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# CANADIAN Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XVIII.

TORONTO AND MONTREAL, APRIL, 1901.

No. 4.

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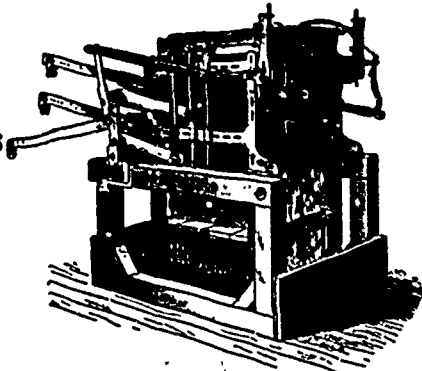
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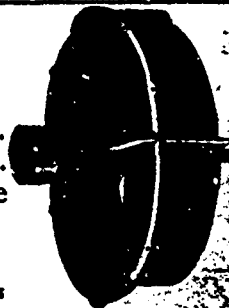
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Textile Trades of Canada.

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## Canadian Journal of Fabrics

A Journal devoted to Textile manufactures and the Dry Goods and kindred trades.

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### THE CANADIAN TEXTILE DIRECTORY

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

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### THE WOOLEN SITUATION.

The suggestion of "Scrutator," whose letter on the woolen situation appears in another column, is certainly a timely one. The woolen manufacturers can only get justice from the Government by fighting for it. As pointed out in last issue, the disabilities of woolen manufacturers under the preferential tariff are quite exceptional. They suffer in a way which no other branch of the textile trades suffers, for the reasons we have already stated, and it may be said that no department of home manufacturing, whether in the textile or any other line of business, bears so fully the brunt of exemption accorded under the preferential act. Not only so, but we do not know of any other branch of industry which invites the amount of wholesale smuggling from Germany and other countries, by way of Great Britain, that is invited and permitted under the

preferential tariff. These things have never yet been brought home to the Dominion Government, as they should be, and now is the time to do it.

We should like to have the opinion of the woolen manufacturers and manufacturers in any other department of the textile trades, on the present situation, and to have suggestions from them, not only as to tariff changes, but as to the general conditions of trade, and what changes and improvements are needed outside of tariff regulations to build up Canadian textile manufactures.

### TECHNICAL TRAINING IN CANADIAN TEXTILES.

Some twenty-five years ago when the act for the establishment of the Ontario School of Practical Science was passed, it was provided that technical education should be given in the manufacture of wool, cotton and flax. After a quarter of a century has passed and the textile industries of the country have vastly increased in importance, the Ontario Government vote \$41,000 a year for a second mining school in the province but not a cent has been spent in promoting the textile trades. Meantime Great Britain, Germany, France, the United States and every other country of consequence making a pretence to civilization has established technical colleges and schools in textile manufacturing and textile design, and in the last ten years hundreds of our young men failing to get the required facilities at home have had to go abroad to these institutions for the special instruction required to fit them for their vocation. Quite naturally, but unfortunately for our home industry, the best and most promising of these young students have been attracted by offers made by manufacturers in the United States or England and their talent has thus been lost to their native land and goes to build up the textile industries that are now competing with our own. It is amazing that our governments—Provincial and Dominion—do not realize what the country is losing by this supineness. Ontario in particular should awaken to the fact that, since the Dominion Government evidently mean to let the woolen industry sink or swim, a most promising branch of its manufacturing stands in jeopardy. Over two thirds of the tweed carpet, knit goods and other woolen mills of Canada are in this province, and it is not very likely that the politicians of the other provinces are going to fight for an industry which chiefly concerns Ontario. Meanwhile what are the

politicians and manufacturers of the province chiefly affected going to do in the present predicament of the woolen trade?

The want of technical education in any person or nation will ever stand as a bar to progress; English people as a rule are unwillingly enough forced to recognize the fact that other nations, more especially Germany and the United States, are ahead of them in the race of life in this respect. Our supremacy in trade is being gradually wrested from us not in one but in many branches; and though we have, bulldog like, fought a hard battle we are now realizing at length the cause of our errors. No amount of character of however high a standard, will supply the place of knowledge; and the technical schools that are being too slowly erected in Great Britain, had been better placed there years ago. It is a striking proof of the necessity of technical education, that in all centres where such have already been placed, a new vitality seems to be imparted to the community resulting in a higher intellectual standard being adopted, as well as greater individual success being achieved. The writer has in mind a simple colleen, bright, adaptive, but as bare of education as her own native mountains of Kerry, who came to live in Boston, Mass. Her young mind drank in knowledge with avidity; and she developed a latent talent for textile design which by the technical school authorities was recognized and fostered. In about five years from the time she left the "old country," the simple Irish girl was earning enough money to keep her parents in undreamt of plenty!

In the larger industrial centres of England, Scotland and Ireland the necessity and blessing of technical schools has been recognized, and the results achieved by them may assist in enabling our Empire to regain her commercial supremacy. It seems not unreasonable to hope that Canada whose natural resources have contributed so largely if not entirely to her recognized position among the daughters of the Empire, should before it is too late, still further secure her place by providing her sons and daughters with that technical knowledge which will enable them to be more than mere "hewers of wood and drawers of water," and assist them to take and hold their own among the brain workers of the new world.

### THE LINEN TRADE.

The world's acreage of flax—that is of flax grown specially for fibre and not for seed—has been growing less and less, though the price of linen goods is well maintained, and the demand strong. In spite of the scarcity of raw material, there does not seem to be any tendency among agriculturists to go largely into flax raising. The superstition that flax is exhausting to the soil should not stand before the investigations of scientists, who have shown that the farmer only requires to know how to treat his land and to know what constituents are to be returned to the soil in order to make flax an easy crop for the farmer to raise continually. The last annual report of the Belfast Linen Merchants' Association, shows that the acreage under flax in Ire-

land in 1900 was 47,327 acres, which, though showing an increase over the two previous years, was much below what it was from 1886 to 1896, when it averaged about 100,000 acres. The secretary, speaking of the stimulus given to flax cultivation, said what their trade was suffering primarily from at present was the very diminished quantity of flax on hand or in sight, besides the inferior quality of much of the foreign growths. Since the end of December, the raw material had further advanced, so much so that the prices paid latterly for coarse flax had amounted to fully 100 per cent. advance over the lowest prevailing about two years ago. The manufacturer, therefore, had to face a serious dilemma. If he was to keep his looms running he must get a corresponding price for his cloth. The year that was past could scarcely be called so prosperous for their staple trade as the preceding one. The high prices which prevailed lessened sales to a considerable extent. On the other hand, there had been a falling off in production, owing to the fact that a great many of their mills and factories wisely decided to go on short time; consequently, that day he was safe in saying that there were no stocks of any account. Shipments also had fallen off in quantity, and from this they might infer that those markets to which they sent their products were in the same condition as they were in regard to stocks of linen goods. He thought he might safely assume that a reaction in demand was in progress.

The president, in his annual address, said the general trade of Belfast was fairly satisfactory during 1900. The linen industry had been for 60 years, and still was, the staple trade of Belfast. Fifty years ago, the number of spindles employed in spinning linen yarn was: In England, 365,000; in Scotland, 303,000; and in Ireland, 326,000. To-day flax-spinning spindles had almost ceased to be in England; they had notably decreased in Scotland, whereas in Ireland, they had largely increased, and numbered 828,000. As Mr. Wyndham, the chief secretary, said the other day, Belfast was the last stronghold of the linen industry. Perhaps it did not now get credit for all it had been worth to the town. Undoubtedly, it was the chief factor in the development of the town in bygone days, and it still went on, amid many difficulties, to maintain its position, and distribute in Belfast and the neighboring counties over £50,000 per week in wages, whether trade were bad or good. Among the difficulties which the linen trade had to contend with were the diminishing quantity of flax fibre grown in Ireland, a limited demand for linen goods due to their relatively high price, to the encroachment of cotton frequently under the fraudulent guise of linen, and to the common, but unproven, assumption that linen was unsuitable for wearing next the skin. The linen industry had shown fairly profitable results in the past year. It should, however, be remembered that these profits were to some extent due to mills and factories having laid in raw material at cheap rates before the

advance in price. The coarser and medium qualities of flax were dear, and both yarn and linen were higher in price than a few years ago; yet they were only, in a few instances, above what might be considered the average price. A chief want in the linen industry was novelty, as well as in the process of manufacture, as in the article produced; and for this they looked to technical instruction and the teaching of applied science.

The question may be asked: How is it that Ireland has thus secured a practical monopoly of the linen industry? We are afraid the reply must be that the sister island has simply picked up what the other parts of the Kingdom have abandoned for something better. One of the causes which enabled it to do this was the fact that the north of Ireland was the most important flax-growing field in the country. Its raw material was, therefore, on the spot—a desirable economy. But this is a diminishing advantage, for flax culture is a decaying industry, and this fact, it is anticipated, will prove a serious trouble in the early future. How is it that with the mills upon the fields, farmers do not find it profitable to grow flax for them? Such must be the case, or it would be done. The distressful condition of all kinds of agricultural pursuits is a stale topic in relation to Ireland. What is the cause? English misrule can hardly be charged with this by any equitably-minded person. We are loth to accuse anybody of unfair dealing, but if what we hear be true, it would not be difficult to place a finger upon the festering sore which is killing the flax-growing industry. It is one which the Department of Agriculture and Technical Instruction will never cure, nor even reach with any appliance or experiments it can bring to bear or enforce; it is unfair dealing with the flax-grower. The market is too small in which to sell the produce under such a degree of competition as shall ensure a fair market value to the grower. A combination among the men who buy flax for the mills can, by abstaining from operation, easily starve the small grower into surrender, because he has no means of access to foreign centres of manufacture, his production being too small. It may be denied that such combination ever takes place; we fear, however, that investigation would prove it. Assuming it to be true, all we have to say about it is that it is an extremely shortsighted policy, for persistence therein will ultimately place the spinning and weaving industry of Belfast entirely at the mercy of foreign flax cultivators, and Ireland will lose another industry which it can ill spare. We need not dwell upon the other points raised, as we are afraid the industry will never see a return of the affections of mankind to linen as an article of underwear. Linen has its sphere of usefulness, and it has found this during the closing half of last century; and such sphere it is not likely to lose.

—It is not alone the cotton mills of the United States that are entering a period of depression, but

there seems to be a good deal of uncertainty among the woolen manufacturers. Some attribute this partly to the lack of any indication as to what styles will be in demand for the coming season. At the sources of fashion no one seems to know whether it is woolen or worsted, or rough or soft finished goods that will be in demand, and only staple lines are being made up with any sort of confidence. Some of the trade papers advise mill men to shut down rather than work in the dark, stocking up goods which may have to be sold at a loss. The Boston Journal of Commerce, while admitting that the past six months have been a most trying period for the wool trade, thinks that a turn in the tide is at hand, one of the promising indications being a disposition among buyers to take the finer grades of wool. As for the cotton trade of the United States, the closing down of the Tremont and Suffolk mills, of Fall River, the other day, throwing 1,000 hands out of work, is only one of several signs of a widespread depression which is affecting northern and southern mills alike. Fully seventy per cent. of the mills of the United States are at this moment curtailing production, and it seems certain that most of the mills have been producing goods at a loss for the past three months. The present curtailment of production is intended to bring down the price of raw cotton, and may restore the market to a better condition by enabling many of the mills to export cotton goods more largely on the basis of lower prices.

—The depression which has been increasing for several months, in the German textile industry, has spread to the iron and other industries, and is causing a good deal of uneasiness throughout that Empire. We recently referred to this state of things, as likely to have an unfavorable reflex action upon the Canadian textile industries by the importation of German goods on a lower level of prices. One branch of the German textile trade, seems to have already run into a state of decline. This is the combed worsted yarn industry. In the districts around Cologne there were in 1895 about 253,000 spindles in this trade, but this total has fallen to 185,000 spindles in the present year. Of the spindles in operation, in 1895, 88,000 made yarns for the cloth and hosiery manufacturers of the neighborhood, and 165,000 yarns for sale elsewhere. In 1901, 92,000 are working for the immediate home trade, and 93,000 for export elsewhere. Since 1895, the number of spindles has therefore been reduced by 68,000, or in round figures 27 per cent. Since 1895, twenty-eight mills have totally disappeared as spinning mills, seven being burned, and twenty-one having been stopped. In addition to this, three mills have been partially stopped, and only one has effected a material extension. Besides this the spinning mills around Berlin, in Lusatia, etc., have decreased about 130,000 spindles; in spite of which there has not been a single profitable year for such establishments during the period from 1895 to 1901.

The reason for this seems to be that the hand-loom weaving industry and the small power-loom mills are gradually disappearing, and are replaced by large power-loom manufactories. These large mills are gradually but steadily adding their own spindles to their establishments. The export of yarns becomes smaller the more effectively foreign countries are hedging themselves with protective duties. German sheep rearing is steadily going back. The once numerous small peasant spinners or spinning mills which used to convert the wool of the peasants in their immediate neighborhood into yarns, are no longer to be found, and the home-spun stocking or skirt has disappeared altogether. Speaking of the general outlook in manufacturing in Germany, the Berliner Tageblatt takes a gloomy view. It says the conditions are so bad that charitable efforts are powerless to cope with the situation. Reduced production and the consequent dismissal of working people are so general as no longer to attract notice. It is safe to say that a quarter of the working people are either idle or insufficiently employed. There is little prospect of an improvement in the situation. The matter is made more serious by the uncertainty of Germany's commercial policy. The numberless industries of the country do not know whether disastrous tariff wars will not destroy the work of years. The uncertainty of Germany's vacillating trade policy drives German capital and intelligence to found large industrial undertakings abroad, and hinders business relations with foreign countries. Prices are so depressed in Silesia that even the iron companies there, who possess their own coal mines and furnaces, cannot cover operating expenses. The tin plate and tube manufacturers, the plants for the manufacture of electric supplies and the textile industries are in a similar plight. Many factories have closed, and in others the hours of labor have been reduced, while the workers crowd to the gates of the factories seeking employment. The wealthy classes feel the pressure of these conditions proportionately with the working and professional classes.

### THE WOOL MARKET.

No fresh developments can be recorded in the Canadian wool market. The new clip wool, which was mentioned last month as beginning to come in, was, of course, fleeces from breeders, and farmers' wool will not be quotable till next month. There seems every probability that prices for the new clip will open on a lower level, inasmuch as large quantities of the last clip are still in the hands of dealers here, while the United States market, which affects the wool trade here, is still uncertain. There are no transactions taking place in Toronto, but values are given by the local dealers as follows: Fleece, washed, 12 to 14c.; unwashed, 8 to 9c.; pulled supers, 16 to 17c.; extra supers, 19 to 20c.

The Montreal wool market is firmer for all merinos, which show from 5 to 10 per cent. advance. Manufacturers are now showing their spring sheets, although at the moment they are buying wools sparingly. Capes, 14 to 15c.; Natsals, 15 to 16c.; Chilian, 12 to 13½c.; B.A., pulled wools, 25 to 35c.; Canadian, pulled, 19 to 20c.; fleece, washed, 15½ to 17c.

Canadian fleece is held in the Boston market at 26 to 28c., which, allowing for duty, means 13 to 14c. here.

The second series of colonial wool sales in London closed on the 27th March. Cape of Good Hope and Natal sold well to the home trade and Germany, and a few suitable lots were taken by American buyers at steady prices; the best grades scored an advance of 5 per cent. Snow white scoured, unchanged; inferior grades were irregular throughout the series. The sales from opening to close were active and competition was brisk, especially during the last week, when the Continent bought freely. At the close the tone was very strong, notwithstanding the nearness of the next sales, which are scheduled to open on April 30th, with a limit of 250,000. The market for fine wools has recovered from the depression prevailing for fifteen months, prior to the sales just closed, and the consumption of wool under the stimulus of low prices is resuming normal proportions.

—On Thursday 11th inst, Galletti Whyte, of Galetta, died after a long illness, aged 88 years. He leaves a wife, but no children. For a number of years deceased ran the woolen mill at Galetta, and was widely known and highly respected.

—Ithol B. Royce, who years ago ran a woolen mill in Pembroke, Ont., died recently at his home in Muskegon, Mich.

Incorporation is being applied for by the John Bertram & Sons Company, of Dundas, to manufacture and deal in machine tools, machinery, pulp and paper machinery, and operating by steam, water or electric power. The proposed capital is \$300,000, and the applicants are John, Alexander, Henry, James and Thomas Bertram.

The Keewatin Power Co. have obtained from the Ontario Government, a concession of pulp timber on 60 square miles of land along streams tributary to the Lake of the Woods, on condition that the company spends \$1,500,000 within three years in the erection of pulp and paper mills at its water powers at Funnel Island, Rainy River.

—Louis Simpson, formerly manager of the Montreal Cotton Mills, has secured concessions at Chats Falls, some twenty miles above Ottawa, where, he says, he has 100,000-h.p. at his command. Mr. Simpson states that industries of equal magnitude to those of Sault Ste. Marie will be established at the Falls in the near future. Outside capital is behind the enterprise. A town site of 2,000 acres has been laid out on the Quebec side of the river. A cotton mill is one of the industries proposed.

### WOOLEN AND WORSTED INDUSTRY.

FROM A LECTURE BY A. E. GARRETT, F.R.G.S., LONDON.

The lecturer said that wool, even of the same fleece, was not always of the same quality, and the quality of wools obtained from fleeces of the same breed of sheep living under different conditions, of course, varied very much. On this account it was necessary that wool should be sorted before being used in manufactures. For this purpose the wool was placed on a table formed of wire netting or wooden laths. The sorter pulled it to pieces and judged of the quality, partly by handling, but chiefly by the appearance of the wool. Hence the persons engaged on this kind of work must be chosen on account of their experience. Wools might be classed under several headings, first of all there was what was known as hog, or hoggart, which



was the first clip, and was really lambs' wool. It could be easily distinguished by the pointed tops of the staple, since, after the first clip, all wool had more or less blunt ends. The first clip also differed from the after clips by the difficulty which was experienced in separating the fibers from one another without snapping them. The second class of wool was named "wether," which was the name given to wool of all clips after the first. They would all be familiar, also, with the term "skim" wool, which was wool taken from the backs of slaughtered sheep. This process was made easier either by soaking the skin in lime or by a process of sweating. All kinds of wool contained impurities such as earth, dried grass, burrs and yolk, the latter being natural oil secreted by the skin, and which in life kept the fibers from matting together. These impurities must of course be removed from the wool, and for this purpose it was subjected to the following operations: If it were dusty, or if the impurities were of such a nature that they could be shaken out, the wool was sometimes passed through a machine known as the "Battering Willey," so as to render the process of washing simpler. This process was, however, apt to damage the fiber. In the washing treatment the wool was passed through "washing bowls," which contained soapsuds or alkali. After the washing, the wool was generally, but not always, dried, and amongst the best drying methods were those machines in which the wool was kept constantly moving, and, at the same time, subjected to the action of dry heat.

In the spinning of wool it was necessary to consider two separate industries, viz., worsted spinning and wool spinning. In worsted spinning, after washing the first operation was the straightening out process, in order to perform which the wool was passed through a series of machines known as gill boxes. In all, the wool had to pass through some five or six of these machines, and was eventually passed into cans or wound into balls. The combing operation came next, and by this means the short fibers and lumps were removed, the remaining wool, after the process was finished, being known as the "top." Medium and short wools, instead of being passed through the preparing boxes, were subjected to the process known as carding, performed by a machine in which a series of rollers or cylinders revolved at various speeds, each roller being covered with a leather or gutta-percha foundation, in which a large number of wires were placed point outwards. The wool passing between the cylinders was caught by the wires, and the fibers were thus separated from one another. The wool issued from this machine as a thin sheet of opened and straightened material. The next process in the production of worsted yarn was called drawing, and in this the "sliver" wool, which formed the "top," was gradually reduced in thickness, until sufficiently thin for the thread which it was required to spin. The simplest machine for this purpose, and the one which was in general use in this country, was known as the "English," or open-drawing machine. There were, however, two other distinct types of drawing machines, known as the "Code" and "French" respectively. The roving process came next, and this was really a continuation of the previous process, which was carried out on a machine known as the roving frame. The wool was now quite ready for the spinning process, by which it was converted into yarn. In the production of woolen, as distinct from worsted yarns, after the carding process the wool, being often slightly soiled, had to be washed before combing; but, as it was in a continuous or "sliver" form, the ordinary washing machine could not be used, but a machine known as a back-washer was used, where the slivers ran side by side through two or three bowls of soapsuds, and on emerging from each bowl, passed through press rollers. In the spinning process different kinds of mules had to be used for the production of woolen and worsted yarns. For the production of fabrics the yarn had

to be woven by means of some kind of loom. A general idea of the principle involved might be obtained by a careful study of the operations in hand-weaving. The warp threads which, of course, were those threads running the same way as the length of the piece, were stretched out in a suitable manner and passed through healds, by means of which the weaver could lift any of the threads as required. When these warp threads were lifted, the cross threads, known as the weft, were passed between them and the threads not lifted, either by the fingers or by a shuttle thrown by hand. In the worsted yarns all the processes tended towards the production of an even level thread in which the fibers laid as straight and parallel as possible, and which had had removed from it all short fiber and matted wool by combing. The object of this was to produce in the worsted fabric a surface in which the threads could be distinctly followed. On the other hand, in a woolen fabric, the object was to lose the run of the threads and merge the whole into a mass of felted fibers. The sample of the fabrics might also be raised by drawing fibers out by means of teazles. They were then cropped or cut down so as to produce a velvety surface. After the weaving process, materials had still to be "finished," a process which consisted of various operations, such as (1) the removal of oil and dirt which had been collected in passing through the various machines, (2) milling or fulling, by which the fibers were made to become felted together, and by which the fabric became narrower, shorter and thicker; (3) the removal of surplus water; (4) the raising of the surface, in woolens only, by means of teazles, as already mentioned; (5) imparting gloss by pressure, and (6) dyeing.

Two classes of goods which were often placed among woolen and worsted manufactures were mungo and shoddy, which were low-class articles produced by grinding and tearing up waste materials obtained from the various processes, or from old clothes, etc. Mungo was prepared from hard, twisted, and felted materials, while shoddy was made from spinning wastes and from soft goods loss in texture. In its earliest development in England the woolen manufacture was established where there was ample supplies of water, free from lime, for washing the wool, an abundance of fuel, cheap provisions, and good sheep farms near at hand. The kind of wool which could be obtained most easily settled the nature of the industry; if long-stapled wool, then the industry was worsted manufacture, if short-stapled, then it was the manufacture of woolen cloths. Previous to the development of factories, brought about by inventors of machinery, the woolen industry was much more scattered than it is at present. In the seventeenth century the county of Kent, and the towns of York and Reading made one kind of cloth of heavy texture; Worcester, Hereford and Coventry made a lighter kind of fabric; and throughout the eastern counties of Norfolk, Suffolk and Essex, cloths of various kinds were made. Fine cloths came from Wiltshire, Gloucestershire and Oxfordshire; Devonshire made kersey and greys, as did also Yorkshire and Lancashire; the Midlands furnished "Penstone Cloth" and "Forest White;" while Westmoreland was the seat of the manufacture of the famous "Kendal Green" cloth. Thus in the olden times the south and east were the great manufacturing regions, the population being settled there, and the district enjoying the advantages he had mentioned. As prices of rent, etc., rose, the industry went west, where, on the Cotswold Hills and Mendip Hills, were reared sheep whose wool was suitable for the production of broadcloth; and Trowbridge, Bradford and Stroud had all been noted ever since for these goods, although coal was not so cheap there as in the West Riding of Yorks. It would be noticed that it was always the better class of goods which were manufactured in such places, where cheap coal could not be obtained. At the present time the woolen industry of England had narrowed down until the



proportion carried on outside the West Riding was extremely small. This was due to the following facts. (1) We were now largely dependent upon raw material obtained from South Africa and Australia, (2) that the cheapness of coal was an important factor now that machinery was so largely used; and (3) that there were plenty of good ports for the export and import trade in easy communication with the district. In Scotland the woolen manufacture was carried on chiefly in the valley of the Tweed, although Aberdeen, Kilmarnock and Stirling all had some share of the industry. On the Continent woolen goods were manufactured in the northwest of France, round about the towns of Roubaix, Tourcoing, etc., which towns were conveniently situated with regard to the ports of Dunkirk and Antwerp, through which most of the wool was imported into the district. High-class goods were specially produced here for the wealthy centres of London and Paris, for which the district, lying as it did in an intermediate position, was peculiarly adapted.

Dealing with the woolen industry of France, he asked, what were the causes of the long-continued depression of trade in France? There was no doubt that one great cause was M. Méline's protective system. To-day France exported some 7,000,000 kilos less of woolen goods than she did in 1892, and the diminution had gone on of late years at an accelerated rate. In 1896 she exported 14,370,000 kilos of cloth and cashmere, and in 1898 only 8,350,000 kilos. In Belgium the industry had been carried on for centuries at the town of Verviers, and in the United States the manufacture had largely increased in importance since 1895. According to a statement issued by the United States Bureau of Statistics the value of imports of woolen manufactures into the States was now less than one-third of what they were in 1895. During the eight months ending August 31, 1900, the imports of woolen manufactures amounted to 2,518,000 lbs., as against 8,472,000 lbs. in the eight months corresponding in 1895. On the other hand, the exports had steadily increased advancing from £56,000 in 1890 to £185,000 in the eight months of 1900. Details as to the destination of exports of woolen manufactures for 1899 were as follows: American carpets were sent to the United Kingdom, Canada, Mexico and the East. Dress goods were sent to England and Mexico; flannels and blankets to Hawaii, China, Hong Kong, Canada and Chili, and clothing to Canada and Hawaii.

Just a few words as to competition of England with other countries in the woolen trade. In Japan there was formerly an excellent field for German flannels, which dominated the market there. It seemed, however, that noteworthy changes in consumption were taking place in Japan, which offered favorable chances to British manufacturers.

In 1896 Germany supplied 86.9%; England, 10.1%.

In 1897 Germany supplied 89.3%; England, 10.7%.

In 1898 Germany supplied 88.7%; England, 11.3%.

In 1899 (first six months) 61.7%; England, 38.1%.

Probably the importation had fallen off owing to the laying in of great quantities of stock by importers on account of the new tariff, but it also appeared that German flannel, which was thick and heavy, was actually going out of fashion, and was being replaced by thinner and finer British products. Japanese goods would probably become more dangerous to the German product, which was of inferior quality, than to the British make, which was superior. In regard to the British woolen trade with South America, it was worth noting that three-quarters of the woolen and worsted goods imported into Brazil were estimated to be English, and the remainder Continental. In West China also the great bulk of the imports of yarns, piece goods, etc., was in the hands of the British and Indian merchants. In California and Oregon, the Western States of the U.S.A., English woolen goods were holding their

own, but in Turkey they were being ousted by fine wools of Austrian make, ladies' dress material of French and German make, and German hosiery. In another European country, i.e., Switzerland, Great Britain was again beaten by other competitors, and in 1898, out of a total of £1,803,353 coming under the head of woolen goods, Great Britain only supplied to the value of £297,392, or barely 16 per cent. of the total; Germany supplying £1,009,134; France, £370,041, and Belgium, £114,982. Our total exports of woolen and worsted yarns and manufactures, including yarn, alpaca, mohair, etc., were: 1895, £20,997,000; 1896, £25,492,000; 1897, £22,571,000; 1898, £20,143,000; 1899, £21,508,000. The average for the ten years ending 1899 worked out at £23,148,000, and thus they would see that, though the price of wool was very high in 1899, our exports of woolen manufactures fell in value in that year £1,640,000 below the average for the past ten years. The chief centres of the falling off, so far as he could tell, were as follows: First of all America, where, in 1899, we sent woolen and worsted goods value £1,228,000. The average for the ten years ending 1899 had been £3,135,000, so that in this country alone we were £1,907,000 below the average. Then there was a great diminution also in France. In 1899 the quantity we sent to France was £1,617,000 in value. The average for the ten years was £2,185,000, so that here we were below the average by £568,000. It was interesting, however, to know that there were two countries which had been taking more of our woolen manufactured goods during these years. First was Australia, where, in 1899, the imports of English woolen and worsted goods amounted in value to £1,364,000. The average for the ten years was £1,118,000, the increase being £246,000. The other country was India, where, though there had been a steady increase, the imports were not nearly so great as in Australia. For the whole of 1899 they only amounted to £503,000, and the average for the ten years being £399,000, a gain was shown of £104,000. In these statistics he thought they would have no difficulty in seeing that while England still held her own in some quarters she was being ousted in others. It therefore behoved English manufacturers to look about and see if there were not fresh markets open to them, and if they could not compete favorably with other countries in the markets in which, somehow or other, they were letting slide.

#### PROPOSED MEETING OF WOOLEN MEN.

EDITOR Canadian Journal of Fabrics.

Sir,—it is hardly necessary to give expression to the dissatisfaction felt by the people engaged in the woolen industry, both employer and employed. In conversation the ministers, except one, and nearly every liberal member, express sympathy with the manufacturers and acknowledge the injury under which they suffer, but rather than admit in the House that this one may be wrong, they all vote against the interests of 20,000 employees and \$20,000,000 of capital. About a year ago the Government was waited on several weeks before the additional preference was put into force, and the manufacturers were led to believe, though no definite promise was given, that relief would be given. This spring again the woolen industry has laid before them the facts explaining how the industry has been injured by the action under the increased preference, and yet because one of the ministers is determinedly opposed to the judgment of all his confederates, immense loss must be borne by this industry and all its contributors. Public opinion should be educated on this important question. It will be the only way to avert serious trouble which must take place soon, and the responsibility for which must rest with the Government. The woolen manufacturers to save their capital from absolute loss

must at once make a reduction in wages, varying from 10 to 15 per cent. Under the advanced cost of living this will be a hardship which will undoubtedly bring strikes, and all the distrust, annoyance and troubles that invariably accompany a strike. It will be the lesser evil than that of closing the mills down altogether as it will give the laboring people the chance of accepting part of a loaf rather than none. The Government has had a year to make themselves acquainted with the actual condition of the woolen industry, and as guardians of the interests of the people they have not been true to their trust.

It is suggested, therefore, that a public meeting be called, say in Montreal, of all the woolen industry, the banks with whom the woolen men do business, the members of parliament from constituencies in which are woolen industries. The Reform and Conservative press, and representatives from the Trade and Labor Congress of Canada. You are asked, sir, to give this letter a prominent position in your journal, and as you are well aware of the facts under which the industry is being injured, and can vouch for the strictness and accuracy with which statements have been laid before the Government, you will serve an important industry by doing all you can to advocate this meeting in Montreal. SCRUTATOR.

### THE NOMENCLATURE OF THE POWER-LOOM.

BY OSCAR S. HALL, BURY, ENG.

The nomenclature of the power-loom opens out a wide and interesting field of study and research. It takes us back to the troublous days accompanying the period of transition from hand-weaving to power-weaving; it gives us a glimpse into the education and thoughts, wit and humor of the operatives—mostly Lancashire—who were beginning to develop and use the power-loom, because on account of the power-loom containing more parts than the hand-loom it was necessary that names should be coined for the convenient recognition of those parts. It may perhaps be well to remark that the names of the various pieces of the power-loom differ in different districts, and also that the designations to be placed before you do not all belong—although generally—to every power-loom, but to various types. If a person totally ignorant of the power-loom and its several portions were to stroll into a weaving mill or a power-loom making establishment, and casually hear some of the curious names in common use therein, he could easily come to the conclusion that a menagerie was in the immediate neighborhood or that a power-loom was another title for an animal. If such an individual was to close his seeing organs, and solely rely upon the voices he heard, he could come at one time to the opinion that human beings were being operated upon, at another that he was sojourning in the ladies' department of some draper's shop, or that he had somehow got mixed up with all the world and its contents. It could also be easily imagined that the Society for the Prevention of Cruelty to Animals might find great scope for its exertions in such establishments. It would probably shock the susceptibilities of an innocent, kind-hearted old lady if she stood behind a man and heard him say, "William, tell Bill to fetch 50 monkey's tails," or asking how many swans' necks and ducks' bills were ready. A power-loom possesses a monkey's or a monkey tail. Why the piece of loom with this designation was thus christened I cannot conjecture, unless monkeys wag their tails. With my slight knowledge of the natural history of the monkey I am not in a position to say whether monkeys wag their tails or not, but this part of a power-loom is continually moving to and fro, and may be straight or curved.

Power-looms also possess swans' necks and ducks' bills, in addition to horses' heads. No doubt these parts are so termed because of some resemblance. In fact, most of the names at-

tached to the separate parts of the power-loom seem to have been given by reason of some fancied similarity of shape or movement. A human being is represented in the power-loom by fingers, cheeks, heels, teeth, backs and what probably some individuals would like to possess, back eyes. Natural history is not neglected, because the power-loom owns frogs, indeed even frogs with wings. Perhaps these parts were so termed because when in the natural exercise of their functions they are suddenly touched they jump. Like many other machines, the power-loom possesses worms, and also extends its kindly care to two or more lambs. And as to fashions, what more can we expect than to be informed that a power-loom is the proud possessor of ruffles, hoops, linings, earrings, stays and caps. And what puzzled me for a long time was the fact that a piece termed an "old hat" was included in the inventory. I could understand the hat, because the piece is of hat shape, but why "old hat?" At last I hit upon the solution; it was because it had a hole in the top. The circus has added its quota to the nomenclature of the power-loom in that it has given us a tumbler and a juggler. The term juggler is very appropriate indeed, the part bearing this title cutting most remarkable capers, turning cart wheels, springing up and down, standing on its head and striking its complementary piece in the due exercise of its allotted task. The juggler would probably not receive such an appellation if brought into existence and baptized at the present day, but in former times, when first introduced, I should fancy the work accomplished by it was considered very clever and remarkable. And as for the household, the power-loom rejoices in the possession of hammers, shelves, staples, forks and, what are very essential, rockers, binders and cradles. Banks have not been overlooked. No doubt our worthy old weavers had their thoughts fixed upon such like institutions, and have dubbed special parts of the loom which control certain movements as "tellers;" while a lawyer had possibly been visited when such a name as "scroll" was added to the vocabulary. Astronomy has also added its little share to the power-loom. Probably one of our young weavers had been out courting, or, as it is termed—I hope The Athenæum critic is not present—in the Lancashire dialect, "quirting" (court-ing) expedition, and he was so struck with what he saw on the previous evening that he called some of the pieces "half moons" and others stars, star wheels. Plants are not overlooked in the power-loom, because stalks and leaves are indispensable to its completion. And it goes without saying that the harvest of nuts to be found about a power-loom never fails. In order to give a feeling of protection to the power-loom it has been armed with a couple of swords. In conclusion, the nomenclature of the loom is really very attractive and interesting. I have by no means exhausted the subject by what has been placed before you, but having drawn attention to the matter, leave it to more capable hands to complete the work. There are, of course, many other names connected with the power-loom which are common to other machines, for which reason I have not touched upon them.

### Foreign Textile Centres

MANCHESTER.—The figures of the cotton supply seem to be changing considerably in favor of Lancashire, owing to the diminished takings of America and the Continent. The prospective scarcity at this period last year induced both the Continental and American trades to buy very freely, much more so than did the Lancashire people. One reason for this, says The Textile Mercury, is that the former trades have not the same facilities for quick purchase, despatch, and receipt of the raw material at their mills as has the Lancashire trade, which can always get its supplies from the Manchester

and Liverpool markets in a few hours. This induces a habit of working on short supplies which, as shown by last year's experience, is sometimes a disadvantage. The former trades have to look further ahead and make earlier provision, which they did, and under perhaps exaggerated fears bought rather abundantly. The high prices, however, to which cotton and cotton productions were driven proved more than their markets could bear, and there has been a comparative collapse in the demand for their goods. They have therefore reduced consumption considerably, and, with no prospect of a scarcity, are using up their reserves. This enables them to keep out of the market; hence their diminished takings, amounting to 678,000 bales in six months. This has enabled 576,000 more bales to come to Liverpool, and these, coming upon an inflated price, have caused the rapid decline. The downward movement has also been accelerated by the disappointment and fears of American holders, further aided by the influence of the new crop.

**BRADFORD AND HUDDERSFIELD.**—The principal reason for low prices in cheap colonial crossbred wools, says The Draper's Record correspondent, is probably to be found in the fact that the demand from the Continent for two-fold yarns of the description made from these wools has been recently particularly bad, and the financial position in the principal using European countries, continues far from satisfactory. This extremely quiet state of the continental export yarn business has caused spinners here to reduce their quotations for two-fold yarns to some extent lately without to any great extent increasing their business, but even now the position of the Bradford spinners is much more healthy than that of their continental rivals, most of whom show very large losses on their trading in 1900. There is no improvement in the demand for any class of home-grown wools, but pure lustre wools continue to be the easiest of sale. There has been a considerable business done recently in raw alpaca at firm prices, and the best kinds of Turkey mohair are also in very good demand. Both the home trade and export demands for single mohair and alpaca wett yarns is still good. Business in Bradford dress goods, although showing some improvement, is still far from satisfactory, and, at first sight, it is difficult to fully account for the lack of demand at what should be the busiest season of the year for the class of goods produced at this centre. Our Continental competitors do not seem to be at all better off than we are, as most of the manufacturers there are badly off for business. Some classes of Bradford dress goods, such as plain black and colored mohairs and light corkscrew coatings, are now being sent out from the warehouses in good quantities, and the demand for the better class of Bradford wool serges is also good. For the autumn dress trade there is every indication that plain fabrics will again be largely in demand, and some very beautiful fabrics are being shown in high-class cloths for costume purposes after the satin Amazon character, but having quite a new bright finish, which gives them quite a most handsome appearance. As the American demand for fine-worsted coatings has fallen off so much, many of the makers of these goods are turning their attention to the production of light-weight worsted fabrics suitable for ladies costume cloths. The spring trade in men's wear goods has not opened out in Huddersfield as well as it was hoped it would do, but there are rather more orders for both woolens and worsteds of the best class for the London West End trade for the present season. In the heavy woolen districts makers of cheap goods suitable for the spring clothing trade are busy, and some makers of army goods are also well under order, but in some other classes of woolens the demand is still very quiet.

**LEEDS.**—The woolen market is characterized by a slightly better tone, and though for most classes of goods orders, both

in number and bulk, are still disappointing, the prospect is more encouraging. The increase of  $7\frac{1}{2}$  to 10 per cent. in the prices of the finer qualities of wool shows that the worsted branch is in a better condition; and in this district worsted looms are better employed now than they have been for many months. Government orders for fabrics required for army clothing are still being placed here. The severe weather which has prevailed during the last few days has had an adverse influence. While the majority of producers are complaining, some are fairly well supplied with orders. The worsted branch is gradually increasing its production, and many looms which have been running short time are now much better employed. For the finer classes of wool local merchants are asking an advance upon late rates, but buyers are not disposed to pay more. Piece merchants, being subject to little or no pressure, are also operating with caution. The better classes of goods, both worsted and woolen, are in larger demand than the lower class fabrics. In the ready-made clothing industry considerable activity now prevails.

**HALIFAX.**—The Chamber of Commerce trade report for March is as follows: Wool—During the current month there has been more doing in merinos at slightly better prices. Other descriptions are steady and unchanged. Woolens—There has not been any increased demand during the past month, the general trade remaining quiet. Short wools are very cheap, yet no great desire for speculation. Worsted Yarn—The keen competition and the higher prices which are being paid for some classes of wool in London have done very little so far to create any activity for new business. It is to be hoped this will soon follow. Prices upon the whole still remain very unsatisfactory. Cotton—Bundles for the Far East continue quiet. Two-folds for home use are in moderate demand. Fustian manufacturers and wholesale clothiers remain steady, full time being worked.

**LEICESTER.**—The yarn market shows more animation. Prices are decidedly firmer, and lamb's-wool as well as fancy yarns show a steady improvement. The hosiery industry is more healthy and the stocks of spring and summer fabrics are under the average. There is a large output of goods for army purposes.

**NOTTINGHAM.**—For the cheaper descriptions of fancy millinery laces there is not a very brisk enquiry. Moderate quantities of better-class goods, such as fine Valenciennes, maille ronde, and embroidered Valenciennes, are selling, as are allover nets in Cluny, Valenciennes, and other fancy styles, of which good quantities have been sold in black. Torchons still meet with a fair enquiry, but the market is rather over-stocked with these goods. The enquiry for silk laces is still meagre. The veiling departments are selling large quantities of black, white, magpie and jackdaw goods. Irish trimmings and crochet edgings sell moderately, but no expansion is to be noted; in fact, all the available machinery cannot be utilized. Large quantities of hobbin nets, Mechlin tulles, and mosquito nets are still selling, but the supply is getting on more level terms with the demand, and manufacturers find it difficult to obtain the higher prices which ruled a short time back. Spotted nets continue in favor, and good quantities of light tulles are selling for confirmation veils. Paris and other stiff foundation nets are dull of sale, and prices are easier. Moderate quantities of striped nets are selling. The lace curtain, window blind, and furniture lace departments are doing about an average business. Buyers are less willing to place orders at the full prices. There are no particularly striking departures from ordinary styles being shown. Sales on United States and Canadian account have shown a slight falling off. From some other departments of the export trade the reports are rather pessimistic in tone.

**KIDDERMINSTER.**—Buyers of carpet are not inclined to go much beyond their immediate wants, which, however, are considerable. Hence it follows that, though manufacturers have enough to do, and in some cases are pressed for delivery, they have not as much carpet on order as usual, and their trade just now is of a scrappy, troublesome nature. The yarn trade is more cheerful, especially in higher counts. The strength of the London wool sales, coupled with an increased enquiry from Yorkshire and the Continent, has stiffened the trade generally.

**KIRKCALDY.**—The hosiery manufacture has suffered from the excessive cost of some of the raw articles, but the recent fall in oil and coal is favorably viewed. The position in the linen industry is without any special feature, and business continues exceptionally limited. The high price of the manufactured article prevents American buyers from acting freely, and they merely purchase on a small scale out of sheer necessity.

**HAWICK.**—Manufacturers and spinners continue very busy, principally on government orders. Scotch manufacturers have secured a large share of these orders. Overtime is being worked in all the mills in the dyeing and finishing departments. Spinners are exceptionally busy.

**DUNDEE.**—The trade as a whole improves. Jute is again 2s. 6d. to 5s. dearer. The large and regular consumption causes all fairly good parcels to sell easily. Fortunately the arrivals are large, but the steady demand, especially for good to medium, gives the sellers a good and firm market. Jute yarns are again 1 16d. per lb. dearer. For common cops even 1s. 5½d. is now asked and 1s. 5d. to 1s. 5¼d. is paid. Warps are firmer at 1s. 7d. to 1s. 7½d. for 8 lb. spools. Good yarns are 1s. 10d. for 8 lb. Heavies are all the turn dearer, and sellers refuse to enter contracts for far forward delivery except at a considerable rise. Hessians are rather firmer and the whole market for jute cloth is slightly against the buyers. Flax is still very strong, especially good. The hope of some spinners that flax would fall becomes fainter. From all sides comes the demand for rather higher prices for good flax. The best K is quoted at £38 to-day, as against £37 last week. In the meantime, a considerable trade is doing, as not a few spinners are very short of supplies. The effect of all this is still farther to depress the ordinary linen trade, as opposed to unusual demands for the heavier and better kinds of flax goods for the government. Manufacturers declare that it is impossible to get prices for the home market, and the American trade up to the new price-lists. From week to week large orders are still being placed by the government for both tow and flax goods. Tows are now very dear, so that tow spinners find it difficult to make ends meet. The demand for tow yarns is, however, strong, and buyers are forced to pay a slight rise for quick delivery. The fancy jute trade is better. The spring demand continues to improve.

**BELFAST.**—Enquiries have been fairly numerous, but, The Draper's Record says, little new business has resulted. Rates keep steadily firm, and there is little prospect of a reduction until it is seen how the new flax crop is likely to turn out, and that will not be for some months. The demand for yarns has been slow. Prices are well maintained on the whole, but for some descriptions quotations are said to be a shade easier. Stocks are small. The home warehouses are not operating very freely just yet, and the trade in bleached and finished goods is quiet all round. Any change is in the direction of improvement, but the difference is not very marked. Household linens and damasks are slow of sale, and makers-up report business as rather slack, but the high level of prices all round is well sustained. Export trade is moderate. A moderate number of orders has come to hand from the United States, but not up to the average. Canada is buying fairly well, but

Australia keeps slow. The tone of the market is good. Cuban trade keeps quiet, and colonial demand is slackening. European markets, particularly Germany, have been taking a fair quantity of goods.

**CHEMNITZ.**—The London wool sales have not made any difference among the local yarn consumers, as the results were pretty well anticipated. The reduction of 5% for coarser qualities has not altered the state of the yarn market, and has not caused any fluctuation, the business dragging itself along slowly during the last few weeks. Considering the present state of trade among hosiery manufacturers, this quietness will probably be the rule for some time to come, and will have to be reckoned as a regular thing, the only beneficial result being the fact, that if yarns remain at about the same level for some time, more confidence will be felt in placing large contracts for yarns, which are at present conspicuous by their absence. Business in woolen yarns is very dull, and the pressing of spinners for particulars of deliveries shows that they are not well employed. In mixed yarns of cotton and wool of better quality, the demand has been small for a long time, the goods manufactured from those yarns during last year have not caught on so well, the consequence being that there are large stocks in the hands of the manufacturers, and it is not expected that sales will improve for next winter's trade. A little more life is displayed in yarns with a small percentage of wool, and here and there, contracts were entered into at reduced prices.

**CREFELD.**—The demand in Crefeld on reassortment by retailers continues moderate. In gold effects, reports The Dry Goods Economist correspondent, the demand has continued, but as the goods can be more quickly and freely delivered, buyers go slowly and do not order for more than current requirements. Gold brocades form an exception, however, and orders for these have been placed for fall delivery which will keep some looms engaged for some time. Printed goods are favorites, and while surface prints are good sellers the demand for warp prints is steady. Manufacturers appear unable to produce as much of these as is needed and cannot accept orders except for long delivery. This causes a scarcity in this style which enhances its selling value and makes it the more desirable. This favor for warp prints has extended also to the fall, and orders have already been placed in sufficient quantities to indicate that buyers have faith in the article for next season. In articles for the cloak and garment-making trade the sales already made since the first of the year have been of sufficient volume to keep buyers provided, and therefore it is not likely that the usual rush for goods at the last moment, which has been experienced in former years, will be seen this season. The demand for ready delivery is, however, fair although no large lots are taken out. In plain black linings in half silk qualities demand is slow. The manufacturing situation is unchanged and still favorable. In dress, blouse and lining silks orders for spring previously received are being completed, and will be succeeded on the looms by goods for fall, on which a fair volume of orders has already been booked. The silks continue in good demand and production is active. In umbrella silks, however, there is no change and ribbons are not much better.

**CALAIS.**—The outlook of the lace business is satisfactory and assuring. The Economist correspondent says styles are in favor of Calais goods, the thinner fabrics following the heavy embroidered effects of the last two seasons. All the vals., the fine imitations and delicate fabrics are going to be unanimously taken hold of and will undoubtedly swell sales, increase business and altogether make strong lace conditions for much time to come. Bands, borders, serpentines, arabesque, pieces for berthas, scarfs for hats, even lace-edge veils, all show the coming tendency that will increase the use of lace fabrics and lace materials.

**THE SILK TRADE.**—The London silk market is very quiet. As the advent of the new silk crop approaches increased caution on the part of buyers is natural. The falling-off is mainly due to a diminution in the clearances of Asiatic silks—Indian, Chinese and Japanese descriptions. To some extent this may be a consequence of the disturbances in Marseilles. Lyons manufacturers, meanwhile, appear to be fully employed. Italian and French silks have been taken on a scale which, though not exceptional, is at least about normal. Broussa and Syrian raws have also been in demand. As regards throws, Canton organzines, as well as French and Japanese, have been much in request, and there has also been a good demand for the trams of Canton, Japan, China and France. The decline in the price of silver must be taken into account as regards business in silk from the Far East. The reports from Italy testify to a slackening of business there, the superior description of raws and those required by throwsters being the only steady elements of the position, the market, as a whole, showing weakness. The telegrams from the Far East indicate diminished firmness generally. A Lyons correspondent reporting on the designs for this season use, says that Louis XVI. and 1830 patterns are reproduced in striped and floral effects, the material being exquisitely soft in texture.

#### TEXTILE EXPORTS OF GREAT BRITAIN TO CANADA.

The following are the values in sterling money of the exports of wool and textile fabrics from Great Britain to Canada for February and the two months ending February of this and last year:

	Month of February.		Two months to February.	
	1900. £	1901. £	1900. £	1901. £
Raw wool .....	9,588	1,378	11,595	3,008
Cotton piece goods .....	71,892	74,664	165,188	162,396
Jute piece goods .....	9,300	12,648	21,130	23,554
Linen piece goods .....	21,185	14,544	44,921	37,474
Silk, lace .....	2,972	121	4,841	514
Silk, articles partly of .....	6,389	7,276	12,201	12,780
Woolen fabrics .....	55,660	53,673	93,828	104,454
Worsted fabrics .....	66,587	58,600	149,458	164,040
Carpets .....	33,543	40,091	58,321	66,380
Apparel and slops .....	29,045	25,269	49,980	44,252
Haberdashery .....	16,064	13,799	37,316	27,720

#### TEST OF ARTIFICIAL SILK.

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

The Durban Chamber of Commerce reporting on the wool trade of Natal in 1900, says: The wool and hide market fell continuously during the year. Large quantities of Orange River Colony and Transvaal wools, that in the ordinary course would have reached Durban for sale, were shipped via Delagoa Bay, and much was left up country to rot in the open. A great number of sheep were slaughtered, and the flocks that were left have been without proper attention and are said to have scab. Only small quantities of wool are expected to reach Durban until the war is over and the country has settled down again under normal conditions.

#### ELECTROLYTIC BLEACHING.

In a recent report from Consular Agent Ernest L. Harris at Fibenstack, notice is given of a new bleaching liquor. The apparatus for producing the "chemic" was invented by two Germans in Aue, Saxony. The principle of electrolysis is used in producing the new bleaching liquor, and this fact will add more interest to the subject, as the application of electricity to manufacturing processes has long occupied the attention of scientists and inventors. The idea involved is the production of sodium hypochlorite from ordinary brine. The ordinary apparatus is very simple, being mainly a rough trough or box of slate, swung on trunnions, in a suitable frame, with an inlet for the brine and an outlet for the sodium hypochlorite resulting from the passage of a current of electricity through the brine as it runs through the box, the poles or electrodes being placed at opposite ends of the box. The following advantages are claimed for this system: The electrolyzed solution possesses the highest decolorizing or bleaching power. The goods treated in this process of bleaching are not harmed in the least, and there is scarcely any appreciable loss in weight. Lime or magnesia salts are not deposited on the cloth, thereby eliminating any possible trouble in subsequent dyeing and printing. Constant strength of liquor, which can be used as fast as made, if desired. Economy in cost of production.

#### WOOL FIBER.

The wool fiber is an albuminoid body chemically known as keratine, which contains, besides carbon, nitrogen, hydrogen and oxygen and a certain percentage of sulphur. These properties of the wool fiber should be clearly understood in their relation to each other, and to the coloring matter that may be applied to them by every dyer who expects to be proficient in his art. Keratine, which is referred to by Edmund Knecht, head of the chemical and dyeing department of the Municipal Technical School, Manchester, England, as a proteid substance, is, after all, but little known as to its true constitution. It is the constituent part of not only the wool fiber, but of all horny tissues, such as horn, whalebone, feathers, etc. Mr. Knecht gives the average composition of wool keratine as follows: Carbon, 50 per cent.; nitrogen, 15 to 17 per cent.; hydrogen, 7 per cent., and sulphur, 2 to 4 per cent. The difference between the sum of these figures and 100—that is, 24 per cent.—is oxygen. Its constant occurrence, and that in comparatively large proportion, precludes the idea, in Mr. Hummel's mind, that it is merely an accidental constituent, and it has hitherto been found impossible to deprive wool entirely of its sulphur without at the same time modifying somewhat its structure, and in large measure destroying its tenacity.

In commenting upon the presence of sulphur in wool, Mr. Hummel says that it is attended with some practical disadvantages, as, for instance, the wool is apt to contract dark colored stains under certain conditions, and on that account its

contact with such metallic surfaces as those of lead, copper and iron should be avoided during the processes of scouring or dyeing. In mordanting with stannous chloride and cream of tartar especially, if an excess of these ingredients be used the wool is frequently stained by reason of the formation of stannous sulphide.

### CARPET MAKING IN INDIA.

The East India woolen carpet factories are mostly located in some of the principal towns of the Punjab, notably at Amritsar, Lahore, Batala and Ludhiana; but the chief centre which supplies such carpets to the markets of Europe and America is Amritsar. In that city there are numerous carpet factories, the largest having nearly 300 looms, the smallest working with but eight looms. While on account of the terrible shortage of the cotton crop in India the Bombay mill industry is greatly depressed, the woolen carpet factories of the Punjab are either expanding the area of their buildings and adding new looms to them, or are adding to their number by the erection of new factories every year. Many of those factories are under engagements for their productions for not only months, but years, ahead, and the same abnormal activity is so apparent in each of the others that they are unable to book orders for immediate delivery. There are others which go on increasing the number of their looms as orders flow in. The general aspect of these factories from the outside is rather unassuming and uninviting. The first idea that strikes us on entering a carpet factory is that this carpet weaving industry, one of the oldest in the country, is still in such a flourishing condition, and that while most other Indian industries have been pounced upon and transferred into the hands of advanced European and American nations, this industry has not been so attacked, which shows that the excellence and perfection of quality and workmanship are above imitation, and this is indeed gratifying to all Indians who have the interest of their country at heart. European and American tourists rarely fail to include the city of Amritsar in their programme of places worth visiting. It may be on account of the Golden Temple—the Sacred Temple of the Sikhs—but those intent on making their travelling instructive and profitable visit this city in order to inspect some of the carpet factories. As the natives of these parts are, however, very particular in withholding full details from these inquisitive people, the American and European tourists are vouchsafed very little information that can be turned to much account on their return to their native country.

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

The designing department contains a number of artisans squatting on the carpeted ground with a long table about 5 by 1½ feet, and about a foot and a half in height in front of them. On this table the paper, generally a large sized one of ordinary newspaper quality—drawing paper being altogether conspicuous by its absence—is spread out and first marked with cross lines inclosing the squares familiar to all weavers. These squares vary in size according to the quality of the carpet to be woven. The quality, as is usual in cloths, is distinguished both by the number of threads to an inch of space and the count of the wool yarn employed in the web. If the quality required is to be 8 by 10, there are drawn cross lines inclosing 80 small squares to a square inch. These squares are then traced over in the required design with small pieces of delicate twigs of a tree,

the wood of which has been converted into coal by burning. The traced portion is then filled up with the requisite colors in which the carpet is to appear. Any combination of colors can be made to appear in the design, and so also in the woven carpet, such combination affecting but little the cost of either dyeing or labor. The designs drawn on paper generally represent one pointer only of a carpet, it being superfluous to sketch the whole design. Combinations of as few colors as possible, with a total absence of white in the border and centre patterns, are generally approved of. Plain ground centres, with a central circular design and bold patterns in the border, look very fine and attractive. A good deal of time and labor has to be spent in making these sketches, as by inspection of these only can the manufacturers expect to secure orders for their looms. Genuine Indian designs are greatly approved of by Europeans and Americans, but lately some of the carpet makers at Amritsar got some designs from England, and when the carpets woven in these designs were recently inspected by Lord Curzon he rightly took to task the manufacturers for the uncleanliness and unsuitability of these designs to Indian work.

There are in these factories no mixing, carding, spinning or various other departments so familiar to one connected with the cotton mills. The cotton as well as the woolen yarn required for the purpose is readily obtainable in the open market, and this alone is brought into requisition for weaving the carpets. The dyeing of the yarn is done in all of the factories. Indian Textile Journal.

### INFLUENCE OF ACIDS ON WOOL DYEING.

Sulphuric acid impedes the dyeing of wool by basic dyestuffs, such as magenta, methylene blue, safranin, etc., while it promotes the absorption of sulfonated basic dyestuffs, such as light green SE, acid magenta, and crystal ponceau. With the latter its action is greatest when it is applied in the proportion of 1.5 to 6 per cent. of the weight of the wool. Hydrochloric acid acts similarly. It may be stated generally that the favorable action of an acid upon the absorption of a dyestuff by wool is inversely proportional to the basicity of the dyestuff. Sulphurous acid, prepared from pure sodium bisulphite and sulphuric acid, has no effect upon the dyeing properties of wool. The action ascribed to this acid by Prudhomme would therefore seem to be due to the presence of impurities in the sodium bisulphite of commerce.

Hydrogen Peroxide—Treatment of wool under ordinary conditions, with commercial hydrogen peroxide has no influence upon the dyeing property of that fiber with regard to slightly basic dyestuffs. On the other hand, the attraction of the fiber for highly basic dyestuffs is much increased. The change is not produced by pure hydrogen peroxide. It is therefore, no doubt, to be ascribed to the presence of impurities, probably silica, in the commercial product, which is found to contain, in addition to that substance, magnesia, alumina and fluorine.

Alkalis—Dilute (1 per cent.) solutions of these, at a temperature of 70° C., have no permanent effect upon the dyeing properties of the active substance of the wool fiber, although they neutralize the acidic group in the wool molecule. The compounds thus formed behave differently towards different dyestuffs. The sodium compound attracts highly basic and repels slightly basic dyestuffs, more powerfully than does the free acid (wool). The compounds resemble the salts of the higher fatty acids, inasmuch as water dissociates the ammonium compound very readily, the sodium compound less readily, and the calcium, magnesium, and aluminium compounds with difficulty. The changes produced in the fiber by the action of alkalis and acids, although only temporary, have an important



bearing upon the dyeing of wool. The modifications in the dyeing properties of this fiber observed by Prudhomme are in part to be referred to such changes.

**Chlorine**—When wool is treated with chlorine for the purpose of increasing its dyeing powers, an important alteration in its permeability to water takes place. While ordinary scoured wool requires a prolonged immersion in water to completely wet it, the wool so treated, when put into water, is saturated almost immediately. This is the principal change which is effected in the process of "chloring" wool.

### A WOOL PROBLEM.

The correspondent of The Sydney Mail, who propounds a "Wool Problem," evidently writes from a grower's point of view, and certainly states his case with great intelligence. How to grow fine wool, maintaining the quality and at the same time increasing the length of fiber, is not a new problem, but it is difficult of accomplishment in certain latitudes, whilst easy in others. Not being a grower, but yet a consumer of fine merino wool, the writer begs to discuss the matter from a manufacturer's point of view, based upon actual experience in manipulation and comparison. The manipulation has been that of a life-time, the comparison that of the highest qualities, European and Colonial, including twenty years' attendance at the London wool sales. The question is not one of chemistry, nor yet mechanical, but is a question of Nature's laws under "assistance versus neglect." As a horse's coat improves under good feed and good grooming, so does the wool of the domestic sheep under good pasture and care, and when neglected or starved it deteriorates. The propounder of the problem admits that his object is to produce a combing wool by lengthening the staple, which would perhaps double the weight of his fleece at the same time. When fine wool was double the price it is to-day (some thirty years ago), growing short wool of fine quality was then profitable, but at to-day's prices a fine fleece of only 3 lbs. in weight yields but a poor return per head of sheep. Evidently this new condition of things prompts the problem, since combing wools command, as a rule, about 20 per cent. higher prices than carding wools, and a 6 lb. fleece would give a more satisfactory return to the grower.

The Spanish merino was the parent stock of the best and finest European wools, but those were not combing wools. The Elector of Saxony improved both the animal and its wool by cultivation and care, and the survival of the fittest, but he did not grow combing wools. The Saxony wools are the finest grown to this day, but they are not combing wools. It is also the most wavy or curly, a feature indicative of quality, and showing under the microscope the greatest number of serrations in its fibers. Its shortness of fiber, combined with its fineness and serrations, was its excellence in the manufacture of fine broadcloth. The wools of Sydney or New South Wales were derived from the same parent stock, have the same peculiarities as those of Saxony, and both remain short in fiber. From other districts, such as Victoria, Tasmania and New Zealand, we find merino wools of longer fiber, but none equal in quality to those of Saxony and New South Wales. From this it would almost appear as if quality and length were incompatible. Both the long and the short wools are the growth of one season and the same period, from which it is evident that the longer fibers grow the faster of the two, and they certainly contain a less number of serrations per inch. This difference is most marked in long Lincoln wools. The longer the fiber the greater the strength and change in character. Clothing or carding wool becomes combing wool, where fulling properties are little required. For broadcloth such wool is out of the question, as only short-fibered wools will suit. The

question presents itself, how is it that New South Wales and Queensland produce only short merino wools, whilst the other and more southern colonies produce a longer fiber, and all from the same strain of sheep? Climate asserts its influence, as the nature of animals responds to the climate. In cold regions they grow long wool, and in hot climates short wool, which is quite sufficient protection for animals where cold is seldom known. As a matter of fact, in some districts of South Africa sheep shed their wool in summer (as horses shed their hair) and as a preventative have to be shorn twice a year. Tasmania solves the problem the nearest of any colony producing both length and quality in combination. Victoria grows a deeper fiber than New South Wales, and produces good combing wools; whilst New Zealand, with its cooler climate and greater humidity, yields a fiber still deeper grown and coarser in quality.

Good combing wools come from all the southern colonies of Australasia, and the fiber would lengthen if the sheep of the northern colonies were transplanted.

The superfine quality of Sydney wool is esteemed throughout the world over, and is only equalled by the wools of Saxony. Careful selection of the best animals, and repeated importations of good rams from the Saxon flocks, will maintain the quality, but locality and climate appear to refuse a longer fiber. That object may be attained by cross-breeding, but in that case the quality is lost. Other colonies and the River Plate have resorted to cross-breeding to such an extent that a glut of that class already exists, so that New South Wales has nothing to gain by following the example. The supply of superfine wool is not excessive, but fashion has changed, and doeskin or black broadcloth has given way to worsteds and vicunas, the last-named being more of a name than a reality. Sydney wool has the highest reputation of the colonies for quality, the maintenance of which should pay better in the long run than any attempt to change its character.—"Textor," in *Textile Recorder*

### MILL VENTILATION.

Mr. Osborne, the late factory inspector in England, in referring to this matter of ventilation said that the use of fans, both for blowing in and exhausting air is the cheapest and most effective system for such a building as a weaving shed, owing to the large cubic space (some containing more than 8,000,000 cubic feet), and the consequent impossibility of bringing uncontaminated air from side inlets to the central parts. The point here made will be appreciated when attention is called to the very wide buildings that now are a part of mill construction. It is the ventilation of the central portion that is the most difficult to obtain. A Mr. Williams, another English factory inspector, made the remark some time ago that "the figures shown for cotton weaving are of special interest in view of the prophecies freely made not long since to the effect that the increased stringency of the sanitary regulations made in 1898 by the Secretary of State for artificially humidified cotton factories would cause the occupiers of the factories to relinquish the use of artificial humidity rather than comply with the regulations. So far from this being the case," he says, "the number of cotton weaving factories with artificial humidity steadily increased," a fact which, he thinks, shows that the improved sanitation insisted upon has not had the inimical effect upon the industry that some people feared. Mr. Williams mentions a conspicuous example of a manufacturer who installed at a great expense an improved system of ventilation in his weaving sheds, in which nearly 2,000 operatives are employed. He took a sample of air from the middle of a number of the sheds and found that the carbonic acid therein averaged 7.37 volumes per 10,000 only; a



condition as good as that to be found in our best ventilated buildings. The manufacturer referred to has adopted other improved methods, such as providing a purer steam for moistening purposes and in fitting up electric lighting in place of gas.

—It may not be generally known that for many years the late Queen's stockings, supplied by the well-known hosiery firm of I. and R. Morley, were knitted by one John Derrick, an expert hand, who was engaged on this special work for Her Majesty when she was as yet the Princess Victoria. He knitted the silk stockings she wore at the Coronation, and he made an identical pair for her on the occasion of her Jubilee fifty years later. Derrick died a few years ago. The Queen's weaver, or stocking embroiderer, is Miss Ann Birkin, who lives in a neat cottage in the little village of Ruddington, where she is a notable personage on account of her occupation. In 1898 Her Majesty forwarded to Miss Birkin a framed portrait of herself, with autograph signature, which was dutifully acknowledged by the recipient. The Birkin family have embroidered for the Royal Family for three generations. At the present time Miss Birkin, who is 84 years of age, has been in the employment of Messrs. Morley for 72 years.—Textile Mercury.

### TEXTILE PATENTS.

The following are recent patents granted in Canada of interest to the textile trades:

No. 69,225.—Sackholder; by Frank Heiman Gilbert, Ridgefield, Washington, U.S.; a sackholder with hopper and means for attaching same to a support so as to retain the sack open.

No. 69,253.—Tag-making machine; by George William Swift, jr., Bordentown, N.J., U.S.

No. 69,273.—Apparatus for pressing and stretching garments and fabrics; by Edmund William Dawson, London, Eng., co-inventor and assignee of Robt. H. Bishop, of Hornsey, Eng.; a co-operative combination of a pair of separable presser boards and springs.

No. 69,274.—Spinning and doubling frame; by Robt. Wighton Moncheiff, Newport Pagnell, England; wherein a rotating ring and horizontal revolving supporting pulleys are substituted for a stationary ring and a revolving traveller.

No. 69,312.—Hose supporter by Emily Waitec Thayer, Shirley, Mass., U.S.

No. 69,311.—Hose supporter, by Geraldine Mary Plumer, Sault Ste. Marie, Ont.

No. 69,333.—Spinning and twisting machine; by Victor Belanger, Sea View, Mass., the combination of a rotatable ring having radial and axial motions, with the means for guiding and limiting the movement of the ring.

No. 69,354.—Shuttle cop; by Simon W. Wardwell, jr., Providence, R.I., U.S.; a composite shuttle cop with greater accommodation for yarn and extra facilities for unwinding.

No. 69,355.—Loom spindle mechanism; by Oliver Cromwell Burr, North Adams, Mass., U.S.; improved combination of spindle, hobbinholder and thread grasping device.

No. 69,356.—Guide lever for looms; by Louis A. King, Salem, Mass., U.S.; an attachment for regulating the movement of the journals of the cloth rolls.

No. 69,357.—Loom; by Thomas Brindle and Merrill O. Steere, Pawtucket, R.I., U.S.; with lays located on opposite side of loom.

No. 69,359.—Stop motion for looms; by Joseph Coldwell and Christopher Giles Gildard, Fall River, Mass., U.S.; an electrical stop motion for looms.

Nos. 69,363 and 69,386.—Loom; by American Loom Co., New Jersey, assignee of Ingraham Harriman; described fully on page 51 of our February issue.

No. 69,367.—Sweep strap for looms; by Charles F. Thompson, Oswego Falls, N.Y., U.S.

No. 69,368.—Loom for cross weaving; by Isaac Emerson Palmer, Middleton, Conn., U.S.

No. 69,369.—Spinning frame; by Andrew Cowles Allgood, Henderson, N.C., U.S.; with rods adapted to reciprocate vertically, and having adjustable stops for limiting their downward movement.

No. 69,372.—Needle filling machine; by John E. Inman, Kalama, Wash., U.S.; a combination of rotary needleholder, a winder and means for moving part of needle so as to facilitate winding.

Nos. 69,388 and 69,419.—Jacquard machine; by the Crompton & Knowles Loom Works, assignee of Geo. W. Stafford and Albert E. Kelmer, Providence, R.I., U.S.; with increased flexibility of stem of the griff to promote the bending thereof.

No. 69,391.—Loom; by the Draper Co., Portland, Me., assignee of Belonie Janelle, Manchester, N.H., U.S.; with movable filling feeder with filling carriers and a transferer controlling the feeder and carriers.

No. 69,392.—Loom; by Malcolm Green Chace and Wm. P. Baker, of Central Falls, R.I., and Frederick E. Kip, Montclair, New Jersey, all in U.S.; with automatic changing or supplying mechanism, regulated by an electric device, the circuit of which is made and broken by the throw of the shuttle.

No. 69,407.—Knitting machine; by Michael J. Fisher, Utica, N.Y., U.S.

No. 69,422.—Spinning and twisting machine; by the Ather-ton Manufacturing Co., Providence, R.I., assignees of Simon Bernard, of Fall River, Mass., U.S.; with improved rotating ring fitted with upwardly extending shell to shield the yarn guide, and arrest the outward swing of yarn.

Nos. 69,426 and 69,427.—Winding machine; by James Chris Anderson, Jersey City, U.S.; with improved facilities for yarn winding.

No. 69,441.—Device for holding skeins of silk by an ingenious arrangement of hooks; by Stasia Sweeney, Springfield, Mass., U.S.

No. 69,449.—Knitting machine; by Harry Brown, Philadelphia, Pa., U.S.

No. 69,456.—Garment supporter; by Mabel Florence Loving, St. Joseph, Mo., U.S.; whereby the weight of the garments is distributed over the shoulders.

No. 69,622.—Garment fastening and supporting device; by the above M. F. Loving.

No. 69,464.—Ball winding machine, by the B. F. Goodrich Co., Akron, Ohio, U.S.; assignee of John R. Gammeter of the same place.

No. 69,212.—Needle loom; by George Francis Knett, Paterson, N.J., U.S.

No. 69,539.—Machine for drawing in warp threads; by Richmond Haywood Ingersoll, Billeford, Me., U.S.

No. 69,542.—Machine for sewing buttons on fabrics; by National Machine Co., New York City, assignee of James T. Hogan, Jersey City, N.J., U.S.

Nos. 69,543 and 69,886.—Buttonhole sewing and cutting machine; by the National Machine Co., New York City, assignee as above.

No. 69,623.—Garment; by Patrick Doyle, Halifax, N.S.; a new method of dressmaking.

No. 69,647.—Manufacture of buttons; by Dilman B. Shantz, Berlin, Ont.; an automatic arrangement of chuck, saw and chuck jaws for the making of buttons.

No. 69,675.—Hose support; by Ella Foster Young, Chicago, Ill., U.S.

No. 69,683.—Spinning machine; by Adolph Henichen, Paterson, N.J., U.S.; improvements on patent No. 69,076 mentioned in our March issue.

No. 69,684.—Apparatus for treating flax; by Charles Wetherwax, Best, N.Y., U.S.

No. 69,705.—Machine for spinning, doubling or twisting, by Phmeas Pearson Craven, Ardwick, Manchester, England, improvements for handling the discs on spindles.

No. 69,720.—Machinery for making yarn; by W. H. Drury, Waltham, Mass., U.S.; a machine with combined facilities for carding and spinning.

No. 69,779.—Brading machine; by R. Kirsch and A. Pessi, of Vienna, Austria.

No. 69,799.—Dressmakers' pattern; by Jacob S. Bangham, Burlington, Iowa, U.S.

No. 69,871.—Process for moulding fibrous pulp; by James Augustus Wheeler, New York City, U.S.

No. 69,944.—Glove Fastener; by Herbert Thomas Arnold, Acton, Ont.; an endless rubber band with links and lacing hooks

No. 70,069.—Garment supporter; by Margaret Ann Irving, Victoria, B.C.

#### TRADE MARKS AND DESIGNS.

The following are new trade marks and industrial designs recently registered in Canada:

No. 7,550.—The Union Fabric Co., Ansonia, Conn., U.S., dress stays.

No. 7,555.—Hamlyn Bros., Ltd., Buckfastleigh, Devonshire, England; worsted and woolen serges, estamenes and coatings.

No. 7,561.—The Eclipse Whitewear Co., of Toronto, Ltd.: ladies' and children's cotton underwear.

No. 7,567.—The Consumers' Cordage Co., Ltd., Montreal, Que., yarns, twines and cordages.

No. 7,597.—The Kinleith Paper Co., Ltd., St. Catharines, Ont.; pulp and paper.

No. 7,612.—E. A. Small & Co., Montreal, Que.; clothing for men and boys.

No. 7,617.—George D. Ross & Co., Montreal, Que.; cotton threads.

No. 7,628.—Weingarten Bros., New York, U.S.; corsets.

No. 7,629.—The Gault Bros. Co., Ltd., Montreal, Que.; ladies' costumes and underwear.

No. 7,632.—The Anderson and Macbeth Co., Ltd, Toronto; hats and caps.

No. 7,638.—Moore, Eady & Co., Leicester, Eng.; woolen goods.

### THE YARN AND CARPET MANUFACTURERS.

Editor, CANADIAN JOURNAL OF FABRICS:

Sir,—The virtuous indignation with which "Golden Rule" assails the article and its author in your February number, "Plea for Protection on Carpet Industry," opens a new line of literature not frequently met with in your journal. Indignation, however, is not argument. There is perfect compatibility in stating that "the duty on yarn should be reduced or the duty on carpet increased," and yet contend that "consistency demands that no reduction on yarns should be asked for." This argument simply advocates an increase of duty on any material in proportion to the labor on it as it advances towards a finished product. "Golden Rule" forgets the relation to truth that name implies when stating that all worsted warps used in Canadian carpets are imported. He can very easily be put right on this by some of the worsted yarn spinners in Canada.

As to the great increase in importation in yarns it is easily traced to the new yarns needed by the knitting trade, in a yarn spun on a system not used in Canada. The mistake in refer-

ence to the duty on the yarn is freely acknowledged. A purely clerical error, not worth mentioning as it does not alter the argument (a carpet journal of the United States and a trade journal devoted to the textile interest, published in French, both reproduced the article with corrected figures, but it does not upset the point. In writing the article, fractions of percentages were omitted to simplify the statement, so "Golden Rule" may take what satisfaction he likes out of the fraction. The duty on yarn is, net 20%, the duty on carpet is, net 23½%, a difference of 3½%, which was called 4%, deduct this 4% from the 20%, and you have 16%, which the yarn man has in his favor as a protection over that of the carpet manufacturer.

As "Golden Rule" is evidently not a worsted spinner, it may be assumed he does not worry himself about the war. He contends, however, that 5% for labor on filling yarns is six or seven times too little. He will not deny that a yarn of about 18c. is an average price for the yarn used by Canadian carpet manufacturers of ingrain wool carpets.

A two-sett mill will produce about 9,000 lbs. a week. The raw stock for this will cost about \$1,100. Soap, oil, etc., about \$60, and labor, \$80. General expenses would run about \$60, but as it is a good argument that the woolen industry in Canada costs much more to run than in Great Britain, double the allowance for general expense account. If you care to work this out you will find the yarn spinner has a very good profit and only 5% for labor. But it may be noted that most of the yarn producers in Canada run their mills by water power, and so save engineer's expenses and coal.

As to percentage of skilled labor—out of a possible staff of fifteen people required to run a two-sett mill, very, very few need be skilled labor. Whereas, in the production of a thousand yards of ingrain wool carpet, two-ply, 26 picks per inch, out of sixty-five people employed, all had to be taught the business with the exception of five. If the Canadian yarn spinner is held to an 18% shrinkage, it is that the carpet manufacturer is not prepared to pay yarn pound price for lard oil or its substitute. By turning back to the Government returns of 1889, they show that yarns valued at \$129,523 were imported under a tariff of 7½c. a lb., and 20% ad valorem, which in 1891 had grown to \$165,916, under a tariff of 10c. a lb. and 20% ad valorem. It will hardly be contended that these importations were "low, greasy waste and shoddies," or intended at all for carpet manufacture. This would throw the responsibility on those Canadian spinners who produced carpet yarns that "Canadian carpets were never clean" up to ten years ago.

Finally, if "Golden Rule" had interviewed some of the carpet manufacturers before writing his article, he would have learned that there is no selfish desire to injure any Canadian industry, but to urge on the Government the very pressing need of relief required by the woolen trade in Canada, no small part of which is carpet manufacturing. The foregoing is not written with any carping disposition, but the severe censure of "Golden Rule" required a clear explanation from

SCRUTATOR.

### THE PARKS COTTON MILLS.

At the adjourned meeting of Wm. Parks & Son, cotton manufacturers, St. John, the following report was presented on the affairs of the company: The mills were run full time during the first half of the year, and showed a profit of \$11,688.79. From the 1st of July to the end of the year the mills were on reduced production, and made a loss of \$27,621. The raw cotton used, January 1st to June 30th, was 2,168 bales. The raw cotton used, June 30th to December 31st, was 1,451 bales. Wages paid during the year, \$115,304.14. Sales for the year, \$357,725.74. Price of raw cotton advanced from 8½c. to 11½c.

during the year. Prices of goods remained the same all the year, excepting a small advance in March. On the 1st of July, owing to want of working capital, we were compelled to reduce our production. This course necessarily resulted in a serious loss, as noted above, as the standing charges could not be reduced pro rata with the production, being unable to arrange for working capital, we were forced to shut down the mills on January 9, 1901.

At the special meeting of the shareholders held January 31, a report was made of the financial position of the company, a copy of which was sent to all the stockholders. Since that time our insurance has been kept in force by the mortgagees, they paying for coal, firemen, etc., necessary for the purpose. In accordance with the resolution of the shareholders, passed at the meeting held on the 31st day of January last, we have secured the mortgagees for the money thus advanced for heating, etc. The foreclosure proceedings instituted by Jones and Turnbull have been continued. Since January 31st, 1893, when the business was taken out of the Equity Court, the manufacturing accounts have shown profits of \$223,506.21, out of which have been paid the following amounts:

Interest on mortgage .....	\$74,458.09
Interest on banking accounts, not including discounts .....	83,975.87
Bonus to Turnbull and Jones .....	11,764.70
Salary of trustees for mortgagees .....	7,917.00
Taxes and water assessments .....	12,533.07

The mills would have made a better showing had our working capital been sufficient. Especially during the last four years the operations of the mills have been seriously interfered with. We have not been able to purchase our raw material to best advantage, and during the period of extremely low prices for cotton, in 1899, we were unable to secure ourselves against the impending advance. The mills are both in good repair and thorough working order. Our costs for making goods are as low as in any mills in the Dominion for the same class of goods. The lines of goods we are manufacturing are well received by the trade, and compete favorably with any in the market. We have made no losses by bad debts during the year. Your directors regret very much to have to make this unfavorable report of the year's workings. They have done all in their power to replace the mortgage on the property by an issue of bonds on more favorable terms, but the condition of the money market during the past few years has made this impossible. The report was signed by John H. Parks, president.

## 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 a dividend and improved paper.

Mr. Hinnegan, of Wallaceburg, is about to erect at that place a flax mill to employ 20 hands during nine months of each year. He receives from the village a small bonus.

Victoriaville, Eastern Townships, has granted a bonus of \$20,000 to Paul Tourigny for a woolen factory to employ 150 hands.

Cronkhite Bros., Thessalon, have recently received another car load of machinery, and are going to enlarge their woolen mills at Thessalon. They have moved their old factory at Wisawasa to Thessalon, and have sold their houses, farm and all the Wisawasa property except the water powers.

The Dominion Cotton Mills Co. have under consideration plans for the enlargement of their factory in Halifax; but the matter depends upon the extent to which they are granted exemption from taxation.

From a report made by the Toronto Chief of Police to the city council it appears that of 510 factories and shops employing 37,623 persons, only one in four is provided with any kind of fire extinguisher, only one in eight with fire escapes, and that in the majority the employees have to depend for exit, in case of fire, upon stairways and windows.

A woolen manufacturer of Union, Ont., S. A. Wilson, has made an assignment. He has been many years in business, and three years ago his statement showed a surplus of nearly \$20,000. Last year he found himself with a large stock of wool on hand for which there was but little demand and now he has had to face the result.

It is reported that a large pulp company is negotiating for the purchase of the lumber lands owned by the Chappell Lumber Co., in Hants county near Windsor, N.S. R. R. Chappell, manager of the firm of Chappell Bros. & Co., Ltd., of that town, is heavily interested and if the deal goes through the capital of the last mentioned company will be increased to at least \$50,000 and Wm. Chappell, of Windsor, will take charge of the manufacturing part of the company's business.

A big pulp and paper mill is to be built on Tunnel Island, at the outlook of the Lake of the Woods. Ontario capitalists are interested. The Keewatin Power Company will spend a million and a half in buildings, etc., and will receive a grant of sixty square miles of pulp wood land, paying forty cents per cord for spruce and ten cents for other wood.

Alex. Little, proprietor of the new woolen factory at York Mills, has leased the factory for three years to Wm. Knox, of Woodstock. Mr. Knox has for some years been superintendent of the woolen mills at Woodstock and thoroughly understands the work. It is expected that he will have the new mill in full operation about the 1st of June.

Negotiations have just been completed between the government of the province of Quebec and a party of New York capitalists, by which the recent acquisition by the latter of the marvellous water power of the Upper Saguenay, better known as the Grand Discharge of Lake St. John, will be utilized for operating the largest pulp mill in the world. The water power that can here be utilized is practically unlimited, and the capitalists interested in the project who will commence operations this spring, have decided to invest four to five millions of dollars in their undertaking. The mills that they purpose to erect on the Grand Discharge are to be much more than double the capacity of those at Grand Mere, which are principally controlled by General Alger and Sir William Van Horne and friends. The latter have 24 grinders. The other will have 60, and will turn out 600 tons of wet pulp, or thirty car loads, daily.

The larger number of operatives in the St. Croix cotton mill are working on three-quarter time. It is reported that quite a number have left as they could not afford to pay board in town and make anything worth remaining for, on three-quarter time.

A. Mungall, of the St. Croix cotton mills, goes to Europe for four months to study machinery in the interest of the mills. He sailed from Boston on the 13th inst.

W. S. Watson, of the well-known firm of Haworth & Watson, of Lowell, the largest manufacturers in the United States of cop tubes and paper goods for mill uses, on resigning the presidency of the Board of Trade of that city last week, in his address to that body made some very valuable suggestions in regard to the management of the textile school of that city. Mr. Watson has always been a strong supporter of the school, and while serving two terms in the Massachusetts legislature was largely instrumental in carrying the State's appropriation for the school, which is now in a very flourishing condition.—Boston Journal of Commerce.

The Goderich Knitting Company has increased its capital from \$20,000 to \$60,000, by the issue of 400 shares of new stock of \$100 each.

A number of Americans propose to build a pulp mill at Mattawa, Ont., if the municipality will grant privileges. One of these privileges—which rests with the Minister of Public Works—is the liberty of damming the Ottawa river at Johnston's rapids.

Wm. J. Matheson & Co., Ltd., Foundling street, Montreal, are sending out to the trade samples of cloth dyed with their new "Diamineral Blue R" patented. These swatches bear evidence to the superior qualities of the dye, which for evenness and brightness must stand high in the class. Samples will be forwarded upon application.

John Childerhose & Sons, Eganville, Ont., have started up their woolen mill for the season.

The business of Ker & Harcourt, bobbin and spool manufacturers, Parry Sound, has been turned into a joint-stock company. An Ontario charter has been granted to Thomas Ker and J. W. Harcourt, Parry Sound; J. E. Murphy and H. F. Murphy, lumbermen, Amabel; and J. R. Shaw, solicitor, Toronto, to manufacture and deal in spools, bobbins, wood-turnery, furniture, novelties, etc., under the name of The Canadian Spool and Bobbin Company, Ltd.; capital, \$50,000; head office, Parry Sound.

Robert Gofton, for some time in charge of the Canada Woolen Mills, Hespeler, Ont., has taken a similar position in their factory at Markham.

There was a small fire at the Hamilton Cotton Co.'s mill on the 1st. Only about \$200 damage was done.

The Northrop Loom Co., of Canada, has changed its name to the Northrop Iron Works.

About five weeks ago James C. Pettigrew, manager of the Canada Fiber Company, 582 William street, Montreal, disappeared, and his friends have not heard of him since. He may have sailed for the Philippines or Africa. No reason is assigned for his disappearance.

The Spanish River Pulp & Paper Co., of Webbwood, has finally decided to build and has let the contract for a pulp and paper mill and a dam at Webbwood to J. W. Munro, M.P.P., of Pembroke, the contract price being about \$200,000.

The suit of Arthur H. Wilson, of Markham, against the Imperial Woolen Mill Company, of Streetsville, was heard before Justice Robertson and a jury in the County Court. In March, 1900, Wilson was engaged by the Imperial Woolen Mill Company as traveller, at \$1,000 a year, and was dismissed in June, the company not having commenced to manufacture goods. The jury awarded Wilson \$900.—Markham Economist.

Howe Watt has left Lanark to take a position in the Mississippi woolen mills, Appleton.

It is reported that a company is being formed at London to be called the Western Woolen Co.

D. W. Micewicz is organizing a company to erect a flax-seed mill at Edmonton, N.W.T.

Edw. Leckie, late overseer of weaving for the Wm. Parks cotton mill, St. John, N.B., is now second hand in the new weave room of the Lorraine mills, Pawtucket, R.I.

At the annual meeting of the Colonial Bleaching and Printing Co., of St. Henri, Que., to be held this month, the question of building a cotton mill to supply the company's print works with grey cotton will be discussed.

At the assizes in Hamilton this month, John Price lost his action against the Hamilton Cotton Company. He was engaged in oiling shafting and fell from the ladder, breaking his arm and permanently stiffening the elbow. The defence was contributory negligence.

Fred Blair, since the suspension of the Parks cotton mills, St. John, N.B., is second hand of spinning at the Eclipse mill, North Adams.

The Hamilton Cotton Co. is now manufacturing mule landings and spindle bandings of unlimited length.

The Dominion Cotton Mills Co. are building a large addition to their mills at Cornwall, this spring.

The Guelph Mercury reports that the Palmerston flax mill, that has stood idle so many years, has at last been sold, the purchasers being Pender and Kennedy, of Arthur. The price, although not given out, we are told, is very low. Mr. Gay, who has been manager for a great many years, will be retained by the new firm.

The firm of Jack & Robertson, dyestuffs and chemicals, Montreal, has been dissolved, and the business is being continued under the style of Watson, Jack & Co. Mr. Jack, who is widely known among the textile manufacturers of Canada, has been connected with the business since the time it was owned by Middleton & Meredith. The new firm has been appointed Canadian agents for the American Supply Co., of Providence, R.I., manufacturers of loom reeds, harnesses and pickers.

A proposal to transmit electric power from Burleigh Falls to Peterboro, Port Hope, and Cobourg, is interesting the people of these towns, and it is probable that Dick, Ridout & Co.'s woolen mill, Cobourg, will adopt electricity if the scheme goes through. The distance from Burleigh Falls to Cobourg is thirty-four miles, and, it is said, that the present price of generating power by coal in Cobourg—\$34 per horsepower, per year—can be reduced almost one-half by electricity.

Louis Gouilloud, late superintendent of the Dominion Weaving Co., Papineau Road, Montreal, has now become proprietor of that concern. The business is principally in the weaving of curtains, table and furniture coverings.

The Star Quilting Hosiery Co., Jacques Cartier Square, Montreal, which, under the management of Charles Massey, produced quiltings, embroidered goods and hosiery, has gone out of business.

Many houses were flooded and much damage done by the overflow of the St. Croix river, at Milltown, N.B., this month. Speaking of its effects on the St. Croix cotton mill, the St. John Sun says: In order to keep the water out of the basement of the cotton mill, the doorways were blocked up with cemented timber. A piece of timber was placed at the doorway, then cemented down, and another piece of timber added as the water continued to rise. Only by this method could the machinery be kept in order to resume work as soon as the water subsided. The racks were filled in with bark and other debris, held by the power of suction. A large amount of coal has been carried down by the flood from the mill-yard.

Peter Bouchette, overseer of carding at the Whitinsville, Mass., cotton mill, died of pneumonia in February. He was a native of the province of Quebec.

The by-law to bonus a flax mill at Tilbury was carried by the electors.

There is talk of converting the Waterloo, Que., knitting mills into a joint stock company. The pay roll is said to be over \$16,000 per annum.

D. J. O'Keeffe has gone from the Chatham, Ont., woolen mill, to the Richelieu woolen mill, at Chambly, Canton, Que., where he is now overseer of finishing.

William Stephenson, late boss carder for the Cornwall Mfg. Co., Cornwall, Ont., has resigned and gone to Peterboro, Ont.

George Small has left the Chesley, Ont., woolen mill and gone to Neustadt, where he is running a woolen mill.

C. L. Owen, formerly superintendent of the Trent Valley woolen mill, Campbellford, is now superintendent of the Cornwall Mfg. Co., Cornwall, succeeding Mr. Meiklejohn, who resigned.

James E. White, overseer of carding in the Fremont and Suffolk mills, Lowell, for many years, has resigned. Mr. White was formerly in the Montreal cotton mills.

The William Firth Company, Boston, the well-known Canadian agent for Asa Lees & Company, the English builders of cotton machinery, has received numerous orders for machinery in New England and in the South.

H. G. McKerrow, of Boston, the Canadian agent of the English firm of cotton machinists, Tweedales & Smalley, will read a paper before the New England Cotton Manufacturers' Association, at its annual meeting in Boston, on April 24th, on "A Model Machine Shop." The lecture will be illustrated by stereoptic views of the shops of Tweedales & Smalley, in England.

At the annual meeting of the Dominion Cotton Company, which was held in Montreal, on the 17th inst., the annual report was presented, and showed the earnings for the past year to have been the heaviest in the history of the company. The gross receipts amounted to \$652,339, and after the payment of the usual dividend, the sum of \$50,000 will be carried to the rest account, which now amounts to \$794,000. The old board of directors was re-elected.

Over 800 men employed by the Laurentide pulp mill, at Grand Mere, have gone on strike, owing to a readjustment of wages, which, though benefiting a few, yet reduces the wages of the greater number of employees by 10 or 15 per cent. On the 17th inst., Messrs. Alger & McGibbon had an interview with the men, when the papermakers asked for an increase, and the other men announced that they were willing to return to work provided none of those on strike were discharged. On the 18th, the strikers had all determined to hold out for higher wages, which the company is not prepared to give. A force of special constables has been raised in Montreal, and will proceed to the scene of the strike to prevent any trouble arising on the part of the strikers.

Charles J. Boughton, manager of the Star Knitting Co., of Cohoes, N.Y., has taken a position in the knitting department of the Canadian Woolen Mills, St. Hyacinthe.

James Hall, overseer of carding for the Paton Manufacturing Co., Sherbrooke, has resigned to accept a similar position with the American Woolen Co., Maynard, Mass.

### THE WOOLEN MILLS AND THE TARIFF.

During the debate in the House of Commons last month on the budget the situation of the woolen mills under the preferential tariff was brought up by James Kendry, M.P., for Peterboro, and manager of the Auburn woolen mills of that town. We give the chief points of Mr. Kendry's able speech, as follows: In the few remarks that I am about to make I intend to confine myself almost exclusively to the effects of the preferential tariff on the woolen industry of this country. As a practical woolen manufacturer of over thirty-five years, I may be supposed to know something about the conditions governing that industry in this country.

The capital employed in the woolen mills of Canada amounts to about \$15,000,000 to \$20,000,000, and employ over 12,000 hands, and has at least 60,000 people directly dependent upon it. Now, who are these people? They are the sons and daughters of our hardy industrious pioneers, their fathers have helped to build up this great Dominion, they have been taxed

for its development, they have struggled to provide schools for their children and fit them for good citizenship; and I contend that they have been successful, for in no country under the sun, not even in the United States, can we find a more intelligent, more industrious, more progressive class of people than the woolen and cotton operatives of Canada. These are the citizens that this government, with the preferential tariff, is surely and certainly going to drive out of our borders to seek homes and a livelihood in the United States—a country that at least knows the value of protecting its markets for its own people.

Last session the woolen manufacturers had an interview with the government, and we pointed out exactly what is happening to-day. We pointed out that a large number of our best operatives were leaving, and would continue to leave for the United States. Within the last seven weeks I know of seven mills in this country, in one of which I am interested myself, who have had to discharge 50 hands, and within the next three or four weeks they are liable to be shut up altogether for some time. On the floor of this House on March 30th, 1900, the Minister of Customs pointed with pride to the increased importation of goods under the preferential tariff; he gave a list of the imports of eighteen of the largest industries of Great Britain to Canada. Had the hon. gentleman stopped for a moment to consider, he would have seen in that statement of his, a very startling fact. He would have seen, Sir, that 56 per cent. of the whole increase was made up of woolens and cottons, woolens alone furnishing 38 per cent. of the total increase, thus leaving the remaining 44 per cent. to be divided amongst sixteen other industries. He would also have found that it took thirteen of the industries to make up the value of the importation in woolens alone. But I will put these figures a little plainer. Of all the goods imported in 1900 under the preferential tariff, about 30 per cent. were woolen goods. In round numbers, about \$7,000,000 worth of woolens were imported out of the whole \$26,000,000. Now is it any wonder that men who have invested capital in woolen manufactures are very much discontented with the operation of the preferential tariff? As I have already mentioned, it is driving a large number of our best employees out of this country to the United States. Would it not seem to be a wiser policy, Mr. Speaker, for this government to endeavor to keep at home our own Canadians instead of letting them go away to the south; instead of spending large sums of money to bring in Doukhobors and other people of that class? Our government spend half a million dollars a year to bring in immigrants, and still pursue a policy that drives away our own native born Canadians. I have a letter saying that last week some 80 or 90 left the village of Hespeler alone, they have gone to the United States, and in a short time they will probably send for their families. Now, we must say for the United States that they are careful to look after their own people, and in that respect we might take a lesson from them. I want to show you exactly what this policy will do in so far as the laboring men are concerned. I have always wanted to see the workingmen well paid, but we do not want to see them put on the same level as the workingmen of Great Britain. No man in this country wants to see our employees treated as they are in England.

Now, Mr. Speaker, perhaps I had better name to you those thirteen industries which I mentioned a moment ago. They are: Drugs, dyes and chemicals; flax, hemp and jute manufactures; glass and its manufactures; machinery and other iron and steel manufactures; soaps, oils, paints and colors; paper and its manufactures; pickles, sauces and capers; earthenware and chinaware; fancy goods, hats and caps; leather and its manufactures. Now, out of these thirteen industries, woolens alone are affected, that is the industry that this preference is especially going to strike.

Now, I claim that it not only affects the woolen industry but it affects wool. In the Northwest they are beginning to grow as fine a quality of wool as is to be found in any part of the world, and we are now brought under a policy which compels us to close our mills to their wool. Just when they are getting to the point where they can produce any quantity of wool for their own market, they find their own market being shut to them. This preferential tariff policy also affects the towns all over the country where woolen industries are established. Some of these towns have given bonuses to the woolen factories, and possibly exemption from taxation. Let me state here that four years ago I condemned in the strongest terms the policy of giving a preference to any other country but Canada. I stand in this House as a Canadian, and support Canadian interests. I was born and brought up in Canada, and I say that we have no right to give any other country a preference to the detriment of our own people. If you want to build up this country you have got to do it on broader lines than the government are pursuing, we must build it up on the lines of our own interests. Surely our workmen have vested rights in this country as well as capitalists. Those operating in our woolen mills usually occupy their own houses, they have social, pecuniary and political interests in this country, which the government ought to respect. Some time ago, when I was mayor of the town of Peterborough, I remember that many manufacturers were talking of locating there, but they were always afraid of the Liberals getting into power, knowing that if they did a Liberal government would probably pass legislation that would jeopardize their capital.

In 1896, the right hon. the Prime Minister came to Peterborough and stated on the public platform that the manufacturer of this country would not be disturbed, and that vested rights had no cause to fear the advent of the Liberals to power. Let me ask this House, if the Prime Minister has been true to his promise. What position does he occupy to-day? I have been nearly five years a member of this House, and never heard the policy of the Liberal party defined until the last ten days, when the Prime Minister and his supporters told us what they thought about it. I had always believed that the policy of this government was on the principal of the old national policy, and for my part I found it hard to discover where the line was drawn. The Minister of Trade and Commerce (Sir Richard Cartwright) has also spoken, and he has announced what he thinks the Liberal policy is. Well, Sir, we know what his opinions on fiscal questions were in former years, we know that he stated that if he got into power he would remove the last vestige of protection from the manufactures of Canada. We did not expect much from that hon. gentleman, and, at least to some extent, we have not been disappointed. The Prime Minister, in the course of his speech, said: "If we impose a duty of 25 per cent. on articles of any kind, it is manifest that the manufacturers of similar goods in this country must have the benefit of that 25 per cent." That statement shows how very little the right hon. gentleman (Sir Wilfrid Laurier) knows about the trade of this country. It is well known that in countries where goods are manufactured, certain goods are sold cheaper for export than they are sold in the country of manufacture. I myself know some gentlemen in this House who buy machinery in the United States, and they can buy for export to Canada cheaper than the people of the United States can buy exactly the same goods in their own country. It is the same way in England, and, therefore, although we may have 25 per cent. it is not 25 per cent. on the real value of the goods. As a matter of fact, we do not even get our old protection to-day, simply because they sell job goods, or "seconds," for this country. Therefore, we have not the protection we should have. This government should take means to appoint some competent authority to adjust the value of the goods imported

into Canada. As a matter of fact, we do not know what the duty is to-day, because at one port they collect one duty and at another port another duty. There should be appraisers in each town, as is the case in the United States, and no matter whether they are job goods or seconds or anything else, they should pay duty under the regular tariff and at their full proper price.

Now, the provinces most directly affected by the preferential tariff are the provinces of Ontario and Quebec, which are the largest manufacturing provinces in the Dominion. And while I speak with particular reference to the woolen industry, I wish to say, that although other industries are less affected by the preference, yet, all our industries must be injured to a greater or less extent. The great question with us in the woolen industry is the question of labor, and the more labor we put on our goods the further we get away from competition with England. We pay our workmen in Canada from 50 to 75 per cent. higher wages than they pay them in England, and hon. gentlemen will see at once to what extent we are handicapped in this respect. I believe that it is impossible for us to reduce our wages in Canada, because we have a high protectionist country to the south of us, and high class labor will not stay in Canada unless it is paid about the current wages in the United States. We, therefore, cannot get as cheap labor in Canada as they have in England. I have some experience in this matter, Sir, because I visited some large manufacturing establishments in England, and I state here that I, as a Canadian manufacturer, never wish to see Canadian workmen in as poorly paid a position as are the workmen of England. Therefore, if we have to compete with English goods under this preferential tariff, it is absolutely certain that we will have to reduce the wages of our workmen, or else close up our manufacturing establishments. As a matter of fact, I do not see anything else for it than to close our places up. This, of course, would be a hard blow to Canadians who have their money invested in the woolen industry, but it will bear harder still on the thousands of workmen who are engaged in Canadian woolen factories. The importation of low woolen goods is going on by leaps and bounds since the total preferential tariff came into force in July last. Hon. gentlemen on the other side of the House have argued time and again that a tariff was not made to suit one class of individuals above another, but, Sir, in face of the above facts, can you not see that this preferential clause is aimed directly and almost entirely against the woolen operatives and manufacturers of this country, and directly and largely in favor of the woolen manufacturers of Great Britain. Just consider, \$8,933,000 worth of woolen goods imported in one year into a market of something less than 6,000,000 of a population, or nearly one dollar and a half's worth for every man, woman and child in the whole Dominion.

I would ask what share can there be left for our own woolen mills, or what prospect can there be of this industry holding out against such a competition? During the last election, the hon. the Minister of Labor went up and down this country proclaiming himself to be the apostle of labor, the friend of the workingman. He was introduced as such at a public meeting held in Peterborough, and the workingman's vote was solicited on the strength of this new portfolio in the interests of labor. Where is he now? Is he to speak on behalf of the 12,000 operatives? Is there one member on the government side of this House who is independent enough to speak a word in favor of so arranging this fatal tariff that this industry may be saved for the country?

We have a Minister of Labor in Canada—at least I heard we had such a minister during the last election—but I have heard little about him since, and I wonder where he is to-day. I assume that he is on his way to Australia, but nobody seems



to have been appointed to take his place in the cabinet. I wonder the Minister of Labor did not interfere when the government decided to embark in this policy of giving this preference to England, because there is no doubt that labor in Canada will be greatly injured by it. This preference will undoubtedly be the means of injuring not only the woolen industry, but other industries throughout Canada, because you cannot injuriously affect one without injuring all. There are other considerations which enter into the woolen industry of Canada which, perhaps, the government do not pay heed to. Let us take the plant which is required for carrying on that industry. We will say that the plant of a mill cost \$130,000 in Canada. That plant in England would be worth only \$100,000, because we have to pay the duty and freight here. There is \$30,000 more that a Canadian woolen mill has to invest in its industry at the start, and besides that, our coal costs more in Canada, the interest on our money is more, and the cost of our labor is higher than in England. I believe, Sir, that there are any number of manufacturers who will bear me out in the statement, that if we could put down the cost of labor in Canada to what it is in England, we could compete with the English manufacturers to-day. But, Sir, I never want to see labor in Canada as poorly paid as it is in England. However, this preferential tariff is bound to militate against the interests of labor in Canada, and I have no doubt that when the next four years come around the government will have some trouble with their own supporters to keep them in line on this question. I understood the hon. member for South Ontario (Mr. Ross) to say that he had a hosiery concern in his constituency, and that they were perfectly satisfied with the present conditions. I hardly think the hon. gentleman is right in that. But, was it not inconsistent on the part of the hon. gentleman (Mr. Ross) to announce that he was a free trader all his life, and at the same time to tell us that he is in favor of the bounty system, which is about the most drastic form of protection that can be imagined. I, for my part, Mr. Speaker, am in favor of giving a bounty or adopting any other fiscal policy which will tend to strengthen the industries of this country, but I do not believe in helping out one industry at the expense of another. I often think that if we had our woolen mills located in Nova Scotia we would be a good deal better off than we are, and that, perhaps, if we moved down in the neighborhood of Sydney, this government might give us a bounty, the same as they have done to the iron and steel men.

I think we were told by the Minister of Customs the other evening that the woolen manufacturers should go home and work harder and eat less, and that they should be more alive. Well, I consider that the woolen manufacturers of this country are just about as much alive as the man who makes biscuits. The biscuit manufacturer has double the protection that the woolen manufacturer has. The hon. gentleman made the statement that there was only 25 per cent. on biscuits, but the fact is that there is 27½ per cent. Besides, he gets his raw material, his flour, in this country, and his labor is largely wind, or something of that kind, while the woolen manufacturer has to import his raw material from other countries. I did not intend to allude to any personal matter, but it was brought on by the Minister of Customs himself. I want to say, so far as that gentleman is concerned, that he is looking after the biscuit industry of this country, if he is not looking after the woolen industry.

Now, I want to say to the Minister of Trade and Commerce and the Premier of this country that I consider that these gentlemen have done a great injustice to this country. In 1876 and 1877 I was in the manufacturing business. We all remember the deputations which came here to interview the government at that time; we know how those deputations were received; and I want to say that the deputations of manufacturers who come here to-day to wait on this government are received

in exactly the same way. It has been said in this House that we do not want any tinkering with the tariff; but these gentlemen, ever since they came into office, have been tinkering with the tariff. They first gave a preference of 12½ per cent., then they altered it to 25 per cent., and afterwards they altered it to one-third. What is that but tinkering with the tariff? I want to say that no man is warranted in going into manufacturing in this country to-day under this tariff. I would not invest one dollar in manufacturing in this country, with such a preference against me. If we owe England anything, let us pay it, no matter what it is—whether it is one million or two million dollars. But I say it is not fair to this country that the government should give this preference, not to England—we are not giving it to England—to the manufacturers of Yorkshire. I say it is a matter of vested rights in this country; but it seems that we have no vested rights in this country which this government is not willing to legislate away.

Mr. Speaker, I hold in my hand a letter, part of which I intend to read to the House. I understand that the Prime Minister has received a copy of it. I may say that it comes from the manufacturers of this country as a whole, and not from any individual manufacturer. It is as follows:

"Hon. W. S. Fielding, Minister of Finance,  
"Ottawa, Ont.

"Dear Sir,—I beg to enclose herewith a paragraph taken from last month's Journal of Fabrics, showing the imports of woolen and worsted fabrics as compared with last year. You will notice a startling increase for the month of January, nearly 40 per cent., in woolen fabrics, and over 35 per cent. in worsted fabrics. You will note also that there is a falling off in all other textile exports from Great Britain to Canada, except carpets, which is slightly increased, about 10 per cent.

"When we interviewed you in Ottawa we told you that the 33½ preferential rate had not fully gotten into operation, and that we should feel it when the spring imports were received. Our worst fears are more than realized. Our future looks desperate. Surely there is some way in which you can afford relief. There were over fifty employees discharged at the Auburn mills, Peterboro', last week. Fifty more will be laid off this week, as the orders are being completed and no new orders coming in. During the past month we have discharged over 200 employees at Hespeler alone. Lomas' mill, Sherbrooke has completely closed down, and other mills are running on short time. The repeat orders for spring are of such small character, and coming in so slowly that it looks as though there would not be in six months from now 25 per cent. of the woolen machinery in operation that there was in July of last year. I cannot think that you will allow that condition of affairs to continue. It is a case of life and death with us, and matters should not be allowed to drift along until next year. Our help will be scattered. I am informed by Mr. Brodie that forty-seven men left Hespeler last week for the United States. They left their families behind until they obtained work, when they propose to send for them. Our machinery will be lying idle, and getting out of condition. Fixed charges will be running on, and there will be a very ruinous loss of capital before the end of this year. Our general manager informs us that owing to the state of his orders he will be obliged to discharge over 200 more persons by the 10th April, which will leave only 400 at the mill, where we employed up to quite recently 800. I fear you do not realize the serious condition of the woolen industry and the danger it is in of being completely extinguished.

"Woolen machinery is only fit for making woolen goods, and buildings are erected especially for the convenience of manufacturing woollens. It is all very well for people who have no practical knowledge of these things to say with a light heart—as many members of parliament do in their speeches—'why



not turn your attention to something else? Well, when everything one has got is invested in an enterprise, what can he turn his attention to? It requires capital and experience to embark in any manufacturing enterprise. Our capital is invested in the woolen industry, and our experience is in the manufacturing of woolen goods. I venture to say you do not realize that the woolen industry is the only one that has been hit, and hit hard, and I may say, without the slightest exaggeration, is on the brink of ruin by the operation of the preferential tariff.

"We do not object to the preference to Great Britain, we are prepared to support it, but the tariff should be so arranged that we should be put on an equality with the Lancashire manufacturers.

"I can assure you that the situation is really serious, and the financial institutions who are supporting the various large woolen industries—what I mean by supporting is discounting their paper and making them advances—are becoming seriously alarmed. If they withdraw their confidence and refuse to continue to make advances, the mills will have to close down, and that is just what is in sight, I fear.

"It looks to us, and to a great many of the members of the House, that the woolen industry has been singled out for the severest competition, not only by reason of the peculiar advantage of British manufacturers of woollens, but by reason of the extent to which German goods are smuggled into Canada through Great Britain under pretense of partial manufacture in England. You will note that the several departments of the textile trade are relatively untouched by the preferential tariff. The silk trade, the linen trade, the jute trade, and the cotton trade all appear to be exempt from the severe competition suffered by the woolen mills.

"I greatly regret to say that many members of the House I have spoken with do not vote as they talk, as I have been assured by many of them, including some members of the cabinet, that they were protectionists, and that we ought to have some relief; but they vote the other way when relief is asked for. I hate to put it in that way, but it is a true statement of the case.

"In making this appeal I do so in the hope that the facts already before you, and the additional information contained therein will be fully considered by the government, and that something will be done for us this session."

I have nothing more to say, Mr. Speaker, on this question except to express again the hope that the government will see its way to afford some relief to this very important industry.

At a later stage of the debate Mr. Smith, of Vancouver, referring to the discharge of hands at the Auburn mills, said he had made enquiries into the statement, and had received from R. F. McGregor, chairman of the Associated Labor Union of Peterboro, the following telegram:

"Auburn woolen mills have been continually running night and day during this last four years, have employed twice as many hands, and have over twice as large pay-roll as before, and turn out more than twice as much goods and of better quality. They have improved their machinery out of their earnings at least \$50,000, and have for three years been too busy to partly close down to take stock. As this is the period they change from summer to winter goods, they now take stock, and are repairing their machinery, and have laid off very few hands temporarily for that purpose, as stock cannot be taken and machinery repaired with mill running at full capacity. Have regularly paid good dividends to shareholders for five years and are making money."

To which Mr. Kendry replied: If the hon. gentleman will allow me to explain, I will state exactly the position. Mr. Speaker, so far as that telegram is concerned, the whole statement is incorrect. We are to-day not doing any repairs at all,

and we are closed on account of having no orders in the mill. Whoever gave that information to Mr. McGregor, the whole thing is incorrect.

### BINDER TWINE AT COST.

The following circular has been sent out by the Dominion Government binder twine factory:

We are selling binder twine to farmers, and to farmers only, at cost! To the cost of the raw hemp we add the cost of manufacture and advertising, and while our stock lasts, or until notice, farmers can have our twine at the following prices, free on board cars or boat at Kingston: "Beaver," 8½c. per pound; "Monarch," 8½c. per pound; "Sisal," 7c. per pound; "New Zealand," 6½c. per pound; "Pure Manilla," (650 feet to pound), 10c. per pound. To secure the advantage of cheap twine from the government factory, send in your orders now, stating quantity and grade. We will book your orders, and send you invoice and at any time during the season, when you desire us to forward twine, send us the money, by registered letter, express or post office order, or government draft, and we will ship at once. We do not pay the freight in any case, but will ship by the cheapest route, when no directions are given. Where it is at all convenient, or even possible, it is better for farmers to club together and order ton lots through one of themselves or through the head of any farmers' union or society, or through any agent they may choose, so long as we receive the list of farmers making up the order. In this way they get the advantage of cheaper freight and save the expense of postage, registration of money letters, etc. Where larger orders are likely to follow, we will send samples on application. We have on hand a large stock of good twine, but this unprecedented offer to sell at cost warrants us in advising that orders be booked as soon as possible. It is not at all likely that prices will be lower than at present, and even should the price of hemp drop later on, neither we, nor anybody else, will be likely to sell below the quotations in this circular, this season. Address all letters to J. M. Platt, warden of the Kingston Penitentiary, Kingston, Ontario.

### FABRIC ITEMS.

Mme. Samuel A. Adler, of Montreal, has registered a business, under the name of the Eagle Ladies' Waists and Skirts Mfg. Co.

A manufacturer of high grade glasses, in Bohemia, desires to secure an agent in Canada, and solicits correspondence through R. G. Dun & Co.'s Foreign Department.

Isidor Frankenburg, Ltd., of Manchester, Eng., the celebrated manufacturers of waterproof clothing have appointed H. L. Smyth & Co., of Montreal, their selling agents in Canada.

J. G. Terry, accountant; E. H. Crandell, agent; Robt. J. Hutchings, manager, all of Calgary, N.W.T., have formed a joint stock company, known as the Calgary Tent and Mattress Co., with a capital of \$10,000, to manufacture tents, mattresses, bedding, and similar goods.

The Hon. Thomas R. Jones, for twenty-two years a member of the New Brunswick legislative council, died at St. John, on the 10th inst., aged 76. He was formerly a leading wholesale dry goods merchant of St. John, and was one year president of the St. John Board of Trade.

The business of R. J. Whitla & Co., wholesale dry goods Winnipeg, has been converted into a joint stock company. It is capitalized at \$500,000, and the incorporators are R. J. Whitla, D. K. Elliott, Richard Driscoll, salesman; A. S. Binns, salesman; John M. Campbell, salesman, and James A. M. Aikins, barrister-at-law, all of Winnipeg.

A committee from the Custom Tailors' Union of Hamilton, met a committee of the merchant tailors on April 2nd, to adjust the differences which caused the recent strike. The matter was settled amicably, the men obtaining a 10 per cent. advance, and a slight change in the classification of goods was made in their favor. The strike was declared off, and the shops are now working as usual.

There has been a reduction by Canadian mills of half a cent a yard in one or two lines of Canadian cottons, but whether further reductions will be made will depend a good deal on the effect of the present depression among United States cotton mills. If the American mills job off their stocks at slaughter prices here, the home manufacturers will have to meet the competition.

We regret to announce the death of the Hon. J. Arthur Paquet, of the eminent Quebec firm of hat, glove and fur manufacturers, which took place somewhat suddenly from congestion of the lungs. Deceased was 44 years of age, and leaves a widow but no children. Quite recently a company was formed, with a capital of \$1,500,000, to extend and carry on the business, and the letters patent were only received quite recently.

An interesting wedding took place the other day at Brantford—that of John M. Garland, of Ottawa, senior partner in the well-known wholesale dry goods firm of John M. Garland & Son, and Mrs. Emily McKinnon, fourth daughter of James Ball, a leading citizen of Brantford. The bride is a cousin of the groom, and they were lifelong friends. She was first married to Dr. McKinnon of Brantford, who was a cousin of the first Mrs. Garland. Both bride and groom have grown up families. On their return from their wedding trip to the Southern States, Mr. and Mrs. Garland will take up residence in the Garland home on Nepean street, Ottawa.

A London, Ont., firm of wholesale dealers in woolen goods, A. E. Pavey & Co., has made an assignment. Their liabilities amount to \$105,000, while their assets are nominally \$25,000 less than that amount. Recently one of the partners, F. A. Fitzgerald, who declined to agree to an assignment, retired from the firm. He has been interested in some outside ventures, which failed to realize as expected, and the firm are now endeavoring to protect their creditors. It is stated that they propose to pay 70 cents on the dollar. Among the principal creditors in Canada are the Rosamond Woolen Co., Almonte, \$7,346.88; the R. Forbes Co., Hespeler, \$4,633.19; the Joseph Simpson Co., Toronto, \$2,461.56; Montreal Suspender and Umbrella Mfg. Co., \$2,210.87; G. H. Harrower, Montreal, \$1,369.64; the Kingston Hosiery Co., \$1,331.74; Canadian Bank of Commerce, \$13,000; Bank of Montreal, \$10,015. The principal English creditors are, Hudson, Sykes & Bonfield, Huddersfield, £1,543 4s. 11d.; C. H. Simon & Co., Bradford, £1,463 12s. 2d. There are also private creditors, principally friends of the firm, to the amount of \$14,500.

#### NORTHROP IRON WORKS.

The Northrop Iron Works, Valleyfield, Que., which was organized about a year ago, to manufacture the Northrop loom, has added to its important establishment a line of freight and passenger elevators. The elevator is one of the most popular in the United States, and has been in use very extensively there for the past twenty-five years. The company has also added a very saleable article in the shape of a gas house-heating radiator. The manager, Mr. Bethel, went to the States a few weeks ago, and made a thorough investigation of this heater, which is extensively used in New York, and which the company will make for the Canadian trade. There is no odor or soot, and it costs less than two cents per hour for gas to heat

a room of 20 x 25 feet. It is adapted for use in stores, offices, cafes, halls, bath-rooms, or any room where a furnace or steam heater is either inadequate or not obtainable. Its superiority over all other gas radiators is in the use of an improved Holland burner, used in this heater only, which produces a compound triple blue flame, yielding an intense heat, and with combustion so perfect that no odor or gas is produced, and all necessity of chimney or flue ventilation is thereby avoided. One very important value attached to the use of this radiator is that by placing it in dining rooms during the spring it will save the cost of firing furnaces. The company is willing to place one of the heaters on trial for a reasonable time. By the addition of the above-mentioned goods to the Northrop industry, it is estimated that it will give employment to 150 men. All who are interested in articles of this kind can see the same on exhibition at the company's store, 296 St. James street.—Montreal Gazette.

#### THE KAISER'S CARPET JOKE.

The Kaiser goes in strongly for English carpets, and all the royal palaces in Germany are "Kiddministered" in almost every room. When the Duke of Cambridge (who will have his joke) was staying with the Kaiser, some months ago, he remarked upon this, and said: "We English ought to feel flattered, your Majesty, seeing that you think so highly of English manufactures. Well, English carpets can't be beaten anywhere, I am sure!" "Ah! Duke," replied the Emperor, laughing somewhat exultingly, "whenever I put my foot upon an English carpet I say to myself, 'Germany trampling on English trade!'"

Close to where the Duke of Cambridge was standing rested a large easy-chair upon which was placed a magnificent cushion, and embroidered across it, in silk, were the words: "German Empire." "Your Majesty," said the Duke, very quietly, as he plunged himself down on the cushion, "you, as representing Germany, have just trampled under foot English trade. Allow me, as representing the Queen of England, to sit upon 'the German Empire!'"—Modern Society.

It is said the New York capitalists will start this spring on the proposed pulp mills at the Grand Discharge, of the Saguenay, referred to in a recent number. It is stated that the mills will have 60 grinders and turn out 600 tons of pulp per day.

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- 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
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- 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
- 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

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Nothing of importance to note. Market firm, Gambier advanced 1/2c per lb. More enquiry is expected on opening of navigation.

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Sal soda ..	0 75	"	0 80
Carbolic acid, 1 lb bottles.....	0 50	"	0 60
Caustic soda, 60° ..	2 45	"	2 60
Caustic soda, 70°.....	2 60	"	2 85
Chlorate of potash ..	0 13	"	0 15
Alum ..	1 35	"	1 50
Copperas ..	0 65	"	0 70
Sulphur flour ..	2 00	"	2 50
Sulphur roll ..	2 00	"	3 00
Sulphate of copper ..	6 00	"	6 25
White sugar of lead.....	0 08	"	0 08
Bich. potash.....	0 11	"	0 12
Sumac, Sicily, per ton ..	75 00	"	80 00
Soda ash, 48° to 58° ..	1 30	"	1 40
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Castor oil ..	0 09	"	0 10
Cocoonut oil.....	0 10	"	0 11

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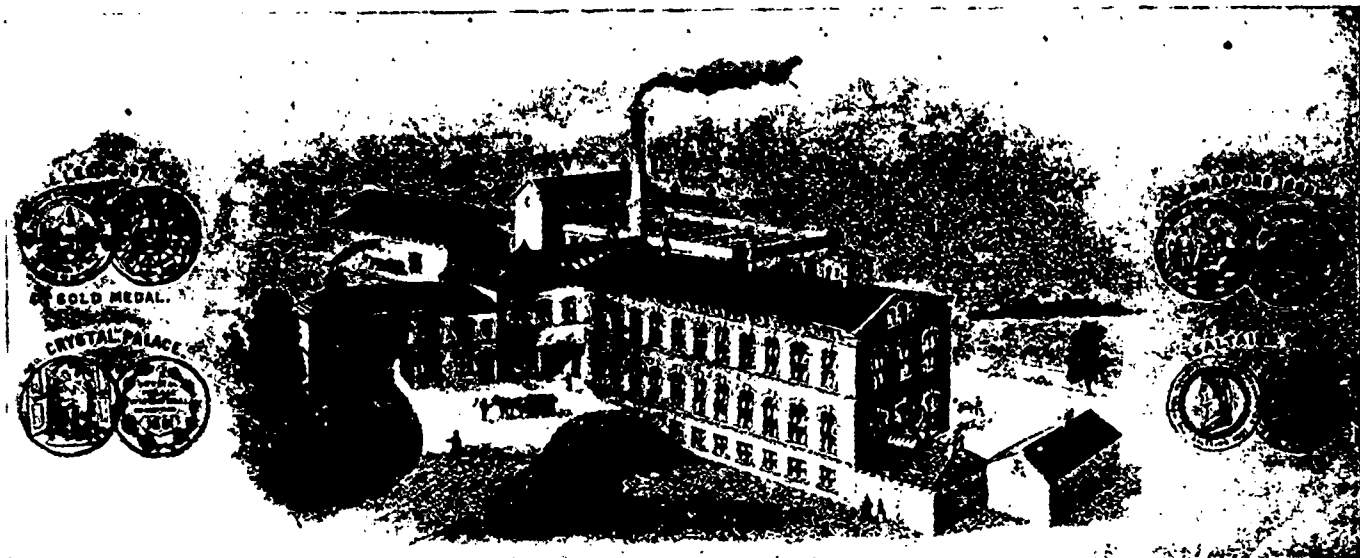
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### SWEATING SYSTEM MISUNDERSTOOD.

President Bernard Rose, of the Montreal Journeymen Tailors' Union, in an interview with a Star reporter gave his views of the sweating system, as follows: The agitation now going on, relative to legislation for the abolition of the "sweating system" is, in my opinion, worthy of some serious consideration. As a labor man, and an official of the Tailors' Union, I emphatically assert, that there exists, no form of sweating, at least, in the clothing industry of Montreal at the present time. If certain, misinformed labor men, would confine their attention to more absorbing phases of the industrial problem, they would benefit both themselves and their fellow-workers. What is erroneously termed the "sweating system," exists, to my knowledge, in every trade. What is erroneously called sweating is nothing more than a species of sub-contracting, in which a certain party, undertakes to make, a certain amount of work, for a specified sum. I have studied the so-called "sweating system" in Great Britain, the United States, and Canada, and speak from a knowledge of the facts. No legislation, beyond that vested in any municipality, is needed to cope with this mis-named subject, namely, a vigorous inspection, by the officials of the Health Department. I should like to call your attention to the fact that a Royal Commission, was appointed by the British Government, some twelve years ago, to enquire into the evils of this system. The recommendations made by the Commission were that nothing was necessary beyond a stricter enforcement of sanitary conditions and restriction of the hours of labor, which was duly carried into effect. I should like to point out, that legislation, that would seek to cope with this evil of modern industrial expansion would tend to interfere with "Individual Liberty," by compelling every man to become an employee, whether it suited his purpose or not. I trust, the time is far distant when the Government of Canada will seek to coerce its citizens by unwise laws, and too officious legislation, brought about by a lack of knowledge of the facts governing the case.

### TEXTILE DESIGNS

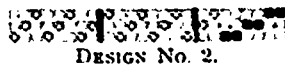
FROM THE TEXTILE RECORDER.

The patterns being made in stripes at the present time, both in woolens and in worsteds, are very simple in coloring and weave details. A few typical examples may be suggested of the lines on which to work. In the first place, a number of hair-line effects, as in accompanying designs, may be considered. The first of these has a fine rib cord on the last four threads, and is specially adapted to fine worsted yarns or to Saxonics. If warped one-and-one for 24, and then one, two,

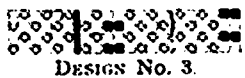
24 B



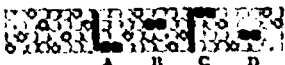
DESIGN No. 1.



DESIGN No. 2.



DESIGN No. 3.



DESIGN No. 4.

one, and wefted one-and-one, the broken row sections would be in fine lines of color, and section B in weft effect. This plan, like design 4, may be set as follows:

Worsted yarns, 2/36's, 64 threads and picks per inch.

Woolen yarns, 32 skeins warp, and 30 skeins weft, with 54 threads and 50 picks per inch.

Design 2 has a pruned twill ground, and by warping 1 thread of shade 1, 1 of shade 2, 1 of shade 3, for 18 threads, and then three 2's in the same colors, and wefting 1 of shade 1, 1 of shade 2, 1 of shade 3, the first 18 threads make fine lines of color, and the last six, lines of two threads each. This idea is developed in design 3 with a plain ground, and No. 4 a compound of swansdown weaves. The following are suitable methods of weaving:

DESIGN No. 2 Warp.

For 18 { 1 thread of 30 skeins, shade 1.  
1 " " " " 2.  
1 " " " " 3.  
2 threads " " 2.  
2 " " " " 3.  
2 " " " " 2.  
16's reed, 3's.

Weft.

30 skeins, three shades.  
52 picks per inch.

DESIGN No 3. Worsted Warp.

For 8 { 1 thread of 2/28's, shade 1.  
1 " " " " 2.  
2 threads of " " 1.  
For 8 { 1 thread " " 2.  
1 " " " " 1  
2 threads of " " 2.  
12's reed, 4's.

Weft.

1 pick of 2/28's, shade 1.  
1 " " " " 2.  
44 picks per inch.

DESIGN No. 4.—Warp.

For 8 { 1 thread of 2/40's, shade 1.  
1 " " " " 2.  
1 " " " " 3.  
1 " " " " 4.  
2 threads " " 1.  
1 thread " " 2.  
1 " " " " 3.  
2 threads " " 4.  
1 thread " " 1.  
1 " " " " 2.  
2 threads " " 3.  
1 thread " " 4.  
1 " " " " 1.  
2 threads " " 2.  
1 thread " " 3.  
1 " " " " 4.

15's reed, 4s.

Weft -- Same as warp. -- 68 picks per inch.

The latter plan would thus give fine lines in four shades, interspersed with lines of two shades each in the same color.

### A NEW CANADIAN SHEEP.

A new species of mountain sheep has been sent from Dawson City to Director Hornaday, of the New York Zoological Society. This species is absolutely new to science, and is so strikingly different as to render its title to independent specific rank beyond question. Director Hornaday has named it the *Ovis Fannini*, in honor of Curator Fannin, of the provincial museum of British Columbia. In the Klondike region it is known as a "saddl-backed," or "piebald" sheep. Its head, neck, breast and abdomen and inside of the forelegs are of a snow white. The other portions of the body are a brownish grey, giving the animal the appearance of being covered with a grey blanket.

—One of the Zionist movements among the Jews in Vienna is an effort to establish industries in Palestine. Among those being considered are fez and basket-making, and the manufacture of textile fabrics, clothing, paper, chemicals, matches, machinery, bricks and tiles.

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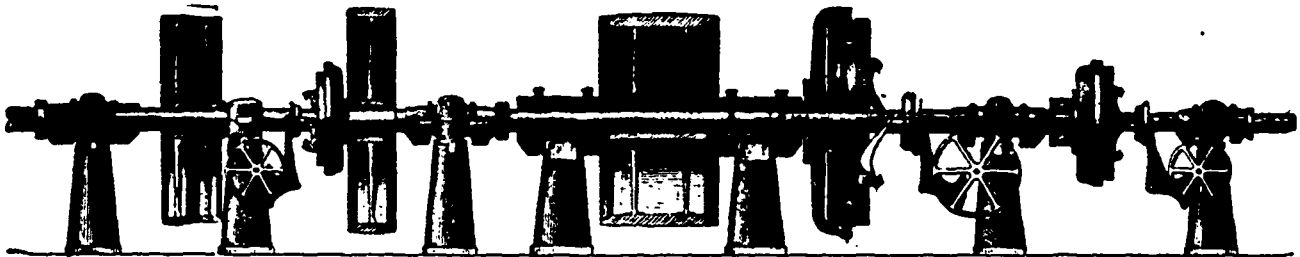
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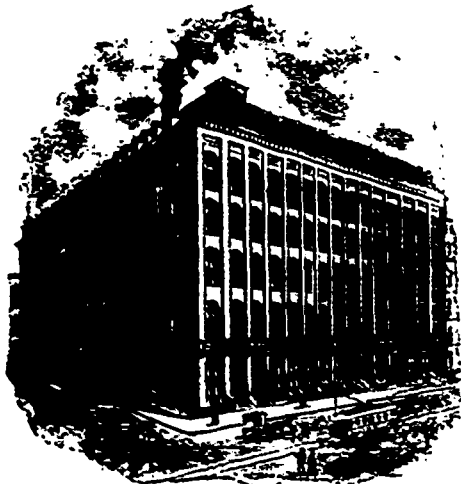
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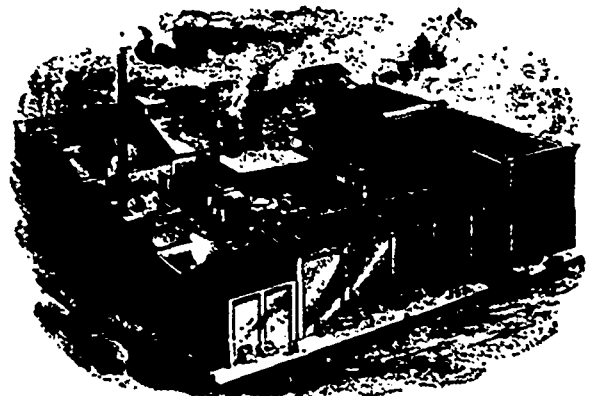
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—Since the adjourned meeting of Wm. Parks & Son, St. John, reported in another column, the company have approached the city council asking the corporation to guarantee the company's bonds to the amount of \$250,000, to enable them to pay off a mortgage of \$130,000 and cover other liabilities of \$50,000, leaving a working balance of \$70,000 in which to start up the cotton mills again. The council, after discussing the matter, reported that it could not go beyond exempting the business from taxes and water rates; so that matters stand as they were. There is a rumor that one of the cotton syndicates of Montreal may buy up the mill with the object of dis-

mantling it, as was done with the Dundas cotton mill. If no purchaser appears the mills and estate will probably be put up at auction.

—The Alaska Feather & Down Co., Montreal, are asking the town of St. Henri for exemption from taxes on their factory there.

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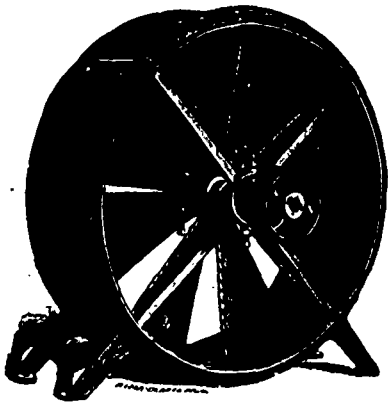
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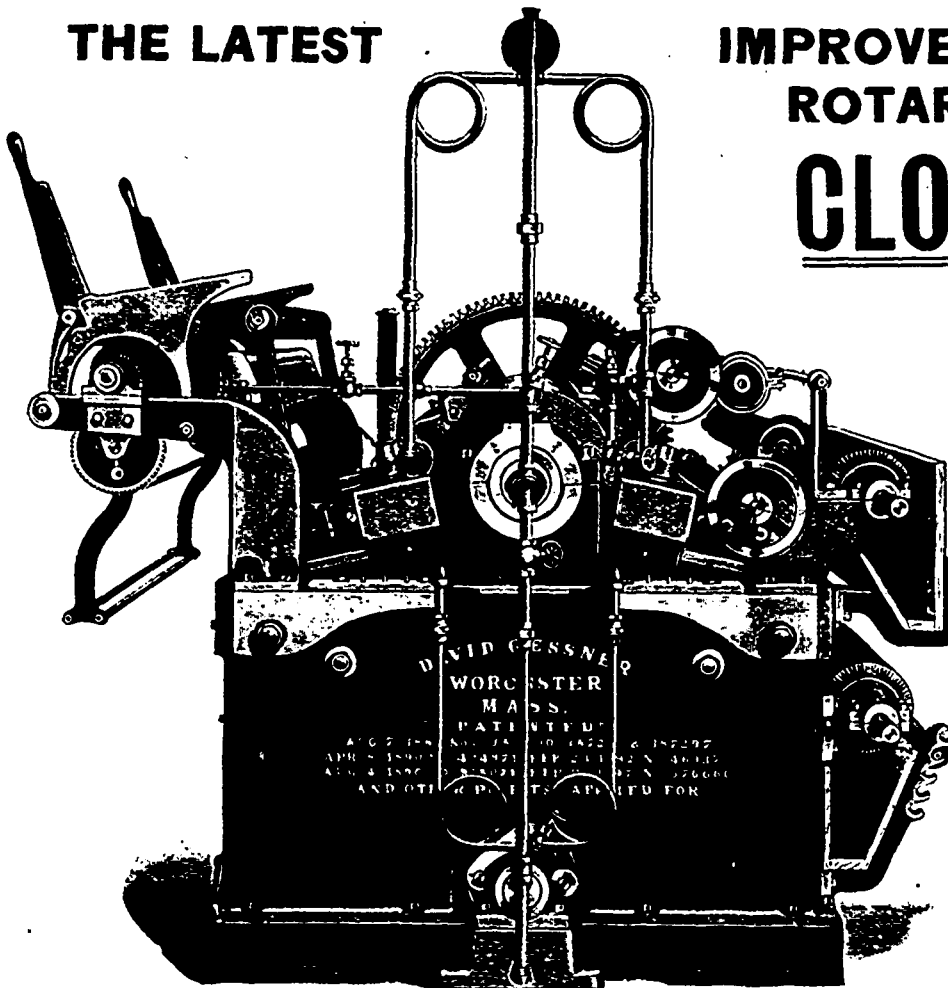
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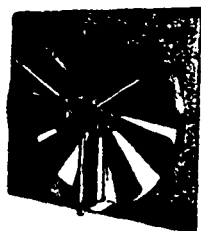
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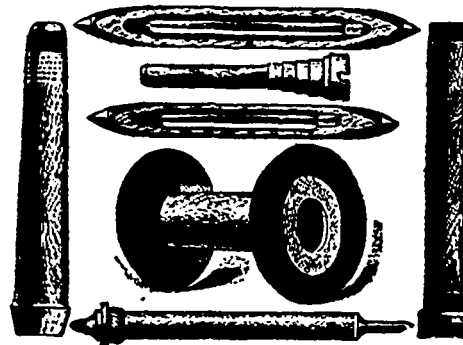
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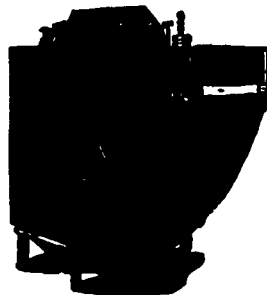
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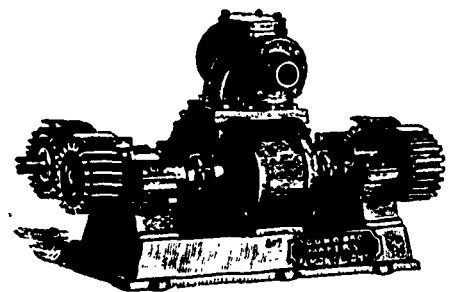
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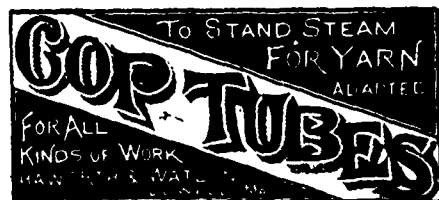
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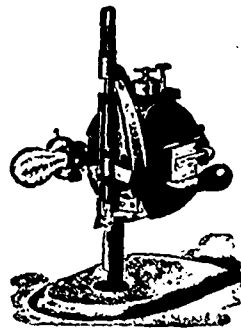
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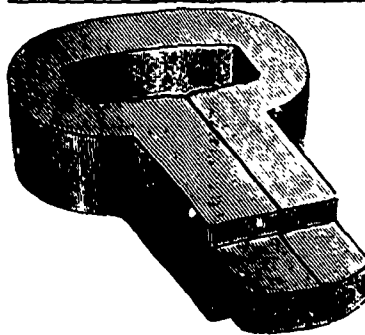
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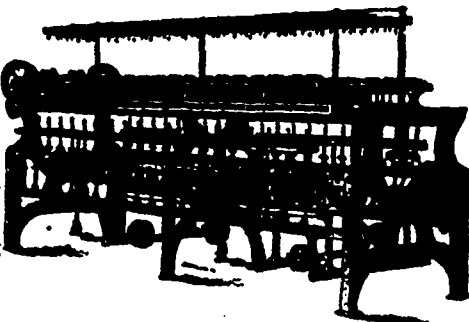
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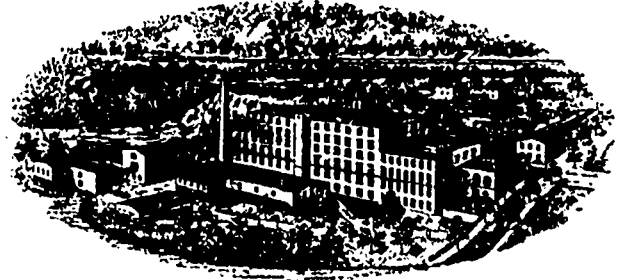
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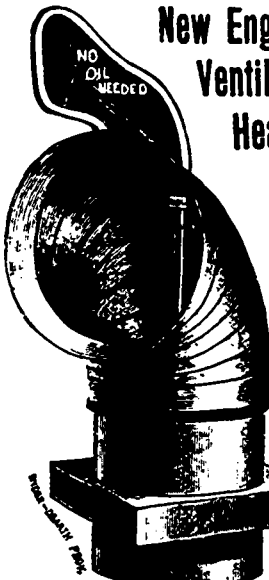
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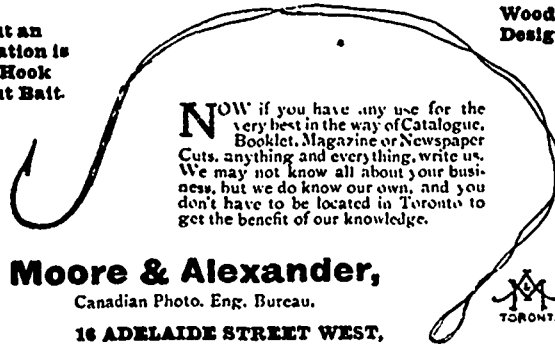
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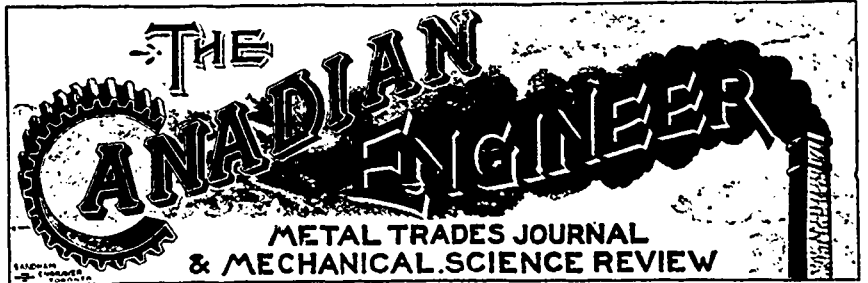
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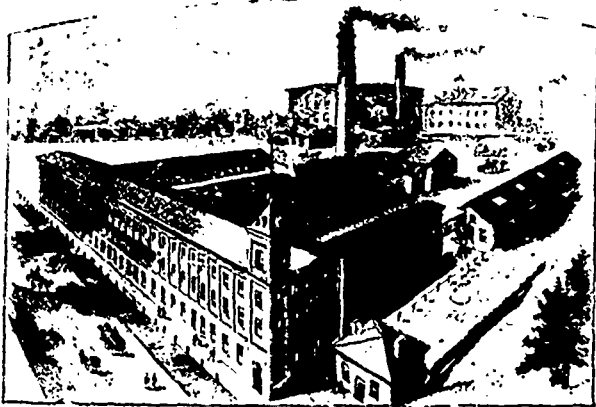
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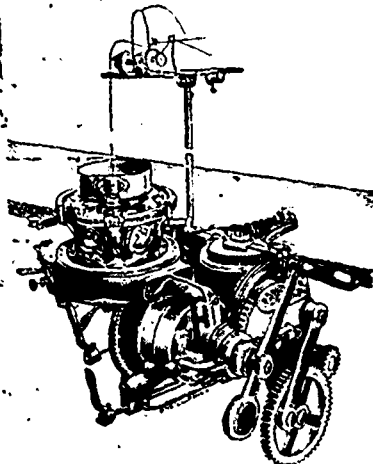
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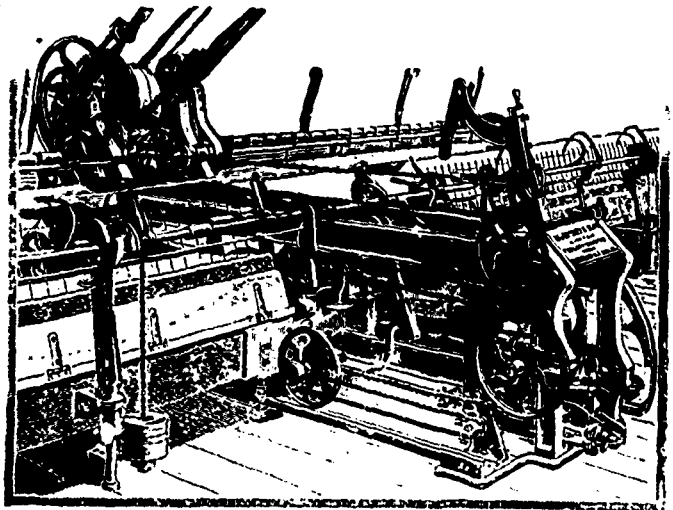
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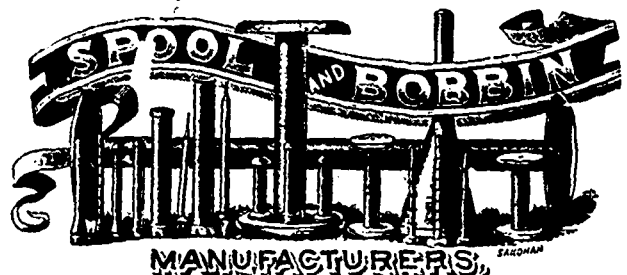
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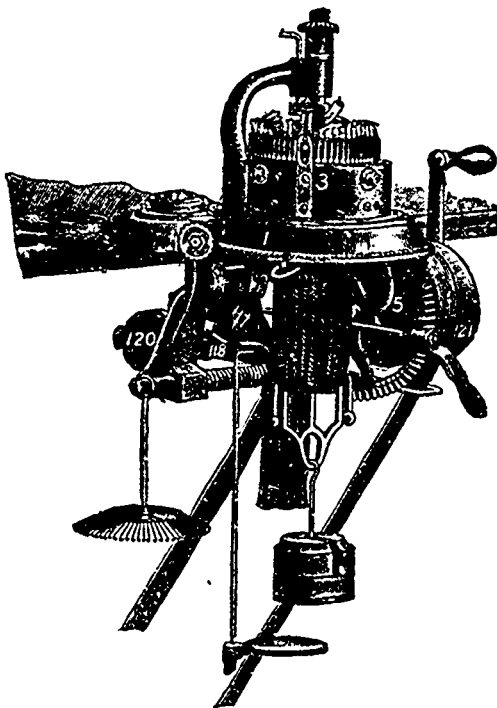
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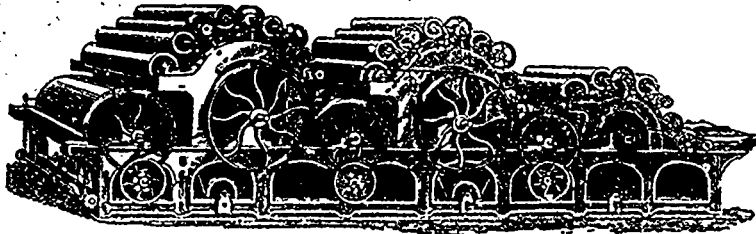
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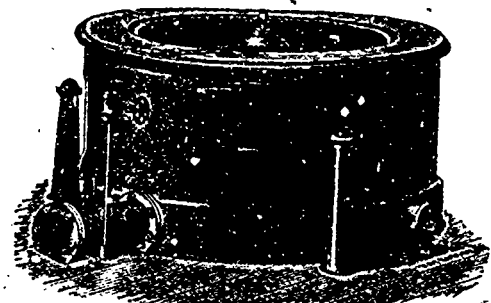
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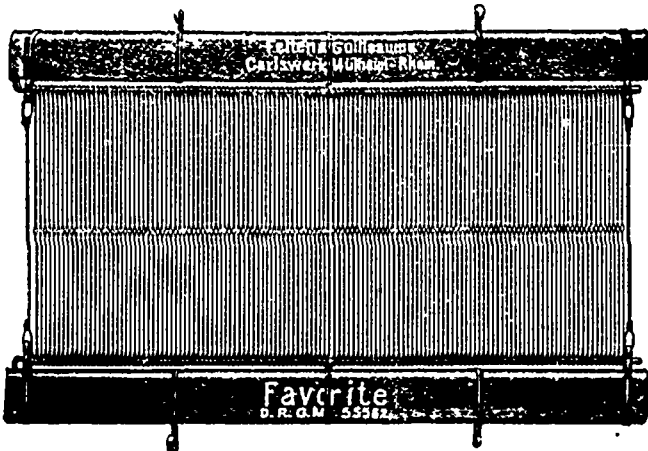
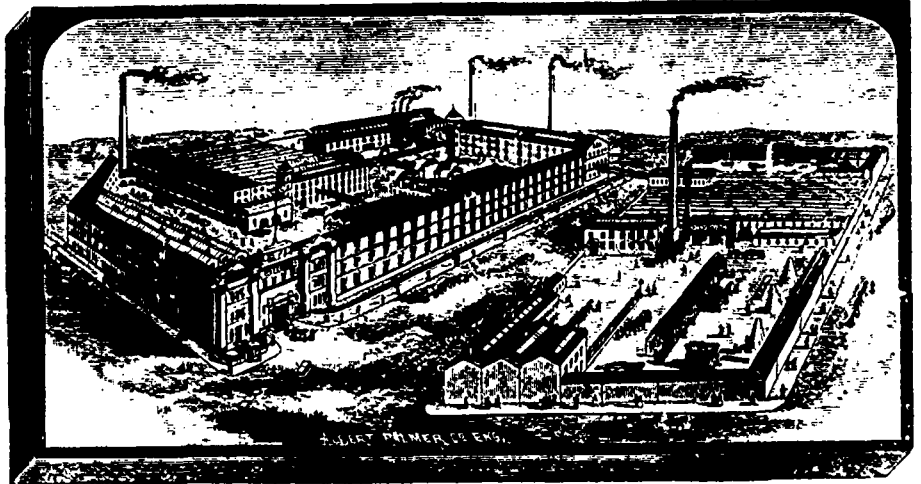
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