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Canadian Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVII. TORONTO AND MONTREAL, SEPTEMBER, 1900. No. 9.

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CONTENTS OF THIS NUMBER:

CHINESE TRADE.

In Lord Charles Beresford's book we find some very interesting statistics on Chinese trade. Its growth with various foreign countries is shown in a comparative table of the imports of cotton goods and yarns into all China from 1887 to 1897. The trade of Great Britain and India, which was 87 per cent. of the whole trade of China, has increased by almost one million pounds, sterling, in the ten years, and the imports from Japan to China have increased from nothing to £1,007,200. The Dutch trade, which is very small, has fallen off 22 per cent. The total increase in the trade of the foreign countries with China has been slightly over two and one-half millions, of which slightly over one-half a million is set down as "American." Whether this includes our Canadian cottons is not apparent, but it is highly probable that this is the case. This increase of half a million pounds from America represents an increase in quantity of 121 per cent., and in value of 59½ per cent. This indicates that the United States is now manufacturing for the Chinese market, and is producing in large quantities those low-grade goods which that market demands, not sending abroad from time to time the surplus of the domestic production. This is also true of Canada. The market is a large one, and Canada's share in it should be very large.

REV. FATHER O'LEARY.

The Rev. P. M. O'Leary, now known as Father O'Leary, the heroic and devoted Roman Catholic chaplain of the Royal Canadian Regiment in South Africa, was born in Quebec City in 1850. Of his first charge, the Montreal Witness says: ". . . as vicaire or assistant to the late Father Drolet, parish priest of Sillery, he made himself exceedingly popular among the mixed population of that parish by his thorough identification with all their needs, spiritual and temporal, so that when he left them to take charge of a parish of his own, at Laval, in the county of Montmorency, his departure was viewed with the deepest regret by all, and made the occasion of a very remarkable farewell demonstration in his honor, in which every element, Protestant and Catholic, Irish and French, took part."

At the time of his departure for South Africa he was chaplain of the Belmont Asylum and teaching at the Quebec Seminary and Laval University. Of his heroic conduct with the army in Africa space fails us to speak. We hope that everyone who admires courage and true piety will take part in the proposed testimonial to Father O'Leary, and send in a subscription. For this purpose, small sums are specially solicited, as it is deemed more fitting that the many should contribute their mites, unashamed, than the few should be ostentatiously generous. Let the people he loves show their affection for him.

WOOL PRICES.

Justice Bateman & Co., Philadelphia, report the demand for wool improving, though the woolen goods market continues in very bad condition. The English mills are many of them running on three-quarters time only, and even then working only a part of their machinery. To keep their employees together some are paying four days' wages for three days' work. Clothing merchants largely over-bought last year, and their orders for the present season are correspondingly small.

The reckless speculations in the French wool market at Roubaix and Tourcoing has caused a panic in France, and has affected the trade all over the world. All summer the gambling fever raged, until, in August, the price reached the high-water mark of six francs, seventy centimes per kilogram. Speculators for a rise lost their heads, and there were daily purchases of a million or a million and a half kilograms. The manufacturing business was dislocated, owing to the ordinary fluctuations in the price of material. The amount of wool bought blindly by French firms reached the total of forty million kilos, which means a deficit of over eight million francs. The next series of Colonial sales at London open October 9th.

COTTON.

In Great Britain the cotton mills are largely closing down, and a good authority estimates the loss from the stoppage as probably £25,000,000.

In the United States the advances in the price of raw cotton have not raised the prices of manufactured goods, greatly as the market was glutted when the advance came.

In Canada, rising prices of raw cotton and a fairly active market in manufactured goods have combined to advance prices somewhat, though sympathy with United States conditions prevents any extreme movement. An English contemporary summarizes the situation, thus: "The raw material has been scarce and dear owing to a shortage in the American crop, aggravated by the high price of coal, while the plague and famine in India, and the outbreak in China have further increased the difficulties of the situation. The deficiency of last year's cotton crop, with the consequent rise in prices, has, however, been the most serious element of the situation, and the uncertainty of the near future is a source of considerable embarrassment."

BUSINESS IS BUSINESS?

Under constitutional government, the minister is responsible for the acts of his subordinates. Nothing more can be said about emergency rations because the Minister of Militia, in a long and labored argument, proved that he "didn't know any better," and the "faithful commons," (or at least those of the faithful who knew "there was something in it" for the Minister, if they voted against the Government, for the boys if they voted for it)—the faithful voted that "he didn't know any better." Next time the white-wash pail is brought in for the Minister of Militia, it will no doubt be proved that "he didn't know anything about it"

The facts in the case are these: Shorey & Co., Montreal, clothing manufacturers, believing that a large contract for supplies for the Imperial forces was about to be given out, wrote to the authorities at Ottawa asking for information on the subject, so that they might have the necessary particulars on which to base a tender. The reply received was to the effect that nothing was known of any such intention. Shorey & Co., having the rumor corroborated in a way that absolutely established its truth, made application a second time and were again told that the Canadian Government knew nothing of the matter. Between the time of Shorey & Co.'s two applications, a contract appears to have been given to Mark Workman & Co., Montreal, and Sanford & Co., Hamilton, and that without asking for tenders. Now the Minister, his deputy, and clerks, may not have known as soon as Shorey & Co. that the Imperial forces were to receive supplies from Canada. Someone, in an inferior position, who opens letters and refuses information to proposing tenderers, may not have known that the Imperial order had been received. No one surely will believe that any responsible head or deputy would knowingly set signature to a falsehood, but the cheap help, who are employed to refuse information, should be superannuated, and heads and deputy heads must make a point of "knowing" their business. It is time the public business was conducted on business methods. A member of the Government, not unknown to fame, has declared business to be business. The business men of Canada heartily wish that this statement, like many others from the same brilliant author, could be verified. Tenders should be called for on all Government contracts. Leading business men should have their letters read and truthfully answered. Get someone who "knows" something at work.

ELECTRO CHEMISTRY IN A DYE AND PRINT WORKS.*

The action of the electric current upon dye-wares and intermediate products may be brought about in several ways, of which the following are the most important:

The action of the electric current upon the substance itself, at the ordinary temperature, if a liquid, or if a solid, above its melting point. The action of the current upon the body dissolved in some solvent. This gives the best results. The first method does not give such good results as when dealing with inorganic sub-

*A paper by A. E. Sunderland, read before the Society of Dyers and Colorists, at the Bradford Technical College.

stances for it is too severe in its action, and usually resolves the compound into its elements. Certainly, intermediary products are formed, but these are so difficult to isolate that as a commercial method it is not to be recommended. Most members of the aliphatic and aromatic series in a molten state can be resolved into $CO_2 + H_2O$, etc., with the production of intermediate products, such as oxalic acid and glycollic acid in the aliphatic series, and hydroquinone ethers and hydro oxy carboxylic acid in the aromatic series. The simplest apparatus employed consists of 2 tubes joined together by a water-tight V joint, each leg containing a circular disc pole. The dimensions of the tube, the quantity of liquor, the strength of the current, and the amount consumed should all be known

The nature of the products obtained by the electrolysis of organic bodies depends upon two things: 1. Whether the body is a good electrolyte or not, and if not, what bodies are used to make it so. 2. Whether the decomposition takes place in an acid or alkaline medium; totally different products being usually obtained by electrolysis in each medium.

The primary action which takes place in an electrolytic cell is an oxidizing action at the positive pole and a reducing action at the negative pole, and the best results are got by adapting the process so that the products thus formed are immediately removed from the field of action. This may be done in several ways. 1. Automatically by making use of the different densities of the solutions. 2. By raising or lowering the temperature of the cell. 3. By using different electrolytes in the anode and cathode chamber. 4. By using such an electrolyte that the body formed is totally insoluble in it, and thus falls out of solution, and is unacted upon by the current.

The chief interest in the electrolysis of organic compounds centres in the behavior of the hydrocarbon radicle, which both in the aliphatic and the aromatic series seem to be very stable. The most important reactions are, however, the reduction of aromatic nitro bodies in alkaline solution, first to azo compounds and then to hydrazo compounds, these changes being produced in a very satisfactory manner, and the yield being equal nearly to the theoretical. If the same electrolyte is used in the anode and cathode chambers, the electrical osmosis is very noticeable, and is one of the chief difficulties in adapting these processes on the large scale, and the results obtained tend to emphasize the law of Clausius and Hittorf, that the electric current does not overcome affinities, but that the chief reactions are produced by the primary electrolysis of the electrolyte into hydrogen and oxygen. As regards the actual production of dyestuffs by electricity, very few results have been published, and the known cases, such as the production of methylene blues, alizarin black, etc., simply depends upon the oxidizing action of the electric current in the anode cell.

Goppelsroeder, in 1886, published several results which he had obtained on a laboratory scale by the oxidation of various primary amines. He states that by the action of the electric current on aniline hydrochloride in acid solution, emeraldine and aniline black are produced, and by the electrolysis of aniline salt alone a brown precipitate and red to violet coloration only is obtained. Further results, which Goppelsroeder recorded, are as follows: With methyl aniline he obtained a blue coloration, with diphenylamine, a violet coloration; with salts of naphthylamine, brown bodies; with naphthol, a golden yellow; while magenta methyl alcohol and potassium fluoride gave Hofmann's violet. Goppelsroeder also produced aniline from nitro benzene, and alizarin from anthraquinone.

Electricity may be applied in the dyeing process itself in two ways—(1) in printing, (2) in the dyebath.

With regard to electric printing, Goppelsroeder proceeded as follows: A plate of lead or other suitable conducting material is used as the negative pole, and the stencil pencil or plate is used as the positive pole Between these is fed the cloth impregnated with the various chemicals. On passing the current, decomposition of the various chemicals take place wherever the stencil plate touches and the design is produced. As for instance: 1. If the cloth be impregnated with an acid solution of aniline salt, an aniline black figure is produced. 2. If the cloth be impregnated with potassium thiocyanate, a yellow to orange figure is produced.

Goppelsroeder also found that some dyes, such as turkey red and indigo blue, could in the same way be discharged white by the electric current, and thus, by combination with the aniline black and canarin yellow, he could produce white, black, and yellow prints on red or blue ground. If metallic oxides were used, the oxide was precipitated, and the cloth, on dyeing with alizarins, would show a design where the current had passed. These results, as obtained by Goppelsroeder, are very interesting, and with the azo dyes some equally interesting results have since been obtained.

The diazo compounds are so unstable that they are decomposed by ordinary daylight. I have subjected such to the ordinary current, and find that with a current of 20 to 40 volts, 5 amperes, a five seconds' contract will in some cases cause the decomposition, and on developing, the print will remain undeveloped. This discharge, however, is not quick or good enough, but it can be intensified by mixing along with the diazo compound a certain amount of sodium chloride, nitrate, chlorate, or other suitable chemical, which will, on the passage of the current, liberate compounds capable of discharging the diazo compound more thoroughly.

Such reactions may be greatly extended, and by making use of the colors themselves, instead of bases which contain the amido group, some very useful effects can be obtained, such as, for instance, with rosaniline. red and dark brown patterns can be obtained; with

safranine, red and dark blue; and with cyanole some very peculiar combinations can be obtained. Cyanole on diazotizing becomes yellow, but wherever exposed to air or some oxidizing agent, such as an electric current it turns a fine peacock blue shade, and on washing the print with a phenol or soda the effect is permanent. This, along with the use of bases, such as thiotoluidines, gives some useful results. Another branch of printing by electricity, which also offers some very interesting information, is the combination of organic bases along with the use of metallic anodes. This may be made use of for the production of effects of the opposite kind to the above, and most certainly in cotton and paper printing it is worth experimenting with.

There are only two machines I have seen recommended for electrical dyeing, and these in no way offer any advantage over ordinary processes. From my own experiments, I consider that a machine for this purpose should fulfil the following requirements: 1. The poles must not be of metal, but of carbon or biscuit porcelain, which conduct by becoming saturated with the electrolyte. 2. They must be as near to one another as possible. 3. The cloth must pass between the poles in the open width. 4. The poles may be perfectly smooth, and preferably cylindrical, revolving freely.

These particulars are necessary, because in the ordinary passage of the electric current across any dye solution, the tendency of the dye is to concentrate itself around the negative pole, and not to circulate freely in the whole dye vessel; thus there is always a great danger of unevenness.

In the finishing of goods, the peculiar effect which is produced by calendering a piece in two different directions, one impression upon another, is well known. This is technically termed water-marking or moire, and is due to the irregular reflection from the surface of the material, one part of the light being totally reflected, and the other part dispersed. This effect can be introduced in several ways. One way is by displacing the warp or weft threads in an irregular manner by means of combs. Another method is by placing the chief reflecting surface below an upper gauze surface, which being free to move causes a constant change of reflections, and produces this effect in a very pretty manner. But still another method is by electricity. The new process resolves itself practically into the local application of electrolysis. A platinum plate of suitable size is connected with the positive pole of the source of current. On this conducting surface is placed some absorbent material saturated with a solution of common salt. On this pad is placed the fabric to be water-marked, and the plate engraved with the water-mark connected with the negative terminal is pressed down upon it. The salt solution is decomposed, and a facsimile of the water-mark is printed on the cloth. To produce opaque designs, the absorbent material is saturated with a solution of barium chloride, which is decomposed on passing the current.

The electrical pressing machine introduced by Schreihage may also be mentioned. By its employment it is possible to hot-press any description of fabric for any duration of time, at any required temperature, and all this in an apparatus which is perfectly clean and dry, and in an atmosphere free from superfluous waste heat and steam. An ordinary press is used, and may be operated hydraulically or by any other method. The press is identical with those in ordinary use. Press boards are provided, composed of suitable insulating material, inside which are embedded the heating wires. The ends of these wires terminate in a double plugway in front of each plate. The switch board is mounted on wheels for convenience. It can be utilized for any press, or can be wheeled into a corner out of the way, when not required. The fabric is placed in the press in the ordinary manner, and the current switched on. The plates become warm almost immediately, and when the current is switched off are soon cool enough to handle. The cost of the process is, I understand, not more than the present method of pressing when everything is taken into consideration.

—There appears to be no foundation for the story which is going round that English flannelettes, especially in the higher grades, are flooding our market since the second increase in the Imperial preference. We have imported more of these goods, it is true, as we have imported more of almost everything else than ever before in the history of Canada; but this is trade expansion, not trade decline. The truth is that since February last Canadian flannelettes have been so far sold ahead that anything like satisfactory delivery has been impossible, and the demand has been so much in excess of the capacity of our mills that jobbers have been forced to import heavily or do without.

PILE WEAVING.

Pile weaving may be divided into two classes; the first in which the pile is produced by the filling, and the second in which the pile is produced by the warp. Velveteens, fustians and corduroy are produced by using filling to form the pile. One kind of warp is used to form the body of the cloth and to bind the pile picks, and in most of them only one kind of filling, but two kinds of filling may be used. When only one kind of filling is used, it is employed to form both the pile surface and the body of the cloth. The weave may be plain or twill, and the filling inserted one pick for pile and one pick for body or two picks for pile and one pick for body or three picks for pile and one pick for body, etc. The pile picks float over three, five, seven or more warp threads, as the pattern requires. The number of pile picks inserted in excess of the body picks largely depends on how fine the pile surface is wanted. If a pile pick floats over four warp threads, the arrangement should be four pile picks to each body pick inserted, but in binding the pile picks the warp binding thread must move one to the right after each pick. That will give a close pile surface when

the cloth is finished, as there will be a row of pile between each thread. This may be illustrated by Fig. 1, in which the body pick is left out, the black square representing the binding or interlacing of the warp threads with the pile picks, and the white square represents the warp threads over which the pile picks float; 1, 2, 3, 4, 5, 6, representing warp threads, and A, B, C, D, E, F, represent picks, the body picks being put in before and after the pile picks. It will be noticed that each succeeding interlacing occurs one warp thread to the right (or left), so that between the two body picks there are four pile picks, each pile pick being bound or interlaced with a different warp thread from its predecessor.

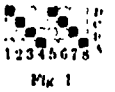


Fig. 1

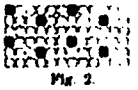


Fig. 2.

In that manner each warp thread binds one pick of pile between the body picks, and owing to the pile picks floating over three warp threads when the pile picks are cut, the surface is closer than if the same warp thread interlaced with all the pile picks. Fig. 2 represents a coarse pile surface, the body weave being a three-harness twill, two up and one down for the body pick, the pile picks floating over five warp threads, there being but two pile picks between each two body picks, and the pile picks having two intervening warp threads between the interlacings. As a consequence the velvet or pile surface is only half as close as on the style illustrated by Fig. 1. By the use of the filling pile many handsome patterns are woven more cheaply than can be done by means of warp pile. The pile is cut by hand, which makes the finishing of the goods more expensive than warp pile fabrics. The cutting table is about 60 or 70 inches long, and clamps are used to fasten the cloth on the table in a smooth stretch the full length of the table. The cutting knife consists of a long steel bar, one end being formed into a knife which is provided with a narrow piece of sheet iron, doubled to fit on the knife, and which extends in front of the knife, the forward part forming a needle that the cutter inserts under a row of floating pile picks. The cutter begins at one selvage and cuts each row of floating pile picks the length of the cloth clamped to the table, after which he continues until each row of picks has been cut on the fabric. Then the cloth is unclamped and a fresh section clamped on the table. Various patterns are produced by cutting the pile in alternate stripes so as to produce a stripe of velvet and a stripe of terry or uncut pile, or alternate figures or spots of velvet and terry. The rows of pile vary from 500 in the cheaper and coarser qualities to 1,200 in the finer and higher priced qualities, the number of rows frequently running as high as 400 per inch, and the warp 60 threads per inch. Cloth as heavy as that is generally used for upholstery and for curtains.

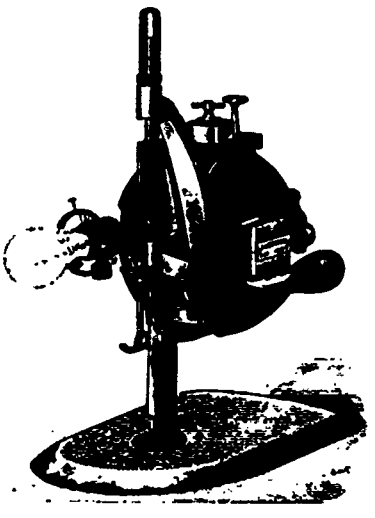
Chenille pile weaving is produced by first weaving the chenille filling on a loom fitted for gauze or leno weaving. Plain chenille filling is sometimes made on specially constructed machines, but the general way is to weave it. Various colors are used in producing the filling for pattern work, but when only one color is used the filling can be produced cheaper on a specially constructed twisting machine. Chenille filling is used in weaving shawls, curtains and carpets. The chenille filling is woven like ordinary gauze or leno. The threads are drawn in through the harnesses as plain leno, two threads plain and one leno to bind, or a repeat of two threads plain and one leno to bind. Whatever number of threads are drawing through the harnesses to form the core of the chenille, are drawn through the same dent of the reed. The same draft is repeated across the loom for as many chenille threads as are to be woven, allowing a space between each chenille thread. That is, if the reed is 40 inches, with 30 dents to the inch, if the filling were for fine work there would be about six full dents to each inch of reed space, with four empty dents between each full dent. But the number of full dents together and the number of empty dents intervening between the full dents depend on the coarseness of the core and the length of pile required. The larger the core the more threads drawn through the reed together, and the greater the number of empty dents between the full ones, the longer the pile of the chenille. The warp or core threads of the chenille are generally cotton, while the weft to form the pile is silk, woolen or cotton. Sometimes the core threads are drawn in plain, as in ordinary weaving, without a leno binding thread, but that method does not produce as good a weft as when the leno is used. The weaving of the piece forms each chenille stripe into a rib, and when completed it is cut half way between each rib, the free ends on each side of the core threads forming a pile. Sometimes a series of cutting knives are arranged on the breast beam of the loom, and each core of chenille is separated from its fellows as soon as the cloth reaches the breast beam. Generally it is taken entirely from the loom, and cut on a specially constructed cutting machine. In the machine the cloth is passed over and under a series of rollers to keep it at a proper tension. It then passes over a grooved roller, above which is another roller on which is mounted a series of circular knives which sever each core of the chenille as it passes over the grooved roller. If it is to be used for fabrics in which the pile is to show on both sides it is then twisted so that the fibers stand out around the core. When it is to be used in fabrics in which the pile is only to show on one side, the free ends of the weft are doubled up on one side of the core by running over a grooved roller heated by steam, which fixes them in that position. After twisting or doubling back the pile the chenille is wound on large bobbins for weaving. Generally chenille filling is woven in hand looms, except in cases where nothing but a heading of a few inches in width is to be woven in curtains, etc. When the whole surface on one or both sides of the cloth is to be pile formed by chenille filling, the binding threads are wound on a separate beam from the body of the warp. In carpets from 18 to 26 warp threads are used to the inch for the body of the fabric, the weave being perfectly plain, and from 10 to 18 picks of the chenille filling inserted for each inch, according to the quality of the goods. When the pile is to show on one side only, two picks of a coarse body filling are inserted to each pick of the chenille, that will leave each pick of chenille alternate with a pick of body filling on the face, the other pick of body filling being on the back and directly underneath the pick of chenille. The coarse filling being for the purpose of giving a good body for the fabric. The body warp also contains one-half coarse and one-half fine threads for the purpose of giving body and weight at a low cost. Each fine body warp thread alternates with a coarse one, and there are about one-fourth as many binders for the chenille picks as there are body warp threads. For hand looms, the filling is wound on long needles, and the binding warp threads are drawn through the eyes of inverted gauze needles. When the chenille pick is to be inserted the binding shed is raised, and the weaver carefully passes the weft through, and then combs it up before beating up. Then the coarse picks of body filling are inserted and beaten up. In fine work as many as 18 picks of chenille are put in to the inch, and in coarse work the number frequently runs as low as four to the inch, with a corresponding proportionate increase in the number of body picks between each pick of chenille.

In weaving cheap rugs only one set of coarse warp threads are used, which do duty for binders and form the body, the body filling frequently being 3/8 of an inch in diameter, each body pick alternating with a chenille pick. Sometimes the

chenille picks show a pile on both sides of the rug, and again it will be woven in the style of a pile carpet. The body warp is drawn through two harnesses, and occupies a reed space of six and eight to an inch. The shed is formed, and a pick of the body filling is inserted, then the shed is changed and a pick of the chenille inserted and so on. This gives an imitation of Smyrna rugs at a small cost.

ELECTRIC CLOTH CUTTING.

To those concerned with the manufacture of textile fabrics one of the most interesting exhibits at the Toronto Fair was the electric cloth cutting machine invented by G. P. Eastman, of Toronto. This machine, shown in the accompanying illustration, is mounted on a light metal platform, which slides



smoothly over the operating table and enables the cutter to direct the machine easily into any angle or round any curve. The machine receives its impulse from a ¼-h.p. electric motor, mounted on an upright shaft, which acts as a guard to a vertically fixed knife capable of making 2,000 strokes per minute. The machine carries an incandescent lamp covered by a shade and reflector, which throws a good light down upon the work as the machine moves over the marked cloth. The power of this motor is sufficient to cut through a body of cloth, 3½ inches thick, and 314 thicknesses have been cut at a time. The weight of the whole machine, motor and all, is 25 lbs., but it slides about so easily that the weight appears insignificant. Any length of cloth can be cut and it can be used on an ordinary table having a smooth surface, while it can also be moved from one table to another. One operator on this machine can keep from 4 to 7 markers busy. It cuts from 1,000 to 2,500 pairs of pants or from 250 to 500 suits per day according to the thickness of the lays of cloth used. As it takes a small amount of current to run it, the cost of operating is very light; and all machines are installed and proved free of expense to the purchaser. Mr. Eastman is meeting with great success with this machine, not only in Canada, but in the United States, where hundreds are already in constant use. Among Canadian firms to whom reference may be made are H. Shorey & Co. and Thomas, May & Co., of Montreal; Lailey, Watson & Bond, the Wyld & Darling Co., the S. F. McKinnon Co., the T. Eaton Co., of Toronto, and the W. E. Sanford Mnfg. Co., of Hamilton. Further particulars may be had on application to the Eastman Electric Cloth Cutting Machine Co., 206 George street, Toronto.

NEW DYESTUFFS.

Katigen Black S. W. and T. G. are two new cotton dyestuffs, which will undoubtedly play a great part in black cotton dyeing. Both brands are possessed of excellent fastness in every respect. The S. W. quality can be dyed either direct or afterwards treated with chrome, but the T. G. mark only is recommended to be after treated with chrome; it then shows a full deep black, whilst the S. W. has a more bluish tone. Their fastness to light, alkali, acids, washing, boiling with soda, boiling with acids, crabbing and steaming is said to be excellent, either when dyed direct or when after-treated with chrome. They are also possessed with excellent level dyeing properties. Katigen Black will no doubt become a substitute for Aniline Oxidation Black, and is of equal importance for the dyeing of hanks as for pieces. They are also extremely well adapted for the dyeing of loose cotton hosiery, and haberdashery, as well as for warp dyeing.

Katigen Chrome Brown 5 G. is a new product to be considered chiefly as a combination color for the shading of other Katigen dyestuffs for the production of fashionable shades, and amongst others in conjunction with Katigen Black Brown N. it yields the excellently fast khaki tones. When dyed direct with common salt, soda and sulphide of soda the shade produced is brown, but when afterwards treated with chrome and copper the shade is changed into a dull old gold. The color levels well. The fastness to washing and boiling is excellent, and its fastness to alkalies, acids and light is also very good.

Benzo Fast Orange S. This color is remarkable for its brilliancy, its fine clear shade and excellent properties. It is dyed with the addition of Glauber's salt and soda, and falls on to the fiber well, yielding good level shades. The fastness to alkalies, acids and washing is the same as that of the other substantive oranges. Its fastness to light is considerably better than that of Benzo Orange R. Dyed acid on wool it produces very nice shades, which are fast to milling. It is also adapted for the dyeing of half-wool and half-silk. Dyed on cotton the color can be discharged with stannous sulphocyanide or zinc powder.

Benzo Nitrol Bordeaux G.—This new color is dyed with the addition of Glauber's salt and soda and developed in the usual manner with Benzo Nitrol developer. It yields a deep bluish Bordeaux very similar to Alizarine Bordeaux on an alumina mordant which meets with so much favor for fancy woven goods. Benzo Nitrol Bordeaux G. is very fast to washing and light, and resists the action of acids and alkalies very well indeed. This new product is especially suited for cotton yarn dyeing, weaving yarns, etc.

Acid Blue Black 3 B.—This new product is remarkable for its excellent fastness to acids. It is dyed with the addition of Glauber's salt and sulphuric acid or acetic acid. Acid Blue Black 3 B. produces a dark blue shade which in deep tones has rather a violet cast, and is possessed of good fastness to alkalies; its fastness to light is also good. It fastness to rubbing, perspiration and steaming is very good indeed. Shades obtained with this product are distinguished for their clearness and possess the same bloomy appearance over-hand as those produced with logwood. It is also recommended for the production of cheap navy blues.

Alizarine Sapphirole S. E.—This color, which, owing to its properties, is very popular for wool dyeing, has proved itself very valuable for the dyeing of cotton. When fixed on the fiber with the aid of alum its fastness to light is excellent, being far superior to any other product on the market. Its fastness to soaping, however, is not so good. Alizarine Sapphirole S.E. is especially adapted for dyeing curtains, checking threads in cretonne, etc.

Fashionable Shades Fast to Light.—Since the discovery of Alizarine Sapphirole and Fast Light Yellow G. it has become possible to produce fancy shades on ladies' dress material which meet the utmost demands as regard fastness to light. This was hitherto impossible owing to the want of a fast blue. Indigo Carmine, which was mostly employed, showed a great sensitiveness to light as compared with the other components employed, so that in fading the shade underwent a very disagreeable change. This is illustrated very clearly in a pattern card of a few fashionable shades on ladies' woolen dress material which have been dyed in one case with Indigo Carmine and in the other with Alizarine Sapphirole "E., employing in both instances the same combination colors for shading red and yellow. After a few days exposure to sunlight the superiority of Alizarine Sapphirole will, it is said, easily be seen.

Benzo Fast Scarlet 4 B. S. will meet the urgent requirements for a red cotton color fast to acids of a similar shade to Benzo Purpurine 4 B. at the same time dyeing according to the ordinary simple method It is extremely fast to acids, even resisting the action of mineral acids. The fastness to washing and boiling is about the same as that of Benzo Purpurine 4 B., but its fastness to light is superior, it being at least equal to that of Geranine. Benzo Fast Scarlet 4 B. S. is also well adapted for dyeing of half-wool and half-silk. Dyed on cotton the color can be discharged a white with stannous sulphocyanide or zinc powder.

Leather Colors.—A new pattern card has been issued illustrating over a hundred and fifty shades on sheep-skin. Some of the shades show a dull, long grain and others a glazed shagreen. This new card should prove very useful to leather manufacturers, as it contains every fashionable shade at present in use, together with all necessary instructions for dyeing.

Samples, instruction circulars, and any of the above new shade cards mailed gratis to interested dyers by the Dominion Dyewood & Chemical Co., Toronto, Canada, sole agents in Canada for the Farbenfabriken, vorm Friedr. Bayer & Co., Elberfeld, Germany.

Foreign Textile Centres

MANCHESTER.—The peculiar position of cotton is now attracting considerable attention. I am sorry to hear in this connection that a stoppage of mills is regarded as probable by those well able to judge, says the correspondent of the Draper's Record on Sept. 8th. The heavy departments are somewhat oppressed by clouds which can scarcely be removed within a short period. The available stock of raw cotton in Liverpool is, of course, much below the average of recent years, but the future probabilities are no more known here than in the States. It is useless attempting prophecies. Even those who issue private cotton circulars at a subscription of so much a year can only analyze the facts which are supplied to them by the News Agency and other channels of information. They cannot afford to visit the cotton belts personally, because that would result in their replacement here; and if they went, they could not be of use, because they have never lived in the midst of a cotton-growing district. They would be laughed at when they arrived on the other side. The decline in the exports of special cotton finishes on New York account has been very noticeable of late. The shrinkage is believed to be due not so much to the diminished popularity of such fabrics, as to the increased production on the Continent and in the United States. In the silk section the demand has been improved by the cheaper prices at which some products have been obtainable. The famine, noticeable a year ago, and referred to in interviews with authorities in London and Manchester districts at the time, no longer exists, although a "good healthy fright," as the saying run, has been accorded to some members of the trade by recent events in China. It was thought that exports from Shanghai would be disturbed owing to the Chinese troubles, the fear existing, of course, in the minds of those who are unaware of the relation of Shanghai to the silk-producing districts of China. There is a flutter in some of the dress goods dovecotes, both here and in London, owing to the troubles in the French woolen trade. These troubles are entirely due to the operations on the market *a terme*, which is simply another way of expressing gambling in futures. The system of future operations on the Continental markets, as applied to wool, has never been accompanied by that keenly organized arrangement which is characteristic of operations in cotton in, say, the Liverpool, New York or New Orleans markets. Besides, the wool trade is not so concentrated in France as is the cotton trade in other centres, and this places the speculator in an awkward position. There is no wool Liverpool in France for the French operator to speculate on. London is still probably the biggest wool market in the world, although direct imports have increased largely of late years to Continental ports. From enquiries I have made I am not disposed to think that the Roubaix troubles will interfere much with the comfort of woolen houses on this side. The remark made by a journal of standing that the troubles in South Africa are responsible for the difficulties in the trade on this side will be answered by your able Bradford correspondent. Reference is made to the matter here because the London correspondent of a Manchester paper has seen fit to make the assertion. Manchester men were not aware that South Africa possess a predominating influence in the wool trade; although with the alleged discovery of 1,500,000 sovereigns in bottles found cemented in the walls of a house formerly occupied by a relation of friend Oom, the influence of South Africa over the gold supply can readily be understood.

OLDHAM.—Mill building in Oldham is proceeding apace, but in some instances not as fast as the directors of the companies would like, the want of ironwork being the cause of the delay. The Bee mill, at Royton, however, has not belied its name, but has been erected at a rate that has pleased its promoters. In fact, it has out-distanced its rivals by a long way, so much so that the mill is now being roofed, while others are months behind.

LEEDS.—There is but little doing in any department of the woolen cloth trade, but there was a fair average attendance on 'Change. Orders of a sorting-up character are given out sparingly, and taken all round, business is unsatisfactory, the Roubaix crisis having had an unfavorable effect on trade. Merchants continue to complain of the difficulty of moving stocks, even at a sacrifice. Orders for a considerable quantity of waterproof material have recently been placed with Leeds firms on Government account. This is the first occasion such contracts have been completed with a Leeds firm. Worsteds of all descriptions are comparatively neglected, especially as regards higher grades. For unions there is a somewhat better market. Makers of Army blankets have a good average of work on hand, and there is a disposition to act more freely in serges.

BRADFORD.—The crisis in the wool trade in France has probably been of larger dimensions and of more serious import to that department of the Roubaix trade than has previously been experienced there, but the immediate effect on this market has been comparatively slight. It was the over-speculation in "futures" on the Continental wool exchanges which caused merino wools on this market to advance to the extremely high prices of last year, and which movement had such an injurious effect on the Bradford trade generally, but this foreign lead was not followed to nearly the same extent, and there is every indi-

cation that a staple level of prices in merinos has now been reached here. As a matter of fact, the quotations for the standard qualities of combed 60's merino tops are to-day quite as high as they were a week ago, and the tone of this department of the market is distinctly more cheerful. As the rather heavy failure which was announced in Bradford recently was that of a firm engaged in manipulating special classes of Eastern wools this has had no effect at all on the merino trade. To sum up the present situation of the merino wool market here in a few words—it may be taken for granted that there is a large falling off in the supply of colonial merino suitable for this market. There are also undoubted signs that the present reasonable price of this raw material is gradually bringing back the business which the high prices had killed out. As the country is still fairly prosperous, there is every reason to look for an average amount of consumption of merino wool at prices at least equal to those at present ruling. Although the rapid fall off in the prices of merino wool since the commencement of the year has given many Bradford traders some hard knocks, there can be no doubt that the extremely high prices to which merino went up had the effect of diverting attention to the cheaper crossbred wools; and from the great development which has taken place in the crossbred colonial wool trade here, it appears that to this department of the wool trade Bradford must in future look for a large amount of its business. The prices of crossbred wools and tops remain quite firm, and the numerous offers from the Continent for twofold and single crossbred worsted yarns (although at rates slightly under the market here), indicate that stocks there are getting low, and that supplies will be required soon. I am aware that it is natural for buyers of such fabrics as dress serges to assume that this trouble in the Roubaix wool trade will cause prices of these goods made from crossbred wools also to depreciate, but there is really no reason why such should be the case. It is the opinion of the best informed traders here that the prices of crossbred wools and yarns are far more likely to rise in price than to fall, and this opinion is confirmed by the fact that in the face of the quiet trade we had recently, the combers of crossbred wools have been, and are to-day, very busy. The improvement in the prices and the enquiry for pure lustre wools is fully sustained, and the very low prices which have recently been ruling in these wools seem to have created an improved demand for them from the United States. There is a steady demand for both mohair and alpaca yarns, and the prices of these raw materials are fully sustained. After we have experienced a fall in raw material like there has been in merino wools this year, a great amount of caution and care is always exercised by the buyers of the manufactured article, as there is always present the fear that still lower prices may yet be reached, and the present time is certainly no exception to the above rule. Even the buying for what may now be termed the present autumn season is unusually late, and repeat orders have been given out most sparingly, so that now when it is found that friezes and tweeds will be wanted little preparation beyond the actual orders has been made, and some business will be missed through the impossibility of getting it through in time. Buying for the next spring season is also unusually late. Up to the present it has been mainly confined to orders for plain cloths, which were the most successful last season, and in this way such goods as plain black mohairs have come in for a considerable amount of attention.

ROCHDALE.—Business at the flannel market recently has been restricted. Orders of small dimensions keep dropping in, and if the present seasonable weather continues there will soon be an increase. Prices are steady, at late quotations. Manufacturers are very busy sending out deliveries. Full time is being worked throughout the district, and there is every prospect of its continuing, as the manufacturers have still a large number of orders unfinished, irrespective of the orders they are now receiving.

NOTTINGHAM.—Lace and curtain yarns have hardened in value, but the change has not induced more business. There is a steady demand for fine yarns, and special qualities of the lower counts are moving in large quantities, but there is an absence of buoyancy in the general demand, says the correspondent of the Textile Mercury. Hosiery yarns are unsteady in value, coupled with too much uncertainty to encourage business either in merino or wool yarns except to meet proximate wants. The bobbin net trade is without change Business in the fancy lace warehouses is uneven, special goods being in strong request, while others are comparatively neglected.

LEICESTER.—Cords, braids and dress beltings are in good demand. The hosiery industry is active and healthy in all the leading branches, and stocks are kept very small, while prices are slightly in favor of buyers. Specialties and fancy goods sell freely for home and Colonial markets, and machinery is well engaged. The yarn market is only moderately active, and the bulk of the business is of a hand-to-mouth character. There are fair enquiries regarding fresh contracts, and some users show more disposition to cover future needs at slight concessions. Cashmere, lambs-wool and fancy yarns are in fair demand at steady rates.

KIRKCALDY.—The tendency in the linen trade is towards dulness, and in some cases there is already a lessening in the amount of production. The English market as well as the Scotch is now very quiet. Linoleum and floorcloth manufacturers continue to have a fair volume of business, and the tone of the trade for the season of the year, especially in view of the high price of material, which enters largely into the manufacture, is satisfactory.

DUNDEE.—Steadiness prevails in the Dundee market, and manufacturers apparently have no difficulty in keeping all their machinery in full operation. Linens, sackings and baggings are unchanged There is a firmness in the Russian markets which prevents spinners from doing much in flax, tow and codilla, the "Draper's Record reports. They are evidently quite content to look on for the time being. Business is fairly good in 40-inch hessians, the price paid in most cases being 2d., but perhaps a point under it has been accepted for large orders for the Argentine. The other widths are rather unsteady; 2 1-16d. is the average price being paid for 50 to 60-inch wide goods. Spinners would welcome yarn buyers for the end of September-October delivery, but prices are not changed.

BELFAST.—There is not much change in the linen market to report, but the tendency towards improvement has been maintained. The quiet season is about over, and from this forward the usual steady growth in the volume of trade may be expected. It is true, short time has come into operation in a number of factories, but this can hardly be said to be due to over production. It is more of the character of a preventive measure, that production may not be in excess of demand. Stocks are not unduly large, and it is considered unwise to add materially to them with the probable result that they would have to be realized by the weaker firms, and buyers would be able to cut prices below paying point. Yarns have been in dull demand, and rates for tows a shade easier. Prices of line yarns, both warp and weft, are practically unchanged. A quiet, steady business is passing in brown cloth. Powerloom linens for bleaching continue in moderate demand. Cloth for dyeing and hollands has again sold a little more freely, and a fair trade is passing in unions. Damasks and household linens continue in improving request, and the same may be said of dress goods.

The handkerchief branch of the trade is well maintained. Handloom linens for bleaching are quiet. Orders for bleached and finished linens show a slight increase, but more might easily be done. Prices are stationary. Home demand is about the same. Damasks and housekeeping goods are selling a little more freely, and makers-up continue fairly busy. The handkerchief trade is moderately brisk and prices steady. Orders and advices from the United States give indications of a somewhat better trade, but the Cuban market keeps very dull. The South American markets show a slight further improvement. Canadian trade is perhaps a little less active, but after the lengthened spell of brisk trade this is not surprising. Business with Australasia keeps expanding and with the Continent remains steady.

LYONS.—The silk goods market in Lyons is not active. Buyers are slow in purchasing their goods for fall, restricting their orders to absolute requirements. The questions that are of the most importance at present are to what extent fashion will favor silks this fall, and how large are the stocks of goods in the various markets. The first question does not seem to receive a favorable answer, wool tissues being liked, while the great favor shown for velvet is also bound to interfere with the consumption of silk tissues. As far as the following spring is concerned much better is expected, says the Dry Goods Economist, New York. Stocks are not believed to be large in Paris, as Paris houses have had good sales through the summer, and have been conservative buyers. The manufacturing situation is now unchanged. The handlooms have not much work on hand, but the powerlooms continue busy and have enough to carry them to the opening of their campaign for next spring. The leading articles of production continue to be mousseline, piece-dyed goods, half-silk linings and half-silk satins and serges. New business is light and for either present or future delivery transactions are of moderate volume. Orders for Louisine, satin duchesse and cheap failles have been placed, but in small lots. Pongees as an article of staple production figure well on the looms, but buyers are unwilling to pay good prices on new transactions. Crepe lisse has been ordered. Some brocades and gold effects in mousseline have been purchased for the Indian market. The ribbon market has lost activity. In novelties some printed warp effects find takers. Velvet ribbons continue active and have had a good season throughout. The velvet market is unchanged and the demand is steady for plain velvet, as well as for panne. In piece-dyed panne, for which much was expected, but not realized, a few fair sized orders have been placed recently.

CREFELD.—The demand for silk fabrics in Crefeld is not of very large proportions. The home retailers are reassorting their stocks for the opening of fall business, but as their sales in the late spring were not heavy their present requirements are light and wholesale buyers are waiting. Advance-order business for spring has not yet started and is believed to be late this year. For export the conditions of demand are not much better than they are for home trade, both England and America being very conservative. In the industry there is a slight change for the better, but the summer rest does not seem to have been broken. Whatever improvement exists is due entirely to the demand from the garment-making trade. A relatively large business is being done in linings. The prices realized for these are not of the best in some cases, but as many looms which would otherwise be forcedly idle can thus find work the question of price is not a too important consideration. The distributing trades are the most conservative, and dress silks are not doing as well as they should at this time. In tie silks the order season is supposed to be open and manufacturers have had their lines out for some time. But these novelties do not seem to have attracted buyers and the orders so far placed have been of little importance as far as the home market is concerned, while England, which usually had sent good orders by this time, has this year been slow. However, an improvement is looked for soon. The umbrella silk branch, on the other hand, is in a satisfactory condition. Not only have orders for parasol novelties for 1901 been placed, but the demand for plain umbrella silks has improved and in the staple lines business is good. In the better grades, however, it is not so satisfactory, buyers having some old stocks of these to draw from. Ribbons continue inactive, and in plain ribbons the demand is light, while the orders placed for novelties are not large in volume. The velvet and plush market is in satisfactory condition, the demand for mantle plushes and for plain velvets continuing good. Black velvet ribbons in narrow widths are selling.

ZURICH.—The Zurich market is unchanged. With London and New York business is light, while with Paris it is moderate. Some of the large Parisian buyers in the market have shown some interest in novelties, but the orders that have resulted, although not unsatisfactory in price, have not been as large as in previous seasons. In goods for ready delivery a little business has been done, but the volume of transactions has been interfered with by the low prices offered by buyers, and which did not tempt sellers. For future delivery transactions have been few. Buyers have not yet changed their policy of reserve and seem to be justified by the continued weakness of the market for raw material in adhering to it until consumption makes itself felt. But with the present conditions of demand, the industry here will soon find its producing capacity to be in excess of the markets' needs, and the looms will have to run up stock if production is not lessened. The raw silk market is quiet and unchanged.

AUTOMATIC STOCK DRYERS.

In the equipment of the modern mills, the handling of the raw stock is receiving well-deserved attention and the older forms of table-dryers are being replaced in many instances by automatic stock dryers, which in first cost are practically no more expensive than the old style dryers and at the same time are claimed to save labor, heat and power, as well as take up much less floor space. To secure safety from fire and render the machine quickly and easily cleaned, special attention has been given to the design of the enclosure, the result being a very acceptable risk from the standpoint of insurance.

The self-feed is very substantially built with iron sides and is provided with a spiked apron arranged so as to elevate the stock, carry it forward and deliver it to the dryer. In order to regulate the amount of stock and the thickness of the feed, we use either a flat-blade paddle or an adjustable comb, accordingly as the stock has a short staple like cotton or hair or a long staple such as wool. This attachment also prevents the choking of the machine. In order to strip the apron and remove the stock from it, a doffer is located under the apron on the return side, thus effectually cleaning it and delivering the stock to the dryer.

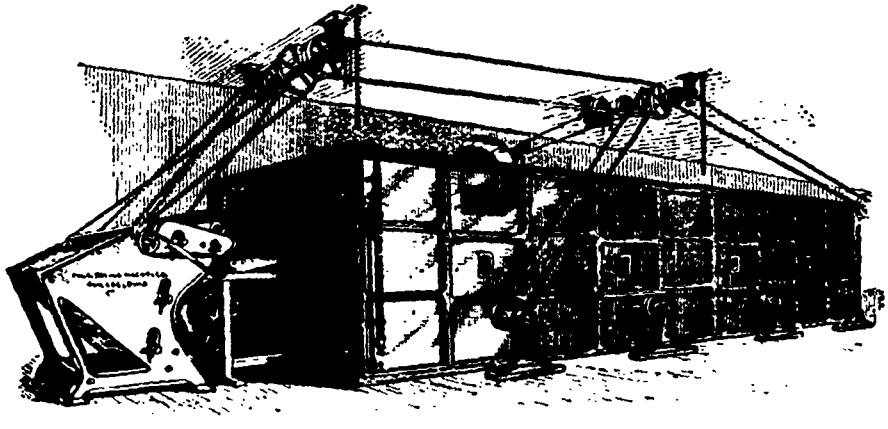
Any stock having the same nature as cotton is ordinarily very hard to dry, from the fact that the fibers, when wet, lie very close together and the tendency is for the material to cling together in a heavy, soggy mass. For this class of stock a valuable attachment is the opener, which is mounted on the top of the feed above the apron. Being driven at a high speed, the iron pins separate any heavy mass and pick the stock apart so thoroughly that when it drops on the apron of the dryer, it is claimed to be in a soft, lofty condition and so open that the air can be easily forced through and in between the fibers, thus insuring rapid and uniform drying. The stock is thus thoroughly blended and the grit and dirt are shaken out before entering the dryer, thus making it very much easier on the card-

ing. If desired, the machine can be fed by hand and the self-feed dispensed with temporarily, provision being made for this purpose. The advantages of the automatic system are particularly noticeable, it is said, when handling cotton stock by this method. The raw stock dyeing machines, which have become such a necessity, have also increased the need for an improved system of drying and probably the best proof that the automatic dryers are receiving the proper recognition in these days of close competition, is the fact that they are being so extensively used. After the stock is opened up by the self feed and distributed to the dryer, as it enters the machine it is subjected to the greatest heat. The steam which is thus driven off is carried away through an exhaust pipe. The machine being divided into compartments, the heat is regulated independently in each and it is possible to grade the temperature so that the stock is finally delivered thoroughly dry and in a cool condition.

The preceding remarks concerning the economies and general principles of the automatic system and also the construction of the machines, apply equally well to wool dryers and hair dryers, except that the wiry and open nature of wool does not necessitate the use of the opener. On short staple hair, however, the opener is frequently used to advantage. The grading of the temperature during the drying, as the stock travels toward the delivery end of the machine, is a point upon which too great stress cannot be laid. This fact of the stock being subjected to the greatest heat as it enters the machine and where it contains the most moisture to counteract the effects of the heat, prevents all possibility of the stock "baking" or becoming harsh. The temperature being gradually reduced in the successive portions of the dryer, the stock is finally delivered dry, cool and in a soft, lofty condition. The arrangement of an automatic machine for carbonizing wool, noils or rags is somewhat different from a standard dryer and, when ordered especially for carbonizing purposes, the machine is constructed with the following points in view. In order to do thorough and complete carbonizing, it is necessary to maintain a dry atmosphere at a high temperature. If cold, wet stock is allowed to enter, therefore, it counteracts the conditions most essential for carbonizing. Before the stock enters the carbonizing compartment, however, in our machines, it is first thoroughly dried and the surplus moisture removed through an exhaust pipe connected with the drying compartment, but the balance of the air is returned over the steam pipes and heated before being again forced through the wet stock, this operation of recirculating the hot air being utilized to such an extent that the greatest economy is attained in the use of the steam. Travelling continuously from the drying into the carbonizing chamber, a high, dry heat is then easily maintained.

The machines are enclosed in a framework of yellow pine and poplar, which is framed and joint bolted, with a sheathing of kiln-dried, beaded ceiling. The steel-blade fans and the mechanism for operating the machine and driving the apron are all of good design and more than sufficient strength to stand severe tests. Cone pulleys and a worm, the latter running in oil, give a range of several speeds to drive the wire apron, which can be stopped in a moment by means of a clutch-gear. We use but one apron and return it at each end of the machine over large drums, thus ensuring good wearing qualities for the wire.

Full particulars as to prices, etc., can be had from the makers, Philadelphia Drying Machinery Co., 6721 Germantown avenue, Philadelphia, Pa.



WEAVE ROOM LIGHTING.

BY SIDNEY B. PAINE.

The term "arc lamp" is a very general one, and covers many types. In the "open arc" type there are the so-called 1,200 and 2,000 c.p. lamps operated on a constant current generator. These are the type ordinarily used for street illumination. There are also lamps of the same candle power adapted for operation on constant potential generators, such as are ordinarily used for incandescent lighting. Of "enclosed arcs" there are lamps of different candle powers operated on either alternating or direct current, either at constant potential or constant current. The term "incandescent lighting" is very broad in its scope and covers lamps of various candle power, the number of looms per lamp and the location of the lamp with respect to the loom.

Weaving is also a very general term, which covers all classes of goods, white and colored, manufactured upon all widths and descriptions of looms, which may be driven from overhead or from beneath. The height of the room will have a very important bearing upon the number, kind and arrangement of lamps. All of the conditions must be taken into account in deciding on the comparative merits of the two systems of lighting. It is not merely a question as to which system or which type of lamp will give the better light. The economy of operation, the diffusion of the light and the first cost must be considered.

Until a comparatively recent time, the "open arc" was the only type in commercial use on a large scale in this country. The shadows resulting from its use, however, were very dense, and the light at a particular angle very intense, thus magnifying the shadow. These lamps could be burned only about eight hours, unless a double lamp was used, and the expense of trimming was considerable. The general use of the "enclosed arc" has remedied these troubles to a very considerable extent, and I

believe that the "open arc" should no longer be considered in this connection. With the "enclosed arc" of either of the types mentioned above, and especially designed for mill work, equally as good diffusion of light may be obtained in a weave shop as with the incandescent lamp, and yet the high efficiency of the arc lamp be retained. To be specific, on colored work, with the "alternating enclosed" arc lamp, I should use a lamp requiring about six amperes of current for lighting twelve, or not exceeding fifteen, ordinary gingham looms, where those looms are belted from below. When they are belted from above I should use one arc lamp to ten, or not exceeding twelve, such looms. the illumination obtained would be better than that obtained by one 20-candle power lamp to each loom, and the operating expense would be less. Stated another way, assuming that each gingham loom requires, on an average, about 52 square feet of floor space, with the "alternating enclosed" arc lamp I should use one lamp for about 625 to 750 feet of floor space, where the looms are belted from below. Where the looms are belted from above I should use one such lamp for about 525 to 625 feet of floor space. With the "series enclosed constant current" arc lamp you could probably illuminate 15 per cent. more looms per lamp than with the "alternating current enclosed" arc lamp, but with nearly a proportionately increased expenditure of current. Incandescent lamps, however, cannot be operated on the same generator with the "series enclosed constant current" arc lamps. This is to the disadvantage of the latter type of arc lamp, as incandescent lamps are preferable in the preparatory departments, and unless the installation is sufficiently large to warrant different types of generators, it is better to operate both arc and incandescent lamps on the same generator. This desirable result can be obtained by the use of the "direct current constant potential enclosed" arc lamps, but these are not so economical in operation as the "alternating enclosed" arc lamps, even though transformers are used on the latter type to reduce the potential. Again, most mills are using incandescent lamps on a higher voltage than 110. In such cases, with the "constant potential direct current" arc lamp a wasteful resistance must be used to reduce the voltage.

On colored work the arc lamp has a great advantage over the incandescent, inasmuch as colors can be more readily distinguished by the former than by the latter. It must not be forgotten that the candle power of incandescent lamps is affected by the gradual accumulation of dust on the outside. The interior globe of the "enclosed arc" is cleaned at each trimming.

One word further about the form of generator to be adopted. It is obviously highly desirable that the same type of machine should be used for all purposes. It is also very desirable, where there are several generators, that they should all be operated in multiple; that is to say, that they all should deliver their current into a common set of wires, called bus bars, at the switchboard, thus permitting the use of the current from either generator for any purpose in any portion of the premises up to the capacity of the generator. The advent of the "enclosed alternating" arc lamp has rendered this possible, and to-day arc and incandescent lamps as well as induction and synchronous motors may be operated from the same generator, or from several generators connected in multiple. While it is true that "constant potential" generators, such as are ordinarily used for incandescent lighting, may also be operated in multiple, the types of motors which must be used on these machines are, up to the present time, less desirable for driving textile mills. The "constant current" generators which have been most commonly used for arc lighting cannot be operated in multiple, and the type of motor which must be used therewith is impracticable for mill work. I will not go into the discussion of the comparative merits of the two systems on other classes of weaving. I have merely suggested the above to show that the topic has many sides.—Sydney R. Paine, in the Boston Journal of Commerce.

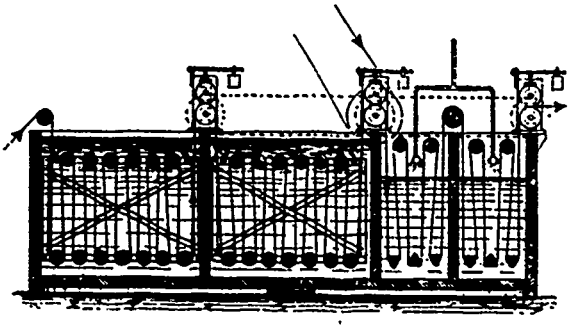
TO DETECT ARTIFICIAL SILK.

Artificial silk has not met with that success which was predicted for it, but it has found some uses and finds employment in the manufacture of gallooms, brands, etc. It has become an article of commerce and as such it became the duty of the chemist to find methods for detecting its presence when employed in combination with natural silk or other fibers. Natural silk dissolves in an alkaline solution which remains white, while with artificial silk the solution turns yellow. Another method for distinguishing natural from artificial silk is the following: Artificial silk is not soluble in an alkaline copper solution when glycerine is present, while natural silk dissolves in it at ordinary temperature. This test is so sensitive that by means of it the relative quantities of natural and artificial silk in a tissue can be ascertained. The solution is prepared by dissolving 10 parts of sulphate of copper in 100 parts of water. To this are added 5 parts glycerine and potash in sufficient quantity to again redissolve the precipitate that has been formed.

IMMEDIAL BLACK ON PIECE GOODS.

The following is from a book issued by Wm. J. Matheson & Co., Ltd., 96 Foundling street, Montreal, on the dyeing of Immedial Black on piece goods: This process may be carried out in the continuous dyeing machine, in the jigger, or in the padding machine. The continuous dyeing machine is chiefly important for dyeing on a very large scale, the padding machine for light, thin goods, whilst the jigger may be used for all kinds of goods. The following sketch shows a suitable construction of the continuous dyeing machine.

1 and 2 are vats provided with rollers and contain the dye liquor. The guide rollers rest in an iron frame which can be



lifted at will. It is recommendable to provide the partition with holes to allow of a free circulation of the liquor. 3 and 4 are the ordinary rinsing vats. The vat may be either of wood or iron, whereas the small guide rollers must be made of iron. The two squeezing rollers may either be both of wood or the lower one of wood and the top one of iron; they are covered with cloth as usual. The dyeing is done by giving one or two passages in the vat to the boiled off, then dried, or at least well squeezed, goods. Leaving the dyevat, the goods pass a small washing box provided with a sprinkling pipe, in order to be rinsed immediately after being squeezed. For each 10 gals. of water charge the dyebath with 2 to 2½ lbs. Immedial Black, ¾ to 1 lb. sulphide of sodium, 4½ lbs. soda ash and 1½ to 2 lbs. common salt.

Heat to the boil, shut off the steam and enter the goods. The dyeing is done as a rule at a temperature of 80 to 90° C (175 to 195 F.); in some cases, especially with goods dyeing through very easily, also a lower temperature 50° C (about 120° F.) is sufficient. An iron steam coil serves for heating the bath. The use of copper pipes must absolutely be avoided, nor must any parts of the dyeing machine be made of copper. The

duration of one passage is about 3 to 4 minutes. The dyebath is replenished by running in during the passage a solution of 9 to 11% dyestuff, 3 to 4% sulphide of sodium, 2% soda ash, and 1 to 2% common salt, calculated on the weight of the goods to be dyed, which quantities are reckoned as being absorbed by the fiber. After dyeing the pieces are well rinsed and treated with chrome alum or bichromate of potash.

LITERARY NOTES.

A. McKim & Co., newspaper advertising agents, Montreal, have published a revised list of Canadian newspapers, as a supplement to their Canadian Newspaper Directory, which appears biannually. Although the last issue of the latter was published only a year ago, so many changes have taken place in the circulation, ownership, etc., of papers all over the Dominion, that this supplement became necessary. This revised list is supposed to contain the particulars concerning every newspaper published in Canada.

Newfoundland at last has its own literary magazine, and the first number issued in July will compare in quality of contents with any magazine published across the Gulf of St. Lawrence. It is called The Newfoundland Magazine, is published at St. John's, and edited by Theodore Roberts, a brother of Charles G. D. Roberts, the Canadian author. A sketch of Sir H. E. McCallum, the governor of the island, a description of St. John's, humorous pen-pictures of Newfoundland by Dr. D. W. Prowse; the Timber of Newfoundland, by C. M. White, and the French Shore Question, by Hon. E. P. Morris, are among its topics of current interest; while its poetry and fiction are above the average. The French shore question is very ably treated by Mr. Morris. This magazine is only $2 a year or 20 cents a number, and we strongly commend it to Canadian readers, who should know more about our nearest colonial neighbor, whose interests are so identified with our own.

Among the articles in the current number of the Imperial and Asiatic Quarterly Review, published at Woking, Eng., is a very suggestive one on the famine problem of India, and a strong "Plea for the Indians in South Africa," who have been most unfairly treated by the colonial governments, and shamefully outraged by the late Dutch republics. The heroism of the Indians who served as stretcher bearers in the Natal and Free State campaigns, should now be remembered, and the unjust legislation against them repealed throughout South Africa. Other instructive articles deal with the Referendum in Australia, with Corea, Morocco, the China situation, etc.

Morton, Phillips & Co., the well-known stationers and blank-book manufacturers, 1755 and 1757 Notre Dame street, Montreal, have just issued a valuable hand-book of the Canadian Customs Tariff and Excise Duties, with a list of warehousing ports in the Dominion, extracts from the Canadian Customs Acts, sterling exchange, and the principal foreign currencies at Canadian values, and other useful tables; price, 50c.

Cotton Values in Textile Fabrics is the title of a new book by D. A. Tompkins, Charlotte, N C., U S This book is larger and thicker than the other two textile books by the same author and yet it has a smaller number of pages, which is accounted for by the fact that this book is made up almost entirely of cloth samples. There are a large number of these, beginning with coarse duck and gradually running up to fine embroidery. They are systematically and artistically arranged and bound into book form in elaborate style. The samples constitute a most valuable object lesson in textiles. They illustrate by the actual goods themselves the possibilities of cotton. The book is one that ought to be in the library of everyone interested in the great subject of textile development and education. It is for sale by the Textile Excelsior; price, $2.50.

Minister Wu Ting Fang will present in the October Century "A Plea for Fair Treatment" in behalf of his fellow-countrymen. This is one of half a dozen articles in the same magazine, in which the Chinese question will be treated, directly or indirectly. Bishop Potter writes on "Chinese Traits and Western Blunders"—the first of a series of travel sketches and studies.

The coming tints for fall and winter, writes Emma M. Hooper, in the September Ladies' Home Journal, are wood and castor browns, rich tans with a touch of a brownish cast, soft, medium and light grays, navy blue of a bright shade, dull old rose, cream, ivory white, turquoise, vivid and pale pink, pinkish lavender, clear violet—but not bluish violet. These will be the fashionable colors this season. Black fabrics will be modish and popular, and combined with white will be much in evidence this autumn. The very light pastel tints will form demi-evening and visiting gowns, and in panne and cut velvet these tones will prove exquisite for accessories and trimmings. The general effect in materials this autumn will be light for smooth goods, and medium for the rough fabrics. Everything points to a season of cloth again for dressy suits and entire gowns intended for elaborate occasions where a silk one would formerly have been seen.

The Linotype Co., of Montreal, manufacturers of the Oliver typewriter, have issued a very attractive booklet giving the genesis of this very successful machine and quoting many strong testimonials from users. It is interesting to know that the Oliver typewriter is not only Canadian in manufacture, but in creation as well. Thomas Oliver, its inventor, was born in Oxford county, Ontario, and the interesting story of the evolution of the Oliver typewriter should be widely known as an example of what perseverance will accomplish.

The Statistical Year Book for 1899 has been issued by the Department of Agriculture from the Government Printing Bureau, Ottawa. Facts and statistics regarding the Government and constitution of Canada, its resources in agriculture, fisheries, minerals and manufactures, its commerce, its public works, its financial, insurance and other commercial institutions; statistics of education, population, temperance, crime, mortality, etc., are embodied in such a compact form as to make the work more useful than ever before. George Johnson, the Government's chief statistician, is a man born for his work. He knows by instinct just what new information is most valued, and how to present the developments of the country in an instructive way. He has the rare gift of making figures interesting; and the admirable order and system of his work enables him to make instant use of a vast mass of material, which was formerly "without form and void." Mr. Johnson is in fact the creator of a ready reference information department which is probably unequalled by any Government institution of the kind in the world.

In an instructive illustrated pamphlet on the "Wood Pulp of Canada," compiled by George Johnson, Dominion Statistician, an estimate is given of the available supply of pulp wood in this country. It is calculated that there are 450,000,000 acres of spruce wood in Canada, and taking 10 tons of ground pulp as the product per acre we have 4,500,000,000 tons of pulp in sight. In the province of Quebec alone it is estimated that there are 200,000,000 acres of wood land mostly timbered with black spruce, the most valuable of all woods for pulp and paper. Then the water powers as yet unutilized, and without which the manufacture of pulp and paper would be much handicapped, are enormous in the very regions where spruce most abounds. Canada is the premier land for spruce and paper.

The secretary of the Silk Association of America, Frank-

Im Allen, who is also a member of the International Jury of Awards at the Paris Exhibition of 1900, has issued a pamphlet on the subject of American silks at the exhibition. We note that statistics revised by the Jury give France as producing 33½% (almost) of the silk goods of the world, and United States as producing 23 1-4%; Great Britain is third lowest in the scale of production, with 4 1-10%, and only Italy and Spain produce less. The United States exhibit of silk goods was stated to be a selection from existing stocks and not an exhibition of special products made for exhibition purposes.

The eighteenth year of publication of the American Directory of the Hosiery and Knit Goods Manufacturers of the United States, Canada and Mexico brings us a 300 page volume, which contains, besides a full directory of the knitting mills, a list of the knit goods jobbers and the large retailers of the United States. It is published by the Textile Record Co., No. 425 Walnut street, Philadelphia, Pa.

A pamphlet of some 30 pages, which contains conversion tables of weights and measures and foreign moneys, has been prepared and published by the Philadelphia Commercial Museum, 233 South Fourth street, Philadelphia. Now that the introduction of the metric system has been generally conceded to be a national prerequisite to commercial progress, such tables as these will prove of great value.

The 13th annual edition of the Blue Book, Textile Directory, which is the 20th century edition, and has a patent index, has been issued, and shows a great increase in all branches of the textile industry, the number of new cotton mills built and under construction during the past year being about three times as large as during the previous year, while the new mills in the woolen and silk line show a large increase over previous years, the new establishments manufacturing knit goods being about the usual number, the total of new establishments in the various lines being about 400. The textile maps, which are a feature of this book have, as usual, been revised to June 15th, these maps showing all towns where textile plants are located. In honor of the new century the publishers have given in this edition scores of pictures of textile mills throughout the United States, these covering all branches of textiles. The addition of these photographs, with the great increase in the number of new mills, have added an additional 100 pages to the work, making it the finest edition published and a book of 700 pages. This enlargement has caused no change in the price, it remaining as heretofore. The new edition is the largest and finest issue ever put out by the publishers of this work. The Blue Book contains the textile manufacturers in the United States and Canada, including a directory of textile mill supplies, covering the machinery, chemical and dyestuff manufacturers, with the commission merchants, yarn dealers, etc., and these, in connection with its many pages of specially engraved maps, make it a trade work of the highest order, and one which fully maintains its well earned reputation. The book can be obtained from the publishers, Davison Publishing Co., 401 Broadway, New York. Price, office edition, $3; traveler's edition, $2.50.

THE ROSAMOND WOOLEN CO. AND THE PATON MNFG. CO., AT THE PARIS EXHIBITION.

In the American Cotton and Wool Reporter of August 9th appears a letter from its correspondent at the Paris Exhibition, from which we excerpt the following references to the Rosamond Woolen Co.s and the Paton Mnfg. Co.'s exhibits:

"Canada has a building all to itself in another part of the exhibition grounds, and I had to make a special journey over there to see what the Dominion manufacturers have to show. They do not show many fancy worsteds, but what there are, are choice, and will stand alongside the best here. You can only look at the samples at a distance, however. They are not only enclosed in glass cases, but the cases are also railed off so that it is impossible to get too near them. There is, however, one advantage which other exhibitors might have followed, that is, all the patterns have the selling price marked on them. The Rosamond Woolen Co., Almonte, Ont., has some good pantings at 70c., 27 inches. I have no doubt it can make them cheaper to-day. As this firm employs English designers, and one member of the firm studied at the weaving classes in England, it is not to be wondered that they make such a good show. The tweeds from this firm are the best I have seen outside the genuine Scotch. They are like what I should call the Galcar, or Yorkshire tweed of the better class, and are marked 50 cents a yard for 27 inches. This is a big price for them, but exhibition prices are notoriously high. The Paton Mnfg. Co. shows a good line of tweeds, and some very fair pantings at $1.45, 16 ounce. There is no doubt that the Canadians have learned the art of tweed making, and I am not surprised to know that on certain lines of cheviots they can get into the New York markets ahead of the European makers."

COTTON GOODS PRICES.

The only advances of any moment so far in Canadian cottons have been in white, bleached sheetings and some prints The lists of the Merchants Cotton Co. show an advance of 10%. Prices in knit goods are practically the same as last year, but some houses have withdrawn their cheaper lines, and refuse to handle goods upon which a living profit is not obtainable. In half-hose there is little change, but grays and blues have advanced slightly. Cashmere and cashmerettes are being extensively sold, and a rapidly increasing demand is accounted for in the improvements made in their production.

The Central Agency, Glasgow, comprising the firms of the Coats, the Clark Company and the Brooks Company, advanced prices 3d. per pound on knitting, mending and tambouring cottons on Sept. 18th. The increase equals 12½ to 15½ per cent. The second quality, soft and glace reels, was also advanced at the rate of a shilling per gross of 500-yard spools

THE WOOL MARKET.

Toronto.—The market continues stagnant, and prices for Canadian wools are merely nominal. There are no sales. The Roubaix crash has caused some French wools to be sold on the Toronto market to the exclusion of similar Canadian wools. When there comes a demand in the United States for our wools, one dealer said, we can sell them, in the meantime, for the most part, we must wait.

Montreal.—Sales of all merino wools are slow. Mediums and crossbreds are in better demand, and prices are firmer than they were a week ago, although not any higher. Cape greasy wool is quoted 16 to 17½c.; Natal, 19 to 21c.; B.A., washed 35 to 40c., for good merino qualities; Canadian fleece, 16½ to 17½c.; pulled, 19 to 21c. North-West is getting scarce, and prices of this class have advanced, so that now 17c. can be got for good condition wool.

—Hand-painted textiles, usually velvets and high-moire silk, are increasing in popular favor. Some are hand-painted in the piece. The rage for black and white goods has brought *designs painted in gray or black on white materials*, which are among the very latest novelties in dresses shown for fall and winter.

Among the Mills

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

The Hamilton Cotton Co. is building an addition to its dyehouse.

The Western Canada Woolen Mills Co. will build a mill at Medicine Hat, Assa.

Forty men have been recently employed in the Listowel, Ont., tax mill of P. J. Livingston.

The Montmorency Cotton Mills Co. has this year paid a 6% dividend, and a bonus of 1%.

The Kinneth Paper Co., a new industry in St. Catharines, Ont., is expected to turn out paper by November.

James Dareas was instantly killed a short time ago while raising the sluice at St. Croix Cotton Mill, Milltown, N. B.

Residents of Hamilton, Ont., object to the emptying of dyewater into the bay by the Canadian Colored Cotton Co., Ltd.

The new storehouse of the Morden, Man., woolen mills, B. Fraser, proprietor, was burned Sept. 5th. Damages, $2,500; partially insured.

The Dominion Cotton Mills Co., Ltd., recently lost a considerable quantity of raw cotton by the fire in the wincey mill at Brantford, Ont.

Thompson & Co., manufacturers of bobbins and spools, Sherbrooke, Que., are very busy just now on orders from the cotton and woolen mills for their bobbins and spools.

A fire on Sept. 12th did damage to the extent of $250,000 in Paris, Ont. The offices of the Paris Wincey Mill Co. were burned, the damages being $1,200, and insurance $200.

Mr. Wilson, the new superintendent of the Dominion Cotton Co.'s mills, Magog, Que., from Moncton, N.B., is in charge, having succeeded H. Kimball, who has returned to his home in Maine.

Fire on Sept. 5th caused by spontaneous combustion did $50,000 damage to the contents and building of the storage department of the St. Ann's mill of the Hochelaga Cotton Manufacturing Co., Montreal.

W. C. Caldwell is lighting his woolen and grist mills at Lanark, Ont., with electric light, and has installed a 500 lamp dynamo. He may extend the system at an early date to light the business houses in the town.

The Canada Woolen Mills are running full time at present on serge for the British army. The new dyehouse at the Gillies mill is nearly complete, the wide looms are being set up. The capacity of the mills has been enlarged by two sets.—Carleton Place, Ont., Herald.

Adrien Chauset, manager of the Hudson's Bay Knitting Company, was charged before the Montreal Recorder the other day with trying to coax two girls to leave the employment of Fred. Galibert. The Recorder dismissed the case owing to insufficient evidence.

F. A. Clarry has gone into court and sworn that he was about to open up and operate the Streetsville, Ont., woolen mills when S. G. Treble, Hamilton, induced him to engage with the proposed Beaver Woolen Mills Co. at a salary of $50 per week, whether the project succeeded or not. S. G. Treble is dead and Clarry now sues the estate for $1.455.10, the amount alleged to be due.

The Corticelli Silk Co., Ltd., has received notice that "Corticelli" spool silks and "Brainerd & Armstrong" wash silks in patent holders were awarded the Gold Medal at the Paris Exposition, 1900.

Geo. Rumple, Berlin, Ont., who bought out the Winger Woolen and Felt Co., Ltd., Elmira, Ont., a month ago, undertakes to put in a $10,000 plant if the townspeople grant a bonus of $5,000. Otherwise the business will be closed down permanently.

Surveys are being made of Koochiching falls, Fort Francis, Ont., and an application will be made for a lease of water power to operate a pulp mill, which, it is reported, will be erected by a strong United States company. Fort Francis will soon have rail connection with Winnipeg.

The Hamilton Herald reports that the Wentworth Knitting Co., which has been doing business in the old Laidlaw building, corner of Mary and Kelly streets, has gone out of business. The factory will be operated hereafter by George Byrl, of Duke street, in that city.

Wm. J. Matheson & Co., Ltd., of New York and Montreal, agents in America for Leopold Cassella & Co., have issued a very handsome book of samples of their immedial blacks and immedial blues, giving formulas for using these dyes on different materials, and showing also diagrams of appliances that may be used to carry out the processes. The company now issue a monthly bulletin of new dyes, which is mailed on application to the Montreal office, 96 Foundling street.

Thomas Kennedy proposes to establish a two-set woolen mill in British Columbia, and has submitted a proposition to the Nelson, B.C., council. The proposed industry will be capitalized at $125,000, of which $60,000 is said to be available. Of this sum the company figures on investing $8,000 in buildings, and the balance in plant and working capital. He asks for a free site where good drainage and abundant water will be available.

The August bulletin on the Ontario crops states that flax of late years has not been sown to so great an extent as formerly, though the few correspondents who refer to it speak of the crop as very heavy, and the quality of fiber as excellent this year. The same authority puts the number of sheep this year in Ontario as 1,797,213, against 1,772,604 in 1899, and 1,677,014 in 1898. Of the total of this year's estimate 847,616 are reported as being under one year old. The wool clip in Ontario this year is estimated at 5,805,921 lbs.

The Southwark Mills Co., Philadelphia, has recently added to its equipment, a large automatic continuous machine for drying and carbonizing piece goods. This machine contains all the latest improvements used in the process of carbonizing, and was built by the Philadelphia Drying Machinery Company, 6721 Germantown avenue., Philadelphia. The latter company reports a number of large orders recently received for its well known Hurricane dryers, for raw stock and skein yarn.

Among the unfortunate employees of the Streetsville, Ont., woolen mills who have been unable to get anything but promises from F. A. Clarry, the manager (?) of the business, is T. D. Douglas, a Canadian, born at Appleton, Ont., who learned the business in Almonte, Ont., and was brought from North Andover, Mass., where he was head of the weaving department in a large woolen mill, to be superintendent of Mr. Clarry's venture. Mr. Douglas advertises for a position in another column. Fifty per cent. of the wages was offered the hands, the employers to pay the legal expenses, and this offer was accepted, but nothing came of it except a further demand from the employers that the employees should pay the lawyers' fees. Mr. Douglas is a capable designer, and has had practical experience in all branches of mill work.

Jas. Knox has been given the agency for the new cotton mill in Hamilton, Ont —the Imperial.

A Philadelphia firm has installed some new machinery in the Almonte, Ont., Knitting Co.'s mill.

J. Jackson late manager of the Dominion Cotton Mills Co., has moved his family to Toronto to reside.

Ernest Sirois, a youth of 17, employed by the Montmorency Cotton Co., was drowned last month while bathing.

Kershaw Hudswell, of Cleckheaton, England, is now head of the carding in the Trent Valley Woolen Mills, Campbellford, Ont.

Joseph Hindle, superintendent of the print works at Magog, Que., accompanied by Mrs. Hindle, has gone on a voyage to England.

Arthur Fraser, aged 14, an employee of the Kingston, Ont., Hosiery Co., Ltd., knitting mill, fell from a platform recently and had both his arms broken.

McLean & Scott, of the Pembroke, Ont., woolen mills, have installed a stocking yarn twister, built expressly for them by H. W. Karch, Hespeler, Ont.

The Northrop Loom Co., of Canada, has opened a branch warehouse and office at 296 St. James street, Montreal, for the convenience of parties who cannot reach the works at Valleyfield, Que.

H. A. McArthur, who has filled the position of bookkeeper in the Hawthorne Woolen Co.'s mills, Carleton Place, Ont., for many years, has gone to Montreal, where he has received a lucrative appointment with W. T. Benson & Co.

P. A. Codere, Almonte, Ont., is suing J. H. Wylie, of the Elmsdale Flannel Mills, Almonte, for $1,500 for injuries received in the factory through the alleged negligence of the defendant in not properly guarding a rag picking machine.

The proposed establishment of a cotton yarn mill at Belleville, Ont., looks a rosy vision from the Belleville standpoint. From the business point of view, however, obstacles, such as freight rates, lack of suitable labor and power, etc., make it a serious undertaking.

L. Steinfeld, J. H. Wintermeyer, E. H. Scully, Berlin, Ont.; G. M. Foster, Peabody, Mass., and Eugene Racine, Quebec., have applied for incorporation as the Canadian Tanners Glue Company, Ltd.; chief place of business, Quebec; capital stock, $300,000.

Attention is called to the advertisement in this issue of an opening for a factory for a new line of woolen manufacturing The advertiser has a mill, with water power, in a good situation, and only requires capital to install machinery and put the goods on the market.

R. H. Pope, M.P., Cookshire, Que.; G. G. Foster, Montreal; G. S. Stevens, Waterloo, Que.; F. P. Buck, Sherbrooke; W. W. Bailey, Cookshire, Que., have applied for incorporation as the Dominion Industrial Co., to buy the Cookshire Mill Co., and make pulp and paper; capital stock, $200,000.

The Merchants' Cotton Co., Montreal, is being sued by E. Cantieau for $1,999 damages for the amputation of a hand, rendered necessary by falling into the defendant company's cellar, which fall was due, it is claimed, to the negligence of the company.

Egan & Edwards, Ottawa, have, it is said, bought for $150,000 the water-power of the Hull Lumber Co., adjoining Table Rock, for the purpose of establishing an extensive pulp works. They can develop between 5,000 and 6,000 horse-power at this point, and intend to erect a pulp mill with an output of 100 tons a day.

The Tooke Bros. Co., Montreal, has asked the town of St. Henri, Que., to cancel its mortgage of $35,000, held as security for a bonus, and to accept instead $35,000 in bonds of an issue of $50,000, which the company proposes to float in order to build a new wing on the factory and develop the business. A bylaw to this effect has been passed.

The curled hair factory of P. & P. Griffiths, St. Helen's avenue and Bloor street, Toronto, was burned Sept. 22nd. The main building was destroyed, but the boiler house escaped. The loss amounted to $25,000, on which there was $12,500 insurance. Machinery recently put in for the manufacture of haircloth was also destroyed. The factory will probably be rebuilt.

The ratepayers of Berlin, Ont., will vote, October 1st, on a bylaw to give an $800 bonus to the Star Whitewear Co., which proposes to build a three story brick factory, 45 by 100 feet, and employ 100 hands. The bonus is to be used to buy the site, the site to become the property of the town for ten years and to be given up to the company at the end of that time if the conditions of the agreement have been carried out.

Speaking of the settlement of the strike at the Dominion Cotton Mills, Magog, Que., last month, the St. John's News says: "Rioux, the chief striker, who boasted of having been in 14 strikes, knew just how far to go, when the arrests commenced he got out and has not been seen since. He, an irresponsible rascal, kept a town in a turmoil for nearly a week and many a misguided striker would like to hit him."

The Dominion Carpet Co., Ltd., is now the name of the Dominion Brussels Carpet Co., Sherbrooke, Que., which has been taken over by an English company. The plant will be much enlarged and will turn out Brussels, Wilton and tapestry and velvet carpets and rugs. The subscribed capital is £45,000. The directors are: C. S. Cox, W. R. Harmar, G. M. Smith, W. M. Philip, E. W. Randle, secretary.

The management of the Montmorency Cotton Co. is said to be prepared to close down the mill indefinitely rather than recognize organized labor. The employees, or many of them, profess perfect willingness to go to work at existing rates, etc., if they have assurance that the female employees may safely enter the factory. The two sides of the story seems widely diverse and in the meantime it is said that steps are being taken looking towards a thorough investigation of the labor conditions in the Montmorency cotton mills.

J. R. Milford, overseer of the weaving department of the Richelieu Woolen Mill at Chambly Canton, Que., for the past year, has had to resign his position on account of ill-health. On leaving, Mr. Milford was presented with an illuminated address, accompanied by a very handsome gold-headed cane, from the weavers. Mr. Milford has accepted a position with the J. C. McLaren Belting Co., of Montreal and Toronto, so that his many friends in the trade may look to having a call from him with a full line of this popular firm's mill supplies.

The Belgo-Canadian Pulp and Paper Co. is about to establish at Shawenegan Falls, Que., a 100-ton ground-wood pulp mill, a 75-ton pulp mill, and a 100-ton paper mill. It has contracted with the Shawenegan Water and Power Company for 15,000 horse power of water and the necessary land for the storage of pulp and for the mill buildings, and has also bought a large area of heavily-timbered spruce lands on the St. Maurice river, which will enable the mills to be run continuously, it is hoped on the wood from its own lands. A. C. Rice, of Worcester, Mass., is engineer for the new work. The work of building the pulp mill is to be started at once, the contract calling for completion by June 1st, next. The other buildings must be completed within two years.

J. M. McLennan lost the middle finger of his left hand a short time ago on a circular saw, in the workshop of the Canadian Colored Cotton Mills Co., Ltd., at Cornwall, Ont.

J. M. Poole, G. W. Baker, W. C. Mackay, E. L. Young, Toronto, have been incorporated as the Consolidated Pulp and Paper Co., Ltd., share capital, $500,000; chief place of business, Toronto.

T. DuTremblay, mechanical engineer; P. A. Potvin and A. DuTremblay, Roberval; Charles A. Paquet and Amedee Robitaille, Quebec, have applied for incorporation as La Compagnie de Pulpe de Peribonka; capital stock, $30,000; headquarters at Roberval, Que.; to buy in the county of Lake St. John, water powers, timber limits, etc., develop electricity and make pulp.

J. B. Jones, who was formerly in the employ of Buck Bros., Somerville, Mass., is now interested in the Columbia Napper Clothing Co., 81 Holley street, Lawrence, Mass., manufacturer of napper clothing suitable for all kinds of nappers, fleecers and brushes for the same. This company has the agency for the Eclipse sewing machine, and builds dyeing and finishing machinery. Mr. Jones' present address is 2623 N. Sixth street, Philadelphia, Pa.

The Truro Knitting Mills Co. has completed the enlargement of its premises begun in April last. The new main building, which is fireproof, is 150 x 55 feet, two stories, with tower for stairway and main entrance. The new boiler house is at the eastern end of the main building and is 25 x 35 feet—one story high, with a smokestack 10 feet square at the base, 84 feet 8 inches high and 3 feet square at the top inside. The new picker house, 32 x 42 feet, is at the rear of the main building from which it is distant about 20 feet, and is also of brick. These buildings are in addition to the old buildings which have been put in good repair. The total floor space in use is 28,000 square feet. The boilers, heaters and pumps were installed by the Truro Foundry & Machine Co. The engine is of the Wheelock slow speed type and was built by the Goldie & McCulloch Co., Galt, Ontario. Its fly-wheel is 12½ feet in diameter, and weighs three and one-half tons. There is a 5-foot pulley on the main driving shaft, and the belt is 19 inches wide. There are 61 knitting machines, 30 sewing machines and 3 sets cards.

A curious state of affairs prevailed recently in the clothing workshops of Mark Workman, Montreal. Some men were discharged. The discharged men ordered a strike and some 52 employees went out, 36 garment workers and 16 cutters. They said they had many things to complain of, chief amongst which are the employment of a number of Roumanian Jews, who work for less than $5 per week, as against $12 and $15 paid to union men; also the employment of boys and girls under the age of 14. The Montreal Star interviewed some hundreds of those working in the shop, and all declared themselves satisfied with their work. S. Sloman, secretary of the cutters' union, said: "We have heard the two sides of the story and we are satisfied that Mr. Workman was justified in dismissing the men from his employment, as he did not need their services. Mr. Gordon had no right to go to Ottawa (a delegate appointed by the United Garment Workers' Union No. 140), to bring this matter before the Trades and Labor Congress; his action was entirely without authority, and we repudiate it entirely. We have no grievance ourselves, and we are satisfied that the other hands have none. If they had we should back them up, but there is absolutely no cause for this trouble and agitation."

—As a result of a new union of German weavers, controlling about 140,000 looms on colored goods, it is expected that prices there will be advanced 15 per cent.

FABRIC ITEMS.

The Sandell Shirt Co., Vancouver, B.C., has assigned.

R. J. Molloy, of R. J. Molloy & Co., tent makers, Brandon, is dead.

Horner & Myles, dry goods merchants, Vancouver, B.C., are dissolving partnership.

J. W. Scovil & Co., clothing, St. Stephen, N.B., have dissolved partnership, and J. W. Scovil continues under the same firm name as before.

The Imperial Dry Goods Co., Winnipeg, will be in its new building, Main street, next month. The new building fronts on both Main and Albert streets.

Suckling & Co., Toronto, offered at auction this month the stock of fall and winter clothing, overalls, shirts and men's furnishings of Donald Fraser & Co., Winnipeg.

A winding-up order has been issued for the Maple Clothing Company, Montreal, at the instance of Beaumont Shepherd, a creditor for $1,500. A. L. Kent has been appointed provisional liquidator.

W. P. Slessor, of the firm of W. R. Brock & Co., Ltd., 26 St. Helen street, Montreal, was the victim of a painful accident recently. While at Lac Brule, on an outing, he fell and broke two bones of his wrist.

Duncan McDonald died at Ottawa recently at the age of 75. He was the son of John McDonald, of Garth, who was one of the founders of the Northwest Fur Co., which gave the Hudson's Bay Co. such a fight for the fur trade of the Canadian west until the two were ultimately combined.

The W. E. Sanford Manufacturing Company, of Hamilton, has an order from the India Department of the British War Office for 11,000 military overcoats, Canadian frieze, to be completed by September 27, and to be shipped from Vancouver on October 9, for Weihaiwei, China.

The value of Canadian manufactured goods shipped by the "Empress of China" on Sept. 10th to the commander of British troops at Weihaiwei, is estimated at $150,000. They consisted of great coats, boots, fur caps, socks and moccasins. Fifteen thousand pairs of the latter were shipped.

The assessments of the departmental stores in Toronto have been raised owing to the efforts of the Retail Merchants' Association. The expenses of the association in collecting evidence were to be partly met by a vote of $500 from the city council, and against the payment of this sum legal action has been taken.

Michaud & Gauvin, dry goods, Quebec, are in financial difficulties; Michaud was previously in business alone, failing in 1896, when he settled at 65 cents, and the present firm was formed. An assignment has been made on demand of the Gault Bros. Co. Liabilities are stated at $30,000; estimated assets, $25,000.

E. J. Dignum and J. Monypenny, who have done business as manufacturers' agents and importers of dry goods, woolens and tailors' trimmings for a number of years, under the firm name of E. J. Dignum & Co., have changed the firm name to the style of Dignum & Monypenny. There has been no change in the firm except the name, the same members continuing together as formerly.

An action for libel has been dismissed, which was brought against the Kingston, Ont., Times, by the proprietor of a silk skirt coupon business. This method of getting something for almost nothing by forcing your friends to contribute is becoming too popular. Anyone should know that to obtain a $9 garment for 25 cents is to cause fraud or injustice to be done someone. The garment is not had for value received.

The firm of Love & McClure, laundry, St. Stephen, N.B., has been dissolved.

Boulter & Stewart, manufacturers of ladies' and children's wear, Toronto, have made a settlement with their creditors. The statement presented by the firm showed a surplus of $25,000. Too great expansion of business on a limited capital is the cause of the difficulty.

The wholesale dry goods firm, Thibaudeau Bros. & Co., in Montreal, will cease to exist as an independent firm at the end of the present year, and the business will be continued in Montreal as a branch of the Quebec firm of that name. This is one of the oldest houses in Montreal, it having been founded by Robertson & Co., in 1811. It was in 1849 that the firm name was changed to Thomas, Thibaudeau & Co., then in 1867 to Thibaudeau, Genereux & Co., and in 1879 to its present style of Thibaudeau Bros. & Co.

The Montreal dry goods commission firm of Paris, Milne & Co., composed of Alfred E. Paris and R. C. Milne, made an assignment this month, and Arthur W. Wilks was appointed curator. The total liabilities were about $7,500 of which about $2,700 were secured by notes. The assets are nominally $5,600, of which stock and fixtures amount to $4,000. The failure is attributed to insufficiency of capital and inability to realize on certain securities with which the firm hoped to raise more money. The following are the principal creditors: The Maple Clothing Co., Drummondville, P.Q., $1,500; the Montreal Shirt & Overall Co., Montreal, $451; H. A. Beatty, Montreal, $600; Hudson Bay Knitting Co., Montreal (secured), $500; G. W. Stephens, Montreal (rent), $514; John Moore, Montreal, $250; R. C. Wilkins, Montreal, $30; Elson & Neill, Manchester, Eng., $350; Dean & Duncan, Manchester, Eng., $486; John Searle & Co., Luton, Eng., $1,500; Salter & Whiter, London, Eng., $949; Nebenzahl & Unger, Vienna, Austria, $200; Hodgman Rubber Co., New York, $30; Dominion Flower & Feather Co., Montreal, $82.

IMPERIAL TRADE NOTES.

The following are some of the enquiries received by the Canadian High Commissioner in London, referring to Canadian trade. Names and addresses can be obtained from this office:

The manufacturers of umbrella component parts desire to hear from Canadian umbrella makers interested in the direct importation of such goods.

A firm of flag and bunting makers asks for the name of a likely firm to take up the agency in Canada for the wholesale sale of bunting, flags, etc.

A Canadian importer of button cloth (punched), and of button parts, i.e., shells and collets, wishes to correspond with British makers who would supply samples with a view to business.

The makers and manufacturers of specialties suitable for shirt-makers, such as collars, cuffs, union and cotton interlinings, etc., desire to get direct correspondence with good Canadian factories and firms open to do business.

A firm at Bucharest desires to enter into an export trade with Canada, and enquires whether business can be done in Italian produce (wines, almonds, oranges, olive oil, etc.), as well as in woolens, cotton manufactures, yarns, etc.

—By a practically unanimous vote, the stockholders of the National Wall Paper Company, capitalized at $38,000,000, and popularly known as the wall paper trust, decided to dissolve the corporation, says a New York report. Outside competition and the demand of the trade for goods identified with individual manufacturers, force the abandonment of the combination. The company was formed in 1892 by the absorption of twenty-four separate companies. Ten plants were closed, and in the first year of its existence 130,000,000 rolls of paper were made. The company now operates seventeen factories.

TEXTILE PATENTS.

The following Canadian patents which are of interest to the textile trades, have recently been granted at Ottawa. The Patent Office Record containing the specifications upon which the patents are issued are on file in the office of The Canadian Journal of Fabrics, and may be examined by our subscribers at any time:

Patent No. 65,575.—Jacquard machine; Crompton & Knowles Loom Works, Providence, R.I.

Patent No. 65,581.—Knitting Machine; Binns Kershaw, Lancaster, England.

Patent No. 67,749.—Raw wool preparatory treatment; Emil Maertens, Providence, R.I.

Patent No. 67,758.—Cloth measuring machine; Edwin C. Crompton and W. G. Killmaster, Brantford, Ont.

Patent No. 67,883.—Loom; Crompton & Knowles Loom Works, Providence, R. I.

Patent No. 67,939.—Method and apparatus for the production of weaving designs; Jan. Szczepanik and Ludwig Klienberg, Vienna, Lower Austria.

WOOL IN SOLUTION.

When cellulose is treated with carbon disulphide in the presence of an excess of caustic soda, a reaction takes place, resulting in the formation of a xanthate, the now well-known body viscose. A corresponding reaction takes place in the case of wool, and a body similar in appearance to viscose is produced; on longer standing, however, it becomes quite fluid and can be poured from one vessel to another. In color it is dark reddish-brown, and, unlike viscose, it appears to be quite stable under ordinary conditions. It is completely soluble in water, slightly so in alcohol, but in most other organic solvents it is quite insoluble. The solution, when treated with hydrochloric acid, forms a yellow precipitate with the evolution of hydrogen sulphide. On boiling, a further evolution takes place and the precipitate dissolves, leaving only a small residue of a brown, plastic body. On the addition of sulphuric and nitric acids similar precipitates are produced, which dissolve on boiling; but in the case of nitric acid a reprecipitation occurs on continued boiling, due in all probability to some oxidizing action. Like lanuginic acid, the "wool xanthate" gives heavy precipitates with solutions of metallic salts. Oxidizing agents —*e.g.*, hydrogen peroxide—give a white precipitate, while permanganate gives a heavy black precipitate containing manganese. In order to determine whether the substance precipitated by hydrochloric acid was merely reprecipitated wool or some sulphur compound, an estimation was made of the amounts of sulphur in that and in ordinary wool. The results were not, however, conclusive, but tended to show that the relative amounts of sulphur were approximately the same. Another portion of the precipitate was dissolved in acid and then neutralized as closely as possible, in order to see if it resembled lanuginic acid in its reactions. Unlike the latter, however, no reaction took place on addition of picric acid, Nile blue, or any of the acid colors. This reaction of wool is due to the albumenoid character or constituent of wool, this being shown by the fact that albumen and gelatine under-

went the same or a very similar reaction on standing overnight in the presence of carbon disulphide and caustic soda; in these cases the action was much slower, the resultant product being a yellowish-brown viscous substance, miscible with water, but only slightly so with organic solvents. A small quantity of lanuginic acid was similarly treated, and this gave a dark-brown solution, which reacted in the same manner as the wool solution.—Textile World.

CARPET WEAVING IN INDIA.

The Indian Textile Journal gives some very interesting and instructive information in regard to the way woolen carpets are woven in that country. This paper says that the Indian woolen carpet factories are mostly located in some of the principal towns of the Punjab, notably at Amritsar, Lahore, Batala and Ludhiana; but the chief centre which supplies such carpets to the markets of Europe and America is Amritsar. In that city there are numerous carpet factories, the largest having nearly three hundred looms, the smallest working with but eight looms. While on account of the terrible shortage of the cotton crop in India, our Bombay mill industry is greatly depressed, it will be a matter of some surprise to Bombay mill owners that the woolen carpet factories of the Punjab are either expanding the area of their buildings and adding new looms to them, or are adding to their number by the erection of new factories every year. Many of those factories are under engagements for their productions for not only months but years ahead, and the same abnormal activity is so apparent in each of the others that they are unable to book orders for immediate delivery. There are others which go on increasing the number of their looms as orders flow in. It is indeed a very interesting and novel sight to visit these factories. Their general aspect from the outside is rather unassuming and uninviting. The first idea that strikes us on entering a carpet factory is that this carpet weaving industry, one of the oldest in the country, is still in such a flourishing condition, and that while most other Indian industries have been pounced upon and transferred into the hands of advanced European and American nations, this industry has not been so attacked, shows that the excellence and perfectness of the quality and workmanship are above imitation, and this is indeed gratifying to all Indians who have the interest of their country at heart. European and American tourists rarely fail to include the city of Amritsar in their programme of places worth visiting. It may be on account of the Golden Temple—the Sacred Temple of the Sikhs—but those intent on making their traveling instructive and profitable visit this city in order to inspect some of the carpet factories. As the natives of these parts are, however, very particular in withholding full details from these inquisitive people, the American and European tourists are vouchsafed very little information that can be turned to much account on their return to their native country.

All the factories are erected generally on one principle, viz., a quadrangular area being enclosed with a double brick wall, one inside and at a distance of about 15 feet from the other, the space between them being occupied by the looms. The inner wall has a number of entrances to these looms, and the central area thus enclosed on all sides is reserved for the designing and dyeing departments.

The designing department contains a number of artisans squatting on the carpeted ground with a long table about 5 x 1½ feet in area and about a foot and a half in height in front of them. On this table the paper, generally a large sized one of ordinary newspaper quality—drawing paper being altogether conspicuous by its absence—is spread out and first marked with cross lines enclosing the squares familiar to all weavers. These squares vary in size according to the quality of the carpet to be woven. The quality, as is usual in cloths, is distinguished both by the number of threads to an inch of space and the count of the wool yarn employed in the weft. If the quality required is to be 8 x 10, there are drawn cross-lines enclosing 80 small squares to a square inch. The squares are then traced over in the required design with small pieces of delicate twigs of a tree, the wood of which has been converted into coal by burning; the traced portion is then filled up with the requisite colors in which the carpet is to appear. Any combination of colors can be made to appear in the design, and so also in the woven carpet, such combination affecting but little the cost of either dyeing or labor. The designs drawn on paper generally represent one pointer only of a carpet, it being superfluous to sketch the whole design Combinations of as few colors as possible with a total absence of white in the border and centre patterns are generally approved of. Plain ground centres with a central circular design and bold patterns in the border look very fine and attractive. A good deal of time and labor has to be spent in making these sketches, as by inspection of these only can the manufacturers expect to secure orders for their looms. Genuine Indian designs are greatly approved of by Europeans and Americans, but lately some of the carpet makers at Amritsar got some designs from England, and when the carpets woven in these designs were recently inspected by His Excellency Lord Curzon, our enlightened Viceroy rightly took to task, in his reply to the address from the municipality of that city, the manufacturers for the uncouthness and unsuitability of these designs to Indian work.

There are in these factories no mixing, carding, spinning or various other departments so familiar to one connected with the cotton mills. The cotton as well as the woolen yarn required for the purpose is readily obtainable in the open market, and this alone is brought into requisition for weaving the carpets. None of the factories have any of the above departments, although dyeing of the yarn is carried out in all of them.

(To be continued).

—The laundries of Chicago have combined with a capital of $2,000,000, and have raised prices considerably.

—Canadian failures during August numbered 97, with liabilities of $775,316. Of these, twenty-three were manufacturing concerns for $166,451, and seventy-two trading concerns for $587,865, and two other commercial for $21,000. One satisfactory feature was that there were no banking defaults. No heavy failures occurred in manufacturing, and only two in trading exceeded $100,000 each.

J. V. Veintraube, clothier, Quebec, is reported absent, and a considerable proportion of his stock is said to be missing. It is said that he recently tried to compromise with creditors in Montreal, and to have figured not altogether favorably, in connection with the much-criticized failure of M. Bernstein, clothing manufacturer, of that city, who was his brother-in-law.

TEXTILE PUBLICATIONS.

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

Loom Fixing; a handbook for loom fixers working on plain and fancy worsteds and woolens; containing chapters on shuttles and bobbins, and their management; head motion; putting in warps; filling; adjusting and starting new looms; chain building, etc.; 104 pages, by Albert Ainley $1 00

Technology of Textile Design; explains the designing for all kinds of fabrics executed on the harness loom, by E. A. Posselt 5 00

Structure of Fibers, Yarns and Fabrics, the most important work on the structure of cotton, wool, silk, flax, carding, combing, drawing and spinning, as well as calculations for the manufacture of textile fabrics, by E. A. Posselt 5 00

Textile Machinery Relating to Weaving, the first work of consequence ever published on the construction of modern power looms, by E. A. Posselt..... 3 00

The Jacquard Machine Analyzed and Explained; explains the various Jacquard machines in use, the tying up of Jacquard harness, card stamping and lacing, and how to make Jacquard designs, by E. A. Posselt..... 3 00

Textile Calculations; a complete guide to calculations relating to the construction of all kinds of yarns and fabrics, the analysis of cloth, etc., by E. A. Posselt.. 2 00

Wool Dyeing; an up-to-date book on the subject, by E. A. Posselt 2 00

Worrall's Directory of Cotton Spinners, Manufacturers, Dyers, Calico-printers and Bleachers of Lancashire, giving the mills of the British cotton district, with number of looms and spindles, products of the mills, cable addresses, etc $2 00

Woolen and Worsted Loom Fixing. A book for Loom fixers, and all who are interested in the production of plain and fancy worsteds and woolens; by A. Ainley..$1 00

Worrall's Directory of the Textile Trades of Yorkshire, comprising the woolen, worsted, cotton, silk, linen, hemp, carpet, and all other textile mills, giving looms and spindles, and the various lines of goods manufactured, etc $2 00

Worrall's Textile Directory of the Manufacturing Districts of Ireland, Scotland, Wales, and the counties of Chester, Derby, Gloucester, Leicester, Nottingham, Worcester, and other centres not included in preceding works, with capacity, products of mills, cable addresses 2 00

The Wool Carder's Vade-Mecum, by Bramwell; third edition, revised and enlarged; illustrated; 12mo..... 2 50

CHEMICALS AND DYESTUFFS.

There are no changes to report this month. Trade is improving and enquiries for Heavy Chemicals, for delivery before the close of Navigation, are coming in:—

Bleaching powder	$ 2 75	to	$3 00
Bicarb. soda	2 00	"	2 05
Sal soda	0 75	"	0 80
Carbolic acid, 1 lb bottles	0 50	"	0 60
Caustic soda, 60°	2 15	"	2 60
Caustic soda, 70°	2 60	"	2 85
Chlorate of potash	0 13	"	0 15
Alum	1 35	"	1 50
Copperas	0 65	"	0 70
Sulphur flour	2 00	"	2 50
Sulphur roll	2 00	"	3 00
Sulphate of copper	6 00	"	6 25
White sugar of lead	0 08	"	0 08
Bich potash	0 11	"	0 12
Sumac, Sicily, per ton	75 00	"	80 00
Soda ash, 48° to 58°	1 30	"	1 40
Chip logwood	1 90	"	2 00
Castor oil	0 09	"	0 10
Cocoanut oil	0 10	"	0 11

—The value of pulp exported from Canada for the year ending June, 1900, was $1,275,000, as against $750,000 for the previous year. Great Britain took $670,000 of this as against $165,000 in the previous year, an increase of more than four hundred per cent. for the year.

—Here is a story of technical knowledge on the part of a buyer which, if true, it would, we are afraid, be somewhat difficult to match in this country, says the Dry Goods Economist, New York. It appears that an English merchant saw a mummy in Egypt and brought away a portion of the cloth. This was handed to a buyer for a Manchester house, who was asked if he could tell where it was woven. After examining the piece carefully with his glass he said he would be able to tell just where it was made if he could have the loan of the piece of fabric for a few days. Afterwards he reported that it was made where he had thought, near Oldham, and was known by the manufacturers as No. 85. Of course, the buyer did not know that the piece of goods had been taken from a mummy, and the gentleman who gave it to him was not aware that the mummy from which he took it was a counterfeit one. The demand for mummies of recent years has outgrown the supply, and the Egyptians who have been making the fake mummies did not happen to be experts in mummy cloths; otherwise they would have known that their awayback ancestors did not use cotton, but linen cloth for wrapping mummies in.