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CANADIAN Journal of Fabrics

THE JOURNAL OF THE
Textile Trades of Canada.

Vol. XVII.

TORONTO AND MONTREAL, JULY 1900.

No. 7.

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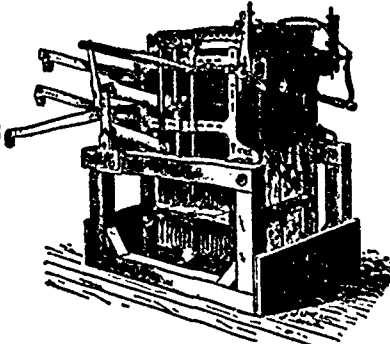
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A Handbook of all the Cotton, Woolen and other Textile manufactures of Canada, with lists of manufacturers' agents and the wholesale and retail dry goods and kindred trades of the Dominion, to which is appended a vast amount of valuable statistics relating to these trades. Fourth edition. Price, \$3.00.

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CONTENTS OF THIS NUMBER

Among mills.....	206	khaki, Fast	201
Beryman's Failure, Robert.....	209	Shades on Cotton.....	209
Canadian Manufacturers and Yan-		Loom, The Northrop.....	202
kee Methods.....	202	Mercerized Yarn.....	208
Chemicals and Dyestuffs.....	213	Pulleys, About.....	208
Clothing Factories.....	199	Reid & Co., Toronto, Charles.....	200
Cotton, Artificial.....	197	Samuel, The Late William Roy.....	209
Cotton Cloths.....	196	Strike, The Valleyfield.....	209
Raw.....	196	Tartar, Lactic Acid and Lactaline.....	210
Decoloration of Shoddy.....	196	Textile Design.....	200
Fabric Items.....	206	Imports from Great Britain.....	210
Fibres, Nitrated.....	208	Specialization.....	193
Foreign Textile Centres.....	203	Turnbull & Co.'s New Factory The C.....	201
Hallam, The late John.....	199	Textile Publications.....	211
Head and Box Motion, To Time.....	193	Worsted and Woollen Goods, Un-	
Hosiery Mills, Cone Winder for.....	193	shrinkable.....	196
Hudson's Bay Co.'s Meeting.....	197	Wool Market, The.....	209
Imperial Trade Notes.....	208		

SPECIALIZATION IN TEXTILES.*

To enable us to more fully understand and appreciate this present tendency toward specialization, let us first briefly review the history and growth of the textile industries in Europe and this country, and then we shall be able to see more clearly the necessity for textile schools, such as this one in Lowell, and their connection with specialization. As I am more intimately associated with the branches of textiles connected with the wool manufacture, I shall use those branches as an illustration. What I have to say about wool is, however,

equally true in regard to all other branches in the essential features.

There could not well be a greater industrial contrast than that presented by the development of the wool manufacture in the United States, and that which has taken place in England and on the continent of Europe. One experience is almost the reverse of the other, as will be seen in the following brief sketch. The subdivision of the wool industry in Great Britain is an evolution of centuries, and a survival of the days of hand manufacture, under which, just at the present, the spinner, the weaver, the dyer, and the fuller had each his own separate work. It was a subdivision unaccompanied by any inconvenience, on account of the close concentration of the various branches of manufacture in particular localities. In fact, there were many towns in which practically the occupations of the entire people were in one way or another connected with the cloth manufacture. The foreign manufacturer in visiting a typical American mill is astonished at the diversity of operations performed in one establishment. The custom in England generally is for the scouring and the carding and the combing to be done in one establishment, the spinning in another, the weaving in another, the dyeing in another, and, very often, the finishing in still another, and the packing of the goods constitutes another distinct branch of business. This division of work in the English textile manufacture has an historical origin, and the English factory system is a direct evolution from the hand and home industry of the eighteenth century. Both carding and combing were originally carried on in the homes of the working people. The wool was weighed out to carders or combers by the merchants at the storehouses and taken to the homes; thence it was returned in the form of card rolls or tops, and again given to the spinner. The yarn was sold to the weavers, who carried their products to the markets. At the markets or the inns, the merchants bought the cloths, and, in turn, sold them to the fullers, and so they were passed on through various steps until in time they reached the shops and were sold at retail. Each branch had its own distinct, well-defined field of work, into which the rules of the guilds forbade either of the others to encroach.

*From an address delivered by F. W. Hobbs, State Director of the Lowell Textile school at the Graduation Exercises June 6th, 1900.

Small capital prevented large enterprises in those days of the beginnings of the wool manufacture. The comber, however, whose savings permitted him in time to buy his own stock, which he sold in the form of tops, gradually took other combers into his employ, and, as machinery came into vogue, he was able to utilize it, selling his tops to the spinner, who, at first, conducted his business in the household, developed his branch of industry in the same way, and still sold his yarn to the weaver, and so on, to the completed fabric. As machinery was gradually invented and introduced and the old hand manufacture driven out, this differentiation continued along lines which, as we have seen, had been established for many generations. This custom has been so firmly fixed in the methods of manufacture in England, that there are but slight departures from it to-day, because experience has led men in that country to believe that on the whole, it is the most efficient and economical system of manufacturing.

The factory system of manufacturing grew up in the United States under circumstances wholly different from those I have described. Up to the time of the Revolution, we had practically no textile manufactures here except those carried on in the household. Our people wore either "homespun" or imported fabrics. In the meantime, the factory system was developing at rapid strides in England. The English manufacturers realized what a source of wealth and commercial supremacy they would have if they could keep these textile manufactures in their own country. The British Parliament, therefore, enacted laws, which, under the most stringent penalties, prohibited the exportation of textile machines of any nature or any parts or models of them. During the Revolution, the few manufactures we had were disorganized, but at the close of the war, when our people once more turned their attention toward the manufacturing industries and wished to develop them as they were being developed in England, with new processes and new machinery, they found that by these Acts of Parliament it was impossible to import the necessary machinery. In this country there was none of this new machinery, the use of which had already revolutionized the textile manufacture abroad.

In the woolen industry, our earliest mills were the developments of the old carding and fulling mills of the Colonial days. At the beginning every man was literally his own weaver, and the wool manufacture was unknown outside of the household. Each farmer raised his own sheep; he clipped and washed their fleeces, while his wife and daughters made the yarn and wove the coarse fabrics on the hand loom. The processes were simple; the wool, after washing, was combed as straight as possible with two cards, with leather backs and wire teeth, which were held in the hands. The wool was taken from the cards in a long, soft roll, and spun up on a large light wheel, sometimes kept in motion by the hand, sometimes by a treadle. The wheel caused

a single spindle to revolve with great velocity, and this spindle gave to the yarn its twist, the dexterous fingers of the operator regulating the supply of wool and the consequent size of the yarn. The degree of uniformity secured by this method was the evidence of marvelous dexterity. After the spinning followed the weaving on a slow moving wooden hand loom, and the dyeing and fulling by hand. The first variation in this household manufacture came with the introduction of the outside fulling mill for the preparation of the cloth after it had been woven. This part of the manufacture was naturally the first one to be done outside of the household, for it required appliances not convenient to have or easy to handle in the house. The carding mill also soon appeared, and these two mills were the real forerunners of the New England woolen mill of to-day. They were apt to be found side by side, for one was a help to the other, and both required water-power. Both adjuncts, originally, of the household industry, they were frequently combined in one mill, and, when that combination was made, the steps to the spinning jenny and the loom were short and followed naturally. Thus we have the genesis of the woolen factory of America. The tendency to consolidate all branches of the industry under one roof was a feature from the start, and as has been shown, it was a tendency entirely different from that which continued in England after the appearance of power machinery.

On every side we see significant indications of the growing perception of the fact that in these days business sagacity and ability must be reinforced by the best educational opportunities. This is pre-eminently the age of the trained man; the untrained man is at a great disadvantage in trying to make a place for himself or to solve the problem of success. Superior education was once regarded as essential only to the success of the professional man, and it was assumed that natural sagacity and alertness were sufficient capital for the business man. Under the conditions of modern life and the growing pressure of competition, it is now seen that special training is as necessary for the man of affairs as for the man of letters, law, medicine, or theology; and that the uneducated business man—the man, that is, who is not specially trained in his own field of enterprise—is a man not properly fitted for his work and probably doomed to failure; in any event he is greatly handicapped. In Germany, especially, great strides have been made along the lines of practical education. The partnership of the German textile school and the German manufactory, which has been developed during the last ten years, has seriously menaced the commercial supremacy of England, and has led in the latter country to the establishment of schools for the training of business men along scientific lines.

When the power machinery was introduced in America and factory-made cloth began to supersede the

"homespun" made in the households of our ancestors, the manufacturers found it necessary to perform all the processes connected with the manufacture of cloth. These first mills were erected upon different streams and were situated at long distances from each other. One man could not comb wool for others to spin, or spin yarn for others to weave, because in the part of the country in which he was located there were no others to whom he could sell. In the same way each man was compelled to dye and finish his own cloths, and every mill was forced to be complete in itself. Thus, by sheer force of circumstances, our methods of manufacturing developed and continued along individual lines in which all the processes, from the raw material to the finished product, were carried on. What we have seen to be the case in the wool manufacture is equally true in regard to cotton and other branches of textiles.

This brief review of the beginning of the textile industries in the country makes it clear why the system of manufacturing as it has been carried on in the United States differs so widely, as a rule, from that which prevails in England. The chief idea in the English system has been from the beginning specialization and sub-division of each industry into various smaller industries. The finished product of one division is the raw material for the next, and so on up to the final product. The American system, up to within a few years, has been to concentrate the management of the entire manufacture of cotton, wool, or other fiber, in all the steps, from the raw material to the finished product, in one concern, under one management, and, one might almost say, under one roof. I have said that the American system embraced all the processes of manufacture, from the raw material to the finished product. That is the usual method, but there have always been many notable exceptions, and I think that to-day there is a well-defined tendency toward sub-division and specialization in all branches of textile industries in this country. This tendency toward specialization, so comparatively new in the United States, we have seen was its earliest characteristic in England. In America it is only within a few years that the inertia of inherited habit has begun to give way, here and there, and a sub-division of the textile industries into specialties has gradually taken place. In Philadelphia this division has existed for some years in the worsted industry. In that city, where there is a complete network of manufacturing establishments, all within short distance of each other, the specialization or differentiation of the wool manufacture, its division into distinct and separate groups, such as combing, spinning, weaving, dyeing, and finishing, has been making headway for many years, and we have practically the so-called European system in operation. There are in Lawrence mills where combing alone is carried on, others where spinning is carried on; and there are many commission dyers and finishers. I read in the paper only a few days ago that a new combing

mill is to be established on the site of an old woolen mill in the western part of the State. This is but another instance of the old method giving way to the new.

This tendency to specialization is quite as marked in the other great industries as in the worsted manufacture. We see it in the many woolen mills in which the sole product is yarn, no cloth being made. In New Bedford we find cotton manufacturers, whose sole business is the spinning of cotton yarns for the trade; others who buy all their yarns and simply weave the gray goods; still others who print, dye and finish the woven cloths. The same is true of Lowell, Fall River, Providence, and all the great centres in the State and the country at large in all lines of textile manufacture. I do not think it necessary to go into the matter further in detail. It is sufficient to say that practically all of the various divisions of manufacture are to-day being independently and successfully carried on in this country. It is not the purpose of this sketch to go into the merits of specialization in industry, nor to discuss its advantages or disadvantages, but simply to point out the fact that the present tendency in the textile industries is toward specialization, and to see what it means and to what it leads.

We have seen that the present tendency in the textile industries is toward specialization. It seems to me that this same tendency is growing more apparent year by year in every line of business and in every walk of life. We find it true in the iron and steel business, in the electrical business, and we have recently seen it carried to its full development in the bicycle, the several parts of which are now made, as a rule, in separate and independent establishments. The same tendency is found in general business in certain houses who have specialties in merchandise; or in the case of stock brokers and bankers who handle special lines of investment. In law and in medicine we find it the same. The old-fashioned country lawyer or doctor is being replaced by the specialist; in the case of the former we have the business lawyer, the criminal lawyer, and the corporation lawyer; in the latter, the specialist for the eye, the ear, the nose, ~~the~~ throat, a different man for every organ in the body. I have mentioned enough instances to show my claim that the whole trend of life to-day is toward specialization in every branch of activity. What does this mean? To what does it point? It means that the world needs trained men to go into these special branches of industry; men who have been trained in some special line of activity; in other words, specialists.

—The disturbed condition of China is not expected to affect the silk market, or at least not for some time. Almost one-half of the Oriental supply of raw silk comes from China, but it is handled at the Southern treaty ports, and is produced in the Southern provinces, which are remote from the scene of the present agitation.

RAW COTTON.

The market has recovered entirely from the weakness resulting from the Price McCormack's failure, and the first week in July saw the advance of cotton to 20 cents a pound, a price which it has not reached in a period of nearly ten years. The rise was all the more striking to those not familiar with the conditions when taken in contrast with the quietude prevailing in the cotton goods market. It was attributed chiefly to the apprehension of spinners in Liverpool over the crop situation in the United States and the operations of a bull clique in New Orleans.

COTTON CLOTHS.

The present disturbance in China is to have more influence on the market for cotton cloths than some suppose. China is, next to India, the great importing market for cottons, and at present the Chinese market is closed, and will probably remain so for some time. Already, very severe cutting has taken place in the brown cotton mills in the United States at Fall River and elsewhere. That the market remained stagnant in spite of such cutting shows that prices will go much lower. The amount of cotton sent from Canada to China will not depress our market very seriously, even if thrown upon it, which will not be done, but the United States prices will bring ours down very sharply and that before long. The great increase in the capacity of our mills, with the closing of the Chinese market, and the inflow of United States cottons will have a decided effect on our market, there can be no doubt.

UNSHRINKABLE WORSTED AND WOOLEN GOODS.

Wool, in any condition, treated by chlorine or its compounds, loses all its characteristic qualities, and notably its capacity for felting. The loss of this latter quality is absolute if the chlorinating has been sufficiently energetic to ensure that pure wool materials, after having been treated, are unshrinkable. As a rule, wool fabrics which have been called unshrinkable are not possessed of such property, but if the treatment with the chlorine or its compounds which is applied to the wool in any one of its conditions—that is to say, raw wool, combed, carded, spun, woven or manufactured wool, etc.—before or after dyeing or bleaching—renders the wool unshrinkable, it at the same time makes it dry, rough, hard, papery and similar to pasteboard to the touch, and therefore partially useless. It has been the aim of experimenters for some years to obtain the unshrinkable properties given by chlorine without the great disadvantages accompanying such treatment, and the efforts of a Roubaix dyer in this direction appear to have met with a certain degree of success. His object has been to restore the chlorinated, unfelted, and unshrinkable wool to its other natural properties, such as elasticity, suppleness, softness to the touch—in a word, to soften it, and to thus obtain wool analogous both in appearance and touch to ordinary wool, but being in addition unshrinkable.

The processes for chlorinating wools are numerous, and generally consist in treating solutions of calcium hypochlorite with an acid, or in directly employing chlorine gas itself. According to the proportions of the agents employed, the

transformation will be more or less complete, and wool become absolutely unshrinkable with 12 per cent. of calcium hypochlorite and an equal proportion of acid. By reason of the more powerful affinities of chlorinated wool, the latter is capable of attracting, when cold, the bases of a number of salts of weak acids—such, for example, as the basic mineral salts, organic salts, acetates, oxalates, tartrates, citrates, sulphocyanates, etc.—in such a manner as to form new combinations which give a touch quite different from that of the chlorinated wool, the modification depending upon the nature of the base of the salt employed. In particular the salts of aluminum, zinc, tin, iron and chrome have the property of considerably softening chlorinated wool so as to render it at least of equal quality to natural wool. The salts of the alkalies and alkaline earths from the following acids—that is to say, aluminates, zincates, stannites and stannates—can be also employed for the same purpose. The reaction can be effected simply by immersing the materials treated in a bath of one of the salts above mentioned; for example, a bath can be employed which is obtained from 125 parts by weight of acetate of alumina at 10 deg. Be., and 2,500 parts of water to 100 parts of wool. The reaction can be quickened by heating the bath to a temperature more or less high. At the end of a suitable interval—say about one hour—the wool is washed, and then dried by exposure to the air. At first it preserves its rough touch, but after a time, especially when left exposed to the air, its softness gradually completely returns to it. The bath is not exhausted, and for another operation can be renewed so as to have the same richness as at first.

The chlorinated wool energetically retains all substances which it meets, and certain acids or washing does not eliminate them; this should be taken note of, as the presence of these acids hardens the wool, especially in soapy baths, which are often employed before or after finishing or dressing. It is therefore necessary to eliminate these acids and prevent the formation of a precipitate of fatty acid during subsequent washing operations, by treatment with a suitable weak alkali such as soda, potash, ammonia, lime, magnesia, etc., caustic carbonate or bichromate. This treatment can be applied directly after the chlorinating or the softening process. For example, the neutralization can be effected with about 50 grms. of crystallized carbonate of soda per kilogramme of wool.—Ex.

DECOLORATION OF SHODDY.

A simple, yet safe process for removing the color from woollen rags and shoddy is greatly needed in the textile industry, and has been since the demand increased for light-colored or undyed shoddy, says an exchange. Unfortunately, the processes most easily carried out have injurious effects upon the wool fibers. Recently, however, two German chemists have succeeded in finding an excellent chemical for the purpose in hydrosulphite acid, a product of reaction of zinc dust upon bisulphite, which, when employed in an aqueous solution at boiling temperature destroys the color of the woollen rags after a short immersion. Of the hydrosulphite solution, only a comparatively small quantity is required, and with most of the rags, especially those of cloth, stockings and woollen fabrics generally, a thorough decoloration is said to be obtained, so that the goods manufactured from them appear almost white, and as if manufactured from fresh wool. As with this process the solidity, touch and elasticity of the wool fiber is in no way injured, there is obtained a great improvement in the rag material furnishing regenerated wool, which constitutes a result of considerable importance. The following is an example of the manipulation of the process: 100 kilos, of fully dyed rags (bordeaux, scarlet red, navy blue, green), so-called "Thibet," are boiled with about 1,500 to 2,000 litres of water

and 100 to 150 litres of hydrosulphite solution, the rags being from time to time turned to enable the liquid to thoroughly penetrate them. After boiling for about half-an-hour the process is complete, the rags having become nearly white. They are then washed in a cold bath, dried, and are ready for manufacture. The hydrosulphite solution is prepared by diluting 20 litres of sodium bisulphite of 38 deg. Be. specific gravity with 180 litres of water at 30 to 40 deg. C., and adding gradually 4 kilos. of zinc dust, while the mixture is well stirred. After the reaction is complete, the whole is allowed to rest and the clear supernatant liquid is employed. Instead of sodium bisulphite, potassium or ammonium bisulphite may be used. Instead of the separately prepared hydrosulphite solution the bisulphite and zinc dust may be added directly to the bath, but this method is not to be recommended as the material is soiled by the zinc dust. The rags may be boiled in either an open or close receiver; in the latter case less hydrosulphite is required, but with the same result.

ARTIFICIAL COTTON.

To obtain the pure cellulose necessary for artificial cotton, the wood of the fir tree is used, the knots and bark are removed, and the limbs are then run through a machine, which cuts them up into small pieces; 100 cubic metres of the wood thus cut up are placed in a horizontal lead-lined copper cylinder about 30 feet long and 13 feet in diameter. Steam is turned on and the wood steamed for ten hours, when 60 cubic metres of bisulphite of soda are introduced, and a steam pressure of 45 lbs. kept up for about 36 hours, says a contemporary. The wood, which is now white, is washed and submitted to a pounding by power hammers. After that it is bleached still more by chloride of lime or an electro-chemical process, then squeezed between two heavy rollers to rid it of liquid. The result is pure cellulose, which is mixed with chloride of zinc, chlorohydric and acetic acid, and heated in a tank. A small quantity of castor oil, casein, or gelatine is added to give the fiber cohesion. This pasty mass is placed in a chamber, where it is subjected to pressure, and forced into a fiber or thread; the thread is then run through a weak solution of carbonate of soda and dried on steam cylinders. It is necessary to run the thread through a bath of ammonia to give it solidity, and it is then passed through cold water. In this state it is ready to be worked, and can be easily woven. It can also be colored, and will take a good lustre.

THE LONDON WOOL SALES.

The present series of wool auctions opened at London, July 3rd. There was a large attendance, buyers being present from all sections. Only 7,478 bales were offered, consisting mainly of cross-breds. Considerable animation was noted in the bidding, the English buyers securing the bulk of the offering. Merinos showed a decline of 10 to 15 per cent.; fine crossbreds, 10 per cent.; medium grades, 7½ per cent., and coarse grades, 5 per cent. from the last series. Many withdrawals were noted. The sales in detail on the first day were as follows: New South Wales, 100 bales; scoured, 11½d.; greasy, 5d. to 7¾d. Queensland, 1,400 bales; scoured, 9½d. to 1s. 5½d.; greasy, 7d. to 11d. New Zealand, 470 bales; scoured, 6½d. to 1s. 2½d.; greasy, 4½d. to 9d. Cape of Good Hope and Natal, 900 bales; scoured, 7d. to 1s. 6d.; greasy, 5¼d. to 8½d. Buenos Ayres, 20 bales; greasy, 4¼d. to 4¾d.

No decline was noted in prices on the 4th, bidding keeping rates firm. Sales were Queensland, 800 bales; scoured, 1s. 4d. to 1s. 6d.; greasy, 6¼d. to 9d. Victoria, 800 bales; scoured, 8d. to 1s. 10d.; greasy, 3½d. to 10½d. West Australia, 19 bales;

greasy, 5¼d. to 6¾d. New Zealand, 5,000 bales; scoured, 6¾d. to 11d.; greasy, 4½d. to 9½d. Cape of Good Hope and Natal, 300 bales; greasy, 6d. to 8½d. Jamaica, 59 bales; greasy, 4¼d. to 5½d.

The wool sales on the 11th were fully attended. Queensland greasy combings were actively competed for at dearer rates. Crossbreds, especially coarse and shabby, were in strong demand, and recovered to a parity with the last auction sales. Merinos were very firm at times, bringing higher rates. Cape of Good Hope and Natal wools sold fairly well. The number of bales offered was 8,187. The present series of sales will close July 20. The following are the sales in detail: New South Wales, 600 bales; scoured, 8d. to 1s. 6d.; greasy, 7½d. to 10d. Queensland, 3,100 bales; scoured, 10½d. to 1s. 8½d.; greasy, 5¾d. to 11½d. Victoria, 800 bales; scoured, 1s. 4d.; greasy, 5d. to 1s. ½d. South Australia, 500 bales; greasy, 4¾d. to 9½d. New Zealand, 1,000 bales; scoured, 8½d. to 1s. 5d.; greasy, 4¾d. to 9d. Cape of Good Hope and Natal, 1,100 bales; scoured, 1s. 3d. to 1s. 5d.; greasy, 5½d. to 9d.

On July 10th there were 10,934 bales offered, including a good selection at hardening rates. Cross-breds were in large supply, American representatives paying full rates for suitable lots. The home trade bought freely, being met with competition by the Continent. Cape of Good Hope wools were in better demand. The attendance was good and business was brisk. There was a better all-round demand for merinos and cross-breds. The following is the sale in detail: New South Wales, 1,100 bales; scoured, 10d. to 1s. 4½d.; greasy, 4¾d. to 11½d. Queensland, 1,000 bales; scoured, 1s. 1½d. to 1s. 6d.; greasy, 8½d. to 9d. Victoria, 1,500 bales; scoured, 6½d. to 1s. 5d.; greasy, 5¼d. to 1s. 2½d. South Australia, 200 bales; greasy, 4¾d. to 7½d. New Zealand, 6,200 bales; scoured, 7½d. to 1s. 5½d.; greasy, 4½d. to 11d. Tasmania, 500 bales; greasy, 5¾d. to 1s. Cape of Good Hope and Natal, 300 bales; scoured, 1s. 3d. to 1s. 5d.; greasy, 4¾d. to 7¾d.

The next and last series for the year will open in London, October 9. The list will close when the total reaches 250,000 bales.

—The May bulletins of F. E. Atteaux & Co., manufacturers and importers of dyestuffs, Boston, contain some nice colors on cotton and worsted yarns. A one-dip black is shown which it is claimed will stand 300 degrees of heat without turning green. Particulars of handling will be sent on application. The worsted yarn samples are colored blue, orange, yellow and brown; they are fast and produce even shades.

HUDSON'S BAY CO.'S MEETING.

The annual meeting of the Hudson's Bay Company was held in London, Eng., on the 3rd inst. The annual statement showed a profit of £155,045 1s. 9d. as compared with £125,595 9s. 11d. last year. The increase is partly due to the high price paid for furs at the last spring sales. The balance carried forward from last year was £41,968 9s. 9d., making a total profit of £197,013 11s. 6d. Out of this sum a dividend equal to 9½ per cent. was paid, and additions made to the reserve and insurance funds and to the employees' benefit fund. The receipts from the instalments, interest, rents, etc., shown in the land account amounted to £53,271 12s. in comparison with £16,956 4s. 7d. last year. Farm land sales amounted to 64,598 acres for \$321,702, averaging \$4.88 per acre, as compared with 61,546 acres for \$300,554, averaging \$4.88 per acre in 1898-9, and town lots realized \$54,470 as against \$26,330. Lord Strathcona and Mount Royal, G.C.M.G., the governor, and John Coles, members of the board were re-elected.

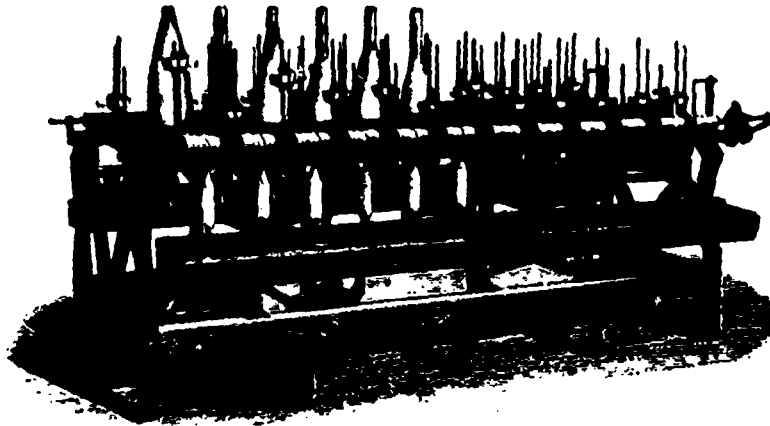
COME WINDER FOR HOBIERY MILLS.

Geo. W. Payne & Co., of Pawtucket, R.I., manufacturers of spoolers, winders, quillers, etc., have now in the market a patent come winder for hosiery manufacturers, which has a number of noteworthy features. The makers claim that this machine, which is here illustrated, is superior to others in the following points:

1st. The durability and simplicity of the machine, which any knitter or spinner can operate as soon as leveled up and belted.

2nd. Takes less room, runs with less power, and will wind more yarn per spindle than any other winder.

3rd. Winds a perfect bobbin, uniform in size, from 4 to 6 inches in diameter at the base, 17 inches long and will not chafe the softest or finest yarn.



4th. Each spindle is independent and has its own stop motion, one bobbin may be filling at the top, another at the base, or another half way up, or any other place on the bobbin.

It makes no difference, as each bobbin being independent of its neighbor, is taken off when filled and another started in its place at once, making the winding continuous.

5th. It winds fine and coarse yarns at the same time if required, in fact you can wind as many different Nos. of yarns as there are spindles in the machine without altering the machine, as the filling motion to each spindle adjusts itself to the No. of yarn it is required to wind. We build machines containing any number of spindles, from 6 to 48 in a machine.

There are 1,350 of these machines in operation in the United States and Canada, having an aggregate of 50,000 spindles, and among the prominent Canadian firms using them are the Penman Mfg. Co., Paris; Joseph Simpson's Sons, Toronto, and the Peterboro Underwear Co., Peterboro, Ont., to whom reference may be made.

TO TIME THE HEAD AND BOX MOTION ON A CROMPTON LOOM.

Timing the head and box motion on a Crompton loom is not so simple as on a Knowles. Anyone not thoroughly acquainted with said loom will find it quite difficult, as many good fixers, who have worked for years on other looms, undertake to fix Cromptons, and do fairly well until there is a head motion job. Then they were at a loss to know what to do. To set a head motion on a Crompton loom, start at the pull-over gears first, or clutch gears on upright shaft, says a writer in the American Wool and Cotton Reporter. To do this turn

lathe forward till knives draw the jacks even (or harness level), then with the aid of a small S wrench, loosen the two set screw on the tumbler or pull-over gear; when loose, centre clutch. This will enable you to turn clutch gears free and easy. Then turn lower clutch gear, so as to bring the slot even with gear in the clutch. This also ought to set top gear at the same time as bottom, as both gears turn at the same time only in opposite directions. If when you turn the lower gear even with slot in clutch, the top one should not come even, then loosen the collar above top gear on upright shaft, and raise said gear up out of gearing with pull-over gear, and turn one tooth at a time only till gear slot comes even with clutch. This is all that is required to time cylinder properly, providing the pull-over stud is set properly, which should be seen to first. Before timing head motion, the pull-over stud should be set so as to show half way through pulling, or tumbler gear, when the

harnesses are even. After these operations the fixer should put clutch into gearing, then push the lathe back, and bring it forward again by hand slowly without the aid of the belt. We do this to see if the cylinder falls over right or on time. Always bear in mind that if the cylinder pulls over nicely without the aid of power, you may depend on it when running with power. Now supposing when you pull the loom up by hand, that the cylinder does not drop in properly, loosen set screws on tumbler gear again, and turn clutch gear one sixteenth of an inch ahead. This will drop cylinder in place all right. After doing this, drop clutch into lower gear, and bring lathe forward same as before by hand, and see that the cylinder drops in on the reverse, the same as on the go-ahead. This done, we start the loom, and find that it works like a charm. The reason for making the cylinder drop in place by drawing the lathe up by hand is to prevent mispicks, while the cylinder will drop in, as one would think all right when the loom is running. It probably will not do so when drawn by hand. This causes mispicks at times, although one would not think so, but if you take time to reason this out, you can very easily see why it is so. For instance, we shall say that the cylinder is pulling in right, when the loom is running, but will not pull in right by hand. The weaver stops the loom to put in a thread or change shuttles, and it does not come up far enough to suit him; therefore he takes hold of the hand rail, and pulls it to where he wants it. The cylinder will lack an eighth or a quarter of an inch of dropping into place. After shuttles are changed, or thread is in, he starts the loom, and nine times out of ten the consequence is a mispick, and when the fixer is told about it he comes up, examines the loom, and cannot see how such a thing should be, as he thinks the head motion is right. After tinker-

ing around the loom for a short time, making a big bluff to fix some part of the head motion that he thinks the weaver does not understand, on purpose to fool him, he stands erect, puts on a bold front, and in a stern tone tells the weaver "all right," go ahead. At the same time he knows that it is not all right, for he has done nothing to the loom whatever. He has only made believe to fix it, and is going to give it another trial. The next time he is called to the loom an hour afterwards for the same thing, he comes up with his tools under his arm, stands and looks at the loom awhile, then scratches his head, and starts to think. Finally an idea strikes him. 'Tis a pity it doesn't hurt him. He thinks that the cause is in the finger on the jack. He finds the harness that did the mis-picking, cuts off said finger, although there is nothing the matter with it at all; replaces it with a new one, tells the weaver to go ahead, at the same time gathers up his tools and walks away, relieved and fully convinced that the trouble is rectified. He is not away an hour when he is called back for the same thing. After picking out to where the mispick is he then finds, to his surprise, that it is on another harness.

Fixers having this trouble go to work sometimes (after cutting off one finger), take out all the jacks in the loom, as they say for the purpose of evening them up. After trying all the above methods and failing, finally the fixer glances at the cylinder, just as the weaver is changing shuttles, and happens to see that the cylinder does not drop in when the loom is started. Then he finds out where all the mispicks have come from.

Now take it the other way. Supposing after you have set the clutch gears where you think proper, and instead of cylinder not pulling over far enough, it should pull over too far; this is just as bad as not pulling over far enough, as both will cause mispicks. To remedy this you must turn clutch gears after loosening set screws back one-sixteenth of an inch, and if the loom should happen to mispick after this, then look elsewhere for the cause.

The head motion being fixed, we shall now proceed to the box motion. While one finds it an easy matter to set a box motion on other looms, he finds that to set one on a Crompton is a very difficult task, that is, for those who do not understand it thoroughly. To set a box motion, place the loom in same position as any loom; that is, have loom where the boxes are going to raise from first to second box, then take out the shuttle, and let the protector finger hit slide. When at this position the boxes should be one-quarter of an inch high. If not so, turn the lathe all the way back. Then, if boxes are slow, turn timing gear one tooth ahead. This will cause the boxes to rise more quickly. If the boxes are fast, or too quick, turn gear one tooth in opposite direction. Care should be taken, so as never to have timing gear more than six teeth ahead or more than two teeth behind. This timing or stare gear, as some call it, is found on the outside of picking shaft, and is driven by the same. To be able to get at this gear, you must take off plunger or lock knife; then take off lower shell gear, and there will be no trouble in removing said gear.

ONTARIO CLOTHING FACTORIES.

The following appears in Margaret Carlyle's report as a factory inspector for the Ontario Government, under the heading, "Contract-Making of Clothing:"

A great improvement of the conditions under which this work was formerly done is noted this year. Limiting the hours of labor of women caused some dissatisfaction in the custom branch of this trade, one reason being the shortness of the busy season. We find in the larger shops a number of independent masters, caused by the renting of small portions of the shop to

persons having seat room, the practice being for one party to hire a large room, then sub-let in small portions to others who make their own contracts and hire their own help, thus dividing the responsibility for violations of the law. The fashion in vogue among women of wearing so-called tailor-made garments has introduced into the dressmaking business a large number of men tailors. These men are able to produce a more stylish garment at a greatly reduced labor cost, and are in consequence driving women out of this business. One of the results of this condition of affairs is that the standard of cleanliness in those shops is far below that to be found in the dressmaking trade. Some of the shops of the contractors who work for the wholesale trade are located in buildings entirely unfit for occupation—rooms poorly ventilated, walls and ceilings dark, floors old and dirty. In places where I have found such a state of affairs as above mentioned I have always endeavored to compel the proprietors of the workshops to keep the floors and waterclosets clean, and to have rooms ventilated, and to place disinfectants wherever I have thought necessary. I have also measured some of those workshops to ascertain if each individual had sufficient cubic air space. Ready-made clothing establishments, while not always in as good condition as could be desired, are improving gradually. Many of those contractors have secured better and cleaner shops. One great difficulty is that there is a continual changing of owners of these places—a moving around from place to place, which makes the inspection of those places a difficult task. The enforcement of the law in relation to sanitary appliances and their proper maintenance is very difficult; a good deal owing to the carelessness of people employed therein. The law regulating the hours of labor for women will require close attention, as the supply of labor in the ready-made clothing trade is not at present equal to the demand, and the temptation to violate its provisions is therefore apparent.

THE LATE JOHN HALLAM.

In speaking of the death of the late John Hallam, the wealthy wool merchant of Toronto, the *Toronto Globe* says: The career of Mr. Hallam is one of the romances of business. He was born the son of poor parents at Chorley, Lancashire, England, in 1833. When but a child he was sent to work in one of the cotton mills of the district, under conditions of labor that were little short of slavery, for humane factory legislation had not yet begun. At every moment's leisure, however, the lad took advantage of the scanty opportunities offered for self-education, and taught himself to read and write. It was a slow and painful process, and mill life was hard and exacting. When Mr. Hallam arrived at man's estate he saw that there was no future for him as a mill hand, and came to Canada, arriving in Toronto in 1856. After ten years of general work he started on a very modest basis in 1866 the business that has now grown to such great proportions. The struggle at first was keen, but Mr. Hallam spared time to continue the education begun in the old land, and developed a passionate love for books, art and the culture that had been denied to him in his youth. Thus it was that he became the leader of the free library movement in Toronto, successfully championed the by-law under which the library was established, and gave his own splendid library to the people. He was a most public-spirited citizen, and for the past thirty years had been one of the most prominent men in municipal circles. At the time of his retirement last December Mr. Hallam enjoyed the distinction of having served the city of Toronto as alderman for a greater number of years than any other citizen of Toronto. He was first returned as a representative from St. Lawrence Ward in 1870, and was elected to the council twenty-one times after-

wards. He sat for St. Lawrence Ward from 1870 to 1872, from 1876 to 1883, in 1888, 1890 and 1891. In the latter year the change in the wards was made, and Mr. Hallam was elected as an alderman from the Second Ward every year from 1892 to 1899 inclusive. He was frequently honored with the chairmanships of committees, and in this capacity directed a portion of the civic administration in twelve of the years in which he was in the council. His work in the promotion of the city's interests will never be forgotten by those who understand municipal government. In 1883 and 1884 he was chairman of the Public Library Board, and brought that institution safely through the dangers which threatened its earlier days. For years, from 1894 to 1897, Mr. Hallam was chairman of the Parks and Gardens committee of the city council. His love of nature and his knowledge of trees and flowers made his services of inestimable value in that respect. He was also chairman of the Queen's Jubilee Committee in 1897, and was instrumental in forwarding to Her Majesty a magnificent golden casket as a token of affectionate regard from the citizens of Toronto. Mr. Hallam marked the close of his municipal career by entering the contest for the mayoralty for the present year. He considered that 30 years' services to the city deserved the reward of the Chief Magistracy. The opposition of Messrs. Macdonald and Clarke, however, was too strong, and he was defeated. Another of his many-sided activities of which less is known was his devotion to horticulture. He introduced into Canada many of the rare bulbs and flowering shrubs now found so plentiful on almost every lawn. At his country house, Chorley Park, he conducted valuable experiments with regard to the acclimatization in Canada of rare foreign trees. He was also deeply interested in the success of the Industrial Exhibition, and had been a member of the board from its inception. Amid all these varied activities he attended carefully to the details of his rapidly-growing business, and the house that he founded is now perhaps the greatest mercantile establishment of its kind in Canada. The principal warehouses are in Toronto, but there is a large branch in Winnipeg, where western hides are handled. Latterly Mr. Hallam had become extensively interested in woolen mills and other manufacturing enterprises, the care of which during his illness had been in the hands of Mr. Carter, the general manager of his business.

Textile Design.

FANCY CHEVIOT.

Light-weight fancy all-wool cheviot. Finished weight, 14 to 14½ ounces for 56-inch width. Yarns dyed in stock. Warp and filling yarns double and twist and single, one-fifth double and twist in warp and ¼ in filling.

Warp design.											
R-d & mix, d. & t	1	2	2	2	2	2	2	2	2	1	equals 1
Light mix single	2	2	2	2	2	2	2	2	2	2	" 18
White single	1	1	1	1	1	1	1	1	1	1	" 6
Green & mix, d. & t	2	2	2	2	2	2	2	2	2	1	" 5

Total pattern equals 30 threads

5) 2,100 ends, 6-3 width.

30) 420 ends section.

14 patterns to section.

Woven: 58 picks to inch.

Filling design.

Medium mix	1	equals 1
Black and white, d. and t.	1	equals 1

2 picks to pat.

Drawn straight on eight harnesses. Reed: 68 inches inside selvege, or 70 inches over all. Warp: Double and twist and single, twisted to right.

Filling: Double and twist and single, twisted to right. All single yarns warp; spun 3½ runs; all double and twist yarns warp, called 3½ runs, and spun eight runs in single. All single yarns filling, spun four runs; all double and twist yarns filling, called four runs and spun eight runs, fine in single.



Twill weave to right.

4,100 ends warp, fig. as 4 runs, equal 7.50
8 picks fill, figured as 4 runs, equal 8.30

Est. weight, 6-4 yds. from looms equals 14 80 oz.
14 80 oz. shrunk 14 p.c. equal 18 0-10 oz. stock,
as being required 1 6-4 yds. A. W. & C.R.

ABOUT PULLEYS.

Those seeking information on pulleys, shafting and rope transmission of power should send for the new 1900 catalogue, issued free by the Dodge Mfg. Co., York street, Toronto. It is a well bound and well illustrated book of 266 pages, and gives extensive tabulated lists of weights per foot of all the various sizes of shafting, as well as tables showing the horse-power transmitted by the different sizes at all speeds. Many up-to-date shafting couplings of the latest types are also illustrated, also improved set collars, safety pattern, a complete line of the Dodge Co.'s new ball and socket adjustable hangers, open side, and with all the most modern self-oiling types of bearings. The Dodge patent split friction clutch pulley and clutch couplings are described, with something new in a clutch pulley for powers as small as 1 h.p. The Dodge system of rope driving is well illustrated in many forms, and the Dodge Company are now thoroughly equipped for the manufacture of iron ground rope wheels. Complete dimension tables are appended, making it invaluable to mill architects and superintendents laying out plants.

CHAS. REID AND CO., TORONTO.

A meeting of the creditors of Chas. Reid & Co., wholesale millinery merchants, of Wellington street east, Toronto, was held in England on June 7, when an offer was made by Mr. Reid at 10s. on the pound, or 50 cents on the dollar, to be secured to the satisfaction of the three principal creditors. This was refused, and it was decided to appoint E. R. C. Clarkson to look after the interests of the creditors. It is reported that the New York creditors have decided to accept 50 cents on the dollar. The firm has been in difficulties for some time, and recently Mr. Clarkson prepared the following statement of affairs, which was taken to England by Mr. Reid, and submitted to the creditors when offering to compromise:

Liabilities—	
Bills payable, Quebec Bank	\$46,237 89
Quebec Bank, indirect	26,068 57
New York and local	7,571 53
Salaries, rent and taxes	2,900 00
Total.....	\$82,777 99
Assets—	
Shop furniture	\$ 1,179 20
Stock-in-trade	90,000 00
Accounts receivable	30,609 71
Total.....	\$121,788 91

Mr. Reid explained that while the estate showed a surplus of nearly \$40,000, nearly \$20,000 would probably be lost in collecting the accounts, and that a considerable portion of the stock was sold. He also explained that in taking over the stock

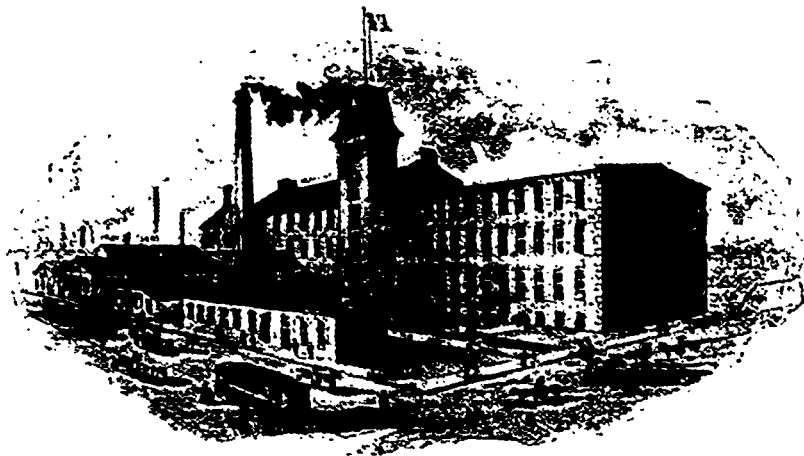
a couple of years ago the present firm made an error of judgment in valuing the stock. The firm consists of Mrs. Hugo Block and Mr. Reid, the stock having been originally that of the firm of Reid, Taylor & Bayne, which they purchased.

With reference to the affairs of Charles Reid & Co., an English trade journal says: "On paper there is a surplus of £8,000, so that if Mr. Reid's offer had been accepted, as he seemed to think it would have been, the capital in the business would have been a very handsome present from the creditors. All the creditors seemed to think Mr. Reid had been badly treated by the bank. Mr. Reid's offer, on the basis of figures, was preposterous. There is a feeling that Mr. Reid could pay 15s. at least; others think, 11s. 6d., while not a few look upon the case as one purely for an extension of time to pay in full."

The settlement was finally arranged at 15s. or 75 cents on the dollar.

THE C. TURNBULL CO.'S NEW FACTORY.

A recent special number of The Galt Reformer, describing the industries of that substantial town, has the following reference to the C. Turnbull Co.'s business: In 1839 the late Robert Turnbull and John Deans founded what has since become the C. Turnbull Company, Ltd., one of the foremost knitting establishments in the Dominion. It is just forty years since the first goods were produced, yet to-day the firm enjoys a patronage, purely Canadian, that anyone might well envy.



The business began in a roughcast building on West Main street, and continued there until a comparatively recent date. Messrs. Turnbull and Deans remained in partnership until about 1872, when Mr. Turnbull purchased the other's interest. On Mr. Turnbull's death six years later, his son, Mr. Charles Turnbull, assumed control, managing the factory with judgment and success. In 1890 a joint stock company was formed under the firm name of the C. Turnbull Company, Galt, Ltd., one that is known from the Atlantic to the Pacific. The Wardlaw mill on North Water street was bought in 1890, and in 1897 the site of the McKay mill, burned a few months previously, came into the company's possession. In 1898 the present building, three stories and basement, was built, undoubtedly one of the finest mills in the country. The Wardlaw structure had been used since its purchase, and on the completion of the new factory, the West Main street premises were vacated, part of the plant being moved to North Water street, where the C. Turnbull Company employs 130 operatives under one roof.

The C. Turnbull Company's speciality is the manufacture of full fashioned lamb's wool underclothing (Scotch system), men's, ladies and children's; and ladies', children's and infants'

ribbed goods. The company's artisans have no peers. They were brought out from Scotland by Mr. Turnbull and also by his father, and are justly celebrated for their skill and knowledge of their craft. Having direct relations with the retailers the C. Turnbull Co. enjoys trade in and with every province in the Dominion. The times, consequently, are always good, and the year just closing is conspicuous as the premier one in the firm's history. Galt is an industrial centre and no industry has contributed more to the town's proud reputation, than that owned by the C. Turnbull Co., Ltd.

FAST KHAKI.

Leather-colored khaki shades varying from yellow on the one hand to greyish-red on the other, are sometimes produced by combinations of the substantive dyes, and sometimes from dye-woods, such as catechu, quercitron and logwood. As a rule, however, the fastness is not satisfactory. While the substantive dyes fail in resisting light or acid the dye-woods are not fast enough to washing, and after finishing are not fast to acid.

The chamois colors with chrome, however, are quite fast to light and washing, and to make them thoroughly fast to mineral acids it is sufficient to add a Turkey-red oil bath to the ordinary dyeing process, and then to cause the oil to combine with the metallic oxides by steaming under pressure. The details and the process are given by Dr. Furth in the *Farber Zeitung*, as follows: The well-scoured or half-bleached goods

are taken on the jigger through a bath containing 2 per cent. of its value of sulphate of iron 45 B, and to every 22 gallons 25 lbs. of chrome-alum previously dissolved in water, as well as from three-quarters to a whole pint of pyroligneate of iron for the grey shade. Pass the goods through this about six times. Next turn the roll upside down to distribute the mordant evenly, and after half-an-hour pass through twice more. Then enter immediately into a hot bath of ½-lb. soda to the gallon. Give three passages through this. Then wash, dry, and pass through the Turkey-oil bath, which contains 20 per cent. of Turkey-red oil containing 30 per cent. of castor-oil. Then dry and steam one hour at 7 lbs. per square inch. Finish as usual, but remembering that oil has been already added. The process can, of course, be carried out in a machine. The following recipes give a guide for the production of the various shades. All are for 22 gallons and bath:

1. Reddish-Yellow.—3½ pt. persulphate of iron 45 deg. B. 27 lb. chrome-alum. ¾ pt. pyroligneate of iron 12 deg. B.
2. Yellowish-Green.—1¾ pt. ferric sulphate 45 deg. B. 20 lb. chrome-alum, ¾ pt. pyroligneate of iron 12 deg. B.
3. Intermediate Colors.—(a) 1¾ pt. ferric sulphate, 30 lb.

chrome-alum; (b) 1½ pt. ferric sulphate, 20 lb. chrome-alum, 3½ pt. pyroligneate of iron; (c) 1¼ pt. ferric sulphate, 25 lb. chrome-alum, ½ pt. pyroligneate of iron.

THE NORTHROP LOOM.

As our readers are already aware the Northrop Loom Co. recently started operations in Valleyfield, Que., with a large machine shop equipped with the most up-to-date machinery obtainable for the manufacture of the Northrop loom, and for the production of special machinery to order. The makers give the following among the many special features of the Northrop loom:

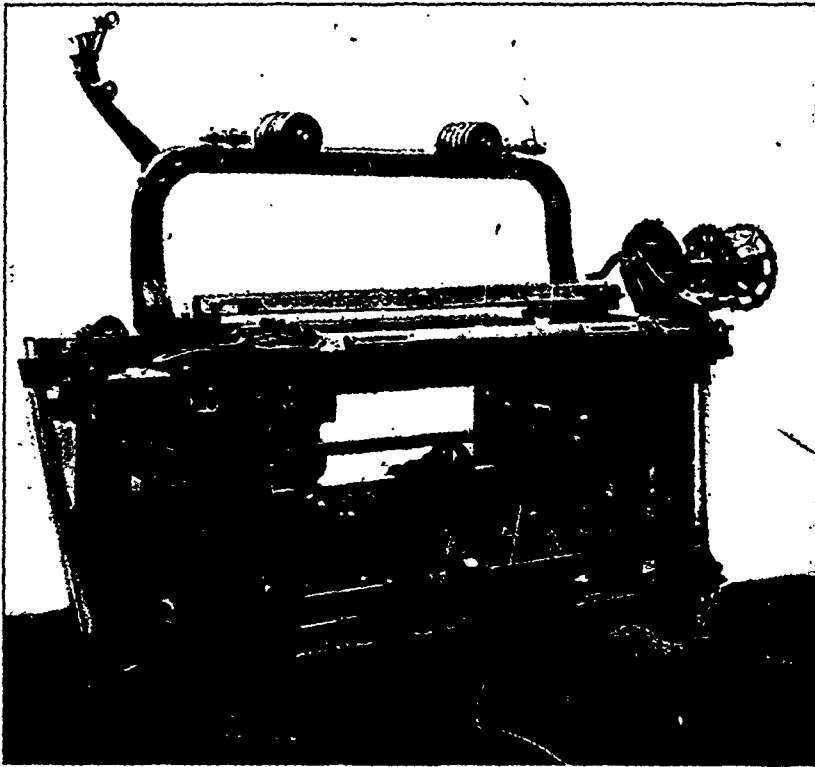
The illustration shows the 36-inch loom, in which the reed space is 41½ inches, equipped with Lacey patent head for operating from one to six shafts, auxiliary shaft for multiple harness and selvage motion. The manufacturers say: "Our harness motion is so made that a change of one gear only is

tube covered with steel fillet, and will never shrink or swell. There are many other points about which we would like to tell you if you will let us." The company also manufacture special types of warpers, to which reference will be made at another time.

CANADIAN MANUFACTURERS AND YANKEE METHODS.

A correspondent signing himself "Traveler," writes as follows to Fiber and Fabric, on a recent trip to Canada:

Your correspondent, hearing of the combination of woolen manufacturers in Canada, decided to visit the Dominion and brush up against those who were reputed as members of the company. It was done in an unofficial way by me, nothing being said by any member of the combination for publication. In fact the subject was not mentioned by me that I was a correspondent for any trade paper, so that what is written can be



necessary when the number of harness is changed. Our cams are made single, and it is necessary to change one cam only when a larger or smaller set is required, instead of changing the entire set. Our selvage motion is simplicity itself, easily accessible from the outside, adjustable for opening, and made so that the opening in the reed is always the same. This is a great advance over the old style, in which the front and back selvage harness are lifted the same distance, thus making openings in reed unequal. The yarn beans (not shown) are made to withstand the peculiar climatic condition of Canada by machinery made expressly for the purpose. The rings and gudgeons are forced into place. Gudgeons and barrel turned on centres, and heads held in place with joint bolts. Heads have extra long hubs fitted to gudgeons, instead of being forced on to outside of wood. This method effectually prevents the heads coming loose. The take-up roll is of steel

set down as truth. The combination takes the name of The Canada Woolen Mills Co., Ltd., with their main office at 110 Wellington street, Toronto. The mills taken by the company are the A. W. Brodie mills, Hespeler, Ont., 6-sets; the Lambton Waterloo woolen mills, Waterloo, Ont., 6-sets; the Lambton mills, Lambton, Ont., 5-sets; the Maple Leaf mills, Markham, Ont., 5-sets; the Hawthorne mills and Gillies mills, Carleton Place, Ont., 4-sets. So it is seen that the company makes quite a showing at the start. There is no doubt prices have been too low for goods in Canada, by foolish price cutting to get business, and the object of forming the combination was evidence enough that things have not been in satisfactory shape when the above number of sets of cards have entered a combination. Mr. Brodie is one of the leading manufacturers of Canada. He is a progressive man, and will not keep machinery in his mill that is out of date. He learned in his young

days that he could not afford to keep old machinery, and he is always the first to take up improvements and improved methods in manufacturing cloth. He has broken up more old machinery than any manufacturer in Canada, and to-day he is still in the business. The Halifax tweeds, made by this company, are too well known to describe in these columns. The machinery at Lambton mills is being removed to Brodie's mills in Hespeler, and the presumption is that the Lambton mills will be made a shoddy factory for the rest of the mills in the combination. Carpet manufacturing has increased wonderfully in Canada, and the wonder is that they import so much of their yarn. Carpet yarn is being made in Canada, but by such obsolete methods that nine-tenths of the yarn required is being imported. Here is a good chance for some enterprising manufacturer to engage in the business of carpet yarn spinning. Jute yarns, I understand, are all imported, and the greater proportion of other carpet yarns are imported also. But let me caution those who intend to take this pointer up, that they must buy the best machinery for the purpose or the importer will still go ahead importing the yarn. It is a well-known fact that the "penny wise, pound foolish" people are not all dead yet, and they will want to buy old second-hand, out-of-date machinery. My suggestion is only meant for a manufacturer who knows the best machinery for making carpet yarn and will buy no other, and no other man need apply in Canada, for there are others with out-of-date machinery trying to compete with the importer now. The writer has traveled over all sections of the American continent, and, in his opinion, no place can compare to the Philadelphia section in the making of carpet yarns. The man to engage in the business in Canada must follow their methods in Philadelphia. They know the best machinery and the way to get yarn out at a low cost. Were I to mention the production the carpet yarn spinners get in Philadelphia I would be put down for a prevaricator, and were I to say what stock they used for making yarns, I would be called a liar (plainly). I am only writing as an observer, and it is the duty of trade papers to point out facts as they are. Fiber and Fabric is always for truth, and, knowing the editor as I do, would not dare to send anything but truth. There is an opening in Canada for a carpet yarn manufacturer who will take the suggestion and look into it at once. Mark our prediction. Some one will take hold soon. Who is the lucky man? Time will tell. I want to say right here that all the machinery I have seen in Canada imported from the Mother Country is not in it with the latest so-called Yankee machinery. Now, it is very nice to be patriotic and all that sort of thing; perhaps some money is saved at the start owing to preferential tariffs, but the writer can afford to throw patriotism to the winds and state truths. Patriotism never bought shoes for the babies; work is what does it, and also work (labor) buys war ships, and if business is prosperous, a country can buy war ships and guns to equip them. But if some other country merchant comes into our country and sells his wares, he takes so much of the producing capacity away with him, and in the end he gets our ships and guns also. Moral for Canadian manufacturers. Buy Yankee machinery and use the Yankee methods in manufacturing. The true Yankee don't say, how much wages will I pay a man, but how much can he make for me? What you pay a man per day don't determine his cost to you, but what he does for his pay does. Yet I venture to say that at least one-half the manufacturers of Canada don't figure labor cost right. For instance, your production is so much per day; raise your production at same labor cost, and figure the cost of goods and see the difference. Some will say we can't get any more. Now, Yankees, do you ever say that? No! The Yankee, if he gets his production higher, wants it still higher, and the Yankee, by these very methods, will yet

send his goods to every corner of the earth. Wages paid per day in the United States are considered higher than in other countries, but the labor cost is less at that. "Think it over." There is no incentive for an overseer of a department in a woolen mill to get all he can out of his department when his pay is only a fraction higher than his help in the room. Also "think this over."

Foreign Textile Centres

MANCHESTER.—Under the influence of advancing cotton, the market presented a firmer appearance at the opening of the week under review, but this was mainly on the part of sellers. It met with no response from buyers, who do not at present consider cotton, strong as may be its position, the most powerful factor in the market. The darkening aspects of Chinese matters have shut down almost all prospects of business until the cloud is lifted. There was little improvement to look for from India, as matters were not reported better to any important extent. Stocktaking, although still absorbing a considerable amount of attention, has not deprived the future of its interest either in the fancy or the heavy departments. In the former one notes a reluctance in some quarters to place orders for figured designs in silks, dress goods, and other articles, the view being in such cases that plainer styles are likely to be safer stock. This, of course, applies to autumn purchases, or even to those further ahead. In the light departments the position is affected by the decline in the available employment for looms on fancy linens.

LEEDS.—There is very little business passing in any description of textile fabrics, as buyers are still holding off for easier rates, which producers are unable to concede; even should wool in the near future make less money, and with the present prices of coal and other commodities, it seems unlikely that manufacturers will give way. Machinery in the district is running fairly well, but will not take long to run out the orders in hand. Merchants are doing fairly well in some lines of seasonable goods, but trade in this direction has been distinctly disappointing, and cannot now reach an average. There is more passing in shepherds' cheeks, and covert coatings, continue about a fair turnover. The bulk of manufacturers in Dewsbury are less busy. In rags there is little trade done. Makers of rough sorts of blankets are kept going. Wool sells slowly.

Huddersfield makers report that, although the demand for the very highest class of worsteds and woolens for the London West End is a good deal interfered with by the war, that the colonial and home demand for fancy woolens at a medium price is still very good and there is rather more business offering on account of the United States. Travelers are now getting out with blankets and flannels, and report that the coming season promises well for these departments, and that stocks in retailers' hands are not generally large. There is a rather better enquiry for fancy sealskins for upholstery purposes, especially in art painted styles, but the ordinary demand for sealskins for mantle purposes continues to be very small. Some orders for khaki uniforms have been placed by Germany, and some of the worsted yarns required for these are being bought on this market.

BRADFORD.—The wool market here continues to be very quiet, as consumers are all inclined to wait until the new series of Colonial wool sales have established a more definite basis of prices. These sales commence on Tuesday next in Coleman street, writes the correspondent of the Draper's Record under date of June 30th, and are sure to be well

attended, even if the competition is not keen, but there will probably be some hesitation shown on the opening days. The price of fine merino wools and tops in this market to-day are probably some 7½ per cent. below the rates which obtained at the close of the last London sales, but with the exception of the nervousness which is always developed in a market after prices have been falling for some time, there is no apparent reason why rates should have dropped even as low as this. There has been a further fall in the quotations for South American or B.A. merino both at Antwerp and the other continental wool exchanges, but I understand that this fall is generally attributed to the action of some financiers, who wish the market to be depressed, and are pursuing a "bear" policy. Other raw materials required for the textile trades, such as silk and cotton, have recently shown considerable weakness, and, of course, in the case of silk prices, have quite broken down, but as merino wool first commenced to fall, it is quite possible that wool may be the first to start on the upward grade of prices. Although colonial crossbred wools have not shown nearly the same drop that merinos have done, the market in the coarser description of these colonial wools has for some time been weak, and any distinguishable tendency recently has been slightly in favor of buyers. As there is still some hesitation amongst users of serge dress goods and men's wear as to whether plain finished coating serges or cheviot serges are to be the most fashionable, worsted yarn spinners are also compelled to defer the purchasing of their wool until they see whether they will require raw material with milling properties for chevots, or brighter wools for the smart coating finish. When it is definitely settled which class of goods is to be most fashionable, prices of the most suitable wools will at once commence to rise. Unusually little interest is being taken by the buyers from this market in the various country wool fairs which have been held throughout the country during the month, and farmers are holding on to the produce of their flocks wherever they are able to do so, rather than accept the very low prices which wool dealers are offering. It should be understood, however, that, with the exception of pure lustre wool, very little English wool is used for either dress goods or the better classes of men's wear goods. The great bulk of home-grown wools are used for hosiery, upholstery cloths, and carpets, so that the price of the general run of home-grown wools has no effect whatever on the cost of dress goods. There is no change in the prices of raw mohair or alpaca, and if the spinner and manufacturer are to receive anything like a fair remuneration for their labors, the price of bright dress goods should be advanced, as the present basis of prices was established when raw material was very much cheaper. Although worsted spinners who confine their attention to English wools and colonial crossbreds of a similar character are still busy both for the home market and the Continent, new business is not specially plentiful, and the yarn market throughout has recently been distinctly quiet. For piece goods it is, of course, between seasons, as the goods required for the spring season are now to a great extent in the hands of the retailers, and it is still too early for the trend of fashion to be sufficiently indicated for any large number of repeat orders for the autumn season's requirements in dress goods. The heavier and more warmly-finished fabrics, which have been in such good demand for the autumn season, are more than holding their own in competition with the more smartly-finished coating serges, and there are distinct indications that even for the coming spring season fabrics of a tweedy character will in a modified form be in vogue. When these fabrics of a tweed nature have been fashionable before, there has always been great difficulty in obtaining a finish for them equal to that given by manufacturers who had always confined their attention to these goods, so to speak, on their native heath; but now I am glad to find that at

least one firm of dyers here are not only finishing locally produced goods most satisfactorily, but are actually getting goods to finish from tweed and frieze districts. As the time for buying approaches the feeling is growing that really good plain mohair goods will again be much worn for the summer season of 1901, but it is to be hoped that blacks will not be as much in request by that time. The clothing factories of Leeds and Huddersfield are still busy, and the buying of summer garments seems to be continued much later on into the season this year.

HALIFAX.—The following is the Chamber of Commerce trade report for June: Wool—The trade during June has been very quiet. Unfortunately, merino sorts have made another drop in prices, and English wool and strong crossbreds have barely held their own. Worsted Yarns—There is no improvement to record in this branch during the month. Pieces—Manufacturers all round are very quiet, and few new orders are being placed. The China disturbance has affected the Oriental trade, and the uncertainty of the future value of wools operates adversely to the giving of orders. Spun Silk—During the month prices have become slightly firmer, especially in Eastern materials, and machinery has been fairly well employed. Carpets—There has been a brisk demand for goods, and looms have been kept busily employed. Cotton—Bundle yarns, both single and two-fold, are exceedingly slow, only very small lots changing hands. Fustian weaving is steady. The wholesale clothing houses are doing less business than for some time past.

ROCHESTER.—Business on the flannel market recently, says the Textile Mercury, was rather quiet, considering the time of the year. The manufacturers are busy working on old contracts, and they have a difficulty in delivering at the time arranged. The merchants' travelers are now on their rounds, and increased repeat orders are expected. There is no change in prices, and so far as can be ascertained they are practically settled for the season.

KIDDERMINSTER.—The carpet trade is growing more quiet in places; in others it is still busy. The constant repeats from the retail trade, and the early enquiries of the wholesale and shipping houses, point to a healthy state of the trade. Buyers' actions are probably hastened by a fear of higher prices of all classes of carpet; the cheap materials are nearly all used up, and makers begin to feel more plainly the general advance in everything that they use. Not much can be said of the yarn trade. General stocktaking has deadened business more than ever, and any business that has passed in the last few days is not enough, or of a nature, on which to base a report.

NOTTINGHAM.—The lace trade is without much change, and there are a good many complaints among makers and finishers. The silk fancy lace trade is in a depressed condition. Orders are given out very slowly for the goods, and the machines engaged in the production of silk millinery laces are very differently employed. There is a steady business doing in the more fashionable varieties of cotton laces, but the demand can be readily supplied, and there is no pressure of orders. Valenciennes, torchon, and Victoria laces are among the more fashionable varieties. All-over nets are still in some request. The curtain trade is in a somewhat languid condition, and machinery is not fully employed. Even the plain net trade shows a slight falling off. Makers have had as yet no need to curtail production, but new orders are being placed less freely, and buyers are inclined to resist the high prices demanded. The making-up branches are fairly active. In the hosiery trade cashmere stockings are in fair request, and there are good orders on hand for underclothing.

LEICESTER.—The yarn market is cheerful on the whole, but the transactions, if numerous, are on a small scale and merely to tide over current necessities. The deliveries under old contracts are still sufficiently large to prevent the accumulation

of stocks, and prices of lambs' wool and fancy yarns are well supported, writes the correspondent of the *Textile Mercury*. The hosiery trade is rather partial at present so far as deliveries are concerned, but the orders on hand both for home and Colonial markets are of large extent. The Indian and Canadian trade shows a very large expansion, while Australian orders are of good extent, and great pressure still exists in the Army branches.

SOUTH OF SCOTLAND.—Complaints continue to be received from the South of Scotland tweed manufacturers. There is still a great scarcity of orders, and the outlook is not particularly promising. The present depression is the result of the short boom which was experienced last year, says the *Draper's Record*, London.

KIRKCALDY.—The linen trade at Kirkcaldy continues in a satisfactory state. Looms are fully employed, even although yarns are rather high. The manufactured article is bringing a higher price, and the military orders have had a good effect on the industry. The floorcloth and molenum factories are, as usual, working at full pressure. Prospects are bright.

DUNDEE.—No change can be reported in the state of the Dundee jute market. Values are very stationary, and there is a feeling that Calcutta advices have to be reckoned with before much business can be put through.

BELFAST.—The linen market keeps dull. After nine months' brisk trade, with advancing prices, the falling-off in orders is the more marked. It is, however, the quiet season, and by the time orders in hand are worked off there will probably be a revival in business. Prices are a shade easier for most descriptions. Buying in the yarn market has been of a hand-to-mouth character merely. Linc yarns remain firm at recent rates, but rates for tow wets are more in favour of buyers. Brown cloth is in quiet demand. A moderate business is passing in power-loom linens for bleaching. Cloth for dyeing, and hollands, is in less active request, and unions are selling but slowly, while prices have rather a downward tendency. For damasks and household goods there is a fairly steady demand at firm prices, and the handkerchief trade continues good. Hand-loom linens for bleaching are in quiet request, the *Draper's Record* states. Bleached and finished linens are slow of sale, and rate are rather against sellers. The home warehouses are placing comparatively few orders, but this is customary at this season of the year. It will be another month or six weeks before there is much change for the better. There is a somewhat quieter demand for damasks and housekeeping goods, and the making-up factories are beginning to feel the effect of the holiday months. Export trade is also quiet. Orders from the United States are not large, neither are they numerous, and prognosticators are anything but unanimous as to the future. Cuban trade remains in a quiescent condition, but the South American markets maintain their improved demand. Canadian trade continues very good, and the Australasian trade is still growing. Demand from the Continent keeps satisfactory.

LYONS.—In the silk goods market in Lyons there is no change, and from nowhere are reports sufficiently encouraging to foretell an early improvement. In Paris the retail sales are good, but this and even more had been anticipated, and Parisian buyers had made preparations for it in advance, so that the supplementary demand is not as large as could have been expected. With London a fair volume of business has been done, but better results should have been obtained. The demand for the English market has been for plain and printed panne, black and colored taffeta, crepe de Chine, muslin and printed goods, writes the correspondent of the *Dry Goods Economist*, New York. Buyers of fabrics are waiting for the result of the new

crop of cocoons to be better known before placing large orders. The manufacturing situation cannot but feel this condition of cautiousness, and the looms are quietly losing their previous activity. The hand looms, which have been the less favored throughout the season, feel it most. But the power looms have also commenced to feel it, and are kept active only by the very large production of muslin. A number of looms continue at work on taffeta, skirt foundations, faille, etc., while in linings there is a fair demand for satins, serges, etc. China and marcelme also find buyers. Velvets continue in favor and collar velvets are in good demand. Panne is a favorite and finds a market in plain as well as in fancies. The fall outlook is very good. Ribbons continue in fairly active demand. Plain taffeta, faille and gros-grain sell. Printed warps, shaded stripes, etc., find buyers. Velvet ribbons continue active with a good demand for black.

CREFFELD.—Retailers in Creffeld continue to have good selling weather. The wholesale market has gradually been drifting into the dead season without feeling the desired improvement, and since about the opening of April the situation has been gradually and slowly getting worse. While manufacturers of velvet and pile fabrics generally have no right to complain those of the silk branch generally have little to be thankful for. Very few orders for fall have been placed, and, with the exception of linings, for which orders have to be filled, and of tie silks, on which previous orders have not all been delivered, there is little work provided ahead. Offerings made in the London market by Continental manufacturers who were anxious to get rid of stock, have been made at so low figures that even with the present low prices for raw material, the goods could not be duplicated at those figures. This, of course, has made buyers even more conservative, and as some of them believe that raw material prices will go still lower, they abstain from placing orders for fall. Not much is seen in novelties, and any number of new styles in fancies would not be sufficient to animate the demand. What would do more good would be some new lines in plain fabrics that could be relied upon to displace taffeta, but manufacturers do not seem able to do anything in this direction. In the pile fabrics industry conditions are much more satisfactory than in the silk branch, notwithstanding the fact that large orders have not been placed recently, and that there is room for improvement in the demand for export. Velour du Nord and plushes will be the favorite material for cloaks, and have been ordered accordingly. In plain velvet the looms have good work on hand, and in fancies production is also fair. A good season is also anticipated for panne in plain and fancy.

LITERARY NOTES.

Under Mr. Cooper's editorship *The Canadian Magazine* is taking rank among the very best periodical literature of America. The June and July numbers are varied enough in contents to satisfy the student, the politician, the military man or the mere reader of fiction.

The *Prince Edward Island Magazine* for July has some very interesting sketches of local history, and is doing a good work for the literature of the island. This bright little magazine is only 50 cents a year, and should be read by all who have an interest in the "green isle" of Canada.

Number 10 of the *Educational Review series of historical papers* has been issued by Geo. U. Hay, St. John, N.B. The principal contents of this number are: "History of Fruit Culture in Canada," by Geo. Johnson, Dominion statistician; "Before the Loyalists," by James Hannay; "Father LeClerg's Voyage in 1677 from Nepisiguit to Miramichi," by W. F. Ganong, Ph.D., and "Notes on Madawaska," by Rev. W. O. Raymond. This means of presenting in a cheap and popular

form phases of Canadian history not familiar to the ordinary reader cannot be too highly commended, and we trust Mr. Hay will be well encouraged in his good work. The price of these pamphlets is only 10 cents per number or \$1 for the series of twelve.

The subject of Paris and its great exhibition figures largely and entertainingly in the July number of the Century Magazine; but its other contents are varied enough in range of subject to suit every taste. John Morley's pictures of the life and times of Cromwell are continued, the scene shifting from Dunbar to Worcester. One article which will be seriously studied by Canadians and British subjects generally is the "Commercial Ascendancy of the United States," by Carroll D. Wright, the New England statistician. Mr. Wright estimates that the manufactures of the United States will amount this year to \$12,500,000,000, a sum which he calculates to be \$450,000,000 in excess of the value of the manufactured goods of Great Britain and Germany combined. The production of pig iron, for instance, in the United States this year is nearly 12,000,000 long tons, against about 8,631,000 gross tons in Great Britain. While the industrial ascendancy of the United States seems to the writer to be assured, the commercial primacy of the States is some distance off, the aggregate imports and exports of the United States in 1899 being \$2,051,749,558 (a little less than those of Germany), while those of Great Britain were \$3,650,591,028.

A new descriptive atlas of Canada and a small atlas of Canada and Europe have been published under the direction of Hon. Clifford Sifton. The former contains 12 pages, 11 by 14 inches, and the latter 32 pages, 5½ by 7 inches. The maps are very clear and well printed, and the idea of the atlases, which are intended for the use of emigrating immigrants, is a well conceived one indeed. The history, area, physical features, climate, products, manufactures, public works, population, government, religion, etc., are given in the text, and a large amount of information is thus presented in a condensed form. The atlases are sent out by Frank Pedley, superintendent of immigration, Ottawa.

Industrial Canada is a new journal whose first number appeared in June. It is the official organ of the Canadian Manufacturers' Association, and is edited by the capable and energetic secretary of the association, T. A. Russell. The first number gives some interesting information on South African trade contained in letters from J. M. Taylor, of the Dominion Radiator Co., Toronto, and from A. W. Allen, of the Allen Manufacturing Co., Toronto.

FABRIC ITEMS.

John Dummers has opened a dry goods business at St. John's, Nfld.

M. Bernstein, clothier, Montreal, is seeking to effect a compromise with his creditors at 25 cents on the dollar.

James Ferguson, head of the firm of James Ferguson & Co., tents, awnings, etc., Brandon, Man., died in the hospital in that city last month.

F. W. Chapman, representative of Gault Bros. & Co., at Vancouver, B.C., died there recently of pneumonia. Deceased only moved to Vancouver from Toronto last September.

The assignment is reported of Lacroix, Pichette & Co., retail dry goods merchants, Quebec. They have been in business two years and the liabilities are estimated at \$40,000.

T. M. Bayne, lately engaged in the wholesale millinery business on Bay street, Toronto, has become manager of the Walker House, Toronto. Mr. Bayne is well known to the traveling public as a traveler of many years' experience.

Lacroix, Pichette & Co., dry goods merchants, St. Roch, Quebec, have consented to assign on demand of P. Garnier, Fils & Cie. The liabilities will amount to about \$40,000, and assets about the same. V. E. Paradis has been named provisional guardian.

Fire at St. Stephen, N.B., June 26, did about \$15,000 damage to the stock of the Imperial Wrapper factory, and destroyed other stores. It required the united efforts of the fire department of St. Stephen, Calais and Milltown to confine the flames to the upper flat of the factory. The wrapper factory, which manufactured ladies' blouses and wrappers, carried \$12,000 insurance.

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 Paton Mfg. Co.'s mills at Sherbrooke are running to their full capacity.

Whitby, Ont., papers state that a clothing factory is to be established in that town.

A dividend of 15 cents in the \$1 has been declared on the insolvent estate of the Cloak Mfg. Co., of Toronto.

The Petrolia Corset Co., of Petrolia, is asking the Winnipeg city council for a bonus to a proposed corset factory there.

In Truro, N.S., recently, fire destroyed Craig & Mahoney's hat factory, which was worth about \$15,000; insurance, \$4,000.

The Perth Flax & Cordage Co., Stratford, has arranged a compromise with their creditors at 50 cents on the dollar.

The Harding shoddy mill at Simcoe, which has been closed down since the death of Mr. Harding, is now running again.

The Coaticook, Que., Woolen Mills Co., announces that it is carrying on business as usual in spite of its losses by fire some time ago.

Alexander Little, of York Mills, N.B., has commenced work on a new woolen mill on the site of the one destroyed by fire a few years ago.

The William Clark Co., Westerly, R.I., has placed a repeat order with the William Firth Company, of Boston, for ribbon lap machines.

J. E. Deegan, Brockville, Ont., has the contract of roofing the Canadian Colored Cotton Co.'s mills at Cornwall, Ont. The area of the roof is almost two acres.

A fire in the wool sorting room at the Simpson knitting factory, Toronto, last month, caused about \$250 damage to stock and some small damage to the building.

The new extension of the Merchants Cotton Co.'s mills at St. Henri, Montreal, is nearly completed. Alfred Hawksworth is manager, and Fred. Hawksworth superintendent.

Geo. Burrow, who learned the woolen manufacturing business in England, is the new superintendent of the Trent Valley Woolen Mills, Campbellford, in succession to C. L. Owen.

The J. Stevens Arms and Tool Co., of Chicopee Falls, Mass., the well-known manufacturers of the "Favorite" rifles and shot guns, have, as a consequence of enlarging their works, a large quantity of machinery for sale in good condition. Over 400 machines of various kinds are thus offered at reasonable prices.

The Barrie Tanning Co. lost its tannery by fire recently. The loss on building and machinery is \$8,000, and on plant, \$21,000. There was \$6,000 insurance on building and machinery, and \$17,500 on stock.

The Richelieu Woolen Mill, Chambly, Que., is running on novelties and military clothing for the Canadian militia. Stanley Willett, son of S. T. Willett, of this mill, is a graduate of the Philadelphia Textile School.

Walter Mein, an old resident of Perth, Ont., who is an octogenarian, walked from Perth to Arnprior, Ont., a distance of fifty miles, on Friday of this week, in search of employment at his trade, weaving.—Arnprior Watchman.

The Consumers Cordage Co., Ltd., has reduced its capital stock from \$2,500,000 to \$1,000,000, by reducing the preference stock of the company from \$1,000,000 to \$500,000, and the common stock from \$1,500,000 to the sum of \$500,000.

The Hadley Company, of Holyoke, Mass., has placed an additional order with William Firth Company for cards, drawing and speeders. This machinery will be made by John Hetherington & Sons, Manchester, England.

The proposal of Louis Simpson to establish a cotton mill at Hull, Que., appears to have fallen through owing to the late fire, but a proposition is now before the town of Longueuil, a suburb of Montreal, which is being asked to vote a bonus of \$150,000.

James B. Jones, representing Birch Bros., manufacturers of dyeing and finishing machinery, of Somerville, Mass., has just returned from a successful trip among the woolen and cotton mills of Quebec and Ontario. The Columbia napping machine is one of the specialties of this firm.

Wm. J. Matheson & Co., Ltd., has removed its Montreal offices from St. Paul street to 96 and 98 Foundling street. This company issued during the past month some brilliant samples of new dyestuffs, which will no doubt be forwarded to dyers and manufacturers on application.

The Ontario Government has decided for the future to sell the binder twine product of the Central Prison to farmers only. Two grades are manufactured, which will be sold this season at 9½ and 11 cents. The twine is guaranteed, and the greatest care will be taken to prevent it getting into the hands of the trade.

Daniel Law, senior member of the firm of Law, Young & Co., Montreal, died in Montreal on the 15th ult. Mr. Law, who had retired from business about six years ago, was engaged in trade in Montreal, as a general merchant, since 1820. For many years he was interested in Canadian cotton mills, and was agent for the old Dundas Cotton Co.

Among the trade enquiries received at the office of the Canadian High Commissioner in London is one from a London firm, who wishes to represent Canadian woolen mills in Canada. We fancy there are some Canadian woolen manufacturers who would not hesitate to sell goods in Great Britain or any other quarter of the world where good prices are to had. The name of this firm is known at the office of the Canadian Journal of Fabrics.

A large extension is being built in Albert street, Toronto, to enlarge the factory of the T. Eaton Co., Ltd., which has grown too small for the enormous output of the various articles, chiefly whitewear and clothing, manufactured by the company. The electric plant will be removed to the basement of the new structure, the remainder of the building being given over to manufacturing shops of the most modern description, in which some 700 hands will find employment. The company already has over 3,000 employees, and by next January expects to have reached the fourth thousand.

The Dominion Cotton Mills Co., Montreal, has ordered from Elliott & Hall, of Worcester, Mass., a folding and measuring machine.

C. D. Owen, Providence, R.I., and David Morrice, jr., Montreal, have left by the Intercolonial for their salmon fishing grounds in Newfoundland.

The Merchants Cotton Mills Co., Montreal, has placed an order with the American Monstening Company, Boston, U.S., for the equipment of its mill with humidifiers.

Geo. Reid & Co., 11 Front street east, Toronto, have bought the machinery in the Glen Tay, Ont., woolen mill, and will dispose of it to the trade in lots to suit the buyer.

The Canadian Woolen Co., Ltd., is building a water tower on the Hawthorne mills, Carleton Place, and will install a sprinkler system of fire protection. New winders have been put in the building throughout.

C. Delaney, H. Whitaker, jr., and R. Rollingsford Thomas, Philadelphia, U.S.; C. S. Pettit and J. H. Pettit, Toronto, have been incorporated as the Delaney and Pettit Company, Ltd., to make curled hair and glue, etc.; capital, \$50,000.

S. C. Phillips, of the British Paper Journal, who is in Canada with a party of gentlemen representing the British paper trade, says that a large amount of capital will shortly be invested by British paper makers in Canadian pulp plants.

Francis Willey & Co., Bradford, Eng., have had their wool buyer in the Canadian Northwest for some weeks, buying wool for shipment to Toronto, where it will be handled by Geo. Reid & Co., sole Canadian agents for Francis Willey & Co.

The power to run the Hawthorne mill of the Canadian Woolen Co. is now being developed at the Gillies mill. Both steam and water will be used, and the Canadian General Electric Co.'s machinery is being installed to transmit this power to operate the Hawthorne.

The first piece of machinery in Eddy's mills to be put in operation since the fire was started up July 5th. At present building operations are being conducted on six separate establishments on the Eddy premises, and about five hundred men are at work.

Binder twine, amounting to 100 carloads, is being shipped from the Kingston penitentiary by boat to Fort William, and by rail to the Northwest, where it will be sold by the Dominion Government Department of Agriculture to the farmers of the Northwest at cost price.

The new knitting factory at 491 St. Louis street, town of St. Louis, Montreal, is now equipped with the improved Victor automatic machines, manufactured by the American Knitting Machine Co., and is turning out 150 dozen pairs hose per week, of fine cashmere and cotton goods.

A correspondent in Merriton, Ont., writes that Louis Simpson has recently visited that town to see how much water power was available if he located the proposed new cotton mill there. Sufficient was not to be had, however, and it is understood that the scheme has been dropped.

J. E. Hanson is continuing the woolen mill business of his father, Jno. D. Hanson, Hull, Que., who died early this month as a result of a paralytic stroke. The woolen mill, which was entirely destroyed in the great fire, has been rebuilt, and is being equipped throughout by Geo. Reid & Co., 11 Front street east, Toronto.

The pulp mills and construction works of the new paper mills at Surgeon Falls have been closed down and the workmen all discharged. The English investors appear to have found the property other than they had been led to expect, and so have withdrawn. At least this is one of many rumors given for the closing down of operations.

Chas. W. Bates is the new superintendent of the Slingsby Mfg. Co.'s mills at Brantford, Ont.

A. W. Leitch, 16 Hughson street south, Hamilton, selling agent in Canada for the New York and Boston Dyewood Co., has returned from a most successful trip among the mills of the Maritime Provinces and Quebec. Mr. Leitch is now getting ready a range of samples of new colors of more than ordinary importance to dyers, and will send these free, we understand, to those interested.

The Victorine Co., Ltd., has been incorporated in the province of Quebec to manufacture compounds, soaps, etc., at Montreal, capital \$20,000. The applicants are: A. H. Brown, F. R. Shaw, J. Quintal, G. A. Thomson, M. Lauterman, M.D., J. A. Franchere, C. W. Meakins, H. D. Metcalfe, E. L. Clark, J. E. Wright, J. C. Wark, J. Wray, L. A. Lefebvre, J. O. Chalus, E. G. Brown, E. Ryder, W. C. P. Gaden, Montreal and G. J. L. Desbarats, Ottawa.

Wm. J. Matheson & Co., Ltd., has issued an index to the various publications treating on his extended series of dye-stuffs. These publications contain detailed and explicit dyeing directions and information regarding the uses and properties of the dyes mentioned, all of which we would be pleased to supplement by results obtained in our laboratories upon any goods submitted. Interested parties may obtain any of these publications free by addressing any one of the company's offices.

The Farmers' Binder Twine Co., Brantford, Ont., has issued a warning to all concerned that it is preparing to obtain writs against a number of persons for making alleged libellous statements and unjustifiable attacks against the company. It alleges that these persons are attacking the company by means of anonymous letters and circulars, "while old and disreputable looking balls of twine said to be the Farmers' Company's Red Star, are being hawked about the country and represented," it is alleged, as the production of the Farmers' Company.

In the "Patric's" correspondence from the Paris exhibition, under date of May 28, are mentioned the display of woollen goods from the manufactories of the Rosamond Woollen Co., Almonte, Ont., Willett, of Chambly, Que., and Paton, of Sherbrooke, Que. The managers of the exposition, says the correspondent, were much surprised to find the Canadian woollen goods exhibited of such fine quality at the prices quoted, which were so moderate that all the samples shown have been already purchased. The correspondent further states that this Canadian exhibit of woollens and flannels of varied colors compares very favorably with exhibits of the same class from Scotland and elsewhere.

Main mill of the Imperial Cotton Co., Ltd., Hamilton, Ont., will be 107 x 225 feet and three stories high, with large outside finishing rooms, cotton storehouse and boiler room. The building will be of brick and electric power will be used amounting to about 700 h.p. The machinery will arrive about October 1st. It is partly English and partly from the United States. The mill will begin operations about February. There will be 130 looms, 9,000 spindles, 56 cards; no bleaching or dyeing. The mill will run on cotton ducks, for sails, awnings, tents, tarpaulins, harvesting machinery, car coverings, paper mills, rubber manufactures, etc. The output is expected to be about 2,200,000 lbs. of goods per year. The directors of the company are: J. M. Young, president; W. D. Long, vice-president; C. T. Grantham, secretary and managing director; John Knox, T. P. Coffee, C. Cloepfer and Wm. Kendry.

The Truro, N.S., News in referring to the smokestack recently erected for the Truro Knitting Co., says: Contractor Frank Wilson finished the largest smoke consumer in town; in fact, it contains nearly as many bricks as any three in Truro;

something over 60,000 bricks were used in the erection of this enormous landmark, which measures nearly 100 feet from the foundation, which is over 10 feet in width. We congratulate the Truro Knitting Mills Co. on erecting such a magnificent chimney. It will carry the smoke away out of sight, and we will hear no complaints, as we frequently do in other places, of the smoke nuisance. It is a handsome structure, substantially built, and is a landmark for many miles around. It only remains to enquire when our manufacturers will give up these massive and expensive constructions, when the same results can be obtained by the employment of a suitable and more economical system of smoke consumers on the fan principle.

IMPERIAL TRADE NOTES.

The following enquiries have been received at the office of the Canadian High Commissioner in London. We will give the names of those making the enquiries, on application:

A long established London firm wishes to represent Canadian woollen manufacturers.

A Glasgow firm making india rubber and gutta percha want a sole Canadian agent.

MERCERIZED YARNS.

The following paragraph about a firm composed of young Canadians appears in a recent number of The Boston Journal of Commerce: "The other day we had the good fortune to see some of the handsomest mercerized cotton yarns that it has ever been our pleasure to look upon. The yarn we speak of was mercerized and dyed by Wm. H. Lorimers' Sons' Company of Philadelphia. We saw some carded peeler yarn that had most perfect coloring and a brilliancy that was almost as fine as that of combed yarns. The lustre of their mercerized combed peeler yarns is every bit as fine as that of spun silk, and we believe that in many respects it is superior. They also showed us some of their mercerized combed sea island, and it cannot be denied that it is every bit the equal of Floss silk. The coloring in these yarns was of the highest order. We were also shown some two-colored mercerized yarns that were very handsome both as regards coloring and lustre. This company certainly deserves great credit for the character of yarn produced by it. They spare neither time nor expense in making their production of the highest possible quality, and there is no better testimonial of the grade of yarn produced by them than the large amount of business which they report."

NITRATED FIBRES.

A treatment of the yarn or of the texture with strong nitric acid is advantageous in several respects. The yarn assumes the lustre and touch of silk, and rustles like that material, and the absorptive capacity for bleach and for coloring matters is augmented. This nitric acid treatment could be applied to cotton, wool and to other materials. Tussah silk, e.g., were it not for one disadvantage which has so far prevented its practical adoption—the materials contract strongly; in the case of cotton the contraction may amount to as much as fifteen per cent. F. W. Scheulen, of Barmen, claims to have found a way of meeting this difficulty. The yarn to be treated is placed over two porcelain rolls. No stretching is applied, but the contraction is prevented. After the nitrating follows washing with water. When taken off, then the fiber proves to be not only not contracted, but on the contrary slightly elongated, which after all is not so very surprising. The effect is in a

certain sense the opposite of the mercerization effect. The inventor speaks of ennobling the fiber by his process. One cannot reasonably expect to attain nobility without risk, and there may be a certain risk in his treatment.—Trades Journals Review.

KHAKI SHADES ON COTTON.

For each 100 pounds of cotton cloth: Red shade—2½ oz. Phenamine Blue R, ½ lb. Cotton Orange R, 1¼ oz. Thiazine Red R, 5 lb. Glauber's salt and ½ lb. soda. Yellowish shade—2½ oz. Phenamine Blue R, 9¾ oz. Cotton Orange R 1½ oz. Thiazine Red R, 5 lb. Glauber's salt, and ½ lb. soda. Greenish shade—4 oz. Phenamine Blue R, 9 oz. Cotton Orange R, 1 oz. Thiazine Red R, 5 lb. Glauber's salt, and ½ lb. soda.

ROBERT BERRYMAN'S FAILURE.

The failure of Robert Berryman, wool dealer, at 620 Atlantic avenue, Boston, has been announced during the past week. Mr. Berryman was well known to the trade as quite an extensive operator in Canadian wools, and bought quite freely of wool in 1897. Mr. Berryman, it appears, had purchased quite liberally of wool, and was caught by the drop in the market, and not having sufficient capital to carry it, was obliged to fail. His liabilities are \$63,833, and nominal assets, \$11,580, the latter consisting chiefly of his equity in the wool, Stoddard, Hasebick & Richards are reported to have been his bankers. His indebtedness is chiefly to them and the banks.

The foregoing item, from The American Wool and Cotton Reporter, of July 12th, refers to Mr. Berryman, well known to the Canadian woolen manufacturers as a wool dealer in Hamilton. Four or five years ago he opened a branch of his Hamilton business in Boston, and began buying in the latter city on an extensive scale in view of the impending changes in the United States tariff. Having bought at low prices he held a large stock, and wool taking a rise as he anticipated he sold out his entire stock at such an advance as enabled him to clear off all his liabilities and have \$50,000 to \$75,000 to the good. Mr. Berryman, like a good many others, was not satisfied at having well enough alone, but as wool continued to rise he became very sorry he had sold so early and immediately turned round and invested all his funds in more wool, even buying back stock he had just sold. He was sure it would go up still higher, but it took a drop and left him with a heavy stock on a depressed and failing market. The result was his failure with large liabilities, in which the bank which had carried him along lost pretty heavily. The sanguine temperament of Mr. Berryman led him again into the speculative fray with the result above noted.

THE VALLEYFIELD STRIKE.

Six new looms were started in the Montreal Cotton Co.'s mill at Valleyfield, Que., the other day. Five were tended by French-Canadians and one by an English-speaking Canadian. The weavers went out on strike. The strikers prevented the non-strikers from entering the mill in the afternoon and threw stones through the windows of the Empire mill, breaking the glass and damaging some of the machinery. The Montreal Witness thus refers to the strike: "Some of the French-Canadian mill hands of Valleyfield seem to have the same objection to Englishmen as the British Columbia people have to Chinese. They call them 'etrangers,' which being interpreted into English means foreigners and in Dutch would be Uitlanders. What it is in Chinese we do not know, but the Chinese have the same

objection to etrangers. Because in starting six new machines the cotton company assigned one to an English speaking man there was a strike and riots. The windows of the mill were smashed, several people were hurt, one woman being trampled on, and damage is supposed to have been done to the machinery. The whole strike seems, however, to have been the work of a drunken minority, the great majority opposing and denouncing it."

WILLIAM ROY SAMUEL.

Readers of The Journal of Fabrics will have heard with keen regret of the death on Dominion Day of William Roy Samuel, son of Thomas Samuel, of the well known thread firm of Thomas Samuel & Son, Montreal. Mr. Samuel came to the office alone on the holiday to attend to some urgent orders, and was caught between the wall and one of the goods elevator trap doors, and crushed to death. Mr. Samuel was a native Canadian, being born at Weston, Ont., 36 years ago. He had his early business training in the office of the Canada Sugar Refinery, where he was for four or five years, which office he left to take a position in his father's business. Some twelve years ago he was admitted as a partner in his father's firm, Thomas Samuel & Son, commission merchants. At that time the firm had the Canadian agency of Wm. Barbour & Sons, Ltd., the well known linen thread manufacturers, Hilden Mills, Lisburn, Ireland, as well as several other leading manufacturers in England whom Thomas Samuel had been representing for upwards of twenty years. Now all the linen thread companies have amalgamated their interests under the name of the Linen Thread Co., Ltd., of Glasgow, whose selling agents are Frank & Bryce, Ltd., of Glasgow, and who recently appointed the late W. R. Samuel their manager for Canada in conjunction with his father. He was engaged in this capacity at the time of his death. Mr. Samuel was an energetic and able business man, inheriting his father's integrity and correct habits, and was universally liked for his kind and genial disposition. He was a member of the Royal Arcanum, and the Laurentian Council to which he belonged passed a resolution of sympathy with his family. The funeral was attended by the employees of the firm in a body, and by Mayor Lighthall, of Westmount, and many prominent Montreal citizens.

THE WOOL MARKET.

Toronto.—The local wool market is very quiet, country buyers and city buyers having widely different views. The price on this market is in the neighborhood of 16 cents, and local men have paid more, so that sales are few.

Montreal.—The Montreal wool market has improved recently, and better prices are obtainable for Cape wool. Stocks are small in first hands and manufacturers are taking sample lots, which may result in some large sales, as prices in the London sales, now going on, are improving on the opening with higher prices. We quote: Cape, 19 to 22c.; Natal, 20 to 24c.; B.A. washed, 40 to 45c.; Canadian fleece, 18 to 20c.

Reports from Hamilton show that not a pound of new Canadian wool has so far been shipped to the United States, and no American buyers have been in this market. The quality of the new clip in southwestern Ontario is up to the average, and the quantity about the same. Local dealers in the villages and country districts started off by paying too high prices, and now they are holding on to their stocks in the hope of getting a little profit or at least avoiding loss, which it is not certain they will be able to do.

TARTAR, LACTIC ACID AND LACTOLINE.

Although lactic acid and lactoline have been recommended for years as substitutes for tartar, and are used as such, we are constantly hearing complaints about them. Many dyers use them, give them up, and then start using them again. Everything new has many difficulties to contend with, and complaints both just and unjust to face, especially as it is usually put forward to replace something which has been long in use and is thoroughly understood, so that the results achieved with it, if not always so good as might be desired, are always certain. The new article is always introduced with a flourish of trumpets, but "without guarantee." Naturally much chaff is found among the wheat, and the recurrence of this has bred a distrust in everything new. Care must be exercised in adopting novelties in the dyeing industry, as weeks or months may be necessary to test fastness, and haste may result in very disagreeable experiences. Besides, changes in dyeing recipes always cause, at least at first, difficulties and slowness of production, circumstances which set people against them. There are also difficulties of what may be called a personal nature, as were seen on the introduction of alizarine, and are seen now in connection with artificial indigo.

Lactic acid and its preparations have all these obstacles to fight against. The acid has suffered from the fact that it was recommended and used for yarn and piece goods before such recommendation had been proved to be justifiable. Experience has shown that pieces mordanted with lactic acid reduce chromic acid so fast as to cause unevenness. This still makes many dyers nervous at the very mention of the name of lactic acid. This drawback has, however, been avoided by the substitution of lactoline for lactic acid. The expectation that acid potassium lactate would behave similarly to the corresponding tartrate, and fix chrome slowly and uniformly on the fiber was justified, and lactoline won its way as being at least as good as, and certainly cheaper than, tartar for piece-goods and yarn. Lactic acid itself, which is even cheaper than lactoline, is now restricted to loose wool, as unevenness in that is corrected by the subsequent carding.

Nevertheless, a minority of dyers is still against lactic acid in any form. Some say it hinders the spinning of the wool more than tartar, some that the dyes are not so fast to milling, etc., the test of which it is a question if this article were instituted to set these points at rest in a decisive manner uninfluenced, as is apt to be the case in the dye-house, by differences in the material used, or by inaccurate work. In all the tests to be described exactly the same wool was treated, and the same machines, and all the pieces were washed, milled, and finished together. Besides, to prevent any special effect due to single dyes, a combination was used of three very largely used alizarine dyes, viz., Anthracene Brown, Anthracene Blue and Alizarine Orange. Good Sydney wool was used, and the three following processes were compared:

1. Mordant—Three per cent. bichromate and 2½ per cent. tartar. Entered at 60 deg. C., brought to the boil within half-an-hour, and boiled one and a half hours. The bath was then pumped out, and cold water pumped through for ten minutes. To the bath at 30 deg. C. were then added 2.75 per cent. of Anthracene Brown SW in powder, 0.75 per cent. of Anthracene Blue SWGG in powder, and 0.75 per cent. of Alizarine Orange SW in powder (corresponding to a total of about 21 per cent. of the paste-brands). The bath was then brought to the boil inside forty-five minutes, and 10 per cent. of 30 per cent. acetic acid was then slowly added during thirty minutes. The whole was then boiled for an hour and a half. The bath was then pumped out, cold water pumped through for ten minutes, the goods were wrung in the bath, and dried at about 40 deg. C.

2. Mordant—1.25 per cent. bichromate, 1.25 per cent. per cent. lactic acid, and 1.25 per cent. of sulphuric acid deg. B. Starting at 30 deg. C., the bath was raised to the within forty-five minutes, and boiled for fifteen. As the acid was still slightly yellow an additional 0.25 per cent. of sulphuric acid was then added, and the boiling continued for another minutes. The bath was then quite colorless. After running off the bath and pumping cold water through for ten minutes the goods were dyed as in 1.

3. Mordant—1½ per cent. bichromate and 3 per cent. lactoline. Entering at 60 deg. C., the goods were brought to boil inside of half-an-hour, and boiled for an hour and a half. After the first half-hour's boiling the bath was mixed with about 0.1 per cent. of its own volume of acetic acid. The bath was pumped out at the end of the hour and a half, and cold water and dye were used as in 1 and 2.

(To be continued).

TEXTILE IMPORTS FROM GREAT BRITAIN.

The following are the sterling values of the textile imports from Great Britain, for May and the five months ending May, 1899-1900

	Month of		Five months ending	
	May	May	May	May
	1899.	1900.	1899.	1900.
Wool.....	£2,186	£ 2,004	£ 7,314	£ 23,222
Cotton piece-goods.....	27,841	32,141	242,310	307,500
Jute piece-goods.....	12,730	14,512	45,605	64,850
Linen piece-goods.....	7,512	9,822	73,055	88,670
Silk lace.....	1,608	964	8,078	8,695
" articles partly of.....	2,560	3,699	13,255	23,352
Woolen fabrics.....	10,415	14,351	108,329	170,832
Worsted fabrics.....	16,703	22,087	220,794	253,204
Carpets.....	7,209	12,341	95,839	142,105
Writing-paper, &c.....	3,988	6,455	11,409	15,725
Other paper.....	824	1,004	3,235	4,403
Apparel and slops.....	10,202	13,116	87,856	120,910
Haberdashery.....	6,723	7,775	72,113	72,661

On July 13th, binder twine, manufactured at the Kingston, Ont., penitentiary, was reduced to 9, 8½ and 8¼ cents in small lots, tons and car-loads, respectively.

The Master-in-Ordinary, Toronto, has given judgment, allowing the Quebec Bank \$30,000 of their claim of \$50,000 against the Cloak Manufacturing Co., of Toronto, as a preferred creditor. The balance of \$20,000 will go as the claim of an ordinary creditor.

WANTED—Two Hand Jack Spinners. Address CARLETON WOOLEN COMPANY, Woodstock, N.B. 7-1f

POSITION WANTED—As superintendent, designer or boss weaver. Thirty years' experience in some of the best mills in Canada and the States. Of good habits. Temperate and industrious. Address "D. W.," Montreal Office Canadian Journal of Fabrics. 6-3

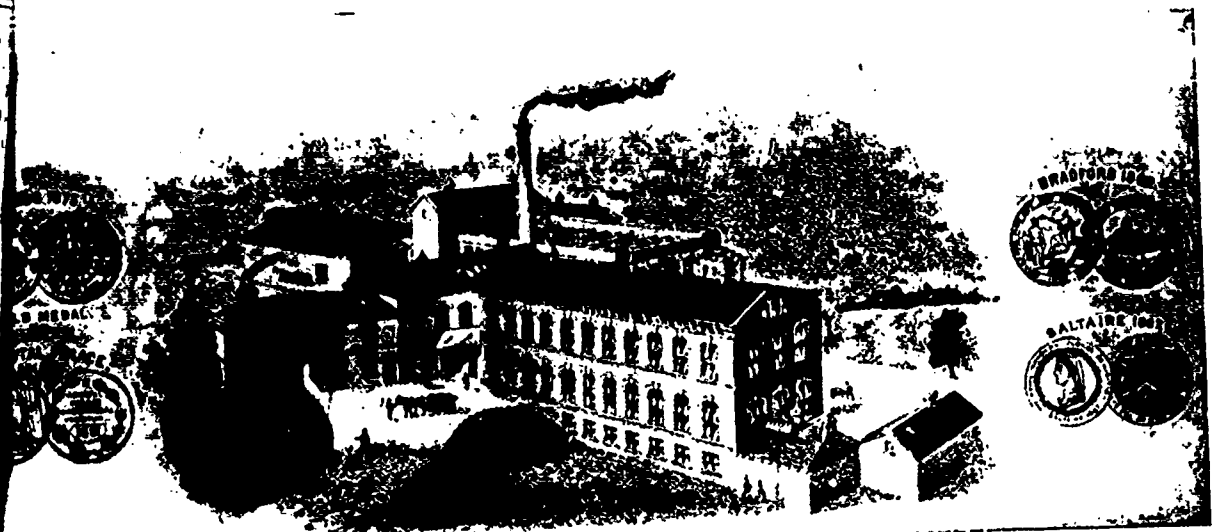
FOR SALE—\$1500 buys the Durham Woollen Mills—quick sale to close estate one set; large custom and wholesale trade; cost \$7,500. Estate J. H. HUNTER, Durham. 7-3

WOOL FOREIGN and NORTH-WEST.

GEO. REID & CO.

11 Front Street East, Toronto.

Sole Canadian Agents for Francis Willey & Co., Bradford, Eng., have on hand and will carry in stock full lines of Foreign and North-West Wools. Samples on application. 7-1



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**"Genuine Oak" Tanned Leather Belting,
Mill Furnishings of every description.**

We would also draw your attention to our **"LANCASHIRE" PATENT HAIR BELTING**
for exposed situations.

D. K. McLAREN,

Head Office and Factory: **MONTREAL**

Branch: **88 Bay Street, TORONTO**

—A German chemist has used X-rays for detecting weighted silk, both as to the quality and quantity of the adulterant.

—An expanding business in linoleums and floor cloths is reported from Kirkcaldy, Scotland, and nearly all the manufacturers are well booked with orders.

—According to the reports received from leading jobbers. "Soie Neomje," a new silk fabric, has met with instantaneous success. In order to obtain the "enleve" effect, which is the peculiar feature of this fabric, a tiny thread of wool is used, which ensures its retaining its characteristics.

In one of its latest sample cards, Wm. J. Matheson & Co., Ltd., New York and Montreal, call attention to their green and blue levelling colors for wool dyeing, which have aroused considerable interest on account of their good levelling properties.

—An exchange describes a recent excursion to the Paris Exhibition, given by Lever Bros., the English manufacturers, to 2,000 of their employees. It occupied in all forty-eight hours, of which sixteen were spent in Paris, from morning till midnight, seeing the Exhibition, and driving around the city.

—H. H. Donner, Chemnitz, Germany, has invented a parallel-knitting machine, in which the needles to be thrown into and out of action in fashioning are carried on jacks, which have projections or heels and slots working on rods on the needle bed. By means of a slide having corresponding projections, the jacks and needles can be depressed or raised until the needle bits are out of or in range of the knitting-cams. This method of operating the needles may be used for fashioning with or without fashioning-points.

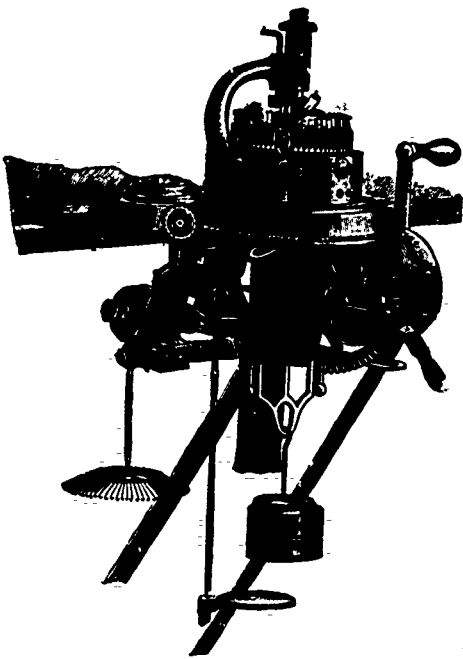
—A late number of The Hosiery Trade Journal, Leicester, Eng., gives the following explanation of yarn counts by the metric system: In the metric system of enumeration, the counts of yarn denote the number of meters that go to a gram, or kilometers to a kilogram, the length of the thread being fixed as 1,000 meters, with decimal subdivisions. In numbering cottons, however, the half kilogram is used—that is to say, the counts of cotton yarn indicate the number of times 1,000 meters are required to make up a standard weight of 500 grams (half a

kilogram). For example, No. 20 cotton yarn is one, 20,000 meters of which weigh 500 grams (half a kilogram). The following will give the weight in grams of 1,000 meters (1 kilometer) of cotton and worsted yarn for different counts: No. 1, cotton, 500, worsted, 1,000; No. 5, cotton, 100, worsted, 200; No. 10, cotton, 50, worsted, 100; No. 20, cotton, 25, worsted, 50; No. 40, cotton, 12½, worsted, 25; No. 60, cotton, 8 1-3, worsted, 16 2-3; No. 80, cotton, 6¼, worsted, 12½.

—Light, air and sunlight, says a writer in The Ladies Home Journal, are important factors in keeping the family and the house in a healthy condition. Nothing could be worse than the habit some people have of keeping the house in darkness from early morning until night. The house should be flooded with light and air for several hours each day. In the July number of the same journal Edward Bok maintains that the best intellects are nurtured and the best literary work produced by the fresh air of the country.

—A French patent has been taken out for the old idea of lustring wool and cotton by means of a solution of real silk in caustic lye. Soda lye of 36 deg. Be. is put into an earthenware vessel, and to it are added raw silk scraps, fragments of cocoons—in fact, any raw waste—to the amount of 3 per cent. of the caustic soda used. The solution obtained is diluted to 10 deg. Be. if it is to be used cold, to 3 to 5 deg. Be. if hot. The fabrics are then plunged in, and after about ten minutes' immersion centrifuged, scoured, rinsed and dried at a low temperature. It is said that the prepared fabrics can be dyed perfectly well.

—The Prussian Diet has adopted the bill for laying a special tax upon "department stores." The bill as finally passed fixes the limit at which the tax begins at a turnover of \$100,000 a year. The measure is regarded only in radical circles as the entering wedge of similar taxation upon a larger scale, and it is expected that efforts will be made in due time to impose special taxes upon the great banks and upon the enormous aggregations of capital in the iron and other industries. That this idea is not without foundation is shown by the statement of Minister Miquel that the law is merely an opening wedge for more legislation of this kind.



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Our customers have had Success.

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GIVE THE BOYS A Stevens Favorite Rifle.

It will teach them to enjoy outdoor life, to learn how to shoot. The first will bring health and a good disposition. The latter will induce coolness and deliberation, command of eye and hand—all valuable helps for success in future life. There is nothing cheap about a Stevens Rifle but the price: the quality is in every arm.

Favorite (with Open Sights) .4.

Where dealers do not carry these in stock we will send, express prepaid, on receipt of price. Our new catalogue contains description of the entire line of arms made by us: also a valuable reference book for shooters. No charge except stamp for postage.

J. STEVENS & SONS TOOL CO., Box 2, Chicopee Falls, Mass.

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 of consequence to note since last month. Trade is inclined to be dull. Glycerine is slightly firmer and is now held at 16½c:—

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 35	"	2 60
Caustic soda, 70°	2 60	"	2 85
Chlorate of potash	0 13	"	0 15
Alum	1 35	"	1 50
Coppers	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 09
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 00	"	2 00
Castor oil	0 09	"	0 10
Cocanut oil	0 10	"	0 11

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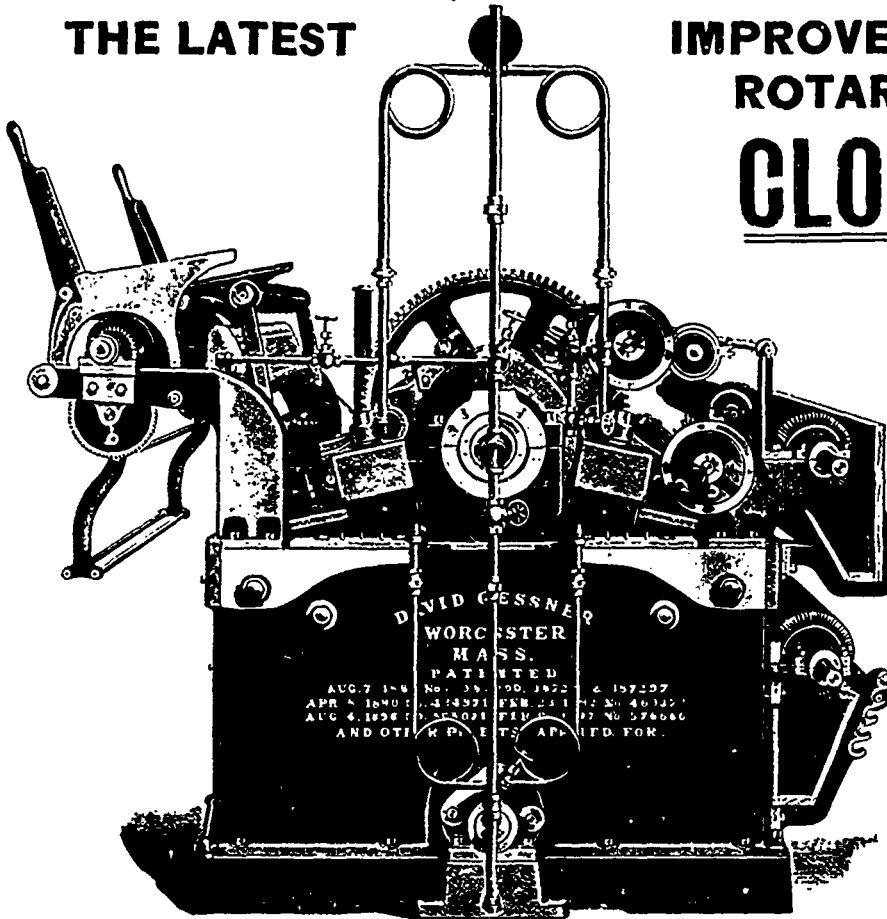
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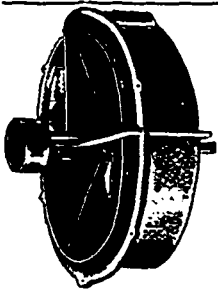
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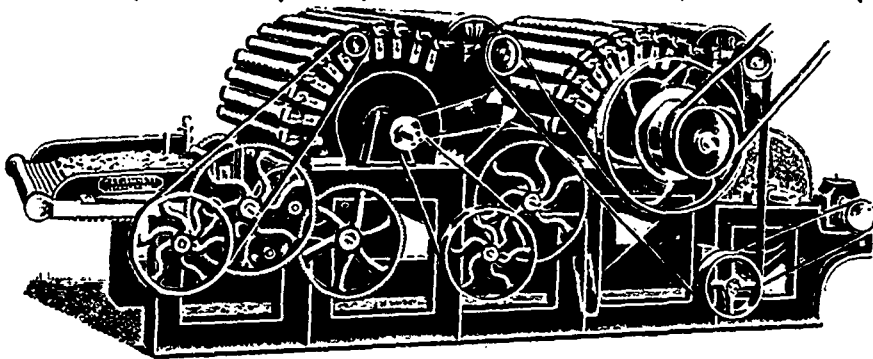
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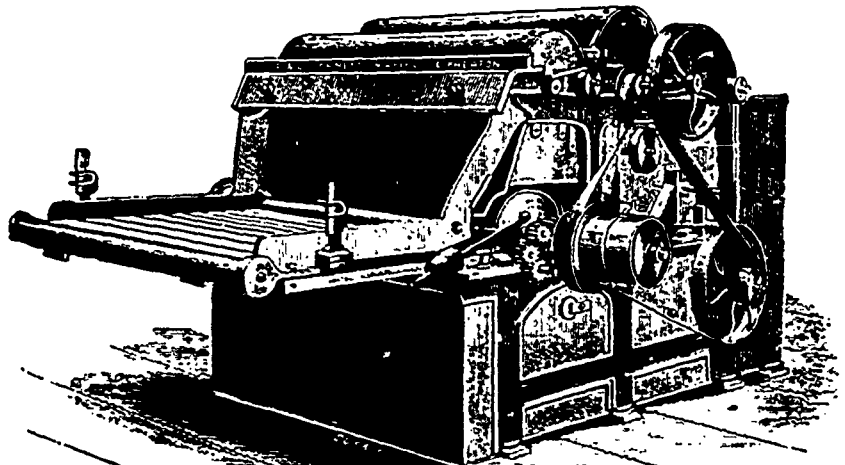


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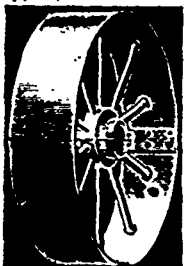


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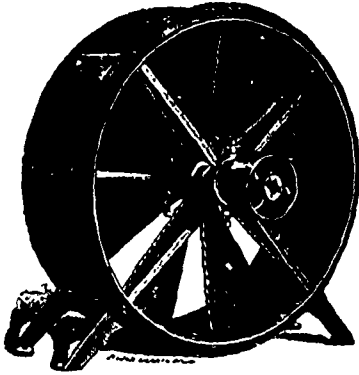
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As an example of the information given in the various lists of manufacturers, the following shows the form of report of the Woolen Mills: Name and address of Proprietors, and names of the Officers (if a joint stock company), the capacity in sets of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

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

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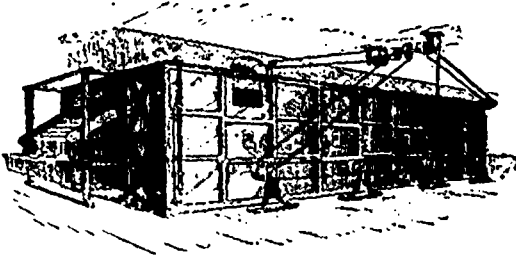
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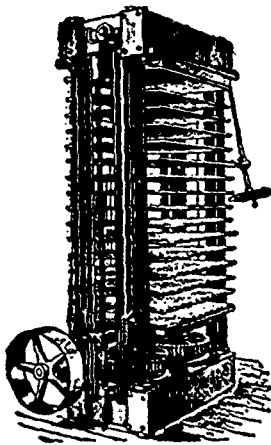
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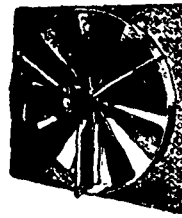
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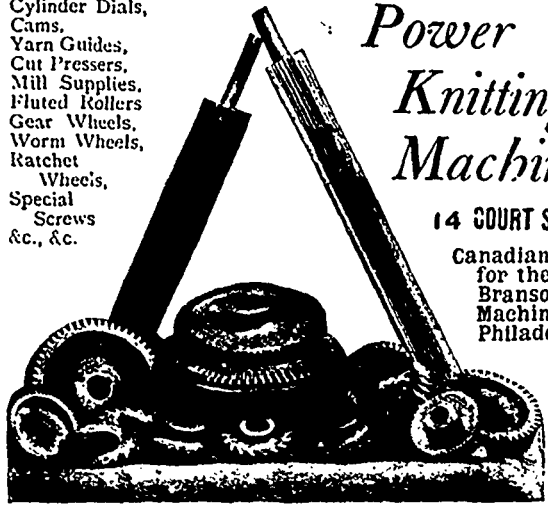
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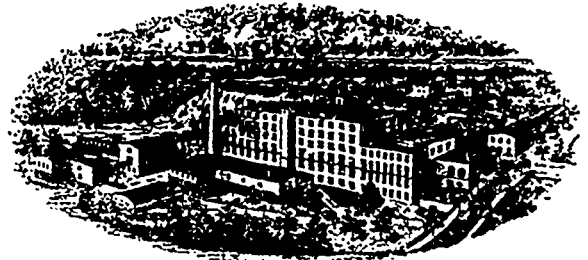
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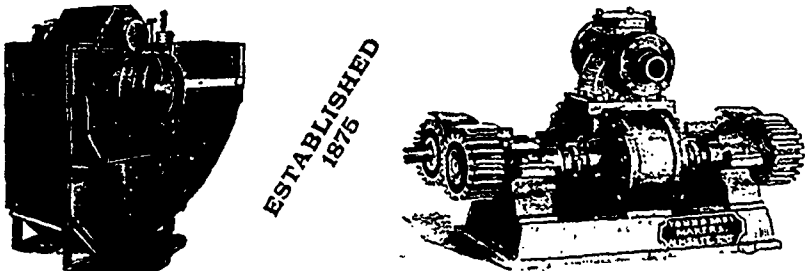
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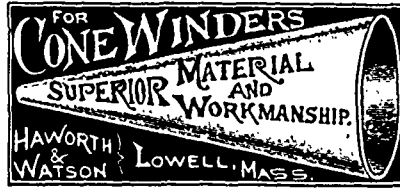
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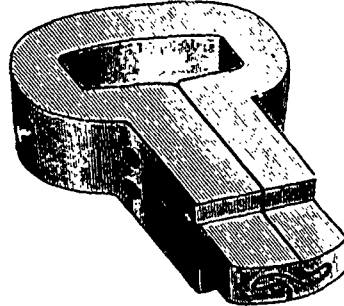


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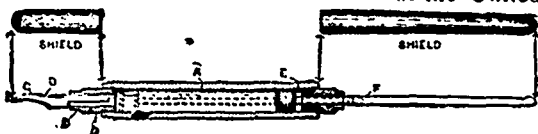
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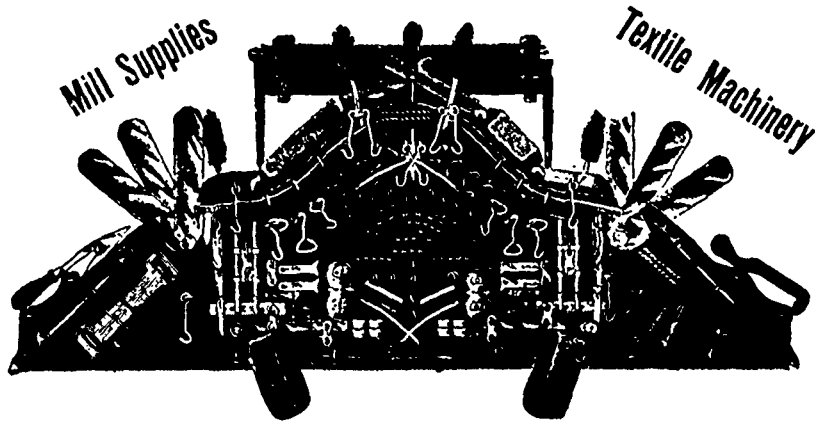
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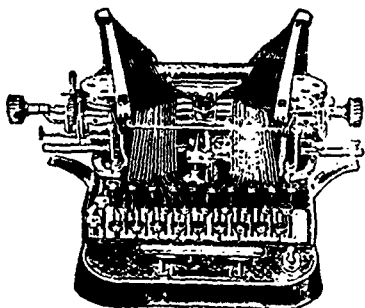
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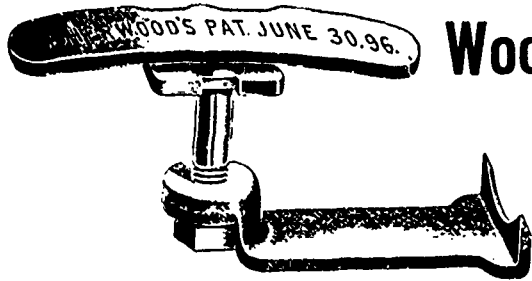
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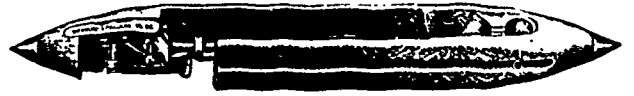


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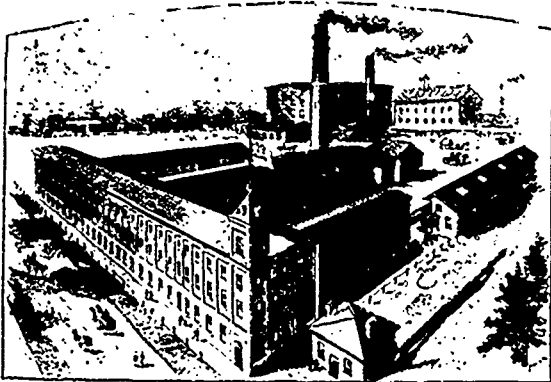
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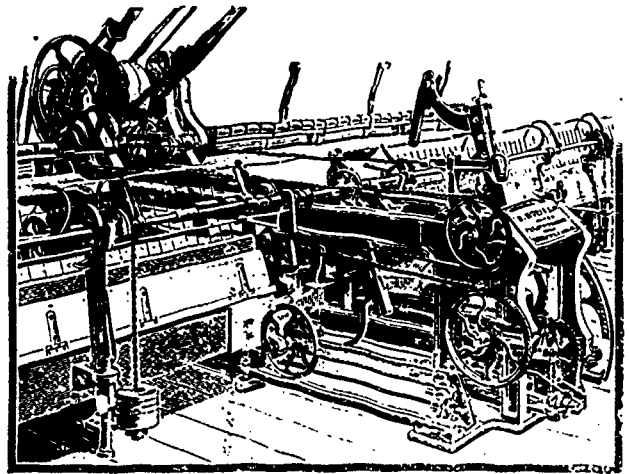
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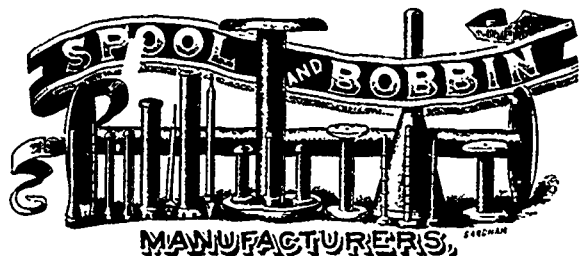
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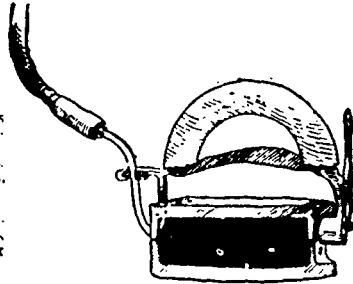
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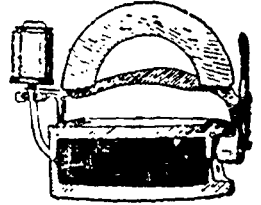
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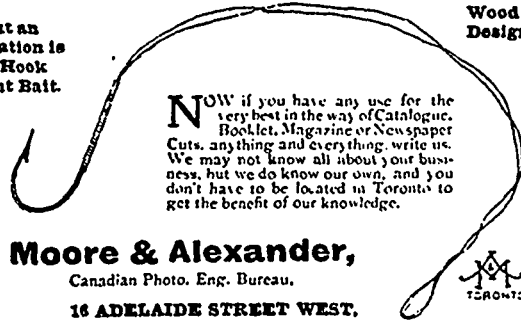
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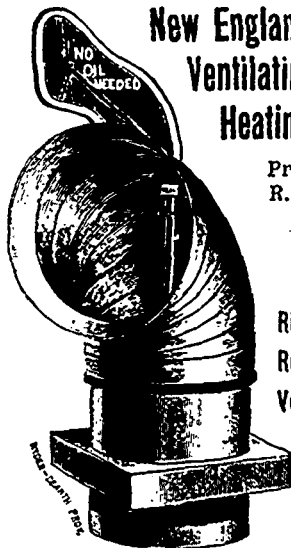
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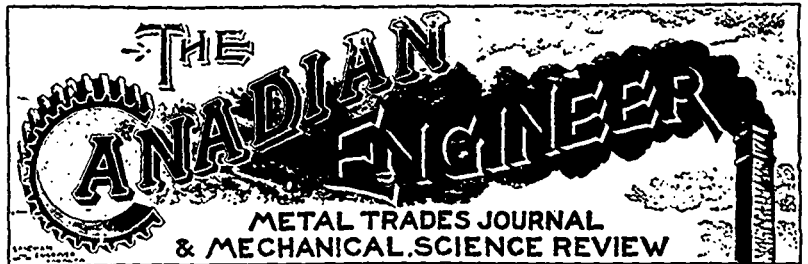


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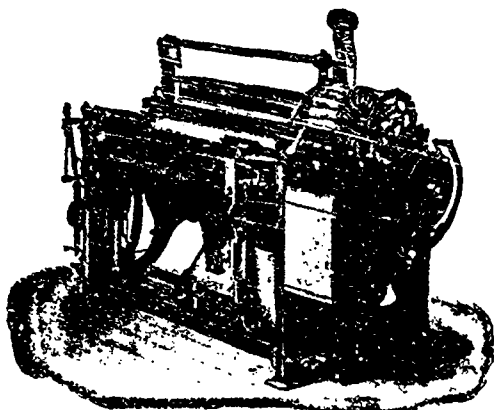
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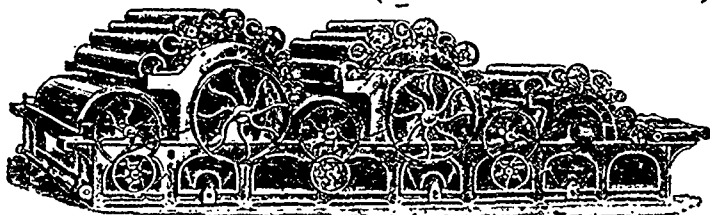
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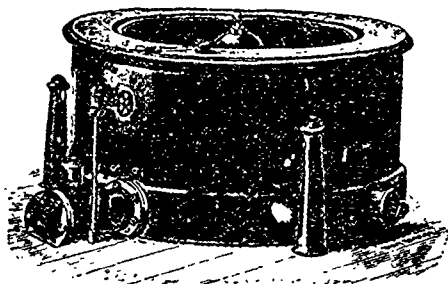
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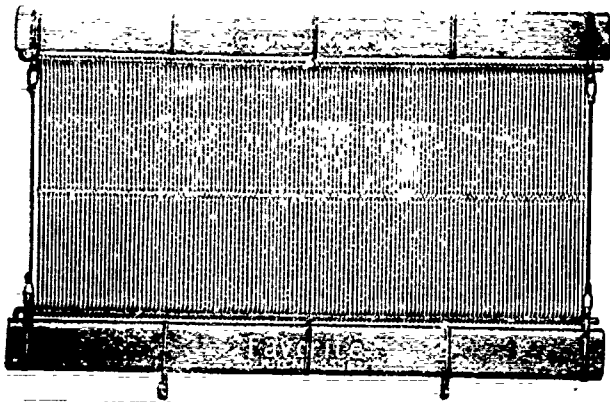
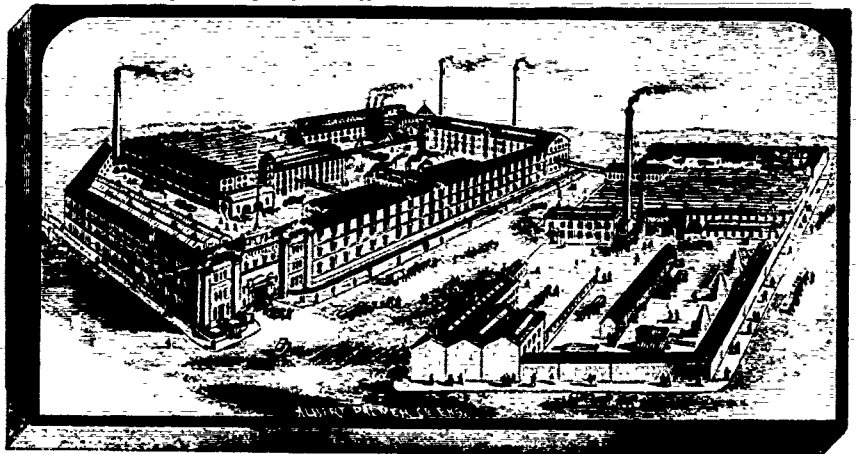
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