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\* Readers at home and abroad are invited to avail themselves (gratis) of our columns, for the purpose of entering into communication with machine makers or others able to supply their wants, and for obtaining any other information on textile matters, which they may desire. Their names will not be published unless requested.

All communications to the Editorial Department should reach the office, 23, Strutt-street, Manchester, early in the week in order to receive attention in the next issue.

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## CLOSING OF THE VICTORIAN WOOLLEN MILLS.

After a period of struggling, the proprietors of the Victorian Woollen Mills have decided to close their works at Geelong, the shareholders refusing to continue the payment of money towards the expenses of a concern which is constantly conducted at a loss. The factory, we believe, obtained a bonus some years ago from the Government for the first 5,000 yards of tweed manufactured in the Colony, and hopes were entertained at the time that the foundation of what would prove a permanent industry had thus been laid. For years past the Victorians had been taxed for the support of the mills by means of tariffs ranging from 25 to 30 per cent.

And yet, after all the efforts made, the result is a distressing failure. This outcome is all the more exasperating as the Victorians know that across the water in New Zealand several woollen mills are at the present time carrying on a most successful business, not only for the supply of the home market, but with the Australian mainland as well. In Dunedin alone there are a couple of mills paying dividends every year, "always increasing operations, always improving products," as a disgusted Melbourne critic points out. How do they manage to pay?—asks the same critic. The answer is that, in the first place, they employed men who understood the matter, to design their buildings and to choose and purchase their machinery. In the second, they brought out people not trained only, but bred to the work of weaving. In the third, they imported those people in families and provided them with homes, where they might live with all the necessary comforts and conveniences of domestic life. In the fourth, they had no boards of directors holding frequent meetings and drawing handsome fees, nor any managers strolling about in silk hats and broadcloth, nor clerks keeping elaborate books which it would puzzle a Philadelphia lawyer to understand. And, lastly, they arranged for all their goods under their own hands to be sold in every city and village of the land. They are prosperous, busy, happy places, those mills now. Green fields and wooded hills surround them. Brightly painted cottages are set in gardens where holly-hocks and stocks and roses and rhododendrons bloom. Half-a-dozen workers turn out at times from a single cottage—all wage earners, all colonists of the very best sort. They belong to no trade union, and yet have larger liberty, better income, and more comfort than any working folk in Australia. And still the proprietors take a fair share of the profits, and find work for every boy and girl when school age is passed, and generally bring out a few skilled hands from the Old World every year. It is a pretty picture, and, says the *Melbourne Standard*, we are conscious of a terrible contrast in returning from Dunedin to Geelong. "Is not the failure of the Geelong mills," it adds, "attributable to the policy which is characteristic of Victorians—every man seeking State aid for his own industry, and despising the products of his neighbour's protected industry?" We reproduce the criticisms of the *Standard* as affording an interesting illustration of the fact that even highly-protected industries cannot always be made to hold their own in competition with less protected but better managed ones. The Victorian Woollen Mills were within a short distance of Melbourne, the largest city in the Southern Hemisphere. Behind them was "Australia Felix" proper—the rich grazing country known as Gippsland, in which some of the finest wools in the colony are clipped. The sea was, moreover, close at hand, so that, as far as position was concerned, the Victorian Mills had very little to wish for. Better management is said to characterise the operations carried on in the New Zealand Mills, and this may account for the comparative success which has attended the operations of the latter. We have not the slightest doubt that Victorians will try again, and that eventually the woollen industry of the colony will be placed in a sounder position than characterises it at present. In the meantime we append a few particulars regarding previous attempts of the kind, forwarded us by a correspondent, who states that he has made a study of the question. A few years ago, he says, the Government of Victoria offered a premium of £5,000 for the product of 10,000 yards of worsted tweed of local manufacture. The latter condition was imperative, as the object of the bounty was to

encourage the manufacturers of the colony. As a result of this, two firms—Messrs. E. and W. Gaunt, Williamstown, and the owners of the Ballarat Woollen Mills—competed, the first-named concern being successful after a somewhat exciting race between the two as to which should complete the stipulated quantity first. New machinery had to be bought by Messrs. Gaunt before entering on the contest, and a representative of the firm was in this country five years ago for that purpose. Messrs. Paterson, Laing, and Bruce, of Melbourne, purchased *en bloc* the first 10,000 yards manufactured in the colony, a member of the firm stating at the time that the cloth was of excellent quality. Despite the efforts made, however, the trade is not in a flourishing condition, and its present state is fully illustrated by the facts given above concerning the fate of the Geelong venture.

## COTTON CULTIVATION AND MANUFACTURE IN BRAZIL.

It is not only with some curious aspects of cotton history that Mr. Branner deals in his admirable paper, in that equally admirable magazine the *Popular Science Monthly*, but he treats also of cotton developments and prospects in the great southern republic—as the times have made it. The plant is indigenous to the country, and might be grown throughout its entire area in almost unlimited quantities. But sugar cultivation has pushed the crop back from the coast line, and the cost of carriage, in a land almost destitute of railways and with not many more roads, often precludes profit. Where waterways are available the ports can be more readily reached, but as a rule "transportation is on horse-back or mule-back, and it is thus brought to market often from a distance of from three hundred to four hundred miles, trips sometimes requiring three or four months for a troop of mules, over roads that are nothing more than bridle-paths, and often very bad ones at that." During the Civil War in the United States—it is the same old story in this case, as in so many others, so familiar that it will hardly bear repeating—with quickened demand and higher prices an average annual import of rather over 28 millions of pounds, calculated on the returns between 1850 and '61, rose rapidly until it was over 102 millions of pounds in 1868. English interest and ardour kept the ball rolling. The war over and supplies from the States resumed, falling prices damped the energies of the Brazilian planter, and cotton enough and to spare, from elsewhere, satisfied the English manufacturer, and the subsequent proceedings interested him no more—Bret Harte's famous line being adapted for the occasion. So it came that the "amount of cotton exported from Brazil, although still large and fluctuating from year to year, was gradually decreasing, until in 1876 it had fallen to 63,609,000 pounds," and a country which has finer natural facilities than the States only produces about one-eighteenth as much cotton. The varieties most commonly cultivated have all been introduced from elsewhere, but all flourish with the minimum of care and attention. Cotton seems to be regarded much in the same light as the nigger was looked upon farther north, and it may, like Topsy, be said to have "growed,"—it is hard to say how. The system of cultivation is mentioned, but the term has only the remotest possible relation to the haphazard and indifferent treatment of the plant, from the seed to the gin; and yet in spite of these drawbacks, and such a profusion of insect pests that sometimes half the crop is destroyed, so kindly is the soil and climate that cotton still pays. Lack of capital and lack of communication, agricultural sloth and ignorance, the most primitive appliances, the said gin excepted, waste of seed products—all these



things, in the Prayer-book phrase, let and hinder the full success of Brazilian cotton, and yet Mr. Branner believes that the disappearance of slavery and the consequent adoption of some system of small farming will, in the near future, materially increase the present production. It is a thousand pities that the country has been stricken with that political unrest which seems to afflict all South America, and that the long and judicious reign of Dom Pedro was summarily snapped short. With the establishment of the Empire in the beginning of the nineteenth century a new impetus was given to all industries, and cotton shared in the benefits of good government. From 1785 all factory spinning had been prohibited on the complaint of Portuguese merchants that the increasing manufacture of cotton cloth was injuring their trade; but this decree was at once repealed by the Emperor, and first looms, which had been also forbidden, began to be used, and later factories were established. There are "now no less than fifty spinning and weaving establishments in Brazil," says Mr. Branner. The industry "is at present confined almost wholly to the provinces of Rio de Janeiro, Minas Geraes, São Paulo, and Bahia, where the demand for the better grades of cotton cloth is greatest. But the factories have by no means done away with direct consumption of raw material. To the traveller in the interior of Brazil there is no more familiar sight than that of spinning with the ancient distaff and spindle. In some parts of the country this custom is so common that the children learn it as a matter of course, and it would be very difficult to find a person who did not know how to spin." In order to shew the wide-spread knowledge of this art in the interior a Brazilian gentleman once assured him that it might be taken for granted that the then Brazilian Prime Minister could spin in this aboriginal fashion! Very nearly all the hammocks used throughout the northern part of Brazil, together with considerable quantities of coarse cloth, are still made of thread spun in this manner. The direct domestic consumption is about 1,162,000 pounds annually, which, with the amount made up by the factories and used in the country, makes the whole consumption of raw material in Brazil 18,481,600 lb. annually since the factories began operation.

#### STOCKTAKING IN THE OLDHAM MILLS.

Our Oldham correspondent writes:—"During the past few days some 40 spinning companies in the district have taken stock. Taking the results as a whole, they are regarded as more favourable than anticipated. It was expected they would be irregular, and this conjecture has turned out quite correct: while one announces a profit of £1,700, another shews a loss of £1,600. Still, the adverses are nothing like so heavy as those made known a few months ago. For the most part the losses are confined to a few hundred pounds. The difference in a profit or loss by common consent is acknowledged to be due to the adoption of a certain policy or a certain course of action. For instance, concerns which have declared profits are known to be free from cotton stocks, and have sold yarn pretty freely at current prices, and have been able to keep themselves free of yarn stocks. Of course this condition of things is the exception, and not the rule. On the other hand, where they have cotton supplies it makes all the difference how they have valued the raw material—whether at invoice price or something near current rates. At any rate, it may be generally stated that the directors' feelings have been in the direction of adopting the latter course, though in some instances, it is believed they have been led by policy to not go as far in the 'lopping' business as they would like. Still, the experience now being

undergone will have a salutary effect on the method of valuing stocks. 'Get it low enough and keep it there' is now regarded as a sound policy."

#### MULE SPINNERS AND BOBBIN CARRIERS.

Our Oldham correspondent writes:—"Mule spinners in this district are being strongly recommended to cease assisting to do what is regarded as making up the wages of bobbin carriers. It is contended that employers do not pay this class of labour a sufficient rate of remuneration, and that milder-spinners, as it has become the custom, pay them a few coppers for bestowing favours upon them in the way of placing the bobbins in the spot where at the time they are most needed, and thus saving the milder or his piecers the trouble of carrying them there. The matter itself seems simple enough. But for all that, the fiat has gone forth that the practice must be stopped, and that employers must pay the extras if anyone has to do so." We would, to quote from the operatives' official organ, caution "mule spinners against the foolish practice of throwing themselves out of situations for simple matters, which they should overlook, and not treat as being of any importance," as "notwithstanding the number of new mills which are in building, and some of them on the point of starting the mules, there is a great difficulty in mule spinners finding situations." Is it not better, therefore, to bear the ills they have than fly to others they know not of? At any rate this view of the subject is worthy of consideration.

#### THE GROWTH OF THE CO-OPERATIVE MOVEMENT.

In a general way it is known in this country that the Co-operative Societies of Great Britain transact in the aggregate a very large amount of business. We do not, however, think that many persons have anything like an accurate idea of what the dimensions of that business are. Even local merchants, themselves at the head of vast concerns, have been known to utter remarks concerning Co-operation which proved conclusively that the speakers had not fully familiarised themselves with the subject they were discussing. In the narrow thoroughfares which commence at the Corporation-street end of Balloon-street, Manchester, and extend for a considerable distance behind the former business centre, are to be found several vast piles of buildings, the property of the Co-operative Wholesale Society, Limited, in which is transacted a trade exceeding, we believe, that of any other single house of the kind in the world. In 1890, the Society's sales amounted to £7,429,073, the net profits upon which amounted to £126,979. The sales represent an enormous total even for a large wholesale house, and Messrs. Rylands and Sons, Ltd., must, we fancy, yield place to the "C. W. S." as far as the magnitude of their transactions are concerned, although it must be remembered that the business of the former is chiefly confined to textiles, while that of the Co-operative includes almost every article manufactured. The most striking feature about the Co-operative movement, as shewn in the Society's Annual for 1892, just issued, is the steady growth which has characterised it ever since its commencement. With the sole exceptions of the years 1878-79, the sales of the Manchester Wholesale have never declined, but have steadily grown. In 1864 they amounted to £51,857, in 1870 to £677,734, in 1875 to £2,247,395, in 1880 to £3,339,681, and in 1890, as already stated, to £7,429,073, the figures for that year being over £400,000 in excess of those for 1889, which again shewed an increase of £828,920 in comparison with the returns of the preceding twelve months. Taking the whole of the societies in

the kingdom for the purposes of comparison, it will be found that in only one year—1879—did the returns shew a falling-off. With this exception the increase has been steady, the sales in 1890 amounting to £40,674,673. These facts sufficiently illustrate the extent to which the movement has grown. With reference to the "C. W. S.," as it is generally termed, the enquirer will for several reasons find details concerning its position of special interest. In the first place, the establishments in Balloon-street really form one concern, as do those belonging to Rylands' in the neighbourhood of High-street. Secondly, the trade is purely a distributing one as far as the Manchester house is concerned, although the Society has mills and works of its own in various parts of the country, including a woollen mill at Batley. The Society is also agent for the Airehead Manufacturing Society, Limited (lustrus, Italians, etc.), the Eccles Industrial Society (quilts, sheetings, etc.), the Hebden Bridge Fustian Society, and other organisations at Heckmondwike, Leek, Leicester, and elsewhere, manufacturing silk twists, carpets, and various classes of woollens. The "drapery and woollen cloth" trade of the Manchester Society amounts to about £340,000 a year, the stock being valued at £96,202 at the end of the December quarter, 1890. The sales in the woollen cloth department fluctuate roughly between £7,000 and £9,000 a quarter, the stock at the date of the last available return being valued at £13,880. These are not big figures, but it may be mentioned that the Manchester trade in woollen piece goods is a declining one, the business having been transferred to the ready-made garment branch, the consumption of cloth being of course the same, or rather larger. The mill at Batley produces from £3,000 to £4,000 worth of goods per quarter. So far the operations at this establishment have not resulted satisfactorily, a loss having been made each year, with the exceptions of 1890-91. In 1887 the net loss was £483, in 1888 £1,629, in 1889 £3,918, and in 1890, £766.

#### EXPENSES OF DISTRIBUTION.

The "Co-operative Annual," besides furnishing material from which we have made some extracts above, also gives a mass of information concerning the movement generally, with historical sketches on commercial history, and essays on "The Rich Richer, and the Poor Poorer"—a cant phrase which, being half the truth, is worse than a lie. "The South Sea Bubble" is discussed by Dr. Dunckley, and the volume altogether furnishes nearly 600 pages of statistics and lighter reading matter. From the analysis of distributing expenses for the year ending December, 1890, some most valuable results are arrived at. The figures will prove of interest to many manufacturers, and to all merchants who have similar items of expenditure to meet every year. The figures, as concerns the "C. W. S.," may, of course, differ in some details from the percentages of private firms: but so do figures of one private firm from those of another, the expenses in the case of a house dealing principally in light fancy goods such as ribbons and other classes of silk, flowers, feathers, and laces forming, naturally, a smaller percentage of the total amount of sales than is the case with a firm whose carriage charges are principally for the conveyance of such heavy fabrics as linens, woollens, or cotton goods. We should like to give the figures supplied in "The Annual" in full, but as this would occupy too much space, a summary only can be presented. Thus, out of a total turnover of £6,803,111 in Manchester in 1890, the expenses amounted to £126,879, of which £52,685 was for wages,



£4,460 for travelling, £3,211 for stamps, and £30,059 "interest." In the grocery department, with sales £3,517,114, wages figured for £16,887, the total expenses being £41,549, of which £9,491 represents "interest." Below we give the items for two other departments:—

	WOOLLENS AND READY-MADES.	DRAPERY.
Sales .....	£311,365	£26,692
Wages .....	6,569	852
Interest .....	4,524	528
Total Expenses.	15,611	2,094

The sales at the Newcastle and London branches amounted to £1,173,876, but with the expenses here we do not propose to deal at length. Below, however, we give a table compiled from the Society's figures, which shows that the distributive expenses of Manchester were far less than those of London or Newcastle, with the exception of furnishing and drapery, in which the Tyne town has a slight advantage over this city, London being far dearer than either. It is not a sufficient reason to explain the great difference in expenses by ascribing it to the larger business transacted here. London expenses in the furnishing department are, it will be seen, twice as great as those in Manchester. Besides, although the Newcastle branch transacts a smaller trade than Manchester, its proportionate expenses are in two important departments actually less. Our figures, if they demonstrate anything, prove that as a distributing centre London is a much more expensive place than Manchester. The capital is many miles south of the centres of population, and if it transacts a trade equally spread all over the country, it is obvious that most of its goods will be burdened with the heavy cost of carriage from the almost extreme south of England to points in the Midlands and the north, which would be much more economically served by Manchester. It is rarely that an argument is so fully supported by figures representing results actually arrived at in ordinary business as is the case with this. The figures represent the expenses in pence of selling each hundred pounds worth of goods:—

	Grocery.	Drapery.	Boots & Shoes.	Furn'g.
	d.	d.	d.	d.
Manchester ..	283	1,203	761	1,054
Newcastle ..	309	707	799	953
London ....	457	1,992	1,395	2,019

This table should prove of permanent interest. We cannot compare it with any figures representing the expenses of private firms, as none such exist, and few would be disposed to give them. It may be taken, however, that the proportions given indicate in a general way the cost of distribution, representing as they do actual results. The Co-operative Wholesale Society has not yet been able to conduct its textile manufacturing operations successfully, as the particulars concerning Batley shew. Its Leeds and Batley ready-made works have also been conducted at a loss since their commencement a few years ago. Both, however, are comparatively new, and as the Soap, Biscuit, Boot and Shoe, and other factories of the Society are in a flourishing condition, the textile branches may also be a success in a short time. In saying this, however, it must be borne in mind that many merchants of long experience disapprove of the practice of combining the business of distribution and manufacturing. The successful merchant is he who buys in the cheapest market wherever it may be, and not one who is tied to purchase certain goods from certain mills which he owns wholly or in part. The "C.W.S." is, as yet, essentially a distributing concern, but if its manufacturing operations increased largely it might well happen that its present prosperity would receive a check. Mills have before now been dependent upon warehouse profits, and the modern dry goods buyer hates the idea of his firm having anything to do with a mill, if he is to be thereby in

any way hindered in the exercise of a free hand as to the time and the place where he is to make his purchases. Without expressing here an opinion as to the claims made by co-operators on behalf of their system, it is for many reasons a matter for congratulation that such a powerful organisation as the Co-operative Wholesale Society has its headquarters in Manchester. Its business is an important item in the home trade of the city, and is one of the departments of that trade which is growing steadily in volume from year to year, notwithstanding the complaints heard in other quarters. That the presence of the Society is a source of strength to Lancashire will not be denied, if it is true, as has frequently been stated, that its members had determined in the event of a refusal on the part of the Corporation to furnish a Ship Canal Loan, to find the money themselves.

THE AMERICAN OIL-CLOTH TRADE: PROPOSED COMBINATION.

Dissatisfied with continuing to sell standard 5-4 Mosaics at \$1.50, instead of \$2.60 per piece of 12 yards, the price before the break in the combination a year ago, the American oil-cloth manufacturers have determined to make an attempt at re-union, so that the old quotations, which were remunerative, may be re-established over the present unsatisfactory prices. It is not considered probable that the attempt will prove successful, as there is a lack of unanimity in the trade, and wholesale houses furthermore hold large stocks at the old prices. Messrs. Thomas Potter, Sons, and Co. have issued a new list shewing an advance of 10 cents, but others have not followed suit.

SERIOUS CRISIS IN THE COTTON TRADE.

The harassing conduct of the operatives' societies in the cotton trade, to which for a considerable time we have given prominence, has at last produced its natural effect. Powerful employers' unions have been formed, and these have been federated and have already begun to exercise such an influence as might be expected. The other day we recorded the first object-lesson thus given to the mischief-mongers who have assumed to guide the operatives' conduct and the charge of their interests. This occurred at Bury. A much more important matter will have been decided upon before this comes before our readers. The Federation is in meeting as we write, but its deliberations may not have been concluded in time for announcement in our columns. Meetings of the various employers' unions have been held in order that their decisions might be correctly given and represented at the Federal meeting to-day. At a meeting on Thursday 76 per cent. of the cotton masters in the districts of Ashton, Stalybridge, Droylsden, Mossley, and Dukinfield decided in favour of stoppage until the strike at Stalybridge is settled, and a crowded meeting of the Oldham spinning trade was held in the Oldham Lyceum that night, in connection with the closing of the mills in conjunction with other towns to bring an end to the strike at the Stalybridge Spinning Company. The replies that had been received shewed that of nearly ten million spindles over 75 per cent. were favourable to the stoppage. The announcement gave the liveliest satisfaction. The Federation meeting referred to above, which includes Oldham, Bury, Hyde, Stockport, Heywood, Ashton, and Rochdale, will ratify or otherwise this decision. There are 174 million spindles in the Federation, and £51,000 is paid in weekly wages. Should two-thirds of the masters in the whole Federation agree, the whole of these will be stopped forthwith. From the above statements, which are from

the most authoritative sources, it will be evident that the employers have determined to endure the mischievous wickedness of the operatives leaders and the stupid folly of their dupes no longer. Only a prompt submission in the case of the Stalybridge strike can save Lancashire from a great disaster. And a permanent discontinuance of the harassing conduct directed against their employers' management of their own businesses will be requisite if this matter is not precipitated upon them, even should they make a judicious retreat from their present position in relation to the Stalybridge Spinning Company.

AFRICA AS AN OUTLET FOR LANCASHIRE MANUFACTURES.

Increasing knowledge of the interior of Africa and its peoples demonstrates very forcibly that the continent offers far and away the best and greatest chances of new outlets for the manufactures of Lancashire. In most places the people are naked, or so nearly naked as hardly to deserve the drawing a line of distinction between that condition and one of being clothed. It is, however, being everywhere discovered that they are so not from choice, but from necessity. Native weaving, of which there is a considerable amount, is totally inadequate to provide them with cloth, and consequently, unless a supply can be obtained from extraneous sources, they must perforce go without. Wherever there is an entrance for European commerce there is an opening for Lancashire calicoes, which should not be neglected. And that there are thousands of such openings in the enormous coast-line of the continent cannot be disputed, but we are afraid they are not utilised as they ought to be. The remarks of a recent writer in *Blackwood's Magazine* are very pertinent. He says—

A question which is somewhat puzzling in connection with trade on the east coast of Africa, is as to what is the cause of so little English calico being sold on the coast and inland. East and Central Africa's great import is calico; yet the bulk of this comes not from Manchester, but from Bombay. From Natal to Cape Guardafui, most of the trade in the coast ports is carried on by British Indians, known on the coast as "Banians," and these get their supplies of calico entirely from Bombay. Manchester seems to supply most of the printed stuffs, but very little of the common white calico. This is probably because the Banian traders are mostly working on advances from Bombay, and are tied both to obtain their supplies there and to forward their ivory there. Still, when the cry for new markets for our goods is so often heard, one can scarcely help thinking that they are not sufficiently pushed in existing markets. This is a subject that should engage the earnest attention of those interested.

YARN CONTRACTS AND HOW THEY ARE KEPT OR IGNORED.

Business on the Manchester Exchange appears to be deteriorating in the quality of morality or fair dealing. In days now getting somewhat distant, when parties had agreed upon a transaction, all that was deemed necessary was that each should enter into a little memorandum book a pencil record of the quantity, particulars, and price of the yarn, or cloth bought and sold. This was subsequently transferred to an order book at the mill or office, and was delivered and paid for accordingly, no one on either side ever thinking for a single moment of attempting to evade the obligation. In those days a man's word was emphatically as good as his bond. It is impossible, however, to evade the conclusion that for some time a process of deterioration has been going on, and that parties to business transactions seem to think they may fulfil or repudiate their engagements at their own good pleasure. But this cannot be done without either legal risk or depreciation of character, and often both combined; and to persons tempted to enter upon



courses of this kind we would direct their attention to and bid them remember the motto encircling the base of the great dome of the Exchange under which they are in the habit of transacting their business, namely, that "A good name is rather to be desired than great riches." There is much truth in this, and its application is to all men who do business beneath it. We hope it is not literally too high to be read or morally too high to be attained. A trial that took place at the Manchester Assizes on Monday, and which is reported in another column, gives pertinence to these observations. It was an action brought by the Fern Spinning Co., Limited, Shaw, for the recovery of £139 4s., the amount of loss entailed by the refusal of the defendants, the Union Manufacturing Co., Ltd., Rochdale, to accept delivery of certain orders of yarn. After hearing the evidence the deputy judge gave a verdict for £126 11s. 3d. damages, with costs, against the defendant company. We are not quite satisfied that either upon the evidence or upon the merits of the case the award has been correctly given. Some legal point, however, not apparent to laymen, may have influenced the judge in giving his award. Indeed, as much may be gathered from a remark he made to the defendants' counsel, that the point he was pressing was that the plaintiffs had not been ready or willing to deliver to the contract. This being so, he said the defendants were able to cancel the contract, but they did not do so. Mr. Smyley may be a very good lawyer, and fit even to be a deputy judge, but he must be very innocent of the ways of commerce to put the position in that manner. The defendant company had commercially sound if not legally valid reasons for not cancelling the order. In the first place, it is to be presumed that they had entered into contracts or made sales of cloth that required the yarn they purchased, and that they had agreed to certain terms of delivery in regard to time, failing which their contract would have been cancelled by the merchant, who would have bought a cloth for substitution and have charged them, and compelled them to pay any advance of price that the change of the market might have involved had an advance taken place, with perhaps damages for the loss of his own market. On the other hand, had the market declined, the same merchant would have cancelled the contract in order to buy at the lower prices prevailing, and so make a profit in that way. So much for the manufacturing company's position. They wanted the yarn purchased, and in consequence of not receiving it their manager, Mr. James Tattersall, was compelled to buy another supply, and, as he testified in evidence, gave the same price for an inferior article, in doing which, we believe, he made a mistake. He ought to have bought an equal quality, and charged the defaulting company with the difference between the two values. By substituting an inferior quality of yarn, the defendant company ran a very considerable risk of having their order cancelled on the ground of inferiority, whilst at the same time, in the event of its passing the merchant's examination, they could establish no claim for loss. But a further result of the plaintiffs' default in failing to make delivery according to contract was that the defendants, having purchased a second supply of yarn, were saddled with yarn they did not want, and that on the verge of a long and heavy decline in the market. The defendant company having been, through the plaintiffs' default, compelled to satisfy its requirements for yarn elsewhere, the transaction, according to all principles of equity and sound commercial morality, ought to have been "off." That the defendant company did not require those yarns afterwards may reasonably be presumed to be correct, as was alleged in the correspond-

ence, and from the fact that the management of its mills changed hands about the time when the deliveries should have been completed. It is quite within the bounds of reason to suppose that a new manager would bring new business connections, and consequently would obtain orders for different descriptions of cloth, requiring other yarns, and therefore could have no chance of using those that had failed to be delivered in time for use in the orders for which they had been bought. On these grounds, and judging from the best reports of the evidence laid before the deputy judge, we hold that there has been a serious miscarriage of justice.

Just now, as at many times in the past, there is a great outcry amongst spinners about the difficulty of getting manufacturers to accept delivery of yarns bought at high prices compared with those ruling now. There is always this sort of friction when prices either fall or rise. Manufacturers ought to take their purchases though prices have gone down, and if circumstances have arisen which have compelled them to cease using such counts or qualities as they have purchased, then they ought to go at once to the spinners and get the order cancelled by paying the difference in value between the price at which the yarn was purchased and the market price of the day. This is far better than allowing the thing to drag on and encountering all sorts of risks and chances of unpleasantness, with the final one of an expensive law-suit, and a very problematical issue of justice from it. In the earlier days we have spoken of, this procedure was not infrequent. If manufacturers will not do this, they can expect no sympathy from right minded and honourable men. Spinners under these circumstances ought to compel them to do right, and in doing so will do themselves and the State a service. But of one thing spinners must be careful, and that is they must go into court with clean hands. Justice in upright and intelligent hands wields a two-edged sword, and it will not do for spinners in a period of deep depression in the market to come complaining of the rascality of manufacturers, and next week or the week after, when the market has risen, to go on selling as it advances, and always delivering the highest-priced orders first. The spinners and spinning companies of South Lancashire are not deemed to be quite sinless and perfect in the eyes of manufacturers for fair dealing in this respect. Over and over again, during a lengthened experience upon the "boards," has it come under the observation of the writer that manufacturers, with many thousands weight of yarn orders on their books after the market has advanced, have been almost unable to get a skip of their low-priced orders delivered. Of course, "the boot has been on the other leg" then. These facts go strongly to demonstrate one thing, namely, that spinners and manufacturers are, to use a common Lancashire phrase, "much of a muchness," one being about as good and as bad as the other.

Is it not quite time, it may now be pertinently asked, that our spinners' and manufacturers' associations, and our influential Chambers of Commerce, should take up the consideration of the loose method now prevailing of conducting business, and which under the pressure of the fierce competition prevailing gives rise to so much equivocation and meanness? Why should not a committee of the most intelligent and influential members of the trade, or of its various sections, be elected to draw up a code of rules or commercial laws, which should govern all the transactions of the trade in buying and selling its materials and productions. The experience gathered by the trade during the past half-century is simple enough to enable

almost every conceivable point to be provided for either specifically, or under general principles. All contracts should be made upon these rules and regulations as a basis, and the fact so stated upon the contract notes. All orders to be valid should be confirmed on both sides by a purchase and sale note respectively. These should also contain a proviso that any dispute arising upon the contract should be referred to a committee or court of arbitration in connection with the chambers or associations. These arrangements would do much to remove the friction that so frequently arises in conditions like the present and their opposites, and which it is highly desirable, in the interests of every party concerned, should be removed.

## Reviews of Books.

SILK DYEING, PRINTING, AND FINISHING. By GEORGE H. HURST, F.C.S. London: George Bell and Sons; Manchester: Marsden and Co., Textile Mercury Office; pp. viii., 226; price 7s. 6d.

Prior to the issue of this little book silk dyeing has not formed the subject of any work in the English language, although several have been published on the Continent. What has been given in books on dyeing about silk has been of a most unsatisfactory character, the subject being dealt with in a scanty and perfunctory sort of manner; therefore the appearance of the book now under notice fills up a gap in English technical literature. The work is divided into eight chapters, and there is an appendix of recipes and patterns. The first chapter contains an account of the various silk fibres, describing their origin and more particularly their chemical properties; it is illustrated by a number of cuts of the various silk moths and silk fibres, and the information given is fairly complete. The second chapter deals with the subject of boiling-off and bleaching of silk and contains much suggestive matter. The third deals with the production of blacks on silk and describes clearly and succinctly the method of dyeing all kinds of black: the author does not give many recipes but devotes his space to the explanation of the phenomena of dyeing. Chapter iv. treats at length of the production of fancy colours on silks, reds, blues, yellows, and greens, from both the natural and coal-tar colours. The author first describes the methods of weighting silks, then the dyeing processes, the principles underlying these processes being carefully pointed out, and we find many practical hints scattered through these pages shewing that Mr. Hurst has a practical acquaintance with his subject. The next chapter on the dyeing of mixed silk fabrics is but a short one; then follows a chapter on silk printing, then one on silk dyeing and finishing machinery, which is very well illustrated, although we notice that many of the illustrations are of machines used in the cotton industry. This chapter is a suggestive one, and should prove of interest to the silk dyer and finisher. Chapter viii. deals with assaying and testing raw and dyed silks, and is a very useful one. An appendix gives a collection of some 178 recipes relating to silk dyeing and printing, illustrated by 11 plates of 66 dyed and printed patterns. The recipes are thoroughly practical, and appear to us to be reliable, while the patterns are exceedingly beautiful and well done. We like the plan of the book: the author has not overburdened the text with recipes, which generally teach nothing, but has dealt with his subject in a somewhat more scientific manner, laying the foundations on which practical knowledge can be based. The style is clear and concise, free from unnecessary verbiage, and the information given is fully up to date. The book is well printed, free from errors, and is a credit alike to author and



publishers, while the price is low considering the considerable cost which the introduction of the patterns must have entailed. It will, we feel assured, be the standard text book on silk dyeing for many years to come.

## Foreign Correspondence.

### TEXTILE MATTERS IN THE UNITED STATES.

Boston, March 19th.

#### UNITED STATES CONSULAR RETURNS OF ENGLISH TRADE.

Below I append a summary shewing the extent of recent changes in the volume of the American trade of Huddersfield, Bradford, and Leeds during the past two years, as indicated in returns published by the American Consuls in those towns:—

	1890.	1891.
Bradford .....	\$23,688,000	\$10,958,000
Huddersfield .....	4,185,699	3,046,718
Leeds .....	2,444,653	1,796,186

The figures refer in each case to the year ending September 30. Comment upon them is unnecessary, as your Yorkshire readers will know well enough what are the causes which have produced the changes indicated.

#### THE PLUSH INDUSTRY.

Mr. Acroyd, the English manufacturer through whose efforts a silk plush mill is to be established at South Portland, made some interesting statements before the Lewiston (Me.) Board of Trade in regard to the manufacture of plushes in this country, and respecting the uses to which the now idle Lincoln Mill in that city might be put. He remarked that but for the McKinley Bill he would now be in England making silk plushes. Because of that bill the silk plush industry of England has greatly declined, and a number of English manufacturers are already looking toward the United States. Mr. Acroyd stated that, after paying a duty of 110 per cent., it costs \$5.50 per yard to land foreign-made "seal plush" in New York, while he declared he could make and sell the same goods at \$4.75 per yard. Regarding the Lincoln Mill, Mr. Acroyd said that it would do for a silk plush manufactory, because of the unavoidable vibration. Silk plush looms must be placed upon a solid foundation, free from tremor, such as will be provided at South Portland, where a brick building 80 feet square is to be erected. He would guarantee, however, that English capitalists would take one quarter of the stock in the Lincoln Mill if that establishment were started on fancy yarns, and he thought the enterprise would pay 20 per cent on a capitalization of \$500,000, as there is a large and steady demand for the class of goods mentioned.

#### BRITISH MANUFACTURES IN THE UNITED STATES.

Another lace curtain factory is to be established in this country. Cleland Campbell and Co., of Glasgow, will own and operate the factor, which will be situated at Columbia, Pa. The Scotch firm will equip it with \$100,000 worth of machinery and will employ over 200 operatives.

Archibald Campbell, who represents a firm of lace curtain manufacturers in Glasgow, Scotland, is at Chester, Pa., with the object of making preparations for establishing a plant, which will probably be located at Chester, near the mill of the Abefoyle Manufacturing Company.

The Frank Wilkinson Manufacturing Company, of Tariffville, Conn., and Nottingham, have been turning out and delivering finished lace curtains for some weeks past. They are now making rapid progress in setting up additional machinery under the supervision of Superintendent Jones, and will be in good shape for fall deliveries.

#### THE CHEAPNESS OF STAPLE ARTICLES.

Cotton is down to seven cents a pound, Bessemer pig iron at a Pittsburgh to \$15 a ton, and wheat to \$1.02 a bushel. A year ago the figures were nine cents \$16½, and \$1.11 respectively. Two years ago Bessemer pig was at \$20.25. The

shrinkage in values has been enormous. The value of 8,000,000 bales of cotton at New York prices was \$500,000,000 two years ago, and now is only \$222,000,000.

#### REVERSAL OF THE FRINGED TOWEL DECISION.

The importers have at last been relieved from anxiety by the General Appraiser's decision. It may be remembered that the Appraiser returned some fringed towels as "manufactures of flax containing not more than 100 threads to the square inch," and duty was accordingly assessed thereon at 50 per cent. *ad valorem* under paragraph 371. The following is the text of a portion of the final decision overruling that of the Appraiser:—

As appears from our findings of fact, the number of threads to the square inch differs in different parts of the substantial or body portion of these goods, the number of threads in the borders being greater than in the plain portion of the surface; hence that the fabrics—exclusive of the fringes—are not homogeneous or alike throughout. Nevertheless, we have ascertained by actual count, and without difficulty, that the average number of threads to the square inch contained in such woven portion of the goods, counting both warp and filling, exceeds 100. We have here, therefore, fabrics 90 per cent. of the entire value and surface whereof—comprising all that portion composed of both warp and filling—contains over 100 threads to the square inch according to the test prescribed by the statute. The remaining 10 per cent. of the value and surface of these fabrics consists of fringe, to which the prescribed test cannot be applied, for it does not contain "both warp and filling," and hence, in our opinion, must be disregarded in the count. Although, as stated by the Appraiser, this "fringe forms an appreciable part of the articles," it is not part of the cloth proper or a substantial or essential portion of the fabrics. It appears to answer the purpose of a hem or binding to prevent fraying or ravelling.

In view of our findings of fact, and following the decisions of the U. S. Supreme Court in *Newman v. Arthur* (109 U. S. 132), and the doctrine of our decision of March 1st, 1892, in relation to certain fancy cotton dress goods, we hold that the goods here in question are dutiable at 35 per cent. *ad valorem* under paragraph 371 N. T., and accordingly sustain the protests.

Fringe towels will therefore pay 35 per cent. duty and not 50 per cent.

#### MISCELLANEOUS.

The print cloth market rules quiet but firm on the basis of 3 1-16c. for 64 by 64 cloths; and 2½c. at Fall River for 56 by 60 cloths.

At Fall River the reported sales for the week ending March 12th, 1892, were these:—

	Pieces.
64 x 64 cloths, spots, at 3½c @ value.....	40,000
64 x 64 cloths, to be made at 3½c.....	6,000
56 x 60 cloths, spots.....	—
Irregular cloths, to be made.....	144,000
Total.....	190,000

Messrs. Geo. A. Clark and Bro., of O. N. T. fame, announce that after this month they will supply handsome desk cabinets free of charge to buyers of certain amounts of their goods. The useful store fixtures presented by this house have always been of handsome exterior and fine workmanship, and their generous offer will be welcome to the trade.

With reference to the dye and chemical market, trade is moving along quietly, with few new features to note. Chlorate of potash continues to shew a firm and advancing tendency. Quicksilver has also a firmer undertone. Cream tartar and tartaric acid continue dull and rather easy in tone. Citric acid is firmer. Shellac remains dull, but quatably unchanged. Borax is quiet.

The present season is said not to offer many inducements to manufacturers of cheviots. This is because plain goods in browns and tans have been so much enquired for that large numbers of manufacturers have taken up the trade. The trade is greatly cut up, and profits will dwindle away to nothing if the competition is maintained. Wool is cheap, and so are goods, and the manufacturer to realise good profits must place his production at opening prices. There cannot be much margin in to-day's prices unless the entire production is sold. These are the views of a local authority, and refer to domestic makes chiefly. Blacks in cheviots are great favourites. Makes up to 5s. a yard are in request, and there is not a large supply. The quantity of goods on the

market is, in fact, small. Worsted cheviots in fast dyes are also moving off freely. With reference to the demand for piece-dyed makes, European goods are selling at very low prices, lines offered at 9s. last year being now quoted at 8s. Fine botany goods, all worsted diagonals, 19 ounces, 56 inches, sell at \$2; and goods guaranteed to weigh 21 ounces at \$2.05. The domestic maker has strong competition to meet, and were it not for the distrust of clothiers, who have had some experience in handling the foreign stuff, which came in during the spring season, the domestic maker would not be in it. Some lines of domestic goods with cotton in, ranging \$1.50 to \$1.75, are reported as meeting with a fair sale, but the price is low, and few care to meet it.

Dress goods agents are beginning to give more thought to fall goods, and are closely watching the market. As yet very little has been done, and there is not much disposition to urge the opening. Here and there is a speciality on which orders have been taken. With reference to the spring trade, fancy, soft wool goods are probably the weakest point in the market; there is very keen competition on 56 in. stuff, and it is here that the struggle is. Yet makers have been fairly successful in placing their lines, and the season will close with desirable stuff cleaned up.

ACCORDING to a return by the Crefeld Chamber of Commerce, the production of silk and velvet goods in that centre during last year was \$800,000 less than in the previous year.

THE RATING OF MACHINERY BILL.—The President of the Local Government Board has arranged to receive a deputation on Tuesday from the Central Chamber of Commerce with reference to the Rating of Machinery Bill (which will be read a second time on Wednesday). The Central Chamber consider that the effect of the Bill will be to throw further charges upon land, houses, and other property by relieving manufacturers of a part of their present liability to rates; and they will urge that it ought not to be dealt with by a private member's Bill, but by a comprehensive measure brought forward by the Government.

IRISH HANDLOOM WEAVING.—Colonel Sanderson's Bill dealing with the regulation of handloom weaving in Ireland has been issued. It provides that when the weaver receives materials to be woven into a piece of linen a written contract note shall be delivered to him, stating the name of the manufacturer, the name of the weaver, the number of the contract, the description of the linen to be woven, and the price for each length of fifty yards. Such contract note shall provide that no piece shall be woven in pursuance of the contract exceeding a length of fifty yards by more than one yard. Any contract which does not comply with the provisions of this Act shall be void if the handloom weaver elects to declare it void, and no money paid or advanced to him in part performance of such a contract shall be recoverable at law. The inspector of linen, who is to be appointed by the local authority, is armed with full powers to visit any place in which handloom weaving is being carried on, or in which handwoven pieces of linen are kept for sale, and may examine any web or piece, and may require the production of the contract note in pursuance of which such web or piece was woven, and he shall stamp in such manner as the local authority may prescribe all completed pieces of linen which do not exceed a length of fifty yards by more than one yard. The inspector shall be entitled to receive from the person in whose custody any piece of linen is when stamped a fee of twopence. The penalty for selling unstamped pieces to linen shall not exceed £2. The Act does not apply of any damask weaver or to damask.

## Designing.

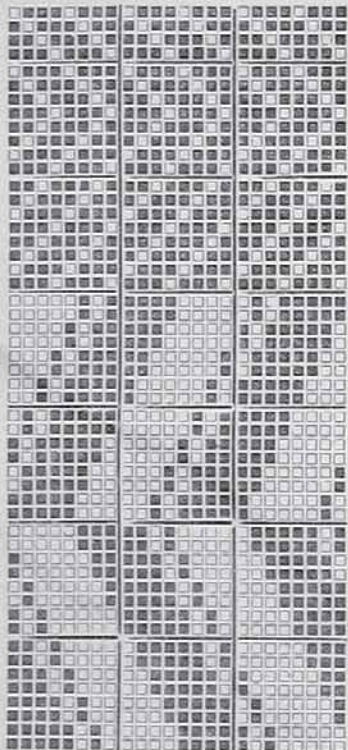
### NEW DESIGNS.

#### SHIRTINGS, CHEMISETTES, ETC.

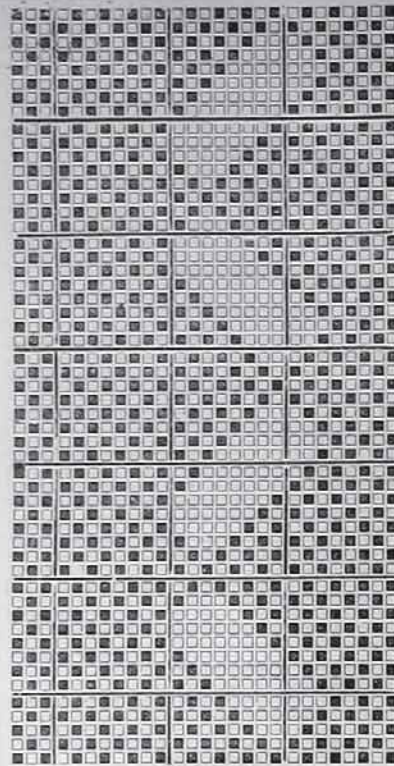
Designs for fancy and *negligé* shirtings, chemisettes, zephyrs, and other light or gauzy fabrics, are being rapidly produced for the summer season. Fashion will lead with very low vestings, so that the front or bosom of shirt and chemisette will shew either stripes or checks. We cannot, however, follow all the *minutiae* of forthcoming fashionable details: suffice it to say that *Design A* has been specially constructed with a view to meet the popular taste as a fancy shirting. It can be woven on 16 shafts, 24 to



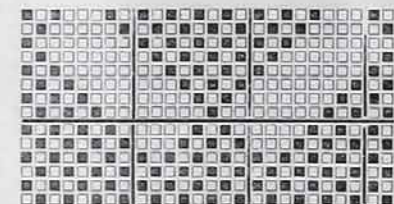
the round; the pegging plan is numbered for the purpose of following the draft of any pattern, however small or extensive. The dots in the design give a warp surface, the weft being subordinate in the make of the fabric. The warp, two in a heald, four in a dent, 20 dents per inch, of two-fold 60's, on the shafts 1, 2, 3, 4; for the shafts 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, the counts to be two-fold 30's; this will require a second beam; 40 picks per inch, 60's linen, or finer if required; the linen must be clear and lustrous. First warp pattern: 48 cream, two in a heald, on 1, 2, 3, 4 shafts; four in a dent. The drafting of this would be as follows: 1 2 3 4, 1 2 3 4, 1 2 3 4, 1 4 3 2 1, 4 3 2 1, 4 3 2, 24 double ends, or as pattern, 48 single, then 24 royal blue, two in a heald, four in a dent on 5 6 7 8 9 10 11 12 13 14 15 16 shafts; 24 very bright coral, two in a heald, on the same shafts, and four in a dent, the complete pattern being 96 ends, and repeating from "48 cream." Weft all cream linen. The figures will clearly demonstrate how this pattern or any other can be drawn in. Four shafts give a satin twill ground, or any other twill may be made on the four shafts. The 12 shafts may also be made to



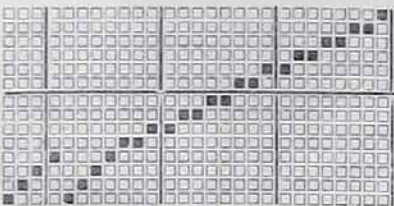
DESIGN A: FANCY STRIPE.



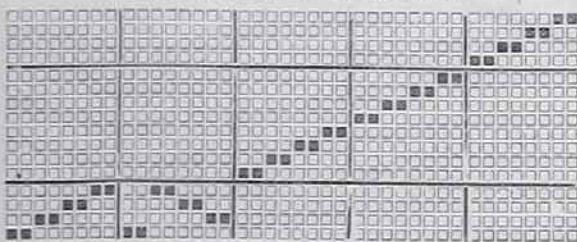
DESIGN B.



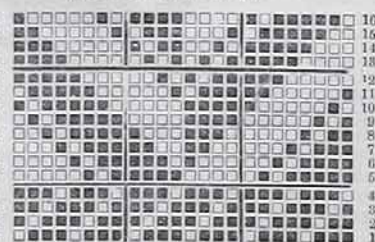
DESIGN B: PEGGING PLAN.



DESIGN B: DRAFT.



DRAFT FOR DESIGN A.



PEGGING PLAN: DESIGN A.

produce fancy or broken diagonals. The great scope afforded for change, combination of colours, and arrangement of pattern is almost unlimited, giving every opportunity for effective styles.

We give a second pattern shewing how the stripe may be shaded on 1, 2, 3, 4 shafts, especially if the pegging plan in these shafts is made to develop a broken satin; 24 deep orange, 24 mid orange, 24 primrose, 24 very light straw, all two in a heald, on 1, 2, 3, 4 shafts; 24 cinnamon brown organzine silk, two in a heald; 24 crimson or scarlet organzine silk, two in a heald; this silk stripe of 48 to be on 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16 shafts; 4 in a dent, 48 picks per inch of 30's cotton weft. We

need not give further details, as sufficient is shown how to obtain the best results. Good lustre finish, 30 inches wide out of loom.

DRESS GOODS OR FANCY SHIRTING.

Design B will give a pretty effect in striped materials: 10 shafts for the figure, which has two in a heald, four in a dent. The ground for plain stripe is on 4 shafts, single in the heald, two in a dent, 26 to the round. Of course extended stripes of ground and figure may easily be obtained by increasing the draft repeats on each set of shafts. The construction of the design is for a weft effect; therefore this material may be cotton, linen, silk, mohair, angola, or any very lustrous material. The warp for figure stripe, 30's, two in a heald, four in a dent, 36 dents per inch. Warp for ground stripe, 30's, two in a dent. Weft, 56 picks of 18's cotton, or the equivalent, if linen, silk, or worsted weft be used; 31 inches in the reed. First warp pattern: 72 primrose on the ground shafts, 40 very dark blue on the ten figured shafts, weft all primrose. The following varieties in the two stripes will be fashionable:—

<p>Ground.</p> <p>Cream.</p> <p>Cream.</p> <p>Light pink.</p> <p>Rose.</p> <p>Dark buff.</p> <p>Dark eau de Nile blue.</p>	<p>Figure.</p> <p>Cinnamon brown.</p> <p>Shrimp.</p> <p>Greenat.</p> <p>Sage.</p> <p>Dark prune.</p> <p>Claret.</p>
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In every colour arrangement the weft must be of the same tint as the ground stripe, always one shuttle; the dark hue being the figured stripe, the light weft crossing it gives the effect or contrast, producing a bright pleasing figure and a very neat stripe.

THE ANALYSIS OF PATTERN.—VIII.

FIGURED GAUZES.

A thorough comprehension of the foregoing principles renders the task of analysing figured gauzes a comparatively simple one. Take such an example as that represented in Figure 6: intricate it undoubtedly looks, but if the analyst for the moment throws aside all consideration of the combination of ordinary figure and gauze, and carefully examines each as separate and distinct patterns, and having done this proceeds to systematically combine them, then his task is much simplified. In all cases then, where gauze and figuring are combined, the following procedure should be adopted:—(1) Find the gauze pattern by careful analysis, and divide the design paper into stationary, doup, and doup shaft threads, clearly indicating each; (2) Analyse the warp and weft flush figures as if it were an ordinary cloth; (3) Carefully put this figure upon the stationary threads, and either the doup or doup shaft threads, not both.

It follows from the above that a gauze pattern will always occupy more threads than picks on the design paper, should an equal number of threads and picks be present in the cloth. The analysis of Figure 6 may now be given as an example for reference:—(1) Brief examination of the gauze ground shews that it is constructed as indicated in Diagram 17. (2) An examination of the figure reveals that it is composed of warp and weft flush as indicated in Design 24, with plain weave between these flushes and the gauze ground. This figure then must be sketched out in full and developed, on design paper. (3) Having ascertained the number of threads and picks that the figure repeats according to (2), take the same number of picks but a third more threads (for the doups); place the figure on every four out of the six threads, as

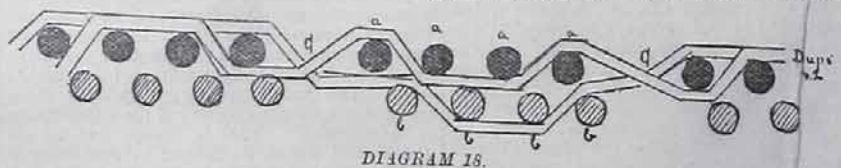


DIAGRAM 18.

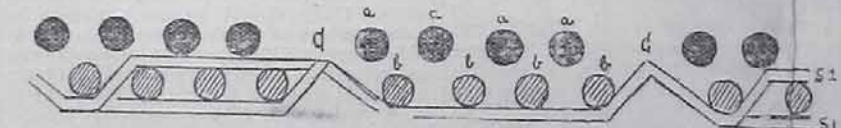


DIAGRAM 19.

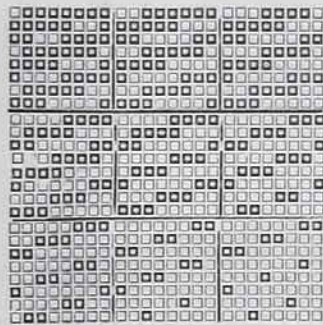


shown in *Design 25*; and join the gauze ground up to the plain on the principles previously indicated. It will be observed that in *Design 25*, 64 picks and 64 threads are in reality represented, the doups occupying a third of the thread, without being represented by any similar places in the cloth.

A type of gauze effect liable to prove very confusing is that which may be best described as a "double-weft gauze," the construction of which is indicated in *Design 26* and *Diagrams 18* and



FIGURE 6.



DESIGN 34.

19. Here the idea is to use weft of two colours, thus obtaining the effect of an extra weft without any flushing at the back of the fabric. The gauze used in designs of this kind is usually formed as indicated in section *a* of *Design 26*, which brings the dark odd picks to the surface, thus covering the even-numbered picks entirely. Thinking out the effect of such a construction as this is well nigh impossible, but if rough sketches are made of the cloth, as shown in *Diagrams 18* and *19*, then the effect may be rendered very apparent. For example, *Diagram 18* represents the working of the crossing or doup threads, while *Diagram 19* represents the working of the two stationary threads. Thus *a a a a* dark odd picks thrown into the surface of the fabric; *b b b b*, light even picks, covered by the peculiar arrangement of crossing and stationary threads; *s 1* and *s 2*, stationary threads; and doups 1 and 2, the crossing threads, and *c*, the crossing of stationary and doup threads. In *Design 26* the possibilities of this scheme of construction are shown, warp and weft to be as follows:—

*Warp.*—All fine black silk.

*Weft.*—1 pick grey silk; 1 pick white silk.

Then *a* will be grey gauze, *b* will appear as plain cloth, *c* as pure white, *d* as pure grey, and *e* as black. Thus most elaborate figures may be designed on this scheme of construction, which may nevertheless be analysed with comparative ease according to the foregoing particulars.

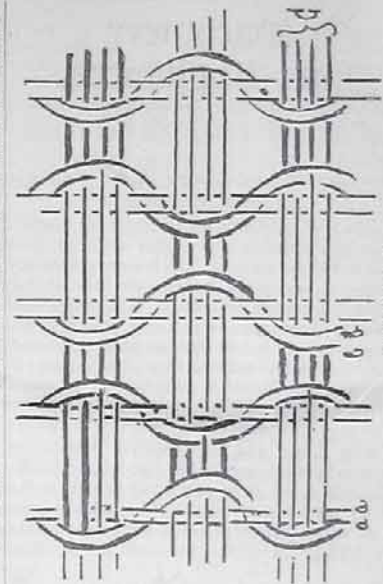
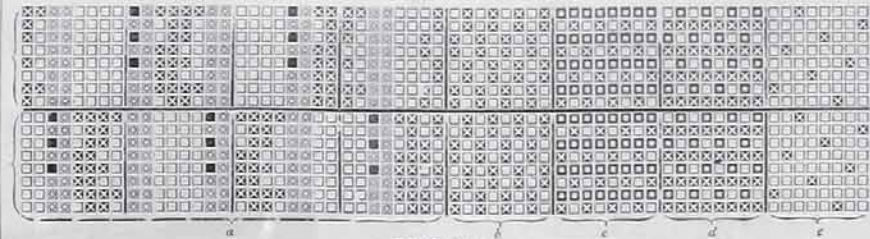
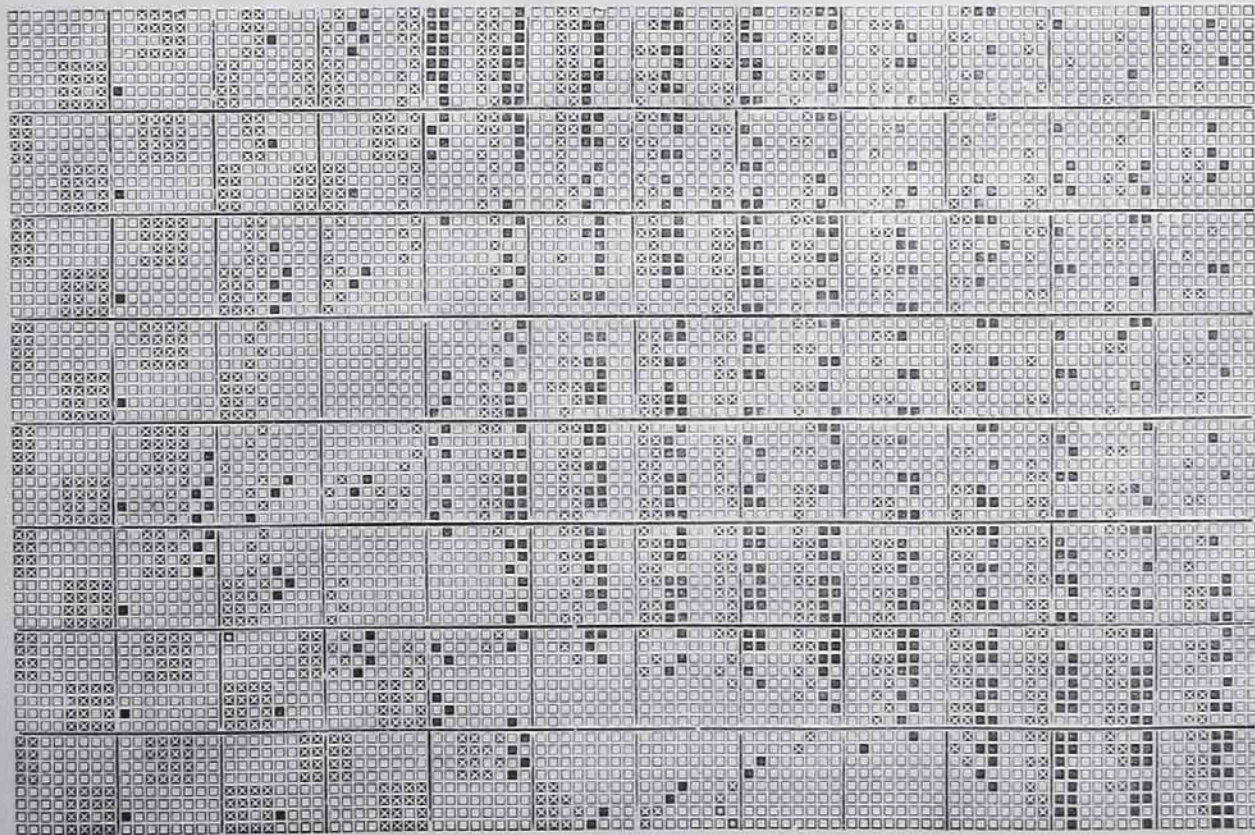


DIAGRAM 17.



DESIGN 26.



DESIGN 35.



## Machinery and Appliances.

### MORE IMPROVED BALE BREAKERS.

MAKERS: MESSRS. TAYLOR, LANG, AND CO., LIMITED, STALYBRIDGE.

The bale breaker or cotton puller is a machine that has come to stay. This is evident from the fact that every machine maker of note now makes it, and many of these we have already been called upon to notice. It is hardly more than half-a-dozen years since the first was made, and yet it has already been very widely adopted, and no mill can be said to be properly equipped that does not possess one.

Amongst the first firms to place a machine of this kind upon the market was that of Messrs. Taylor, Lang, and Co., Limited, Stalybridge, who exhibited one at the Manchester Jubilee Exhibition, in 1887, which the present writer described. The first of the two machines under notice is in principle, and to a large extent also in detail, exactly the same as the one then

enables them to seize, and the back being straight, which enables them to hold the material firmly when subject to the action of the second pair of rollers. The teeth of the second pair are both sides alike, as the retaining capability in that position is not required. The construction and arrangement of the teeth of the rollers in relation to each other is such that no contact can possibly arise or the cotton suffer any damage. Having passed the second pair of rollers the cotton is received by the fly roller, a single roller with longer spikes upon its periphery, the function of which is to beat the cotton into smaller shreds when delivered from the second rollers. This it does by striking it downward upon the floor or upon a lattice, according to arrangement.

The rollers are enclosed, and all gearing is effectually guarded. The roller shafts are of wrought iron, and the steps are bushed with brass. All the gearing wheels are made of a special mixing of metal to yield great toughness and strength. This machine occupies a floor space of 10ft. 3in. by 6ft. 2in. It is easily wrought when only four to five bales per hour are put through. The increase in the diameter

## Bleaching, Dyeing, Printing, etc.

### NEW COLOURING MATTERS.

During the past few weeks we have been favoured with samples and particulars of a large number of new colouring matters that have been placed on the market and are now available for use in the dyeing and printing of textile fabrics. These we have subjected to various tests, and now bring them to the notice of the readers of *The Textile Mercury*.

#### NEW ACRIDINE SERIES.

From Messrs. A. Leonhardt & Co., of Mulheim, we have a range of seven new dye-stuffs, belonging to the same series as Acridine Orange, which they sent out some time ago. These dye orange, scarlet, and deep pink shades. They are basic dyes, and on cotton are dyed with the aid of a tannin and tartar emetic mordant. On calico they can be printed in the manner common to tannic colours. A good printing colour is made with 5½ lb. starch, boiled up in 5½ gallons of water; to this is added 7 lb. acetic acid of 50% strength, and 3½ gallons of gum thickening, with 3 ozs. of

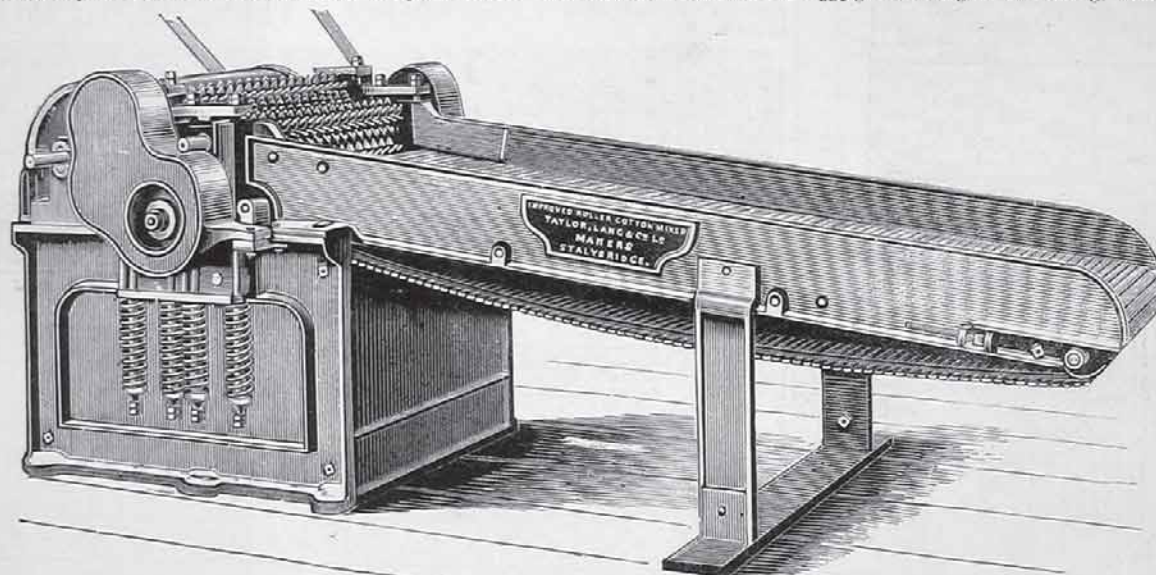


FIG. 1. IMPROVED BALE BREAKER.—MESSRS. TAYLOR, LANG, AND CO., LIMITED, STALYBRIDGE.

placed on view. It has, however, been modified in several points. As will be seen from the illustration, it consists of the usual travelling lattice, by means of which the cotton is fed to a pair of rollers, on the peripheries of which are cast in helical order a large number of blunt spikes or teeth. As originally constructed these rollers were of 5-in. diameter, including the teeth. They are now made of 6-in. diameter, the difference having been obtained by increasing the length of the teeth. These rollers are weighted by two rods attached to a weighting cap, and, descending through a stand connected to a framing, are attached to two very strong spiral springs. Above these springs is arranged a strong bracket, against which, when the top roller is lifted by the passage of a thick layer of cotton, the springs are compressed. A perfectly vertical lift is obtained by the use of the two rods. This pair of rollers make about 18 revolutions per minute. Immediately behind these are a second pair similar in construction, but of 7 inches diameter. These make about 120 revolutions per minute. Thus the matted masses of cotton coming through the rollers are instantly seized, and by the greatly accelerated movement of these rollers are torn asunder and disentangled. In the first pair of rollers the construction of the teeth is peculiar, the front being rounded, which

of the first pair of rollers, as compared with the original type, renders this machine much more effective as a cotton puller than before, as it brings the cotton so much sooner within the range of action of the second pair of rollers, with the effect that it is torn into much smaller shreds.

The second type of bale breaker, shewn in Fig. 2, contains four pairs of rollers 6in. diameter, but has no fly roller. As in the preceding, it is strongly geared, and each pair of rollers double weighted. The rollers are of the same construction as the first pair in the machine just described, and move at varying velocities, the acceleration being towards the front.

As will be observed, our illustration shews an elevating lattice, from which connection can be made with distributing or mixing lattices in the same or any other room, as convenience may allow. We had an opportunity of inspecting an excellent installation of this cotton puller in connection with a very extended lattice at one of the most modern mills, and which seemed admirably to do the work for which it was designed.

Messrs. Taylor, Lang, & Co., Limited, who also make all kinds of cotton machinery of the highest quality, will be pleased to answer any application for further information on being addressed as above.

dye-stuff (previously dissolved in 2½ lb. acetic acid); finally ¼ lb. tannic acid dissolved in 1 pint of water is added. The colour is ready for use when cold. The calico is printed, steamed for ¼ hour at 5 lb. pressure, passed through a bath of tartar emetic, washed, soaped, and dried. For wool dyeing and printing they are not very suitable. For silk they may be used with good effect, dyeing it from a neutral soap bath. In printing silk they are used with a simple thickening, no mordant being required. The above recipe for calico-printing without the tannic and acetic acids will be found to answer very well.

They can hardly be considered fast colours: when boiled in soap and water they bleed to a greater or less extent, although they are faster on silk than on cotton; and they are affected by strong acids and alkalis, which turn them of a yellow or buff colour, but are not affected by dilute acids. The series comprises Acridine Orange R extra, which dyes cotton and silk a fine bright orange, slightly varying in tone on the different fibres. The dye-stuff is a deep reddish-orange powder, soluble in hot water to a clear reddish-orange solution, with slight fluorescence; the solution in strong sulphuric acid is of a lemon yellow colour, with a green fluorescence. Caustic soda added to the aqueous solution throws down the base in the form of a buff-coloured precipitate. Acridine scarlet R, acridine scarlet RR, and acridine scarlet RRR, do not give bright shades when dyed on cotton, but better results are obtained by printing: on wool and silk the



shades are decidedly yellower in tone. The R is an orange-coloured powder, soluble in water to a scarlet solution, and in strong sulphuric acid to a brownish yellow solution, which has

and most of which promise to be of some value. The first we will notice is

**NAPHTHOL BLUE-BLACK,**

Which belongs to the same series of colours as the original naphthol black—a dye-stuff known, or that ought to be known, in every dyehouse. This new body dyes wool from acid baths in the usual way very easily and evenly, 1 % giving a dark blue, 2 % a blue-black, and 4 % a good black; a trace of yellow or naphthol green will make the dyeings a full coal black. On silk the shades are much bluer than on wool. The dyeings are quite fast to acids, alkalis, and soaping, so that the colour may be used on goods that have to be milled. The dye-stuff is sent out in the form of a brown-black powder, soluble in water and alcohol to deep blue solutions, and in strong sulphuric acid to a deep bluish-green solution. From the aqueous solution hydrochloric acid throws down a deep blue precipitate.

**NAPHTHYLAMINE BLACK 4 B**

Is also adapted to wool dyeing, giving shades from blue-black with 2 %, to deep coal-black with 4 %, using a bath of Glauber's salt and sulphuric acid, and one of bi-sulphate of soda. On silk the dyeings are not so good, the shade approaching a violet brown. As with the naphthol blue-black, the dyeings are quite fast to acids, alkalis, and soaping. The dye-stuff is a

Victoria black-blue, new Victoria black B, and new Victoria black 5 G. These are intended to replace the old types, being rather cheaper. They possess the same dyeing properties as the old dye-stuffs, dyeing wool and silk from acid-baths, the black-blue giving steel-blue to bluish-black shades, the B reddish-black shades, and the 5 G jet blacks on both wool and silk, the dyeings in all cases being fast to acids, alkalis, and soaping. They can also be dyed on chrome-mordanted wool, which enables them to be combined with dye-stuffs requiring such a mordant to produce a variety of compound shades. These new blacks are suitable for dyeing woollen goods that have to be milled.

**BENZO DARK BROWN.**

This is the last issued of the Benzo series of direct-dyeing cotton dye-stuffs. Like all the rest of these colouring matters, this dyes cotton from a bath of soap and soda, or soap and Glauber's salt or common salt, giving very dark shades of brown, of a yellowish tone. These are fast to acids and alkalis, but bleed a little on boiling in soap and water. On wool the colour may be dyed from a salt bath, but the shades are rather redder than those on cotton, and no faster to soaping. On silk it can be dyed from a salt bath, giving about the same shade and tone of colour as on cotton; therefore it can be used for dyeing mixed silk and cotton goods with

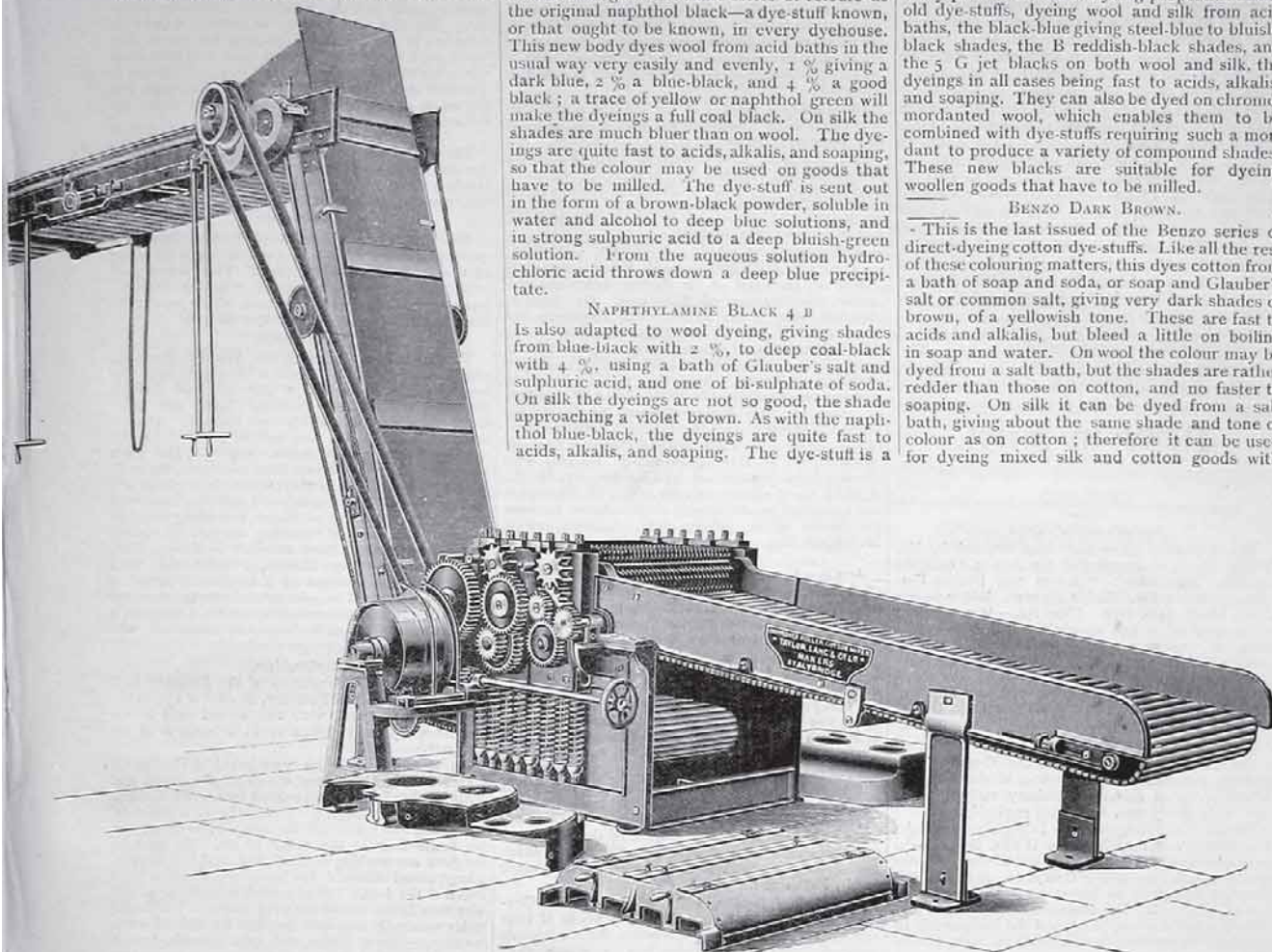


FIG. 2. IMPROVED BALE BREAKER WITH ELEVATING LATTICE.—MESSRS. TAYLOR, LANG, AND CO., LIMITED, STALYBRIDGE.

a green fluorescence. Caustic soda precipitates the base as a buff-coloured gelatinous mass. The 2 R is a dull orange powder, soluble in water to a scarlet solution, in strong sulphuric acid to a brownish yellow solution with a slight green fluorescence, and in alcohol to a scarlet solution with orange fluorescence. The base is thrown down by caustic soda as a pale buff-coloured precipitate. The 3 R is a dull brick-red powder, soluble in water to a dark scarlet solution, and in alcohol with a pinkish red colour and a strong orange fluorescence. Acridine red B, BB, and BBB complete the list. These dye bright and deep shades of a bluish pink, both on cotton and silk, and are likely to be the most useful of the new series of acridine colours. The B is a dull brownish powder, soluble in water to a dull scarlet solution, and in alcohol to a pinkish-red solution, having an orange fluorescence, while strong sulphuric acid forms a dull scarlet solution. Caustic soda throws down from the aqueous solution a pale reddish precipitate of the colour bases. The BB red is a dull brick-red powder, soluble in water to a pale crimson solution, and in alcohol to a pale pink with an orange fluorescence. The 3 B red is a brown powder soluble in water to a crimson solution; in alcohol the solution has a pink colour, and an orange fluorescence.

From Messrs. Cassella & Co. we have received samples and dye tests of several new colouring matters which they have lately offered to dyers,

black powder, soluble in water to a bluish violet, in alcohol to a reddish blue, and in strong sulphuric acid to deep blue solutions. Hydrochloric acid throws down a reddish-blue precipitate. Woolleg dyers should find both these colours very useful, and they are well worth a trial.

**DIAMINE GOLD**

Is a new direct-dyeing cotton colour, dyeing from a bath of Glauber's salt and soap, giving shades from a chrome with 1 % to an old gold colour with 3 %. The dyeings are even, and the shades bright and full; this is indeed one of the best direct yellows on the market. The dyeings are fast to acids; alkalis turn them to a slightly more orange shade; and they are not quite fast to soaping.

**METAPHENYLENE BLUE BB, B, AND R.**

These are new basic colours, dyeing cotton which has been mordanted with tannic acid and tartar emetic deep navy-blue shades, the BB being the palest and reddest, and the R the deepest and reddest of the series. The dark shades are of a better tone than the pale shades, and for these the dyes will be mostly used. The dyeings are quite fast to acids, are slightly reddened by alkalis, and scarcely bleed on soaping.

The Farbenfabriken vorm. F. Bayer & Co. have sent out several new products during the past month. First, there are some new types of their Victoria blacks, under the names: New

good effect. Taken altogether, the introduction of benzo dark brown is an acquisition to dyers, as giving shades not hitherto obtainable from a single dye-stuff, and which are practically fast. The dye-stuff is sent out in the form of a blackish-brown crystalline powder, soluble in water to a brown solution, in alcohol to a reddish-brown, and in strong sulphuric acid to a deep violet solution. Both caustic soda and hydrochloric acid throw down greenish-brown precipitates from the aqueous solution.

According to Gardner, a mixture of 1.5 % of morin and 5 to 6 % of maclurin has the same dyeing power as 40 % of dry fustic, of which the two bodies are the colouring principles. With alumina, morin gives a bright orange yellow; with maclurin, a dull sulphur yellow; with chrome, a bright olive yellow; with maclurin, a greenish sage yellow; with iron, a deep olive; with maclurin a brown of a reddish tone.

AZURINE PASTE produces on chromed wool bright blue-violet shades, which are scarcely so fast to light as the alizarine dyes, nor are they quite fast to milling. The colour, however, dyes level; it can also be dyed direct on wool from a bath containing acetic acid; can be mixed with all mordant-dyeing colouring matters, and be used for brightening wood colours with good effect.

DYEING WOOL.—The one-bath method of dyeing wool, as used with wood and some alizarine colours, is dependent on the produc-



tion of a colour lake from the colouring matter, and the mordant and the solution of this colour lake in an acid, generally oxalic acid, which is added to the dye-bath. It is used in the direct method of dyeing black. In this case the colour lake is produced by means of ferrous or copper sulphate, or both, from a solution of logwood and fustic extracts; a quantity of oxalic acid sufficient to keep the material in solution is added to the dye-bath, and the wool is boiled in this until the black has been properly developed, which takes from 2 to 3 hours. Bichromate of potash may be used to precipitate out the black, but the results are not so good as with the iron and copper blacks. Scarlets from cochineal and tin crystals, yellows from fustic and tin crystals, reds from alizarine and alumina, maroons from alizarine and chrome acetate or fluoride, Bordeaux from alizarine Bordeaux, and chrome fluoride blues from alizarine cyanine and chrome fluoride, and other colours, can also be produced in the one-bath process, but the results are never so good as those obtained by the ordinary mordanting process. The advantage is a reduction in the cost of labour, which is the principal item in dyeing operations.

## News in Brief.

### ENGLAND.

#### Ashton-under-Lyne.

The following letter has been received by Mr. Wright Wood, the secretary of the Ashton Operative Spinners' Association:—"Ashton and District Employers' Association, Market Avenue, Ashton-under-Lyne, March 24th, 1892. Dear Sir,—At a meeting of the members of this association held March 3rd, 1892, it was unanimously resolved:—"That one month's notice be given to all the Operatives' Associations to terminate the agreement as to rising and falling in the question of wages one week after Oldham." This notice to date from to-day.—Yours truly, DAVID DIXON, secretary."

#### Bolton.

On Saturday the Harris Institute Cotton Class, Preston, visited the Bridgeman-street Works of Messrs. Threlfall, cotton spinning machinery makers, where they spent nearly three hours very profitably.

Messrs. Hick, Hargreaves, and Co., engineers, Soho Iron Works and Phoenix Boiler Works, Bolton, who were established in 1832, have for private family reasons availed themselves of the Companies Act, and will therefore henceforth be known as Hick, Hargreaves, and Co., Limited. This alteration will not make any difference in the management, and the business will be conducted on precisely the same lines as under the old firm.

The work of getting out the foundations for the new spinning mill of Messrs. Chadwick and Brother, of Eagley, is proceeding rapidly. The machinery for the new mill will be furnished by local firms—Messrs. Hick, Hargreaves, and Co., of the Soho Iron Works, Bolton, having in hand the requisite engine and boiler power; whilst Messrs. Dobson and Barlow, of the Kay-street Machine Works, Bolton, are to supply the machinery.

A gathering of the employes of Messrs. John Kershaw and Co., Derby-street Mills, took place in the Co-operative Hall, on Saturday, to present their late inside manager, Mr. Ellis Vickers, with a valuable walking stick and a purse of gold. Over 230 persons sat down to tea. The Chairman (Mr. Matthew Loft-house) made the presentation, and spoke in great praise of Mr. Vickers, having worked with him for 24 years. Mr. Vickers suitably responded.

#### Blackburn.

On Wednesday evening a fireman named Barton, who was injured by a boiler explosion at Messrs. D. and W. Taylor's mill on Friday of last week, died in the Infirmary from his injuries.

The repairs necessitated by the recent fire at Commercial Mill, Great Harwood, are being pushed forward with the utmost vigour. The boiler-house and tape-room are being rebuilt, while the repairs to the engine are almost completed. Work will be resumed next week.

Mr. Inspector Osborn's subordinate in the supervision of the Steaming Act has commenced his labours in Blackburn, having made several calls upon manufacturers in the centre of the town. So far his conception of matters hardly appears to run on all-fours with the terms of the Act, and if not modified it will lead to prosecutions.

The annual report of the Blackburn Technical School shows that the total subject entries were 1,266,

and the number of students 650. A sub-committee has been appointed to consider the subject of cotton teaching, but has not yet reported. The building is said to have suffered injury where, owing to its incomplete state, what should be inside walls are exposed. The Council regrets the disappointment caused through the failure to secure distinguished men to distribute the prizes, and promises that in future students shall be placed in possession of their rewards early in each new session.

On Monday a meeting of the Blackburn and District Chamber of Commerce was held at the offices of the secretary, Richmond-terrace, Blackburn, Mr. Henry Harrison, J.P., presiding. Mr. Bickerdike moved that Mr. Harrison be re-elected president for another year, and Mr. J. Hacking seconded the motion, which was carried unanimously. In thanking the members for again being re-elected, Mr. Harrison said that they would always have to be dependent upon such centres as Manchester, Liverpool, and Blackburn for chambers of commerce being successfully carried out on behalf of the districts which had particular characteristics of their own. He thought, therefore, that it was desirable that Accrington and Preston should join the Blackburn Chamber, along with the North-East Lancashire districts generally. It was quite impossible for Burnley to have a chamber of commerce of its own. At no time would it be of the slightest use or influence in the formation of chambers of commerce. He looked forward to having the support of Preston and North-East Lancashire generally attached to the Blackburn and District Chamber.—Messrs. W. B. Huntington and J. Hacking were appointed vice-presidents of the Chamber, and Mr. E. Appleby was re-elected treasurer.—Mr. W. Thompson was appointed an arbitrator to settle a dispute between the owners of the Jubilee Mill, Padiham, and a Manchester firm.

#### Bradford.

At a meeting of the Council of the Bradford Chamber of Commerce, on Wednesday, Mr. G. Hoffman read a letter from the Labour Commission, in the course of which it was intimated that the Commission would be taking further evidence from Bradford operatives.

At the annual meeting of the Bradford Technical College, on Wednesday, Sir Henry Mitchell, who presided, stated that the educational position of the college was being more than maintained, and its financial condition was better than ever before. There was, however, much need for the extension of the premises.

The death occurred on Tuesday of Mr. James Rawson, head of the firm of Firth, Booth, and Co., stuff merchants, of Leeds-road. Mr. Rawson was in the Town Clerk's department from 1853 to 1862, and then went to Messrs. Firth, Booth, and Co.'s office. He was admitted as a partner in the business of that firm some years before the death of Mr. George Firth, upon which he took over the business under an arrangement made in Mr. Firth's will.

Messrs. Peel Bros. and Co., of Globe Mills, City-road, having decided to remove the whole of their dress-goods department to Thornton, the workpeople gathered together on Tuesday last to present their manager, Mr. Jonas Normington, with a gold Albert and medal (with inscription) as a token of respect for the manner in which he had looked after their interests for the last ten years. Mr. J. Briggs made the presentation, and Mr. Normington suitably responded.

#### Burnley.

Messrs. Shaw and Thorner, Brierfield, who are extending their weaving shed at the Room and Power Co.'s premises, are putting up a number of additional new looms.

#### Bury.

The spinners (operatives) have collected amongst themselves £42 15s. towards the local Infirmary funds.

The Spinners' Association have instructed their delegates to the Central Association at Manchester to vote for the abolition of the "joining system" at the next meeting.

The Spinners' Association have had 104 members on the funds during the month, payments being made to the extent of £116 17s. 2d. The gain on the last quarter was £73 3s. 4d.

The operations at the Peel Mill, No. 2, have reached such a stage that the delivery of the necessary machinery has been commenced by Messrs. Platt, of Oldham. Messrs. Musgrave, of Bolton, are putting in the new quadruple expansion engines, and the first of the four new steel boilers is expected to arrive this week.

The engine of the firms in town continue to stop a portion of their spinners for a week in their turns, while at other mills the time work is somewhat irregular, though, it is said, scarcity of orders and "useables." On the other hand, Messrs. J. A. Openshaw and Brother, of Pimhole, have commenced to run their mill full time, after having worked only three days per week for the last three months. Messrs. W. and G. Openshaw, Pimhole, and Messrs. W. Rumney and Co. are at present engaged in removing some of their old looms, and replacing them with new.

Affairs at the Daisyfield Mill, Elton, have resulted in an open rupture, the operatives coming out on strike on Wednesday evening. An interview took place between the operatives and their representatives and the firm, along with the Employers' Association secretary. The firm were willing to concede a point in reference to the matters in dispute, but unless they would put it that the overlookers must bear their share of responsibility, the operatives said they would refuse to withdraw their notices. No definite arrangement was arrived at, so the operatives came out on strike the following night.

#### Carlisle.

The death is announced of Mr. John Stead, head of the firm of Messrs. Stead, McAlpin, & Co., calico printers, Cummersdale, near Carlisle, and one of the wealthiest private men in Cumberland.

#### Darwen.

On Friday evening of last week Professor Beaumont gave his last of a series of lectures on textile designing in the United Methodist School. There was a good public attendance, and his subject, "Woven Fabrics," was elucidated by several diagrams, which were exhibited by the aid of an oxy-hydrogen lantern.

#### Farnworth.

The Irwell Bank Spinning Co., Limited, Prestolee, which was registered about a fortnight ago, has been formed to acquire a plot of land forming the site of the old Prestolee Mills, and other land adjoining, on which the company propose to erect a handsome new mill to contain 130,000 spindles for spinning Bolton counts. The plans are being drawn by Messrs. Stott and Sons, the well-known mill architects, of Manchester. The ground will be cleared from the old mills and a new start made with perfectly new mills and machinery, everything being up to date. The order for furnishing the mill throughout has, we understand, been awarded to Messrs. John Hetherington and Sons, Limited, of Manchester. With such a start, and favoured by a lengthened period of good trade, it should be quite possible for the company to parallel the achievements of the late Mr. Crompton, a former owner of the mills about to be dismantled, who became a millionaire.

#### Haslingden.

At a meeting of the creditors of the Laneside Mill Weaving Co., held on Thursday, an offer of 15s. in the pound was accepted, viz., 10s. spread over a few months, and 5s. to be taken up in debentures of the company.

On Monday some cases were heard at Haslingden Police Court arising out of the strike of spinners and cardroom hands which has existed for several weeks at Hazel Mill, Haslingden. James Hayes, a labourer, summoned four doffer lads for doing wilful damage to his house door to the extent of 10s. He said his daughter was working at Hazel Mill, and last Monday a large crowd followed her home and threw a lot of stones at the door. He identified defendants as four who were in the crowd throwing stones. The magistrates eventually dismissed the cases for lack of corroboration.—Ernest Taylor and John Cassells, two of the spinners who are on strike, were summoned for intimidating workpeople. A policeman named Wild said that on Wednesday evening of last week, defendants headed a crowd of persons who followed and hooted two women who were working at Hazel Mill. Defendants were each fined 40s. and costs, or one month's imprisonment. Cassells was also summoned for using threatening language to Elizabeth Holt. Complainant said that she met the defendant last Friday morning, when he told her if she continued going to work at Hazel Mill he would knock her face off. He was bound over in £20 to be of good behaviour for six months, and was ordered to pay the costs or go to prison for one month.—Another charge of intimidation preferred against Mary Ann Larkin was withdrawn on payment of the costs.

#### Leeds.

At the instance of the Leeds District Factory Inspector (Mr. G. A. Hine), Mr. George Taylor Lockwood, cloth finisher, Neville-street, was summoned before Mr. Bruce, at the Leeds Town Hall, on Wednesday, for having a young person in his employ for more than seven days without having obtained the customary certificate of fitness. A fine of 20s., including costs, was imposed.

A dispute has occurred at the mill of Messrs. Hargreaves and Nussey, woollen manufacturers, Farnley. The firm wished the weavers to take charge of two looms. In Lancashire and in the Bradford trade the weavers have charge of two looms. The weavers made a stand against the new order of things and left the mill. Messrs. Hargreaves and Nussey have since decided not to compel their workpeople to manage two looms, and so far as that point is concerned the dispute is settled. There are however, some differences as to the new wages list.

#### Leigh.

All the mills and sheds here, with the exception of the Co-operative weaving shed, are running full time.



**London.**

At the London Bankruptcy Court, on Wednesday, a receiving order was made against Messrs. J. L. Pring and J. E. Adams, woollen merchants, 9, London-wall, E.C. The debtors presented their own petition, and state their liabilities at £15,000. The assets consist of stock £3,000, and book debts £6,000.

**Manchester.**

The business of the Dale-street Warehouse Co. is being taken over by a new firm, viz., Messrs. Henry Dale and Co., Limited.

**Ossett.**

On Monday a deputation from the Technical Instruction Committee of the County Council paid a visit to the weaving and designing classes which have been held at Batley for the last 14 years. Their report will, doubtless, be of a favourable character.

**Oldham.**

Another spinning company at Shaw is replacing its old mules with new ones.

The directors of the Honeywell Spinning Co. have placed an order for new wheels with Messrs. Saxon, of Openshaw.

Mr. John H. Dronsfeld, of Oldham, has been appointed as the representative on 'Change of the Oldham Card Clothing Co., Limited.

The subject of the rating of machinery is receiving considerable attention in this district, and several petitions from employers and workpeople have been presented to the House of Commons in favour of the Bill now before Parliament.

A large meeting of employers in the Oldham district was held at Oldham Lyceum on Thursday night to receive replies to the circular sent out to the owners of ten million spindles as to the advisability of stopping all the mills in the district with a view to putting an end to the strike at Stalybridge. Replies in favour of stoppage were received from 75 per cent., or eight million spindles. Other towns are considering the question.

The fine weather we are having is favourable to building operations, and as a consequence the completion of the mills in course of erection is being pushed on with. However, there is not much inducement in the present state of trade for directors to get machinery to work, and in this respect we believe not much anxiety is being shewn, though it is being got ready in case there should be an early improvement in trade.

The yarn contract case by the Fern Spinning Co., Shaw, against the Union Manufacturing Co., Rochdale, has excited considerable interest in the district, and the decision in favour of the former is viewed with much concern. More than usual notice has been taken of the lawsuit owing to the difficulty in effecting the completion of yarn contracts by reason of the very severe fall in prices. Spinners are yet in the throes of difficulty, and law is being evoked to their aid. We learn of instances, in order to get the customers to accept the orders, that yarn even of a better quality has been tendered as a kind of solatium to the buyer. This indicates an earnest desire to make peace with customers.

**Preston.**

Short-time notices have been posted up in the mill of the Park-lane Spinning Co., and Simpson's Hartford Mill. It is proposed to work three days per week only, stopping on Thursday nights until Tuesday mornings.

**Radcliffe.**

The New-road Mill weavers that are members of the Weavers' Association have recently drawn very heavily from the funds of the association through the working-up of the mill, they having received between £140 and £150 up to the present time.

The negotiations in reference to the new list of coloured goods weaving in the Radcliffe and Pilkington list are said to be approaching to some definite and amicable conclusion. The final meeting has now been held and a list completed, which has received the assent of both employers' and operatives' representatives, and this list will be laid before the weavers of Radcliffe in the coming week. Some very strong opinions seem to prevail amongst the workpeople as to the prices which should prevail, but, as we have previously pointed out, unless they wish to completely drive the trade out of the town their object ought to be to endeavour to co-operate with the employers with a view to keeping it within the precincts of their own locality, having in view the prices paid at other places.

**Rochdale.**

On Monday the monthly meeting of the Rochdale Chamber of Commerce was held, Mr. John Turner presiding. Mr. J. E. Lord, the secretary, read a report on the state of trade in the town, which stated that the market for cloth during the month had been of a very dull and inanimate character, there being very little practical business offering. The demand for the home trade kept very quiet. The position of spinners had not improved during the month, as they had not been able to get the advance which had taken place in cotton. Woollen manufacturers had been

fairly well engaged, through merchants not having such heavy stocks on hand as last year, and being more inclined to place orders, the tone being much more healthy than for some time past.

**Stockport.**

The death is announced of Colonel M'Clure, a prominent figure in the local public life of Stockport, which occurred on Friday of last week. He was 59 years of age, and a son of the late Mr. Robert M'Clure, ex-mayor and alderman of Stockport, and founder of the well-known cotton manufacturing firm of R. M'Clure and Sons, of Travis Brook Mills, Stockport, and Manchester. He was one of the first officers of the 4th Cheshire Regiment of Volunteers, and during his 28 years' active connection with the corps did much to bring it up to its present position as one of the strongest battalions in the service. In 1885 Colonel M'Clure was elected Mayor of Stockport. He was the proposer of many important public improvements now in progress in the town, and his unexpected death is a serious loss to the borough. He was a leading member of the Congregationalist denomination.

**SCOTLAND.**

**Alyth.**

The death occurred on Sunday of Mr. William Johnstone, for 52 years factory manager for Messrs. D. Smith and Sons. Mr. Johnstone, who was in early life a Chartist, was a leading member of the U.P. Church, and was for 60 years a Sunday School teacher. He was 81 years old.

**Brechin.**

On Saturday, at the office of the Brechin Mill and Factory Workers' Union, a deputation of weavers employed at Denburn Works (Messrs. D. and K. Duke) waited on Mr. Bean, secretary of the Union, for the purpose of getting assistance in laying several matters before their employers. Their principal grievance was the great inequality of the wages paid on the different classes of looms. The deputations stated that on 48-inch looms the average was about 12s. 3d.; on 60-inch looms, 13s. 6d.; 36-inch looms, 10s. 6d.; 32-inch looms, 11s.; looms engaged in working towelling, £1. 1s. 6d. The principal dissatisfaction exists among the 48 and 60-inch loom weavers. They state that on the other classes of looms engaged in working towels nearly double the wages can be earned. Mr. Bean said he would lay the different matters before his committee, and communicate their instructions to the proper quarter.

**Dundee.**

The depression in the jute trade in Dundee, which has necessitated employers putting off part of their machinery and running short time, is bearing heavily upon the mill and factory workers who have been thrown idle. Not a few cases of extreme hardship have been reported, and some measures of relief are urgently required.

Since the commencement of the year eleven vessels have arrived at Dundee from Calcutta, bringing 181,506 bales of jute, and three vessels have arrived from Chittagong with 45,235 bales, a total importation for the three months of 224,739 bales of jute, as compared with 206,369 bales in the corresponding period last year. At this time last year thirty-three vessels were afloat from India to Dundee, but at present there are only fourteen vessels, this being a decrease of nearly 43,000 tons in the quantity of jute yet to be landed this season. Several vessels have been chartered for next season's jute at freights ranging from 30s. to 33s. 9d. per ton.

**Glasgow.**

The following table gives the value and destination of the exports of cotton and linen goods from the Clyde for last week, and also the totals to date for the year. The first line refers to cotton goods, and the second to linen:—

India and China	U.S. and Canada	W. Indies & America	Australasia	Africa and Egypt	Continent	Totals	Totals for year to date
£59,189	9,542	4,873	352	1,458	—	75,424	1,131,805
125	13,359	63	—	175	—	13,723	260,860

The following are the total values of the export for the same thirteen weeks of last year:—Cotton, £1,050,776; linen, £262,907.

**Forfar.**

At a meeting of Forfar tenters held last week a letter was read from Messrs. Don & Co. in reply to a request for the removal of certain grievances. The answer was considered most unsatisfactory, and a committee was appointed to draw up a letter in reply to that effect.

It is rumored that a firm of manufacturers in Forfarshire is contemplating erecting in the North of Ireland a factory for turning out jute and linen fabrics. If the project is carried out, the linen-producing machinery now in use in the firm's present works will in all likelihood be removed to Ireland.

The scarcity not only of jute but of orders has had a very material effect upon the jute industry in Forfar. Messrs. John Lowson and Son, Haugh and South-street Works, have resolved to close their works on Fridays and Saturdays, and their future arrangements will be determined by the condition of trade.

**IRELAND.**

**Belfast.**

An intimation has been received by the Town Clerk of Belfast that the Government has decided to recommend Her Majesty to grant the style and title of Lord Mayor to the chief magistrate of this city.

Five of the locked-out linenlappers left Belfast on Saturday for Derry, en route for New York. There was a large assemblage of their friends and fellow-workmen at the York Street terminus of the Northern Counties Railway, who, notwithstanding the early hour, had turned out to see the emigrants depart. The men sailed for America in the Anchor liner, "Anchoria."

A meeting of the Council of the Linen Merchants' Association was held on Friday of last week to receive a deputation which sought to see them on behalf of the Linenlappers' Trade Union, in order to facilitate a settlement of the existing dispute. The proceedings were private. The deputation consisted of Messrs. James Musgrave, J.P., Thomas Sinclair, J.P., and Richard Patterson, J.P. Mr. Musgrave stated the views of the deputation. The following basis of settlement was agreed upon:—That the strike notice and lock-out notice be simultaneously withdrawn, and that, if desired, the Association will agree to a conference between employers and employed after the lapse of two months.

**Miscellaneous.**

**WOOLLEN MANUFACTURES IN SOUTH AFRICA.**

(FROM A CORRESPONDENT.)

The desire of the Englishman to transplant to his new home in the colonies the institutions with which he has been familiar in the old country has been one of the ruling motives in the attempt to establish woollen manufactures in South Africa. For many years it has seemed to South Africans a striking anomaly that they should have to export hides to England and re-import them as shoes or harness, and to send home wool to be re-introduced to the colonies as cloth, blankets, and other textile fabrics. A reference to old records shews that during the last 30 years much has been said and written on the subject—much, indeed, more theoretical and plausible than practical. From time to time the Legislatures of Cape Colony and Natal have been approached, and they have repeatedly expressed their opinion of the desirability of encouraging the establishment of woollen manufactures, and have in recent years promised protection, not in the shape of higher customs duties, but by yearly Government grants in accordance with the quantity of cloth or blankets manufactured from colonial wool. To the present, however, no firm or company has succeeded in earning the bonus, and in both colonies it is still on offer.

A quarter of a century ago a man named Dyson demonstrated in Grahamstown—then a prosperous centre—that he could make cloth from Cape wool, which should be as cheap and serviceable as certain kinds of the imported. His achievements were certainly on a small scale, for about 30 yards of thick brown-black cloth per week was the utmost extent of his enterprise. His machinery was of the most primitive character, and if placed on view at any exhibition in England would almost be as great a novelty and curiosity as one of Stephenson's earlier locomotives. Dyson's cloth was good and durable, but, alas! he had no variety of patterns. The bucolic sentiment was patriotic, and the desire was to support the local manufacturer, but there, as here, there was such a thing as fashion, and the wearers got tired of the uniformity of colour and texture. Dyson's enterprise was worthy, but his concern collapsed. It was not until 1885 that a really systematic attempt was made to manufacture woollens in the Cape Colony, and even then



the efforts made would seem on this side half-hearted. At Ceres, a village near Capetown, there was that year inaugurated a manufactory of which much seemed to be expected. The members of the Cape Parliament and several ministers went in a body to the opening ceremonies, and ornate speeches were delivered regarding the new industry. A few months' experience, however, quite convinced the promoters that the manufacture of cloth there was out of the question. All the machinery and skilled labour had been imported from England, and it was found that though the technicalities of the trade could be understood there, yet that it was impossible to produce an article that could be offered in competition with the imported. Despite the import duty of 15 per cent. *ad valorem*, the merchant could more than compete with the colonial manufacturer. Then cloth-making was abandoned and attention devoted wholly to blankets. A thick, white, household blanket was produced at a reasonable cost, and for a time the farmers seemed to favour the colonial-made article. But the latter could never be made to compare in finish and appearance with the English-made blanket, and gradually the Ceres industry began to languish. The manufactory is still in existence, but only serves the requirements of the immediate locality, and does not promise any scope for enterprise or extension. Practically, the whole of the Cape Colony is supplied with blankets from England, and, as the periodical trade returns shew, the exportation from this side is considerable and, taking each decade, is growing. At one time the blanket favoured at the Cape was a special thick cloth article, and large numbers were made in the Dewsbury and Heckmondwike districts. In recent years, however, the old "Cape blankets" have ceased to be so popular, and the ordinary varieties familiar in this country are the fashion. Some of these old "Capes" must have been made of magnificent stuff. The writer met an old Dutch lady in Capetown who seemed to think that she had reason for boasting that her bed blankets had been in constant use for over 20 years and were still good in comparison with the present importations. Woollen rugs, too, have, during the last dozen years, become greatly the vogue in South Africa, and there seems in the future a great scope in this branch of woollens. The natives are year by year becoming purchasers of blankets, and as there are some six millions of them in the territories within the sphere of British influence, the trade is likely to increase. The Cape Kaffir uses his blanket for quite a variety of purposes. It covers him from the heat of the sun and protects him from the cold; he utilizes it as a table-cloth, uses it as an umbrella, and when travelling it is his portmanteau and his purse. Of gaudy and garish colours he is fond, and in some cases he delights to have on his blanket the representation of some warlike, hunting, or pastoral scene. Compared with the European, the ordinary native in South Africa is lightly taxed, and the tax is imposed indirectly. The blanket is one of his principal purchases during the year, and, by a small import duty upon it, the Governments manage to thereby make him a contributor to the revenue. In the two British colonies the feeling is manifestly rather in the direction of free trade than protection, and the Customs Duties on woollens are imposed only as the simplest and easiest mode of collecting necessary and inevitable taxation. As the natives have advanced in civilisation they have invariably shewn a desire to copy the European mode of dress, and there are now many thousands whose ordinary daily attire is quite up to the average of the respectable artisan of this country. Shop clothes are, of course, their selection, and one imagines that the trade in ready-mades will, in the future, continue to steadily increase.

The South African Exhibition at Port Elizabeth, in 1885-6, and the Exhibition at Grahamstown in the Jubilee year, gave a great impetus to the colonial manufacturing spirit. Side by side with splendid samples of colonial wool were the finished manufactured goods from England. The display evoked the aspiration to manufacture the raw material in the country. The jurors were patriotic commercial colonists,

with a fair knowledge of the wool and of the manufactured articles, but with little but purely theoretical notions of the complicated processes of manipulation. Their official reports induced a sanguine view of the manufacturing projects that for many years previously the newspapers had been placing before the public. The outcome was the Jubilee Manufacturing Company at Grahamstown, the promoters of which seemed to think they could, in one small factory, make not only all kinds of cloth, but all kinds of blankets. Machinery was imported from Scotland, and for a couple of years the well-intentioned directors played at having a cloth mill. They were pleased enough with their new fad until they began to perceive that it cost some money. The tweeds produced and hawked round the country were "fearfully and wonderfully made," and would have staggered a Leeds cloth buyer with an eye to finished appearance. But they were of wool, and the country farmers who wore them as clothes said they were warm and strong. Of the latter fact there could possibly be no doubt, though the articles were certainly an improvement upon Dyson's efforts. The general public did not, however, take kindly to the Grahamstown tweeds, which neither in price nor quality could be favourably placed side by side with the English. The shareholders had money when the company was floated, but no experience of manufacturing; they have now had the latter, but so far as the company is concerned they have no money. No dividend ever appeared possible, and, a few months ago the company was wound up and, according to recent Cape papers, the concern is standing, and the plant is for sale. Possibly the failure may be attributed to mismanagement and the lack of experience, and perhaps in private hands the concern may yet be made to succeed. It is sufficient for our purpose to notice that up to the present there has been no successful woollen manufactory established in South Africa, and that the English manufacturer has no reason to fear competition in that part of the Empire. One imagines that the Yorkshire woollen manufacturer will, for a long time, be able to compete with any cloth or blanket-maker in the Cape Colony, though the time may arrive when certain kinds of woollens can be profitably made there.

In the adjacent colony of Natal there has been already one fruitless endeavour to establish the woollen industry. Two years ago an artfully-worded prospectus induced a number of residents of Maritzburg, the capital of the colony, to embark on the cloth-making enterprise. The shareholders met, machinery was ordered, but local dissensions arose, and the company was liquidated before they had had the pleasure of listening to the clatter of the loom or the music of the spindle. During the last month, however, a German company has announced its intention of starting a woollen manufactory in Natal, and asserts that it has machinery and hands on the way out from Germany to the colony. The company further announces that of its capital of £100,000 over £60,000 has been paid up and is available for operations, regarding the success of which they appear to be assured. *Nous verrons*. At Newcastle, a small town in Natal, a company has just been formed with a capital of only £10,000 for the purpose of initiating the woollen industry in the district. Judging from the prospectus none of the promoters know what they are undertaking, and the project has not yet shewn any probability of ultimate success.

In the two Republics, the Free State, and the Transvaal, there has long been talk about the desirability of establishing woollen manufactories, but as yet no project has taken a definite shape. The Transvaal Government offers a substantial yearly bonus for the manufacture of a certain number of yards of cloth in the country from wool grown within the Republic, but as yet nobody has entered into competition for the bonus.

It will thus be seen that at the present moment there is only one insignificant woollen mill at work throughout the whole of South Africa, and that the projects for the future do not promise much better results than the unsuccessful attempts of the past. The great

colonial contention, that material for manufacture is to hand in its cheapest form and that labour is also cheap, is not very important.

The time seems far distant when South Africa will offer a field for prosperous enterprise in the woollen industry, and facts reported by careful observers up to date convince one that the home manufacturer need fear no unwelcome rivalry, nor the loss of his present valuable markets in that quarter.

#### CALCUTTA AND DUNDEE.

##### RELATIVE PROGRESS IN TEN YEARS.

Official returns shew that in India there are now 26 jute mills, as against 21 ten years ago. In this interval the number of looms has increased from 5,655 to 8,101, and the number of spindles from 91,000 to 162,000. The number of persons employed in the jute works has increased from 40,500 to 62,000. Roughly speaking, these figures indicate that the manufacture of jute in India is now one-half larger than it was ten years ago.

What has been the progress in Dundee during the same period? In this country no official returns are available such as are collected in India. Undoubtedly there has been progress, but not so extensive as that mentioned above. During the period indicated several of the Dundee factories have been enlarged, but no information is available as to how many spindles are running now, how many looms, and how many workers are employed in the various jute mills and factories. An indication of the development of the industry in Britain is available, however, from the Board of Trade Returns, shewing the quantities of jute imported into this country and the quantities of jute manufactures exported. Dealing first with the quantities of jute imported, the following table shows the position in 1881 and 1891:—

	1881.	1891.
Jute imported ..	247,649 tons.	344,720 tons.
Jute re-exported ..	64,900 tons.	110,002 tons.

Net import .. 182,749 tons. 234,718 tons.

These figures shew that there has been an increase in the imports of jute of 52,000 tons, or about 28 per cent. If the average for the three years ending 1881 and the three years ending 1891 be taken, the increase is from 180,400 tons to 250,900 tons, or an increase of 39 per cent. The Board of Trade returns, however, do not state what the jute is used for. Undoubtedly some portion of the increased quantity is devoted to other purposes than textile manufactures, possibly for paper making. If this be not the case, a larger quantity of jute goods must now be required than formerly for the home trade, as there does not appear to be corresponding increase in the quantity of jute goods exported to foreign countries.

In considering the exports of jute manufactures from Britain now and ten years ago, it has to be remembered that during this decade the Continent of Europe has been practically closed to Dundee manufacturers. Since 1881 tariffs have been either freshly imposed or smartly increased on jute goods entering France, Spain, Austria, and Russia. Within this period, too, Calcutta has strengthened its hold upon Eastern markets. In view of these facts one might expect that the exports from Britain should have receded rather than increased. If they have been augmented it indicates that the trade has prospered under extremely adverse circumstances.

It is remarkable that in 1891 nearly twice as much jute yarn was exported from Britain as in 1881. Ten years ago we sent 8,066 tons of jute yarn to customers abroad, but last year we sold 14,818 tons, or an increase of about 90 per cent. The following table shews where this yarn has gone:—

	1881.	1891.
Germany .....	2,836,200 lb.	6,699,900 lb.
Holland .....	648,300 "	1,219,200 "
Spain .....	7,375,100 "	8,502,100 "
United States ....	5,833,800 "	3,449,600 "
Other Countries ..	1,376,500 "	13,321,500 "
Total ..	18,069,900 "	33,192,300 "



Germany, Holland, and Spain, although they have erected manufactories of their own, still receive increasingly larger supplies of yarn from this country. The United States are less dependent on us than heretofore. "Other countries" have greatly added to their orders. It would be interesting to know what these countries are.

The exports of jute cloth have not increased as those of yarns have done. Ten years ago we sold 204 million yards to customers abroad, and last year our shipments were 284 million yards. In addition to this cloth, the bags and sacks have to be considered. Ten years ago we despatched abroad 65,600,000 bags and sacks, but last year we only despatched 31,000,000. In determining what was the actual quantity of jute cloth sold abroad in 1881 and 1891 it is desirable to compute how much cloth there is in each bag or sack. Opinions differ on this point. Some people say there may be more than two yards, and some say there are less—it depends what class of trade they are engaged in. We shall assume that a fair average over all is two yards for each bag or sack. On this basis the net export of jute cloth in yards is as follows:—

	1881. Yards.	1891. Yards.
Cloth.....	204,000,000	284,000,000
Bags.....	131,000,000	62,000,000
Total.....	335,000,000	346,000,000

From the above the increase in the export of cloth appears to be only of nominal amount. The increase in cloth is considerable, but it is almost compensated by the decrease in bags and sacks. The official figures in the Board of Trade returns are as follows:—

EXPORT OF JUTE CLOTH (YARDS).

	1881.	1891.
Sweden and Norway .....	—	3,523,000
Germany.....	33,158,000	29,318,800
Holland.....	5,088,000	2,426,000
Belgium.....	—	2,069,200
France.....	6,030,900	10,593,200
Italy.....	4,597,000	300,600
Turkey.....	—	4,702,300
United States.....	101,482,100	172,977,000
Brazil.....	12,124,500	7,557,100
Argentine Republic.....	6,057,100	16,392,900
Canada.....	—	10,276,400
Other countries.....	34,857,700	23,824,800
Total.....	204,206,200	283,961,300

EXPORT OF BAGS AND SACKS (DOZENS)

To Russia.....	1,159,609	47,944
Germany.....	930,020	410,161
Turkey.....	—	190,566
United States.....	934,528	67,790
West Indies (Foreign).....	—	85,760
Australia.....	244,723	204,093
W. India Islands.....	—	110,868
Other countries.....	2,202,803	1,477,441
Total.....	5,471,683	2,594,623

On analysing these figures it will be observed that the Continent of Europe, with the exception of France, is taking less jute cloth from us now than it did 10 years ago. The United States and the Argentine Republic are much better customers, however, than they were at the commencement of the decade; and Canada, Sweden and Norway, Belgium, and Turkey have assumed proportions rendering them worthy of detailed enumeration. The United States are by far the best buyers of Dundee goods, taking no less than 173 million yards of cloth out of a total export of 284 million yards. It is little wonder that the cablegrams indicating the course of prices for jute goods in New York are so eagerly scanned. The New York prices directly affect the greater portion of the Dundee goods exported abroad. If bags and sacks be taken into account it will be found that the United States take almost exactly one-half of the export of jute fabrics from this country. Assuming, as before, that the average amount of cloth in each bag is two yards, the proportion of the goods exported to the United States as compared with the total export is as follows:—

	Exports to United States.	Total Export.
Cloth .. ..	173,000,000 yds.	284,000,000 yds
Bags and Sacks,	1,600,000 "	62,400,000 "
Total .. ..	174,600,000 yds.	346,400,000 yds.

It will be observed that in 1881 there were exported to the United States 934,000 dozen bags. This figure had fallen to 67,700 dozen last year. This shortage on the bags explains why the increase on the cloth is so large. While the cloth is up 714 million yards, the bags are short by 21 million yards, shewing a net increase of 50 million yards in the exports to the United States within 10 years.

Seeing that the United States is so important a market for Dundee goods it is desirable to notice the extent to which Calcutta competes with us in that market. This competition concerns only the Eastern States, the Western States being supplied wholly from Calcutta. In 1881 no jute cloth was shipped from Calcutta to New York or any other American ports on the Atlantic seaboard. The first shipment was made in 1882, when Calcutta despatched 289,000 yards. The quantity has increased until 1891, when the shipments amounted to 29,800,000 yards, or, if bags be included, 35,518,200 yards. This figure is equal to about one-fifth of the quantity of jute goods shipped from Dundee to the United States. Of the jute cloth exported from India, about one-fourth now finds its way to New York. In 1890 the exports from India were:—

Austria .. ..	16,100,000
New Zealand .. ..	5,100,000
The Cape .. ..	2,700,000
Egypt .. ..	4,000,000
New York .. ..	23,200,000
San Francisco .. ..	9,700,000
Europe .. ..	25,200,000
Total .. ..	85,500,000

A writer, when commenting on these figures recently, said:—"With regard to New York, the chief buyer of the product of the Dundee factories, Indian manufactures seem to be finding their way thither in no insignificant volumes. The closer proximity of Dundee to New York may, it is hoped, still enable manufacturers there to retain the larger share of the trade, as, indeed, it enables them quickly to meet all pressing demands for jute goods that may spring up. It will certainly be very many years before Calcutta really attempts to annex the New York market for hessians; but if the time ever comes, the fight will probably be more severe than any hitherto experienced in the trade." Our New York correspondent mentioned the other day that more attention was being given in that market to Calcutta manufactures, and doubtless further extensions of business between Calcutta and New York will be watched with keen interest by Dundee manufacturers.—*Dundee Advertiser.*

YARN DELIVERY: ACTION FOR BREACH OF CONTRACT.

On Monday morning, at the Manchester Assizes, before Mr. Smyley, Q.C., the case of the Fern Cotton Spinning Company, Limited, Shaw, against the Union Manufacturing Company, Limited, Rochdale, came on for hearing. In their statement of claim the plaintiffs said that on the 13th of June, 1890, the defendants ordered of the plaintiffs 40 skips of 52's weft, and 40 skips of 42's twist, at 10d. per lb., payment for the same to be made within fourteen days from delivery, and if so made to be subject to a discount of 2½ per cent. On the 1st July the defendants further ordered 5,000 lb. of 52's weft at 10d. per lb. on like terms. The plaintiffs accepted the orders, and the defendants took delivery of part of the goods, but with regard to the remainder the defendants would not accept it, and repudiated the contract. When the defendants so refused to take delivery the market price had fallen to the rate of 7½d. per lb., and the plaintiffs lost £139 4s., which they now claimed. For the defence it was pleaded that the defendant company did not order from the plaintiffs the goods mentioned at the price or on the terms alleged. They accepted delivery of the 40 skips of 42's twist in pursuance of a contract which was fully performed by the delivery of that. Further, the defendants said that section 17 of the Statute of Frauds had not been complied with, and that the plaintiffs agreed to deliver, and the defendants to accept, the goods as occasion arose in the course of their (defendants') business, and on the request of the defendants; and the defendants, when they required the said goods, requested the plaintiffs to make delivery of, and were ready and willing to accept, the same, but the plaintiffs refused to deliver them. The particulars furnished of the weights of the various deliveries to the defendants, with the dates thereof and

the prices, were as follows:—30th June, 1890, 934½ lb.; 11th July, 1890, 2,428½ lb.; 21st July, 1890, 1,817½ lb.; 2nd September, 1890, 1,610 lb.; 10th September, 1890, 1,543 lb.; 1st October, 1,507 lb.; 10th December, 1,838 lb.; 3rd February, 1891, 618 lb. Mr. Gully, Q.C., and Mr. T. F. Byrne (instructed by Mr. H. Booth, Oldham), were for the plaintiffs, and Mr. Bradbury (instructed by Mr. J. T. Worth, Rochdale), defended.—Mr. Byrne having opened the pleadings, Mr. Gully stated the case of the plaintiffs, in accordance with the statement given above. He added that there could be no pretence on the part of the defendants to say that there was no contract, that there was not a breach of contract, or that the damage was not as alleged by the plaintiffs. Mr. Gully further urged that this being an executory contract the plea of the Statute of Frauds did not apply—in fact, it was an unfair plea.

George Pickup, secretary of the plaintiff company, said that on the 13th June, 1890, he saw Mr. Tattersall, the manager of the defendant company, and made a contract with him for 40 skips of 42's twist at 10d. and 40 skips of 52's weft at 10d. The defendants took all the delivery for the twist and paid for it, but they took no weft. On the 1st July, 1890, he met the manager again, and made a contract with him for 5,000 lb. of 52's weft at 10d. On that contract also nothing had been taken. The defendants had "sold" notes sent to them in respect of each of the contracts, and the initials "S.M.," which were now on them, were not on them when witness sent them out. Those letters were the initials of the secretary of the defendant company. A consignment of twist sent to the defendants on the 3rd March was returned to the plaintiffs with the invoice and weight note. On the weight note and invoice being again sent to the defendants by the plaintiffs, the latter wrote back that they were not using that count of yarn. Afterwards the defendants wrote that the plaintiffs need not forward any more weft until they received instructions to that effect. After further correspondence had passed, the matter was placed in the hands of solicitors. A Mr. Smith having succeeded Mr. Tattersall as manager of the Union Manufacturing Company witness saw him, and the last mentioned gentleman suggested that he (witness) should write to the directors of that company, who would then probably appoint a deputation to consult with a view to settlement. A meeting of representatives of both parties took place, but no settlement was come to.—Cross-examined by Mr. Bradbury: There have been previous contracts between the parties. It is not a fact that in the agreement no dates were mentioned, but that delivery was to be made following the completion of previous orders, and was to be in something like the same quantity as previously, viz., four or five skips a week. Between June and the end of October the market was a little in favour of the defendants. During July and August Mr. Tattersall pressed me two or three times to deliver, but I could not do so on the dates named, and Mr. Tattersall said he would get yarn from other spinners. After September there was a fall in prices.—This was the plaintiffs' case.

Mr. Bradbury submitted that on their own evidence the plaintiffs had put themselves out of court. First of all he had their own statement in the particulars, and by that they were bound. He could not conceive how they could get out of it. The case was that the delivery of these orders was to follow on the delivery of previous orders, and their own case was that the delivery was to be at the rate of four or five skips a week. Now, the first delivery under this order was on the 10th June, after the previous order had been completed, and at the rate of four skips a week that contract should have been completed on the 26th July. Taking ten weeks from that it would bring them as nearly as possible to the end of September, when the 40 skips ought to have been delivered. To that time the defendant company were willing to receive the yarn, but there was no tender of it, and no delivery. The subsequent letters did not affect the matter, unless the learned judge was satisfied that there was a contract to waive the delivery, and certainly there was no evidence of that. They all knew that as long as the market was against the seller he would not deliver, but when it came in his favour he turned round and pressed delivery. Simply because of a big drop in the market the plaintiffs tried to make the defendants responsible for these heavy damages.—The learned Commissioner held that there was a case, and said that Mr. Bradbury had better call his evidence.

James Tattersall said he was in the employ of the defendant company in the year 1890, when the contracts in question were made. He left there in November of that year. The deliveries were to follow on previous contracts. Down to September, 1890, they were using 52's largely at the defendant's mill, and they wanted the yarn badly. They had to pay the same price for an inferior quality. Witness asked Pickup almost daily to deliver, and he said he would when he could.

The learned Commissioner said he found that the contract of the 14th June was one on which the plaintiffs were entitled to damages. On the other contract,



taking it that "S. M.," the letters on it, were the initials of the secretary of the defendant company, it appeared that they were put there to show that the contract was correct. That amounted to a verdict for the plaintiffs on both contracts. As to the damages, he had had some difficulty in arriving at a conclusion, but, after considering the rising and falling of the market during the period in question, he would give a verdict on the basis of 17½d. per lb., which would be a verdict for the plaintiff company of £126 11s. 3d. Judgment accordingly.

#### THE SOCIETY OF DYERS AND COLOURISTS.

The eighth annual meeting of the Society of Dyers and Colourists was held on Thursday, at the Victoria Hotel, Bradford. The president (Mr. Henry Sutcliffe) occupied the chair. The report was read by Mr. R. H. Rawson (secretary). It recorded the fact that the society now contained 259 members and 20 associates, there having been elected during the past year twelve members and one associate. This total was a falling-off of 38 compared with last year, but the reduction was caused by the striking out of the names of members who were considerably in arrears with subscriptions. The journal of the society still continued to offer matter which was eagerly copied by the leading British and foreign technical papers. It was hoped in the next volume to interest the members by the frequent insertion of patterns of new colours and accounts of processes, and so make the journal more valuable. In October last the society offered two free scholarships to the evening dyeing class at the Bradford Technical College, and these were gained by Messrs F. Burgess and S. J. King. At the conclusion of the financial year in February there was a balance to the credit of the society of £280 10s. The Chairman briefly moved the adoption of the report, expressing pleasure at its satisfactory character. Mr. H. Crossley seconded the motion, which was agreed to. The balance-sheet was also submitted and approved. The following officers were then elected:—President, Mr. Henry Sutcliffe; vice-presidents, Messrs I. Levenstein, H. Ripley, H. Sutcliffe, and Watson Smith; members of the Council, Messrs H. Grandage, T. E. Gates, H. Hey, and J. H. North; hon. treasurer, Mr. J. B. Moorhouse; hon. secretary, Mr. T. Whitaker; hon. patent agent, Mr. W. P. Thompson; hon. auditors, Mr. W. George and Mr. T. Wolf.

Afterwards the members and friends, to the number of 56, partook of a capital dinner in the hotel. Mr. Sutcliffe again presided, and there were present, among others, Dr. Bowman, Mr. Henry Ripley, Mr. J. Nutter, Mr. J. B. Moorhouse, Mr. James Sharp, Mr. A. Whitaker, Mr. R. Holliday, Mr. W. Holmes, Mr. Kellest, Mr. T. Whitaker (hon. secretary), Mr. J. H. Binns, and Mr. H. Grandage. Apologies for absence were received from the Worshipful Master of the Dyers' Guild, the Mayor of Bradford (Alderman T. Priestley), Sir Henry Mitchell, the president of the Bradford Chamber of Commerce (Mr. Gordon), Sir James Kitson, and others. After the health of the Queen had been honoured,

Mr. J. NUTTER proposed the toast of "The Society of Dyers and Colourists." It was, he said, a remarkable fact that, while many other societies in the town had to shew a deficit, the dyers and colourists had no less than £280 in hand. He hoped that the society would go on prospering both in numbers and in finances. On behalf of the Bradford Technical College, which he represented, he thanked the society for the two scholarships they had given, and remarked that owing to the Bradford Town Council grant there were now seven scholarships tenable in the day classes in the dyeing department of the college.

Mr. JAMES SHARP, in responding to the toast, said the very favourable report which had been read shewed that the society held a sound and progressive position. The funds were larger than ever before, and the members now on the books were "live" members, those dead limbs which had been lopped off only leaving the society more healthy.

Mr. H. RIPLEY proposed the toast of "The Town and Trade of Bradford." The town, he said, was one of which those connected with it might be proud. Its trade, unfortunately, was not all that could be wished, but what its merchants, manufacturers, and dyers had to do was to keep Bradford well to the front, and endeavour to see that no one got in front of them.

The CHAIRMAN, in calling on Dr. Bowman, remarked that the old trade of Bradford—the lustre and mohair trade—had now become almost a thing of the past. But working as he did among the products of Bradford, he was able to say that Bradford could defy either France or Germany, which were the countries always pointed out as being to the front.

Dr. BOWMAN, replying to the toast, referred to the chairman's remarks, and said that though the old staple trade of Bradford had been almost removed the town had had energy to rejuvenate itself. The removal of the trade referred to had not been an unmixed evil, bringing as it did a greater diversity of trades into the

town, and developing the industry and ingenuity of the people.

Mr. J. B. WILKINSON proposed the toast of "The Guests," to which Mr. NUTTER and Mr. W. HOLMES replied.

Mr. J. H. BINNS gave "The Health of the Chairman and Officers."

Mr. HIXON, replying for the Publication Committee, said that that body were determined to make some very radical alterations in regard to the journal, which had in the past not been altogether to their own or the members' satisfaction.

The CHAIRMAN and several of the officers briefly responded.

During the evening songs were given, and a pleasant time was spent.

#### THE STALYBRIDGE STRIKE.

There is but little change to notice in the position of affairs connected with the long existing dispute at the Stalybridge Company's mill. At noon on Saturday, the non-unionists employed at the mill left there in a body, and were marched to the railway station under a strong escort of police, mounted and on foot. The use of waggonettes for conveying the hands to and from the mill has now been discontinued. Owing to a number of the new hands having left their work in consequence of an alteration in the conditions of their service, there was increased public interest on Saturday, and a large crowd assembled in Bridge-street, while Market-street was lined with spectators watching the procession. Some hooting was indulged in, but not to any considerable extent. Mounted policemen cleared the way in front of the hands, and others brought up the rear. Pickets were also about. On the arrival of the procession at the new railway station the people booked by the Manchester, Sheffield, and Lincolnshire Company, the police following them on to the platform and seeing them safely off. On Monday morning a body of police went to the railway station to meet the hands returning to their work, and to escort them to the mill, but the number was much less than last week. The rumour that the mill is to be closed has been contradicted.

At the Stalybridge Police Court, on Monday, Hannah Knowles, of Cockbrook, was charged with disorderly conduct in High-street, on the 23rd inst.—Constable Roebuck stated that on the day in question, from 300 to 400 people were waiting in High-street to see the waggonettes containing the persons employed in the Stalybridge Spinning Company's mill. As the waggonettes passed by the defendant began to hoot and yell like some one mad. He asked for her name and she refused to give it. Eventually another woman gave it, and she was reported. The defendant said she would give her name when they got those of other people who had shouted. The defendant denied the offence. After other evidence the defendant was fined 5s. and costs, or seven days. Joseph Allen was summoned for using threats to Mary Jane Scott on the 19th of March, and the complainant applied that he be bound over to keep the peace.—The complainant said she went into the Friend and Pitcher, Caroline-street, and ordered a quart of beer. As she was talking to the landlady the defendant came up. The jug was then on the window-ledge, and he knocked it through the window and spilled the beer. She told him she would make him pay, and he said, "I would sooner pay for a coffin for you, and I will knock your false teeth down your throat." Defendant was bound over to keep the peace for six months, himself in £10, and two sureties of £5 each.

At Hyde, on Monday, Louisa Dean and Ellen Bradbury, both of Town-lane, Dukinfield, were summoned by Mary Clarke, of Dukinfield, for having, on the 8th inst., along with other persons unknown, unlawfully followed the complainant in a disorderly manner through the streets of Dukinfield, with a view to compelling her to abstain from working for the Stalybridge Cotton Mill Company. There was also a charge against the defendants of intimidating Mary Clarke on the 8th inst. Summonses of a similar nature were issued against the defendants by Elizabeth Caveney, of Dukinfield, and Mary Ellen Caveney, of Hyde. The defendants were represented by Mr. J. B. Pownall, Ashton, and Mr. Cobbett appeared on behalf of the Stalybridge Cotton Mill Company. It appeared that the two defendants followed complainant and by their disorderly conduct caused a crowd of people to assemble. Dean had a key in her hand, and threatened to knock complainant's head off with it. Bradbury was heard to say that she would "cut her eye out," and Dean attempted to strike Clarke. They had also threatened to take away Elizabeth Caveney's life, and the crowd of people who surrounded her house broke her windows and furniture. She required a police escort when she went into the town shopping. She had had to leave the town in consequence of the threats which had been made against her. The Bench dismissed the charges against Bradbury, but fined Dean 10s. and costs in each

of the intimidation cases, the case of assault against her being dismissed.

THE firms of Jacob Biech and Adolf Weinberger, at Reichenberg, in Bohemia, propose to enlarge their premises.

THE cotton spinning mill of Herr Franz Rosenberger, jun., at Ernstthal, near Reichenbach, in Silesia, was totally destroyed by fire a few days ago.

A FIRE broke out a few days ago in the upper storey of the old castle at Forst, and destroyed the premises of Schreiber and Erdmann Schreiber, manufacturers, the damage being estimated at 250,000 marks.

THE tricet factory of Wilhelm Lurkens, Lodz, has been damaged to the amount of 25,000 roubles by a fire caused by the spontaneous ignition of woollen waste.

THE Stohr and Co. Worsted Yarn Spinning Company, Leipsic, has declared a dividend at the rate of 5 per cent. for the past financial year, as against 7 per cent. for 1890.

THE Höchst-am-Main Dyeworks Company (formerly Meister, Lucius, and Brüning) propose to pay a dividend at the rate of 26 per cent. for the past financial year. The dividend for 1890 was 25 per cent.

FOLLOWING the example of the Briinn printed woollen manufacturers, the Austrian calico printers have now combined to regulate selling conditions. It is stated, however, that it is not proposed to advance prices.

A VERY bad case of arson is reported from Potten-dorf, in Northern Austria. A cotton mill was set on fire in six places, but as efficient help was at hand the mischief done represented only 5,000 gulden. Two workmen who were suspected of having a hand in the crime have been arrested.

THE German Emperor is said to have placed at the disposal of the Minister of Trade and Commerce the sum of 45,000 marks to enable the children of the Silesian handloom weavers to adopt other callings, and to provide better looms for those weavers who cannot change their calling.

AGAVE FIBRE ROPE.—The report of Consul Chambers, just issued, states that a factory has been started at Ambato, in Ecuador, for the manufacture of rope from the agave fibre. The price, however, is about £2 per 100 lb., but this is 40 per cent less than English rope can be sold for when duties and other charges at Guayaquil have been added. A sample of the rope has been sent to the Gardens at Kew.

THE balance sheet of the Cologne Cotton Spinning and Weaving Company gives the gross profit from last year's operations as only £1,053, as against £11,936, the profit balance for 1890. For the appropriations to the depreciation and other accounts a sum of £3,945 is required, so that the whole of the profit will be absorbed, and £2,892 will have to be written off, in addition, from the extra reserve fund. No dividend can therefore be distributed. For 1890 a dividend at the rate of 5 per cent. was declared.

RUSSIAN COTTON.—A first and sample consignment of Russian cotton, grown in Central Asia, and consisting of twenty bales, has been despatched from Odessa for New York. The rapid development of cotton culture in Russian Turkestan and several of the Central Asiatic khanates under Russian protection is attracting the serious attention of the United States Government. Dr. Thomas E. Heenan, United States consul in Odessa, has been instructed from Washington to make an investigating tour of Transcaspia and Central Asia in order to report fully on the general condition and prospects of the cotton plantations in those regions. Dr. Heenan was to start on this mission last week.

THE CARPETS AT WINDSOR CASTLE.—Few people are aware that her Majesty still adheres to the pattern chosen by the late Prince Consort for the carpets at Windsor. So that when one set is worn a new one precisely similar in all respects has to be woven to supply its place. What is this pattern? It may be asked. Well, it is one that would make modern aesthetes groan in spirit. It consists of roses, lilies, and ferns on a very green ground. Fancy your nineteenth century "art student" treading on roses and lilies. This is one way out of many in which her Majesty shews her regard for the memory of her husband.

SILK-THROWING IN SWITZERLAND.—According to some comparative statistics which have just been issued by the Swiss Association of silk-throwers, their industry has been nearly stationary for two years. The number of persons working at factories have increased, to the detriment of the workers at home, who produce less, for although the total number of workers has decreased by 361, the amount of wrought silk produced has been maintained. The working up in organzine has gained what has been lost by the working up in welt. The working up of braids has been stationary for two years; that of silks for embroidery, on the contrary, has continued to develop.



The "Witter" Sprinkler's record for the past month included the following successful fire "stops" in cotton mills, viz. :—March 8th, Park and Sandy Lane Spinning Company's mill at Royton, when four Sprinklers operated and extinguished the fire, with small loss; March 12th, Messrs. E. & T. Broadbent's Clarksfield Cotton Mill, Lees, near Oldham, when one Sprinkler extinguished the fire, with practically no loss; March 14th, Messrs. C. Shorrocks & Co.'s Moss Bridge Cotton Mill, Darwen, when one Sprinkler operated and extinguished the fire, with loss nil; March 22nd, a fire in the Glodwick Spinning Co.'s Mill, Oldham, was extinguished by the Sprinklers, with small loss; and March 29th, Darwen Spinning Co.'s mills, Darwen, when four Sprinklers extinguished a fire in the mixing room before the arrival of the brigade. Messrs. Witter & Son, through their London office, 145, Queen Victoria Street, E.C., have just received orders to protect with their Sprinklers the new bookbinding works which Messrs. Straker & Son are erecting in Whitefriars, London, which will be a model building.

**ARTIFICIAL SILK.**—The *Moniteur des Filis* says: "Attention has been called to an interesting discovery which is going to endow Normandy with a new industry. It refers to a product which is going to be exploited by MM. E. Cadoret and E. Degraide, engineers, at Deville, and which is destined to replace silk in most of its applications. The reproduction of silk is indeed nothing new, but effected as it is by the gentlemen just named, it constitutes an immense progress on all that has been hitherto achieved in this direction. The property possessed by gun cotton of dissolving in a mixture of alcohol and ether has been long known. It is known also that the cellulose thus formed can be drawn out into very thin threads, which approach silk so closely that the most practised eye cannot detect the difference. MM. Cadoret and Degraide have succeeded in eliminating all dangerous properties by finding a neutral solvent hitherto unknown for cellulose. In studying the various vegetable fibres most suitable for the manufacture of silk, these gentlemen have discovered that it is at the cellulose of the fern and the artichoke that it is advisable to stop. Of course it is understood that this cellulose must be suitably prepared. It appears that the fir tree, which has already supplied pulps for paper, can also produce artificial silk. Not long ago there was some talk of erecting a factory at Elbeuf for making silk from the fir tree, but it seems to be unknown whether those projects are still entertained."

**"DELIVERY AS REQUIRED."**—At the Huddersfield County Court, yesterday week, before Mr. V. T. Thompson (Deputy-Judge), Messrs. Campbell, Sagar, and Co., yarn merchants, Blackfriars, Manchester, sued Mr. William Hirst, manufacturer, Shaw Carr Mills, Slaithwaite, for £9 13s. 4d. for breach of contract. Mr. Reed (Learyd and Co.) was for the plaintiffs, and Mr. Sykes (Armitage and Sykes) for the defendant. Mr. Reed stated that in July, 1891, Mr. Hoyle, then an agent for the plaintiffs, received from the defendant an order for 100 warps. It appeared, said Mr. Reed, to be a custom in the yarn trade to wait until the market got very low, and then to give a large order, the buyer to give delivery orders as he required the yarn, instead of receiving it all at once. When the markets advanced further deliveries were required. In this case twenty warps were ordered and delivered. Two other lots were taken, and the first lot paid for. On July 31st a slight alteration in the warps was suggested by the defendant and made. Yarns then went down, and orders ceased, forty-two warps having been delivered. By this time—February—the defendant wrote that he had cancelled the orders to Mr. Hoyle, as the warps would not do, and the plaintiffs wrote back drawing attention to the fact that the only complaint made was on July 31st. John Hamilton, plaintiffs' salesman, confirmed this statement, and said that from the time the order was taken the markets went down from 9¼d. to 8¼d. The defence was that the warps were not of sufficiently good quality for defendant's requirements, and the contract was annulled by the plaintiffs' representative. Defendant admitted that he made no complaints to the plaintiffs, but only to their representative, and that he had sold the cloth in which the warps were used, and had received no complaints from his customers. The defendant stated that at the time he signed the cheque for the first lot he was ill in bed, and had not seen the goods. His Honour ruled that only one complaint had been made, and that had been complied with. He therefore gave an order for the plaintiffs for the amount claimed.

**Textile Markets.**

**COTTON.**

**MANCHESTER, FRIDAY.**

The principal factor affecting our market during the past week has been the commotion in the silver market, and the heavy fall in silver and the exchanges with

foreign countries. This has been induced to a large extent by the total collapse of the free silver coinage movement in the United States, on the success of which the great silver-producing and silver-dealing communities were buoying their hopes. The leader of the party in the United States Congress having met with discomfiture has thrown up the endeavour to pass his Bill. The heavy fall that has consequently taken place has affected the exchanges with the great consuming countries of the East to such an extent as to temporarily paralysed business here. All pending offers of orders for those outlets have been withdrawn under apprehensions of a further relapse in the value of the metal. This has completely neutralised the upward tendency of cotton values in the Liverpool market, and threatens, if not arrested, to depress them below any point hitherto touched. There has been a considerable falling off in cotton movements in the States, and on this Liverpool dealers are building great hopes. Information, however, is to hand from numerous points that this decline is not owing to exhaustion, but simply to the widespread prevalence of unfavourable weather for the haulage of cotton. As we have pointed out previously, there is not the slightest reason for alarm, even though henceforward to the end of the season the deliveries should not be more than half of those of the corresponding period of last year.

**COTTON.**—The slight pause in the upward movement of cotton on Friday soon ended, and on Saturday the upward movement was resumed. Operators took a rapid glance over the aspect of matters, and concluding that, if anything, they were favourable to an advance, began to act from that standpoint. Futures advanced, and finally closed 1 to 1½ points on the closing rates of the preceding evening. There was a moderate demand for spots, and the official rates were advanced ¼d. All other growths were dull and tending towards ease. On Monday there was a collapse in the market, the aspect of matters having again begun to look dark. Futures opened weak and lower, and gradually declined to the close, which showed a reduction of 4 to 5 points on the day. There was only a moderate demand for spot cottons, and the official rates were reduced ¼d., the last advance proving this to have had only a few hours of vitality. These fluctuations demonstrate the extreme superficiality of the aspects on which the movements of the market are based, and ought to act as a caution to spinners in the present condition of matters, of the danger of allowing their purchases to be influenced by them. On Tuesday the market showed no signs of revival. Futures fluctuated within a very limited range, and finally closed, shewing a loss of ½ to 1 point. Spots were dull, and declined fully ¾d. in value. Other growths were dull and irregular. On Wednesday, there was no new feature, and only a very limited fluctuation in values. There was a quiet retail demand for spot cotton. Brown Egyptian was reduced ¼d., and the other growths were weak, being much neglected. Futures were hardly changed at the close, being partially ½ point advance for the current month and partially ½ point decline in several others. Yesterday the market was very quiet in the earlier hours, but slightly improved towards the close. The demand for spot cotton from the trade was very limited, and owners responded to what enquiry there was very freely. Quotations were reduced ½d., thus again bringing them down to the lowest point previously touched in this long depression. Other growths were quiet, Brazilian being reduced ¼d. Futures fluctuated, with a downward tendency, and closed 1 to 2 points lower.

The following particulars of the business of the week are from the official report issued by the Liverpool Cotton Association:—

	Import.	Forward.	Sales.	Stock.	Actual
American	42,036	51,071	45,700	1,466,460	2,290
Brazilian	300	1,125	180	50,080	—
Egyptian	12,610	4,677	1,960	144,480	1,248
West Indian	1,852	316	660	33,390	207
East Indian	—	1,786	1,049	39,880	521
Total	56,798	58,975	49,540	1,734,290	4,266

The following are the official quotations of the Liverpool Cotton Association:—

	G.O.	L.M.	Md.	G.M.	M.F.
American	3½	3½	3½	3¼	4
				M.F. Fair.	G.F.
Pernam	3¾	4¾	4¾	4¾	4¾
Ceara	3¾	4¾	4¾	4¾	4¾
Paraiba	3¾	4¾	4¾	4¾	4¾
Maranhm	4	4¾	4¾	4¾	4¾
				Fr. G.F. F.G.F. Gd.	Fr. G.F. F.G.F. Gd.
Egyptian	4½	4½	4½	4½	4½
Ditto white	4½	4½	4½	4½	4½
				Fr. F.G.F. F.G.F. Gd.	Fr. G.F. F.G.F. Gd.
M.G. Broach	—	—	—	3¾	3¾
Dholerah	2½	2½	2½	3	3¼
Oomra	2½	2½	2½	3	3¼
Bengal	—	—	—	2¾	3
Tinnivelly	3	3	3	3	3

\* Nominal.

The following are the values of futures at mid-day on each day of the week—American deliveries—any port; bases of middling; low middling clause; (the fractions are in 64ths of a penny):—

**PRICES OF FUTURES AT 1.35 P.M. EACH DAY.**

	Satur-day.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day.	Friday
March	3-39 40	3-36 8	3-34 v	3-36 37	—	—
Mar-April	3-39 40	3-36 8	3-34 v	3-36 37	3-32 b	3-32 33
April-May	3-40 b	3-36 8	3-34 b	3-36 37	3-32 b	3-32 33
May-June	3-43 v	3-39 8	3-37 8	3-39 40	3-35 8	3-35 8
June-July	3-46 v	3-42 8	3-40 8	3-42 b	3-37 38	3-37 38
July-Aug.	3-49 v	3-45 8	3-43 8	3-45 b	3-40 41	3-40 41
Aug.-Sept.	3-52 v	3-48 8	3-46 8	3-48 b	3-43 44	3-43 44
September	3-54 55	3-50 b	3-48 49	3-50 51	3-46 b	3-46 8
Sept.-Oct.	3-54 55	3-50 b	3-48 49	3-50 51	3-46 b	3-46 8
Oct.-Nov.	3-57 v	3-52 53	3-51 8	3-53 54	3-49 8	3-48 49
Nov.-Dec.	3-59 60	3-55 b	3-53 54	3-56 b	3-51 52	3-51 5
Dec.-Jan.	—	—	—	—	—	—

Price of Mid. American.	3 11-16	3½	3¾	3¾	3 9-16	3 9-16
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Estimated Sales including Spec. and Exports.	8,000	8,000	7,000	8,000	7,000	7,000
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**YARNS.**—Last week's turn-over in yarns was a very disappointing one. Notwithstanding the hardening tendency in Liverpool, spinners did not succeed in selling the production of the week, even on the lowest basis. Saturday last revealed no improvement. On Monday the market was practically disorganised by the fall in the exchanges and the value of silver, and only little trade was discoverable in any section of the market. On Tuesday there was no improvement, and neither buyers or sellers made much attempt to do business, feeling its uselessness until external influences became steadier. Values were somewhat irregular, but even at the lowest were not sufficient to tempt buyers. On Wednesday the market seemed to have recovered a little from the heavy depression of the previous two days, though this was hardly visible in the yarn market. Spinners were in poor plight, as the transactions they could bring to book were few and far between, and only of the most retail character in size. Increased numbers of spindles are being stopped. It seems as if a serious crisis in the spinning trade cannot be long averted without a great change for the better. Yesterday the yarn market was very quiet under the influence of the downward tendency in Liverpool. It was hardly, however, so depressed as in the early part of the week, and here and there a little enquiry came to light, though it hardly resulted in business.

**CLOTH.**—The week opened without any change in the cloth market, unless it were that matters were tending to greater quietude. On Monday there was an almost total suspension of business, owing to the disturbance indicated in the preceding paragraph. Merchants immediately withdrew all offers, being determined to await further developments. The indications of a probable further fall in the value of silver, and consequently in the exchanges, were sufficiently strong to bring about an almost total cessation of business. On Tuesday there was no visible recovery of confidence, and the transactions in cloth were neither numerous nor large. On Wednesday a little more enquiry was forthcoming on Eastern account, but it did not result in any weight of transactions. Some of the enquiries may mature into orders in a few days. For cloths yesterday there was very little new enquiry, and that which had been on the market for a few days was not very easy to work. Here and there a trifling advance was made by buyers upon the lowest rates offered a few days ago, but these left the differences between them and producers too great to be bridged over by any possible concession from the latter.

To-day the market bears a very dull aspect. The Employers' Federation has decided to give a week's notice to all their operatives on the next making-up day and stop all their mills for an indefinite period—that is to say, until the Stalybridge strike is settled.

**WOOLLENS AND WORSTEDS.**

**BRADFORD.**—The wool market was quiet on Thursday. The result of the London sales is just as was anticipated, and had no effect upon either demand or prices in this market. There is great doubt, in fact, whether the prices obtained at the opening sales will be maintained, and this impression tends to want of confidence as to the immediate future of quotations. Business in wool is quite of a retail character and to cover the immediate requirements of spinners. Both English and Colonial wools are in request at late rates. Mohair of low quality in moderate demand. The yarn market is without alteration or improvement. Small orders of a miscellaneous character are placed by merchants, and prices are yielded with less hesitation, but it cannot be



reported that there is any improvement in the amount of business done. The lower prices at the London sales have been fully discounted by yarn spinners, and though values are low they are steadily maintained. The home trade is marked by dulness, and there is little doing in any class of yarns. In the piece market there is rather more activity for some quarters of the export trade, but the demand for the home market is quieter.

**LEEDS.**—The orders for spring goods have fallen off somewhat in comparison to the previous weeks, although offers of job lots have met with buyers. The trade of the season has been fairly steady. Novelties for fall and winter will probably be shewn to a larger extent than usual, not only in suitings, but in dress and mantle goods, the prices of all which will be comparatively moderate. Serges and vicunas keep selling steadily at unchanged quotations. Worsteds do not shew any change. The melton trade is rather slack, but some makers are well off for orders. The South American market is gradually coming round again. The United States demand just now is weak, and there are no shipments to France, except of the very latest novelties. Generally speaking, the foreign demand at Dewsbury and the neighbourhood for rugs is below the average.

**HUDDERSFIELD.**—There has been a moderate attendance of buyers, but as retailers have been quiet owing to the cold weather, merchants have found it difficult to push business. Novelties in fine worsteds have been well enquired for in the quarters where such goods usually find an outlet, foreign houses having operated to a fair extent. The designs of the cheap worsteds shewn are excellent, and have attracted the admiration of buyers. Goods of this class, together with vicunas, have injured the trade in better qualities. Cheap tweeds have been in fair request.

**LONDON.**—Messrs. Schwartz and Co., in their report dated March 29th, say:—The second series of London sales of Colonial wool commenced to-day with catalogues comprising:—

	Bales.	Bales.
Sydney . . . . .	2,257 out of an available total of	106,000
Queensland . . . . .	2,499 " "	59,000
Port Phillip . . . . .	1,654 " "	76,000
Adelaide . . . . .	1,184 " "	27,000
Tasmania . . . . .	" " "	8,500
Swan River . . . . .	455 " "	4,000
N. Zealand . . . . .	2,082 " "	37,500
Cape . . . . .	2,178 " "	38,000
Total . . . . .	12,309 " "	356,000

There was a large attendance of both home and foreign buyers and fairly animated competition. Prices for Australian merino and for Cape wools ruled on the average 5 per cent. lower than at the close of the February series. On crossbred there was no quotable decline, but they also sold in favour of buyers. The arrivals in time comprise 416,296 bales (353,406 bales Australasian and 62,890 bales Cape). Deducting what has been forwarded direct, but adding the wools held over from last series, the total available amounts to about 356,000 bales. As at present arranged, the sales will last until the 7th May.—Bank rate 3 per cent.

**ROCHDALE.**—Home trade houses are now placing season's order transactions, having apparently commenced earlier than usual. Quotations on the whole are firm.

**GLASGOW.**—Messrs. Ramsey and Co., wool brokers, in their report dated 29th March, 1892, say:—Wool: There is still want of activity in the wool market. Consumers' wants are small, and they only buy to cover present needs. At the public sales the attendance was moderate, but competition was slow. Half-bred wools were in fair demand at the lower range of values now current. Cheviots and blackfaced were somewhat neglected. Prices are nominally firm. *Sheepskins:* The supply has rather fallen off, probably owing to the irregularity of recent market operations. As skin wools are exceedingly depressed, and pelts continue to drag only slowly along, recent rates are barely maintained.

**HOSIERY AND LACE.**

**LEICESTER.**—The yarn market is rather brisker; deliveries are larger for immediate consumption, and stocks are not so heavy, but prices continue extremely low. Cashmeres, lambs' wool, and fancy yarns are in fairly good demand, but cottons are flat. The hosiery trade improves slowly, and the demand is very partial. Production is heavy, except in plain Cashmere goods, which are flat on account of the almost total absence of American orders. Elastic web fabrics are in fair demand for Continental markets.

**NOTTINGHAM.**—The Levers department of the lace trade has taken a turn for the better. American and other foreign buyers, as well as home merchants, have operated more freely. The cheaper cotton laces are, however, slow. Silk laces and flouncings are also dull. Silk veilings and nets keep to the front. There is not much change in the plain cotton net trade.

Bolbin nets are still being exported pretty freely, and there is rather more doing in stiff Paris and Paisley nets. Orders for mosquito nets are small. Mechlin, Brussels, and zephyr nets do not sell freely, and prices are about the same. The lace curtain trade is in about the same condition as of late. Made-up goods are selling tolerably well. There is not much alteration in the hosiery trade, and manufacturers are indifferently engaged. The sale of cotton goods does not increase, but there is a fair amount of business doing in merino, cashmere, and woollen hosiery.

**FLAX AND JUTE.**

**DUNDEE, WEDNESDAY.**—Never, probably, in the experience of the oldest jute merchants was the Dundee trade in such a peculiar position. Jute is still held at quite £2 a ton more than it is possible for the spinner to pay. The spinner, after selling his yarn at this loss, is met by the manufacturer, who tells him that he too—if he is to sell his cloth—must sell it under cost. It is plain that old stocks of cheap goods are not yet out of the market; and that some large buyers must still have cheap contracts. Upon these they make their profit, and compel others either to sell much under cost, or to put their goods in warehouse. It begins to dawn upon the trade here that reduction of output, which means greatly enhanced cost, will not put the trade upon a satisfactory basis. Disagreeable for all as it is, the truth must be faced. The goods must be made at a lower cost for production so as to prevent our rivals from taking away the staple trade. *Jute* remains firm, indeed rather firmer to-day, at, say, £21 10s. for good firsts. Yarns are a trifle better, say 3/6d. per pound higher all over from the very lowest point. Hessians are in more demand. Buyers with orders feel that prices cannot recede further, and, therefore, will not risk the rise expected from the diminished output. Only for fine hessians of special qualities, however, are prices firmly maintained. *Flax* with the falling exchange is the turn easier to buy, but the better qualities, especially of brown flax, remain firm. Linen yarns shew no change; if anything, tows are a little less strong. There is an excellent business doing still in linens in some departments. Spring orders are a little late in coming, but, upon the whole, the linen trade is in a fairly healthy state. Arbroath only is exceptionally dull, and runs short time in the heavy flax goods made there. Dundee fancy jute goods are still very quiet. Twines, cords, and ropes are in fair demand, even at the higher list rates quoted generally.

**DRY GOODS.**

**MANCHESTER.**—Heavy rooms have been fairly well employed, and the fancy branches have been busier still. The demand for lace keeps up, and the signs now point to the continuance of a satisfactory season, which has commenced. Cotton laces are in fair demand. Lace generally, in fact, is evidently a favourite for trimmings of mantles and other articles of

ladies' attire. Silks remain slow both for dress and trimming purposes. The linen trade, although prices interfere a good deal with business, is nevertheless slightly improving, with the exception of the shipping department, which remains in the dull condition that has characterised it for several months. The jute situation is unchanged, sales being lower than usual. The calico printing trade is quiet, and South American orders continue to be small. There is some revival, however, in the enquiry from the Plate.

**Joint Stock and Financial News.**

**NEW COMPANIES.**

**LOCK GATE MANUFACTURING COMPANY, LIMITED.**  
Registered by Rawlings and Rawlings, 3, Clifford's-inn, E.C., with a capital of £2,000 in £50 shares. Object, to carry on business as cotton-cloth manufacturers in all its branches. With slight modifications the regulations contained in Table A apply.

**MUTUAL ASSOCIATION OF MERCHANTS OF GREAT BRITAIN AND IRELAND, LIMITED.**  
Registered by Kerr and Lanham, 3, Chichester-terrace, W.C. Object, to protect members against improper claims against them for freight, demurrage, etc. For the purposes of registration, the company is declared to consist of 500 members, with an individual liability, in the event of the winding up of the company, of £20.

**SAMUEL BUCKLEY AND CO., LIMITED.**  
Registered by J. Whitworth, Ashton-under-Lyne, with a capital of £4,000 in £10 shares. Object, to carry into effect an agreement, made March 10th, between S. Buckley of the one part, and J. Charlesworth and J. Buckley of the other part, for the acquisition of the undertaking carried on at the Hookey-hill Tool Works, Hookey-hill, Lancashire, and to carry on the business of tool and machine makers in all its branches. Most of the regulations contained in Table A apply.

**JOHN PRIESTMAN AND CO., LIMITED.**  
Capital, £160,000 in £100 shares. Object, to acquire the undertaking of a worsted spinner and manufacturer, hitherto carried on by John Priestman and Co., at Ashfield Mills and Water-lane Mills, Bradford, Yorkshire. Subscribers:—

	Shares.
F. Priestman, Bradford . . . . .	1
E. Priestman, Bradford . . . . .	1
G. E. Priestman, Bradford . . . . .	1
H. Priestman, Bradford . . . . .	1
A. Priestman, Bradford . . . . .	1
W. Priestman, Bradford . . . . .	1
J. Edmondson, Halifax . . . . .	1

The first directors are the first signatories to the memorandum of association, with the exception of A. Priestman. Qualification, holding shares. Remuneration to be determined.

**Tariff News.**

**NEW SPANISH CUSTOMS TARIFF.**

STATEMENT shewing the RATES of IMPORT DUTY to be levied in SPAIN under the NEW SPANISH TARIFF, compared with the RATES of DUTY hitherto leviable on IMPORTS into that Country.

*Note.*—Up to the 30th June next, when the Anglo-Spanish Convention of 1886 expires, the Conventional rates of the Spanish Tariff will still be levied on British produce, including those of the Franco-Spanish and German-Spanish Treaties which are enumerated in Parliamentary Paper, Commercial No. 15 (1886). (C.—4778).

CLASSIFICATION OF ARTICLES.	Rates leviable by New Tariff of 1st February, 1892.	
	General Tariff.	Special Tariff.
<b>CLASS IV.—COTTON AND ITS MANUFACTURES.</b>		
<i>Group 1.—Raw Cotton.</i>		
Raw cotton, with or without seed . . . . .	Per 100 kilogs. Pes. etc. 1 50	Per 100 kilogs. Pes. etc. 1 25
<i>Group 2.—Cotton Yarns.</i>		
Cotton, spun or twisted in one or two threads, unbleached, bleached, or dyed:—	Per kilog.	Per kilog.
Up to No. 35 inclusive . . . . .	1 50	1 25
From No. 36 upwards . . . . .	2 10	1 75
Twisted with three or more threads, unbleached, bleached, or dyed . . . . .	3 00	2 50
<i>Group 3.—Cotton Tissues.</i>		
Close woven tissues, plain unbleached, bleached, or dyed, in pieces, or handkerchiefs: Up to 25 threads inclusive in the square of six millimetres . . . . .	4 60	3 85
From 26 threads upwards . . . . .	5 20	4 35
Ditto, ditto, printed; also twills and tissues worked in the loom: Up to 25 threads inclusive in the square of six millimetres . . . . .	7 20	6 30
From 26 threads upwards . . . . .	4 80	7 00



*Group 3.—Continued.*

	Per 100 kilograms.	Per 100 kilograms.
Transparent tissues, as muslins, batistes, lawns, organdies, and gauzes of all sorts .. .. .	6 70	5 60
Quiltings and piqués .. .. .	6 30	5 25
Velveteens, corduroys, and other double tissues for wearing apparel .. .. .	7 40	6 20
Tulle .. .. .	12 50	10 45
Lace, other than crochet .. .. .	16 20	13 50
Crochet laces, hand or machine made .. .. .	3 90	3 00
Knitted goods, in pieces, shirts, and drawers .. .. .	5 90	4 90
Ditto, in stockings, socks, gloves, and other articles .. .. .	7 60	6 35

CLASS V.—HEMP, FLAX, ALOE, JUTE AND OTHER VEGETABLE FIBRES AND THEIR MANUFACTURES.

*Group 1.—Raw.*

	Per 100 kilograms.	Per 100 kilograms.
Hemp, raw or hackled .. .. .	12 00	10 00
Flax, raw or hackled .. .. .	3 25	2 70
Jute, manilla hemp, aloe, and other vegetable fibres .. .. .	1 20	1 00

*Group 2.—Yarns.*

	Per 100 kilograms.	Per 100 kilograms.
Yarn of manilla hemp, aloe, jute, and other fibres not mentioned: Up to No. 12 inclusive .. .. .	12 60	10 50
Jute yarns, No. 13 and above .. .. .	58 50	45 00
Yarn of hemp and flax or ramie: Up to No. 20 inclusive .. .. .	58 50	45 00
From No. 21 upwards .. .. .	37 75	27 50
Threads, twisted, of two or more strands .. .. .	1 55	1 20
Rope and cordage .. .. .	24 95	20 80

*Group 3.—Tissues (Note 33).*

	Per kilogram. Pes. cts.	Per kilogram. Pes. cts.
Plain tissues of linen or hemp with or without mixture of cotton: Having up to 10 warp threads inclusive in the square of six millimetres .. .. .	2 55	2 15
From 11 to 24 warp threads inclusive .. .. .	6 40	5 35
Of 25 warp threads and above .. .. .	11 50	9 60
Tissues of linen or hemp, twilled or figured .. .. .	5 45	4 55
Lace .. .. .	37 50	31 25
Knitted tissues .. .. .	13 75	11 45
Plain tissues of jute, manilla hemp, aloe, or other vegetable fibres, with or without admixture of cotton .. .. .	0 70	0 60
Twilled or figured tissues of the same materials, with or without admixture of cotton .. .. .	2 70	2 25
Carpets of the same materials with or without mixture of cotton .. .. .	2 20	2 00

CLASS VI.—WOOLS, BRISTLES, HAIR, AND MANUFACTURES THEREOF.

*Group 1.—Raw.*

	Per 100 kilograms.	Per 100 kilograms.
Bristles and hair, including hair of the camel, vicuna, and of the angora and cashmere goat .. .. .	2 40	2 00
Wool, unwashed .. .. .	20 00	17 00
Wool, washed .. .. .	54 00	45 00
Wool, combed and prepared for yarn, raw carded wools, and waste wool from carding, resulting from the working up of rags, raw or dyed .. .. .	57 60	48 00
Wool, combed or carded, dyed .. .. .	66 00	55 00

*Group 2.—Yarns.*

	Per kilogram.	Per kilogram.
Woolen and worsted yarns, twisted or not, raw or in the grease .. .. .	3 00	2 50
Ditto, ditto, washed or bleached .. .. .	3 10	2 60
Ditto, ditto, dyed .. .. .	5 85	4 5

*Group 3.—Tissues.*

	Per 100 kilograms.	Per 100 kilograms.
Carpets of wool, pure or mixed with other materials .. .. .	2 10	1 75
Felts, ditto .. .. .	1 80	1 50
Blanketings, ditto .. .. .	5 35	4 45
Cloths and all other similar tissues of pure wool, hair, or waste wool .. .. .	12 90	10 75
Cloths and similar tissues having either warp or woof, wholly of cotton or other vegetable fibre .. .. .	7 80	6 50
Knitted goods, whether mixed or not with cotton or other vegetable fibres .. .. .	10 40	8 65
Other tissues of pure wool, hair or waste wool .. .. .	10 50	8 75
Similar tissues when either the warp or woof is wholly of cotton or other vegetable fibre .. .. .	6 45	5 40

	Per 100 kilograms. Pes. cts.	Per 100 kilograms. Pes. cts.
Astrakans, plushes, and velvets of wool or hair, also containing mixture of cotton or other vegetable fibre .. .. .	5 20	4 00
Tissues of horse or other hair, with or without mixture of cotton or other vegetable fibre .. .. .	6 00	5 00

CLASS VII.—SILK AND MANUFACTURES THEREOF.

*Group 1 (Note 38).*

	Per 100 kilograms.	Per 100 kilograms.
Cocoons, waste from cocoons, and silkworms' eggs .. .. .	0 10	0 10

*Group 2.—Raw.*

	Per 100 kilograms.	Per 100 kilograms.
Silk, raw or spun, but not twisted .. .. .	0 30	0 25
Ditto, twisted .. .. .	5 20	4 00
Ditto, ditto, dyed .. .. .	6 50	5 00
Waste silk, combed or carded .. .. .	0 20	0 15
Ditto, spun, but not twisted .. .. .	0 30	0 25
Ditto, twisted, of two or more threads .. .. .	2 60	2 00
Ditto, ditto, dyed .. .. .	3 90	3 00

*Group 3.—Tissues.*

	Per 100 kilograms.	Per 100 kilograms.
Tissues, plain or twilled .. .. .	30 00	25 00
Velvets and plushes .. .. .	36 00	30 00
Tissues of waste or floss silk, of raw silk, and of waste silk mixed with silk .. .. .	15 00	12 50
Tulle lace, edgings of silk or waste silk .. .. .	29 25	22 50
Knitted wares of silk or waste silk .. .. .	30 00	25 00
Velvets and plushes of silk or waste silk, with either the warp or woof wholly of cotton or other vegetable fibre .. .. .	24 00	20 00
Tissues of silk or waste silk, with either the warp or woof wholly of wool or hair .. .. .	15 00	12 50
Other tissues of silk or waste silk, with either the warp or woof wholly of cotton or other vegetable fibre .. .. .	12 00	10 00

Gazette News.

PARTNERSHIP'S DISSOLVED.

J. N., B., W., G. H., J., and A. Hirst, Batley, trading as the Alexandra Mill Company; as regards J. N., B., and W. Hirst.  
J. and A. Nelson and J. Lee, Trawden, Lancaster, cotton manufacturers; as regards J. Lee.  
J. P. Leite and J. O'Neill, Sackville-street, Manchester, merchants; as regards J. O'Neill.

Patents.

NOTICE OF REMOVAL AND CHANGE OF FIRM.

E. K. DUTTON & CO.

(Late DUTTON & FULTON).

CHARTERED PATENT AGENTS

Removed from 1, ST. JAMES'S SQUARE, to QUEEN'S CHAMBERS, 5, John Dalton St., MANCHESTER.

SPECIFICATIONS PUBLISHED.

Each of the following Specifications may be purchased at the Sale Branch, 38, Curcitor-street, London, for the price of 5s., or may be ordered on the Postal Request, price 5s., which is now on sale at all the principal Post Offices in the United Kingdom.

1891.  
4,172. EASTWOOD. Clothing carding machines.  
6,621. BOLLMANN. Plating machines.  
6,972. PITT (L. Casella and Co.). Dye-stuffs.  
7,068. CLARINGBURN. Knitting machines.  
7,258. JOHNSON (Badische Anilin and Soda Fabrik). Dyes.  
7,379. SHAW. Driving bands, tapes, etc.  
7,633. WESTWELL. Galico block-printing machines.  
7,711. HOLLINGWORTH. Looms.  
7,925. REBLA. Twilled cloths.

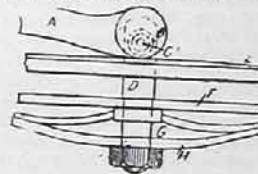
1892.

- 1,176. BOTTGER AND ZEUNERT. Carding machines.

ABSTRACTS OF SPECIFICATIONS.

15,504. Oct. 1, 1890. Spinning. J. W. BIRKINGTON, 13, Upper Mount-street, Dublin.

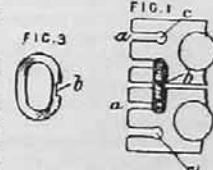
Scutching and heckling flax, etc.—The fibre is held during the scutching or heckling operation by a clamp, the lower jaw or plate F of which is pressed upwards by springs G, H and the



upper plate E is forced down upon it by a cam B formed on the end of an operating lever A. To facilitate the introduction of the material, the pivot pin C takes loosely into an aperture in the central pillar D, so that the upper plate E may be completely removed. For scutching machines the cam B is made double, or is provided with two cam surfaces, either of which may be brought into operation as desired by moving the lever A in one direction or the other from the vertical position.

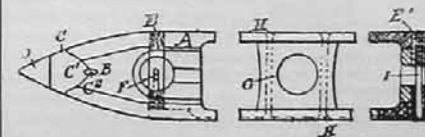
15,590. Oct. 2, 1890. Looms. F. P. MIDDLETON, Adlington, near Chorley, Lancashire.

Pattern chains.—Metal pattern cards are connected by means of plain rings a which are indented at one side to admit of them being passed down slots a in the cards into the holes c, so that, on turning them, they will be secured against accidental withdrawal.



15,611. Oct. 2, 1890. Looms. W. COURTENAY, 14, Dey-street, New York, U.S.A.

Shuttles are made wholly or partly of vulcanized fibre, leatheroid, celluloid, or similar materials. The sides A may be made of strips of the fibre and may be bent down and cemented to blocks B of wood or fibre, the parts being further



secured by screw bolts E, E', metal ferrules C and metal tips D. The thread-hole passes through the bolt E and the substance of the shuttle, and a bolt I forms a pivot for the tongue. A brace or stretcher is provided at G. In some cases the body of the shuttle may be made from a tube of fibre, shaped upon mandrels, the ends being specially formed. The ferrules C may have inclined sided ears C' with their points turning into indents



Ca to prevent the yarn which is being woven from catching against the edges.

**15,701.** Oct. 4, 1890. **Fabrics; looms.** J. H. CLIBRAN, Oldfield, Altrincham, and G. BROWNING, Sussex street, Lower Broughton, Manchester.

Internal selvages are produced by cutting the wefts between the warps of the respective widths, and turning the severed ends into the shed. To effect this, the loom is provided with apparatus comprising rippers, which, when the shed is changed, seize the weft last beaten up; a sliding knife then severs the weft, the two cut ends being caught by oppositely moving hooks and pulled into the shed. Details are given showing how to effect these operations. *Drawings.*

**15,702.** Oct. 4, 1890. **Measuring fabrics.** C. CHEVRON, 30, Boulevard-street, Germain, Paris.

The fabric is pressed by endless bands on the pulleys into contact with a cylinder carried by two wheels on a shaft. Numbering stamps are provided from a double wheel through a hole in the cylinder by a lever for respectively inking the stamps and printing the numbers. A plating apparatus, consisting of a number of links, pivoted to side rods and to each other, is situated at the outlet end of the machine. *Drawings.*

**15,874.** Oct. 7, 1890. **Warp knitting machines.** E. FEHRENDEN and F. KRUSZNER, both of Goppersdorf, near Burgstadt, Saxony.

A wire bar is supported by props behind the thread-guides to relieve them of the strain of the thread.

**15,856.** Oct. 7, 1890. **Stockings, etc.** DORR and CO., 9, Rue de Florence, Paris.

Stockings, half-hose, and similar articles are formed with a seam along one side of the foot, and a false seam along the other. For this purpose the heel is knitted in the ordinary manner, and the two parts of the heel are turned away on opposite sides of A B, which is continued to K S to form the upper part of the foot. For the bottom of the foot, additional needles C E are taken into action, and the fabric is narrowed as required to S L. The toe is then formed by narrowing from both K S and S L. The false seam B S H is formed by a running mesh, or by inverted loops formed by a separate self-acting needle.

**15,918.** Oct. 8, 1890. **Needlework.** M. HAESSLER, Magdeburg.

Marking fabrics for use as ground materials for fancy needlework to facilitate proper placing of the stitches. A network of lines is formed on the fabric by making small depressions at regular intervals by suitable plates, rollers, or other means. These marks may be afterwards removed by dampening the fabric.

**15,895.** Oct. 7, 1890. **Tufted fabrics.** A. BOLLENTIN, 542, West 40th-street, New York; R. STUBTZ, 615, West 22nd-street, New York; and A. CUDDELL, Randolph and La Salle-street, Chicago, Illinois.

Fabrics for rugs, etc., are made up of a warp *a*, and a weft, and a series of tufts *e*, each of which encircles one warp thread and is looped around the back of the next warp thread. The weaving is effected in a loom provided with two toothed racks in front of the reed, such racks having teeth pointing respectively up and down, and being reciprocated oppositely at times; the tuft yarns are fed through tubes above and are seized by nippers, which rise through the warp thread, and are carried down and then up, the tufts being then cut and released, to produce the required knitting-in.



**PATENTS.**  
**W. P. THOMPSON & CO.**  
Agents for procuring Patents and Registering Trade Marks and Designs.  
**6, Bank St. (Exchange), Manchester.**  
6, Lord St., LIVERPOOL; and 323, High Holborn, LONDON.  
Largest Patent Agency in Great Britain.  
"Facts for Inventors" (Pamphlet sent free on application)

## TEXTILE MACHINERY, APPLIANCES, &c.—DIRECTORY OF MAKERS.

### Auctioneers:

Rushton, Edward, and Son, Blackburn, and Manchester.  
Salisbury & Hamer, Blackburn and Manchester.

### Bandings, Tape and Tubular:

Hart, Thomas, Blackburn.

### Belting:

Fleming, Thos., Son, & Co., Halifax.  
Reddaway, F., and Co., Pendleton.  
Rossendale Belting Co., Manchester.  
Sampson and Co., Stroud.

### Bobbins, Spools:

Dixon, John, & Son, Steeton, near Keighley.  
Kay, John, Rochdale.  
Livesey, Henry, Limited, Blackburn.  
Wildman, T., & Co., Caton, Lancashire.  
Wilson Brothers, Limited, Todmorden.

### Boilers:

Fernibough, J., & Sons, Stalybridge.  
Galloways, Limited, Manchester.

### Braiding Machinery:

McGowan & Hadwen, Manchester.

### Calenders:

Hall, Robert, & Sons, Bury.  
Hoyle, E., and Sons, Limited, Halifax.

### Card Clothing:

Sykes, Joseph, Brothers, Huddersfield.  
Wilson & Ingham, Liversedge.

### Card Grinding Machinery:

Dronfield Bros., Ltd., Oldham.

### Cement, Mineral Fusible:

Fox and Williams, Manchester.

### Chaining Machine:

Hurst, W., & Co., Rochdale.

### Cop-Tubes:

Jagger & Co., Oldham.

### Cop-Tubing Apparatus:

Jagger and Co., Oldham.

### Cotton Driving Ropes:

Hart, Thomas, Blackburn.

### Crystoleine:

Wells, M., & Co., Manchester.

### Doffing Comb Motion:

Brooks & Doxey, Manchester.

### Driving Ropes, Bandings, &c.:

Hart, Thomas, Blackburn.  
Kenyon & Sons, Dukinfield.

### Drying Machinery:

Hall, Robert, & Sons, Bury.  
Whiteley, Wm., & Sons, Huddersfield.

### Electric Lighting:

Woodhouse & Rawson, United, Ltd., London.

### Emery Filleting:

Dronfield Brothers, Oldham.

### Engines:

Goodfellow, Ben., Hyde.  
Musgrave and Sons, Ltd., Bolton.

### Fire Hose:

Reddaway, F., & Co., Pendleton.

### Fire Pumping Engines:

Worthington Pumping Engine Co., London and Manchester.

### Grinding Apparatus for Flats:

J. Jones, Dukinfield.

### Fustian Cutting Machines:

Lockwood and Keighley, Huddersfield.

### Humidifiers:

Mathews and Yates, Manchester.  
Parsons, P., Blackburn.

### Hydraulic Presses:

Dickinson, Wm., & Sons, Blackburn.  
Hall, Robert, & Sons, Bury.  
Livesey, Henry, Limited, Blackburn.

### Hydro-Extractors:

Broadbent, Thomas, and Sons, Huddersfield.  
Watson, Laidlaw & Co., Glasgow.

### Indicators:

Orme, G., and Co., Oldham.

### Jacquard and Card Cutting Machinery:

Ayrton, Wm., and Co., Manchester.  
Devoe & Co., Manchester.  
McMurdo, James, Manchester.

### Knitting Machinery:

Harrison, W., Manchester.  
Rothwell, W. & Co., Limited, Bolton.

### Lattices, Pegs, Jacquard Slips, &c.:

Livesey, Henry, Limited, Blackburn.

### Looms, etc.:

Butterworth and Dickinson, Burnley.  
Dickinson, Wm., & Sons, Blackburn.  
Haeking and Co., Bury.  
Hall, Robert, and Sons, Bury.  
Hutchinson, Hollingworth, and Co., Dobcross, Oldham.  
Livesey, Henry, Limited, Blackburn.  
McGowan and Hadwen, Manchester.  
Platt Brothers and Co., Limited, Oldham.  
Tattersall & Holdsworth, Burnley.

### Machinery (Bleaching, Dyeing, Printing, &c.):

Hawthorn, John, & Co., New Mills, Stockport.  
Dickinson, Wm., & Sons, Blackburn.  
Hall, Robert, & Sons, Bury.  
Klauder-Weldon Dyeing Machine Co., Huddersfield.  
Mather and Platt, Manchester.  
Whiteley, Wm., & Sons, Huddersfield.

### Machinery (Cotton Preparation, Spinning, Doubling, etc.):

Ayrton, Wm., and Co., Manchester.  
Bethel, J., Manchester.  
Brooks & Doxey, Manchester.  
Coulthard, T., & Co., Preston.  
Curtis, Sons, & Co., Manchester.  
Dobson & Barlow, Ltd., Bolton.  
Guest and Brookes, Manchester.  
Hetherington, John, & Sons, Ltd., Manchester.  
Hall, Robert, & Sons, Bury.  
Howard and Bullough, Ltd., Accrington.  
Lees, Asa, and Co., Limited, Oldham.  
Lord Brothers, Todmorden.  
Platt Brothers and Co., Limited, Oldham.  
Stott, J. H., Rochdale.  
Stubbs, Joseph, Manchester.  
Tattersall & Holdsworth, Burnley.  
Taylor, Lang and Co., Stalybridge.  
Threlfall, Rd., Bolton.

### Machinery (Flax, Tow, Jute, &c., Preparation and Spinning):

Fairbairn, Naylor, Macpherson & Co., Leeds.

### Machinery (Sewing and Card-lacing)

Singer Manufacturing Co., London.

### Machinery (Thread):

Ayrton, Wm., and Co., Manchester.  
Brooks & Doxey, Manchester.

### Machinery (Silk):

Brooks & Doxey, Manchester.  
Coulthard, T., & Co., Preston.  
Dobson & Barlow, Ltd., Bolton.  
Guest and Brookes, Manchester.  
Hall, Robert, & Sons, Bury.  
McGowan and Hadwen, Manchester.  
Platt, Brothers and Co., Limited, Oldham.  
Stubbs, Joseph, Manchester.  
Sykes, John, and Sons, Huddersfield.  
Taylor, Lang and Co., Limited, Stalybridge.

### Machinery (Sizing, Filling, &c.)

Dickinson, Wm., & Sons, Blackburn.  
Hall, Robert, & Sons, Bury.  
Livesey, Henry, Limited, Blackburn.  
Whiteley, Wm., & Sons, Huddersfield.

### Machinery (Soaping, etc.):

Mather and Platt, Manchester.

### Machinery (Woolen and Worsted):

Brooks & Doxey, Manchester.  
Coulthard, T., & Co., Preston.  
Curtis, Sons, & Co., Manchester.  
Dobson & Barlow, Ltd., Bolton.  
Guest and Brookes, Manchester.

### Hetherington, John, & Sons, Ltd., Manchester.

Hall, Robert, & Sons, Bury.  
Lees, Asa, and Co., Limited, Oldham.  
Platt Brothers and Co., Limited, Oldham.  
Stubbs, Joseph, Manchester.  
Sykes, John, and Sons, Huddersfield.  
Taylor, Lang and Co., Stalybridge.  
Tattersall & Holdsworth, Burnley.  
Whiteley, Wm., & Sons, Huddersfield.  
Needles for Hosiery, &c. Machinery:  
Ellis, Philip, Lenton, Nottingham.

### Oil:

Wells, M., & Co., Manchester.

### Oil Cans and Oilers:

Jagger & Co., Oldham.

### Oilcloth Machinery:

Ayrton, Wm., and Co., Manchester.

### Patent Agents:

Dutton E. K., & Co., Manchester.  
Thompson, W. P., & Co., Manchester, Liverpool and London.

### Pickers:

Bromley, Thomas, Bolton.

### Pistons:

Lancaster and Tonge, Pendleton.

### Pulleys:

Richards, Geo., and Co., Broadheath.  
"Unbreakable" Pulley and Mill Gearing Co., Limited, Manchester.

### Pumping Engines:

Worthington Pumping Engine Co., London and Manchester.

### Roller Leather:

Meredith-Jones, J., and Sons, Wrexham.

### Rust Preventives:

Wells, M., & Co., Manchester.

### Shuttles:

Hall & Sons, Bury.  
Kay, John, Rochdale.  
Livesey, Henry, Limited, Blackburn.  
Wilson Brothers, Limited, Todmorden.

### Shuttle Swells:

Hall, Robert, & Sons, Bury.  
Livesey, Hy., & Co., Ltd., Blackburn.  
Whalley, J., Blackburn.

### Sizing and Filling Preparations:

Adley, Tolken, and Co., Blackburn.  
Eastwood, James, Manchester.

### Smoke Consumers:

Automatic Smoke Prevention Syndicate, Ltd., Manchester.  
Greaves, W. McG., Manchester.

### Sprinklers, Automatic:

Dowson, Taylor & Co., Ltd., Manchester and London.

### Witter & Son, Bolton and London.

### Steam Traps:

Lancaster and Tonge, Pendleton.  
Whiteley, Wm., & Sons, Huddersfield.  
Crowley and Co., Ltd., Sheffield.

### Temples, etc.:

Blezard, James, and Sons, Padiham.  
Brooks & Doxey, Manchester.  
Hall, Robert, & Sons, Bury.  
Lupton Brothers, Accrington.

### Tools (Machine):

Hetherington, John, and Sons, Manchester

### Ventilation:

Mathews and Yates, Manchester.  
Parsons, P., Blackburn.  
Pickup, J. H., & Co., Ltd., Bury.

### Warping Machinery:

Bethel, J., Manchester.  
Hall, Robert, & Sons, Bury.  
Livesey, Henry, Limited, Blackburn.  
Stott, J. H., Rochdale.  
Whiteley, Wm., & Sons, Huddersfield.

### Waste (Cotton) Picking Machinery:

Brooks, Samuel, Manchester.

### Wool Extractors:

Jarman & Son, Huddersfield