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CANADIAN Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XIII.

TORONTO, JUNE, 1896

No. 6

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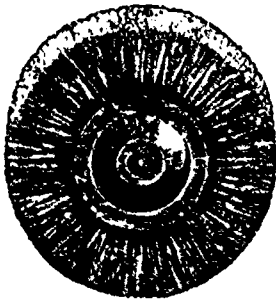
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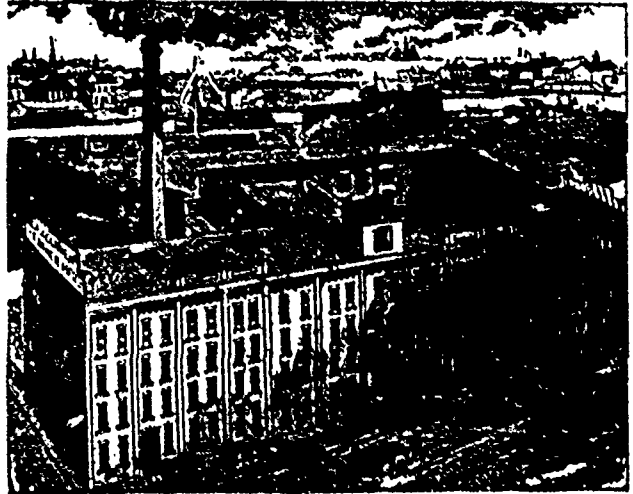
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CANADIAN Journal of Fabrics

THE JOURNAL OF THE Textile Trades of Canada.

Vol. XIII.

TORONTO, JUNE, 1896

No. 6

Canadian Journal of Fabrics

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

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Editorial

Next London Wool Sales. The next series of wool sales begins in London, June 30th; the list of new arrivals to close on the day that 375,000 bales have come to hand.

The Uses of Adversity. "It's an ill wind that blows no one good," and though hard times are seldom spoken well of, we sometimes find that after all the uses of adversity are sweet. A contemporary in the United States publishes this item:

"The weavers of the Lymansville mill, Lymansville, have agreed to accept a temporary reduction of half a cent a yard on a line of worsted goods to enable the concern to get an order for which it is now competing, and which would keep the mill running four months." We here have an example of an understanding between capital and labor which is arrived at through the pressure of misfortune, but which is none the less powerful and likely to survive on that account.

The World's Wood Pulp.

In another column will be found a few notes on what a number of our lay contemporaries refer to as a "new industry," viz., the manufacture of silk from wood pulp. Great interest will be taken in this process in Canada from the fact that Canada possesses the world's supply of the raw material, all other sources being within an easy calculable period of exhaustion, while her boundless forests stretch from Labrador to the mouth of the Mackenzie river, inside the Arctic circle. It is to be hoped that at an early date after the coming elections the Government, which ever leader is returned to power, may see fit to place an export duty on Canadian pulp wood, and thus concentrate in Canada the pulp production of the world, with its attendant industries of machine building and chemical manufacture. It is true there is a clause in the United States tariff which threatens our lumber with a retaliatory duty if export duties are levied by Canada. That this is a very idle threat is evident from a glance at the inconveniences to which such a policy would subject the industries of the United States. In the matter of wood pulp we own the earth and we might as well collect our rents.

New Knitted Twist Fabrics.

Every producer of knit goods should at once look into the possibilities of the new knitted twist fabric which has been adopted by the German Government for army use, in place of the flannel cloth formerly used. The *Knitter's Circular* says: "The sample to hand is made from a cotton yarn, and apparently very light for its gauge. In the making of this particular stitch, the thread is laid by sinkers from the under side of the (bearded) needle. The sinkers take the loop the distance required above the needles, then move sideways over them, which causes the loop to have a cross twist under each needle. The sinker loop, as in ordinary knitted fabric, thus loses its roundness, but by the extra

twist the elasticity is maintained. We understand that this fabric is also to be adopted by other military authorities on the continent, in which case it will give to this department of the knitting industry a new lease."

Wall-Paper Exports. American wall-paper manufacturers recently made experimental shipments of wall papers to Germany, and the Germans are reported to have taken a fancy to the colorings and patterns, and to have considered the prices moderate. If this export trade can be done by Americans, there is no reason why Canadian wall-paper manufacturers cannot open up a trade in foreign countries also. It may be true that our three factories in Canada cannot produce the range and variety of patterns that can be turned out across the border, but our products will be sufficiently varied to meet the average requirements, and, to use the trade phrase, prices can be made "right" on export orders. Such experiments might be made with Australia and South Africa, where Canadian manufactures are steadily gaining ground in more than one line.

Show up Canadian Goods. Although the great British Empire Exhibition for Montreal has been postponed till 1897, that city will have a provincial exhibition this year from Sept. 10th to 19th. We hope the textile manufacturers—and by these we include not only the cotton mills, woolen mills, silk mills, carpet factories, etc., but the manufacturers of Canadian fabrics, such as clothing, shirts, collars, cuffs, hats, caps and furs—will make a good showing both in Montreal and Toronto. It is only by letting the people know what our home manufacturers can produce that the misconception and prejudice regarding our industries and the quality of their products can be removed. Woolen manufacturers, for example, are at this very juncture suffering more than ever before from the trade custom of selling the better grades of Canadian goods as foreign. Many houses refuse to buy a piece of goods that contains the mill's own trade-mark, or tear it off after they have purchased, and put some foreign-sounding mark of their own on. Even where the wholesaler is fair enough to buy and sell Canadian goods under their true character and name, the retailer will take off the marks and sell the goods to his customer as made in Scotland, England, France or Germany, as the case may be. If twenty or thirty of our Canadian mills would combine to make a good representation of their goods in Montreal and Toronto, and have a competent man there to give pointers to the people direct, they would make a revelation to thousands that would not only profit the Canadian people, but boom Canadian goods. The secretary of the Montreal exhibition is S. C. Stevenson, 76 St. Gabriel st., and that of Toronto is H. J. Hill, 82 King st. east. We commend this subject to the consideration of the new woolen manufacturers' association, and the secretaries of these leading exhibitions will doubtless give all the aid possible to such an effort.

SOME OF THE CAUSES OF IMPERFECTIONS IN FANCY CASSIMERES.*

In these days of close competition and small profits, it behooves every overseer, in textile mills, to take off the largest possible production consistent with good quality. It is my purpose in this paper to draw some attention to the small matters that are very often overlooked, and that sometimes cause imperfections in the cloth. We will begin with the scouring and dyeing. Wool that is "felted" in the scouring and dyeing, if it is very much so, cannot make good yarn, for the reason that the life and strength of the wool are taken out of it. Wool, when it comes to the carder, should be open and lofty. When it comes to him in this condition, and he has good machinery, there is no excuse for not producing good roving. Where wool of two staples are mixed together, great care must be taken in mixing, so as to get the long and short fibres thoroughly blended, or, if shoddy is used, to get the shoddy and wool thoroughly mixed, to the end that the thread when spun may have a uniform strength consistent with the quality of the stock. After we are sure that all the requirements of mixing and picking properly have been complied with, we must be sure to have all the conditions of good carding present. The conditions of good carding do not merely consist of having cards sharp and well clothed. As well as having them sharp and well clothed, every motion must be positive, and above all we must feed even. If we comply with these conditions, it will never be necessary to change a tooth in the carding room, when once we have a lot started, until the lot is run out. Whatever variations are in the roving come from some imperfect conditions that changing the gear will not remedy after once the card is started. Roving will vary a little from imperfect weighings. Sometimes when stock is not well mixed and evenly oiled, one weighing will contain more oil than another; and then again, when wool and shoddy are used, one weighing may contain more shoddy than another, and as the shoddy will lose more than the wool in the process of carding, the weighing with the excessive shoddy in will be light on the finisher. If we happen to weigh a spool that is light, changing a gear will only aggravate the unevenness, for the next time we weigh we may find the roving just the amount of the change too heavy. Eternal watchfulness in the carding-room is the price of success; particularly so with old, worn-out machinery and wooden frames. In the spinning-room the spinner must exercise great care and watchfulness, and must be very careful to have all his bands of a uniform tension, and when two or more spinning machines are on the same batch, he should have the revolutions of the back shafts the same on both machines, so as to put in the same amount of twist. He should weigh his yarn often, and should warn his spinners against making soft ends. He should spin his tops and his bottoms separate, and put them in separate boxes, properly marked, and if it is filling, the

*Paper read by John Mulrooney before the National Association of Woolen and Worsted Overseers in Boston, May 24th, 1896.

weaver should be careful to weave one "shade" before starting on the other. Yarn may be even and everything else may be all right, but if we are not careful of all these small points, our cloth will not be as good as if we were. In the dressing room the overseer should be careful to ascertain, before starting to dress a warp, whether or not he has yarn enough to complete it. If he has not he should not put in $1\frac{1}{2}$ run filling in place of 1 run warp. Besides the filling being lighter and making uneven goods, it has less twist, and will not weave so well. All the sections on a warp should be uniform in tension, in order to have the weaving even. The knots should not slip, and in spooling the weights on both sides of the spooler should be the same. In the weave room care should be taken to have good loom fixers, so that they may start the warps right and *keep the looms in condition to take off the best possible production.* The cloth when it comes from the loom should be carefully examined for wrong draws, etc., so that the wrong draws may not be allowed to continue through several cuts; and threads out, mispicks, etc., should be sewed in. In the finishing room the burlers should remove knots, hanging threads, etc., and the speckers any specks that may be in the goods from any cause whatever. The soap used should be strong enough to start the grease, but not strong enough to start the colors. The shearing, pressing, etc., should be done in the best way to obtain the desired finish on the goods in hand. When goods are finished they should be neatly done up before shipping. There are many things that this paper does not cover, and that it is not intended to cover, but if it starts a discussion that will bring out anything of value, it has served its purpose.

CANADIAN WOOLEN MILLS.

In another part of this paper will be found a report of a meeting of woolen manufacturers, held last month in Montreal. Compared with any previous meeting in the woolen manufacturers' interest the attendance was not only very large but very representative, and the meeting was undoubtedly the most important that has been held by the woolen manufacturers in the last ten years. The difficulties under which the Canadian manufacturers have been working for a long time past have been frequently set forth in these columns, and we are glad that the mill owners have at last been spurred to take action in defence of their own interests. They have felt the weaknesses we have pointed out—a lack of community of interest among the manufacturers themselves, and their failure to meet the wholesale dry goods man with adequate weapons, though after all the cutting in prices that has been going on in some of the mills, the blame cannot be put altogether on the dry goods trade.

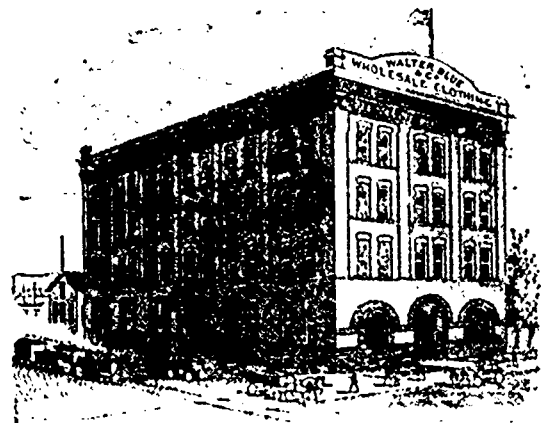
Many of these manufacturers have at last realized that the policy of the wholesale trade in keeping the mills as far apart as possible from the consumer and the retailer, has been destroying their interests, and they are beginning to see that a more direct contact with the retailer and the consumer will restore the

prestige of Canadian goods. The mill men of long experience will recollect the fact that in the early days Canadian tweeds, flannels and blankets stood relatively higher in the estimation of the people than now, and in those days wholesalers, such as Stephen & Co., sold Canadian goods as Canadian goods, and placed orders with mills to the extent of a thousand pieces of a single pattern. We know how all this has been changed and how Canadian goods of the better order sell under Scotch and English labels, and large sections of the trade associate the name of Canadian goods with the worst rubbish they have on their shelves, while the wholesaler demands such a multiplicity of patterns that the production of goods at a profit is out of the reach of most manufacturers.

Nevertheless the woolen manufacturers have done wisely in not making their reforms too radical, but now that they have set their hands to the plough let them not turn back, but face their difficulties until they have made their position with the trade as it should be. We congratulate them on this promising step towards forming an association which will be really representative, and one that will be kept quite distinct from other organizations with which this special trade has little in common.

WALTER BLUE'S NEW CLOTHING FACTORY.

The clothing factory recently erected by Walter Blue, manufacturer of clothing, Sherbrooke, Que. forms quite a landmark for the visitor to that enter-



prising city. The building is substantially constructed of brick, 110 x 50 feet, is four stories high, besides basement, and contains about 30,000 feet of floor space. Mr. Blue now has 150 hands, but the factory will accommodate a larger number, being built with a view to the further development of his business, which has steadily grown during past years. The building is splendidly lighted and ventilated; is fitted up with electric lights and provided with electric power for operating the machinery, elevators, etc. Taken altogether, the CANADIAN JOURNAL OF FABRICS has not seen a clothing factory in Canada that is better built or equipped in more modern style than that of Mr. Blue, whose good name in the clothing trade of Canada is known to our readers.

ARTIFICIAL SILKS.

Industrial changes are not quietly accepted by those interested. No invention the effects of whose introduction would be wide spread has ever been well received at the outset. Either the object to be attained was absolutely impossible in the opinion of the public, or its attainment would result in nothing but disaster. However, even the most improbable schemes to-day look quite like old friends to-morrow. We need not be surprised then that there is a great outcry *pro* and *con* in the English papers at present on the subject of artificial silk.

The transformation of a spruce tree into a silk gown by chemical and mechanical processes naturally seems impossible. The fact remains, however, that this has been done. Indeed, as far back as 1889 the process was discovered by which this feat might be accomplished. At present the cost of the process and the commercial value of the resulting fibre are the only points in dispute. The prospectus of the Artificial Silk Company, Ltd., has been issued and a lengthy article describing the process and eulogizing the product of the discovery has appeared in the *London Times*. The *Warehouseman and Draper* gives a number of statements which would indicate a belief in the present utility of the invention. The *Draper's Record*, on the other hand, marshals facts and figures which are evidently intended to prove that there never has been, and never can be, artificial silk produced which would become a substitute for the natural product of the silk worm.

The prospectus states that a company has been formed with a capital of £200,000, divided into 200,000 shares of £1 each, to acquire and work certain British letters patent granted to, and hitherto owned by, Count Hilaire de Chardonnet, for the manufacture of artificial silk, and apparatus used in the production of that material. That works are established in France and Switzerland for the manufacture of silk from wood and cotton waste, and the demand for the silk in France is so great that the company at Besancon last year granted a license to Maurius Dennis to manufacture it, and works are now being erected at Fismes for this purpose.

The *Warehouseman and Draper* says: "Referring in our last issue to the proposed erection in the neighborhood of Manchester of a mill for the manufacture of artificial silk, we felt it necessary, remembering the exhibition at Bradford a few years ago, to speak with some little reserve. This week, however, we have had an opportunity of examining a large number of specimens of the artificial yarn and of fabrics woven from it, and can speak with less hesitation. We should say that artificial silk as it is now produced has an encouraging future before it, most of the objections urged against it having been removed. So far as appearance goes, the success is complete—the new silk dyes well, quite as well as real silk, and only an expert would be able to tell the difference between the real and the artificial fibre. With respect to price, the artificial silk, we are informed, is to be sold at four shillings the pound,

and compares at that price with real silk at from twelve to sixteen shillings the pound. The new material is, however, the heavier of the two by about 10 per cent., and an allowance to that extent must be made in instituting a comparison. The artificial fibre, too, is not so tough as the thread from the silkworm; it has, in fact, only about 80 per cent. of its strength. It will, however, be remembered that the silks in common wear are not pure, and there seems no reason to doubt that the artificial fibre will wear quite as well, and as long, as the weighted material with which we are all familiar. We had an opportunity of examining woven specimens with silk, cotton and woolen warps, and fabrics in which both warp and weft were composed of the artificial material; in all cases, as far as appearance goes, the result was perfectly successful. The points which must be tested by experience are, of course, in the first place, price, which can only be accurately determined when the new mill has been at work for a sufficient length of time; and, in the second place, the wear, about which it is impossible to speak positively until it has been more widely tested. We are informed that the artificial silk yarns are being woven into fabric in Manchester, Coventry and Macclesfield at the present time, and experimentally elsewhere; and fabrics in which it is employed are now being sold in some of the London warehouses. It will be seen that our remarks are not in full agreement with those of our Manchester correspondent, who has been influenced, we fancy, by the recollection of the Bradford exhibits, to which we have already referred. We may take this opportunity of saying that the artificial silk, which we have tested, is certainly not more inflammable than cotton, and therefore not exceptionally dangerous. Altogether, we regard the new industry as something more than an interesting experiment: how much more it is difficult just now to say. In making artificial silk the inventor uses the same raw material as the silkworm does—vegetable fibre. The process begins with the treatment of the vegetable fibre—wood or cotton, as the case may be—with nitro-sulphuric acid. It is finally converted into collodion, which is pumped through pipes to the spinning machines, from which it emerges through fine glass nipples representing the orifices in the spinnerets of the silkworm. The fine threads thus produced are combined together to make fibre no thicker than human hairs, and these are subsequently 'denitrified' to render them less inflammable, and 'ironed,' to put a gloss on them. The 'silk' is then ready for the weaver."

To all and sundry of these statements the *Draper's Record* gives a prompt negative. Many of the facts adduced in support of these denials, however, are the result of observations made on the Bradford experiments, of which a description appeared at the time in *The Canadian Journal of Fabrics*, and therefore conclusions are not necessarily true of the present attempt at establishing this industry.

The real difficulty at present is one that can be overcome only by actual manufacture and sale under

the normal conditions of trade. The expense of production can, of course, be materially lessened by carrying on the industry, and under the most favorable condition. It is here that the interest to Canadians lies.

Our supplies of the raw material are limitless; millions of horse power are lying idle in the immediate neighborhood, not only of the pulpwood, but of systems of railroad and inland water communication, which places these favored localities nearer in the point of cost of transportation to the centres of the English manufacturing districts than are many towns in Great Britain.

There is something, possibly much, in this departure in textile manufacture. Whatever there is in it, is for us in Canada.

LONDON WOOL SALES.

The third series of the year of the London Colonial raw wool sales, which commenced on Tuesday, April 28th, was successfully concluded. During the progress of these auctions the catalogues have comprised the following quantities, viz.: 60,799 bales New South Wales, 31,826 Queensland, 33,356 Victoria 16,621 South Australia, 7,390 Tasmania, 6,561 West Australia, 49,293 New Zealand, and 10,577 Cape of Good Hope, together making a total of 216,423 bales, which have been brought to the hammer at the average rate of 12,730 bales per diem. Of the above, the quantity actually sold amounts to about 198,000 bales, and it is estimated that out of this total about 106,000 bales have been taken by the continental portion of the trade, including the exceedingly small total of 1,000 bales which have been bought by American representatives. A large number of parcels were re-sales from former American purchases. The daily auctions have been largely and regularly attended throughout the series by both English and continental buyers, but America was scarcely represented at all, and, as shown by the above figures, her purchases were practically nil. The best competition proceeded from German spinners, who made the bulk of the purchasing in merino qualities; indeed this branch of the trade, strongly assisted by home buyers, proved the main support of the market. Bidding for crossbred descriptions has been very animated, and by far the greater portion of these wools have fallen to the share of English houses, whose buyers have also eagerly contested with Germany for merinos while French representatives have proceeded with much caution throughout the series, with the result that, comparatively speaking, very little wool has gone in that direction. At the outset of these sales prices showed a decline of, broadly speaking, 5 per cent. upon the currency of the previous series, and during the first week a good deal of hesitancy in the bidding, resulting in much irregularity of prices, was displayed. At the end of the first week values had fallen away still further, the decline then being quoted from 5 to 10 per cent., and at this decline, but showing a tendency towards fluctuation, the series continued, the rates being

practically maintained until the conclusion. The next series of sales, being the fourth of the current year, is fixed to commence on June 30th, the list of new arrivals to be closed on the day that 375,000 bales have come to hand.

THE BRADFORD CONDITIONING-HOUSE.

One of the most marked contrasts between European and American manufacturing is seen in the absence on this continent of standards of almost every kind. The manufacturer never knows, when he delivers his goods, whether they are going to be accepted or not. He must submit always to the judgment of the interested party; and if there is any turn in the market, or any unfavorable symptom in the business situation, he must expect to be made the sufferer, on the plea that his goods are not in every particular up to sample requirement, and the question whether they are or are not up to the sample has generally little or nothing to do with the mulcting he suffers. How it is possible to carry on manufacturing at all under these conditions is the wonder of Englishmen. So far as piece goods are concerned, the English manufacturers have had their protection in their home trade from time immemorial, through the agency of the cloth workers, whose decision as to the merits of the goods is final as between buyer and seller. Some similar agency will doubtless be evolved in America in the course of time—must be, in fact, for the evil of unjust claims is growing to be an abuse too monstrous for indefinite toleration.

Just how it will come, or who will have the courage to inaugurate it, remains to be seen. But in the meanwhile there exists in the Bradford conditioning-house an example of the ease with which these matters can be brought within efficient control, which is worth the careful study of the American wool manufacturer. The benefits of the conditioning-house, as a regulator of honest and straightforward trade, are simply incalculable—even the Bradford people do not yet realize how great they are, although nothing would induce them to part with it after an experience of only four years. It is curious to learn that originally they were stoutly opposed to its establishment, with their customary conservatism. It took years of agitation to get it started. Conditioning-houses had long existed on the Continent—at Roubaix (dating from 1858), Rheims, Antwerp, and other wool centres; but Bradford, having always got along without one, long thought she would continue to do so. The best evidence of its utility is the statistical record of the increase of its business in the three completed years of operation:—

	1892.	1893.	1894.
Total weight of materials tested..	2,576,190	5,286,500	9,560,842
Total number of tests made.....	8,146	15,062	26,168
Fees received	£500	£1,100	£1,530

Walter Townend, the director of the conditioning-house, presides over a complete chemical laboratory, and revels in the mysteries and possibilities of that science. So profound is his knowledge of the technique

of the manufacture, and so great is the public confidence in this knowledge, that all sorts of trade disputes are constantly referred to his arbitration. It is the unwritten law of the Bradford district that there must be no appeal from his decision. In the official tests of the conditioning-house, his certificate, which accompanies every test, is made by law conclusive as between buyer and seller agreeing to accept it; and it is a fact that no error has yet been discovered in the work of the establishment. The Bradford conditioning-house is at present confined in its work to five lines, viz.:—

1. The average amount of moisture contained in wool, tops, noils and yarns submitted for examination.
2. The correct gross weight of bales, bags, cases, skeps, sheets and packages of goods, and the tare thereof.
3. The net conditioned weight of lots of wool, tops, noils and yarns, after scouring, cleaning and drying.
4. The true counts, lengths, twists and strengths of yarns.
5. The measurement of lengths in piece goods.

The great bulk of its work, however, has to do with fixing the true weight of tops and yarns, and this is done by two samples drawn independently from all bulk lots sent to the conditioning-house. The great difference in atmospheric conditions between America and Great Britain necessarily leads to a loss in weight upon the arrival of English tops and yarns in this country—a shrinkage sometimes so large as to materially influence the financial aspects of the transaction. The standard allowance for moisture has been fixed by trade custom, verified by scientific experimentation, and accepted by chambers of commerce generally in the North of Europe. These allowances for moisture are based upon the average hygroscopic conditions of the atmosphere during a year in the North of Europe, indicating how much moisture absolutely dry material will regain by exposure to the open air. For instance, in worsted yarns the official allowance for moisture at the Bradford conditioning-house is 2 oz. $7\frac{1}{2}$ drs. per pound, and the percentage of regain allowed is 18 $\frac{1}{2}$. The continental standard is slightly different, but they are easily adjusted in international transactions.

All tests are so stated that yarn transactions, based upon a conditioning-house certificate, are settled on the basis of this allowance for moisture and percentage of regain, which is equivalent to saying that the buyer always purchases a given number of pounds of yarn, no matter what may have been the atmospheric conditions under which it was spun and shipped. The cost of conditioning is so small that the buyer is usually quite willing to pay it, in return for the certainty that he will get all the yarn he pays for. About 55 per cent. of the business done at Bradford is for the home trade, the remainder being for the Continental export trade.

The advantages of a conditioning-house certificate reach further than this, however. It used to be the complaint of continental users of English yarns that everybody took advantage of yarns known not to be certified. If the dyer returned deficient weight, all the

blame was thrown upon the spinner; and in the same way, weavers who returned short lengths would throw all the responsibility upon the spinner, who, having no proof to the contrary, generally footed the loss, however sure he might be that he was the victim of other people's knavery. No such risk confronts him under the protection of a conditioning-house certificate. The conditioning-house is worth more than all the statutes of five hundred years against fraudulent practices in manufacture.

In the various testing departments of the conditioning-house are a variety of curious, delicate and complicated instruments for ascertaining counts, testing strength, etc., which it is not necessary to attempt to describe, and several of which have been specially invented for this establishment. They permit of very expeditious work, so much so that no day passes without the disposal of every lot of goods that has reached the conditioning-house for conditioning during the twenty-four hours.

THE PRESENT CONDITION OF THE WOOLEN INDUSTRY IN CANADA.

BY "WOOLEN MANUFACTURER."

(Continued from Last Month.)

In my last letter I pointed out the needs for retrenchment as well as reorganization in the management of a number of our woolen manufacturing syndicates. I wish to draw my readers' attention to another most important point, viz., the terms of credit the trade has had exacted from it by the wholesale merchants and wholesale clothing manufacturers. To fancy that our Board of Trades, who are supposed to have some power to regulate conditions of trade and apply them to all industries, have never yet made any attempt to regulate the terms, such as now are in existence in our woolen industries, is a mystery. The present terms exacted are about the following, as instancing the winter season for example: The samples are submitted in September and October. Then sample orders delivered October and November, and most contracts confirmed in November; bulk delivered in December and January—goods all dated April 4th and four months note from that date, making altogether ten months. The spring season samples are submitted May—orders given for sample pieces, and delivered June. Goods delivered July, August and September, dated November 4th and four months—another ten months from sample orders being given to final payment, making for two seasons, spring and fall, twenty months, or say net eighteen months from delivery of first goods to final payment. This is a most monstrous credit. Well, let us see how it works for the wholesaler merchant and clothing manufacturer. For fall trade the wholesaler delivers to his customers all orders, and dates March and April and four months. For spring trade, deliveries November and December, four months. With very slight variation in perhaps some special instances, these are the recognized terms. The fact is, the woolen manufacturer is never paid until the

wholesaler is paid. The wholesaler works with the woolen manufacturer's capital all the time. I used the word monstrous as regards such terms. I cannot withdraw it; but that is not the worst by any means of the conditions the wholesaler imposes upon the manufacturer. A condition has been imposed by the wholesaler that if any woolen manufacturer making similar lines of goods, such as flannels and hosiery, shall lower his price per yard or per dozen during the delivery season of such goods, the other woolen manufacturers must, and are reduced in their agreed price to this lowered price of the often impecunious woolen manufacturer. The agent handling the said manufacturer's goods, at the last moment finding the goods are not selling because he is beat by the superior make of a competitor, rushes the market by lowering his price to clear his stock, and so sets in a break and consequent loss upon the season's trade. This is one of the periods when the hypothecated goods of the woolen manufacturer held by the selling agent and the bank are thrown upon the market, to the great advantage of the wholesaler, who has helped to bring about this collapse. Who is to blame for this state of things? The manufacturer, selling agent, or wholesaler, or bank at which the goods have been hypothecated? It has often been from the jealousy of competing selling agents. Then the woolen manufacturer has no help for himself having no control over his goods already hypothecated to his selling agent. No matter whether the goods are well manufactured or not, this slaughter by selling agent goes on in order to outsell his competitor. This is one of the most serious aspects of the present position of the woolen industry. Many a manufacturing concern has been brought down by such methods of trade transactions. Here are two instances of the unjust terms imposed or demanded by the wholesaler: a clear nine months term, and to abide by any reduction in price by such actions as instanced above.

The nine months terms enable the wholesaler to work his business with his creditors' money. The risk is never lifted off the shoulders of the woolen manufacturer until the similar risk has been lifted from the wholesaler by his customers.

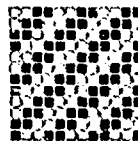
The wholesaler can, if he chooses, hypothecate the woolen manufacturers' goods, either clothing or merchant style, with the money so borrowed pay cash, debiting at the rate of nine and ten per cent. for such cash payments for the four or eight months then unexpired. Poor woolen manufacturer! has to buy his wool and other materials upon one month up to four months credit. If he pays cash, gets three per cent. to five per cent. as may be agreed. But his creditor is clear of the risk in every way, say up to four months.

The dealer in raw material turns his money over three times a year. The woolen manufacturer one and a quarter times. The wholesaler borrows his money at say six per cent., and if he pays cash gets the difference of three and four per cent. The woolen manufacturers, through their selling agents, are charged seven per cent. and often eight per cent. for moving, warehousing

and insurance of goods cased up ready for delivery, and such other handling of these said hypothecated manufactured goods, making such interest charges into ten to twelve per cent. This is not reckoning the commission for selling and accepting risk, viz., five per cent. If not accepting risk, then two and a-half, bringing up to the total from twelve and a-half to fifteen per cent. for the season. The woolen industry should have a meeting and resolve to the following terms, viz., four months from delivery of goods. And all prices agreed upon separately by manufacturers to be paid, notwithstanding that any one chooses to sell his stock at a reduction. Then the manufacturer will be able to turn over his capital twice a year and cease his risk in six months. By such more favorable conditions the woolen industries will be more independent of the selling agent and the banking institutions of the country, and ultimately bring the woolen manufacturer in direct communication with the wholesale buyer, and lessen the chance of woolen manufacturers being under the tight grasp of the selling agent, which, at times, is not to the advantage of the woolen manufacturer.

Textile Design

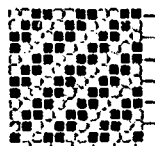
The following are two new French designs given in *Les Tissus*



A, dark spun, 187½ yards per ounce; B, small chain twist, dark and light shades, 212½ yards per ounce; C, composed of two threads, lively shade, 312½ yards per ounce, lively shade, 9 turns per inch; 1700 ends; 68 inches in the reed; 12½ reed, 2 ends in a split; end shrink, 12 per cent., rough finish to 56 inches, unclean weight per yard, 21 ounces.

Dress:
2 ends C,
2 dark A,
4 twist B,
64 { 4 dark A,
4 twist B.
—
72 ends.

Weave:
2 picks C,
2 dark A,
4 twist B,
72 { 4 dark A,
4 twist B.
—
80 picks in pattern, and
52 picks per inch.



Light A, as indicated.

A, light spun, 343½ yards per ounce, B, twist, composed of two threads, 500 yards per ounce, dark and light shades, 9 turns per inch; C, like B, in other shades, D, fancy twist, light and dark shades, 156½ yards per ounce; E, like D, in other shades; 2,584 ends; 68 inches in the reed, 9½ reed, 4 ends in a split, end shrink, 12 per cent.; rough finish to 56 inches; unclean weight per yard, 20 ounces.

Dress:
1 twist D,
1 light A,
46 { 1 twist B,
1 light A.
—
48 ends.

Weave:
1 twist E,
1 light A,
54 { 1 twist C,
1 light A.
—
56 picks in pattern and
35 picks per inch.

MILL MAN.—"Well, if you want to know who all the tweed manufacturers are, why don't you refer to the Canadian Textile Directory? You will get them all there."

OVERHEARD IN THE WAREHOUSE.—"I cannot tell you from memory and I haven't the Canadian Textile Directory by me at the moment. By the way, you can get the new edition shortly. It gives you everything."

Foreign Textile Centres

MANCHESTER—Of late the spot cotton market has been strongly influenced by future operations. Active and increasing operations in spots may, in fact, be accompanied by the apparently paradoxical phenomenon of a falling market. The reason is to be sought in the condition of the market for futures, brisk operations in which may, in the first place, produce a rise, to be followed laggardly by the spot market, which may actually be brisk when a rush on futures has subsided, and prices are on the downward grade. Cotton is now rarely bought on spot terms, future quotations with points on being preferred. The business of buying, in fact, is as important as that of spinning, and a poor spinner may do much better than a good one if he happens to be successful in his raw cotton operations. Just now, German makes of woolen hosiery are being offered at very low prices on account of successful wool buying on the part of Chemnitz houses, who have been more successful in this respect than some of their foreign competitors. The future of ramie appears much brighter. The fibre is undoubtedly a genuine one, and a large Yorkshire firm has been making a number of experiments with it. The material is already being used largely in the production of various fabrics. It is the strongest textile known—stronger even than flax. Tuckers' old silk mill at Castleton has been taken by a company which has embarked in the production of ramie sail cloth and other fabrics. Sir Augustus Harris, of Drury Lane fame, is, strange to say, interested in the project.

LEEDS.—The clothing trade in Leeds has been at high pressure to complete Whitsuntide orders. As the products of the Leeds factories leave them in a state ready to be worn, the operatives are able to work a fortnight nearer the time than is the case in Bradford. The general warehouse trade, however, has been more active and makers of worsted coatings for the home trade report a fairly good demand. There is no better inquiry from America for worsted coatings, but heavy goods for the home trade for winter use are in good request. The position of the flannel trade shows no change. Drapers will not be ready for deliveries of new goods for some months, but the large firms of retailers are now making their arrangements, and I learn from travelers that these show stocks to be light and prospects good.

BRADFORD.—There continues to be a good deal of irregularity in the competition at the London wool sales, but although some special lots of fine greasy wool have created a spirited contest at full rates, and there is a rather stronger tone as regards cross-bred wools, in the Bradford market the tendency of prices all along the line has been slightly in favor of buyers. I am informed, however, from what is usually a most reliable source, that some of the largest operators in wool have been pursuing a "bear" policy for some time, and there is every reason to expect some heavy buying as soon as prices have been forced to a low level. In mohair there is little new business, but there is a better enquiry for alpaca. There is only a quiet demand from the continent for various classes of worsted yarns, and spinners generally are working their way through old contracts. There is less demand both for home and foreign use for mohair and lustre yarns, but this is only to be expected just now. The situation does not show much improvement in piece goods. Of late years, after an early Whitsuntide, the demand for favorite and fashionable fabrics has kept up much better since the recognition of the August bank holiday became more general. Notwithstanding the fearful delays of dyers and makers of bright goods, there are to-day practically no stocks here of wide mohair goods in good qualities in fashionable shades. No improvement is evident in the demand for textiles for the States, and I gather that when the exports for May come to be published they will disclose a still greater falling off than was shown in the April returns. All the leading makers of fancy costume cloths for the coming winter continue well employed, and there seems to be every prospect of another successful season, especially in the more expensive and high-class fancy goods. The reports of the Australian markets,

especially from the western colonies, continue to improve, and Bradford is getting a better share than usual of this trade. Business for the East is quieter, especially in all cotton fabrics, but makers of cotton coatings and jacquards are under order up to the end of the year.

KIDDERMINSTER.—Export business continues to improve, and while the trade for the first four months of 1895 showed an increase of only £7,000 over the corresponding period of the previous year, the increase for 1896 over January to April, 1895, is £36,000. Looking at the values for the period just closed, as compared with the previous two years, the exports to Germany have nearly doubled, and those to Australasia have literally "jumped." The ground lost in Holland last year has been more than regained, and although Belgium shows a slight falling off compared with last year, the figures present no reason for uneasiness. France seems to be taking a less supply quarter by quarter.

NOTTINGHAM.—Activity still characterizes the majority of the branches of the lace trade, the briskness being especially marked in the case of light silk tulles. Makers, dressers and finishers engaged on these goods are literally overwhelmed with orders just now and are quite unable to satisfy the demand. These light tulles are much in use for millinery purposes, and are being turned out in black, white and colors. Spotted they are in demand as falls and veilings. Valenciennes (which has become as popular as ever again), Malines and point Bruges are selling best in dark color, with lighter linen thick threads, while antique Valenciennes, point de Paris and other articles of that kind are being made principally in ivory, though fairly large lots are being turned out in cream and beurre. Cotton bobbinets are selling freely for home and abroad, and prices remain firm—not unnaturally. Mosquito, corset and antique nets are also going off briskly, while Maltese, torchon and Bretonne laces are somewhat dull. Curtain and window-blind manufacturers are complaining that the orders on hand are not sufficient to keep them fully employed. They are turning their attention to next season's novelties. In the hosiery trade the cotton branches are neglected. The newer machinery is well employed with seamless hosiery, fine cashmere and merino stockings, half-hose and larger goods. Fancy stockings and half-hose are giving a fair amount of work to special hands. The glove branches are not in a flourishing condition.

SOUTH OF SCOTLAND.—Business is not improving very rapidly in the south of Scotland tweed districts. Things, of course, are better than they were, and some of the makers have booked good repeat orders for summer goods, which will keep the looms going for a week or two. The demand is increasing for the regular makes of Scotch tweeds, there being a gratifying run upon chevots. Worsteds are still inquired for, but the tendency is undoubtedly towards the ordinary products of this district. Manufacturers are of opinion that the change of taste will develop. Very few transactions are reported in wools. Good reports are to hand regarding the Kirkcaldy industries. The spinning mills and weaving factories are well employed, while floorcloth and linoleum manufacturers have excellent orders in their books. There is still a strong demand for light-weights, which are produced with so much nicety by the fine machinery in the Kirkcaldy factories.

BELFAST—Up to within the past ten days business in linens was of a dragging character, manufacturers refraining from operating except for such small lots as they actually needed. Stocks, in consequence, had increased in first hands. There is now, however, a better feeling in the market, and some cheap lots having been taken off it, there is a tendency towards improvement, and prices are firmer. Tow yarns are in better request, a considerable business having been done in the heavier numbers. On export account trade was quite as good as in previous month, and the Board of Trade returns for the four months of this year show an increase in value of yarn shipments from the United Kingdom equal to 19½ per cent. Belgian spinners are specially firm in quotations for tow yarns. The value of foreign yarns imported shows a decline of 20.7 per cent., compared with the same period last year. Manufacturers of yarns continue to be fairly well engaged, and the current production is disposed of, prices all over being firmly maintained. The tone of the spinning branch is now more hopeful. Ulster markets

closed some weeks back, and with the exception of a few fairs, there is no flax offering. At these the quality is generally inferior, prices ranging from about 30s. to 42s per stone.

LYONS.—The Lyons silk goods market is quiet, the demand for ready consumption having gradually declined to out-of-season proportions, and with the exception of silk muslins, chiffons and some light summer specialties, little is being sold for immediate delivery. The order business for fall is also light. Buyers having placed their first orders for next season, are now waiting for further developments to place more. Prices of goods are however, firm, and notwithstanding the unsatisfactory business done in silk fabrics in the second half of the spring season, stocks of goods in manufacturers' hands are small. The spring season, which had opened with very bright prospects, closed tamely. The warp print has so far deceived the market, as it has not been able to withstand a short period of dullness without breaking down and carrying away with it all hope of a bright finish of the spring season. Other spring novelties, which might have taken its place, did not meet with ready acceptance. Besides muslins, chiffons and printed foulards, which have done well and are still in favor, the cheap taffetas in stripes, checks and other fancy effects have had a successful season to the end, and the heavy production in these has met with easy outlet, so that no large stocks which might be an embarrassment in the future are left. Among the goods which give work for the looms at present can be mentioned satin duchesse, which still finds takers in the better qualities. Black damasks are also among them. Wool-filled bengalines have received some attention, and Paris buyers seem to favor them. Business has also been done in surah and satin merveilleux. Among the goods ordered for fall are also to be included fancy and brocade velvets. The use of muslin and tulle for trimming purposes interferes with the consumption of ribbons, the demand for which has been decreasing. Velvet ribbons are in better demand. Business in plain velvet has improved, and all-silk velvets, as well as Schappe pile qualities, receive attention.

BREITENBURG.—Business in the silk goods market has not been brisk. The season seems to have broken down just at the time which is considered the best for consumption. With better weather, however, the demand has improved, consumption has increased, and manufacturers, as well as wholesale distributors, have felt the change. This is taken as a proof that the situation is not so bad as it seemed to be as far as stocks in distributors' hands are concerned. Of course the time lost cannot be regained, and the bad effect of what, owing to the poor demand from the United States, has turned out to have been overproduction, cannot be recalled. This had to be met with by reducing prices of goods in order to get rid of them, which process the slow course of the raw material market has also given a helping hand. But the situation has become clearer now after the trade has pocketed the losses that have destroyed the profits of a previously good business. Values of goods are now firmer, as there is no pressure to sell. The warp-printed effects seem to have lost all caste, besides having lost in value; prices of warp-prints have not regained the ground lost, and this style seems to have lost all claim to being called a favourite. The relative position of plain goods as against fancies has been reversed, and while formerly the latter had the better place on the looms, they have been gradually losing ground, while plain stuffs have been steadily improving on the looms. Among these staples plain taffeta has the leading place. Black taffetas remain in good demand, these have always sold well and retain favor. A further lease of life is given them by the cloak trade, which has ordered black taffeta for fall and is likely to use it extensively for lining purposes. Changeable taffetas are also liked for lining, but it is likely that they will be seen at their best for this purpose in the spring of next year. In other branches of the industry orders are few. In the silks business is quiet, although production continues active on previous orders. In the velvet branch there is little change. In plain velvets no large orders are being received, but in fancy velvets a fair number has been booked.

ZURICH.—The silk goods market is quiet; the demand has declined for nearly all articles and few buyers are here to make

things lively. In fancy taffetas the demand has decreased, and even printed warps, which have this season been considered a strong bulwark of the market, have given way. Stocks of these printed warps are now met with which should already have gone into consumption or should not have been manufactured. These represent goods for which orders were placed but delivery refused, as they could not be made in time. These are, however, not likely to press heavily upon the market later, as the warp print is likely to remain a staple article of consumption for some time yet. A very active demand relatively is reported for changeable taffetas and for marcaline, which are now scarce. But as many manufacturers have turned their attention to making these goods they are not likely to be scarce long. Demand for export is slow and little is being done for the New York market, while with Great Britain business is not active and buyers can only be tempted by offers at low prices. For fall and winter consumption are mentioned duchesse, rhadzimirs, armures and colored faille Francaise, also satin colored merveilleux in the better grades.

CHEMNITZ.—There are still a number of buyers in the market. So far only a few large orders have been placed for Spring goods, but within a month the situation will be changed. Prices are low at the present time, and there is no outlook that goods can be bought any cheaper later on than to-day. On the other hand there will be advances to some extent in the next few weeks. If trade picks up, ladies' hosiery in 40-gauge, two-thread, will be going up in price, as these goods are now sold at extra low figures. There is at the present time a very large demand for ladies' black hose with maco soles and herringbone stitching, and these goods are expected to be good sellers during the entire coming season. Manufacturers are trying hard to make their lines attractive, and therefore have got up novel designs in striped goods. In ladies' lisle hosiery, they are showing very new and tasty designs in quantities to sell at 35c. and 50c. In embroidered styles, small designs and polka dots, such as have been always selling, are shown, and for 25c. the retailer will be able to sell his customers a good quality hose with neat embroidery. Hermsdorf black stockings are going to have the call again, but tans also will take well again in the coming Spring season. For misses' wear INL ribbed goods in fine gauges will be called for mostly. These goods, with maco feet, are not selling in as large quantities as they sold a few seasons ago. In whites, also, the demand does not exceed previous seasons. In men's half-hose embroidered and extracted goods are shown the same as in ladies' hosiery, and for staple qualities medium and fine gauges are preferred, while the heavy grades are not so much in demand for summer wear. Business in gloves is fair. Orders for Fall goods will be executed in time this season, as the demand has not been exceptionally large. Against previous seasons there is a considerable improvement in the fabric glove business. Long silk gloves for evening wear are selling freely at present.

HISTORY OF THE READY-MADE CLOTHING TRADE.

(Continued)

It is interesting to remember that there are centres in the West of England, as well as in the Eastern counties, which are no longer staples or markets as of old for woollens, but that have become important as centres for the ready-made trade.

The city of Bristol is an example of this class. In the year 1339 this old city set up looms for weaving woollen cloths, being another of the privileged cities which shared the benefits of the legislative enterprise of Edward III. In the days of Edward IV the city was famous for the woollen manufacture, as appears by statute 17 Edward IV., c. 5, whereby this city was the only one besides London which was exempted from sealing their cloths, kerseys, etc., which practice was enforced upon every other market of cloth for the purpose of gauging the length and aulnage of the goods. A large export trade was carried on also, as appears from Hackluit (2 vol., p. 3), who states that "certain merchants of Bristol did not only now (1520), but for a long time before, trade by the ships of St. Lucas, in Spain, to the Canaries, sending cloth, soap, etc., and returning with dye stuff and drugs, sugar, kid-skins, and that they also sent thither fac-

tors from Spain." It was full of clothiers, weavers, and tuckers, all Henry VIII's reign, and a society of merchant adventurers was incorporated within the city, by letters patent, granted by King Edward VI, which were afterward confirmed in Queen Elizabeth's reign. At this latter period, however, the trade began to decline. In the grant of the Queen, of St. Thomas street market, during the thirteenth year of her reign, the poverty of the inhabitants and ruinous state of the houses were assigned as reasons for granting the inhabitants the privilege of a market. The wording of this grant commences as follows: "Since it is made known to us by the mayor and commonalty that not only the street called St. Thomas street, but also the houses, structures, and edifices in it, are reduced to ruin and decay, to the great nuisance of that part of the city; and that the late inhabitants being forced by want, through the decay of their trade of making woolen cloths, had suffered their houses to go to ruin," etc., etc. In the year 1610 an effort was made to revive the decaying industry by the magistrates, who lent money to set up the Colchester bays manufacture; and at the Smiths' Hall beggars and poor people were set to work at spinning and stocking-making, under the inspection of the parish officers, which shows how intent these good men were to promote the true interests of commerce. In spite, however, of all these efforts, the manufacture of woolen cloth has for many years been a thing of the past, so far as Bristol is concerned.

But if the woolen manufacturing has disappeared, Bristol has not been slow to adapt herself to the interests of the newer industry of clothing manufacturing. One of the oldest houses in the export trade is that of Wathen, Gardiner & Co. This firm have almost from the commencement of the trade taken a leading position in the kingdom as shippers, and their connections have been in most of the foreign markets. They have produced a quality of goods, superior in make, finish and style, to those of most other shippers, and have maintained their reputation throughout the intense competition of later years. For the home trade Walsh & Co. have always been held in high repute as producers of excellent goods, especially for men's wear, and they were also amongst the first of the pioneer houses who introduced the trade in England. In spite of the great extensions in Leeds and elsewhere, it seems as if the old city of Bristol was not to be left behind in factory opening, for all the following firms have been enlarging their borders and adding to the number of their manservants and maidservants. Todd & Co., who have been long known in the trade, have lately opened large premises at Temple Gate, which command a most advantageous position, adjoining, the large block facing the joint railway station. Here they gave their employes a treat, when, amongst other speeches that were delivered, W. A. Todd, the head of the firm, gave a history of the growth of the business from its humble start in College Green to its present position, when it is employing over six hundred hands at this branch alone, besides a large number at their factory at Winterbourne.

One of the unique businesses of the clothing trade, and one which deserves to be recognized as a model, in its way, of the paternal character of all true employment of human labor, is that of Holloway Brothers, of Stroud, of which G. Holloway is the sole proprietor. This business was commenced in 1839, retail only at first, for about three years. The wholesale trade was started in 1852, almost immediately after the introduction of the sewing machine, which was employed at once by the firm; and Messrs. Holloway drove their machines by steam, being the first firm in the world to adapt this wonderful motive power to the new invention. Mr. Holloway took out a patent for an improved tension, in order to render the machine workable when most other houses had cast it aside as useless. This patent was afterwards infringed, but it is now the universal principle. The trade done by the firm is unique also, inasmuch as no travellers are employed, and orders are solicited from no one. The cutting is done by three machines driven by gas-engines, and about one hundred men and women cutters. The workpeople number about one thousand five hundred (men and women). The wages paid have steadily advanced year by year, the aim being to improve the quality and finish of the work. No "sweating" is possible, as any competent worker can

have goods out to make without giving security. This would be scarcely safe in London and very large towns, but on the testimony of Mr. Holloway himself, his firm has not in forty years lost forty pounds by the trust in workpeople.

A FLIGHT FROM THE FLEECE TO THE FINISHED FABRIC.

Manufacturers are always pleased to turn out the product of their establishments in less than the average time, and many have made records to which they point with pride. In the issue of Harper's "Round Table" for December 10 a short article was published on making a coat in thirteen and a half hours, from shearing the sheep to putting the finished garment on a man's back. This was done at Greenham Mills, in England, in 1811. Mrs. James Lyon, of Bath, New York, writes that a similar feat took place in that town in 1816, and was accomplished in less than nine hours by one George McClure, who asserted that it could be done in ten hours. The record of each step of the work still exists, with the exception of the shearing. The wool was colored in 35 minutes, carded, spun and woven in two hours and twenty-five minutes, fulled, warped and dyed in one hour and fifty-one minutes, carried to the tailor in four minutes, and was turned into the finished coat by him and his journeyman in three hours and forty-nine minutes. The shears used in the work are still preserved and can be seen at the Steuben Agricultural Society's fair grounds at Bath.

THE LATE AID. JOHN MARSHALL, OF LONDON.

The city of London, Ont., has in the death of John Marshall, wholesale dry goods merchant and manufacturer, lost one of its most enterprising and notable citizens. Mr. Marshall was born in Jedburgh, Scotland, and came to Canada in his youth. He was trained for business in the firm of Adam Hope & Co., with which he was associated in London for many years. He was a man of superior intellectual gifts; had a refined literary taste and a marked individuality and force of character. He was a Liberal, but so broad minded and just that he was as ready to criticise or to condemn what he believed to be the errors or short-comings of his own party as those of the other side. While largely interested in manufacturing industries, he was an unswerving free trader of the Cobden school. In social life he was a universal favorite, and his rendition in public and private of the auld Scotch songs will long be remembered in the city of London. Mr. Marshall leaves two children, who will be amply provided for, his business enterprises having been crowned with success. Mr. William Marshall and Miss Grace Marshall, of Hamilton, are brother and sister of deceased.—*Hamilton Times.*

PRESSES FOR HOT FINISHING.

John Dennis & Co., of Lowell, Mass., have introduced a new idea in a press for the hot finishing of hosiery, underwear, cloths, shawls, and all goods requiring a fine finish.

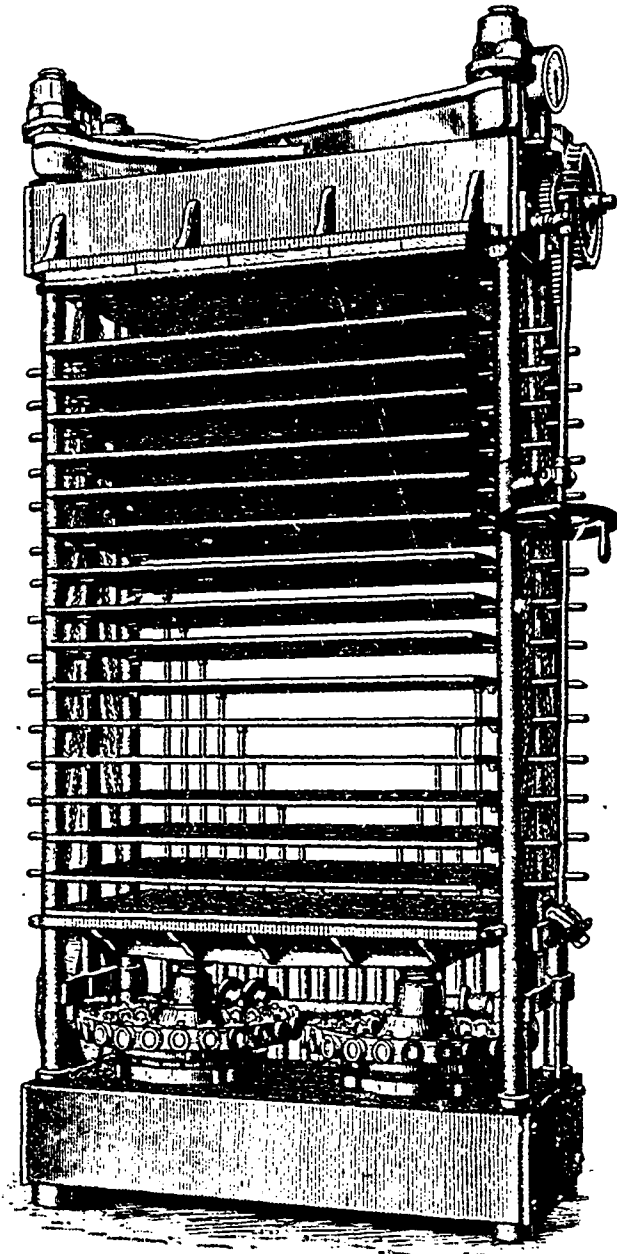
This press is of the double-screw construction, the improvement consisting in the use of revolving teeth on driving gears operated by a suitably constructed worm. The advantages obtained are: First, a quick speed. The press can be run up or down in one-third of the time required to run presses of the old construction, giving the new press a capacity of thirty per cent. more work per day.

Secondly, the makers claim that power friction is reduced to a minimum, and they are able to guarantee a pressure and finish equal to the best hydraulic presses. They think that, as a matter of fact, they can do better. The press is equally well adapted for baling purposes and for other purposes in which a quick speed and more pressure may be desirable.

These presses, which are patented in the United States and Canada, are all constructed with the cone or anti-friction movement, which has stood the test for superiority for the past twenty-five years. Weighing works are applied to all presses when desired. The weighing works secure a uniform finish on all goods of like grade, which can be obtained in no other way. The hoisting and

suspending works are simple, practical and positive. The screws are double, with composition nuts, and so constructed they never can be made to stick by the press running too low.

For hot and cold finishing this new movement gives results so far superior to anything yet tried, and shows such a great saving in the cost of running, with so little additional first cost, that no one can afford to put in any other.



They also have patterns for cheaper presses using the sliding movement, which is a V or planer movement. It is the best of sliding movements and will certainly keep lubricated, but they will not give nearly the pressure of the anti-friction movement. Solid plate presses, for cold finish, can be furnished with the same movements.

Shaping or boarding presses, for hose and half-hose, are very light in their operation and have as a special feature in economy of running, the fact that they can be operated by a boy or girl.

In baling presses they have a number of styles. The anti-friction, quick geared press movement is especially adapted for this work and is constructed on the same general principle as the finishing press. They are built of any power from the cheap hand power to the heaviest power desired, and for baling waste and substances requiring a box, or for fabrics.

A TRIP THROUGH THE SAXON HOSIERY DISTRICT.

(Concluded)

In Gersdorf there are no factories, but the wives and daughters of the miners are extensively employed in embroidering hosiery for Chemnitz houses. The wages earned thereby are very small, averaging about 5s. a week, at sixty working hours. This occupation is especially trying to the eyes in the dark winter days, and the large proportion of black goods increases the difficulty. The goods are collected and taken from Chemnitz to the villages, and delivered back again by a kind of middle-women, who do this, and are in every way responsible for the goods, in return for a profit of about 1d. to 1½d. per dozen.

Starting from Gersdorf again, we next visit Lichtenstein, about three miles to the south-west. There are a few large establishments in this town running an assorted stock of hosiery, chiefly made in the surrounding villages on the house-industry system.

Two miles due south of Lichtenstein, on the top of a hill, lies a little village called Heinrichsort, beautifully situated, with extensive pine forests around. The position is so isolated that some of the customs still observed here belong rather to the eighteenth century, and a quaint old-fashioned air pervades the tiny cottages and lanes. A chance arrival on the last day of April would find the hills re-echoing the sound of the bugle, and the excited population hurrying to and fro in busy preparation for the witch-out-driving. This ceremony is performed as follows: At twelve o'clock in the night, the barns and stables are visited, and a wisp of straw is whisked about in them, then the doors are securely fastened and blocked up with a pile of stones, after the panels have been marked with three chalk crosses. Then the girls and young fellows march through the villages and mount to the highest peak, with the bugle blowing at frequent intervals, and there a fire is lit to burn the evil witches that have been exorcised from the stables by the magic wisps of straw.

To judge by the stockings here made, it would seem that they, too, have become affected by these extravagant fancies. Nowhere are more complicated patterns produced, in fact the most expensive work of any in the kingdom is executed here. Vertical stripes of every sort are made, and most difficult Jacquard designs are shown in bewildering variety. The wages for these goods are frequently ten to fourteen shillings a dozen. The factors show great ingenuity in making new tackle for every sort of pattern, as required, and are in fact continually altering and adapting their frames to new purposes.

We have to return to Lichtenstein, and half an hour's walk to the north finds us at St. Egidien, where there are four establishments. One of them is a large factory, containing 33, 36, and 39 gauge Cotton's rotaries, making a better class of goods in the brown for dyeing, and in the ingrain. Some plain plated hosiery is also made in this village.

Four miles further north lies a group of villages, of which the chief are Langenchursdorf, Braunsdorf, Niederwinkel, and Kaufungen. This is the principal district for making lace hosiery. The work is almost entirely done in the people's own houses. The machines are two to four at once, and an adaptation of the Paget frame. Lisle is the material mostly used, but a fair amount of silk plated goods is made as well.

A little to the east lies another group, comprising Rusdorf, Niederfrohna, Mittelfrohna, and Oberfrohna. Circular lace goods and children's lace socks come from this district, also the most expensive fine fashioned silk lace hose. Gloves however, are the staple article here. They are cut out and sewn, the material being supplied by Limbach, where it is made on French circular machines and warp looms. The gloves when made up, are returned to Limbach. They are chiefly made of lisle, and silk-plated material with lisle or cotton backs.

Keeping still to the east, we soon arrive at Limbach, the principal town for gloves and underwear in Saxony. It is not within the limits of this article to treat this important place in detail, there being eighty glove concerns of more or less importance, sixteen hosiery houses, and about thirty for underwear and cloth

made from warp looms, for jerseys and glove lining, and many other purposes.

On the road back to Chemnitz we pass through Kandler and Rabenstein, where about a dozen glove concerns are situated. Some make the best full-fashioned silk gloves, as well as the commoner sorts, and deliver them to firms in Chemnitz and Limbach.

Six mills due south east of Chemnitz, the little village of Gornau is situated. There are three concerns in it, chiefly employed in making low striped goods on 27 gauge machines. The goods are all full fashioned, but in other respects as common in quality as can be made. Brown and imitation cotton grounds predominate. One factory makes a specialty of coarse gauge vertical striped hose. Scotch plaid patterns and elaborate checks are shown in great variety.

Half an hour's walk in the same direction brings us to the town of Zschopin. Though a place of some size, and an important industrial centre, there is only one hosiery firm here. It supplies goods for the German home trade. In passing, we must call attention to a large cotton spinning mill here. It is one of the oldest in the kingdom, and enjoys a reputation for high class produce of unvarying excellence.

Five miles further south, there are two villages about a mile apart, Dreihbach and Herold. Both places have deteriorated steadily of late years. Coarse gauge knit hosiery is the staple article of manufacture here. Some ribbed hose with straight legs are also made on rib top frames. These villages have adhered to the house industry system and have shared the fate of other places that have not kept pace with the times. It seems, however, that the people are waking up, as Cotton's rotaries have quite recently made their appearance. No doubt this effort will tend to regenerate the prostrate condition of trade here.

An hour's walk from Herold, to the south-west, takes us to the most important place of all in this district the town of Thum. There are nearly forty concerns here for hosiery. Most of them simply finish the goods, and dispose of them direct to the continental markets. The hosiery made here, however, is of an entirely different type, being made for exportation. Chief value is laid on weight and durability, softness and sightliness are quite secondary considerations. This feature is due to certain customs of the consumer. The lower classes on the continent, whilst at work, wear wooden shoes. These consist of a thick sole of wood, with a small leather covering at the toe, but all the rest of the foot is exposed; in fact the foot keeps continually slipping in and out. It is obvious that the hosiery worn with such shoes must be very durable and warm. The machines employed in making these goods are mainly coarse gauge knitting machines. Some circulars are employed, but mostly one, two, or three-at-once flat knitters, built on the Seyfert & Donner system.

A mile and a half south of Thum lies the village of Ehrenfriedersdorf. Several factors have made an attempt to produce fine ribbed hose here, with full fashioned narrowed legs, on knitting machines, but on the whole these efforts have met with very little success. The goods are unable to compete with stockings having straight legs, made on rib top frames. The latter are much cheaper, and answer the purpose quite as well, as they are very elastic.

Keeping to the north-west, about five miles before arriving in Chemnitz again, we pass the village of Kleinobersdorf, which deserves notice, being the home of some very beautiful vertical hosiery. Excellent Scotch-plaid effects and elaborate checks are shown. Yarn of two different shades is twisted together in winding, and worked up in very artistic styles. Great variety is obtained by applying the patterns to the fronts only, or to boots, or by extending them over the full length of the hose. The machines are 30 gauge, and very suitable for working cashmere.

We now turn to the north-east, arriving in an hour and a half at Hillmersdorf, a village still working on the house industry system. One factor collects practically all the production, which is not great. Here, half-hose and children's socks, in the brown for dyeing, are made on 27 gauge Paget's frames.

A mile further north, lies Grossobersdorf, where about a dozen hosiery concerns are established. Large quantities of cheap striped

hose and half-hose are made on 27 gauge machines from imitation cotton. The prices of these goods are ridiculously low. Some large factories here are now being filled with Cotton's rotaries. Thirty-three gauge machines predominate. Both ingrain and goods in the rough, for dyeing, are made. The whole produce of this village is delivered to Chemnitz houses.

We next visit Krumhermersdorf, two miles due north of the village just discussed. There are six establishments here, making a great variety of hosiery in small quantities. This place enjoys the reputation of paying the lowest wages of any. In this respect it even beats Adorf, a village mentioned in a former number.

Leaving Chemnitz once more, we pass into a district producing a great variety of goods. Stockings, gloves, underwear, mitts, stayguards, and Swiss-ribbed vests, all originate from the places now to be visited. The first place we arrive at is Wittgensdorf, situated four miles due north of Chemnitz. Here there are nine glove concerns, and also twenty-four making other knit goods. The former make cotton, lisle, silk, and plated gloves, cut from material produced on warp looms. Much of the seaming is given out, and done all over the country. The other establishments make rib tops, pearl tops, and mittens of every description. The rib tops, for a large proportion of all the fine grade half-hose made in Chemnitz and the entire Saxon district, come from this place. Pearl tops are a specialty. Beautiful shot effects are obtained by plating two colors, similar to the goods made on English ribbed frames of Cotton's style. Stay-guards have become a very popular article of late, and find a ready sale, both in America and Europe.

One factory produces very excellent ribbed pants and vests of superior qualities in spun silk, silk plated on cotton or wool, and in pure wool. Ladies' ribbed underwear, neatly trimmed with lace, is also a specialty of this enterprising place. We must not omit to mention that the celebrated dyeworks of Louis Hermsdorf, to which reference will be made in a future issue, were removed to Wittgensdorf about two years ago, and are established on a most extensive and elaborate scale.

Two miles to the west lies Hartmannsdorf, in which there are established five hosiery and forty glove firms of more or less importance. Several English-built Milanese warp looms, on the Kiddier system, are set up here. The same style of gloves are made as in Wittgensdorf, but a much greater variety of the individual styles is shown.

An hour's walk in a northerly direction, brings us to Burgstadt. This town produces the greatest quantity of gloves, there being no less than fifty concerns engaged in their manufacture. The same qualities are turned out as in the two villages we have just passed through, but other kinds as well. Cashmere gloves are made from material produced on Stuttgart circular machines. Some are made with a lining thread, milled and fleeced to look much the same as woven cloth. Four miles east of Burgstadt, Markersdorf lies. This village and its surroundings are devoted to the manufacture of knit gloves. The style known as "Ringwoods" is made here. Every kind of coarse gauge seamless glove, plain and striped, and with fancy stitches introduced, comes from this centre. The Swiss vests that are sold in such large quantities in London also originate here.

Not more than two miles to the east, we find Taura, which deserves notice, being the home of the very best silk gloves that are made in Saxony. Milanese machines are here employed. One house is of special importance; it is perhaps the largest glove factor's establishment in the entire trade. With Taura our journey comes to an end. In conclusion, it is necessary to say that while we have introduced our readers to almost every place of any importance to the trade, yet it has been necessary, in view of the limits of these articles, to omit a number of very small villages. This omission, however, does not materially affect the general picture given, as such small places are closely related to other larger ones, and have been taken into consideration when dealing with them. As the title of this paper is "A Trip Through the Saxon Hosiery District," we cannot pass over Chemnitz in silence. It is the heart of the whole industry, and has been justly called in Cornwall's geography, "the Manchester of Germany." It will be neces-

sary to devote a separate article to the description of the industries of this town, in order to do justice to its importance.—*Knutler's Circular.*

THE UTILITY OF INVENTION.

From the time when the earth was believed to be flat, and Galileo was denounced and imprisoned for asserting, in accordance with the theory of Copernicus, that the sun was the centre of the planetary system, and that the earth had a diurnal motion of rotation, the opposition to new ideas has existed, and been manifested in the grossest outrages upon the originators and advocates of new ideas. This has been true of inventions and improvements in the arts and sciences, as well as in governmental and religious reforms, says Wm. C. Dodge in the *Engineering Magazine*.

History shows that the great improvements in the arts and sciences have had their development only since free governments have been established and general education introduced; and it is where these exist in the greatest perfection that the greatest advance has taken place.

As illustrative of this spirit of opposition, it may be interesting to cite a few instances. When, in 1807, Papin, of France, the inventor of the digester, in universal use for paper making and many other purposes, and also of the lever safety valve, made a small steamboat and ran it down the river Fulda, the ignorant boatmen, who, like some of the laboring men of the present day, thought it would injure their business, seized and destroyed it. So, too, when Jonathan Hulls patented his steamboat in England, in 1736, he was laughed at and ridiculed in every conceivable way. When Jacquard invented his loom, which was so wonderful that the great Arnout, French minister of war, caused him to be brought into his presence, and said to him: "Are you the man that can do what the Almighty cannot—tie a knot in a stretched string?" There was the strongest opposition to its introduction, culminating in a mob of silk weavers, who took it from his house into the streets, broke it up and burned the fragments.

It was the same with Hargreaves in England, when he invented his spinning jenny in 1763. He was persecuted by his fellow workmen, who seized his machine, broke it in pieces, and drove him from his native town. That invention, with the improvements of Arkwright and Crompton, and the invention of the cotton gin by Whitney, who was outrageously defrauded of his rights, have changed the entire art of producing woven fabrics. Indeed, so far as the cotton industry of the world is concerned, they may be said to have created the industry which to-day gives employment to millions, and has so immensely cheapened the product that it is used the world over.

It is, moreover, a matter of history that in certain sections prayers were fervently offered in churches beseeching that the wickedness of the newly-invented sewing machine, which, it was supposed, would rob the sewing women of their means of obtaining a living, might become apparent, and its promoters be stricken by a conviction of their wrong-doing in making it, and thus be told by heaven to desist from its manufacture. This spirit of opposition exists to-day to a greater or less extent among the labor unions, whose members, without investigating the subject, are made to believe that labor-saving machines deprive them of employment, or at least will lessen their wages, just as the silk weavers of Lyons thought in regard to Jacquard's loom, and as the spinners of Lancashire thought in reference to Hargreaves' spinning jenny.

It is, no doubt, true that when a new invention is introduced which revolutionizes some particular art or branch of business, it at first decreases the number of persons employed in that particular line; but that is only temporary, for in a short time the result is a cheapening of the product, a greatly increased demand for it, because of this cheapening, and then necessarily an increased demand for laborers in that line, and almost universally at increased wages. The statistics show this to be true beyond the possibility of a question. The records of the labor bureau of the United States show that from 1860 to 1880, the most prolific period of inventions, and the most intensified in all directions of their introduction, the population increased 59.51 per cent, while in the

same period the number of persons employed in all occupations—manufacturing, agriculture, domestic service, and everything—increased 109.87 per cent.; and in the decade from 1870 to 1880 the population increased 30.08 per cent, while the number of persons employed increased 30 per cent. As shown by the investigation of a committee of the United States Senate, wages have increased 61 per cent. in the United States since 1860. And, as we all know, during that same period the cost to the people of nearly all manufactured articles has been decreased in as great if not a greater ratio.

DANGER OF FIRE FROM WOODEN LAGGING OR PIPE COVERING.

In connection with the report of the C P R Mechanical Department on the mica boiler covering, it is interesting to consider the data as to the extent of carbonizing which takes place in wood when used for lagging cylinders or boxing pipe, which appears in a recently issued circular of the Boston Manufacturers' Mutual Fire Insurance Co.

In the particular case reported upon, the investigation of the condition of the covering was brought about mainly by chance, for there was nothing in the external appearance of the material to indicate anything radically different on the inside. An additional steam plant had recently been installed for independent supply to a special engine. The pipe was of special pattern, supposed to be advantageous on account of low cost and light weight, but which was found to be worthless on account of joints that could not be kept tight. When the final pipe was put in, the work of covering it was done in such a satisfactory manner that the owners decided to remove and re-cover the pipe that was in service from the main boiler plant. The condition of the boxing was then discovered. The steam pressure maintained was about 100 pounds, and the pipe in question was eight inch. This pipe lead from the boiler-room to the main engine, and passed vertically through the roof of the boiler-house, and then horizontally through the engine room wall. The vertical piece was about 10 feet long, and the horizontal piece, which was outside the building, was about the same length. Inside the engine-room there was a section of pipe about 12 feet, and an elbow and a section about four feet in length to the throttle valve. The pipe outside the building was first covered with about three-quarter inch asbestos cement, and was then wrapped with hair felt, possibly one inch thick. Outside of this was a box. This box was double, both the inner and the outer section being of one inch pine, and between them there was a space of about two inches, which was filled with hair felt. This box was sufficiently large to clear the flanges and fittings when in place as it was originally put on. It was made in October, 1888, and the carbonizing had, during the meantime, been sufficient to char the top boards to such an extent that a considerable portion of the centre had become so friable that it had fallen away. The portion near the outer end near the elbow, and therefore nearer the unprotected flanges, was in the worst condition, but there was considerable of the carbonizing effect even close to the engine-room wall, and a number of feet away from any of the unprotected flanges. The outer covering had also been charred, but there was only one little spot where it had worked entirely through. The hair felt had been so carbonized that a very large part of it, upon the slightest touch, fell to powder. Inside the engine-room, the pipe was covered with about $\frac{3}{4}$ -in. of asbestos cement, but there was no wrapping of hair felt. Outside of this there was a lagging of black walnut and ash, which had been put on merely to improve the looks, and, in general, to match the lagging of the cylinders. This lagging was made so as to clear the flanges by about $\frac{1}{2}$ -in., but was stiffened by distance blocks which fitted quite closely to the asbestos covering. When examined, it was found that these distance blocks were very much carbonized, and even the lagging itself, for some considerable distance back from the unprotected flanges, was very much deteriorated.

In the same circular, Edward Atkinson, the president of the company, states: "It is sometimes held that this finely carbonized wood will not ignite from any cause except actual contact by spark

or flame from an outside source. In proof that charcoal in a porous condition will ignite from the sudden influx of fresh air, I cite the following example in my own experience. Having had occasion to test heat-retarding substances on my own behalf, I once obtained some sections of beautifully-prepared wood pulp in slabs of 1½ inches in thickness, and of a very porous quality, which are made use of in the construction of refrigerators. My purpose was to determine whether or not such slabs could be used to prevent the escape of heat from a lamp oven. I, therefore, raised the heat of my inner oven—which is a tight inner box one inch distant on all sides from an outer case made of vulcanized and very solid wood pulp—to a little under 400° F. In the centre of that inner oven, isolated from any metallic contact with the walls, I placed one of these slabs, and there left it subject to heat at less than 400° F. for about one hour. I then removed the front of the outer oven, and opened the door of the inner oven, letting a very quick and large supply of fresh air into a chamber in which the oxygen had probably been in part exhausted by subjection to the hour's heat. The slab of wood pulp had turned from pure white to lense black, having been converted into very porous charcoal. In less than a minute after the fresh air was let in it took fire, and burned to ashes before my eyes. I then repeated the experiment, with the same result. 400° F. will be developed by a pressure of steam of 238 lbs per square inch, but the same carbonization ensues by lapse of time at boiling heat, or at 212° F."

THE NEW COLORS FOR FALL.

The advent of the winter color card of the Chambre Syndicale des Fleurs and Plumes de Paris is of interest to every branch of the dry goods trade. Of course these shades are added to later, but as they are here they serve as a guide for the fall. In the entire list of 56 single shades what may be styled especially good are the shades Jourdain, Gange, Russe and Tournoi among the greens. Aubepine and Pivoine in the red shades; the purple called Baugainville, the yellow Castille and the dark-blue tones Matelot and Marine.

The clear shades that are of water-green cast in the light tones and deepen to the dark, yet bright Russian tint, open the card as a list of six, Volga, Neva, Euphrate, Jourdain, Gange and Russe. They are not only attractive in themselves, but the three latter shades are handsome for combinations. The lighter water greens have a faint grayish cast like water plants show, and these are predicted for winter evening wear. Menuet is a bluish "china" green that was called Ceramique last season. Page is a light green of a slightly yellow cast, while the regular yellow greens are represented by Oasis, Caspienne and Hetman, formerly known as spring greens. But one other green shade is shown—Tournoi—of a slightly blue cast, yet with a grayish tinge as well.

All of the reds are bright and the favored ones partake of the cherry shades: Cerisette, Aubepine and the rich dark Pivoine, Coquelicot and Pourpre are greeted as old friends, as they appear each season. Among the pink tones are the familiar Rose and Corail shades. New are the peculiar Louis XI. shades, which might be considered among the old-rose tones of brilliant brightness, and Pavane, an antique or old pink of a delicate, rather faded, aspect. Two strong shades are Flore, a deep purplish red, and Silene of the same class, but several tones lighter. The darker one will be exquisite in silk or velvet, though not down, as yet, in the favored list.

Clear and reddish purples show up in ten shades. The dark Prelat is of the clear purple worn in bishops' robes, and Berlinie is a very pink lavender. Favorite, Pourpoint and Baugainville agree with the Ophelia shades of last season and are strongly red. Heliotrope has returned in two rich shades, clearly influenced by pink, under the guise of Damoiseau and Chevalier. Louis XV. is a bluish lavender. The violet shades are Bulgare, Venetien and Roze, and were known under the general name of Parme last season. They are of the bluish cast, but not sufficiently so to destroy their richness.

Eight shades make brown the most varied color on the card though nothing novel is shown. The two castor shades, Beige and

Castor, are richer than of yore, however. The regular browns are from the golden tan Coree through Formose, Kola, Tabac, Marron and Loutre, as last season. The dyers have evidently wisely made up their minds that these shades cannot be improved upon.

The dark blues are represented by the old standbys Matelot and Marine, but they are brighter than formerly. Turquoise is the same as usual, and a new light shade of a grayish cast is of the antique softness noticed in old hangings; this Gavotte is pretty in silk, but rather dull in woolen materials.

The strong daring reddish orange shades are dropped in spite of their richness, the very lightest being the deepest golden tone now listed among six. The range commences with a clear white Blanc, then Creme, Paille, Cytise, Andalousie, and Castille. The latter is a high favorite alone and in combination. Three standard grays finish up the list, Argent, Nickel and Platine. The water greens and the return of heliotrope to the card are the most striking features besides a list of seven examples of ombre and other shadings at the end.

Neigeux shades from white to deep gray across the entire goods. Idylle shows the same shading in violet tones. Reve is a treat. Not of the spring greens after the same manner, and Berceuse of the lovely cherry pinks. Paradisier shows ombre shading of yellow on one end fading to white on each side and reddish violet on the other, also fading out to the white, with a broche figure as well. Speranza has water green in ombre on one edge and cherry pink on the other, with pale green finishing the outer edge of the latter color, a figure being thrown up on both colors. Japonaise shows a ground of blue, green, white, red, yellow and black, with scrolls showing the same shades. This is peculiar and very attractive, being different from Oriental colorings, yet possessing their beauty of harmony and softness—*Dry Goods Economist*.

NEW BLUE AND VIOLET DYES.

Wm. J. Matheson & Co., New York and Montreal, call attention to three basic dyestuffs, manufactured by Leopold Cassella & Co., and brought out by them recently, viz., Naphtindone B B, and Methylindone B and R, which deserve the attention of dyers of cotton and linen as excellent substitutes for Indigo.

Naphtindone B B is better adapted for dark blues. Methylindone R and B are better suited for producing light blue shades. Naphtindone B B can be fixed fast to washing on goods dyed with either Diamine colors or Indigo; thus it will render excellent service for topping purposes. They have received the following receipt from industrial quarters in Europe for dyeing Naphtindone B B on yarn. For mordanting the following quantities are used.

For a 1 % dyeing	7% sumac,	¾% antimony salt.
" 1½% "	10% "	1 % "
" 2 % "	13% "	1¼% "
" 2½% "	16% "	1½% "

After mordanting, the yarn is entered into the dye bath, to which from two to three per cent sulphate of alumina have been previously added. Turn four times, lift and add one half of the dyestuff required, turn six times, and add the remainder of the dye-stuff, turn another six times, lift, heat to 122 deg F., turn again six times at this temperature, and work for half hour at the boil. In dyeing with more than two per cent dyestuff leave the goods in the dyebath for another quarter hour. If the dyeing turns out too red, it is only necessary to work it for another half hour at the boil. If even then the shade should be too reddish or if a duller blue is required, take the goods once more through the first mordanting bath to which some more sumac has to be added, and work for half hour therein at the boil. If, however, a coppery blue is required, dye as above stated, and after having added the second portion of the dyestuff, add for every 100 pounds yarn a solution of from eight to twelve ounces acetate of lime.

Indigo dyeings may be topped with Naphtindone without previously mordanting the goods, a better fastness, however, is obtained in the following manner. The yarn dyed with Indigo is first washed, then passed through a weak tannin or sumac bath, then through an antimony bath, then washed again, and finally dyed as above indicated. In general a sumac is considered the best mor-

dant for Naphtindone, however, mordanting with tannin is to be preferred when Indigo dyeings are to be topped, as by applying sumac the shade of Indigo becomes too greenish.

The fastness to washing of dyeings done with Naphtindone is very nearly equal to that of Indigo dyeings; washing in strong lye only renders Naphtindone dyeings duller. If repeatedly washed with soap, however, the shade remains bright blue and loses less in depth than Indigo.

In fastness to light Naphtindone B B is as good as our Meta-phenylene Blues, and in this respect ranks, especially in dark shades, among the fastest substitutes for Indigo.

The fastness to acids of Naphtindone B B dyeings is good, and, if interwoven with white wool, they resist cross-dyeing in an acid bath. This fastness may still be improved by taking the cotton after dyeing a second time through the sumac and antimony bath.

As above mentioned, Naphtindone is excellently adapted for topping, it acting as a fixing agent for direct dyestuffs, thus dyeings of direct dyestuffs topped with Naphtindone tint white cotton washed together with them much less than untopped dyeings. On Indigo dyeings Naphtindone B B can be fixed just as well. In topping, as well as in dyeing on a sumac and antimony mordant, care has to be taken to dissolve the dyestuff well in condensed water and to add the solution gradually to the dye bath. The topping with Naphtindone is done with the addition of 2 per cent. alum of the weight of the goods, starting cold or tepid, and only boiling for a $\frac{1}{4}$ - $\frac{1}{2}$ hour when the dyestuff has nearly been absorbed.

Although Naphtindone dyeings fixed with alum are not quite equal with regard to fastness to light to those dyed on sumac and antimony mordant, the application of Naphtindone B B for topping purposes promises to become of great importance, its fastness to light being at least as good as that of the blues used at present for topping. The advantage which Naphtindone B B possesses for topping purposes consists in its covering much better than similar blues, which renders it possible to produce deep coppery shades or comparatively light Indigo bottoms, and also very bright and cheap dark blues on a bottom of Diamine Colors. The Diamine Colors which are especially well adapted for this purpose are Diamine Violet N and Diamine Black B H dyed by themselves or in mixtures according to the desired shades. The threads in linen piece goods dyed first with these Diamine Colors and topped with Naphtindone B B are well penetrated.

Methylindone B and R are dyed in the usual manner on cotton mordanted with tannin and tartar emetic. They give level dyeings more easily than Naphtindone B B, and are for this reason, as mentioned before, better adapted for the production of light Indigo shades. The fastness to washing of these colors is as good as that of Naphtindone B B. Their fastness to light is excellent; especially Methylindone B is very near to Indigo in light shades and surpasses Naphtindone B B. For topping purposes they are not as suitable as Naphtindone B B.

MEETING OF CANADIAN WOOLEN MANUFACTURERS.

A meeting of woolen manufacturers was held at the Windsor Hotel, Montreal, on Wednesday, May 6th, 1896.

On motion of B. Rosamond, M.P., Almonte, seconded by Jas. Kendry, Peterboro, A. F. Gault was elected chairman. G. F. Benson was requested to act as secretary. Letters were read from the R. Forbes Co., Moorhouse, Dodds & Co., Robert Meighen (Cornwall Mfg. Co.); Brodie & Co.; and Ferguson, Pattinson & Co., regretting that they could not be personally represented at the meeting.

The following were present. A. F. Gault, representing Globe Woolen Co. and Trent Valley Woolen Mfg. Co.; John Turnbull and A. Robertson, the Paton Mfg. Co.; David Morrice, sr., and David Morrice, jr., Trent Valley Woolen Mfg. Co.; James Kendry, Auburn Woolen Co.; James Gillies, Gillies, Son & Co.; R. R. Stevenson, Globe Woolen Co.; E. J. Coyle, Brodie & Co., and Waterloo Co.; Bennet Rosamond, Rosamond Woolen Co.; A. G. Lomas, Adam Lomas & Son; Feodor Boas, Granite Mills; James Cantlie, R. Gemmell & Son, and Cobourg Woolen Co.; G. F. Ben-

son, Hawthorn Woolen Co.; James Lockhart, Markham and Lambton Woolen Mills.

The chairman explained that the object of the meeting was to discuss the unusual depression existing in the woolen trade, and, if possible, to arrive at some arrangement whereby some of the grievances might be removed. A number of points were raised and suggestions made by a number of the gentlemen present, and after considerable discussion the following resolutions were drawn up, and the first two were unanimously adopted, Nos. 3 and 4 being left for consideration at the adjourned meeting:

1. That in future the terms for the wholesale trade be four months from March 1st, and four months from September 1st respectively, and four months from the first day of the month following delivery for goods delivered after these dates, and that for the clothing trade the terms be six months from the first day of the month following delivery, these latter terms not to take effect till the fall of 1897 trade, but the terms for the former to go into effect for the spring of 1897 trade.

2. That the rate of interest, including prepayment, be not in excess of 9 per cent. per annum.

3. That no original orders for the manufacture of goods be accepted for less than 200 yards for goods under 40 cents, and 100 yards for goods worth 40 cents and over. This to apply to all tweeds 27 inches in width, but half the quantity might be accepted in the case of $\frac{6}{4}$ goods.

4. That no sample ends be given to the trade for the purpose of taking orders, unless goods are actually on order.

The question of refusing to give clippings of all the different lines offered to the trade was discussed, and although the general opinion was that this was an unfair thing to the manufacturer, and a source of great trouble and expense to the selling agent, yet no definite decision was arrived at with reference to this for the present.

The chairman thought that it would be well to get a more general expression of opinion from the trade, and it was, therefore, decided to call another meeting for Tuesday, May 19th, and the secretary was instructed in the meantime to get copies printed of the resolutions arrived at at the meeting, one of which should be forwarded to each of the representative manufacturers of the Dominion, in the hope that they would make it a point to attend the next meeting on the 19th inst., so that, if possible, the resolutions above suggested might be ratified and carried out.

At the adjourned meeting on the 19th May, there were present besides those before named, the following:—W. Rosamond, representing Cobourg Woolen Mills; Robt. Meighen, representing Cornwall Woolen Mills; J. F. Morley, representing Waterloo Woolen Mills; Geo. Pattinson, representing Preston Woolen Mills; S. T. Willet, representing Chambly Woolen Mills, and E. J. Coyle, representing Brodie Woolen Mills.

Mr. Gault occupied the chair, and Mr. Benson again acted as secretary.

The other resolutions carried at the former meeting with regard to quantities of goods for orders and with reference to sample ends, were left in abeyance, as there was considerable opposition to such, and it was also thought well not to make too many radical changes at once.

It was also decided that this meeting should be the nucleus of an active Woolen Manufacturers' Association, and it was decided to again meet in the second week in October to further discuss reforms.

Some of those present thought there should be a penalty in connection with the resolutions passed, but it was agreed to draw up a "bond of honor" to be sent to each mill for signature, as some thought they should first try this method, and the question of a penalty to be decided definitely at the next meeting.

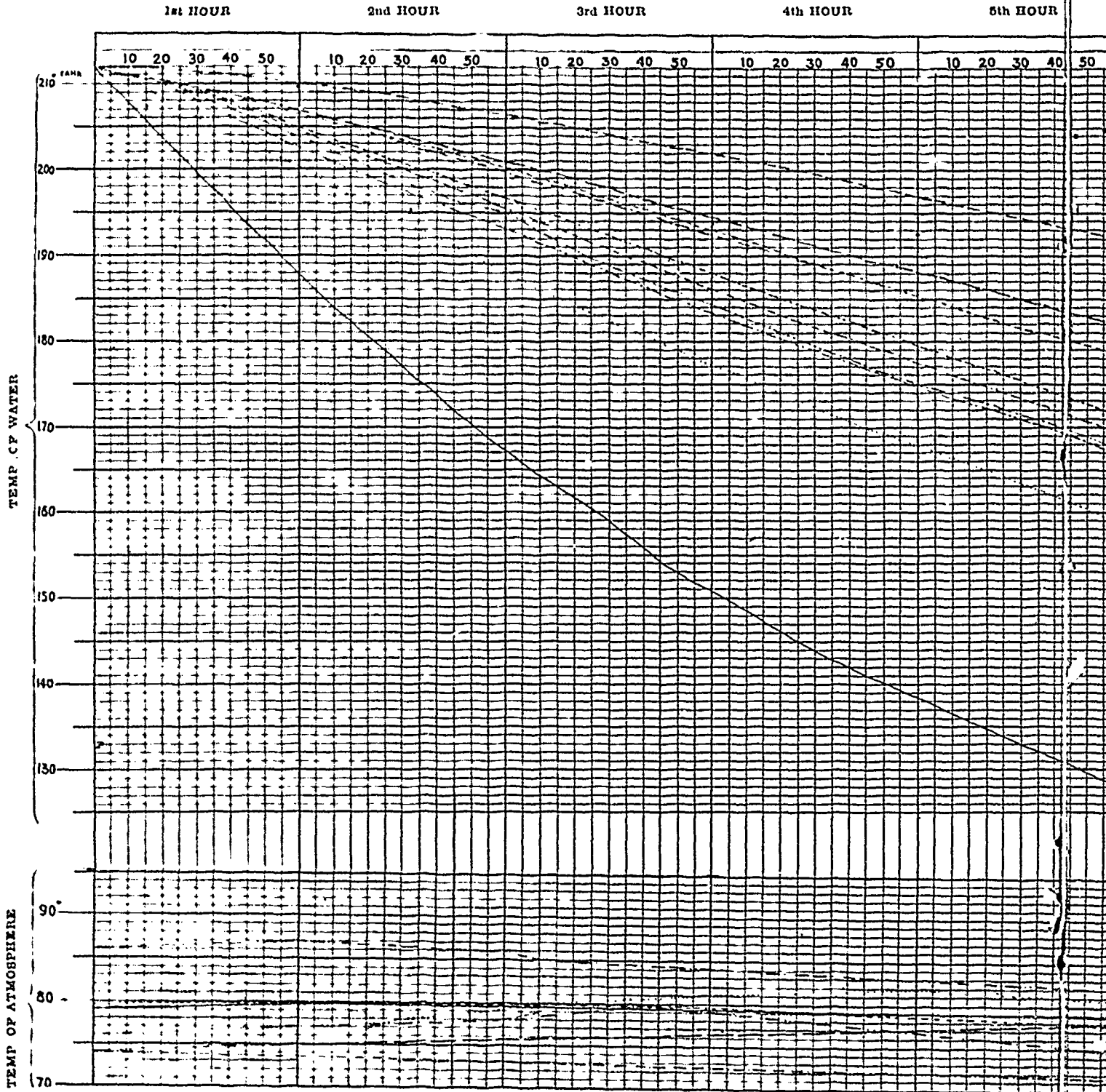
An Ottawa despatch of June 5th says: "The Militia and Public Works Departments are giving out a batch of contracts, for which there are no appropriations. Among those who recently got a contract is Sanford & Company, of Hamilton, for military clothing."

CANADIAN PACIFIC RAILWAY

(MECHANICAL DEPARTMENT)

DIAGRAM OF EXPERIMENTS WITH BOILER COVERINGS.

(Reproduced from Canadian Pacific Railway Company's Chart)



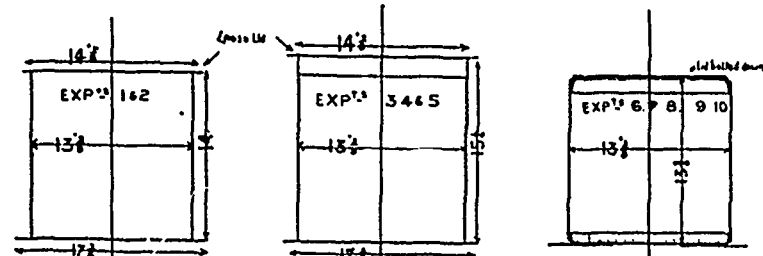
EXPERIMENTS WITH BOILER COVERINGS.

The accompanying chart is a reproduction of a diagram of experiments with boiler coverings made by the Canadian Pacific Railway Co. to test the values of various compounds as non-conductors of heat.

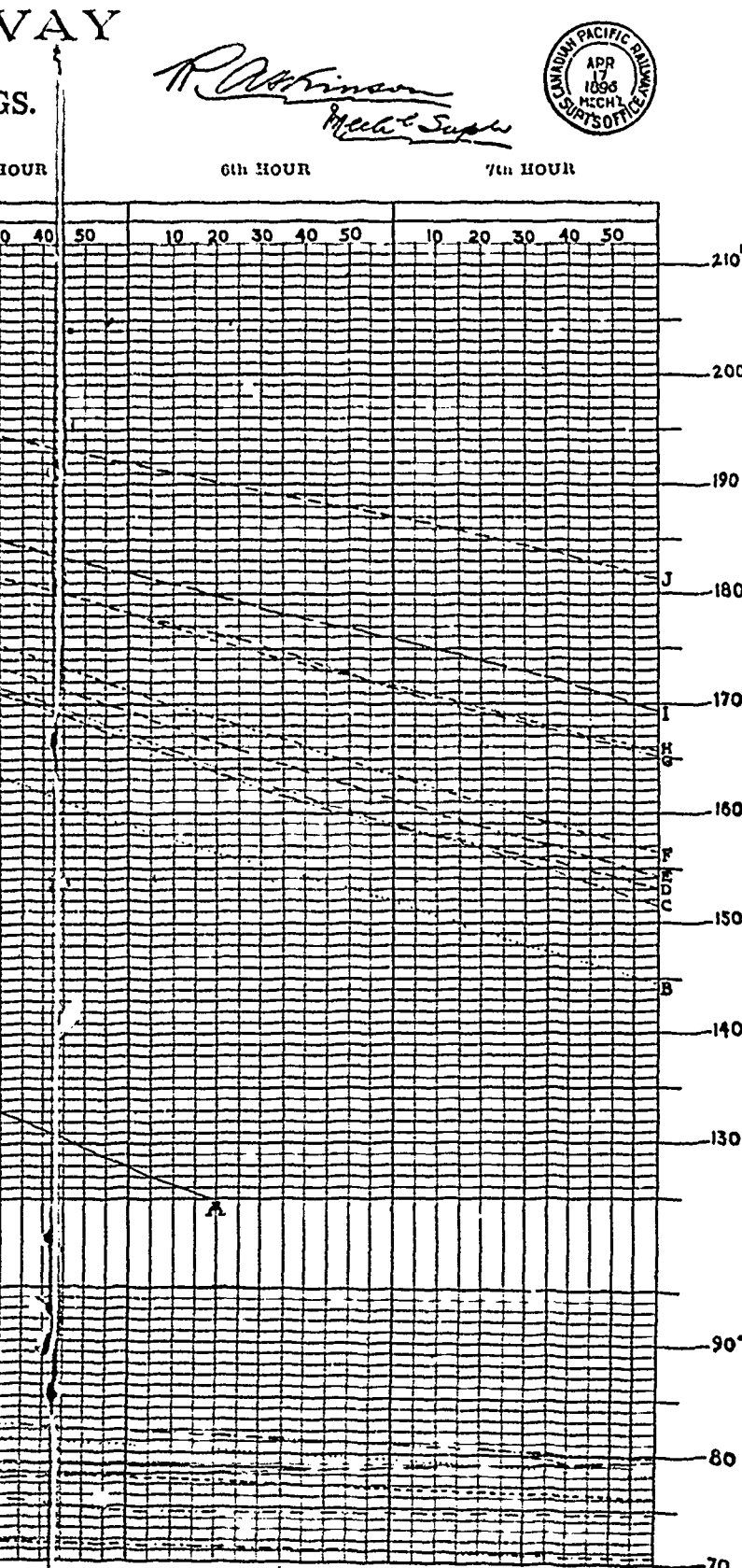
The order in which the experiments were made and the materials tested were as follows:—

- 1st Expt. Tank uncovered
- 2nd " " with air spaces of $\frac{1}{4}$ in. next tank, wood lagging $\frac{1}{4}$ in thick, and outer coat of Russian iron..... II
- 3rd " " same as in 2nd Expt., but with Asbestos woven cloth $\frac{1}{2}$ in thick, inserted in the $\frac{1}{4}$ in space, and placed next tank
- 4th " " covered with Plastic Asbestos Compound, and outer coat Russian iron Comp $\frac{1}{2}$ in thick
- 5th " " covered with Sectional Magnesia Blocks, and outer coat Russian iron Comp $\frac{1}{2}$ in thick
- 6th " " covered with Patent Mineral Composition, and outer coat Russian iron Comp $\frac{1}{2}$ in thick
- 7th " " covered with Plastic Asbestos, taken off C.P.R. Boilers, and outer coat Russian iron Comp. $\frac{1}{2}$ in. thick..... B
- 8th " " with air-space of $\frac{1}{4}$ in next tank, air tight iron coat $\frac{1}{16}$ in full thick and outer coat Russian iron Comp $\frac{1}{2}$ in. thick..... E
- 9th " " covered with Patent Mineral Composition Comp. $\frac{1}{2}$ in thick..... F
- 10th " " covered with Mica Boiler Covering..Comp $\frac{1}{2}$ in thick

The position of the various coverings on the chart may be found by the corresponding letters.



The whole question of the insulation of steam heat and the consequent economy of power and coal has been greatly neglected in this country, and a careful examination of the chart referred to and consideration of the results obtained and their significance, will be of great interest and value to engineers and steam users. In England and the United States increasing attention has been given to the whole question, and elaborate and voluminous reports of scientific trials of numerous non-conductors have lately been published. Various methods of testing these coverings have been adopted, the most general being the measurement of condensed steam in the form of water which has occurred in a given time under the competing coverings. In the case of the C.P.R. trials, however, it will be seen that water at 212° was used, the relative value of the coverings as non-conductors being determined by the number of degrees of heat which escaped through the different substances and the consequent cooling of the water in a given time. A reference to the chart shows that ten experiments were made. It will not be necessary, however, to refer to all of them, as the results of



some were so unimportant, as in experiments 4, 6 and 9, as to render them of little interest or value. It is only necessary to say that the trials were made under as nearly similar conditions as possible, as will be seen by the diagram of the atmospheric temperatures during the tests. The readings were taken from thermometers passed through the coverings and down into the body of the water.

The chart shows the loss of heat in the uncovered tank up to the 5th hour only, and to make a fair comparison the others should be taken for same time. The temperature at beginning of each test was 212°, and the following table shows the temperature at end of fifth hour, the loss in five hours, and the loss in the fifth hour :—

	Loss in 5 hours.	Temp. at end of 5th hour.	Loss in 5th hour.
Bare tank.....	84°	128°	11°
Asbestos compound	53°	159°	9°
Magnesia blocks.....	33½°	178½°	7°
Wood lagging and air space	"	"	"
Asbestos and wood	30°	181°	6°
Mica.....	20°	192°	5°

The mean temperature of the surrounding atmosphere during the 5th hour may be taken as having been 78°.

The fairest comparison of the merits of the coverings is made by considering the loss of heat in one hour per degree of difference of temperature between the tank and its surrounding atmosphere.

The following table shows this worked out :—

	Mean temp. during 5th hour.	Difference between tank and atmosphere.	Loss in 5th hour.	Loss in 5th hour per degree of difference of temperature.
Bare tank	133½°	55½°	11°	.198
Asbestos comp.....	163½°	85½°	9°	.103
Magnesia blocks	181½°	103½°	7°	.0674
Wood lagging and air space	181½°	103½°	7°	.0674
Asbestos and wood.....	185°	107°	6°	.056
Mica	194½°	116½°	5°	.0428

The following table shows the value of the coverings as compared with the bare tank.

Amount of heat which escapes from the bare tank was

- 1.88 times greater than through the Asbestos compound.
- 2.92 " " " " " " Magnesia blocks.
- 2.92 " " " " " " Wood lagging and air space.
- 3.53 " " " " " " Asbestos and wood.
- 4.62 " " " " " " Mica.

Mica shows by far the best result as a non-conductor of heat, and saved

- 245 per cent. as much heat as the Asbestos compound.
- 157 " " " " " " Magnesia blocks.
- 157 " " " " " " Wood lagging and air space.
- 130 " " " " " " Asbestos and wood.

The extraordinary differences here shown will doubtless be a matter of considerable surprise, but it is impossible to doubt the accuracy of the figures, and some other explanation must be sought.

It will be seen that asbestos cement, which is in very general use, particularly on marine boilers, showed infinitely the worst results. There seems no room for

doubt that this is largely attributable to the fact that it is a solid composition, and lacks one of the most vital requirements of successful non-conductivity, *i.e.*, "diffused air." That the air must be diffused or separated into minute cells is strikingly illustrated in experiments 2 and 3. In the first, wood and air space of ¾ inch next to the tank, as used on locomotive boilers, the loss per degree of difference of temperature was .0674°. When the same air space was filled or packed with asbestos fibre the loss dropped to .056°. In the case of mica, the air theory appears to have been carried to the furthest possible extent, the whole covering forming a veritable air cushion, each leaf or film of mica being separated from the next by minute corrugations, the whole mat presenting the appearance of a porous flexible quilt. The value of this ingenious arrangement was amply proved in the experiments in question, when the loss per degree in difference of temperature was only .0428°. That this is one of the most important qualities of a covering has long been recognized, and a large number of patents have been granted for devices intended to obtain it. But in nearly every instance it has been at the expense of the material. Hair felt, which is so largely used in low pressure work, is almost useless under high temperatures, crumbling and cracking, and in some cases igniting, although of itself it encompasses a large portion of the desired air. In other compositions, which are extremely light and porous, vibration or concussion disintegrates them in a comparatively short time, so that the difficulty of finding a substance which would resist all of these dangers has been great. It seems therefore that the great difference in the values of the coverings tested by the C.P.R. is due largely to the manner in which the valuable properties of diffused air as a non-conductor have been utilized. The differences shown between the best of the coverings in this trial are the more remarkable when it is remembered that the nearer the limit is reached, the greater the difficulty of showing substantial differences of value becomes.

The rapid increase in the use of high pressure steam has an important bearing on the question of loss by radiation and the utilization of the best means of minimizing it is an object of prime importance. That this loss is much larger than the majority of steam users realize, is certain, otherwise uncovered boilers or steam-pipes would be unheard of, and the rapid replacing of inferior coverings by the best that could be obtained would be accomplished as soon as possible in all our factories and shops. The following table will give some idea of what the loss of power has been found to be from uncovered steam-pipes with the steam at 75 lb. gauge pressure :—

2 inch pipe..	1 horse power loss for every 132 feet long.
4 " " " " " "	75 "
6 " " " " " "	46 "
8 " " " " " "	40 "
12 " " " " " "	26 "

About 90 per cent. of this waste is easily prevented by a proper covering of the pipes. When it is considered

that this loss occurs at the comparatively low pressure of 75 lbs., it is apparent that with steam at 130 lbs. and 140 lbs. and higher, the loss becomes very serious, and the necessity for preventing as much of it as possible is a matter of urgent importance.

The accompanying diagram very clearly demonstrates what can be done in this direction by the use of various compositions, as it clearly shows the qualities and capabilities of each. It is possible that the question might arise as to whether the great differences between these substances would still be found had the trials of the C.P.R. Company been made with higher temperatures than 212°.

It appears, however, from published reports of trials made some months ago by the engineers of the Boiler Inspection and Insurance Company of Canada, that these differences did exist; that company subsequently issued a special circular on the whole matter, as one of particular interest to steam users. It is stated further that the Grand Trunk Railway Company have lately concluded a series of trials, on a large scale and under high steam pressure, of a number of boiler coverings, including the best of those tested by the C.P.R. and the Boiler Inspection Company, the difference between them being even more marked. As no data, however, is as yet available of these trials, it is impossible to speak of them with accuracy. It is encouraging to notice the increasing attention the whole subject is receiving, and in view of the imperative necessity for observing the strictest economy in power and coal and the prevention of all unnecessary waste, it is to be hoped that our manufacturers will not be slow to avail themselves of every improvement and device calculated to achieve that object.

Among the Mills

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

The shoddy mill at Port Elmsley, Ont., is to be sold on the 19th inst.

There is a report that a new woolen mill is to be started in Ridgeway.

Walter A. Miens has charge of Alex. Wallace's woolen mill at Fallbrook.

J. L. Cockill, of the Simcoe woolen mill, has been paying a visit to his old home in Appleton.

Benjamin Brook, of Simcoe, is another woolen manufacturer who proposes to go direct to the retail trade.

McCulloch & Co.'s woolen mills at Rapid City, Man., were destroyed by fire May 22nd. No particulars are given.

Russel's spool mill and a hundred cords of spool wood were burned at Bartibogue, N.B., by forest fires last month.

The grounds of the Dominion Cotton Mills Company at Magog are being plowed up and laid out in landscape gardening.

Harry Goaf, designer in the St. Croix cotton mill, St. Stephen, N.B., for several years, has resigned the position to accept a similar one in Lewiston.

David McLaren, manager for the Ontario Glove Company of Brockville, in Western Canada, died somewhat suddenly of peritonitis in Winnipeg recently.

Frank Scott had part of one of his fingers cut off in the machinery at the cotton mills, Montreal, a few days ago. The wound was dressed at the city hospital.

Stephen Gardiner has gone from Carleton Place to Lambton Mills, where he has secured the position of boss finisher in the woolen mills there.—*C. P. Herald*.

Wylie & Shaw, woolen manufacturers, Almonte, have received a Dominion Government order for blankets that will keep their mill humming for the next three months.

Mrs. S. C. Martin, widow of the late proprietor of the woolen mill at Speedsville, near Preston, has gone with her son to Brooklyn, where they will probably reside in future.

Wm Binns, printer at the Dominion Cotton Mills Company, Magog, has returned to Lawrence, Mass. He was replaced by Harry Meiklejohn, late of Kendall's Print Works, Lowell.

Jack & Robertson, Montreal, have been appointed selling agents in Quebec and the Maritime Provinces for A. Klipstein & Co., the widely known manufacturers of chemicals and dyestuffs, New York.

The fire which took place in Peterboro on the 14th May destroyed some property belonging to the Auburn Woolen Company. The company ask the town council to make a compensation in the shape of a reduction in the assessment.

Jack & Robertson, manufacturers' agents in dyestuffs and chemicals, have secured the sole Canadian agency of the well known house of John Marshall, Son & Co., of Leeds, manufacturers of indigos, archils, cudbear and extracts of logwood and fustic.

George Dougherty, an employee of Ferguson & Pattinson's woolen mill, Preston, Ont., had his left hand caught between the rollers in the card room, with the result that he will be laid off work for some time, as his hand is badly lacerated. Fortunately no bones are broken.

The work on the flume at the Lomas woolen mill and Grindrod's tweed and blanket factory is progressing rapidly, says the *Sherbrooke News-Letter* of June 5th. It is being executed in a very substantial manner and will probably be soon completed. Work at Grindrod's factory has since been resumed.

Stephen Syer, whose interesting career in St. Catharines will be remembered by those in the carpet trade, has come to the surface again, judging by the following item in the *Lindsay Post*: "Mr. Syer, manager for the Port Hope Carpet Mfg. Co., was in town Tuesday. He left a large order for carpet yarns with the Lindsay Woolen Mills."

J. A. Young is in the city looking about for a site for a rubber factory, and has Ottawa in view as a favorable location if he can secure a free site and water power and other assistance. He interviewed members of the Ottawa Land Company, who will determine what inducements can be held out to Mr. Young in the way of a site.—*Journal*.

F. Wehrle & Co., brush manufacturers, Toronto, have moved from King street west to 134 Bay street. The new premises are larger and more convenient to the business centre of the city. This firm are about to turn their business into a joint stock company, and contemplate going into the manufacture of woodenware as well as brushes.

James Kendry, manager of the Auburn woolen mills, is the Conservative candidate for Peterboro, Ont., and his numerous friends are working hard to place him at the head of the poll. Mr. Rosamond, head of the Rosamond Woolen Co., Almonte, is also before the electors of Lanark on the Conservative ticket, with every chance of re-election. These are the only Canadian woolen manufacturers running for the House of Commons, but the textile trades, apart from party politics, would be glad to have their interests looked after by two such able men.

The new flamelettes now being manufactured by Wm Parks & Son, St. John, N.B., are very popular in the trade already. The colorings and texture are very fine.

A. T. Macdonald, formerly of the Ontario Cotton Mill, Hamilton, has been appointed assistant superintendent of the Jewett City Cotton Mill, Jewett City, Conn.

Gregor Unsler, formerly proprietor of the Yorkville carpet factory, brought an action for \$2,000 damages against Suckling & Co., auctioneers, Toronto. The action arose out of a note given by Unsler on some goods placed in the hands of the firm to sell, and he charged them with conspiracy and fraud. The judge dismissed the action as frivolous and vexatious.

Chas. Booth & Sons, 80 York street, Toronto, are extensive manufacturers of all kinds of brushes. They have exceptionally good facilities for manufacturing all kinds of machine brushes, loom dusters, mill brooms, etc., suitable for cotton and woolen mills, and they also re-kill old rollers. They are at all times ready to furnish close estimates, and pay special attention to the quality of the work they turn out, guaranteeing to fill all orders promptly and carefully.

James Jackson, manager of the Dominion Cotton Mills Co., gives the Montreal press these figures regarding the development of Canadian cotton mills. In 1878, the mills employed 303 hands, and paid in wages each week \$1,154, or an average of 62 cents per head each day, and these figures comprised men, women, boys and girls, and they worked 11 hours per day. To-day there are 1,417 employees, averaging 82 cents per day for men, women, boys and girls, working ten hours, with a weekly pay list of \$7,177.

The promoters of the new rubber factory in New Brunswick have been before the city council of St. John this month. The treasury board, to whom the matter was referred, reported that they had no power to exempt the New Brunswick Rubber Co.'s factory from taxes and water rates, but on discussion, it was decided to hear the company's representatives before coming to any decision. The board of works, at the same meeting, brought in a report recommending that certain lots in Carleton be offered to the company for ten years, at a nominal rental of \$4, if a building were erected thereon, and the works in operation within a year, the lease to be forfeited if the company cease to operate the factory, or use the land for other than manufacturing purposes. The subject was referred back to the board.

Albert Granger, the very well known boss of the balling room in the new twine factory at the Dartmouth, N.S., ropeworks, was nearly killed the other day. Presence of mind and the combined strength of three men prevented him being whirled bodily around the shaft, and meeting probably instant death. Mr. Granger was elevated on a shelf between the shaft and the wall. He was moving along examining the different pulleys on the shaft. The shaft was in motion. Mr. Granger's jumper caught in a set screw on the shaft. Knowing the fatal consequences to himself if he was dragged around with the shaft, he grasped hold of a hanger with both hands and called loudly for help. Another man leaped on a machine and helped him to resist the awful strain of the shaft. A couple of others rushed out to the boiler house to stop the engine, while another employee climbed a ladder which was at hand and ran off the driving belt.

The *Canadian Engineer* reports that the Taylor Hydraulic Air Compressing Company, Ltd., of Montreal, have about completed a large plant at Magog, Que., for the Dominion Cotton Mills Co. The Taylor system of compressing air will, the inventors confidently anticipate, revolutionize water power, and the practical results at Magog are being anxiously waited for. The Taylor Company have shown entire confidence in the system they control, and

deserve success. The plant, which is to furnish 150-horse power, will be running this month. In this process, the air is compressed by the weight of water as it falls down the tube, and the principle is said to have been in use for many years in the mountain waterfalls of Switzerland, in the form of what was called a *trompe*. Mr. Taylor, the inventor of the present plan, is a Canadian, and worked his device out from independent experiments, having never heard of the Swiss *trompe*.

In a political interview John Bertram, of Bertram & Sons, Dundas, accounts for the closing of various factories in that town during the past ten years. Referring to the Dundas cotton mill, the machinery of which was recently taken out, and some of it broken up for old iron, Mr. Bertram said: "The reason it was closed was because the machinery—the biggest part of it—was either worn out or out of date. During the last few years the mill was operated the output was of such an inferior quality that it was very difficult to sell it. When the N.P. came in new mills were erected all over the country—two in Hamilton, two in Brantford, and a number down east—with the latest improved new machinery, and the Dundas mill, not being able to compete with them, had to close. If the proprietors of the mill had kept the machinery up to date, it would have been operated right along."

The following case, of interest to the textile trades, is reported in the courts, Toronto. *John Harvey v. Struthers*.—Judgment on appeal by plaintiff from order of Judge of County Court of Wentworth dismissing motion for new trial in action for the value of two consignments of carpets sent by the Garden City Manufacturing Co., of St. Catharines, to defendants, the plaintiff claiming as endorsee of the bills of lading with notice to defendants. The court held that the judgment should be affirmed. The defendants did not order the carpets sent, but totally different ones, so that there was no contract between the parties at date of assignment of bills of lading. The subsequent purchase of the carpets by the defendants from the company's agent at lower than the invoice price was another transaction, and the endorsement did not pass to plaintiff the money then paid to the company. Appeal dismissed with costs.

The following from a Maritime Province paper, evidently refers to the new rubber company who have applied for a bonus from St. John. Davis and Miles, of St. John, N.B., have invented a new composition for the soles of boots and shoes and bicycle tires, on which they have secured letters patent in Canada, the United States and England. It is likely to effect a complete revolution in the rubber footwear trade, as it is absolutely "non-slippable," is twice as durable as the ordinary rubber, and costs little if anything more. Six million pairs of rubber boots and shoes are made in Canada yearly, paying their manufacturers a profit of from ten to twenty per cent., and the United States Rubber Co. last year divided \$7,775,000 amongst its stockholders. A company is to be formed with \$150,000 capital to operate under the Davis-Miles patent, and their factory, giving employment to 400 or 500 hands, will be located in St. John or some other business centre in the Maritime Provinces.

After the negotiations of Talbot, Cockroft & Harvey, brussels carpet manufacturers of Elora, with the city of St. Henri, Que., for a bonus, fell through by reason of the adverse vote of the people on the by-law, that firm approached Sherbrooke. Here the subject was discussed with the board of trade and the city council, and the firm represented that they would employ 250 hands and pay out \$75,000; and they wanted a bonus of \$25,000, the city to take \$10,000 stock in the company also, and grant exemption from taxation for 20 years. A by-law was submitted embodying a part of these conditions, and there seemed a good chance of the deal going

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through; but a libel suit has developed out of the proceedings, which may result in another failure to secure a bonus. It seems that some rumors concerning the financial standing of the firm were current, and a Mr. Miller took the matter up in the interests of the city. The upshot of this step is reported in the following item in the *Montreal Witness*: "An action for \$20,000 damages has been taken by Frederick Talbot vs. A. M. Miller. The plaintiff alleges that after he had entered into negotiations with the corporation of Sherbrooke for a bonus to open a carpet factory in that locality, the defendant issued a libelous circular against him, discrediting the standing of his firm."

Under the heading "War Among the Cotton Kings," the *Montreal Trade Bulletin* of the 12th inst. has the following: "For some time past certain mills have been quietly cutting prices in grey cottons and shее rgs, and the Merchants' Manufacturing Company, which discovered that for some unexplained reason orders from its regular customers were being placed elsewhere, soon found out that its competitors were selling below card prices, when it at once issued a circular to the trade openly and above board, reducing prices of grey cottons and sheetings about five per cent. It is stated upon good authority that should the underhand cutters make a further cut, the Merchants' Manufacturing Company will pretty quickly issue another circular to meet it. It will be remembered that a few weeks ago the *Trade Bulletin* referred to reports of cutting in certain lines of cottons, and this was no doubt the cause of the circular above referred to being issued. It was thought that a perfect understanding existed among our cotton manufacturers in regard to prices; but there seems to be implanted in the human breast an insatiable and irrepressible desire to somehow get ahead of one's neighbors; and this trait of the human family is never better illustrated than in the domain of trade and commerce. We know 'it's devilish hard to miss a big sale when a slight cut will secure it,' as a traveller recently said; but when certain manufacturers enter into a compact to maintain a list of prices, and then deliberately break it, a great lack of business honor is indicated thereby; and the recent breach that has been discovered on the part of some of the cotton kings, it is feared, will prevent any further compacts as to the regulation of prices for some time to come. It would, therefore, not surprise us if an era of cutting were inaugurated that will lessen the profits of manufacturers very considerably."

W. T. Benson & Co., wool merchants, Montreal and Toronto, are appealing to the Court of Appeal against a judgment in an action brought by them against John Harvey, Mrs. Harvey, Wm. Findlay and John B. Young, all of Hamilton. Harvey was a member of the firm of Harvey & McQuesten, cotton and woolen manufacturers, of Hespeler. In 1887 the firm assigned, and the plaintiffs seek to rank on Harvey's estate for \$8,940 due them from the estate, McQuesten being dead. Harvey conveyed all his estate to his wife, and they seek to have the transfer set aside. Mrs. Harvey has a claim of \$30,000 against her husband's estate. Findlay and Young are the assignees. In the course of the previous trial some shady transactions were alleged in connection with the Harvey failure. In that trial the plaintiffs sued for a declaration that plaintiffs are entitled to rank as creditors on the assigned estate of defendant for the amount of their claim against defendant Harvey (\$8,942); for a dividend on the claim; for an order upon defendant Williamina Harvey to reassign to defendants Findlay & Young all the trust estate transferred by them to her, and restraining her by injunction from dealing or parting with the same; and for a declaration that certain life insurance policies were effected and premiums paid by defendant Harvey with intent to defeat his creditors, and that plaintiffs out of the sum received by defendant Williamina Harvey on the policy in the Equitable Life Insurance Company, an amount equal to the premiums paid thereon, and out of the sums secured by the remaining policies an amount equal to the premiums paid thereon, and that plaintiffs were entitled to a lien on these policies for such amount, and that such policies might be sold to realize such amount, and that plaintiffs might be appointed receivers to receive

the same; also for a declaration that certain stock in a building society was purchased by defendant John Harvey in the name of defendant Williamina Harvey, with intent to defeat his creditors, and that plaintiffs were entitled to be paid the value thereof for their exclusive benefit.

The death of John Livingston, senior partner in the flax manufacturing firm of J. & J. Livingston, took place at Listowel on the 21st May. Mr. Livingston was born at East Kilbride, Scotland, and at the time of his death was probably the wealthiest man in the county of Perth, his estate being valued at \$500,000, exclusive of \$100,000 life insurance. This money was made in the flax trade, he and his brother, James Livingston, M.P., being popularly known as the "flax kings." The firm own flax mills in half a dozen different places in Western Ontario, besides one in Manitoba. The funeral was very largely attended, hundreds of the employees of the firm attending from the villages around Listowel. Mr. Livingston's death is a severe blow to his brother, the member with whom he had been in business for so many years. The will of the deceased names as executors James Livingston, Baden, brother of deceased, John Livingston, eldest son, and Peter Livingston, of Manitoba, nephew of deceased. It appears that each member of the firm carried an insurance policy of fifty thousand dollars the amount in case of death to be used for the support of the family, so as not to necessitate the drawing of money from the business. In addition to this policy of fifty thousand, deceased had a policy of twenty thousand, of which half is to go to each of the six children. The remaining ten thousand, with another ten thousand to be taken from the estate, is to be invested by the

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Very little business doing, mills holding off until after the elections. The following are current quotations in Montreal -

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Bicarb soda.....	2 25	" 2 35
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Caustic soda, 70°.....	2 25	" 2 35
Chlorate of potash.....	0 13	" 0 18
Alum.....	1 35	" 1 50
Copperas.....	0 70	" 0 75
Sulphur flour.....	1 50	" 1 75
Sulphur roll.....	1 50	" 1 75
Sulphate of copper.....	4 75	" 5 50
White sugar of lead.....	0 07	" 0 08
Bich. potash.....	0 10	" 0 27
Sumac, Sicily, per ton.....	60 00	" 65 00
Soda ash, 48° to 58°.....	1 25	" 1 50
Chip logwood.....	2 00	" 2 10
Castor oil.....	0 07	" 0 08
Cocoonut oil.....	0 06½	" 0 07

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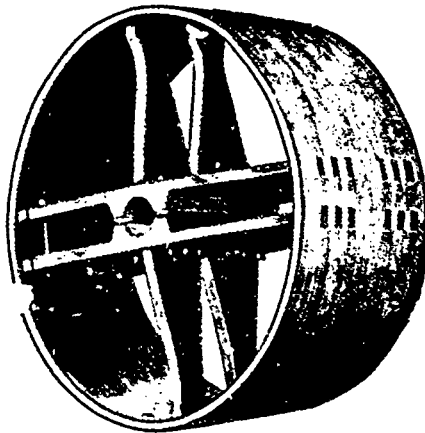
executors and the income therefrom to be paid to Mrs. Livingston during life, or while she remains his widow, for her personal use. The profit on the insurance policies, estimated to amount to between four and five thousand dollars, is given to the parish of East Kilbride, Scotland, where Mr. Livingston was born, for the purpose of purchasing a public park to be known as the Peter Livingston Park. Of the balance of the estate two-thirds is to be equally divided among the three sons and one-third equally among the three daughters, the time of payment to the children to be at the discretion of the executors, but in any event not until they reach thirty years, but each child is to receive the interest on his or her share upon reaching twenty one years of age. The bulk of the money will remain invested in the firm's business, and it is by the will to remain so invested so long as Jas. Livingston wishes. The amount of the estate will not be known until a valuation is made by the executors, but it is supposed that the share of the deceased will be somewhere in the neighborhood of five hundred thousand dollars. The estate will pay a succession tax to the Ontario Government of five per cent.

LITERARY NOTES.

The Toronto Carpet Manufacturing Co. has issued a very neat catalogue of their well known weaves of Axminster and Ingrain carpets.

The *Canadian Magazine* announces in its present issue that it has no intention of reducing its price to that of its new competitors. The *Canadian Magazine* is adding hundreds of subscribers to its lists every month. The story which Ian MacLaren writes for this publication is as fresh and interesting as ever. The Canadian writers help to make up what is generally pronounced one of the best issues of the magazine.

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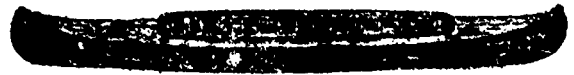
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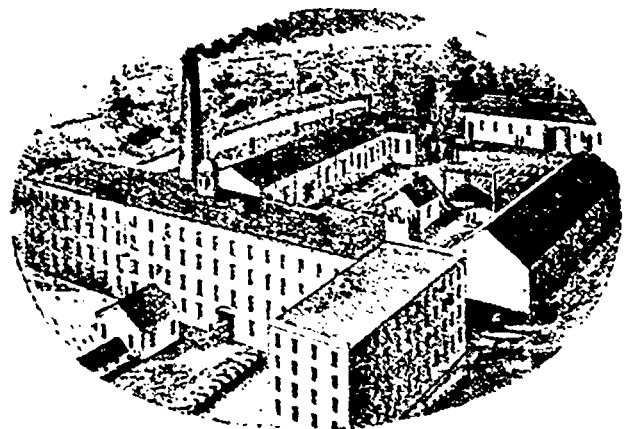
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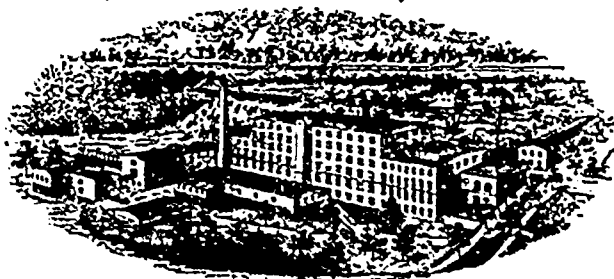
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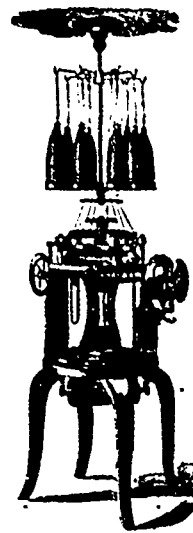
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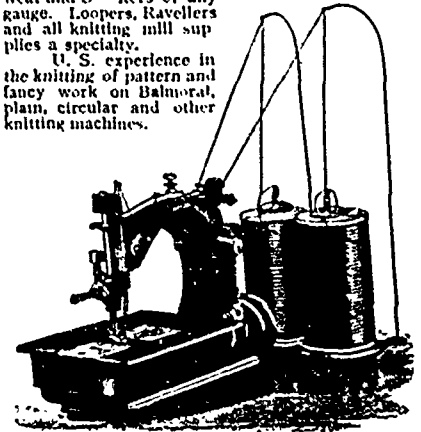
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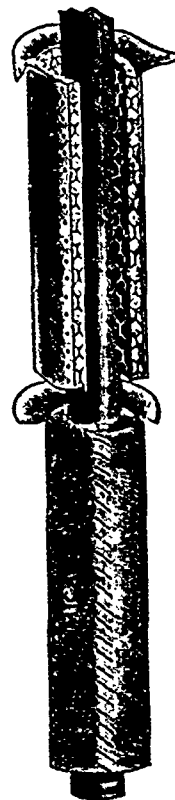
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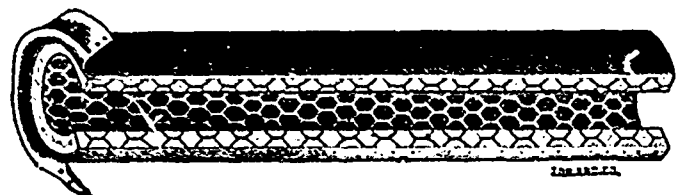
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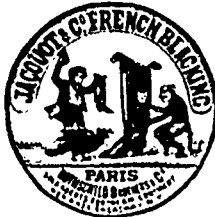
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THE DRAWBACKS OF ELEVATORS.

A lady walked into a warehouse the other afternoon and took an elevator to the top floor. Her husband saw her from across the street, and hurrying over took the next elevator. He went to the department where he knew his wife had business and found that she had stepped in and out again, and went down in another elevator.

In the meantime his wife had gone down, and the elevator-man said:

"Your husband just went up in the elevator. I think he is looking for you."

The lady took the next elevator up. Just then her husband came down. He looked all around, and then inquired of the elevator-man:

"Have you seen my wife here?"

"Yes, she just went up this minute."

The man took the next elevator, and he was no more than out of sight till his wife came down again.

"Your husband has just gone up again," said the elevator-man.

"I suppose he'll wait for me this time, so I'll go up. And up she went.

Down came her husband a second afterwards.

"Did my wife come down again?" he inquired.

"Yes, and just went up again. She thought you would wait for her."

"Well, I'll wait for her."

He waited about five minutes, and then, growing impatient, took the elevator upstairs. She had been waiting for him and came down again just as he disappeared.

"Well, I will wait for and catch him this time," said she.

After standing in the corridor several minutes she decided to go upstairs and find him. As she whisked out of sight he stepped out of another elevator.

"Your wife has just gone up," said the elevator man.

The husband swore a little under his breath, and started to leave the building. At the door he hesitated, changed his mind, and took the other elevator up. Down came his wife at the same moment.

"He's just gone up again," was the elevator-man's answer to her weary enquiry, "and he's mad as a hornet."

"Then I had better go right up and catch him," said she.

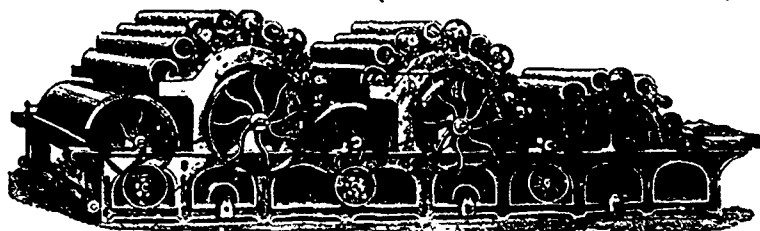
Up she went and down he came.

"Just went up," remarked the elevator man.

"I'm demmed if I'm going up again," said he. "I'll wait right here," and he sat down on the stairs. Half an hour later he was still sitting there, and his wife, equally determined, was waiting for him upstairs.

"I hope they'll meet in heaven," remarked the elevator-man.—
Warehouseman and Drafter.

TEXTILE MACHINERY (New and Second Hand)



English Sales Attended.

CARD CLOTHING TETLOW'S
Stock in Canada

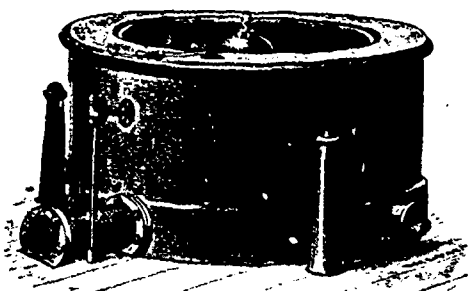
Condenser Aprons Buffed Surfaces Plain & Grooved

- Oak-Tanned and White Belting
- Cotton Banding, Rim Spindle and Braided
- Shuttles, Pickers, Heddles, Harness
- Patent Frames, GENERAL FURNISHINGS

ROBT. S. FRASER

3 ST. HELEN ST., MONTREAL

BROADBENT'S HYDRO EXTRACTORS



Agents for Canada: - - SHAW BROTHERS, 164 McGill Street, Montreal.

Direct Steam Driven. No Shafts or Belting required.
Suspended on Links and requiring no Foundation.

Adapted for **Manufactories, Dyehouses, Laundries, Chemical Works, Sugar Refineries, etc., etc.**

—SEND FOR CATALOGUE—

THOMAS BROADBENT and SONS

CENTRAL IRON WORKS

CHAPELHILL, HUDDERSFIELD, ENGLAND

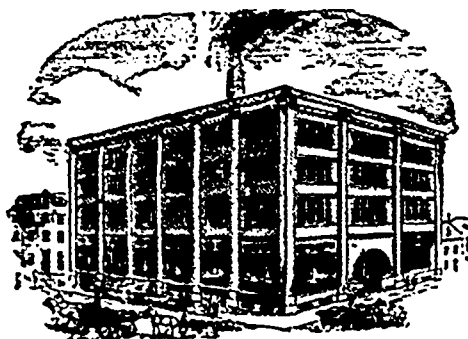
Telegrams: "BROADBENT, HUDDERSFIELD."

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MONTREAL and TORONTO

MANUFACTURERS OF

OAK-TANNED Leather Belting



MONTREAL FACTORY.

We make Belting for all kinds of work. In ordering state where belts are to run.

Loom Picker Co.

BIDDEFORD, ME.



MANUFACTURERS
... OF ...



Loom Pickers & Loom Harnesses

OF SUPERIOR QUALITY

Established 1842

ADAM LOMAS & SON,

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Flannels, Dress Goods and Tweeds

Selling Agents, JAS. A. CANTLIE & CO.

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"We hold thee safe."

The Dominion Burglary Guarantee Co.

Limited

Head Office, Montreal, Can.

CAPITAL, \$200,000.

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

JOHN A. GROSE, GENERAL MANAGER.

J. Ironside Thomson

COMMISSION MERCHANT and MANUFACTURERS' AGENT

European Manufactures:

GEHRUDER HOCHMAN, Meerane and Mulzen, Saxony—

Plain and Fancy Dress Goods and Overcoat Linings

FRANS MUTSAERTS & ZONEN, Tilburg, Holland—

Serges, Vicunas, Beavers, Naps, Ulster Cloths, etc.

W. THEODOR GEY, Gera and Langenburg, Saxony

Ladies' Fancy Dress Goods.

WINZER & WECKER, Chemnitz—Fancy Hosiery.

Canadian Manufactures:

HARRIS & CO., Rockwood—Friezes, etc.

Correspondence Solicited.

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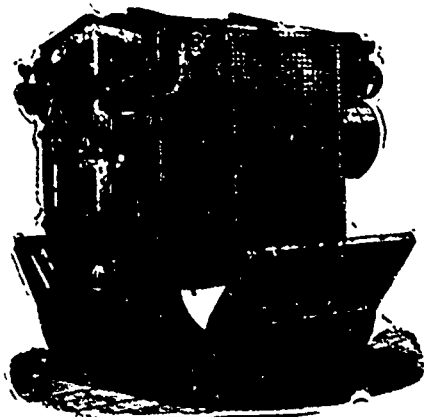
HESPELER, ONT.

MANUFACTURER
OF

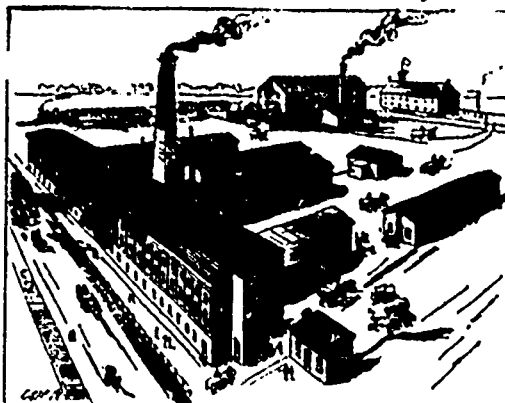
Woolen Machinery,

Fulling Mills,

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



Hamilton Cotton Co., Hamilton

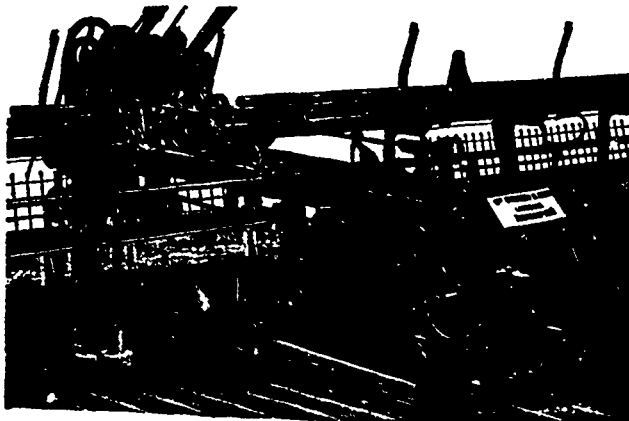


Manufacturers of
Cottonades,
Denims,
Hosiery
Yarns,
Beam Warps
Carpet Warps
White and
Colored
Yarns,

Lampwick (standard and special sizes), Webbing, Bindings, etc. Best in the market.

SELLING AGENTS:
D. MORRICE, SONS & CO., MONTREAL and TORONTO
Agents for Beam Warps: GEO. REID, TORONTO
Agents for Webbing: A. McT. WATT, MONTREAL

WILLIAM WHITELEY & SONS,



LOCKWOOD, HUDDERSFIELD, ENGLAND.

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

CATALOGUE ON APPLICATION

SHAW BROTHERS, - Agents

164 McGill Street, - Montreal.

Thompson & Co.

SHERBROOKE, QUEBEC

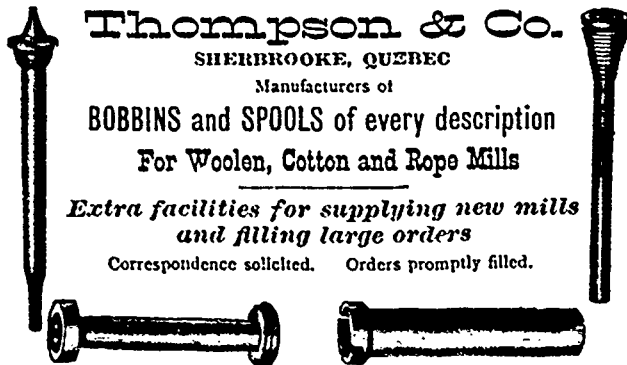
Manufacturers of

BOBBINS and SPOOLS of every description

For Woolen, Cotton and Rope Mills

Extra facilities for supplying new mills
and filling large orders

Correspondence solicited. Orders promptly filled.



JOHN HALLAM,
83 & 85 Front St. East, - - - Toronto,
and
88 Princess Street, - - - - - Winnipeg
Wholesale Dealer in
DOMESTIC AND FOREIGN WOOLS
Sumac, Japonica, &c.

LONG & BISBY
DEALERS IN
Foreign and Domestic
WOOL AND COTTON
GENERAL COMMISSION MERCHANTS
HAMILTON, ONT.

A. T. PATERSON & CO.
Importers of **Foreign Wools**
35 St. Francois Xavier St.
MONTREAL, Canada

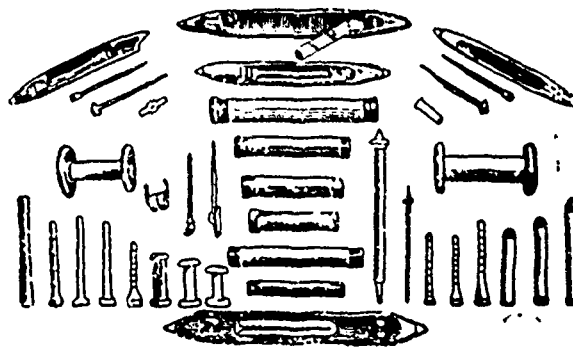
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Manufacturers and Dealers in all Lines of
Wool Stock, Shoddies, &c., Graded Woolen
Rags, Carbonizing and Neutralizing.
Best prices paid for Wool Pickings, Woolen
and Cotton Rags, Metals, &c. Hard Waste, &c.,
purchased or worked up and returned.
219 Front St. E., Toronto | Foot of Ontario St

The Montreal Blanket Co.
Manufacturers of
Shoddies, Wool Extracts
and Upholstering Flocks
Office and Works: COTE ST. PAUL
P.O. Address: MONTREAL

ROBT. S. FRASER
Wools, Cottons, Noils, Yarns
Specialties:
English Pick Lambs and Downs
Foreign Wools and Noils
Egyptian and Peruvian Cottons
Fancy Yarns
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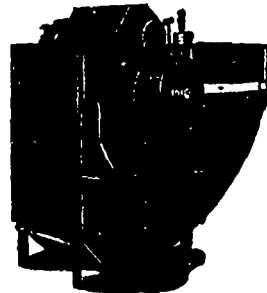
WM. D. CAMERON,
Woolen & Cotton Manufacturers'
Agent,
HALIFAX, N.S., & ST. JOHN, N.B.
Address P.O. Box 401. - HALIFAX, N.S.

Lachute Shuttle and Bobbin Works

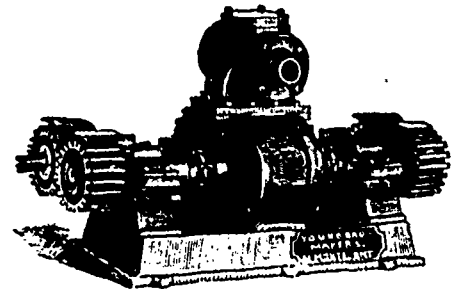


We are the largest Shuttle
Manufacturers in Canada
Slubbing, Roving and all kinds
of Bobbins and Spools for
Cotton and Woolen Mills.
We have always on hand
a large stock of
Thoroughly Seasoned
Lumber.
Orders solicited and all work guar-
anteed to give satisfaction.
JOHN HOPE & CO.
LACHUTE, P.Q.

MISSISSIPPI IRON WORKS



ESTABLISHED
1875

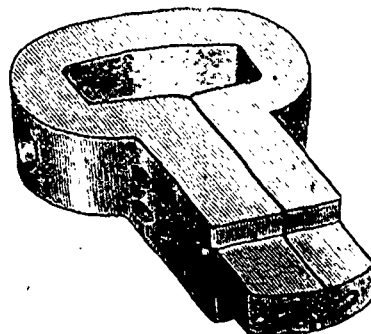


Manufacturers of English or American Fulling Mills and Washers, Wool Pickers, Ex-
haust Fan Driers, Dusters, Rotary Force Pumps for Fire Duty, Boiler Feed Pumps,
Shafting, Hangers, Castings, Pulleys, Gearing, Forgings.
Full equipment of mills of every kind. **YOUNG BROS.,** Almonte, Ont.

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

WILLIAM CRABB & CO.

Manufacturers of all kinds of
Hackle, Gill, Comb and Card Pins, Picker Teeth, Needle
Pointed Card Clothing in Wood and Leather for
Flax, Jute, Tow, etc.
Hackles, Gills and Wool Combs made and repaired; also Rope Makers' Pins, Picker Pins, Special
Springs, Loom and Shuttle Springs, English Cast-Steel Wire, Cotton Banding and General Mill Furnishings
Bloomfield Avenue and Morris Canal, NEWARK, N. J.

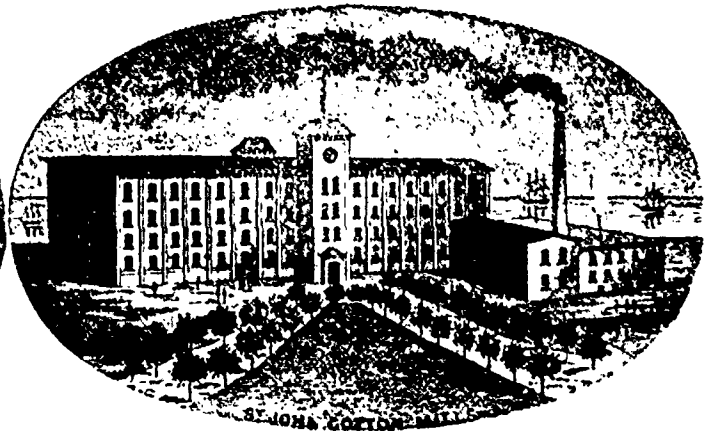
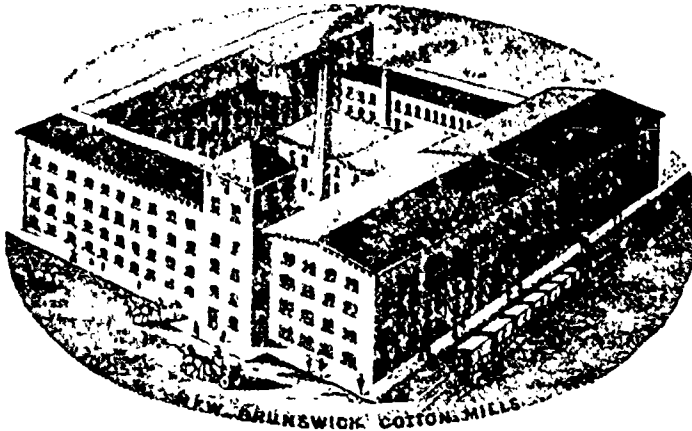


JOHN W. BARLOW
Manufacturer of
LOOM PICKERS,
LAWRENCE, MASS.

This cut represents Barlow's Pat. Bow Picker
with solid interlocking foot. Pat. Feb. 20, 1889

WM. PARKS & SON, LIMITED

ST. JOHN, NEW BRUNSWICK



Cotton Spinners, Bleachers, Dyers and Manufacturers

Yarns of a superior quality and Fast Colors for manufacturing purposes a speciality

Agents: DAVID KAY, Fraser Building, Montreal, J. SPROUL SMITH, 24 Wellington St. West, Toronto, JOHN HALLAM, Agent for Beam Warps, 83 Front Street East, Toronto.

FABRIC ITEMS.

W. H. Lailey, of Lailey, Watson & Co., wholesale clothiers, Toronto, has left for England

A Ingraham, the St. John, N.B., hatter, has been awarded the contract for the uniform caps for the I.C.R.

Fraser, Menzie & Co., Ottawa, and F. Mendels, Mattawa, are offering to compromise. Both are dealers in clothing, and both offer 30 cents on the \$1.

Hoig & Son, tailors, Chatham, Ont., have assigned to Sheriff Mercier. They had been in business 50 years. The principal creditors are Toronto firms.

M. M. Pyke, manufacturer of shirts, collars and cuffs, Ottawa, was tendered a dinner the other day at the Russell House, on leaving for Chicago to be married.

E. D. Gough, clothing, Belleville, whose assignment was recently noted, has effected a settlement at 30 cents on the dollar cash, and 10 cents in notes spread over six months.

A Murray & Co., dry goods dealers, of Hamilton, have retired from business after an honorable career of 50 years, and their stock and good will have been bought out by Thomas C. Watkins, of the same city.

The report of the amalgamation of the Clark Thread Co. of Newark, N.J., the Kearney and Paisley Mills of Scotland, and the J. P. Coates Thread Co.'y of Glasgow, Scotland, is authoritatively confirmed

Osborne & Flower, ladies' tailors, Toronto, have assigned to E. A. Lye, of Wyld, Grasset & Darling. The failure is a small one. The firm had been in existence only a few months, and lacked capital

James Craig, who has been employed for many years in the firm of Walter Blue & Co., clothing manufacturers, of Sherbrooke, has been rewarded with a partnership in the firm. Referring to the change the *Sherbrooke Gazette* says: "We congratulate Mr. Craig on attaining a partnership in this well-known establishment,

and also Walter Blue & Co. on securing for a member of the firm a gentleman of such experience and capability.

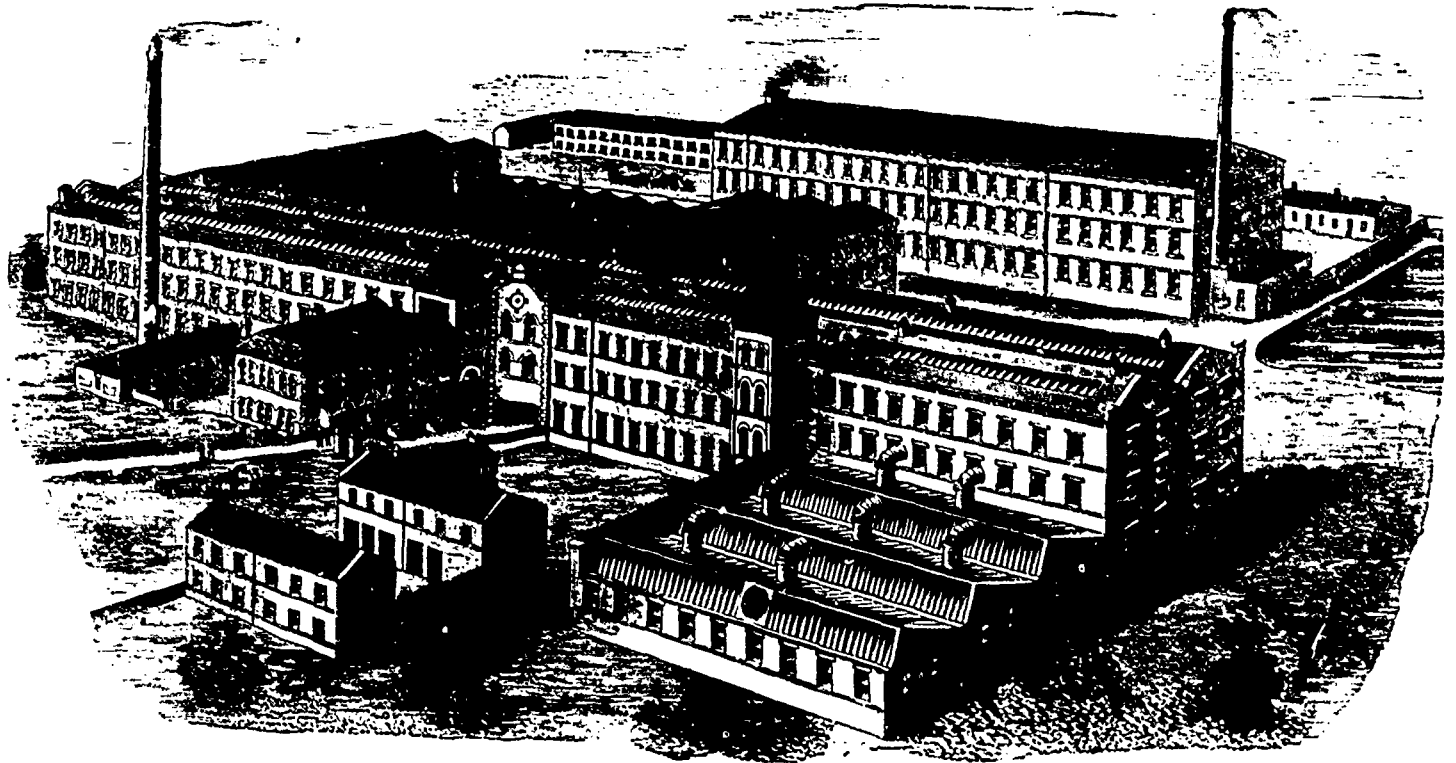
The "Crescent Dry Goods Company," of Rossland, B.C., have applied for incorporation, with a capital of \$20,000. The provisional trustees are: Joseph Coleman, Emera Miles Kinnear, both of Rossland, B.C., and Nancy J. Renshaw, of Colfax, Washington Terr.

James Wilson, of Ottawa, Canada, representing J. A. Seybold & Co., was in Troy, N.Y., the other day in search of Michael Brown, an employee of the firm, who is a defaulter to the extent of \$2,200. Brown was manager of one of the firm's stores, and sold out the stock summarily, pocketing the proceeds.

Application has been made for a charter for the Troy Laundry Company, with a capital of \$20,000, headquarters at Montreal, to carry on the business of laundrymen; to manufacture and sell shirts, collars and other articles of wearing apparel, and to furnish customers throughout Canada with toilet necessaries and supplies: The following are the incorporators: James Henry McKeown, merchant; Stewart James Carter, merchant; John Bothwell Tresidder, agent; George James Crowdy, merchant, and William Laurie Chipchase, merchant, all of Montreal.

The Montreal Waterproof Clothing Company filed an assignment last month. The principal creditors are:—George Harris, New York, \$7,562; J. McAllister, Glasgow, \$7,183; D. Moseley, Manchester, \$5,870; M. Vineberg, Montreal, \$4,000; Canadian Rubber Co., \$6,000; Bank of Nova Scotia, \$16,000; Campbell & Co., Bradford; Towley, Everitt & Co., Manchester; Rocca, Daniels & Co., Manchester, and Ferguson, Shires & Co., Manchester, were also down for amounts over \$4,000. The total liabilities are \$52,525 direct and \$16,201 indirect, and the assets are put down at \$48,700, of which \$10,900 are held as collateral. Of the assets, \$19,200 are in book accounts, of which \$13,400 are either bad or doubtful. About six months ago the company claimed a surplus of \$15,000, but the outlook for the ordinary creditor now is not bright. The business was an ordinary partnership composed of Jacob and Harris Wener. They have made an offer of 25 cents on the dollar, payable in two, four and six months. Kent & Turcotte, Montreal, are curators.

CARD CLOTHING OF EVERY DESCRIPTION



SAMUEL LAW & SONS, LIMITED

Established 1816

MOORLAND AND ROUND HILL MILLS

Incorporated 1888

CLECKHEATON, - ENGLAND

Largest Manufacturers in the World of

CARD CLOTHING

—FOR CARDING—

Cotton, Wool, Worsted, Silk

and other Fibrous Materials.

MAKERS OF

Plough-Ground, Side-Ground, Needle
and Diamond-Pointed

CARD CLOTHING

With HARDENED and TEMPERED Cast Steel Wire

PATENTEES AND MANUFACTURERS OF

Patent Rolled and Compressed Double Convex Wire, Angular, Flat,
Round and Flat, and Ordinary Round Wire Cards.

Samples, Prices and Testimonials on application

Canadian Agent: GEORGE REID, 118 Duke Street, TORONTO

THE WOOL TRADE.

The May sales of colonial wools in London developed disappointingly for the trade, owing to the unsatisfactory condition of business in Yorkshire, France and America. For several days prices tended downwards, but there was a reaction at the close. In inferior merinos the decline was 10 per cent. Cape wools did not suffer so much owing to their scarcity, greasies being only a farthing or half-penny below March prices. For the June sales on the 30th there is no decided indication of what prices will be.

At the Antwerp wool auction sales, on the 10th June, 2,700 bales were offered, of which 1,600 were withdrawn. There was a good attendance, and a fair demand for all grades. Crossbreds were unchanged, and merinos five centimes lower than the previous sales.

In the Toronto market new clip wool is coming in freely, but there is no change in prices and the dealers are not keen buyers. They feel in fact that they are moving in the dark. Last year American buyers were in this market making heavy purchases, but now the Americans not only take little interest in the Canadian market, but their own is unusually depressed. The American knit goods, tweed and worsted mills have little business in sight; many are closed down, and wool dealers are anxiously looking to the future. For instance, the Pacific Mills, of Lawrence, write to a Canadian firm that they have bought 500,000 pounds of quarter-blood Kentucky wool at 14 cents delivered at the mills, the lowest price ever known before for this grade being 18 cents. They have also bought a quantity of Irish wool at 20 cents laid down. This shows a weakness in British domestic wools, and as Irish wools, for instance, are of the lustre character, there would appear to be a poor outlook for any exports of Canadian wools to the States, where the amount of last year's stocks held over till now is reported by Bradstreets to be larger than for many years. Dealers believe that the total quantity of this year's clip in Ontario will prove to be less than last year. Prices quoted at the farmers' wagons in Toronto are 18 to 18½c. for strict selected merchantable fleece; rejects, 15c., unwashed, 11c. Pulled super is quoted at 19 to 20c.; extra, 20 to 21c.

In Manitoba shearing has been delayed by the cool, wet weather, and not much has yet come to market. Prices are thus irregular with lower tendencies. The *Commercial* says: "For the first lots of unwashed fleece 9c. and even 9½c. was paid, and though we can still quote 9c., local buyers report that they cannot pay more than 8c. for good ordinary fleece. We quote, however, 8 to 9c. for unwashed Manitoba fleece; chaffy or burry wool, 5 to 7c. as to quality. Heavy, fine, territory wools, 5 to 7c. We heard of 10½c. being offered for a fancy lot of pure Shropshire wool, but understand the offer was made as a feeler and was withdrawn some time after."

A Montreal correspondent writes under date of 12th: "Sales for the past week in foreign wool have been very limited. Manufacturers are holding off from buying largely until they see the result of the

elections. Orders for next Spring goods are coming in very slowly, and what is selling is cheap stock for light tweeds, from 17 to 35 cents per yard. At these prices they cannot afford to put in much wool, which costs from 35 to 40 cents per pound clean. No change in prices of greasy Cape, 13½ to 15½ is about the range according to quality and conditions. B.A. scoured, 27 to 33 cents.

The following are prices of Canadian wools quoted in various local markets:

Perth	20 cents per lb.
Listowel	20 to 22 "
Renfrew	17 to 20 "
London	17 to 18½ "
Peterboro	17 "
Kingston	18½ "
Petrolia	17 "
Hamilton	16 to 18 "
Lindsay	17 to 20 "
" unwashed	10 "
Collingwood	11 to 18 "
Orillia	19 to 20 "
" unwashed	10 to 12 "
Barrie	17 to 20 "
" unwashed	8 to 11 "
Mount Forest	18 to 20 "
Elora	17 to 20 "
Arthur	18 to 19 "
Guelph	17 to 18 "
" unwashed	10 to 12 "
Montreal	19 to 20 "
" pulled	21 to 22 "

A national convention of "credit managers" is to be held at Toledo, Ohio, June 23rd to 25th. N. T. Elliott, Toledo Chamber of Commerce, is secretary.

T. B. Pearson & Co., manufacturers of clothing, Victoria, B.C., have assigned. Bad debts and slow collections, with a trade too large for their capital, are assigned as the causes.

CANADA GARNETT CO.



MANUFACTURERS OF
Garnetted Wastes
and Shoddies
Waste Openers
and Pullers
Office, 3 St. Helen Street
Works, 10 Bannockburn
Avenue, MONTREAL

*Do not write us
when you want trash!
but when you want
MITTS or GLOVES in either
Buck or Saranac,
Kid or Mocha,
equal to any that are
made anywhere,
well, just you get our
prices.*

**M. J. McDOUGALL,
KINGSTON, Ont.**

HARVIE & CO.,

Box Manufacturers and Wood Printers.

70 and 72 Esplanade Street West,
Toronto.

All kinds of Packing and Shipping Cases made and shipped on shortest notice. Cloth Boards and Box Shooks a speciality. Send for lowest quotations.

R. M. DENNISTOUN, Pres. J. I. DAVIDSON, Sec'y.
JAMES KENDRY, Man. Director.

Auburn Woolen Co.
PETERBORO, ONT.

Manufacturers of

**FINE
TWEEDS,
ETC.**

Selling Agents { D. Morrice, Sons & Co.,
Montreal and Toronto

The best results in
Card Grinding
are obtained by using 

**DRONSFIELDS' PATENT
GROOVED EMERY FILLETING**
SPECIALITIES: MACHINES FOR GRINDING CARDS
MACHINES FOR COVERING ROLLERS WITH LEATHER

DRONSFIELD BROS. LTD.
Atlas Works, OLDHAM, England.

THOMAS KER

J. HARCOURT

KER & HARCOURT,

ESTABLISHED 1857



Orders by Mail
will receive prompt
attention.

Walkerton, Ont.

PAUL FRIND WOOLEN MACHINERY CO., Limited

118 Duke Street, TORONTO

GEORGE REID, MANAGER

WOOLEN MACHINERY

All kinds for sale, including 3 full sets of 60-in. machinery.

WOOLEN MILL SUPPLIES

Every description kept in stock. Best English Card Clothing a speciality.

WOOL

Sole Agents for FRANCIS WILEY & CO., Bradford, Eng. A large stock always on hand.

BEAM WARPS

Sole Agents for HAMILTON COTTON CO.

MILLS FOR SALE

First-class 7-set Woolen Mill, 60-inch Cards, good water power

" 2 " " good water power

" 1 " " " " "

These Mills are in first-class running order, and we shall be glad to furnish full particulars.

STEAM AND POWER

Pumps
& HYDRAULIC MACHINERY

FOR ALL DUTIES

NORTHEY

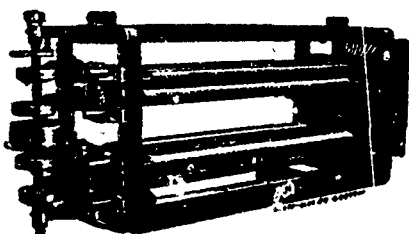
CO., LTD.

TORONTO, ONT.

LAURIE ENGINE CO.

Sole Agents for Quebec

St. Catherine St., MONTREAL



We manufacture Barker's Patent Noiseless Fast-running Dofing Comb

**Barker's Patent Double Apron Rubbing
Motions for Condenser Cards**

Are in successful operation on all grades of stock, being generally adopted because they change carding and spinning rooms for the better.

James Barker, Cotton and Woolen Machinery
Second and Somerset Streets, PHILADELPHIA, Pa.

Have You Tried _____ FLEXIFORT?

The best Backing yet. No stretch. Greater strength. Never requires re-drawing on.
Does not grow hard. Set with polished, hardened and tempered steel wire.
Impervious to oil. Outwears leather. Send for prices and samples.

The J. C. McLAREN BELTING COMPANY

Factory, MONTREAL 22 Front St. East, TORONTO

SAMUEL LAWSON & SONS, LEEDS, England

MAKERS OF

Machinery for Preparing and Spinning
Flax, Tow, Hemp and Jute

Special Machinery for the Manufacture of Binder and Ordinary Twines

Good's Patent Combined Hackling
and Spreading Machine

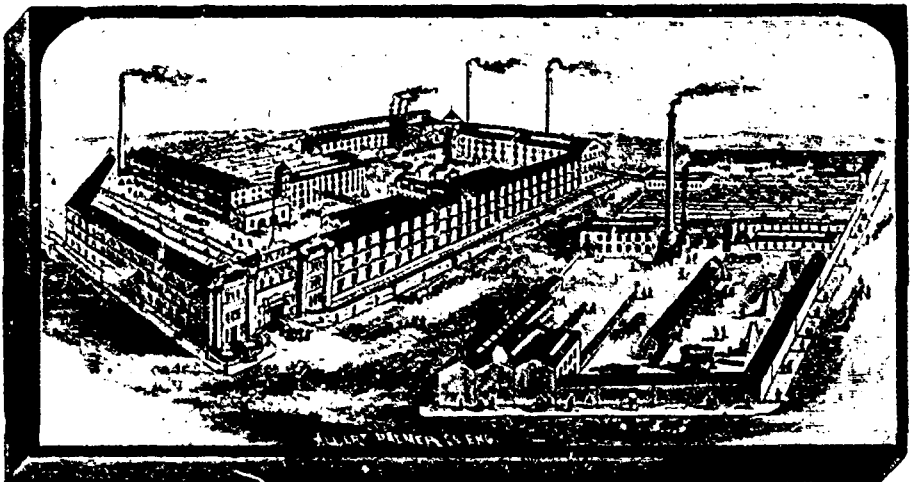
Patent Automatic Spinning Frames
Improved Laying Machines

and other special machinery for the
manufacture of Rope Yarns

ALSO OF

Brownell's Patent Twisting and Laying
Machines for Twines

Council Medal, London, 1851. Grand Medal,
Paris, 1867. Prize Medal, Moscow, 1872. Diploma
of Honor, Vienna, 1873. Highest Award, Phila-
delphia, 1876. Gold Medal, Paris, 1875. Highest
Award (Medal), Melbourne, 1880.



WRITE TO THE

PATON MFG. CO.

Sherbrooke, Que.

FOR

Worsted Knitting and Fingering Yarns

NEW TORONTO WOOL STOCK CO.

(ALFRED PARKER, Sole Proprietor)

A. S. PARKER, Manager

W. H. PARKER, Mechanical Supt.

NEW TORONTO, ONT.

MANUFACTURERS OF ALL KINDS OF
CARDED WOOL STOCKS AND GRADED SPECIALTIES
in Carbonized and Hand-Seamed Stock

The Proprietor asks for orders upon his long experience in the centre of
the heavy Woolen Manufacturing trade of Yorkshire, England.

L. S. WATSON MANUFACTURING CO.

LEICESTER, MASS.



Manufacturers of WATSON'S PATENT MACHINE WIRE HEDDLES

Guaranteed to be perfectly adapted to weaving all kinds of Woolen, Cotton and Worsted Fabrics, Fancy Cotton, etc., etc.
Superior Harness Frames furnished promptly. Also Hand Cards of every description.