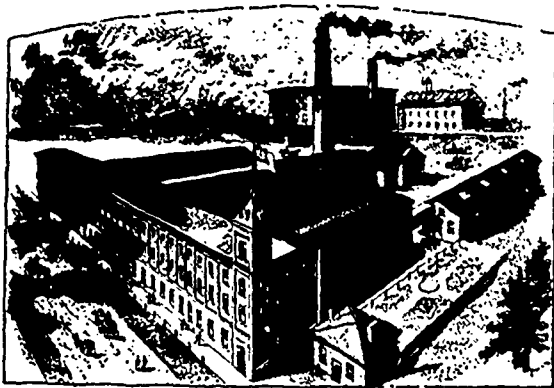
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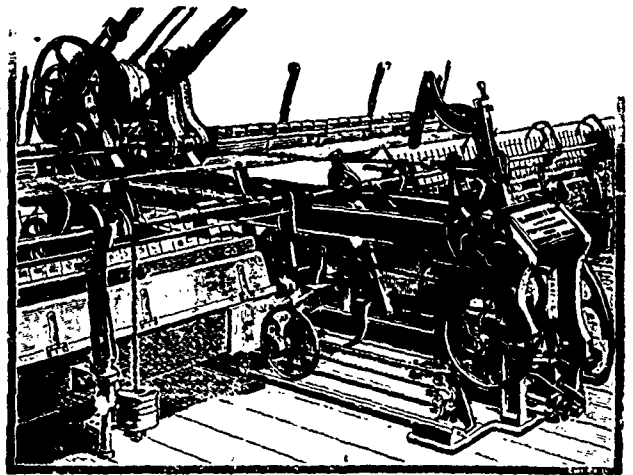
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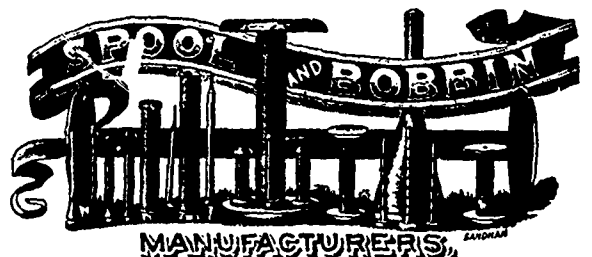
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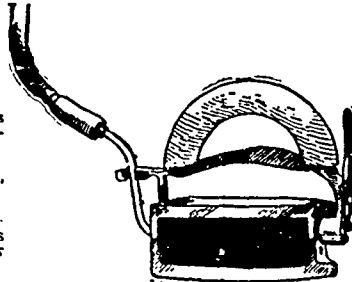
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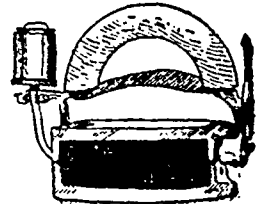
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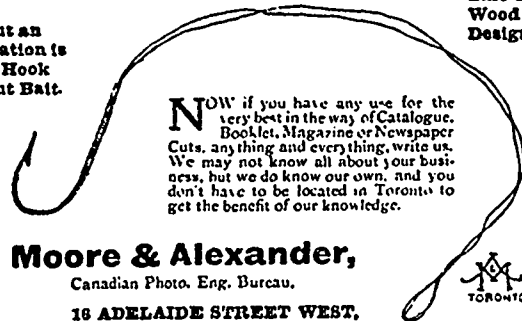
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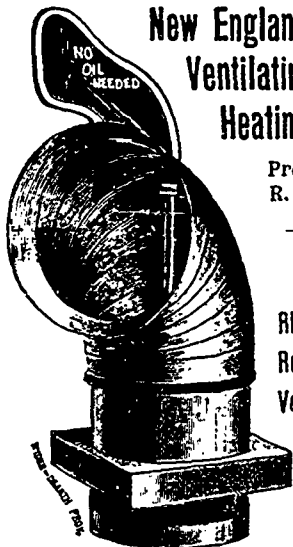
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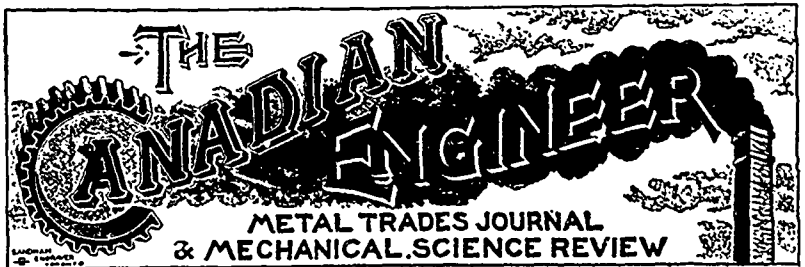
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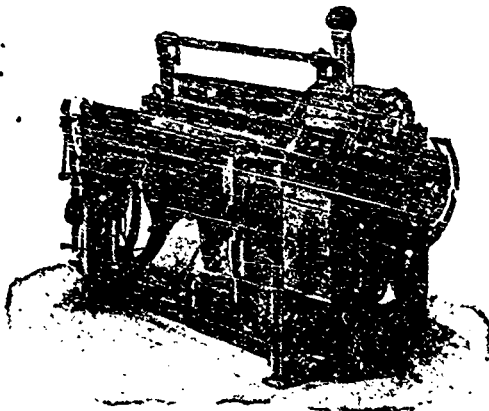
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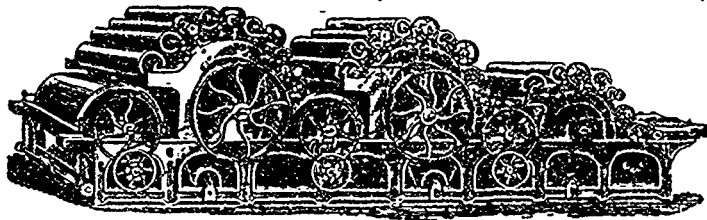
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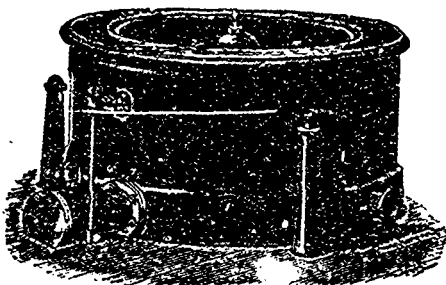
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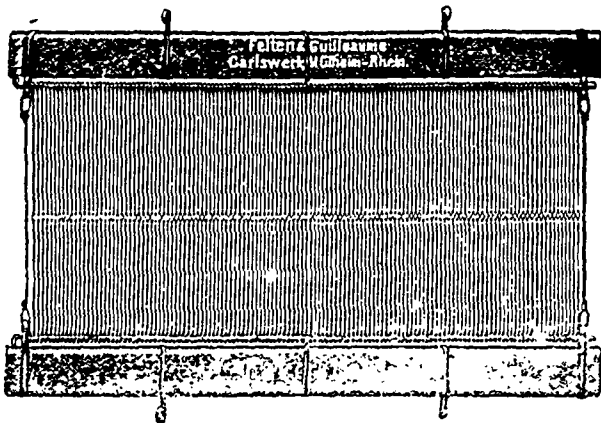
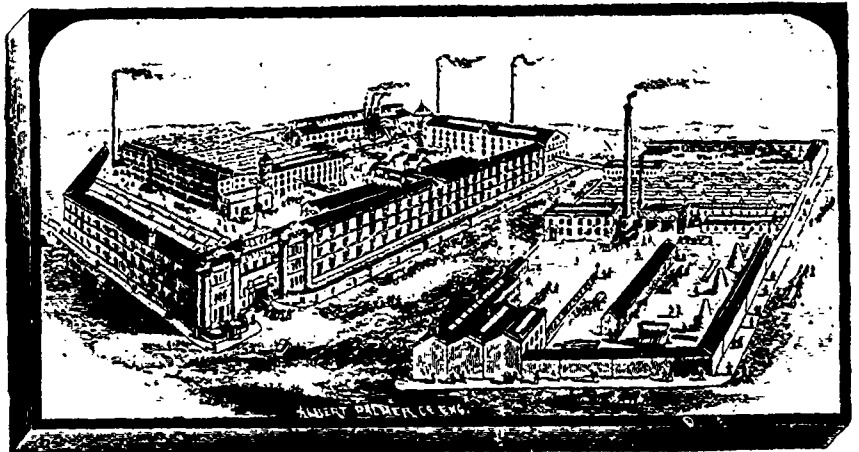
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