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# CANADIAN Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XI.

TORONTO, OCTOBER, 1894

No. 10

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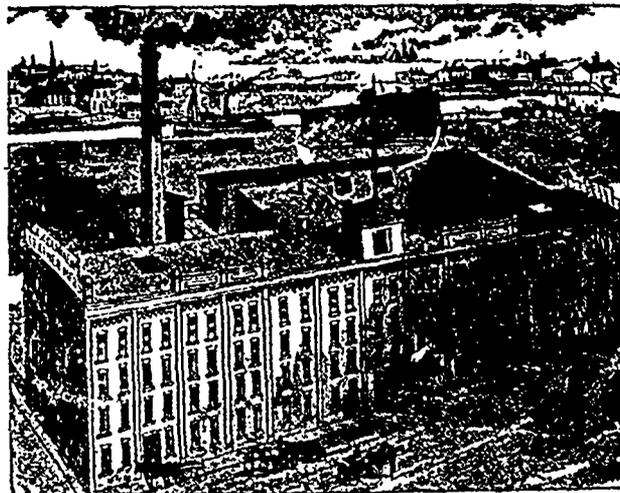
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# CANADIAN Journal of Fabrics

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*Textile Trades of Canada.*

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TORONTO, OCTOBER, 1894

No. 10.

## Canadian Journal of Fabrics

A Journal devoted to Textile manufactures and the  
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Subscription: Canada and United States, \$1.00 per year; Great Britain,  
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NOTE.—All remittances and business correspondence should be addressed  
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### THE CANADIAN TEXTILE DIRECTORY

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### SITUATION OF THE WOOLEN MANUFACTURERS.

During the past month the Canadian woolen mills have been running, but only a few are going up to their full capacity, and while many are complaining of slack orders, all have reason to complain of the prices they get. This is partly due to the keen competition with English and German goods. In the case of the former a large quantity of tweeds and cloths have been unloaded on this market by English houses who have been disappointed in their expectations of doing a boom trade in the United States on the change of tariff. It is true that the prices of English goods have gone up in the past three weeks, but it is not believed here that the rise will be of long duration. But even if prices continue on this present level, English houses will be able to send considerable quantities of goods *in* *the*, while the Germans—adopting the scheme of sending in undervalued goods duty paid—are proving a new source of disturbance to the home manufacturer. The Canadian tweed manufacturers have suffered perhaps more than any other class of our woolen manufacturers, as fashion has run so largely into serges, worsteds and cheviots. Again, the manufacturer has suffered a good deal from the methods of the wholesale trade. To mention one point, eight or ten years ago any of the large mills would scarcely accept an order for less than ten or twelve pieces of a single pattern. Then the wholesale trade got them down to four and five, and at length to one piece of each pattern, while now they demand suit lengths and “ends.” A number of mills, in consequence, have dropped the wholesale houses altogether in the last year,

and sell to the retail trade, and more of the mill owners are considering whether they shall follow their example.

### ELECTRICITY IN MILLS.

George A. Goodwin, president of the Society of Engineers, of London, has an article in the *Textile Recorder*, of Manchester, regarding the economy of electrically driven machinery in mills and factories. “The method of driving factories,” he says, “has, up to the present time, been principally accomplished by the well-known systems of shafting, gearing, cotton ropes, and leather belting, but we are of opinion that the day is not far distant when electricity will become a successful rival to this old-fashioned manner of distributing power. The great losses that occur and are unavoidably present in the first-named system are so important that it becomes a matter of serious interest to those concerned to take note of the constantly increasing application of electricity to such purposes, the use of which tends so materially to diminish the working expenses.”

Such extremely satisfactory results have attended electrical driving in England and on the continent that doubtless many changes of this method of transmission of power will soon be made. One great inherent advantage in using electricity is that the distributing agent, viz., the cables, conveys the power practically without loss and only in strict proportion to the demand, while in the case of mechanical transmission, by shafting, etc., the loss by friction is considerable, being practically a constant quantity, whether full, partial or light work is being done, in many cases amounting to from 20 to 40 per cent. of the power available.

From the intermittent character of the work carried out in factories and workshops, it is well known that frequently only a very small part of the power produced by the engine is actually converted into useful work at the machines. In the present system of mechanical driving, a single accident to the main driving belt, shaft or gear, brings the whole establishment to rest; to obviate this is one of the chief advantages of electric transmission.

A further objection to the old system is the almost insurmountable difficulties of economical extension; for instance, to increase a 500-horse power plant to one of, say, 700 or 800-horse power, would need the almost

complete substitution of new and heavier shafting, etc., to a great increase in the dead load on the structure generally, while with an electric installation little or no radical alteration is required.

In the advocated new system of driving, outside the engines or prime movers (which are neglected as being common to both systems), all the shaftings, gears, belts, bearings, etc., are replaced by simple fixed conductors of very small weight, and by separate motors to each machine or tool; where, however, the power required does not warrant this, a separate motor is used to drive a group of machines from a short line of light shaftings. These shafts or groups of machines can be placed in any position found most convenient for working, regardless of their neighbors.

The nature of electrical generation and dynamo working is such that only a sufficient amount of current required to do the work in hand is used, so its economy is at once obvious. In factories where the machine is working intermittently, and liable to great fluctuations, the economy of working is even more marked, as the electric current can be switched on or off with the greatest ease and rapidity, after which cross belts and fast and loose pulleys appear a heavy and clumsy, not to say unscientific, method of handling power.

In electrical transmission 80 per cent. of the power generated by the engine is usefully employed in the machines, and where each machine can have its own motor, a unique and highly economical method of using power is obtained. It is hardly necessary to point out that no hard or fast law can be laid down; each case must be individually considered, and that system adopted which gives the best results. For old and existing works probably the cost of conversion would seldom be warranted, but for new factories or renovations without doubt the question for electric driving should be most seriously considered.

In these days of fierce competition, and when profits are reduced to their lowest ebb, the careful study of every possible means of economical working is of vital importance to the manufacturer. The use of electricity for driving all kinds of hoisting machinery is extremely satisfactory and most economical, it is easily and instantly controlled, and allows the driver to concentrate the whole of his attention to the work being handled.

For heavy machinery, such as exists in sugar works, electric driving would without doubt be very advantageous in effecting economy, and give great convenience in working, and the facility with which electric lighting could be adopted is also an incidental, but important, advantage to be derived from its use.

Lastly, this system for motive power purposes lends itself most admirably to the subdivision of the motive power engines and dynamos into several units, the consequence being that by this multiplication the chances of total or even serious breakdown are rendered impossible.

Before concluding, we would mention that where factories, or mills, etc., are within a reasonable distance,

say ten miles, of reservoirs, waterfalls, or mountain streams, when water can be relied upon, the motive power could be obtained from them with advantage by generating current at the site, and distributing it to the works on the high-tension system.

#### THE PREPARATION OF WOOLENS FOR THE NEEDLE.

In England, not many years ago, says the *Textile Manufacturer*, the final stage of the finishing process of woolens, aptly called "preparing for the needle," was the work of the tailor or steam-lusterer, but at the present time customers demand an entirely finished cloth from the manufacturer. If it were asked what is meant by "preparing for the needle," and what are the manipulations required to furnish such a cloth, the answer would be that a cloth can only be so designated when it remains unchanged while in the tailor's hands, especially in the operation of ironing with the hot goose, applied upon a piece of wet linen laid over the garment. No artificial lustre produced thereby is permitted, as the cloth would become full of spots.

For the tailor and the steam-lusterer, it was not so difficult formerly to prepare a piece of cloth for the needle, and they did not care how rough and unsightly it became in their hands, as they could easily restore its appearance by ironing. But the case is quite different with the manufacturer. His cloth is sent over the globe, figuratively speaking, and is laid before the foreign as well as the home purchaser, and the goods are perhaps tossed about for months before they are finally disposed of.

In order to impart the above-mentioned characteristics to a cloth, it requires the experience of the skilful finisher, who is obliged to arrange his method of treating it from the very commencement. The greatest difficulties will be presented by a slightly fulled cloth, while others, the felting capacity of which is nearly exhausted, will conform more readily to the treatment. From the grey woven piece to the finished fabric he must proceed with the strictest attention. In the scouring, he must regulate the strength of the liquor to a minimum, and avoid having the pieces run too long in the same folds. A rapid solution of the weaver's size must be followed by a slow rinsing with water. When the pieces are clean they must be removed at once from the washing machine. If they are left in the machine too long, creases which can only be removed with great difficulty are apt to form. Even though they are small and no longer visible after fulling and tentering, they will nevertheless invariably reappear when the cloth is being prepared for the needle, and impart an unfinished appearance to it. Soft cloth is rather less inclined to retain these creases, while hard cheviots should be examined closely, and even if they have only a trace of creases, these should be removed at once.

When the finisher is treating a cloth that is to have a felted surface, and he desires to loosen the nap somewhat before fulling, in order to obtain the desired

effect more fully, and he notices creases, he should not imagine that he can remove them with the teasels. Such a remedy will only make matters worse, because it stands to reason that the higher standing parts are more violently attacked by the teasels than the plain surface. There are different ways of getting rid of the creases caused in the scouring of the cloth, but the best way of all is to avoid having them by washing the piece in the breadth-washing machine—that is, if there is one in the mill. If not, and the finisher finds creases in the cloth under manipulation, let him wrap it, tightly opened out full breadth, upon a wooden roller, and leave it in this condition for twenty-four hours, turning it frequently to keep the water always equally distributed. He may also immerse the roller for eight or ten hours in water that has been heated to a temperature of 145 to 155° F. This treatment will take out creases best. Should the crease be too firmly fixed, it is necessary to first tenter the piece until dry, stretching it as much as possible, after which it is to be wrapped tightly, as above explained, and exposed to the action of the water. The piece while wet may also be steam-lustred.

When the cloth is in the process of milling, the same rules must be observed, taking care that the quality of the cloth is preserved, and that both length and breadth comply with the demands. Steam is the enemy of the fuller, and brings all his shortcomings to light.

Napped and several other kinds of cloth are teaselled. The elegant appearance of the fabric is enhanced by this operation, and it is made softer at the same time. This treatment, according to the quality of the goods, is followed by drying and a treatment in hot water, all of which manipulations are intended to impart the proper degree of smoothness and consistency to the cloth, and in this way do we get the actual foundation for the good "feel" of the cloth. In drying, the cloth is tented only enough to stretch it smooth, because every piece of woollen goods remains in the condition it assumed in drying. To obtain cloth prepared for the needle, it must after drying be thoroughly steamed and opened out above the steaming box or table, so as to reduce it to the length and breadth it had after coming from the mill, after which it is shorn.

For obtaining a firm feel and body, manipulations appropriate to the different kinds of goods are employed. While some cloths are treated with a dry steam-lustring, others are subjected to the wet, and again others to the mixed process. All these manipulations are intended to fix the woollen material in the condition imparted to it. When dry steam-lustring is used, the action of the steam upon the fibres must be fairly strong, because only at a temperature of 212° F., and after a prolonged treatment at this temperature, does it assume the character it will subsequently retain. Wet and mixed steaming require a shorter time for the treatment with steam, because the fibres in a wet condition are much more sensitive to heat, and can therefore easily be burned by careless manipulation.

After this treatment nearly every kind of cloth re-

quires another rinsing with fuller's earth, in order to soften it again and to remove any traces of soap that remained in it after washing, and which might be loosened by the steam. The cloth, which must by this time be smooth and possess a certain finish, is again dried without being drawn out or stretched, then steamed, shorn and pressed either in the cylinder or hydraulic press. The actual preparing for the needle is the next process, which may be performed in various ways according to the nature of the cloth. First of all, it is necessary in this manipulation that it should be thoroughly penetrated by the steam, and opportunity offered to the cloth by free cooling to resume the length and breadth imparted to it in the milling process. The slightly fat-like lustre produced by the pressing has now given way to the handsome natural lustre of the wool. For heavy goods, the steaming table is generally used. The opened-out cloth is conducted over it and permitted to be penetrated by the steam. Light and slightly fulled cloth is wrapped quite loosely upon the steam-lustring cylinder, and steam is admitted until it has penetrated thoroughly. After this the cloth is unwrapped at once, and cooled in an opened-out condition. As the cloth treated in this condition would generally remain "lean" looking, the pieces are entered cold into the press, to improve their appearance. The cloth has now been prepared for the needle, and may be so labelled and shipped from the mill.

Wood pulp is now being used to adulterate woollen yarn. A process has been devised for the manufacture of hosiery, composed of one part of the wood fibre and two parts wool.

SIR JOSEPH RENALS, the new Lord Mayor of London, is a wholesale dry goods man. It may be observed that the dry goods trade and textile manufacturing interests contribute more men to the large public offices depending on popular will than any other trade or profession in Great Britain. Is it because the dry goods men and textile manufacturers are more enterprising and ambitious, or because a greater number are self-made men?

THE following letter to a wholesale firm, which we clip from the *Draper's Record*, will serve to show the length to which "touters" for charitable and other purposes will go in order to get goods for nothing. As our contemporary observes, most of these requests conceal the iron claw under a velvet glove of politeness, but in this case even that is forgotten, and the letter is a very fair specimen of the traditional brigand's command, to "stand and deliver." The letter reads as follows:—"Gentlemen,—Having made an application to you three weeks since, asking either contributions or fringe for my stall at bazaar coming off in Carlow (next month). Not having reply, I will thank you for postcard, consenting or declining. Mr. — will be purchasing his furs, trimmings, &c., &c. Before doing so an answer will oblige Mrs. —." It may be worthy of remark that the purchases of this firm for last year amounted to the large sum of £29 in all.

THE large carpet now being made in the jail at Agra, India, for Queen Victoria, to be used in the Indian room at Osborne, will contain 59,000,000 stitches. The pattern is known as the Poona, being only rarely met with, and having a dark ground on which the device and border are executed in delicate shades of vegetable blues, yellows, browns and greens. It is to be 77 x 40 feet.

THE American carpet manufacturers report a slightly improved trade during the past month, but though prospects are better it is evident the people have not the money they once had. One thing is evident, and that is that even the extreme high tariff men see now that a free wool tariff gives them a better chance than a higher schedule with dutiable wool.

A VERY bright dark green is obtained as follows, viz. : Bottom the wool light blue upon the vat, boil for two hours with 0.72 per cent. potassium bichromate and 0.5 per cent. tartar, and dye upon a fresh bath with 3 per cent. patent blue, 1.5 per cent. anthracene yellow, and 4 to 5 per cent. acetic acid. Enter hand-hot, raise to the boil, and continue boiling for two hours. Take up, add 0.5 per cent. chromium fluoride, re-enter and boil  $\frac{1}{2}$  hour. If a copper boiler is used it is recommendable to hang strips of zinc into the boiler, not only on account of the fluoride, but because patent blue is also very sensitive to copper. Such green dands fulling well, but alkaline soap must be strongly avoided. It can be used for figured goods and mixtures, and is fairly fast to light.

AN English exchange says a strong effort is being made to get the employers of Bolton and North-east Lancashire to join the Master Cotton Spinners' Association. This accomplished, the employers will be able to present to their employees a united front when the further labor troubles that seem impending are upon them. When the last great lock-out took place, a considerable number of the mills kept running, and the people working there supplied the locked-out operatives with means for carrying on the struggle. Obviously this could not have been done had all the employers been of one mind as to the policy to be pursued in the conflict. Then a universal lock-out might have sooner brought the employees to terms, even though at a cost of reproducing the scenes that marred the great cotton famine.

THE New York *Dry Goods Economist* says a New York woman has suggested, and her husband has carried out, a little loom or machine for darning stockings, which adds one more to the many little devices for lessening the labor of the household. It will darn any hole up to two and a-half inches one way and five the other. There is a flat wooden piece that is inserted in the stocking under the space needing darning. Then the loom shuts on over it. The holes should be first surrounded as in darning by hand. A needle threaded with the darning cotton or yarn starts at one corner of the space to be attended to, and the warp is put on to the little loom with this. There are two sets of teeth, just as in a silk or cotton loom, which are worked by a

simple little thumb lever, and the needle thrusts the width of the darn under one set of the threads of the warp. The lever is then pushed down, and the alternate set of threads is lifted for the needle to be passed under again. It is done in remarkably quick time. Anybody can handle it, and the darning is so smooth that no objection can be made to it on the ground of discomfort in wearing.

THE *Textile Manufacturer* of Manchester pays quite a compliment to the progress the Americans are making in the manufacture of textile machinery. It cites the case of the Mason Machine Works of Taunton, whose works cover ten acres of ground, and have a capacity for employing 1,000 men, and who have built 54,000 looms—a number which nearly corresponds to the total number in use in the Preston district of Lancashire. Taking this firm's business as a text, our contemporary proceeds to say: "We think it will be generally admitted in this country that our American cousins are progressing very rapidly in the building of textile machinery of a high degree of merit; and we can scarcely see how it should be otherwise, for they have now been largely engaged in this branch of manufacture for a considerable number of years, and the experience they have gained during that time, and the ideas they have so abundantly copied from our own machine makers, are eminently fitting them out as formidable competitors to the machine-making industry of this country. We should, however, be the very last to say that they progress by copying alone, since it is well known to many on this side the Atlantic that they have discovered and developed some excellent ideas in textile machinery on which we have in many cases been very ready to lay our hands, and others which we have watched with some interest, and which would have been adopted sooner but for the inherent conservatism of our manufacturers. It is too late in the day to deride the efforts of our American cousins, and to point to ourselves as being the providers of the great bulk of textile machinery being used at the present time. Such arguments may do for a time, but it should not be forgotten that vast progress is being made the world over in the utilization of machinery, and that with the continued improvement of machine tools the manual dexterity of artisans is not of so much value in the machine-making industry as it was even some ten years ago. Then so far as America is concerned, it is, we believe, admitted on all hands that they have devised the best labor-saving tools it is possible to produce; and if any one is inclined to cavil at such a statement, we have only to remind him that some of our leading machine makers employ American tools very largely in the actual production of textile machinery. Where the use of labor-saving tools in manufacture is extensive and extending, it is quite clear that those countries, which employ them will be able to manufacture machinery without so much skill being required on the part of the artisan. All this should not be forgotten when comparing the progress of American textile machine building with our own."

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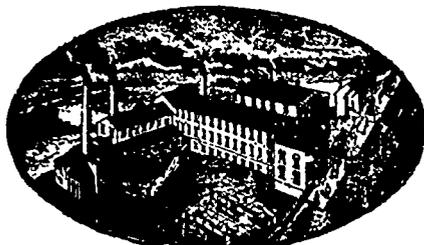
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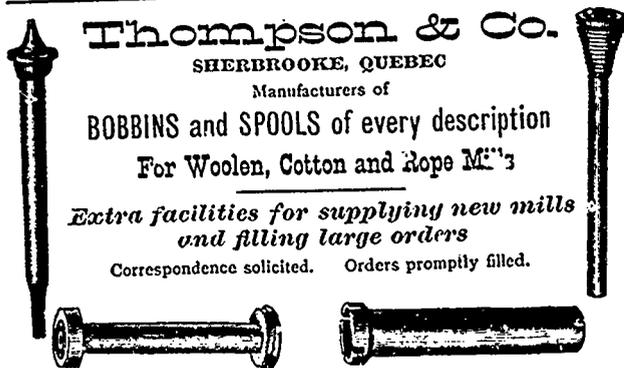
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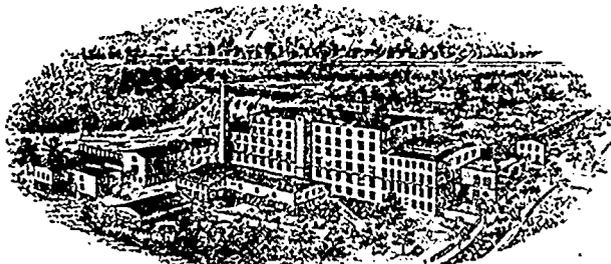
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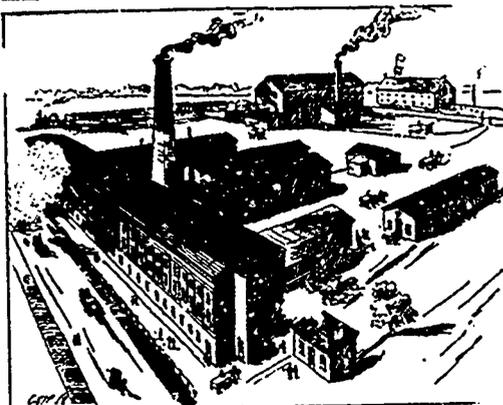
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### WOOL LUBRICANTS AND SOAPS.

Animal hair belongs to the most durable of organic substances. Its resistance to air and humidity is little inferior to that of bone, which is composed of an organic phosphate of lime. Hair, says Dr. A. Leime, contains about 4 per cent. of its weight of fat, which surrounds it as a protecting film, and is the agent to which its durability is principally due. A simple experiment will confirm this assertion. If the fat is taken away from wool, for instance, with ether—which is an excellent solvent for fat—the wool will be destroyed in a short time under the co-operation of air and humidity. Wool owes not only its great durability, but also its suppleness and lustre, to its percentage of fat.

Raw wool, as it comes from the back of the sheep, contains, as is well known, a large quantity of yolk, which is a mixture of cholesterin, cholesterin combinations, sebate of potash, potash and dust, dirt and other impurities. The yolk is removed by washing with water and alkaline fluids, and if this manipulation is not performed with great care the wool also loses a part of the fat required for retaining its suppleness. Still worse is long-continued boiling of the wool in the mordanting liquor, whether of chromate of potash, sulphate of copper, sulphate of iron, etc.; and the same is true of a continued violent boiling in the dyebath. The wool becomes harsh thereby, void of lustre, is difficult to card, and makes an inferior yarn.

The carding of wool is for the purpose of separating the single fibres as much as possible, and to bring them into a parallel position, which is necessary so as to spin them into a thread. This treatment presupposes that the adhesion of the card to the wool fibres is reduced to its utmost extent, so that the wool does not stick to the wires. The cohesion of lubricated wool fibres greatly surpasses their adhesion to the steel wires of the cards. For white and vat blue wool, according to its condition, from 14 to 16 per cent. of the weight of the dry wool of a good lubricant is required. About 10 per cent. may be accepted as the right quantity for wool of other colors. It is evident that most of the lubricant, after it has done its duty in the spinning process, must subsequently be removed again from the wool in a simple and uninjurious manner. In spite of repeated propositions to replace the fats by the much cheaper mineral oils, glycerine, solutions of chloride of magnesium, or other substances, the use of the fats, at least for fine wools, has in no wise diminished. None of these substitutes possess all the advantages of the fats, while many cause great mischief.

All vegetable and animal fats are very nearly related one to the other. They are all glycerines—that is, combinations of the fatty acids with glycerine. When a fat is heated with a solution of caustic soda, it is decomposed into a soluble sebate of soda—that is, soap and glycerine. On the other hand, fats may be reconverted artificially from glycerine and fatty acids. Ordinary soda—that is, carbonate of soda—only produces an emulsion with the fats, which remain unaltered, and

are present in an extremely finely-divided condition in the soda solution. When, for instance, wool is lubricated with olive oil and then treated with soda solution of 2° B., an emulsion is produced, but the olive oil is not, as is often erroneously believed, really saponified. The emulsion of the oil, however, can be removed almost completely out of the cloth in the scouring operation, as a fine, durable emulsion behaves very much like a solution.

The fats are, at ordinary temperature, say from 60° to 70° F., of a very varying consistency. Fluidity of a lubricant, however, doubtless stands in direct relation to the suppleness which it imparts to the wool fibre, and for this reason is a pure olive oil preferable to cotton-seed oil. Another very important characteristic of the fats is their behavior towards the air. As regards this point, the same demand must be made of a good wool lubricant that is made of a machine oil—namely, its power to resist the action of the air. It is well known that the action of the air upon oxidizable substances increases in intensity with the fineness of their division and this takes place in a high degree with lubricated wool.

The fat oils are classified into drying oils, such as linseed, poppy, etc., and non-drying, such as cotton-seed, rape seed, and others. Recent investigations have shown that this classification cannot be carried out strictly. Livache exposed weighed quantities of different oils under equal conditions for two years to the action of the air. After a year rape oil had increased in weight 5.8 per cent., and it congealed and stuck to the fingers. Peanut oil increased 5.7 per cent. and became thick. Olive oil increased 5.3 per cent., and thickened in like manner, while cotton-seed oil increased 6.3 per cent., and became dry. Rape oil, hitherto considered a non-drying oil, had become dry in a year. This drying is more quickly noticeable when the oils are distributed upon the wool, and especially when the action of the air is augmented by heat.

In most intimate connection with the drying of the oils, which phenomenon is to be ascribed to the absorption of oxygen, stands the dreaded spontaneous combustion of the material lubricated with them. Tatlock made numerous experiments on this point, and concluded that the required increase of temperature is caused by the absorption of oxygen by the oils, which increases oxidation, and this in turn causes an increase in heat until the degree of self-ignition of the lubricated material is reached. To prevent the self-ignition of lubricated wool or yarn, the first great care is to store them in a cool place, not packed too tightly; and second, that they are lubricated with pure olive oil or oleine, avoiding at the same time too much water.

It is remarkable that the views on the use of mineral oils for lubricating wool are still divided. Mineral oils, both in their composition and chemical behavior, have no resemblance whatever to fat oils. They are not like the latter, glycerides of fatty acids, but so-called

hydrocarbons, which, according to their names, only contain hydrogen and carbon, while the fats, besides these two elements, also contain oxygen. Mineral oils can form no soaps—that is, no soluble combinations with potash or soda. They are insoluble in cold as well as in boiling potash or soda lye. When a mixture of five grammes olive oil and five grammes mineral oil is boiled for some time with soda lye, and the product dried or extracted with ether, the same amount of mineral oil originally used is obtained unaltered after the dissipation of the ether, while the soda soap formed by the olive oil is not dissolved by the ether. It is therefore out of the question to speak of dissolving mineral oil, or of saponifying it by alkalies. And still there are well authenticated cases where wool lubricated with mineral oil was almost completely freed from it again. But this is not based upon the solution, but upon another property of the mineral oils. The results of exhaustive inquiries into the subject were made and published two years ago by A. Scheurer.

Cotton, as is well known, must be scoured before bleaching. Besides the natural fat contained in the fibre, A. Scheurer also tested the fats used in cotton spinning and weaving in regard to their saponification. He found that a mixture of equal parts of olive oil and mineral oil can readily and thoroughly be removed. The olive oil is saponified while the mineral oil is removed together with the soap in the form of an emulsion. An actual saponification or a chemical alteration of the mineral oil does not take place.

I have lubricated wool with 12 per cent. mineral oil, carded it by hand, thoroughly fulling it with soap and soda solution, then washed it well with clean water, dried it and examined it for mineral oil. Similar experiments were also made with resin oil and oleine. The results showed that of the mineral oil the sixth part, of resin oil the seventh part, and of oleine only the thirty-second part of the original quantity used remained in the wool. The probability is, therefore, very great that some of the mineral or resin oil always remains in the wool, thereby causing great mischief in the dye-house and taking lustre and feel from the cloth.

Whether a pure oleine or olive oil is preferred for lubricating, it will be advantageous under all circumstances if the air or the fluids which come into contact with the lubricated wool are not less than 60°. For instance, when pieces of cloth, after fulling them, have been kept in a cold room, the scouring or washing of the fats and other impurities takes place with far greater difficulty than when the congealing of the dirt has been prevented. Care must also be taken not to have the wash water too cold.

To reiterate the demands made of a good wool lubricant, there should be, first, a complete and easy saponification; second, fluidity at 50° F.; third, the capacity of forming fine emulsions with soda and soap solution; and fourth, the absence of mineral acid, which in time destroys belts, leather and cards.

The different kinds of soap used in the textile industry will now be considered. The same remarks

about lubricants also apply to the soaps. Use only the best—that is, the purest kinds. Of what use is it to give great attention to secure a good quality of lubricant if an inferior, unclean soap is used for fulling, supplying the wool with impurities in place of removing them? A soap must consist only of pure fat, easily saponified. The final product will be of the nature of the final detergent. Soaps which contain considerable quantities of free alkalies, resin soaps, unsaponifiable matter, such as resin oil and mineral oil, filling agents, flour, silicate of soda, etc., are entirely objectionable.

The purest soap, but at the same time the costliest, is the Castile soap. It contains on an average only 30 per cent. of water and 70 per cent. of soap, and is almost neutral—that is, free from essential quantities of unsaponifiable fat or excessive alkalies. Good Castile soap is of a white, homogeneous body, and dissolves without residue in hot alcohol. As stated, it possesses no excess of soda lye, in consequence of which it does not attack the wool fibres. Castile soap, on account of its high price, is used only for silk and washing very fine woolen yarn.

The action of soap is based upon the chemical and physical characteristics of its solution. The chemical solution is due to the fact that soap, therefore neutral sebate of alkali, if dissolved in a large quantity of water, undergoes a partial decomposition, whereby bisebate of alkali and a free corrosive alkali are formed, the energetic, dirt dissolving, cleansing nature of which is well known to us all. The physical action of a soap solution is that it wets yarn and material very rapidly, thereby displacing the air. While it penetrates into the wool fibre with great avidity, it loosens its combination with the fatty and other bodies, and keeps them in emulsion or suspension, so that in the washing they are rinsed away with the soap.

In the fulling operation soap not only acts as a detergent, but makes the wool fibres soft and plastic. The mechanical pressure of the fulling causes the single wool fibres to draw together closely and to interlace, and this capacity of the fibres is still further increased by the heat developed by the friction. When the fulling operation is ended and the soap washed out, and the condition to which the single fibre owes its great capacity of conforming is reached, the fibre remains in its lately assumed position.

#### ANCIENT FABRICS.

European museums contain many examples of ancient weaving, of great antiquity, the preservation of which has been due to exceptional circumstances. Some have been kept from atmospheric influences in the relic chests of our churches; others have reposed for many centuries in the soil of Egypt and Persia. In their new homes these wonderful specimens of ancient art and textile dexterity are gradually decaying, and there is reason to believe that before long they will crumble into dust. Later generations will therefore know of them only from books and engravings, unless special measures be taken to produce duplicates. A

German writer informs us that a manufacturer at Crefeld, having been deeply impressed by these considerations, has accordingly essayed to reproduce one of these curious and precious monuments of the past on modern looms and with the help of modern appliances. The stuff he has selected is a beautiful silk fabric representing two Persian kings hunting lions. In the spaces between the circles is a conventional flowering tree, perhaps the Tree of Life, such as the old Assyrians used to depict on their textile products. The originals (one of which is at present in the Royal Kunstgewerbe Museum, at Berlin, and the other in the treasury of the Church of St. Servatius, at Maestricht) date from the sixth century of the Christian era, and were most probably woven in Persia, which was at that time ruled by the Sassanian dynasty. Those who are at all familiar with the technique of weaving will easily form some idea of the difficulties attendant on such an achievement as this, and the many slow and costly preparations which were necessary. In the first place, the design—which is in some places not clearly visible, and in some old publications had not been exactly reproduced—had to be ascertained as closely as possible by direct examination of the comparatively small and very brittle original. The pattern (that is, the design), when transferred to finely squared paper, had a magnitude of 1.24 cubic metres, and exhibited 1,026,666 small squares, each of which was painted. The production of the stuff necessitated two jacquard machines, which together required 8,800 jacquard cards, with 1,934,800 holes.

All the colors were laid on with the utmost precision attainable by modern methods of dyeing. Not only was all weighting of the silk carefully avoided, but, on the contrary, the silk was as far as possible freed from the so called bast by boiling, in order to make it capable of receiving dyes compounded according to ancient methods. These colors, it may be observed in passing, insure (as far as can be judged) the long continuance of the splendid and brilliant appearance which the fabric now presents. The figures of the original have been reproduced, we are assured, with photographic fidelity. The expression on the features of each of the two mounted figures and many details in the horses and lions agree to a really wonderful extent with the original representation. The enormous labor demanded by this reproduction increases our admiration of those forgotten artists who, 1400 years ago, created the magnificent original with far simpler looms and more limited resources. Little did they imagine that their labors would stimulate artists and weavers in far distant lands after almost a millennium and a-half. The manufacturer to whom this reproduction is owing found his perseverance and technical skill—which is of no mean order—tested to the utmost; and the expense has, of course, been not inconsiderable. It is to be hoped that this effort may only be the first of a series of faithful reproductions of those masterpieces of textile art which will soon be memories of the past.

THE Indian silk production, which is principally confined to Bengal, though in a declining state, is still very considerable. The total production of raw silk in the province is estimated to be about  $3\frac{1}{2}$  million lbs., of which about 500,000 lbs. are exported to foreign countries; 800,000 lbs. utilized in the province for manufacturing piece goods; 250,000 lbs. transported coastwise to other provinces; and 2,000,000 lbs. conveyed to other provinces by road, river and rail. The total value of the production is said to be about  $2\frac{1}{2}$  crores of rupees. The decline in the silk trade has been principally in the export trade and in the manufacturing industry.

DAMASCUS, the oldest city in the world, was famous hundreds of years before the birth of Christ for its textiles: but modern machinery is at last breaking up the old conditions of industry in the ancient city. The French Consul there says the weaving industry, which used to be so flourishing in Damascus, has long since lost its importance and its renown. Ten years ago 20,000 workmen were still employed in the workshops; at present there are not more than 12,000 workmen and 2,000 looms. As to the magnificent textures which formerly made the reputation of Damascus, and took their name from that of the city, they now exist only in imitations made in Europe. The decay of the industry in Damascus is attributed to the progression of European industry, the products of which are every day more and more sought after on account of their quality and their price; to the rivalry of certain towns of Egypt and Turkey, which now manufacture the textiles which Damascus used to send to them; and to the substitution of the European costume for the Oriental, which is now but very little used by the wealthy classes.

WOOL CRAPE is manufactured in the grey condition. The rigidity of the thread is maintained by means of the size put in. As soon as this latter is removed by a solvent, the craping takes place. The operations are carried out in the following manner:—The pieces are singed, brushed, and run through tepid water for ten minutes. This causes the greater part of the size to dissolve, and the pieces shrink about one-third in breadth. They are then passed through boiling water for fifteen or twenty minutes. This operation constitutes the craping proper. Eight pieces of from 80 to 100 yards each are treated at a time. The treatment is finished by washing in cold water, hydro-extracting, and drying. This process furnishes a very good crape, and dispenses with the use of any acid or metallic salt. The preservation of the relief requires the observation of certain manipulations in the subsequent operations. The drying is effected by simple hanging, so as to avoid stretching as much as possible. For widening the pieces it suffices to give them a slight finish of gum dragon and to dry on fixed frames. This process has been used by the firm of Koechlin Brothers for several years, and has always given good results. For cotton crape the same process may be used.

THE report issued by J. and P. Coats, the thread firm, for the past year, shows that, without including the profits accruing to the company from its shares in other concerns, a net profit to the amount of £540,300 is shown. A dividend of 8 per cent. is made on the ordinary shares, and a preference dividend of £70,000 beside, while £200,000 is carried forward to the reserve fund, which now reaches the total of £650,000. The great thread combine punish their rivals by the most cruel cutting of prices in Canada, but they evidently take it well out of the rest of the world.

### CANADIAN TWEEDS

The following are the views of a writer in *The Monetary Times* on the present situation of the Canadian woolen mills: "An industry which has reached such proportions in Canada as the making of woolen tweeds, one which has given us so much satisfaction in the past, and has done so much for our reputation in other countries as manufacturers, is important enough, surely, to demand attention from those who are interested in its welfare. We are told by different persons in more than one city and town that conditions of manufacture and sale of Canadian tweeds are not at the present time satisfactory. And the tone of the trade, as well as the quality of the product, is being sapped. It appears to be, unfortunately, the case that Canadian manufacturers of tweeds have yielded too much to the pressure brought to bear by the wholesale buyers in reducing prices. The coaxing or the pressure resorted to by wholesale houses, after a good season with a certain line of tweeds, to get a mill to make 'the same goods at ten cents less in price,' has led to the adulteration of the fabric. The consequence is that qualities have been reduced, thereby seriously affecting the reputation of Canadian tweeds as compared with imported goods. There is, we are told, a feeling throughout the trade generally, nowadays, that to get a good piece of tweed it is necessary to look to imported goods. While we do not admit this, we must express the opinion that if more attention had been paid by Canadian mills to improving designs and keeping abreast of the times in styles and finish, instead of reducing prices and qualities to please grasping jobbers, much better results might have been attained. The best designs have been prostituted by being used for the cheapest class of goods, instead of being reserved for the best qualities, and the result has been that the designs in low-priced goods are in many cases ahead of those put into the better class fabrics. It is true that some Canadian mills still continue to produce a good quality of goods, but these, generally, are far behind the demands of the market in their designs, and the quality has therefore to be sacrificed because more attractive designs found in inferior goods are more marketable. Surely in a matter of such vital importance as design, no niggardly policy should prevail.

"Another matter that militates at times against the sale of Canadian tweeds, especially during a season of depression like the present, is the fact that consumers resort to the use largely of such goods as plain English serges and vicunas, they being more suitable in point of economy for general purpose suits.

"Further, the Canadian manufacturer of tweed is at a disadvantage in that the British makers, in their determination to secure all possible trade going, offer either directly or through commission men, their ranges of samples to buyers who are not obliged to place their orders until they have canvassed the retail market and in turn secured their customers, thereby reducing their risk in the matter of carrying stock to a minimum. Besides this, it has become a truism that the nearer the market the smaller the profit, which applies to both wholesale and retail men. Consequently a larger profit is confidently asked on imported goods and readily obtained. These latter facts bear more particularly on the wholesale woolen trade. Clothing manufacturers are as a rule compelled to buy Canadian goods on account of their better values even

though their design and finish might be improved, and the fact of their being used so extensively by clothing makers has interfered with the handling of them by the wholesale woolen trade.

"These facts are apparent to any shrewd and competent observer; the remedy is a question for careful consideration, and one difficult to solve. One source of remedy does, it is true suggest itself, the securing of an export trade. Are the markets of the United States under the revised tariff, the West Indies and even the United Kingdom, not accessible? For our own market a change certainly needs to be made in the matter of following more closely or else independently rivalling latest designs of the European producers, the value of whose goods can undoubtedly be competed against by our Canadian makers. It appears to be one of the anomalies which discredit the distributing trade of this country that for years the complaint has been chronic that there was 'no profit in handling Canadian tweeds.' In the name of common sense, whose fault was it? The fault of the mills that over-produced, and the houses that over-ordered and then childishly proceeded to undersell each other, jobbing by the hundred or the thousand pieces under cost. And now when the mills, so far as we can make out, are trying to be prudent and economical in their output, they are bullied or wheedled by the middlemen into accepting prices for orders at which they cannot make honest goods."

### THE COTTON INDUSTRY OF JAPAN.

The textile industries of Japan and China are of more than ordinary interest to us just now, and a report just furnished to the London Chamber of Commerce regarding cotton in Japan throws much light on one branch of the subject. From this it appears that Japan is eminently in a position to take advantage of the acute condition of affairs now reached, for she has an unlimited command of good and intelligent labor at very low rates of wages, and her supply of coal is ample for her own needs, as well as for export. Consequently, with her industries protected by the low exchange, Japan is becoming a great manufacturing country, and is rapidly advancing to a position of marked prominence in many of the branches of eastern trade. Cotton yarns have been, and still are, among the principal imports from England and British India to the far east, but Japanese spinnings are rapidly growing in favor, not only in Japan but also in China, and we think it probable that, if the silver exchanges remain depressed, as at present, these markets will, at no distant date, be closed to all yarns save those of their own manufacture.

The following figures are given as to the rise and progress of the cotton-spinning industry in Japan. "The first mill was erected in the year 1863, with 5,456 spindles, by the end of 1883 this had been increased to sixteen mills, with 43,704 spindles, by the end of 1888, to twenty-four mills, with 88,140 spindles, by the end of 1892, to thirty-nine mills, with 403,314 spindles. The official returns for 1893 are not yet issued, and cannot, therefore, be given, but it is believed that there are now forty-six mills in existence, running about 600,000 spindles. There is the prospect of an even more rapid increase in the near future, as it is known that large orders have been placed for more cotton-spinning machinery (some intended for yarns of the finer qualities), and it is probable that in the next session of the Japanese Diet the export duty on cotton yarns will be removed, the bill having passed the House of Representatives last session, while strong efforts are being made to obtain the abolition of the import duty on raw cotton as well."

The memorial also states that "there is to be noted a great increase in the import of raw cotton generally, but we anticipate that, if exchange with America remains at a very low level and the rupee continues to be held above its bullion value, China will eventually furnish to Japan all the cotton she needs, except such staple as cannot be grown on Chinese soil. In evidence of this possibility, the import of raw cotton from China to Japan has increased from 61,328,021 pounds in 1891 to 95,115,180 pounds in 1893, and is capable of practically unlimited development."

The American Consul-General in Japan supplements this information by further facts. He states: "I am informed that the number of cotton spindles in operation in the mills of Japan before the

end of this year will undoubtedly be between 800,000 and 1,000,000. The manufacture of cotton fabrics is one of the largest industries of Japan, and, I believe, is growing more than any other. Let me, as an evidence of the truth of this assumption, call attention to the fact that, though the last session of the Imperial Diet (national legislature) was very short, this cotton-fabric industry was considered of such importance that the import duty which the Imperial Government collects on raw cotton was remitted. After July 1st, 1894, raw cotton will be admitted free of duty, and this in the face of the fact that, under the treaties in force, the government is prohibited from collecting more than 5 per cent duty on any article, and its revenues from import taxes are consequently extremely limited. Raw cotton, other than American, is bought for manufacturing purposes in Egypt, India and China. In the manufacture of the fabric, I am informed a certain proportion of the raw cotton, varying according to the grade of the goods to be turned out from 30 to 55 per cent, must be long-staple cotton. The Indian and Chinese cottons are short staple. The Egyptian is a very long staple—too long to be used in the ordinary spinning machinery without preparation in another and a special machine. The production of Egyptian cotton is limited, and the wholesale price is from 15 to 20 per cent higher than that of our cotton."

Japanese manufacturers are each year improving the grade of their cotton fabrics, and are thus demanding a larger proportion of our cotton which is the only long staple cotton that can be used in their machines economically yet by far the greater proportion of this large supply of American cotton is purchased in Liverpool and London, only a small portion of it being imported from our ports. The supposed explanation of this peculiar condition is that ocean freights from England to Japan are much less than combined railway and ocean freights from an inland point to Japan.

Within very recent years Japan, realizing that she has a population fitted for the acquirement of skill in the technical manufacturing arts, and that such labor can be obtained here at a lower price than in any other country, has evidenced her determination

to manufacture, not only for internal consumption, but for a broader market, and is beginning to demand raw material. She is aided in this undertaking by the fact that there is no protection of foreign patents, and, her artisans being quick to imitate, she can successfully copy the best mechanical appliances of the countries of the globe, and can in this way produce a machine which, for given work, often excels any to be found in the world. This development of the various manufacturing arts is, we may say, still in the initiatory period, but the cotton fabric industry has undoubtedly passed beyond that stage, and Japan is to-day not only supplying her home consumption, but is shipping cotton fabrics abroad.

JOURNEYMEN tailors in St. John, N.B., are about to form a union.

WM STANFORD, dry goods merchant, Ottawa, has assigned, with liabilities of \$26,000.

IT is now almost decided that the hat factory, recently burned down in Truro, N.S., will not be rebuilt there, but that the plant will be removed to Belleville, Ont.

THE stock of Carsley Bros' clothing, etc., Winnipeg, is to be sold at a rate on the dollar this month. The assets amount to \$14,352 in stock, \$450 in fixtures, and \$1,984 in book debts.

AN authoritative circular, published by a large New York fur firm, says: "The result of this year's London sales have shown us painfully and plainly that the tendency of the European market is similar to our own, and while the current low scale of prices on most American furs may encourage Continental buyers to secure larger lots of cheap skins, we are not warranted in expecting a higher range of values at a later date unless we are favored by a material improvement of the fur business during the remainder of the year, with a better demand for our domestic goods. Opening quotations of otter will likely be about 10 p. c. lower than those of last spring. Lower prices for week may stimulate their sale in Europe. Owing to light stocks of marten, free buying may result in better prices. No material improvement looked for in raccoon."

# Drooping Feathers

That were once the pride of an African ostrich now litter the shelves and old corners of the Millinery and Dry Goods stores. They are there for the simple reason that their color is not in the fashion and the graceful curl has left them. That's no reason, however, why they should be lying around.

# Re-curled Plumes

That look like new may be evolved from the shapeless mass. We take a particular pride in this artistic work—like to the metamorphosis from limp shapelessness to gracefully softened curls.

If you have any stock of Tips or Plumes that are useless as they are, send them to us. We'll get the color right—color is a hobby with us—then we curl them and ship them back, good as new.

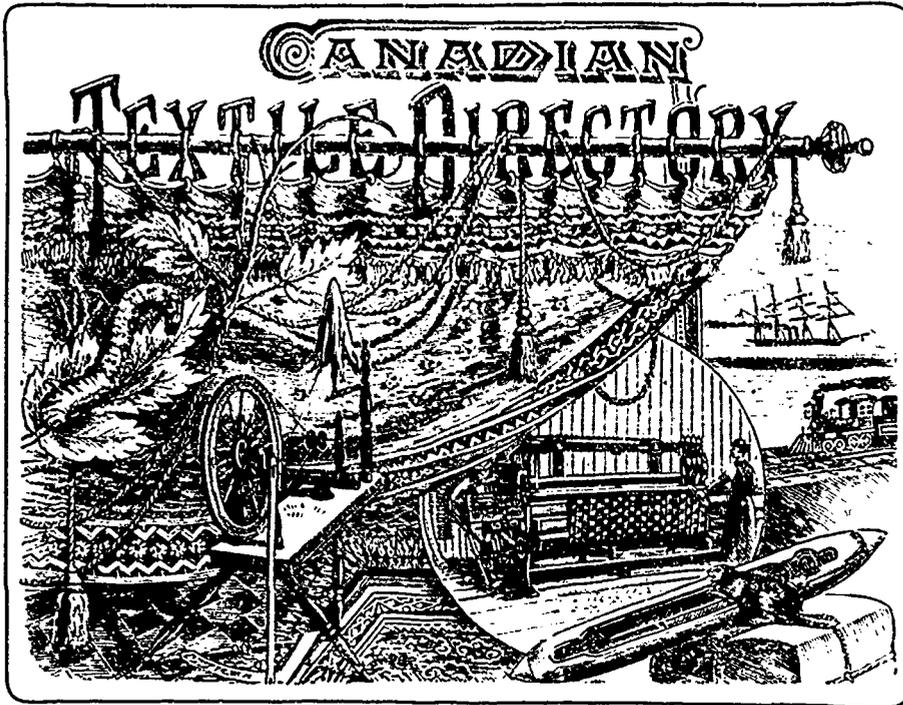
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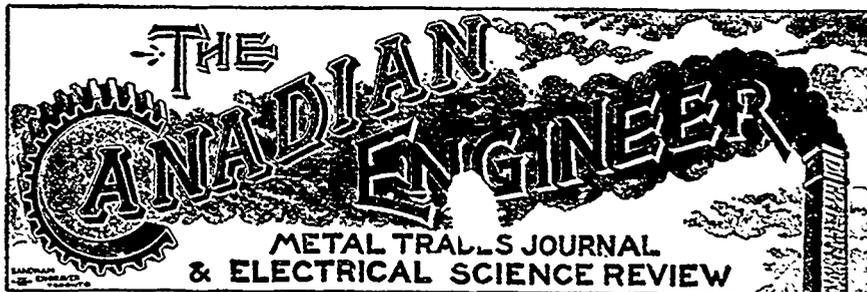
It gives lists of all Manufacturers' Agents, Commission Merchants, and Wholesale and Retail Dealers in the Dry Goods and kindred trades of Canada. Also, Statistics, Tables of Imports and Exports, Customs Tariffs of Canada, Newfoundland and the United States, the Canadian Boards of Trade and Textile Associations, and other information. The Third Edition includes also the Trade of Newfoundland.

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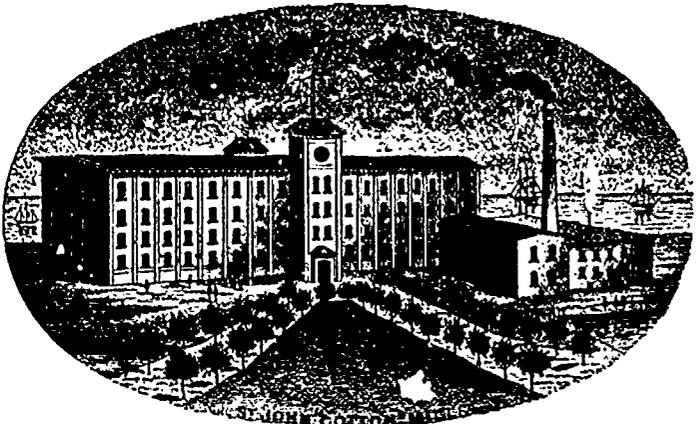
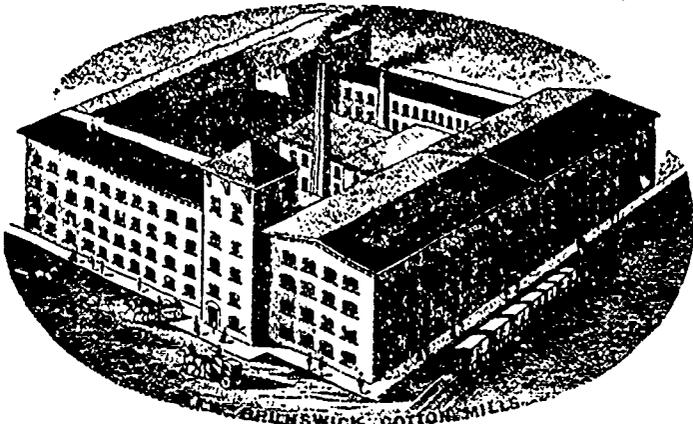
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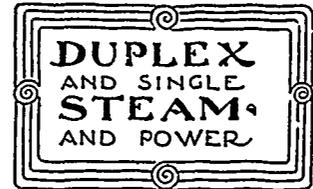
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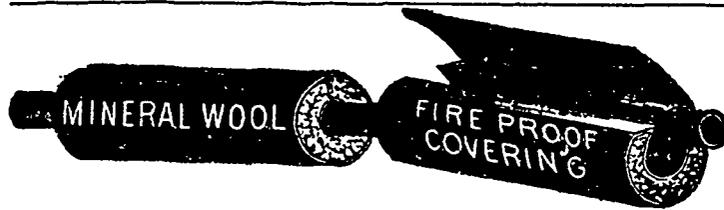
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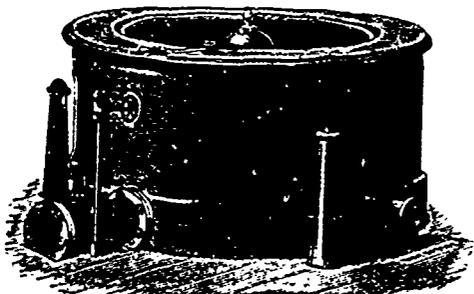
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# Textile Design

The following details of a design for a fancy suiting are given by the *Boston Journal of Commerce* :—

6,270 ends in warp; 98 ends per inch; 12½ reed; 8 in a reed; 54 picks per inch; 64 inches in reed; 56 inches wide when finished; weight, 20½ ounces.

Warp, ends:

1 red,	2-40s worsted,	} 6 times,	} 4 times.
1 red,	5s cotton,		
1 white,	2-40s worsted,		
1 white,	5s cotton,		
1 bronze,	2-40s worsted,	} 6 times,	
1 bronze,	5s cotton,		
1 white,	2-40s worsted,	} 6 times,	
1 white,	5s cotton,		
1 dark brown,	2-40s worsted,	} 6 times,	
1 dark brown,	5s cotton,		
1 white,	2-40s worsted,	} 6 times,	
1 white,	5s cotton,		
1 bronze,	2-40s worsted,	} 6 times,	
1 bronze,	5s cotton,		
1 white,	2-40s worsted,	} 6 times,	
1 white,	5s cotton,		

240 ends in pattern.

Wef, picks:

6 red,	2-40s worsted,	} 5 times.
6 white,	2-40s worsted,	
6 bronze,	2-40s worsted,	
6 white,	2-40s worsted,	
6 dark brown,	2-40s worsted,	
6 white,	2-40s worsted,	
6 bronze,	2-40s worsted,	
6 white,	2-40s worsted,	

164 picks in pattern.



WOOLEN SUITINGS,

1,340 ends in warp; 21 ends per inch; 5¼ reed; 4 in a reed; 23 picks per inch; 64 inches in reed; 56 inches wide when finished; weight, 18 ounces; 4 healds woven plain.

Warp, ends:

4 light twist,	10 skeins	} 5 times.
2 dark "	10 "	
4 light "	10 "	
1 dark "	10 "	
1 fancy "	8 "	

36 ends in pattern.

Wef, picks:

4 light twist,	9 skeins	} 6 times.
2 dark "	9 "	
4 light "	9 "	
1 dark "	9 "	
1 fancy "	8 "	

42 picks in pattern.

## THE APPLICATION OF PHOTOGRAPHY TO TEXTILE FABRICS.

The most recent method of applying photography to textile fabrics, as a substitute for the usual process with engraved rollers, is said to be a decided improvement on anything heretofore in vogue. The material to be printed is dyed at the boil with primuline and common salt, then washed and diazotized in a bath of ¼ per cent. of nitrate of soda, strongly acidulated with sulphuric or hydrochloric acid; after a second washing, and with the tissue still damp, the photographic plates, with flowers, leaves, or other designs, are placed upon it, and the whole exposed to the sun—half a minute exposure being long enough in good weather, with a strong light, or, if the sky is cloudy, any time up to half an hour may be necessary;

the arc light can be employed if convenient, answering the purpose very satisfactorily. To gauge the operation, a small piece of the cloth is exposed to the sun or arc electric light and the reaction carefully watched, after sufficient exposure has been given, the cloth is passed at once into a developing bath, or, if this be not ready, it is to be placed immediately in a dark closet. The development is done as for colors dyed in wool, the tints appearing only on the parts protected by the photographic design. It is said that a wide range of shades is practicable by the use of the various developers, among these, as enumerated, being a red by an alkaline solution of naphthol, a yellow by an alkaline solution of phenol, while chestnut and chocolate come by an alkaline solution of naphthol sulphonic acid, and resorcine gives an orange.

## PARIS FASHIONS.

The correspondent of an English paper writes as follows of fashions in Paris :—

The demand for all striped goods, especially woolens, cottons, velvets and silks, is enormous. Satin and velvet stripes will be adopted this winter by the first houses in Paris, also *gros-grain* and velvet stripes. For the present, exquisitely fine and embroidered cloths over velvet take the lead. Here is a model of a thick cloth dress for autumn wear.—Skirt in velvet cloth, slightly drawn up on the side, the under-skirt being bordered with ziberline, and the side incrustated or embroidered with jet. The bodice had an *empieccment* of the same jet embroidery at the back and front, finished off with a square line of fur. Underneath this *empieccment* was a frilling of black *mousseline de soie*. Waistband of jet, full sleeves, with epaulettes and wristlets of fur. To accompany this dress was a cape in the same cloth, lined with black *moire*, double-breasted, and embroidered all over with jet.

A very pretty model, in exquisite taste, is an under-skirt and black silk bodice, the whole forming *Princesse* in shape. This is entirely covered with an over-skirt in black *mousseline de soie*, quite plain, and almost drawn round, falling in three *goget* pleats on either side on the under-skirt at the back. It is trimmed from the shoulders down to the end of the skirt with a narrow moss-green silk ribbon, which forms *tablier*. This ribbon is edged on either side with an embroidery of black jet beads. Two rows of the same ribbon cross the bust, forming *empieccment* back and front, either side having a very undulating trimming of jet. The braces have a green *chou* bow on either side of the corsage, the blouse has a green silk necklet; the sleeves are narrow and *boullonnees* to the wrists and well up to the arms, where they are met with a large puff sleeve. At the bottom of the skirt the ribbon *tablier* is finished off with a loose black silk ribbon bow, one on each ribbon or *quille*. A lovely robe *d'interieur*, or tea-gown, is called "Sarah Bernhardt." It is in lilac satin *broche*, and is made up in the Empire style. The inner part of the dress is of white satin, veiled with silver spangled *mousseline de soie*. The bottom and top of this inner skirt is slightly *decolletee*. The *carre* is edged with a tiny silver Vandyked trimming; from under each arm comes a scarf in white *mousseline*, which is also spangled. On the bodice, just below the bust, is a trimming—a kind of half figaro—which joins in the centre, almost in the shape of a heart. The upper sleeve consists of one puff, with a long narrow one falling *en point* well over the wrist, edged with spangles, two rows of which also finish the puff sleeve. It is to be remarked that the sleeves of all the new elegant dresses are made in this fashion; that is to say, they fit rather close above the elbow, even when they are draped and have not a puff. Shot satin is one of the newest fabrics for evening dresses. The bodices of these dresses will be in striped velvet and satin, or *gros-grain* and velvet stripes, as well as light striped brocade.

An immense quantity of chiffon is used on day as well as on evening dresses. On cloth embroidered dresses, beneath the embroidered *empieccment*, is generally an inlet of black *mousseline de soie*, the back and front being accordion pleated. Black chiffon is as popular as ever, and is always elegant. Silk *moire* mohairs promise to become very popular. Modistes are beginning to make them up for evening dresses, and the effect in light colors is charm-

ing especially in rose-pink, blue and cream. There are also lovely shades in violet beetroot, but these are more for day wear. I must confess that I do not care for it in black, but there is no doubt that in the lighter shades the effect is unique, and the price is nothing like so dear as silk, while it is more effective, and being stiff and crinoline-like looking, it lends itself admirably to the present fashion of enormous sleeves and full skirts.

Every week brings forth something fresh in the way of designs and fabrics. There are flowers in their natural size. There are exquisite velvet and silk Pompadour designs. There are crushed pink roses on purple *pekin*. There are also some pretty small designs in flowers, etc., but these are in the minority.

### LONDON FASHIONS.

No better guide can be found for the prevailing fashions of the day, both as to material and style, than the costumes worn by the leading characters in 'The Derby Winner,' a modern up-to-date play. The dressmakers have combined and adapted French modes to English taste, and though some of the creations are *bizarre* and *outré*, so as to accord with the character, many others are delicious confections, and most artistically conceived. A yellow brocade gown with plain skirt and immense egg-shape spots on it, has a dainty grey chiffon blouse with black jet braces, the effect being exceedingly good. An evening dress composed entirely of large black sequins mounted on net, and one in white satin embroidered with gold sequin *passementerie*, reveal a *penchant* for this still favorite trimming, while a scarlet gros-grain with lace effects is displayed to the greatest advantage on Mrs. John Wood, who, as 'the Duchess,' goes to court to resist payment of what she considers an extortionate dressmaker's bill. On Derby Day a wonderful black brocade with floral design and velvet sleeves—one green, the other cherry—is donned by this same aristocratic dame, and the predominating influence of stripes is particularized in a lovely gown of black and white silk, charmingly made. In silks, gros-grain in black and colors is leading triumphantly, judging by the numerous orders that are being placed for day and evening gowns, and the following are descriptions of two pretty gowns just made in this material. The first is in black, and has a scalloped edge showing an under-band of mauve velvet, and two long points of velvet laid on as panniers on either side of the skirt, edged with pointed jet *passementerie*, the bodice, which fastens at the side, is drawn to a point in the front with a *ceinture* of mauve ribbon velvet embroidered in black, and the mauve velvet *collet*, in square points, is edged with more jet and two frills of lace.

A second bodice to wear with this skirt is of mauve velvet, with black silk *applique* running up the front to a point at the neck, and the sleeves are distended with crinoline and turned up at the wrist in a black silk pointed cuff. The second gown, in pink gros-grain, has a wide border of chinchilla round the plain skirt and a narrower one round the square *decolletage*, with a hanging fringe of black jet *passementerie* and a black *faulle* sash, its simple elegance being its charm. For blouses, chiffon is still with us, and likely to remain, and a strong feeling is shown for plain gros-grain and striped taffetas—black and white and lavender and black being the combinations *par excellence*. White is creeping very much into favor, both for hats and as a set-off to tailor made gowns, but it is an extravagance that can only be borne by few, and so is not likely to be more than a passing fancy. In the newest covert coatings and tweeds, green shades are pre-eminent, although the popularity of blues, browns and tans has not perceptibly waned. A pretty coat, cut sharply from the hips, in brown mixture, has a green velvet-faced collar and pocket flaps. A double cape, in green cloth, has *applique* designs in brown, and a cheaper single full cape is in a mixture of two cloths, the upper of box cloth, the lower of an indistinct check the same tone of coloring, and divided by strapped ornamentation.

Hats and bunnets are small. Thousands of picture hats, decorated with plumes, birds wings, and ospreys, are presented in bewildering variety, but felt toques, with small colored velvet rosettes and one of the already mentioned decorations as a trimming, vie with their velvet contemporaries with fur and bird trimming, as first favorites. Much thought is bestowed on the *bandeau*,

which is either simple or elaborate, according to taste. A smart 'Toreador,' with high crown, has two-inch *piovine* bands round it, drawn through steel buckles at the left side, with a cherry bow and black bird of paradise as trimmings. A piece of the same ribbon is drawn round the *bandeau*, and tied into a bow underneath, the ends resting on the hair. The great object now seems to be to give length to the head outwards. The hair is brought right away from the head at the back and sides, and the hats must necessarily suit this coiffure.

This length can be obtained by means of ostrich plumes or bows on or underneath the brim of the hat. For blouses and toilettes, miroir *noires*, satins, and gros-grain with guipure effects, are sought after. The latter is being made up into jupons, trimmed with lace and *bebe* ribbon. Soft silk, Stehls, cashmere *superbe*, and *faulle Française*—a rich black gros-grain—are also well to the fore. Black braiding on colored cloth, either simple or elaborate, is conspicuous on some of the smartest tailor mades, both on the bodices and skirts. A royal blue serge, for instance, has an intricate pattern in cord covering both the back and front of the bodice, with charming effect, and cord floats round the hem of the skirt in two indistinct and somewhat erratic reverse scallop lines, which, nevertheless, are *chic* and tasteful. Quite a new velvet cape has treble loops of jet embroidered satin ribbon from the shoulders, and trimmings of tapering jet at intervals brightening up the whole. The collar and fronts are of black or smoked fox, and, in one instance, of fisher fur—a close imitation of sable. Another novelty in capes has a yoke and trimmings of ostrich feathers, and a model coat in frieze has the revers crossing in front and a long basque put on from the waist. Velvet blouses in black, cerise, "dragon's blood," violet, and emerald green, and whole gowns of this soft and becoming material, adorned with fur trimmings, will be exceedingly popular this winter.—*Drapers' Record*

### FINISHING WOOLEN HOISERY.

To finish woolen hosiery requires very great care and experience. Unless it is done by those used to the business, it will be all by chance if your goods will show in the case the good appearance that is necessary to sell them for the price they ought to bring.

In the first place, manufacturers of woolen hosiery should instruct the overseer of the finishing department to be very careful, and not to put any inferior goods into lots or batches that are to be colored and finished for first quality goods. Many goods of excellent quality are frequently sold at value far from paying a profit, for the reason that they are found in bad company, or, in other words, there have been too many imperfect goods, and bad mends, allowed to go in with the perfect goods.

As soon as your batch of hose have been selected and sent to the dyehouse, they should be well scoured by the dyer, before coloring, so that all the grease may be got out of them, for if any grease is left in the goods it will surely show itself sooner or later after they are finished, and will soil the bands and boxes, thus affecting the sale of the goods. After being colored, they should be carried immediately to the board room, and not allowed to remain in the baskets two or three days, as sometimes they will, if the foreman finisher does not look well after them.

On reaching the board or dry room, they should be immediately drawn on to the boards to shape them, and in doing so the boarders should see to it that they are carefully drawn to the board, so that every part of the stocking may fit the board perfectly. If this care is not exercised, the goods will be apt to be baggy at the toe, and the heels will be uneven, and, if rib hose, great care must be taken to have the ribs boarded straight, or they will look bad. After being boarded and dried in the hot drier, they should be taken off the boards, and if they are plain hose they should be pressed either between press papers or in a steam press. A steam press gives the best finish as a general thing. After they are taken off the first boards they should be put on hard wood boards, and placed in a steam box for a few moments until they are dampened a little, then pressed lightly in the steam press. This will give them a fine, glossy look, but great care must be taken not to press them too much, if you do, it will give them a glazed or shiny look. Some finishers

pre. the goods when they first come from the hot box, and then steam and re-press them, but as a general thing one pressing is sufficient to give them an attractive look.

If they should be ribbed hose, the press should be adjusted so that the feet only should receive the weight of the press. The press should be so adjusted that the whole length of the leg of the stocking should be allowed to enter the press, the leg lying free from pressure while the foot is being pressed. The dampness in the fabric coming from the steam box will cause the ribs to swell as they receive the heat from the press while the foot is being pressed, and will bring them up so that they will look plump and bright. The man who is in charge of the press will soon learn by the look of the goods he is pressing how long to allow them to remain in the press. All stock will not press alike, and no certain time can be fixed upon to leave the goods in the press. Good judgment must be used, and the goods removed as soon as pressed enough to look bright and glossy and the rib well brought up. After the goods have been thus operated on, they should be taken to the finish room, and there kept free from dust and flying lint, by being carefully covered by white cloth until such time as they are given to the finish menders to mend. Great care and good judgment, says a writer in the *Textile World*, are required to mend neatly, sort and mate the heels and toes and length of the legs to a nicety. Unless the heels and toes are well mated and the legs are also of the same length in pairs, your goods are not well finished, and you will be the loser. Do not allow, under any circumstances, badly-mended goods to go into the first quality, if you do, sooner or later you will regret it. Make your dozens all one length in the same dozen, and then let the folder be sure that she folds and places for boxes all one length goods for the same case.

You can put up in dozen, or if nice goods, in half-dozen boxes, with a neat band around the first two pairs on the top of the box. Have your cases made so that the boxes will pack snug in the case, for if they shake while in transportation the boxes will be apt to break, and thus spoil their looks when shown in the market. Carry out all these points in your finishing department, and you will have well finished and saleable goods.

#### LITERARY NOTES.

C. W. Irwin, customs' broker, Toronto, has sent us a copy of his "Handbook to the Canada Tariff." This is the 13th edition, and has been revised and brought up to date by experts. Besides the latest changes in the tariff, this useful little book contains departmental rulings, foreign money tables, and a resumé of the commercial law of the Province of Ontario. There are also given a few hints for importers. The book is neat and handy, and no doubt will be as warmly received as previous editions.

The October number of the *Canadian Magazine* is very good in point of articles and illustrations. "Reminiscences of Francis Parkman at Quebec," by J. M. Le Moine, President of the Royal Society of Canada, will be read with much interest, as will also the paper by Attorney-General Longley on "Joseph Howe," the first of a series of articles on this famous statesman by the same able pen. Hon. James Young gives a most suggestive illustrated contribution on "Canadian Homes and their Surroundings." W. A. Sherwood writes on "A National Spirit in Art," Mary Temple Bayard on "Going out of Town," Hugh Sutherland, ex-M.P., on "Nature's Outlet for the North-west," J. C. Hamilton, M.A., LL.B., on "Indian Treaties in Ontario and Manitoba"—a paper full of interesting experiences, and Thomas E. Champion on "Curious Epitaphs." Two excellent illustrated articles, with the flavor of the unknown wilderness upon them, are T. W. Gibson's "Algonquin National Park," and A. H. D. Ross' "Canoe Trip to Lake Mistassini and James' Bay." In "'General' Bain of Sandy Beach," William Wilfred Campbell shows his pathos and his sense of humor admirably combined. D. McCaig has a poem "In the Shadow of the Church," and J. L. Kenways has some stirring verses on "Queenston Heights."

A timely article in *The Century* for October is the interview with the Prime Minister of China in the concluding paper of the

series, "Across Asia on a Bicycle," which has the additional interest of being fully illustrated with half-tones after very unique photographs made by the bicyclers, Allen and Sachtieben. A wood engraving of Li-Hung-Chang, from a photograph sent to the writers by the Prime Minister, accompanies the article. The third and concluding paper of the Poe correspondence deals with Poe in New York, as previous articles dealt with Poe in the South and Poe in Philadelphia. In addition to Poe's own letters, the paper includes letters from Hawthorne, Mrs. Browning, Dr. Charles Anthon, W. Gilmore Simms, Mrs. Clemm, and others, which reflect the impression made upon his contemporaries by Poe's literary work. A paper of wide interest is "The Real Edwin Booth," consisting of familiar letters of this tragedian to his family and friends, with an introduction by his daughter, Mrs. Edwina Booth Grossmann. In the editorial department, a definite announcement is made of the new life of Napoleon by Professor William M. Sloane, of Princeton, which is to begin in November number, the first of the new volume. Special attention is directed to an original feature of Prof. Sloane's work in the detail which it will give concerning the early years of Bonaparte. Altogether, the October *Century* is well up to the average.

We are in receipt of a book entitled "Recent Cotton Mill Construction and Engineering," by Joseph Nasmith, the greater portion of which is a revised reprint from the pages of the *Textile Recorder* of Manchester. Opening with a sketch of the evolution of the present form of cotton mill from the primitive buildings at one time in use, and a brief comparison of the English type with the American, the author gives a resumé of the structural details of both; with special regard to the cost, strength and fire resistance of various floorings. He then enters somewhat exhaustively into the subject of sprinklers and fire appliances. The next topic touched upon is the important one of lighting, which occupies a chapter, and the same space is devoted to the subject of heating, ventilation and humidity, in which several appliances for these purposes are amply described. Chapter 8 deals with the "Calculation of machines," chapter 9 with some recent examples of mill building, and the remainder of the volume is devoted to descriptions of machines, boilers, machinery appliances, etc., etc. There are several well-executed illustrations, and altogether the book is one of the best and most useful treatises on mill construction we have seen. The price is 4s. 6d. net, and the publisher is John Heywood, Manchester, England.

#### THE ORIGIN OF THE UNION JACK.

The Union Jack of Great Britain is three flags in one. The flag of England is a red cross on a white field, that of Scotland a white St. Andrew's cross on a blue field. These flags were combined when England and Scotland united in 1683, and on the union with Ireland the Irish flag, a red St. Andrew's cross on a white field, was added. The union of the three countries is thus indicated on the "union." The St. George's cross of England remains as before, and is the central feature of the flag, dividing it into four quarters, occupied by the St. Andrew's crosses, the white of Scotland and the red of Ireland, which are placed side by side. Until 1864 the British naval fleet was divided into three squadrons, each in command of an admiral, who was known by the color of his flag as the "Admiral of the blue," the "Admiral of the red," and the "Admiral of the white." The distinction was abolished because it was found puzzling in action and was often eliminated Trafalgar, for instance, was fought under the white ensign. The French and Spanish ships went into action without setting their colors, but were later obliged to hoist them so as to be able to strike them.

The Toronto Carpet Manufacturing Co. propose shortly to enter the United States market. This, at least, is the statement of an exchange. If true it will be interesting to watch developments and see whether Brother Murray will yet obtain control of the markets of the world, or whether, after a brief siege, he will settle down contented with the possession of the small 3,450,383 square miles of Canada.

## Foreign Textile Centres

**MANCHESTER.**—Cotton has experienced a sudden and somewhat unexpected fall in price. This is more remarkable as the stock here is still declining in quantity, and is likely to continue shrinking for a few weeks to come. The present condition is entirely due to the fear of an unprecedentedly large supply in the near future. The new crop shows signs of being a "bumper," and though it is yet far too early in the season to attach any great importance to the receipts at the ports, nevertheless, certain significance attaches to the fact that the receipts this season are the heaviest known for any corresponding period. Prices have shrunk 5-32d, and are fast approaching the lowest level reached. The minimum recorded price in cotton was 3½d. per pound in 1848, when taking quality into consideration it was about equivalent to 8½d. for American to-day. Many merchants expect to see this price reached before the year closes. Yarns have been in slow demand even at reduced rates. Home trade buyers are holding aloof, manufacturers keeping their purchases at a minimum, simply to cover actual requirements. A little more business has been done in Bolton and finer yarns, and a few orders for bundles for the Continent have been booked. In cloth a moderate business has been done in dhooties and shirtings for India, but this probably only represents orders which merchants have had in hand for some little time. Only a small amount of new business from the Eastern markets has been secured. Jaconets and mulls have also been in quiet request, but at prices too low for acceptance in many cases. The South American markets have been fairly active, but other markets are decidedly quiet. Few sellers of shirtings report any progress, and the continued decline in Eastern exchange renders transactions of any importance quite impossible at the moment. Printing cloth moves in small lines, and a few bleaching goods are inquired for. However, merchants and dealers prefer to act with great caution, and as if they expected still lower prices.

**BRADFORD.**—The quiet opening of the London colonial wool sales has had its effect, and the tone of the market here is more subdued. It was generally anticipated that a five per cent. advance on the rates ruling at the conclusion of the last series in London would be established on the opening night, and that this would be at least maintained to the end of the sales. Although the competition is reported spirited, no quotable advance in prices has been established, except in crossbred wools, notwithstanding that this is the first sale since the passing of the tariff bill, and several buyers from the United States were in London last week. Spinners are finding less inquiry for yarns, as the confidence of both home and continental buyers has been somewhat shaken by the weakness in wool. Manufacturers here are complaining very much of the small size of the orders which merchants are giving for spring fabrics of the fancy order, although special styles must be strictly confined, and patterns for travellers must be supplied at great expense. As the greatest uncertainty is still felt as to what styles will really go best in the home market in the spring, buyers are acting with considerable caution, and are confining their purchases largely to quiet, neat effects, on which the least loss would be experienced in case any should be left over at the end of the season. I hear of more inquiry for broken stripe effects, and both plain and fancy imitation laces are rapidly taking a lead. Business in the warehouses is not generally brisk, but the piles of autumn fabrics are getting rapidly less, and there is every likelihood of finding stocks remarkably clean at the end of the season.

**LEEDS.**—There has been a fair amount of business doing in this market during the past week. Orders for heavy woollens have come from the States, and 14 oz., 16 oz., and 18 oz. goods are being ordered for spring. Manufacturers who in the past were a good deal dependent on the American trade are making extensive preparations for next year. By those principally concerned in the home trade the want of support from Scotland continues to be seriously felt. There is not so much disinclination as there was to order for forward delivery, as confidence is felt that this year not much fur-

ther change will take place in prices. Orders are, therefore, given out more freely for good serges, vicunas, coverts, and medium and low tweeds. The Yeadon and Guiseley producers of mantle cloths and costumes are now working full time, but no more. The Melton trade is rather brisker, but there is further room for improvement.

**NOTTINGHAM.**—There is a slight improvement in the lace trade, and more machinery is now employed. At the curtain dressers and finishers short time is the rule, but orders for curtains are on hand for future delivery. The curtains shown include some excellent designs. Millinery lace goods are only in moderate request. The silk fancy lace trade is very quiet. Novelties are rare both in silk and cotton laces. Tattings and trimmings, Swiss embroideries, everlasting trimmings, and crochet edgings do not sell freely. The ruching and frilling trade is quiet, and there is not much doing in made-up goods. Only a moderate demand prevails for plain cotton nets. Brown goods continue to be exported for embroidering. Stiff nets are dull of sale. The local yarn market is quiet and prices low. There is much outside competition in the hosiery trade, which prevents local manufacturers from realizing adequate profits. Merino and woollen goods are relatively most wanted.

**HUDDERSFIELD.**—There have been only a small number of buyers in the market here during the week and business is dull. Repeat orders for nearly all kinds of winter goods have been given very cautiously, but orders for next spring have been placed rather more freely with manufacturers. The shipping trade is nearly as slack as the home market. Consequently, with the exception of a few makers of fine goods, novelties, and very low-priced tweeds of taking appearance, manufacturers are unable to run their machinery full time. Wools are selling steadily at firm rates, particularly for good descriptions.

**LEICESTER.**—The wool market is quieter, and consumers show little inclination to do business at present prices. All the most fashionable descriptions of both home and Colonial produce continue dear. The consumption is well up to the average, but there is little disposition to buy heavily unless at slight concessions. Skin wools change hands very freely at full rates. Crossbred Colonial wools are in strong demand, and prices have an upward tendency. Stocks of yarn are kept low, and the consumption is well maintained. Lambswool yarns are in steady request at firm rates, but cottons are very flat. The production of hosiery is of good extent. Elastic web fabrics are in better demand, some very large American orders having been placed.

**KIDDERMINSTER.**—There are signs of a little more activity at many of the mills. Brussels, however, continue to be more languid than Axminsters, which show considerable animation.

**BELFAST.**—The month of September did not bring such an improvement in either the retail or wholesale drapery trade as had been expected. In the country districts the gathering of the harvest pre-occupies the attention of the people, and the present spell of good weather has done much to elevate the drooping spirits, not only of agriculturists, but of general traders. There is yet a considerable quantity of work to be done, and in some districts operations will not conclude for fully one month later than last year.

**DUNDEE.**—Jute is abundant, and is easier to buy. Good firsts are £10 17s. 6d. to £11, and for £12 excellent jute is offered. On the spot prices are easy, and it is difficult now to place large parcels, as recent arrivals have supplied the pressing wants of spinners. This state of the jute market, as well as the fact that this week three spinning mills have been restarted, has tended to weaken the yarn market. Cops, which were scarce a fortnight ago, are freely offered to-day at a fall of one halfpenny. Common cops are done at 1s. 3½d., with sellers over, and 8 lb. warps are quoted at 1s. 4d. to 1s. 4½d. Good are 1s. 6d. to 1s. 6½d. Indeed, values are ½d. per lb. lower all round, and common cops are nearly ½d. lower than this day ten days. Hessians are rather easier to-day. The demand for South America is limited to October delivery. To sell forward makes would require to take less. The flax market is again firm. Tows are held for £1 more, but as buyers of flax and tow yarns refuse to

give any advance, a kind of crisis in the flax trade seems inevitable. The prices now current for yarns are altogether out of the question when compared with flax and tows. For Riga K £20 to £23, according to quality, is the quotation. Flax yarns in the lighter sizes tend downwards. Linens are not cheaper. The autumn demand for the home trade is disappointing, but considerable orders have come to hand from America. Every day demonstrates the far reaching injury inflicted upon all kinds of trade by the labor wars. Linen being rather a luxury than a prime necessity, the demand for Brechin, Forfar and Fife goods is at once injuriously affected by labor troubles. Canvas is still fairly active, and while Arbroath continues to run short time stocks do not accumulate. In fancy jute goods there is more doing and prospects are better. Twines, cords and ropes are still wanted. This branch of the jute trade is healthy and extends.

**CALCUTTA.**—The baled-jute market is very quiet, cablegrams from Europe having had a depressing effect. Prices for superior native first marks are Rs. 32-8 for ready goods, and Rs. 31-8 for shipment during six weeks. Clearances to Europe in August of jute, and rejections amount to 100,000 bales, against 64,000 in August, 1893, and 94,000 in August, 1892. Rates for the common qualities of loose jute have continued to decline, and at the close continue weak at about three annas under last week. There is a good demand for good medium to fine qualities, and prices show no change. Naraingunge imports for the week amount to slightly over one lac of maunds. The market has been steady throughout, the demand keeping pace with the imports. The demand for the finer sorts is very strong, and it is not unlikely that they may advance in price, as the supplies continue to be very limited. Medium and common qualities are not in such eager demand, but the market for them is steady, with no tendency towards lower rates. Prices are practically unchanged from last week. In quality a general, though silent, improvement all round is noticeable, and parcels are not mixed with inferior stuff to the same extent that they were a week or two back. With reference to ordinary jute butts, shippers have been in the market at about Rs. 9, and a fair amount of business might have been put through at this rate had not speculators kept the market firm by offering higher rates, which shippers cannot follow. At the close there are many ready lots offering which speculators cannot handle. — *Textile Mercury*.

**ZURICH.**—The silk goods market is featureless; the first spurt of the fall demand being spent, it seems to have again resumed between-seasons tranquility. The latest developments in the raw silk situation may be a cause why buyers are not more liberal with their orders. It seems now taken for granted, says the *Dry Goods Economist*, of New York, that the fancy taffetas and other specialties which are a familiar production of the Swiss silk industry will be the leaders next spring. This ought to insure a run of steady production for the Swiss looms, and some orders for spring have already been placed. Fancy taffetas are favored. Damassés also find buyers.

**CREZFELD.**—The manufacturing situation has not changed, and although the fall season's demand has started well, and a more satisfactory business is being done, the increased requirements, as far as manufacturers are concerned, can easily be satisfied from the existing stocks. But with the increase in demand the old evil of the too liberal offer is not eliminated, and this interferes to a certain extent with the value that can be realized for the goods. The question of prices thus remains the leading factor in the transactions, and affects nearly all staple goods. An exception in this respect is found in the better grades of piece-dyed satins, which sell well from stock, and are also the object of satisfactory orders for future delivery. Some orders have been received for tie silks and for fancy parasol silks. A fair business has been done in dress and trimming silks, small effects in fancies having precedence. In velvets and plushes the demand for the home trade is satisfactory, while orders for export are not coming in at a too rapid rate.

**LYONS.**—Buyers have been in the market, and their requirements for goods for ready delivery for fall and winter have made

themselves felt in an increased demand. But the business done has been more in the line of a good number of smaller transactions than in transactions for large individual lots. The relative position of the different articles remains unaltered, and nearly all goods suitable for fall trade have benefited by the increase in demand. In linings the demand has been good for ready delivery in piece-dyed and striped satins. These have been bought from stock and have also been ordered in advance. In tulles and laces business has also improved, and prices are firm. The firmness which raw silk prices show, notwithstanding the decline in Asia, is an encouraging feature, and manufacturers feel that this is a good support to help them maintain the prices of goods. In the expectation also that a stronger market for goods may follow, manufacturers have in many cases been working for stock. The better feeling has not yet made itself felt, however, in the placing of orders for next spring, which is rather slow. A fair demand is reported for wool-filled goods and for small effects in fancies. Velvets are in fair movement.

**MILAN.**—The raw silk market is quiet, both legitimate and speculative buying having almost ceased. Transactions only find consummation when holders are willing to make a concession on the high figures reached during the excitement. Spinners themselves seem to be glad that a period of rest has set in which will give buyers an occasion to really test the strong undercurrent of the market. This is seen in the slackened demand for cocoons, which show a slight weakness in consequence. Italian grège No. 1, 11-12, are quoted 43 lire.—*Dry Goods Economist*.

#### ROYAL ORDER FOR IRISH POPLINS.

The Queen has ordered several Irish poplins for the trousseau of Princess Alix of Messe, who is shortly to become the wife of the Czarewitch. Poplins are certainly amongst the most beautiful of dress fabrics, and amidst all the fluctuations of fashion can never go entirely out of favor. The Irish manufacture of poplins has had a chequered career, with many vicissitudes of fortune. During the last few years, however, the patronage extended by the Queen, the Duchess of Teck, and many of the royal families of Europe, has greatly improved its position, the encouragement thus given tending to the development of new designs and the increased beauty of the material. Messrs Atkinson, of College Green, Dublin, are supplying the dress lengths, all of which are of a very beautiful description. Three are in white and gold, the latter being real metal, woven in fine threads, sometimes forming the pattern, and at others simply outlining the satin brocade. On one of these dresses, the design is of Louis XV. period, small curves and festoons of white satin being displayed upon the poplin ground, the whole scattered over with small gold shamrocks. The gold threads, where they pass at the back from one shamrock to another, give a very rich effect to the pure whiteness of the silk, making it look as though shot with gold. Another of the white poplins is in a crescent pattern of an Oriental description, the crescents being in relief in satin and every one of them outlined in gold. For this it is necessary that the metal threads should be closely and evenly interwoven with the silk, and the result is an effect as of cloth of gold and cloth of silver combined. The third dress is even more beautiful than those already described, consisting of small fern leaves carried out in white satin and gold, and interspersed with fronds of maidenhair raised in slight relief in white satin, and outlined with gold. It would be difficult to exaggerate the beauty of this fabric, especially when caught together in folds in a strong light, which brings out not only the gleaming of the pale bright gold, but the sheen of the snowy satin—an exquisite combination. A fourth dress length is in poplin of the palest leaf green, a very delicate and refined tint, with a design of small curling ostrich plumes in white satin in low relief. When the feathers catch the high light they almost appear to be detached from the surface of the silk, so good is the composition and drawing of the groups.—*Warehouseman and Draper*.

C. S. HERBERT has opened a clothing, dry goods and millinery establishment, corner Yonge and Shuter streets, Toronto.

## LONDON WOOL SALES.

The September series of the Colonial wool sales in London began on the 18th inst., when there was an extra large attendance. About 275,000 bales were offered altogether. Much interest was manifested owing to the fact that these sales were looked upon as being the first test of prices since the coming into operation of the new American tariff, though it is thought by some that the American demand will be better tested in November when a larger proportion of lots specially suitable for the American market will be tested. The results of the first day showed a more spirited demand, though not quite to such a degree as was expected. On the 19th, 12,449 bales were offered, for which there was an increasing demand, the home trade especially operating with more spirit. There was a large supply of cross-breds and merinos, for which the continental demand was moderate. Lots suitable for the American trade were poorly represented. Good greasies and scoureds being scarce, American purchases were limited therefor. A brisk competition took place in merinos and cross-breds, the improvement in the better classes of these being very pronounced. Prices were as follows: New South Wales, 2,000 bales offered; scoured  $9\frac{1}{2}$ d. to 1s. 1d.; locks and pieces  $6\frac{3}{4}$ d. to 1s.  $0\frac{1}{2}$ d., greasies  $4\frac{3}{4}$ d. to  $9\frac{1}{2}$ d.; locks and pieces 5d. to  $7\frac{1}{4}$ d., Queensland, 400 bales offered; scoured  $9\frac{1}{2}$ d. to 1s. 4d.; locks and pieces  $7\frac{3}{4}$ d. to 1s. 4d.; Victoria, 2,500 bales offered; scoured  $5\frac{3}{4}$ d. to 1s.  $4\frac{1}{2}$ d.; locks and pieces  $3\frac{3}{4}$ d. to 1s. 1d.; greasies 5d. to  $9\frac{1}{2}$ d., locks and pieces  $3\frac{1}{2}$ d. to  $6\frac{1}{4}$ d.; Tasmania, 300 bales offered; scoured 10d., greasies  $6\frac{1}{2}$ d. to  $8\frac{1}{2}$ d.; locks and pieces 4d. to  $4\frac{3}{4}$ d., New Zealand, 6,000 bales offered, scoured  $6\frac{1}{4}$ d. to 1s. 3d.; locks and pieces 3d. to 1s. 2d.; greasies  $5\frac{1}{2}$ d. to 11d.; locks and pieces  $3\frac{1}{2}$ d. to 9d., Cape of Good Hope and Natal, 1,200 bales offered, 1s. to 1s. 2d.; greasies  $4\frac{1}{4}$ d. to 8d., locks and pieces  $5\frac{3}{4}$ d.

On the 20th the offerings were 1,530 bales. There was a better selection, and American competition was felt, as expected. To American buyers went several large lots, especially in desirable greasies and merino combings; also parcels of scoured, for which they made high bids. There was a keen demand for crossbreds, in which continental purchasers operated freely. In merino prices were fully 5 per cent. higher, compared with July prices. Good merinos were in best request, and crossbreds in good demand at generally 5 per cent. higher. Coarse wool was in good demand. Cape of Good Hope and Natal fully held up prices.

On the 21st, 14,295 bales were offered, chiefly merinos suitable for all kinds of buyers. Continental and American purchasers were keen competitors, and secured the most desirable lots, the home trade not caring to advance higher than to a basis of 600 fine. In Australian wools, there was exceptional firmness, also in Cape of Good Hope and Natal, especially in superior snow whites. Superior Geelong was in demand for America at very full rates.

On the 22nd inst., the offerings were 17,370 bales, 10,000 of which, it is said, were bought for America. The day was noticeable for the amount of grades suitable for American and continental buyers. Americans paid high prices, and secured everything desirable, including superior Victoria scoureds. Punta Arenas realized  $\frac{1}{2}$ d. advance, and superior merinos realized extra high rates.

As we anticipated, the tide has turned in the wool trade between Canada and the States. The shipments to Canada ceased before the tariff bill passed, and since its passage some Canadian wool has gone back to the United States. A Boston paper mentions that samples of Canada pulled, similar to American "B Super," have been shown on that market at 22½ cents, at which rate it would cost the manufacturer there more than the domestic. It is not likely, therefore, that transactions in Canadian wool in the American market will amount to much this season, though there may be a good trade next year, when manufacturing is more settled.

The total consumption of wool in the United States for the last four years is approximately as follows: 1891, 561,000,000 lbs., 1892, 562,000,000 lbs.; 1893, 619,000,000 lbs., 1894, 474,000,000 lbs. This is an average of 554,000,000 lbs. a year. The American clip of 1894 amounts to about 328,000,000 lbs. At the time the new tariff bill became law, there were in the neighborhood of 70-

000,000 lbs. of foreign wool in bond in Atlantic ports, and large shipments have continued to arrive since.

In the Montreal market transactions have been limited. Prices are quoted as follows: Greasy Cape, 14 to 16c.; Canadian fleece, 17 to 20c.; B.A. scoured, 26 to 32c. In pulled wool, 20 to 21½c. is quoted for supers, extra 23 to 26c.; Northwest wool, 11 to 12c.

## TORONTO WOOL MARKET.

The wool market is extremely quiet, and very little wool is coming to the local market or going to the United States. The manufacturers cannot get any advance for their made up goods, and are waiting for orders at prices that will pay them. There has been disappointment among wool dealers, who counted on an immediate boom in prices in the States. One dealer from Philadelphia was over to Toronto at the time the tariff bill became law, and bought 200,000 lbs. from E. Leadlay & Co. at a price which paid the seller; and John Hallam is reported to have cleared \$50,000 on sales to the States about the same time, while Long & Bisby, of Hamilton, sold about 700,000 lbs. and Robt. Berryman about 300,000 lbs. at a fair advance. The position of the American manufacturers is that they must wait till after January 1st—when the new duties on manufactured fabrics come into force—before they can tell exactly how foreign competition is going to affect them. The consequence is that there is stagnation in the American market as well as here. Meantime English and Irish wools are selling to quite an extent in the American market in competition with wools of the Canadian character. Prices in Toronto are nominally as follows: Super, 19 to 20 cents; extra super, 22 to 23 cents; fleece wool, 18 to 18½ cents, and combing, 20 cents. A cable despatch dated Oct. 12th says that the London wool sales are closing with prices from 2½ to 5 per cent. lower, the lower grades showing the most decline. Greasy merinos are unchanged. American buyers have taken 13,000 bales. The next series of sales opens on the 22nd November.

## COLOR AT THE FAR NORTH.

## INTENSE AND BRILLIANT COLOR AND SKIES OF SURPASSING LOVELINESS.

Frederick Wilbert Stokes, who was a member of the first Peary Relief Expedition, gives a new idea of the charms of the Arctic landscapes in a paper on "Color at the Far North," which he has written for the September number of *The Century*. Despite the desolation, he found, from an artistic standpoint, a land of beauty, with seas and skies of surpassing loveliness. The intensity and brilliance of color impress the beholder as something supernatural. Our sojourn was from the middle of July, through August, and a few days of September—a period when the polar latitudes are teeming with animal, insect and plant life. Of this brief period only am I qualified to speak, but from the accounts given by those who have passed through the long, dreaded night season, the phenomena occurring in the heavens are most beautiful. The chief peculiarity of color at the North, so far as my short experience tells me, is that there are no semitones, the general effect being black or just the opposite, intensely brilliant and rich in color. In fact, a summer's midnight at the North has all the brilliance of our brightest noon, with the added intensity and richness of our most vivid sunsets, while noon, when the sun is obscured by threatening masses of storm-clouds, is black. Indeed, it is the true land of "impressionism."

I remember one brilliant morning when the measureless ether overleaded a hue of exquisite blue, repeated itself in the perfect mirror of the sea. Far away, on the otherwise clear-cut horizon, a line of pure white ice shimmered its light up through a pinkish, yellow stratum of mist, which bathed in delicate greenish blue an enormous iceberg that strongly resembled an ancient cathedral. In the afternoon the sky, a threatening black, overhung a vast, contorted sheet of white and pink, composed of ice-floe and colossal bergs looming up above its mass at intervals, with deep, black patches of water, the whole carrying the eye to the horizon—a tapering band of deep, rich blue merging into the sky. In the immediate foreground of the ice-floe, near the water's edge, were shallow pools of delicate blues, purples and greens.

Of the wealth of color in flower, lichen and moss ; of its curious riches as manifested in insect, shell and animal life, and of its wonderful limning skill as shown on the great inland ice, ice-cap and glacier, I have neither purpose nor pen to write. This new world of color awaits the one who can truly describe it. In all these color effects at the North there lies a wizard-like power of enchantment—a distinctive uncanniness that, basilisk-like, both attracts and repels. Great nature's pitilessness broods over it with a force and penetration possibly not equaled, and surely not surpassed, in any other quarter of our globe. It is a land of beautiful and awesome dreams.

#### AFFIXING PAPER TO CLOTH.

To insure perfect cohesion between calico and other cloth and paper, the cloth should be laid on a large, smooth board of sufficient length and width ; then it should be damped and the edges tacked down to the board, the tacks being pretty close together, and care should be taken not to pull upon the edges of the cloth ; it should lie on the board just flat and smooth, or we may lay it on a long flat rule about one-half an inch from the edges of the cloth, and glue them down to the board, laying the glue on hot and rather thick with a flat brush about one-quarter inch wide. It is not difficult to do, but requires a little care not to strain the cloth. It has been damped and laid flat it will lie smoothly on the board. Having laid down the cloth, the next operation is to lay on strong paste with a large, soft brush. In doing this do not pull at the cloth with the brush, but work the paste well in. This will not only insure a better contact with the paper, but will also prevent the cloth from shrinking. The edges of the sheet of paper should be cut very straight, and if the paper is thick the edge of the paper at the back may be thinned down with glass paper. The sheets of paper may now be laid down on the cloth, the sheets overlapping each other by about one-third inch. If the paper is large it will take two persons to lay each sheet, and they must take care to lay the paper flat without pulling at the sheets. If the paper is thick it is better to let it lie a few minutes after the paste is laid on ; the sheets will then expand and will lie much smoother on the cloth. If the paper has not been well wetted it is apt to lie in bladders here and there over the cloth. This done, the mounted paper should not be interfered with for a day at least, even in a warm climate. When dry it should be cut off the board, but before it is used, if possible, be exposed to the sun.

#### CHAFED SPOTS IN PIECE-DYED NAP GOODS.

Chafed spots in piece-dyed goods, with a nap finish, are caused in various ways, and at all stages of the finish, by careless burling ; when, in the pinching off of a knot or the like, a portion of the nap is also pinched off ; or when knots, loops, or straws are overlooked, and in shearing bare spots are produced by the cylinder.

Chafings occur in the dyehouse during the reeling of the pieces, and are in part due to the carelessness of the workman who has to force the cloth running from the reel down into the bath, or who does the work improperly. In the first case, if he does not fix firmly enough the stick with which he forces down the cloth, the downward pressure will cause it to slide along, and although it may not always cause a chafed spot, the track of the stick will remain distinctly visible. In the other case, exactly the reverse takes place. The operator takes the cloth firmly with the stick, and presses it against the side of the kettle, to force it down. If the face of the cloth is brought against the side of the kettle, by a firm pressure, it will readily produce a chafed place. This is not so often the case when a vat is used, although it may happen. In this case, small bare streaks running in the same direction are produced.

The real occasion of these defects was discovered by a mere accident. Close examination of the interior of the lye kettle—and especially the rivets with which the copper sheets are fastened together—will, if the kettle has been in use for some years, betray the presence of a number of small cracks with sharp edges like splinters. It is they, says a writer in *Das Deutsche Wollen Gewerbe*, that produce the well-defined bare spots by shaving off

the nap from the face of the goods. The same thing occurs when the vat is used. Many vats have a false bottom, consisting of a perforated copper plate, through which the steam enters the bath. The edges of these small holes become sharp and cracked, especially if the bottom has been in use for a long time, and produce the results described above. The evil is augmented if the copper, of which the perforated bottom is made, is laminated. This defect is visible only when the copper plate has been worn considerably, and it is due not to the metal itself, but to its improper treatment in the rolling mill. When these bare spots are noticed, only a very severe scrubbing will show that they were caused by the sharp or splintered edges of the bottom holes. It is obvious that these spots are caused only when the cloth is in motion—that is, during the reeling when drawn across the copper bottom of the vat.

Some other causes have been assigned for these defects. For instance, it was said that some of the metallic salts used in dyeing do not dissolve in the water of the bath, and act chemically by their caustic action on the nap, destroying that portion upon which they lie. This ingenious explanation has now been abandoned. At the same time it is advisable that there should be a complete solution of the crystals of all the metallic salts used. It has been suggested that these crystals contain fragments of grit which do the damage. Centrifugal pumps used for supplying water to the dyehouse also bring up occasionally small, sharp stones, and discharge them into the dye kettle. These may fix themselves in the small holes of the copper bottom and injure the cloth while in motion during the process of the reeling. To prevent this the builder referred to constructs a frame to be placed over the perforated copper bottom, and fitting snugly to the interior of the kettle. In this frame are inserted strong, round copper rods, which revolve around a longitudinal axis. The cloth lies upon this frame during dyeing or mordanting, but the rods revolve at the least motion of the cloth. The spaces between the rods are large enough to permit any hard body to drop through. These revolving rods greatly facilitate the movement of the cloth, and reduce the danger of chafing to a minimum.

#### BLEACHING OIL-STAINED GOODS.

Among the difficulties which bleachers have to confront, stains of lubricating oils, and oily threads woven into plain cotton goods, are the most troublesome. They resist all bleaching operations, even lime boil, and can hardly be removed, previously to bleaching by hand, with soap and warm water. Boiling with soap before bleaching is of no avail. The removal of such stains is considerably facilitated by the application of a solution of  $\frac{1}{2}$  ounce of best white soap dissolved in 2 pints of water, to which 3 ounces acetyl ether and 2 ounces ammonia have been added. The dirty places are wetted and well rubbed with the solution by means of a sponge or white rag, when the dirt and oil are so loosened that it is usually easy to wash off with lukewarm water. It is best to apply this treatment before bleaching, because the bleaching operations have a tendency to re-act upon the oil and change its character, so that it becomes more pronounced in color and more difficult to remove. Then, again, should the process not entirely remove all the oil stain, the little which may be left will be more easily removed in the bleaching operations. Very dark and old oil stains are difficult to remove, but the remedy given above may be tried. Another plan is to wet the places with olive oil or cotton-seed oil, allow it to soak for some days, and then bleach as usual.—*Textile Mercury*.

J. McMASTER & Co., dry goods, Perth, Ont. have assigned Liabilities, \$25,000 ; nominal assets, \$20,000.

W. CONVEY & Co., dealers in dry goods, Chatham, Ont. have assigned. Liabilities, \$8,800, nominal assets, \$11,000.

BAZINET & DELLIERE, dry goods merchants, Montreal, have assigned on demand of A. Turcotte. Liabilities about \$17,000, mostly to Montreal creditors.

JACOB Y. SHANTZ & SON (Ltd.), Berlin, Ont., are applying for incorporation with a capital stock of \$140,000. They will carry on the business conducted by Jacob Y. Shantz & Son as manufacturers of buttons and ornaments.

**The Crabs Regulator Co.**  
**Manufacturers of**  
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STEAM WATER PUMP, DAMPER REGULATORS, TRAPS, VALVES, ETC.

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Manufacturers of all kinds of  
**Hackle, Gill, Comb and Card Pins, Picker Teeth, Needle Pointed Card Clothing in Wood and Leather for Flax, Jute, Tow, etc.**

Hackles, Gills and Wool Combs made and repaired; also Rope Makers' Pins, Picker Pins, Special Springs, Loom and Shuttle Springs, English Cast-Steel Wire, Cotton Banding and General Mill Furnishings.  
 Bloomfield Avenue and Morris Canal, NEWARK, N. J.

**GROMPTON LOOM WORKS**  
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 ROOMS FOR EVERY GRADE OF WEAVING.  
**PERFECTION IN WEAVING.**  
 OF WOOLENS OBTAINED BY THE GROMPTON  
**CLOSE-SHED LOOMS**  
 "1893" HIGH SPEED WOOLEN & WORSTED LOOM. WORLD'S FAIR MEDALS.

Established 1848.

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**KNIVES AND SCISSORS.**  
 Knives for all kinds of business cutlery on hand and warranted. All kinds of Cutlery ground and repaired.  
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 Between Broadway and Bowery,  
**NEW YORK CITY**

**MILL AND PLANT FOR SALE**

The managing partner, and the only one of the company with any experience in the business, died last year, and in consequence we have decided to sell the mill. We make both underwear and hosiery plant nearly new and in good condition. Also, a 10 h.p. engine. This is the only mill of its class in the Maritime provinces. We will supply all information on application.

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 YARMOUTH, N.S.

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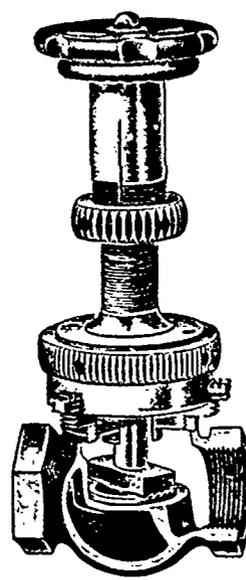
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Sole Agents for the American Continent

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Offices—425 & 432 Broadway, N.Y.  
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**WOOLEN AND WORSTED YARNS**  
 For Hosiery and other work  
**HESPELER, ONT.**



**Morse Valve Machine**

Now that you are repairing heating coils and steam pipes, you can save time, labor and money by using a

**MORSE VALVE RESEATING MACHINE**

and reseating your steam valves in position. We will send you a machine subject to thirty days' trial. Thousands of machines in use.

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 RELIANCE WORKS  
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to hold Pencils, Pens, &c., in the vest pocket. In Plain Leather, Calf, Russia and Morocco Leather. Light & Pliable  
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**MONTREAL**  
 The Leading American and Leading Canadian

**PIANOS...**

PARLOR ORGANS  
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## Among the Mills

The Cobourg Woolen Company has resumed operations

The woolen mills at Albert, N.B., are running full time on tweeds, blanketing, &c.

The Globe Woolen Mills, Montreal, are now working full time and report business good.

The woolen mill at Innisville, Ont., is now running under the superintendence of Kemp & Ferguson.

The J. C. McLaren Belting Co., Montreal, have issued a very tasteful trade list of their belting and mill supplies.

D. Fisher's woolen mill at Paisley, Ont., was destroyed by fire on the 2nd inst. The cause of the fire is not reported.

Merriton, Ont., knitting mill, it is reported, will shut down for the winter. A number of hands have already been laid off.

J. S. Boddy Bros.' dry goods store at Bradford, Ont., was last month burned down. Loss, \$25,000; insured for \$9,000.

J. A. Dillon, of Bellhouse, Dillon & Co., manufacturers' agents in dyestuffs and chemicals, has been on a trip through Ontario

The firm of S. Wolle, of Aue, is erecting an electrical bleaching and finishing establishment at Zelle, near Schwarzenberg, in Saxony.

John McMurchy, proprietor of the Huttonville, Ont., woolen mill, has built an extension to his factory and added some new machinery.

Since the death recently of Andrew Armstrong, of the Armstrong Carpet Company, Guelph, Robert Dodds is sole proprietor of that business.

Notice was given in the Cornwall Manufacturing Co.'s mill on the 11th inst. of a general reduction of 10 per cent. in all wages, to take effect in two weeks.

A fire broke out in the picker room of Dufton's woolen mill at Stratford, Ont., last month, but was put out by means of extinguishers before much damage had ensued.

The Montmorency Cotton Company, of Montmorency Falls, have given a contract to F. Parent, of Beauport, to build a new four-story building of brick 95 x 51 feet, to be used as a storehouse

Maggie McCranday, an employee in the Watchorn Bros' woolen mill at Merrickville, Ont., had an arm broken one day early last month, owing to the sudden fall of an iron bar while she was at work.

A large amount of new machinery and appliances has been put in at the hosiery factory at Collingwood, Ont. A large number of new hands will be taken on.

Peter Scott, superintendent of the Clyde Woolen Mills, Lanark, Ont., left by the Labrador a short time ago on a visit to Scotland, where he will endeavor to understand the latest improvements in woolen manufacture.

A fire broke out last month in Burrows & Co.'s chenille factory, Guelph, Ont. It is supposed that it originated in a spark from the boiler fire, and then gained access to the yarn room. About \$1,000 worth of damage was done before it could be extinguished. The loss is covered by insurance.

The St. Stephen's, N.B., cotton mill started up again last month on full time. The rate of wages is the same as that fixed by the last cut. About three-fourths of the usual number of hands are employed at present, and probably the full number will be employed shortly. The manager, Lewis Dexter, jun., arrived home from a prolonged stay in England a few days ago.

Robert J. Wylie, manufacturers' agent, has removed his office from Front street, Toronto, to 22 Bay street. Mr. Wylie has gone into the manufacture of worsted hosiery, and now has twelve machines in operation, with more orders on hand than he can fill. He expects to have an automatic knitting machine, of which he has bought the patents, in a state to proceed with the manufacture soon.

About 1,000 bales of sisal from the West Indies were received at Kingston Penitentiary a few days ago, to be used in the manufacture of binder twine.

Owing to the repairs on the government dam at Bob's Lake, lower water has been caused on the Tay river, and operations at the Glen Tay woolen mill were impeded for a few days.

B. A. Booth & Son have put in a quantity of new machinery in their woolen mill at Odessa, Ont., and are making arrangements to put in a dynamo for electric lighting. They may also light the town.

Mr. Tetlow, the English card-clothing manufacturer, has been on a trip to Canada visiting his numerous customers. He was accompanied by Robert S. Fraser, his Canadian agent, of St. Helen street, Montreal.

The repairs for R. Gemmell & Son's woolen factory, Perth, Ont., were completed last month and the mill is now in operation again. A new boiler was added to take the place of one in which a defect had been discovered.

Bellhouse, Dillon & Co., sole agents in Canada for Wm. Pickhardt & Kutthoff, are offering new lines of Palatine scarlets, which they claim to be the fastest and handsomest colors on the market. They also state that alizarine brown will be largely used in the coming season.

W. H. Avis, cordage manufacturer, of Toronto, has bought an acre of land in Buffalo, on which he will build a one-storey twine factory about 600 feet long. Some of the machinery has already been removed from Toronto, and Mr. Avis will shortly give up his place in the latter city altogether.

The Dominion Cotton Co. are improving the fire protection in their mills at Windsor, N.S. A reservoir measuring 130 by 75 ft. and 4½ ft. deep, is completed, and they are now placing four additional hydrants outside the mill which can be supplied either from the reservoir or from the town system.

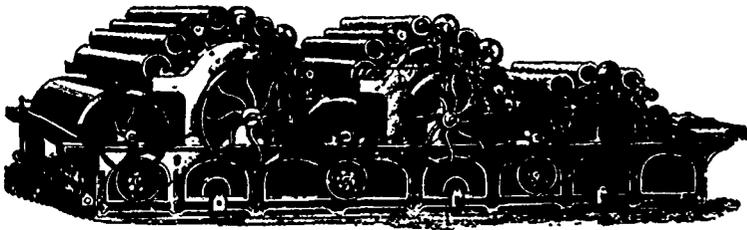
W. Root, of the widely-known firm of G. Root & Co., top-makers, Bradford, England, has also been on a visit to this country, where he has visited several of his customers. He was introduced on this, his first visit to Canada, by Robert S. Fraser, of Montreal. Mr. Root showed a very handsome line of the above stock.

Thos. Harcourt, of Ker & Harcourt, manufacturers of spools and bobbins, Walkerton, Ont., was last month on a business trip through the Ontario and Quebec textile centres, and gave us the pleasure of a visit at our Montreal office. He reports business generally among the mills slowly improving, and that in his own line was distinctly better than he had anticipated finding it.

Alex. Gibson's cotton factory in Marysville, N.B., was on the 2nd inst. broken into by burglars, who succeeded in obtaining \$3,300, which had been deposited in the safe in anticipation of pay day. The tools with which the burglars had accomplished their purpose were found close by, and bore the name of a local blacksmith, and it was afterwards discovered that his store had also been entered and the tools stolen.

There was some trouble a few days ago with some weavers at the Globe Woolen Mills, Montreal, who left work owing to fines having been imposed on a few of them for careless work. The matter was settled without very much difficulty, however, by the management, who refused to recognize in the matter anything of the nature of a strike, and simply ordered the dissatisfied hands to quit. Most of the weavers returned to work at once, and the mills are now running in all departments as usual.

Robert Owens King, son of R. W. King, C.E., head of the firm of R. W. King & Co., Toronto, has resumed his studies at McGill University, where he is taking the Science Course, in preparation for the electrical engineering profession. Our young friend has a promising future before him, having made a brilliant record, so far, in his studies. He came out head in his 1st and 3rd year and a good second in his 2nd year at McGill. In his first year he took also the special prize of \$30 given for the best machine shop work, his achievements being considered by the examiners as quite remarkable.

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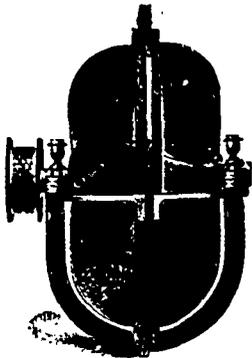
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**CARD CLOTHING TETLOW'S**

Stock in Canada

**Condenser Aprons** Buffed Surface  
Plain & GroovedOak-Tanned and White Belting  
Cotton Banding, Rim Spindle and Braided  
Shuttles, Pickers, Heddles, Harness  
Patent Frames, GENERAL FURNISHINGS**ROBT. S. FRASER**

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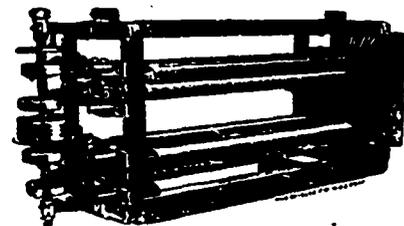
**BARNEY'S COMPOUND VENTILATING WHEEL**

Prompt Delivery, and no Customs Duties.

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**Manville Wool-Felt Sectional Steam-Pipe Covering**

54 Oliver St., BOSTON, Mass., U.S.A.

We manufacture Barker's Patent Noiseless  
Fast-running Doffing Comb**Barker's Patent Double Apron Rubbing  
Motions for Condenser Cards***Are in successful operation on all grades of stock, being generally  
adopted because they change carding and spinning  
rooms for the better.***James Barker, Cotton and Woolen Machinery**

Second and Somerset Streets, PHILADELPHIA, Pa.

A. Thornton has been promoted as overseer of the upper weaver's room at the Paton Mills, and Edward Irwin has been promoted as overseer of the lower weaver's room in the same mills.

The Canadian Mineral Wool Co., Toronto, covered all the steam pipes in the new Drill Shed and in the Ontario College of Pharmacy, in Toronto, and in the works of the Toronto Electric Light Co., with their patent mineral wool sectional covering.

R Gemmill & Son, Perth, are putting a set of 60-inch cards and a pair of mules in their woolen mills. They were supplied through Robt. S. Fraser, of Montreal, and were bought at a large machinery sale in England by Mr. Tetlow, the well known card-clothing manufacturer. The capacity of the mills will be almost doubled and about 12 hands will be shortly employed in addition.

The Dominion Cotton Mills Co. posted a notice in their Brantford, Ont., mills to the effect that from the 15th inst. a new schedule of wages would be put in operation. The weavers claimed that this schedule, together with the cut of 10 per cent. last June, would make a total reduction of wages of about 15 per cent., and that they would not be able to earn sufficient to maintain themselves. They therefore struck work and are still out as we go to press. In the meanwhile the mill is closed down.

The annual general meeting of the shareholders of the Kingston Hosiery Company was held last month at the company's office. The shareholders re-elected the old board of directors, composed as follows: James Minnes, George Richardson, H. Richardson, I. Simpson, E. Dwyer, John Hewton and Dr. Clements. This year, on account of the hard times and the consequent depression of trade, the business of the company was not so successful as last year, but the stockholders all expressed themselves as being very well satisfied.

W. Parks, manager, and Angus Parks, loom overseer, have severed their connection with the Paton Manufacturing Co., of Sherbrooke, to open a mill of their own at Lynn, Mass. Before leaving, Angus Parks was presented by the weavers with a handsome carving set in a plush morocco case, as a mark of appreciation by those under him. Mr. Paton, jr., now assumes the entire management of the mills.

The Toronto News, in a recent issue, informed its readers that the Weston Woolen Mills Co. had applied to Mayor Kennedy for information regarding a desirable city site to locate, as two railways and a good river were insufficient to furnish the necessary facilities for its requirements. The item ended with the announcement that the mayor was busy preparing a map showing all the eligible situations for lease. The company has already received two or three offers, and are now on the warpath after the scalp of the author of the canard. The company view it as an attempt to injure their business, and have demanded the writer's name, and a retraction from the News.

The many friends of James Leslie, manufacturer of card clothing and dealer in cotton and woolen mill supplies, Montreal, will regret to learn that he has been obliged to abandon his estate to his creditors. In starting his business Mr. Leslie had a good many difficulties to encounter, and had trade been good during the last few years, he would no doubt have surmounted all the obstacles to successful business. The unusual depression among the woolen mills during the last two years, however, has told with disastrous effect on Mr. Leslie's trade, and his present step was the only one open to him. Mr. Leslie is a skilful manufacturer, and has very many friends among manufacturers, who will be interested in seeing him placed upon his feet again.

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Made in rolls 38 x  
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**WATER PROOF**  
**Express Paper**

Made  
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the **Imperial Waterproof Paper Co.** 275 St. Martin St.  
**MONTREAL**

The Northey Manufacturing Co. of Toronto had at the Industrial Exhibition a fine exhibit of their power pumps. Eight pumps were shown varying from one of 500 gallons per minute to one of 15 gallons, one of them being the pump already referred to as sold to the Rosamond Woolen Co of Almonte

The leather belting firm known as the Howarth Belting Co., Toronto, of which G. T. Howarth was the head, has been amalgamated with the old established belting firm of Robin & Sadler, Montreal and Toronto. The latter firm's Toronto office will now be in Jordan street, the headquarters of the Howarth Belting Works, the Bay street office being given up. No firm is more widely or more favorably known throughout Canada in the belting line than Robin & Sadler, while the absorption of the more local business of Mr. Howarth will give increased strength to the new company's position in Ontario. The style of the firm will now be Robin, Sadler & Howarth.

The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd., have just completed a large addition to the main building of their factories in Parkdale, Toronto. In this addition will be placed a new set of belt presses of enormous size, also a quantity of other new machinery of the very latest design for the manufacture of belting, hose and other mechanical rubber goods. This increase in the capacity of the Gutta Percha Co.'s factories was made necessary by the constantly increasing demand for their goods. This company has also recently made considerable addition to their plant for the manufacture of men's mackintoshes, in which goods they now hold an enviable reputation. Their "Maltese Cross" brand mackintoshes are rapidly becoming the standard of excellence among the largest wholesale trade in point of finish, durability and attractive design.

A largely-attended meeting of the creditors of the Galbraith Hosiery Co. was held at the Royal Hotel. Mr. Wardlaw, of Galt, Mr. Hughes, of Paul Frind & Hughes, Toronto, R. F. Maddock, of Guelph, and Mr. Jago, Jr., of Rockwood, were appointed inspectors. Directions were given them in conjunction with the assignee, C. L. Dunbar, to make the best possible disposition of the estate. On the statement of assets and liabilities there appears to be a small surplus, and arrangements have been made whereby the business will be continued.—*Guelph Mercury*.

Since the above was in type we learn that after offering 50 cts. on the \$1, the firm has decided to wind up the business and are now selling off their machinery. The disappearance of A. Galbraith, the head of the firm, still remains a puzzle.

A traveller relates in the *St. Louis Star* what he saw in an Italian lace school. There were, he says, "about 350 Italian girls, all wearing the national costume, and industriously at work making the finest kinds of lace. These girls, whose ages ranged from 10 to 18 years, sat in great, barely furnished, well lighted rooms on low chairs, holding their lace frames on their knees. They wore a short, bright-colored petticoat, a green, red or orange fichu across the chest, silver rings in their ears, and beads or coral necklaces around their necks. They drew their needles slowly and gracefully back and forth, and gravely, except when some girlish joke raised a storm of smothered laughter. The work was all carefully superintended by the teachers. They sometimes filled orders for veils worth over \$1,000. While there, a piece of lace drapery said to be worth \$1,800 was shown, seven months having been spent in making its foundation alone."

MR. FALKENBURG, who hails from Manchester, England, proposes to establish a branch factory in Quebec for the manufacture of waterproof clothing.

A MEETING of the creditors of Russell, Gardner & Russell, wholesale fancy and dry goods, Ottawa, was held on the 15th September, at which a compromise was effected at 60c. on the dollar, and the firm will continue business.

ALEXANDER PAUL, dry goods merchant, Sudbury, Ont., has assigned. Liabilities, \$17,000, assets about \$18,000 to \$20,000. The assignment was originally made to a local assignee, but on an order obtained in the Chancery Court by the creditors this was changed to W. A. Campbell, Toronto.

JOHN MURPHY & Co., the Montreal dry goods merchants, have moved their stock into their new store on St. Catherine street.

W. G. HARVEY, dry goods, has opened in Vancouver, and purchased G. I. Wilson's branch store, Mount Pleasant, B.C.

CATHERS BROS. & Co. have established a new industry in St. John, N.B., in the shape of a factory for the manufacture of hand-made fancy slippers and shoes.

J. A. NELSON RATTE, Montreal, who was accused of smuggling furs into the United States, as stated in a recent number, has been sentenced to pay a fine of \$200 and serve a year and one day in the Erie County Penitentiary.

W. H. BRASBIE has severed his connection with Burns & Lewis, of London, Ont., a house which he has represented faithfully for ten years, and will in future represent W. R. Johnston & Co., wholesale clothiers, Toronto. His territory will include Nova Scotia and as far west as Kingston.

CHEMICALS AND DYESTUFFS

Although trade cannot be said to be brisk, orders are very numerous, showing that the mills are fairly busy. The changes in price are not numerous. Sumac is reported higher abroad. Bicarb soda is weaker and outside brands are offered at cut figures. Chlorate of potash does not improve in value. Sulphate of copper is booking for forward delivery.

Bleaching powder.....	\$ 2 00	to \$ 2 10
Bicarb soda.....	2 25	" 2 35
Sal soda .....	0 70	" 0 75
Carbolic acid, 1 lb. bottles .....	0 25	" 0 30
Caustic soda, 60° .....	2 30	" 2 50
Caustic soda, 70° .....	2 60	" 2 75
Chlorate of potash.....	0 18	" 0 20
Alum .....	1 40	" 1 50
Copperas .....	0 70	" 0 75
Sulphur flour .....	1 75	" 2 00
Sulphur roll .....	2 00	" 2 10
Sulphate of copper.....	4 00	" 5 00
White sugar of lead .....	0 07½	" 0 08½
Bic potash .....	0 10	" 0 12
Sumac, Sicily, per ton .....	70 00	" 75 00
Soda ash, 48° to 58° .....	1 25	" 1 50
Chip logwood .....	2 00	" 2 10
Castor oil.....	0 06½	" 0 07
Cocoonut oil .....	0 06½	" 0 07

A. KLIPSTEIN & COMP'Y

122 PEARL STREET, NEW YORK

Chemicals and Dyestuffs

ANILINE COLORS OF EVERY KIND

SPECIALTIES:

Fast Colors for Wool Such as DRY ALIZARINE, ALIZARINE BLUE, GREEN, YELLOW, etc.

Also CAUSTIC POTASH FOR WOOL SCOURING

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ENGLISHMAN, now residing in United States, thoroughly practical in the manufacture of Marseilles crochets, Mitchelne quilts and Turkey sea table covers, is desirous of meeting capitalists who are willing to put capital against experience, or would superintend new place in a stock company, if compensation is satisfactory. No objection to any location, and is willing to learn inexperienced help and guarantee better results than any other manufactured fabrics. Address P.O. Box 267, Beverly, New Jersey, U.S.A.

WANTED—By a Maritime Province mill—a piece sewer and mender. None but a first-class hand need apply. Good wages will be paid. Address Box 1, JOURNAL OF FABRICS, Fraser Building, Montreal.

HUTCHINSON & SON, dry goods merchants, Alliston, Ont., have assigned. Liabilities \$15,000.

ONE of the latest inventions is an electric clothes wringer which works automatically and rings a bell as soon as the work is finished.

F. X LESSARD has brought an action for \$5,000 damages against Jas Coristine, Montreal, whom he accuses of perjury in the investigation regarding the recent fur seizure.

THE Royal Corset Company, of Sherbrooke, is to be put in liquidation. The losses on last year's trade were over \$12,000, but the liabilities to the public are stated to be only \$4,220.

THE Toronto Feather and Down Company has been incorporated under the Joint Stock Companies Act of Ontario. Capital stock, \$20,000. The incorporators are D. Hope, A. Blachford, H. Barber, Mrs. Elizabeth Blachford, Jas. Bink, and Charles E. Blachford.

"We hold thee safe."

## The Dominion Burglary Guarantee Co.

Limited

Head Office, Montreal, Can.

CAPITAL, \$200,000.

Insurance against burglary and housebreaking. Policies clear and free from vexatious or restrictive clauses.

JOHN A. GROSE, GENERAL MANAGER.

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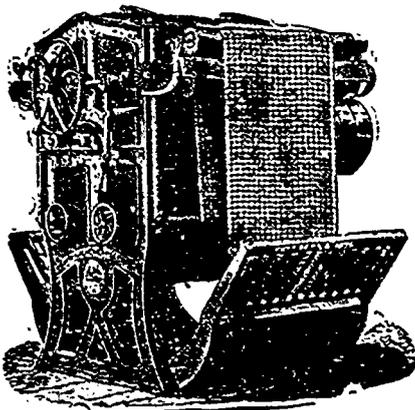
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MANUFACTURER  
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**Woolen Machinery,**

Fulling Mills,

Cloth Washers, Wool and Waste - Dusters, Drum Spool Winders, Reels, Spooling and Doubling - Machines, Ring - Twisters, Card Creels, Rag - Dusters-Dead Spindle Spooler (For Warp or Dresser Spools), Pat. Double, Acting Gigs, etc., etc.

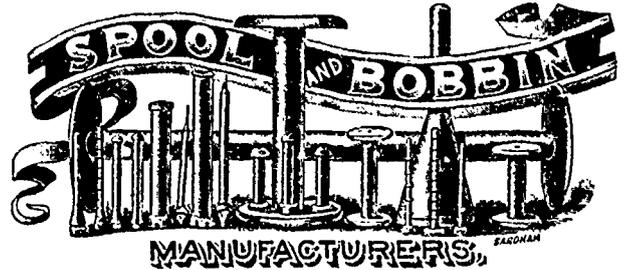


THOMAS KER

J. HARCOURT

## KER & HARCOURT,

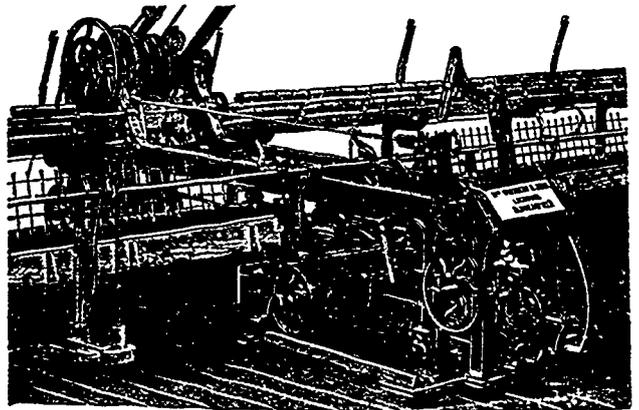
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LOCKWOOD, HUDDERSFIELD, ENGLAND.

Winding Machinery, Improved Self-Acting Mule, Suspended Steam Driven Centrifugal Hydro-Extractor, Tentering and Drying Machines, Patent Wool and Cotton Dryer, Patent Wool Scouring Machine, Cross Raising Machine, Patent Crabbing and Winding-on Machine, Warp Sizing, Cool Air Drying and Beaming Machine, and other Woolen Machinery.

CATALOGUE ON APPLICATION

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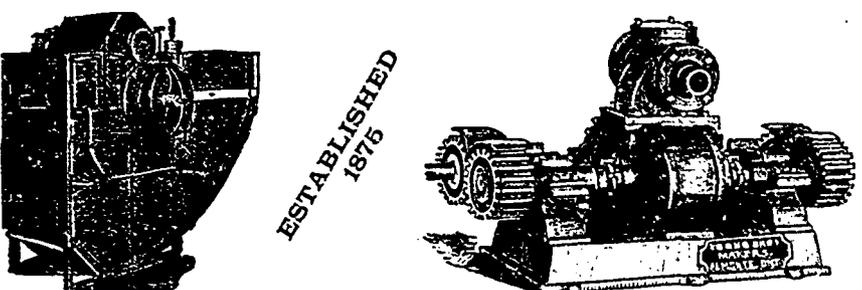
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*ESTABLISHED 1875*

Manufacturers of English or American Fulling Mills and Washers, Wool Pickers Exhaust Fan Driers, Dusters, Rotary Force Pumps for Fire Duty, Boiler Feed Pumps, Shafting, Hangers, Castings, Pulleys, Gearing, Forgings.  
Full equipment of mills of every kind. **YOUNG BROS.,** Almonte, Ont.

**HAWORTH & WATSON**  
MANUFACTURERS OF  
**COP TUBES**  
PAPER COP TUBES FOR MULE SPINNING.  
LARGE PAPER TUBES FOR USE ON BOBBINS.  
FULL LENGTH TAPERED TUBES.  
PAPER TUBES SILK MANUFACTURERS.  
PAPER CONES & TUBES FOR CONE WINDERS.  
**LOWELL, MASS.**

### DIAMINE BLACKS.

W. J. Matheson & Co., manufacturers of dye stuffs, New York and Montreal, have issued a bulletin (No. 32) containing particulars and samples of two new products made by Leopold Cassella & Co. Both of these dye-stuffs, Diamine-Jet-Black OO and Oxy-Diamine-Black N, dye cotton in a single bath deep blacks of fine shades and good fastness, and are highly useful in all cases which do not require the same degree of fastness to washing obtained with diazotised Diamine Blacks.

A full blue black for cottons is produced with 4 to 4½ per cent. of dye-stuff with the addition of 5 per cent Soda crystals and 15 per cent. Glauber Salt, or 2 per cent Turkey Red Oil and 20 per cent. Glauber Salt at the boil for one hour: by shading with some Diamine Fast Yellow A, a jet-black is produced. Such dyeings are as fast to washing as those obtained with the other Diamine Blacks. In order to obtain blacks fast to milling, and which do not tint the white wool or cotton milled with such dyeings, the dyed cotton is boiled for ten minutes in another bath with 4 per cent. Bichromate of Potassium. An identical degree of fastness and at the same time a remarkable increase in the depth of the shade, is obtained by diazotising and developing. With about 3 per cent. Diamine-Jet-Black OO diazotised and developed with Developer No 5, a deep black is obtained, the shade of which is not quite as fine as that of the developed Diamine-Black BH, but which is superior to the latter in fastness to milling and acids. The fastness to acids is especially important, as the black can be boiled in a moderately sour bath without tinting white wool, which property is of value for dyeing warps, to be used for union goods in which the wool is afterwards dyed in the piece.

A black done with 4½ per cent Diamine-Jet-Black OO and 1½ per cent. Diamine-Fast-Yellow A, exposed last summer for six weeks, showed only a very slight change in the shade fastness to acid goods.

Diamine-Jet-Black OO dyes fibres composed of silk and cotton in one bath almost evenly. Excellent results are obtained on cotton-back satin by using the above-mentioned diazotising process, a slight shading of the silk suffices to produce a uniform fine deep black. It is also well adapted for topping pieces dyed with Aniline Black.

On fabrics composed of silk and cotton, when dyed direct, Oxy-Diamine-Black N produces uniform shades from grey to black, and is therefore of special value for this industry. A topping with New-Methylene-Blue improves the shade.

Also for dyeing jute and linen, the results obtained with this dyestuff are very satisfactory, on account of its high tinctorial powers.

### BAST FIBRES.

Chas. Richards Dodge, special agent for the investigation of fibres grown in the United States, has published his report on "Uncultivated Bast Fibres" for the U. S. Department of Agriculture. The species of plants he examined belong mostly to three families, the *Malvaceæ*, the *Asclepidaceæ*, and the *Leguminosæ*. The Malvaceous species are the most numerous and possibly the most widely distributed, their fibre possessing fair strength and comparing with jute, rather than with flax or hemp, though whiter in color than the former. These may be considered as "jute substitutes," while the species belonging to the two other families, and giving stronger fibre, may be termed "hemp substitutes," and are therefore more valuable. The chief object of this very interesting report is, first, to call attention to American fibre plants that are in the treatises on botany classed as weeds, but which some day it is very possible will be used industrially, and secondly, to state their history, uses, method of cultivation, &c., for the benefit of the many persons who are constantly making enquiries concerning them.

Among Malvaceæ, the most important plants treated of are the okra and the abutilon, both of which have long been regarded as possessed of excellent fibres, though they have not been produced

on a commercial scale. Okra grows well in Florida and one or two other Southern States, and its fibre is as white as New Zealand flax, much lighter than jute as usually prepared, but more brittle and less strong. The filaments are smooth and lustrous, and fairly regular. Efforts have been made to utilize this fibre for the manufacture of bagging for cotton bales, replacing jute, especially as it is said to be easily cultivated and prepared for the market. Mr. Dodge himself, however, thinks these efforts will never prove very successful, owing to the weakness of the fibre, compared with jute, and to the fact that there are several other species of indigenous fibre plants which can be just as easily grown, and which are superior in other respects. With regard to the abutilon, which grows in many of the States, several importers of jute have expressed the opinion that jute might in time be supplanted by the former fibre. It is also pronounced satisfactory for weaving tissues and for mixing with a certain class of woollen goods. The failure heretofore to create the preparation of abutilon fibre into a great national industry has no doubt been due to the absence of a good machine for cleaning and decorticating it, though gradually this difficulty is being remedied.

Other fibres investigated by Mr. Dodge are *Asclepia* or milk-weed, Colorado river hemp, Indian hemp, nettle, etc., etc. Altogether the report is well worth study, and it will tend to show what a mine of wealth exists, still unworked, for those who will cultivate some of the more important of the fibre plants of Florida and other States.

Several of these fibre plants are indigenous to Canada and we would suggest to the department of Agriculture at Ottawa that such lines of investigation should be carried out at home.

### POINTS ON BLEACHING WOOL.

Before bleaching wool with hydrogen peroxide it must be washed thoroughly clean. An immersion of 30 to 40 minutes in a bath of commercial hydrogen peroxide, diluted with ten parts of water, suffices to bleach the wool. With a dilution of 15 parts of water, about one hour is required. A capacious vat should be used to allow of the wool being easily moved, as this accelerates the bleaching process.

As long as the wool, after being taken from the bleaching bath, is moist and exposed to the air, the bleaching process goes on, and it is therefore advisable not to hasten drying. The best results are obtained by drying in the sun; if this cannot be done, a moderate temperature should be kept in the drying room. In working with diluted bleaching water, the small quantity of indigo required for the production of a pure white can be directly added to the bleaching bath. By using a concentrated bath the toning must, however, be done in a separate bath. For very yellow wool add a few drops of dissolved methyl violet to the bath, which prevents the white from acquiring a greenish tint.—*Textile Record*.

BEDARD & VINCENT, mantles, costumes, etc., Montreal, have called a meeting of their creditors for the 18th inst. The principal liabilities are to V. Manheimer, Berlin, \$2,609, J. B. Doure, Montreal, \$6,797; Mrs M. F. Blache, Montreal, \$3,528, H. N. Kay, Phillipsburg, Que., \$2,550, and the Banque Nationale (indirect), Montreal, \$6,797.

THE *Merchant*, in its very creditable Toronto Exhibition number, thus refers to the firm of S. Greenshields, Son & Co.:—Among the wholesale and retail trades of Canada, especially those in the dry goods branch, there are perhaps few houses as popular and more favorably known than S. Greenshields, Son & Co. They are everywhere recognized as a live firm, whose unlimited resources in the way of capital, enterprise, experience, energy, quality of goods, system of selling, or in marking of prices, render their competition for patronage most formidable. The firm are sole agents in Canada for the celebrated goods of Priestley & Sons, notably Priestley's "Cravenette," recognized as the only porous waterproofs on the market. This distinguished firm have lately placed on the market a considerable addition to their dress fabrics for gentlewomen in black and half mourning.

## THE INSOLVENCY QUESTION.

A committee of the Montreal Board of Trade, of which James A. Cantlie is chairman, has presented the following special report on the insolvency question :

"The committee on insolvency legislation begs to report that considerable progress has been made during the present year in the direction of an Act to secure uniformity throughout the Dominion on this important matter of liquidations in insolvency, a bill having been prepared under the direction of the Minister of Trade and Commerce, and introduced by him in the Senate in the early part of the last session of the Federal Parliament.

"Copies of the bill having been sent to the various Boards of Trade of Canada by the Hon. Mr. Bowell, this committee, in conjunction with similar committees appointed by other Boards of Trade, named a delegation who appeared before the Senate Committee and laid before it objections to certain clauses of the bill, and such suggestions as were considered to be necessary to bring the bill into harmony with the requirements of the commerce and industry of the Dominion. A delegation from the Canadian Bankers' Association was also present and stated the views of that body on the measure.

"As a consequence of the various suggestions made at this meeting, the bill was recast and most of the additions suggested by the delegates incorporated therein.

"The bill was then discussed at great length by the Senate Committee at numerous sittings, most of which were attended by representatives from this and the Toronto Committee, and it was finally passed by the Senate and sent to the Lower House.

"As a considerable difference of opinion appeared to exist as to whether the Act should apply to traders only or to debtors generally, and as opposition was threatened to this section in the House of Commons, the Government decided to reprint the bill as finally amended, and to reintroduce it next session, considering that permanency would be better secured if the proposed legislation had been previously submitted to, and considered by, the community generally during the parliamentary vacation.

"An active opposition is, however, threatened by some bankers to that part of the bill which refers to the collocation of claims and the valuation of security.

"The contention of these bankers is that they should be allowed to rank for dividends on the full amount of all notes held by them, and that no account should be required by the liquidator until such claim has been paid in full.

"This, in the majority of estates, would mean that the bank would be paid in full, and the dividend to other creditors correspondingly diminished, which your committee considers is contrary to fair business principles, inasmuch as the banker, from the nature of his business, is generally the first to become aware of any financial weakness in his client's affairs, and is enabled thereby to take steps to place the account on more solid ground than is possible to the ordinary creditor.

"In order to prevent any important changes in the bill as passed by the Senate, it will be necessary that provision be made for a representative of your Board to be present at Ottawa during the next session of Parliament, whenever this measure is under discussion and until it is finally passed. The banking interest is represented by eminent counsel, and although Mr. D. E. Thompson, Q.C., representing the Toronto Board, did yeoman service in favor of the principles advocated by this Committee, it is not fair that the defence of our common interests should be left to any considerable extent to a sister Board."

THE Montreal Star says: A. P. Willis, of Montreal, accompanied by W. C. Motley, an expert who attended the Industrial Exhibition for the purpose of purchasing pianos, completed a contract on Saturday with the R. S. Williams (Toronto), and Bell (Guelph) piano manufacturers for 1,000 pianos and 500 organs, which are to be put on the market in Eastern Ontario, the Province of Quebec, and the lower provinces. This is the largest purchase of the kind ever made in Canada.

## AMERICAN TEXTILE PATENTS.

The following list of patents granted by the United States Patent Office for inventions relative to textiles and textile machinery is reported for THE CANADIAN JOURNAL OF FABRICS, by Glascock & Co., patent attorneys, Washington, D.C., of whom printed copies can be obtained for 25 cents each.—

M. Duesberg Delrez, Maurice, Belgium, apparatus for setting teeth in card clothing.

J. D. Tomlinson, Rochdale, England, machine for raising the surface of textile fabrics.

J. Vannette, Tiffin, Ohio, sewing machine.

J. T. Hogan, Jersey City, N.J., buttonhole sewing machine feeding mechanism.

G. A. Stafford, Montague, Tex., sewing machine quilting mechanism.

W. A. O'Brien, Boston, Mass., union garment and knitting same.

S. Jaros, Hartford, Conn., knitting machine.

H. Vogelsang, Dulken, Germany, loom heddle.

H. Wenzel, Scholinde, Hungary, loom shedding mechanism.

M. Cramby, Bradford, England, apparatus for cutting patterns for cloth.

J. B. Price, Wollaston, Mass., sewing machine.

G. H. Scetrini and G. Cade, London, England, sewing machine.

A Hitchon, Accrington, England, separator mechanism for spinning frames

J. Cain, Utica, N.Y., spinning machine roll.

## WOOL LUSTERING.

In the steaming of woolens and worsteds, says "Randolph" in the Boston *Journal of Commerce*, certain very important changes take place which so effectually alter the condition of the fibre that the finish and appearance of the fabric are permanently changed. In order to get at a better notion of the process and of what it means and implies, and in order also to see more clearly what conditions are most favorable to a truly good and thorough finish as obtained by this method of treatment, it is necessary to look at the steam lustering in the details of its effects and action upon the fibres of which the cloth is made.

The finish, which is the peculiar result of the steam-lustering process, owes its individual characteristics wholly to the influence of the process upon the fibres. The fibres take a certain change as the process proceeds, and as the fibres are altered so the finish is regulated. The only way to get at the bottom of the nature of the finish is thus to try to discover some of these fibre alterations which every steaming entails.

In the first place the steam lustering has the effect of hardening or compacting the individual fibre. At first this may not seem true, for every one knows that steam is the very agent employed to take away hardness and glaze, and render the fabric soft and pliable. But when this is the result, it must be remembered that the steam is applied under very different circumstances and conditions, and these different conditions are what make all the difference in the kind of finish which results. In the simple matter of steaming the fabric is steamed in the open air and is subjected to no pressure, while in steam lustering the steam is applied only after the cloth is securely wrapped in a tight wrapper and inclosed from the surrounding air, and also after it has been well rolled on the iron roller under a tension of considerable extent. These two differences must be noted, and then the apparent paradox is at once explained. The fact thus remains that the steam lustering has the effect of hardening the fibres and of imparting in this way an agreeable and moderate amount of material lustre or gloss. The extent of this effect will vary according to the nature of the fibre and the length of time during which it is exposed to the action of the steam. There is a tendency of the steam in connection with moisture, and the inclosure within the confined limits of a tightly wound roll and wrapper, to contract the scales or laminae on the external surface of the fibre, and this results in a hardening and accompanying glazing or lustering of the fibre. The two elements whose action leads

to this result are as already hinted, and the longer the steam is allowed to act on the fibre, and the tighter or greater the tension at which the cloth is wound and wrapped by the leader canvas, the more pronounced will this hardening be. But it does not follow that the feeling is harsh and disagreeable, for whatever of this feeling there may be left is removed by the final steaming of the goods after pressing. The harshness and glaze of pressure in the press are different effects, and do not affect to the same degree the life and body of the fibre.

But in the second place there is also another effect of steam lustring which is of much importance. This is the laying or matting of the fibres one on the other as they stand in the body of the woven cloth. The steam lustring makes the position of the fibres permanent by so hardening the fibre in its place that no kind of subsequent treatment can cause it to assume a complete change. This matting of the woven fibres into a solid firm body is a very important element, and one on which the permanence of the finish especially depends. The reason for this effect is found in the action of steam on the fibre while it is under pressure, and as the action is more prolonged than in the mere pressing of the cloth, so the finish derived from steam lustring is very much more lasting. In pressing, the element that is emphasized is the pressure, in the lustring the important factor is the steaming part of the process. A mere pressure finish is not by any means a permanent affair; but a pressure finish, even when slight or fairly so, accentuated and made a part of the nature of the fibre itself by the action of steam, is a very permanent thing, and to alter it requires a new course of treatment throughout. In mere pressing the nature of the fibre is not changed along with the change in position which the pressure effects; but in lustring every change in the fibre's position is rendered permanent and secure by a radical change in the nature of the fibre itself from the activity of the steam.

From these two main considerations alone it can be seen how the process acts and how its details bear upon the results desired. The skill and judgment of the finisher are called into play in order to regulate the action of the heated steam upon the fibres of the cloth, so as to produce the particular finished effects desired. But practice and observation will secure the coveted end.

A. PAUL, North Bay, Ont., has assigned to R. Marten, Sudbury. Liabilities nearly \$16,000.

THOMAS WATSON, of the dry goods firm of Watson, Armington & Co., Winnipeg, is dead. Mr. Watson had been ill for two weeks with typhoid fever.

OAKES Mfg. Co., New York, have been appointed selling agents for Middleton & Meredith, Montreal. A. H. McKee represents the Oakes Mfg. Company in Montreal.

J. & W. MICKLEBOROUGH, the well-known retail dry goods firm, of St. Thomas, Ont., have dissolved, Wm. Mickleborough retiring and his brother continuing the business.

THE Williams, Greene & Rome Co., the shirt manufacturers of Berlin, have settled with their creditors at 60 cts. on the \$1, payable in three, six, nine and twelve months, dating from 1st of January next

A DOWN-TOWN clothing house exhibited a poster yesterday, bearing the inscription: "We can fit a giant or a dwarf." It had not been out long before some wag added the words, "But have no goods between these sizes." The poster was withdrawn.—*Montreal Witness*

MR. WALKER, manager of the Canadian Rubber Co., in conversation with a representative of the *Monetary Times*, is reported to have said: "The people of Canada wear cheaper and better rubber shoes than do consumers in the United States. Last year American manufacturers advanced their prices from 20 to 40 per cent.; in Canada, however, prices were advanced but 5 per cent. It is worthy of note that most American firms confine themselves to particular lines, while the company which I represent makes rubber goods of nearly every description, including shoes, beltings, hose, and all kinds of hard rubber goods."

THE exhibit of Bellhouse, Dillon & Co., Montreal, at Antwerp Exhibition, consisting of the "Candor" brand of Portland cement, has been awarded, in competition with the world, the highest prize attainable. The Portland cement works are owned by Col. North, the "Nitrate King," for whom Bellhouse, Dillon & Co. are the Canadian and United States agents.

M. HICKS & Co., auctioneers, Montreal, held last month their fifteenth annual exhibition of Oriental fabrics. A special feature was a number of hand-made carpets, made in London, England, by native weavers who had been brought from Agra, India, for the purpose of displaying the intricate methods and delicate manipulations required in making such carpets. There was also a fine display of Teheran and Daghestan rugs, the exquisite gradations of the colors in which are well known. After the exhibition, which lasted three days, the articles were sold by auction.

H. SHOREY & Co., the great wholesale clothing house of Montreal, have for several years past sent to their customers at the beginning of their season's trade a photograph of some distinguished man or woman more or less connected with Canada. This year it is a very interesting photographic group entitled, "Four Generations," and showing the Queen, the Prince of Wales, the Duke of York and the latest possible heir to the British crown—the Duke of York's baby boy. This souvenir will be gladly received and kept by Shorey & Co.'s customers from the West Indies, on the east, to Victoria, on the west.

A VERY attractive exhibit at the Toronto Industrial Fair was that of Colin McArthur & Co., the well-known manufacturers of wall paper, Montreal. Twenty-two entirely new designs were on view, and the exhibit shown as in a room, with borders and moulding displayed. These new designs were very brilliant and artistic, and it must have impressed the visitors very strongly with the rapid progress being made by the wall paper manufacturers of Canada, or at least the progress of this firm. W. C. Craig, who had charge of the exhibit, and arranged it very skilfully, informed us that his firm have this year placed on the market 75 or 80 new patterns, which are having a large run.

THE Manchester indigo blue printing industry is viewing with some anxiety the new development that has just taken place in the rival German industry. For a long time past the German indigo printers have kept up, by means of a convention among themselves, the price of the article of which they had a practical monopoly. After a while the competition of Manchester became too serious to be ignored, and the members of the convention met to consider the situation. It seemed pretty clear that prices must come down, but, nevertheless, no agreement could be come to on the point, and, finally, the convention was dissolved. It now appears that each member of the trade is bidding against the other, and the natural result will be that prices will, at any rate temporarily, fall to an altogether unremunerative point. This will seriously affect Manchester indigo blue printers.—*Drapers' Record*.

A SENSATION was caused in Montreal when it was known that the Canada Jute Co., the Consumers' Cordage Co. and the Dominion Bag Co. had a difficulty with the Customs authorities. The latter claim that these companies have been importing large quantities of jute under the free list, whereas the jute had already undergone partial manufacture to such an extent that it really was dutiable to the amount of 20 per cent. They therefore demanded all invoices for the past six years. The value of goods in which there is the question of duty is about \$300,000. The companies agreed to hold intact all bales of cream jute, half bleached, then in their possession, pending the decision of the Customs Department as to whether it was entitled to free entry or not. N. Clark Wallace, Controller of Customs, has referred the matter to the Exchequer Court, where witnesses can be examined under oath. The point to be decided is whether it should pay 20 per cent. *ad valorem* as "manufactured jute," or whether it should come under the old tariff clause, which reads: "Jute cloth, as taken from the loom, neither pressed, mangled, calendered nor in any way finished, and not less than 40 inches wide, when imported by manufacturers of jute bags for use in their own factories, free."

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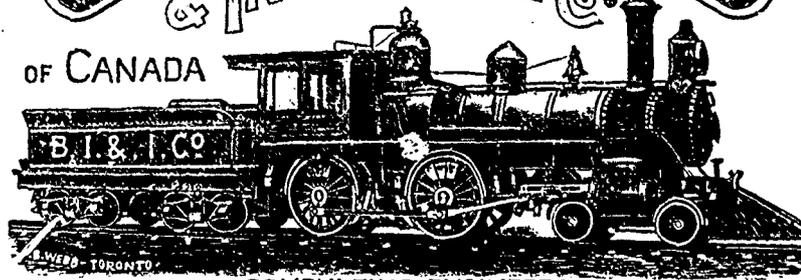
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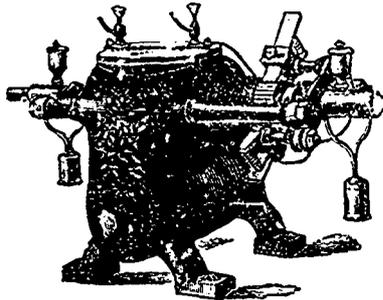
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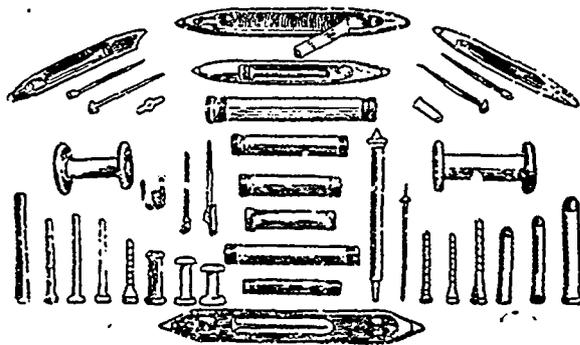


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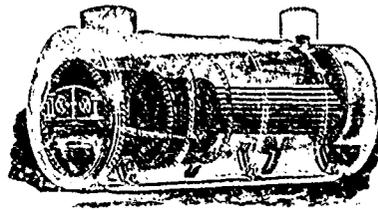
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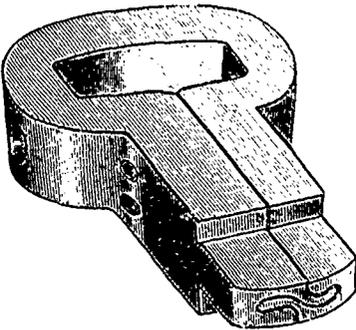
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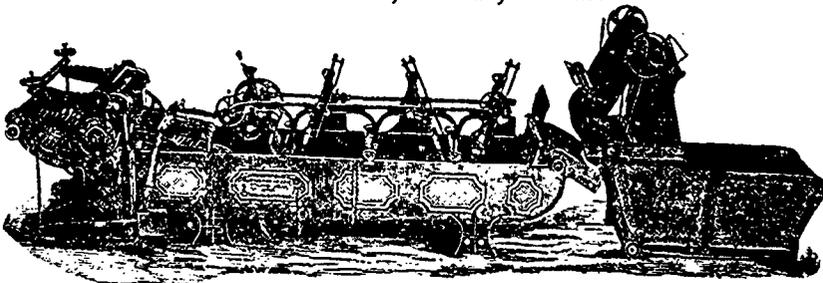
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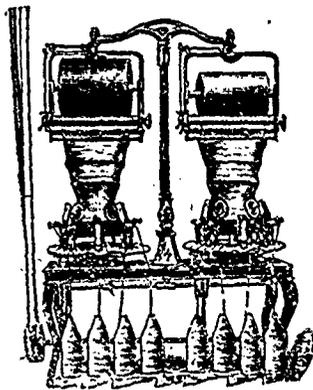
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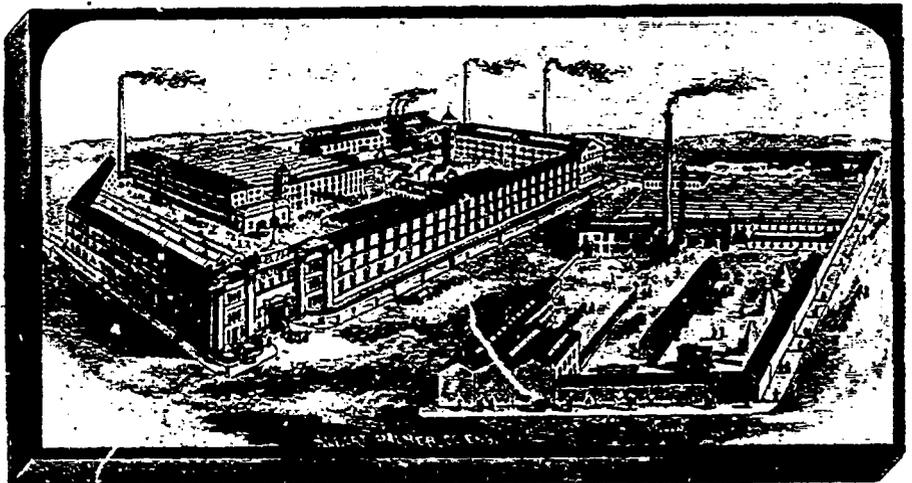
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