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THE NEXT AMERICAN COTTON CROP.

Already the cotton statisticians are beginning to forecast the size of the next cotton crop, and they will no doubt make it low enough to deduce therefrom a conclusion that the trade ought to pay a good round price for the stocks now in hand, and proceed to transfer them from the hands of the present holders to their own. From a spinner's point of view we cannot see that there would be the slightest wisdom in doing this, as in the existing languid state of trade it is quite impossible to obtain even a return of the outlay upon cotton at this price, plus the cost of transforming it into yarn and cloth, when the latter are offered in the market. A great portion of the late nominal advance quickly disappeared, though a renewed movement, based upon the occurrence of floods in the States, has carried it up a point further. The first advance was not a legitimate one, as it arose from the disturbance in the spinning branch and the apprehension that the late lock-out might have endured considerably longer than has proved to be the case. What was affected therefore was simply a transfer of a portion of spinners' stocks to manufacturers at a more or less fictitious value, as the latter are likely to find out to their cost. Now this transfer does not mean that the transferred yarn is already consumed, or even that the manufacturers have secured cloth orders that will absorb it. When it is considered that a large number of looms are stopped, and that these are increasing, it is a fair inference to draw that they have not. That being so, they are not likely to add to these stores any more than is necessary to keep their stocks sorted up so as to meet immediate requirements without inconvenience. That this is the position of the trade has been demonstrated already by the countermands for the delivery of yarns that spinners have already received. The latter will therefore be spinning on merely with the effect of replenishing their stocks in their cellars. As manufacturers' stocks go down theirs will go up, and the former will only draw upon the latter according to their necessities. The dulness of the demand for cloth sufficiently indicates that these will not be urgent, and in that event it looks likely that the prices of yarn will run down to or very near the low point from which the upward movement started. The renewal of the movement has no better basis. Therefore for spinners to load themselves with cotton at the present or higher prices would be fatuous in the extreme. It would be assuming a very great risk to allow themselves to be influenced by any forecasts that the crop of cotton just put into the ground will be smaller than the last two. It may, on the contrary, be quite as large; but this we regard as exceedingly improbable. Were we inclined to hazard a guess at this very early period, we should say that the factors of which cognizance can be taken to-day, plus future probabilities, would warrant us in concluding that the next crop will reach 8,000,000, and we think these figures will prove to be approximately near the actual result. But of course they may be greatly enlarged by a third exceedingly fruitful growing season, and on the other hand be greatly reduced by a very adverse season, an extensive blight, or a remarkably early and wide-spread killing frost. With merely an average season in all respects, we feel that the trade will be justified in looking for a crop of the weight we have stated.

They may thus consider whether with the supplies already existing such a crop would not prove quite sufficient, along with probably a much better crop from India than the past one, to provide an abundant supply for the world's requirements, at the present or even lower rates. But whether this be assumed or not, the considerations we have advanced ought to be strong enough to induce spinners to await further developments before accepting the invitations of the Liverpool and New York dealers to invest in either spots or futures, with a view of ultimately turning them into yarn. We have nothing to say on the matter of speculation pure and simple; the speculator must take his chance in the market.

SERICULTURE IN BRUSA.

As satisfactory statistics are not forthcoming, it is impossible to give exact returns as to the average yield in cocoons of the different races of silk-worms reared in this district, but according to the *Bulletin* of the French Chamber of Commerce in Constantinople, it may be taken that the average yield for eggs of the same race and the same quality is not inferior to that obtained in France or Italy. The general production of the province of Brusa was:—For 1889, 2,350,000 kilos.; for 1890, 2,343,000 kilos.; and for 1891, 2,230,000 kilos. (estimated amount). The eggs are no longer obtained from abroad in the same proportion as was the case a year or two ago. Eggs of the yellow sort imported from France are giving way to what is called the Bagdad variety, whereas in 1888 the yellow race represented 60% and the white race 15%; it is supposed that in 1891 the proportions were 10% of the yellow and 90% of the white (or Bagdad) kind. The growth of the mulberry tree has increased greatly during recent years. Government statistics show that the new plantations made four years ago in the vilayet have doubled the area of ground under mulberry trees. This circumstance must of necessity encourage the growth of sericulture, and several new reeling establishments are already in preparation, as the old ones are no longer sufficient to deal with the present production.

A CHINESE HAND-LOOM FABRIC.

Mr. George Phillips, the British Consul at Foochow, in a report on the trade of that place for the past year, notes the fact that the imports of cotton yarns, which chiefly come from Bombay, were valued at £16,490, as against £2,060 in the previous year. The explanation of these abnormally increased imports appears to be found in a new industry introduced by the gentry of Foochow, with a view to alleviating the great distress prevalent in the city and suburbs. This is the manufacture of a cotton cloth closely resembling grey shirtings. The cloth is made in pieces of 15 inches in breadth and 22 feet in length, which are sold for 400 cash (about 1s. 2½d.) apiece, and is much sought after by the natives, not only on account of its low price, but also because, owing to the absence of chemical preparations, it outlasts the imported article. The hand-loom with which the cloth is manufactured is simple in the extreme, and costs only about 15s. complete. The working, moreover, is so simple that a perfect knowledge of its use can be acquired in a very few days. There are some 10,000 of these looms at work in the country round, most of them in the houses of the artisans using them. It is computed that the hands earn from 90 cash to 200 cash per diem, according to their ability. So eagerly is this fabric bought that, in spite of all the endeavours of the manufacturers, the supply cannot be made to keep pace with the demand, which is likely to continue. The cloth can be sold at the low price above quoted owing to the

authorities having abstained from levying any import on it, and it is consequently likely to prove a serious rival to Manchester goods, which are liable to both import and lekin duties. As, on the other hand, the only material used in its manufacture is Indian cotton yarn, the native product not being suited for the purpose, this trade may become worthy of the attention of those concerned with the export of the staple from Bombay. Our Consul adds that the Foochow trade in Manchester goods, which is solely in native hands, (foreigners not being willing to give the long credit demanded), has been ruinous to those engaged in it. The dealers just managed to tide over the new year, and to keep afloat by getting their bills renewed; but unfortunately this accommodation did not save them, for three of the largest firms engaged in the business are now insolvent. The only bright outlook in the trade of the port is the rapid progress made by the newly started industry of cotton cloth manufacture alluded to above. The import of the yarn is at present wholly in the hands of a number of petty native dealers, who purchase it severally in very small quantities. The foreign merchant, Mr. Phillips thinks, may possibly succeed in getting this trade into his hands, but the great difficulty against which he will have to contend will be the refusal to deal with him unless he gives long credit.



FIG. 3.



FIG. 4.

SWEDISH EMBROIDERIES.

Sweden is a country which differs from many other civilised countries in that its inhabitants carefully preserve many peculiarities of dress and manners. The country people delight to wear their native costumes, instead of foolishly aping the fashions of the towns. In the bathing places on the North Sea and the Baltic stylish Swedish ladies vie with one another in their original toilettes of native origin, which are often graceful and always exceedingly picturesque. The children are often seen attired in the becoming costumes of Dalecarlia and Schonen, and even their dolls wear the curious pointed caps and variegated aprons of the country women. Everywhere in the shops of the larger towns of Sweden are exhibited embroideries and stuffs of very peculiar design, and strong but harmonious colouring. These are modern products made at home, which

have been intelligently and successfully wrought out after good old models, so as to suit the needs of to-day. Even now, as in very early times, most of these products—not all—come from the South Swedish provinces of Skane or Schonen, the business having now been taken in hand by wide-awake firms in Stockholm, Lund, and Gothenburg. The most prominent of these firms are the company of Hand-arbetets-vanner, in Stockholm, and Thora Kulle, in Lund. But goods of capital quality are offered also by the firms of Ellen Ahlberg, in Göteborg, Borgs Söner, in Lund, the Skola for Hemsloid, in Göteborg, the Svensk Kunstlojd-Ut-ständning, in Stockholm, and others. All these articles—pocket handkerchiefs and table cloths, curtains and furniture stuffs, carpets, aprons, collars, cuffs, purses, and covers for cushions—are made by hand without the aid of machines, and are produced not in factories but at home, either by means of the embroidery needle, a sort of scissors, or on a peculiar loom of primitive construction, with upright



FIG. 1.

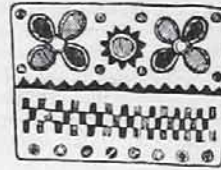


FIG. 2.



FIG. 5.

warp, like the loom for Smyrna tie-carpets. Particularly charming are the little bags for money or keys, made partly of leather and partly of wool, and worn at the belt by ladies and children. They exhibit an interesting combination of plaiting and two kinds of embroidery. They strike not only by their general grace of form, but also by the exceedingly effective, lively, and yet harmonious colouring of their ornamental motifs, which are mostly geometric, the sharp outlines being agreeably softened by details which are either sewn on or embroidered. Figures 1 and 2 represent purses, and Fig. 3, a bag for keys. Of the articles produced on looms, the most important are the parti-coloured woollen stuffs, patterned with designs exhibiting generally horizontal stripes, and worked up into curtains, table cloths, covers for furniture, and cushions. They almost uniformly shew strict forms, mostly

geometrical, sometimes vegetable motifs, or very naive representations of animals or human beings, but always in such full harmonious tones that the impression is exceedingly agreeable. Fig. 4 represents part of a screen for a wall, embroidered after the Gobelin-stitch manner, by Ellen Ahlberg, of Göteborg; Fig. 5 a curtain fabric by the same; and Fig. 6 a curtain. We are indebted for these notes to an article by George Botticher, in the Leipzig Monatschrift.

THE INVENTOR OF THE SEWING NEEDLE.

Horace mused on the marvellous heroism of the man who first ventured in a frail wooden craft on the angry sea. Whoever he was he must have been very bold and ingenious. Not less was the ingenuity of the remote unknown pioneer of sewing. His strength of nerve, indeed, was not appealed to as has been the case with many of his inventive brethren, but his constructive capacity was probably quite equal to that of any of them, and the results of his labour were not less widely extended and wonderful. Little did he dream of the gigantic harvest which his far-off descendants would gather in from the tiny seed sown by him very probably under the pressure of imminent need. Were he to be led through a modern clothing factory, with its busy steam-driven sewing machines making a couple of thousand stitches or more per minute, he would find it hard to believe that there was any connection between such elaborate machinery and the primitive needle by which he managed to join skins or



FIG. 6.

fabrics together to make himself a garment. And yet the machines referred to are as certainly derived from his invention as the acorn is the product of the oak. But who was this remote father of the sewing machine? Where did he live, at what time, and under what conditions? The earliest records are silent. No hieroglyphics of the valley of the Nile have immortalised his memory; no brick or cylinder covered with cuneiform characters has preserved his name. Arabian tradition, however, professes to be able to help us. According to it the patriarch Enoch was the inventor of sewing. If so, then certain textile workers can boast of a grander ancestry than can be claimed by the proudest nobles or the mightiest kings. Their progenitor was not a selfish conqueror, or a murderous marauder, but a man who was taken to heaven because he was too good for earth!

PURIFICATION OF THE MERSEY AND THE IRWELL.

There is good news for Lancashire. The Mersey and the Irwell have to be purified; that the law has declared; but the good news is that the joint committees of the two rivers and their tributaries have agreed with the representatives of the manufacturing interests as to what and how much shall be done. A bill is being promoted embodying the requirements of the case, and the threatened opposition of the manufacturing interests has been withdrawn. The result is one on which everybody interested is to be congratulated. With clean rivers and pure skies Lancashire will not know itself in a generation, it will be so much changed, whilst the remembrance of the present days will only exist as a dark tradition of evil times, hardly to be credited. We trust this pleasant prospect may soon be realised.

COTTON-GROWING IN CENTRAL ASIA.

There is a general idea in this country that the attempts at cotton-growing in Asiatic Russia have proved eminently successful. A Continental contemporary, however, has been collecting information from various quarters regarding these endeavours, and comes to the conclusion that the results, even in regard to the native cotton industry alone, are on the whole inconsiderable. In Tiflis, for example, the cultivation of cotton is said by European papers to have been carried on with good results, but according to a German consular report these statements are not to be accepted without reserve, as cotton can only be grown where there is a proper supply of water, which in those districts is the case only to a limited degree. In the oasis of Merv also the cultivation of cotton is said to have failed. Soon after the completion of the Central Asia Railway large sums of money were invested in the establishment of a cotton plantation, and sanguine hopes were entertained as to the result. These hopes, however, are declared to have proved fallacious, and the proprietors have abandoned the undertaking. The Russian Government, strange to say, shewed itself unfriendly to the enterprise, and the difficulty of procuring an adequate supply of water has been a serious obstacle. In Turkestan, on the contrary, the growers of cotton have met with strong support from the Government. All the cotton produced in Russia remains in the country, but meets only a small part of its requirements.

HIGH PROTECTION AND DEAR PLUSH.

In one respect, at least, the McKinley Tariff has been a pronounced success. The United States are no longer exclusively dependent upon Europe for their supplies of plush, for that article can now actually be produced in the Republic, as far as the cheaper grades are concerned, at a profit in competition with the "pauper" products of Europe—with the help of a very, very high tariff, which of course makes all the difference. It has been acknowledged by a journal published at Rome, N.Y., in a paragraph quoted by the *Bradford Observer* over six weeks ago, and since copied by some of the monthly reviews, that the selling price of plush in the Republic under the present tariff is, from the evidence of Protectionists themselves, higher by far than it ever need be. The inducements to European manufacturers to open mills across the Atlantic are for this reason almost irresistible; and we are not surprised to hear that Messrs. Henry Lister and Co., Ltd., of Huddersfield, contemplate transferring their operations to the States. The firm, it will be remembered, was in difficulties recently, their failure being due to the operation of the McKinley Tariff.

WOOL GROWERS AND THEIR AGENTS
versus WOOL BUYERS.

It is within the knowledge of many of our Yorkshire readers that at the Australian wool sales for some years past there has been a good deal of mutual animosity shewn between buyers and brokers. This is said to be due to the "dictatorial tone" adopted by buyers, which, in the London market, has been strongly resented by selling brokers. At the opening of some recent Melbourne and Sydney sales, a dispute took place, which attracted a good deal of attention in the Colonies, in London, and in Yorkshire, where the principal actors are well-known. The buyers accuse the brokers and officials of the exchanges of treating them like a mere flock of sheep. In London the Wool Importers' Committee has, however, always insisted on fixing its own conditions of selling. The London auctioneers, as representatives of the owners or sellers, are of one mind and method in regard to keeping absolutely within their own discretion the power to determine on its own merits every dispute. In illustration of the firmness of the Importers' Committee it is stated that when, a few years ago, the question of advancing biddings by ½d. per lb. instead of by ¼d. per lb. as hitherto practised came up for settlement, owing to the pressure put upon merchants by colonial constituents, the buying fraternity indulged in a strike, prophesying that the sales could not possibly be conducted under this new condition. The merchants carried their point, and the trade has continued to increase by leaps and bounds, and nobody feels the slightest inconvenience by the innovation, while many sellers have the comfortable conviction that on low-priced lots, especially Adelaides, they often secure an extra farthing per pound owing to the change. This is a view from the merchants' standpoint, and there are no doubt buyers who would dissent from it. Another cause of dispute in the London sales is that sometimes a lot is claimed by two buyers at the same price. If one of the disputants advances on the offer, it is open for others to again commence bidding. Sometimes the auctioneer will ask the buyers for a vote on a doubtful point, and then it is found that the Yorkshiremen generally support their countryman, while the foreigners, whether they understand the subject or not, support the foreign buyer.

THE DEVELOPMENT OF THE JUTE TRADE.

No better picture of the progress of the jute industry during the past 60 years could be presented than by the tables of jute exports which Mr. G. M. Blacker recently prepared for a contemporary. Rejections appear to have been shipped as inferior jute until the season 1865-66. Up to 1868 cuttings were valueless, and were thrown into the river Hooghly at the expense of the owners. About this period Mr. Herbert Knowles, of Messrs. George Henderson and Co., agents, Bally Paper Mills, discovered a process for making a coarse paper out of jute cuttings, and he quickly cleared out all the old stocks at nominal rates. The Americans soon heard of this, and went in for cuttings in 1871-72, and have ever since been the largest buyers. Something, however, appears to have gone wrong this season, as although the shipments have only been 106,909 bales against 459,304 last year, over 12,000 bales have been exported to Europe, which clearly shews that butts are not wanted in America except when cheap. In 1828 the exports of jute from India amounted to 101 bales. In 1849 the figure was 100,726 bales, and although there have been violent fluctuations in the quantity shipped, the general tendency has been towards an increase. The years 1863, 1864, and 1865 were very good for the

exports, which in 1862 were 381,412 bales (the highest then known), and increased to 744,475, 755,675, and 915,667 bales respectively. The American war is thought by many to have assisted to popularise jute fabrics in our own and foreign markets. After the close of the struggle there was a temporary decline in exports, but 1871 saw a marked recovery, the figures for that year being 1,446,586 bales; 1888 surpassed all previous years, the exports amounting to 2,431,700 bales; and 1889 and 1890 were better still, 2,787,852 bales being the quantity shipped in the latter year. The enormous development of the trade is amply illustrated by this summary of Mr. Blacker's tables, which do not, it must be remembered, indicate the consumption of Indian mills, which have greatly increased their purchases during the past few decades. Of jute rejections, the shipments in 1865 were 59,726 bales. In 1890 the amount was 571,506 bales—the largest ever known.

CALCUTTA versus DUNDEE.

The position of the cotton market is being watched very closely by thoughtful observers in Dundee, where the situation would be much relieved by a recovery in values of the staple article of Lancashire's consumption. The *Advertiser* of Dundee, the leading local authority, looking over the past few years, and bearing in mind the many markets which have been virtually closed, the erection of many works in different countries, the restrictions caused by the stringent tariffs being enforced, and especially the rapid extension of Calcutta, thinks it would seem as if Dundee must face in the future a continuous and increasing struggle to maintain its position as the home and the chief centre of the jute industry. This is the view several times expressed in these columns. Not only is Dundee threatened with the loss of its Eastern trade by the competition of Calcutta, but the manufacturers of that city are actually competing with their Forfarshire rivals in the United States, their shipments to that market last year being equal to one-fifth of the total quantity sent from Scotland. This fact is all the more alarming as ten years ago Calcutta had no hold whatever upon the American market. Calcutta houses have now agents in New York, with branch warehouses. The great bulk of Dundee's export trade is with the American Continent, so that commercial defeat in the Western hemisphere at the hands of Calcutta would be disastrous. The situation is rendered all the more embarrassing from the fact that jute mills across the Atlantic are being extended rapidly, even South America having plant of its own. A whole cargo of jute machinery was recently shipped to the Brazils, and the fear is expressed that after that country has got over its present temporary difficulties, increased attention will be paid to the establishment of factories. Brazil, it may be parenthetically remarked, has already a number of cotton mills, one of which, the Alliança factory, produced last year 95,591 pieces. Its capital is \$2,400,000, and bonded indebtedness \$1,917,200. Five hundred and four operatives are employed.

THE announcement is made of the private liquidation of the oldest shipping house in Calcutta, viz., Messrs. Gibson and Co. Three or four Manchester houses have been acting as agents for the firm, but since the Baring crisis only a small amount of business has been done in Manchester piece-goods. The gross liabilities are said to be about £250,000. The firm dealt largely in indigo.

THE breeders of Lincoln Long-wool sheep have just issued the first volume of a flock book of the breed, in which the details are given of 53 flocks and 513 rams. It is stated in the preface that these Long-wools have been recognised as the established breed of the county for upwards of 150 years, and that they possess the power of producing more wool and mutton than any other breed.

TRADES-UNION EXACTIONS AND TERRORISM.

That man is an animal capable of a great deal of self-delusion has been often demonstrated. It is very curious, however, to a student of human nature, to observe to what an extent both the capability and actuality runs through numbers of people. It might have been thought that when one man had gone wrong, others would have remained sane, and have been able to have put him right. But this is not so. The student finds that a delusion generated in one mind is often speedily adopted by others, so that it runs through crowds of people, like the foot-and-mouth disease or the rinder-pest does through herds of cattle, with great deterioration of their mental health and their qualities as citizens. The most numerous and conspicuous illustrations of this diseased state of the mind are found amongst the ranks of trades-unionists, especially those of what we may term the "modern school." They are always the most arrant sticklers for their "rights" to the most minute fraction of what they conceive to be their due under both moral principles and legal enactments. They term their employers grasping, greedy tyrants, if the latter, for their convenience, provide them with a supply of hot water once or twice daily in order that they may brew tea or coffee for breakfast or dinner, or have their dinners made hot when they reside at too great a distance from their employment to go home for their meals, and for this service ask them to pay 1d. per week. This is either paid with a bad grace or bluntly refused, whilst if it is deducted from their wages for convenience of collection, the employers are threatened with penalties for violating the provisions of the Truck Act. A number of instances of this kind have occurred in the Oldham and neighbouring districts during the past two or three years, in which the Unions have threatened to bring the mills out on strike if the hot-water pennies were insisted upon by the owners. The trades-union organ of the cotton operatives has often made a great pother about the iniquity of the employers in this respect, and has demanded that all the pennies contributed should be paid into a fund, and the surplus, if any, after paying very strictly defined expenses, should be at the service and disposition of those who contributed. We leave it to the common sense of impartial and unbiassed readers to imagine how much profit can possibly result to an employer who serves a pint of boiling water once or twice per day for a week, and only charges a penny for doing it. It should be borne in mind that he has to provide the appliances, the building, the fire-place, the boiler, the coals, the water, to pay a man to look after the fire, and always have the water ready when called for, and to pay a woman for the cleansing of the watch-house, which is required almost every day, through being rendered dirty by the trampling in and out and the slopping of the water fetchers. This service of hot water is never in the wages contract with an employer, and the penny per individual which is required to be paid is generally expended upon improving the wages of the person in charge by several shillings per week, whilst the balance, if any, may go into the mill exchequer towards the cost of the coals. We have only drawn attention to this trifling matter in order to shew how exacting the cotton trades-unionists are in their demands, and demands, too, that are neither just nor equitable, in order to contrast it with the utter disregard which they observe towards the rights of others. We might have selected any one of half-a-dozen other illustrations of like kinds that would have

served our purpose equally well, but this will be sufficient.

Let us now look for a moment at the reverse of the medal as shewn by a recent incident or two. The trades-unionist imperatively demands, as our readers are well aware, that he shall have all the work and the non-unionist nothing, because, forsooth, the latter does not think alike with him. But he is not even contented with this: if his union is stronger than that to which another unionist belongs he demands the work available for himself to the exclusion of the second, though it more properly falls within the classification of the latter's work. If not awarded this, he 'strikes' the whole industry, paralyses a gigantic trade, inflicts enormous losses upon a district, and plunges a population of two or three hundred thousand into the extremity of distress. The strike of the engineers of the Wear and the Tyne districts, which has just been closed by the defeat of the men after twelve or fourteen weeks' idleness, has afforded the country this object-lesson. It is not, however, necessary to leave the textile trades for illustrations of the domineering, tyrannical, and brutal spirit that animates the thorough trades-unionist of the modern school. The great lock-out in the spinning trade just closed was brought about by such demands, the arrangement for its conclusion was broken down and for a time jeopardised by the sentiments underlying this sort of arrogance, and the town of Stalybridge was practically in the hands of a mob of semi-mad people, who were behaving more like African savages than civilised Englishmen. In proof of this take the following. Yesterday week, at the Stalybridge Borough Court, a specimen of the modern trades-unionist appeared before a full bench of magistrates in the person of John Wm. Lord, a cardroom hand, formerly employed at the Spinning Company's mill, and one of the strike hands, who was charged with assaulting Hannah Murray, a non-union operative now at work as a frame tender at the mill. Complainant's statement was that on the Monday night preceding she was going home from her work in company with several other female operatives when they were surrounded by a crowd numbering some thousands of people. The defendant was in the crowd and attempted to strike a boy. The complainant put up her hand and prevented the blow, whereupon the defendant kicked her three or four times on the legs, which were injured. Complainant's statement was corroborated by the other women who were with her. It was stated in the course of the evidence that the crowd was the largest which has been seen since the strike began, and the disturbances the most serious, yet the police provision was the most meagre. The bench committed the defendant to prison for two months with hard labour, without the option of a fine. This was an exemplary punishment, and it was refreshing to find that the magistrates had at last braced up their nerves to do their duty in a little more spirited manner than they had hitherto done in these cases of brutal rowdiness. As the magistrates were separating it was reported that a witness called for the defence, named Henry Bennett, a stripper and grinder at Clarence Mill, had in passing one of the women in the corridor of the court used the following words—"I once saved your life, but you did not deserve it. I will now take it." By the direction of the Bench the man was placed in the dock and charged with using threatening language. Evidence having been given by the woman threatened, Elizabeth Ashton, of Ashton-under-Lyne, two of her friends, and Constable Thompson, all of whom heard the words, the defendant was bound over himself in £50 and two sureties of £25 each, or in default one month. He was also ordered to

pay the costs, or go to prison for seven days additional. A little firm government of this kind would do much good in repressing these outrages and preserving the liberty of individuals to dispose of their labour in the manner they may think best.

Trades-unionism as conducted on its present lines exists simply on intimidation, coercion, and savage outrage; and every strike of any moment demonstrates this truth by forcible evidence. Only let an employer whose workmen have discharged themselves endeavour to fill their places with others, and all the brutality and the savagery of the trades-unionist nature bubbles over: the trades-unionist, in fact, becomes demented. We need not travel beyond the Stalybridge strike for an illustration of the truth also of this statement. Precisely a week after the trades-unionist named above was sent to gaol, and when it was well known that the renewed negotiations for a settlement of the Stalybridge dispute had been successful, the following events occurred in connection with it. We extract the account from our daily contemporary, the *Manchester Examiner and Times*, and will let its reporter tell the story in his own words. It is as follows:—

The satisfaction created by what was hoped would prove a definite termination of the strike received a somewhat unexpected shock to-night (Monday) by circumstances which occurred after the closing of the Spinning Company's mill. The non-unionist hands employed in the mill left in a body at 5-30. The Chief Constable deeming it unnecessary, under the circumstances, that the mounted police should appear on the scene, their services were not called into requisition, and when the hands turned out into Bridge-street the general body of them were marched to the station under an escort of foot police. There were no demonstrations whatever, although an increasing crowd followed them to the station. It appears, however, that three of the female hands residing at Dukinfield proceeded unattended in an opposite direction on emerging from Worthington-street, which leads directly into the mill premises. They were followed by a crowd. Hearing a great deal of shouting, Inspector Lowe, of the borough force, followed, and saw a surging crowd of several hundreds going in the direction of Dukinfield. On arriving at Stanley-square he discovered that the attention of the crowd was directed to the three women already referred to, who were being hustled from side to side and pelted with stones and mud. They endeavoured to seek refuge in an adjoining shop, but the owner, fearing probably an attack upon his premises, closed the door. One of the women was seized by a man whose name the police are in possession of, and getting her head under his arm, severely assaulted her. Inspector Lowe, who was unsupported by any police, did his utmost to get the square cleared and protect the women, who were followed and pelted all the way to Dukinfield police station. The names of some of the ringleaders in the disgraceful attack, I understand, are known to the police.

Fancy a howling mob of several hundreds of Englishmen, women, boys, and girls, hustling three defenceless women, and pelting them with mud and stones! Is it conceivable that in the closing decade of the 19th century, in the very heart of England, the land of churches, chapels, Sunday Schools, Temperance and Missionary Societies, Salvation and Church Armies, and the ten thousand and one institutions for ameliorating human suffering, and lifting mankind up to a higher plain of social, moral, and religious life, such a scene could occur? But even this was not the climax of this outrage. We read: "One of the women was seized by a man, whose name the police are in possession of, and getting her head under his arm severely assaulted her." Think of this, men of Stalybridge, men of Lancashire, men of England! A raging mob of hundreds of people intimidating and terrorising three defenceless women; pelting them with stones and mud, and one "man," more fiendish than the rest, if that could be, gets one of the poor women's head "into chancery," as we believe it is termed amongst professors of the noble art of self-defence, and severely assaults her. And this took place in Stalybridge on Monday, the 9th of May, 1892, between the

hours of five and six in the afternoon, and in the eye of the sun. We are thus precise in making this record, because we sincerely trust that it will be the low water mark of degradation to which the teachings of modern trades-unionism will force the working men and women of England. But the topic is not yet exhausted: we are told that the crowd contained several hundreds of persons, yet not a creature in the shape of a man did that crowd contain who raised a finger to shield those defenceless women from the savage outrages to which they were being subjected, save one brave policeman, Inspector Lowe, who did his utmost to protect them. This gallant policeman deserves the thanks of the community, though only engaged in the performance of his duty. But what shall we say to and of that mob of savages? Language fails us. The black savages of "Borio Bhoola Gha" would bleach white with shame and indignation were they to be compared with such creatures. And why were these women attacked in this manner? What had they done? What law had they broken, or what moral principle had they transgressed? They had done absolutely nothing of any of these things. They had simply exercised their legal and moral right to enter into a labour contract with a firm requiring such services as they could render, because those previously employed, part of the aforesaid mob of people, had chosen to terminate their contract, which they had an indisputable right to do. In the persons of these women the rights of every member of the community have been attacked and grossly outraged, and if the state, through the persons entrusted with the administration of justice, does not defend them and punish in the severest manner the aggressors it will be utterly recreant to its duty. The infliction of a paltry fine, or a month's imprisonment, is not an adequate punishment for such unprovoked outrages. The nigger lynchings of the Southern States of the American Union before they go on a shooting or a hanging expedition wait for a semblance of provocation. But, evidently, even this is not necessary in the eyes of the Lancashire cotton trade-unionists.

There is only one other thought we have to express, and that is, that these things are the natural fruit of trades-unionism as it is taught by its modern professors. Any principle which denies the right of a man or woman to make his or her own contract with an employer, and would force them to submit to the dictation of others, is a serious infraction of the rights guaranteed by society to its constituent members and expressed in the laws. The endeavour to enforce such principles must lead to such outrages as we have endeavoured to depict, and the degradation of the public mind must accompany it. Such a condition of things is a disgrace to the governing authorities of any community that does not use every power it possesses to repress them and to bring the perpetrators thereof to justice; it is a disgrace to every bench of magistrates that does not visit such conduct when brought before it with the extreme penalty that the law permits. If the law is not adequate to deal with it, then the disgrace rests upon the Legislature in not providing it. Finally, no association of workmen in the estimation of fair-minded persons can be anything other than deeply degraded, both individually and in the aggregate, that retains in its organisation such brutes as the one sent to prison, and the others we have referred to who ought to go after him.

We do not look for any change to follow our remarks: we do not expect the Ethiope to change his skin or the leopard his spots. It is not in their power, neither is it in the power of the modern trades-unionist who has thoroughly

accepted and endorsed its teachings, and is endeavouring to carry them into practice. But it is in the power of every intelligent self-respecting man to dissociate himself from the unclean things, and if he thinks it desirable or necessary it is within his capability to found a new association for the protection of his interests, which shall be based upon the principles of equity and justice, which cannot be said of those to which he is now giving his shillings and his confidence. Let him turn out the whole batch of his present advisers as not deserving of his confidence; and then organise afresh, elect men of intelligence, breadth of views, integrity, and above all moral men, to represent him, and this will guarantee him from many a future disaster and his family from distress.

Bleaching, Dyeing, Printing, etc.

USE OF THE ALIZARINE COLOURS IN DYEING.

When the alizarine dye-stuffs were first offered to dyers, and were tried for wool dyeing, good results were rarely obtained. This want of success was due to want of knowledge of the right methods of dyeing, and of the influence of impurities in the water used in the dyeing operations on the dye-stuff. The lime which is always present in water forms an insoluble coloured lake with the dye-stuff; and this, particularly with alizarine blue, was and is a source of trouble. When wool which has been properly mordanted is dyed in calcareous water, the colour comes out of a grey tone, and is rather loose. This is because a lime-alizarine blue lake, which has a grey colour and is not properly fixed, is formed on the fibre. To remedy this defect the best plan is to add some acetic acid to the dye-bath, which neutralises the lime, and prevents the lime-lake being formed. This addition of acetic acid is almost indispensable, even when dyeing with pure water, and not only with alizarine blue (where it is of most service), but also with all alizarine dye-stuffs when used in dyeing wool.

Another point that has an important bearing on the dyeing of wool with alizarine colours is that of scouring and cleaning the wool, which must be thoroughly done, or otherwise there is great risk of the colours coming up dull and uneven, and having a tendency to rub off.

The mordanting of wool for all alizarine colours is done, for 100 lb. of goods, in a bath containing 3 lb. bichromate of potash and 2 lb. of tartar. (In place of the latter the crude argols may be used, but for light, delicate tints it is advisable to use the purer tartar.) The material is entered into this bath in the cold, and worked till the goods become thoroughly impregnated; then the bath is gradually heated to the boil, and the working is continued for one hour, taking care to work the goods well, so as to ensure even and level mordanting. The goods are then removed from the bath and well washed with water, when they are ready for the dye-bath.

The dyeing with alizarine colours is best done as follows:—The dye-bath is prepared with clean water, to which is added the required quantity of dye-stuff and also 1½ gills of acetic acid for every 100 gallons of dye liquor. (If the water which is used be calcareous, this quantity should be increased to 3 gills.) The goods are entered into the bath while it is cold, and worked for half-an-hour; then the steam is turned on so as to raise the temperature to the boil. The rate of heating should not be too quick, and the time taken ought not to be less than from three-quarters to one hour. The boiling is maintained for one and a half hours longer. By the end of that time the dyeing will be finished. The goods may be removed from the bath, well washed in water, and then dried.

Any wool or silk dyer following out these instructions is sure of obtaining a good result,

but it should be pointed out that if attempts be made to shorten the process the colour will certainly turn out defective. It should be borne in mind that the colouring matter and mordant only properly combine—and thus lead to a full development of the colour—at the boil; but if the goods were entered into the dye-bath at the boil, the colour would be formed too quickly, and would not be fixed on the fibre. Therefore, it will be loose, and liable to rub off and wash off badly; but the working in the cold and the slow heating leads to the full development of the colour inside the fibre, and so to a proper fixation of the colour results. The alizarine dyes, whether in pale or deep tints, are quite fast to washing, light, and air.

PRINTING COLOURED DISCHARGES ON INDIGO BLUE.

The use of insoluble azo colours formed directly on the fibre, after Holliday's process, can be effected with indigo-dyed goods by the following process:—

(1) Pad the goods, previously dyed an indigo blue, in the vat in the ordinary way with a liquor made of

145 grms. beta-naphthol,
250 cubic centimetres caustic soda lye, 52° Tw.,
500 grms. 50% Turkey-red oil,
10 litres water,

after which the goods are dried, and are then ready for the printing.

(2) The naphthol-prepared blue goods are now printed with a discharge printing colour, the composition of which depends upon the colour to be printed, and the preparation of which is described below.

(3) The printed goods are passed through a cold discharge bath made of

10 litres caustic soda lye, 22° Tw.,
100 grms. soda ash 58%.

the passage taking from five to ten seconds; they are then well washed, and for one minute soaped on a boiling soap bath of 2 grms. soap per litre.

The discharge printing colours are made as follows:—

DISCHARGE RED COLOUR.

55 grms. nitranilin N (25% paste),
145 grms. cold water,
300 grms. cold thickening (see below).

Then, under constant stirring, add
30 c.c. hydrochloric acid, 32° Tw.,
170 c.c. cold water,
300 grms. cold thickening.

The essential point is to avoid the production of heat, and the loss of nitrous acid. Just before printing add

120 grms. red prussiate of potash,
30 grms. acetate of soda,

both in the form of powder.

BORDEAUX RED COLOUR.

This is made with

75 grms. hydrochlorate of *n*-naphthylamine 36%,
95 c.c. cold water,
300 grms. cold thickening,
30 c.c. hydrochloric acid, 32° Tw.,
75 c.c. nitrite of soda solution of 145 grms. per litre,
125 c.c. cold water,
300 grms. thickening.

Just before printing add

150 grms. red prussiate of potash,
30 grms. acetate of soda,

both in fine powder.

ORANGE DISCHARGE COLOUR.

60 grms. *p*-nitro-ortho-toluidine N,
140 grms. cold water,
300 grms. cold thickening,
30 c.c. hydrochloric acid, 32° Tw.,
170 c.c. cold water,
300 grms. cold thickening.

Before use add

200 grms. red prussiate of potash,
50 grms. acetate of soda,

both in the form of fine powder.

The thickening is made with

100 grms. white starch,
200 grms. water,
1 kilo. tragacanth liquor.

The amount of red prussiate of potash should be proportioned to the depth of the blue ground on which the discharge colours are printed. For pale blue grounds, 120 grms. of red prussiate

of potash and 30 grms. acetate of soda; for medium blues, 150 grms. of red prussiate, and 50 grms. of acetate of soda; and for deep blues, 200 grms. of prussiate and 50 grms. of the acetate.

INSOLUBLE AZO-DYES ON COTTON.

Fischesser and Pokorny propose to use the *beta*-oxynaphthoic acid, having a melting point of 216° C., in the place of *beta*-naphthol, which has hitherto been used for the production of the so-called naphthol colours in calico printing. Different results are obtained: thus, while *beta*-naphthol with dianisidine gives a violet, a blue is obtained with the *beta*-oxynaphthoic acid. The method of using is to prepare a bath from

35 grms. *beta*-oxynaphthoic acid,
60 grms. caustic soda lye 70° Tw,
100 grms. water.

In this the calico is padded, then dried, when it is ready for printing. This is done with a colour made from

50 grms. dianisidine liquor A,
50 grms. nitrite liquor B,
220 grms. tragacanth liquor.

The dianisidine liquor A is made from

26 grms. 77% dianisidine sulphate,
40 grms. hydrochloric acid,
280 grms. tragacanth liquor.

The nitrite liquor B is made from

14 grms. sodium nitrite,
76 grms. water,
260 grms. tragacanth liquor.

In printing it is well to use a roller with a rather deep engraving, and to give a strong pressure. After printing, the goods are dried, washed well, and soaped. The addition of 25 grms. sodium acetate to the printing colour makes the colour of a greener shade of blue, but this is paler. By using other bases than dianisidine, a variety of other colours can be obtained from the new acid, as is the case with *beta*-naphthol. In all cases there is a bluer shade of colour produced, as is seen in the following table:—

Base.	<i>Beta</i> -naphthol.	<i>Beta</i> -oxynaphthoic Acid. M.P. 216° C.
Aniline	Orange	Red
Paratoluidine	Orange	Red
Xylidine	Orange-red	Blue-red
<i>Beta</i> -naphthylamine	Scarlet	Bordeaux
Tolidine	Brown violet	Violet
Dianisidine	Violet	Blue

For dyeing, the new acid may be used in the following method: The cotton is prepared in Turkey-red oil, then passed into a bath made from sulphate or hydrochlorate of dianisidine, sodium nitrite, and sodium acetate, and immediately into a bath of the oxynaphthoic acid, when the colour is developed.

DELAINES are prepared for printing by soaping, and are then passed through the sulphur stove, (hydrogen peroxide gives better results, but is much more expensive); and afterwards treated with chlorine in the usual manner.

BINDER has described to the Mulhouse Society a process of discharging indigo-dyed goods, and at the same time fixing alumina on the discharged places, so that they can be dyed subsequently. This process consists in printing a mixture of bromide and bromate or chlorate of potash or soda, to which is added, as a simple thickening, a salt of alumina, preferably the sulpho-glycerate, or the sulphate or chloride. After printing, the goods are passed through a steamer and washed, when they are ready for the dyeing process.

DIE PRAXIS DER FÄRBEREI.—We have received the first part of Dr. J. Herzfeld's new work on dyeing, published under the above title. This really forms the third portion of a comprehensive work on bleaching and dyeing of all kinds of textile fibres. The first and second parts have already been published, and deal with the materials used in the various industries and with the processes of bleaching. The part on dyeing, to judge from the first portion, promises to be a good one. It is to be issued in twelve parts, at the price of 1 mark each. We would commend this method of publishing expensive scientific works in parts to the notice of English publishers. It is published in Berlin by Fischer and Heilmann.

VEGETABLE fibre in woollen or silk tissues may be detected by taking a small piece of the fabric, about six square inches, and thoroughly washing in water to free it from any starchy matter that may have got in in the process of manufacture; then steeping in a small quantity of strong sulphuric acid for from five to ten minutes, diluting with water, boiling up, making the solution strongly alkaline with caustic soda, adding a few drops of a dilute solution of archil, and boiling for five minutes. If there is 1 per cent. of vegetable tissue—cotton, flax, or China grass—present, the violet colour of the archil will be discharged; if it is retained after five minutes of boiling, there can only be an inappreciable quantity of vegetable fibre present in the tissue.

Wool that has been treated with chlorine acquires a stronger affinity for mordants and dye-stuffs, and in consequence is dyed much deeper shades than untreated wool. In so treating wool care should be taken not to use too much bleaching powder, from 2 to 2½% of the weight of the wool being quite sufficient. This is made into a clear solution, acidified with sulphuric acid, and the wool is worked in this for 30 minutes, rinsed in water, and then dyed in the usual manner. For dyeing mordant-dyeing colouring matters, a preliminary treatment with chlorine is a great improvement: much deeper shades can then be obtained, which is due to the fact that the wool takes up the mordant very much better than untreated wool—with the exception of those dye-stuffs that require copperas as a mordant, as, for example, the gambines, when, instead of a green, a brown is obtained; as also is the case with logwood.

THE wool spinning and quilt factory at Ambroise, in the department of Indre and Loire, belonging to Erice Pat'hault, has been destroyed by fire. The damage is extensive, and 500 workpeople are out of employment.

Designing.

NEW DESIGNS.

COTTON, LINEN, AND SILK DESIGNS.

There is a keen competition among manufacturers to put into the market the most striking and attractive designs, so as to eclipse all previous efforts. This involves changes in weave, style, colouring, and widths. The texture must be soft, and woven in beautiful blendings of mauve, melon, fawn, violet, and greens, either in stripes or plaids. Ladies' blouses, shirt-waists, fancy aprons, and morning gowns, are mostly in light muslin fabrics, plain ginghams, with large patterns and small lines of silk, in pink, blue, or canary, all becoming every day more popular. Cotton crepons, or really coarse crape, 27 inches wide, in white and delicate blues, buff, and pink are favourite goods. Nainsook or cambric fabrics in wide widths and of a soft finish are in demand, and are fast displacing the China silk and all-wool cashmeres for night-gowns, etc. In all these classes of fabrics alluded to, conspicuous designs are not desirable.

Design A is constructed for a muslin dress fabric with spun silk; it is on 12 shafts, 20-end draft, 16 to the round; the figures shewn on the margin of the draft indicate that 1, 2, 3, 4 are for the plain ground of cotton, and 5, 6, 7, 8, 9, 10, 11, 12, are for the diagonal of spun silk; two of cotton and one of silk, three in a dent; the gauge or open portion of the ground stripe two in a dent, four dents empty. Warp 40's single cotton, spun silk, 30's two-fold, 40 dents per inch; weft 40's single cotton, well bleached, 80 picks per inch. Warp pattern: 60 spun silk, amber colour, with 120 cream cotton. As each thread of the spun silk must have two of cotton for the ground, the diagonal stripe will be completed with 180 threads in all, 60 going on the 5, 6, 7, 8, 9, 10, 11, 12 shafts, and the 120 cotton threads on 1, 2, 3, 4, which are the plain shafts; the dents for this full stripe would be 180 ÷ 3 = 60: two azure blue, two in

a dent, four dents empty, 2 cream, two in a dent, four dents empty, 2 cream, four dents empty, 2 red, and repeat from the first of the spun silk; weft all cream, white, or ivory. The warping will be as follows: 2 cream cotton, 1 amber spun silk, repeated 60 times, 2 azure blue cotton, 4 cream cotton, 2 red cotton. The stripes may be increased or diminished at will by the shaft; and for ground cotton, all shrimp; the silk light green; the weft always the same tint as the ground cotton. It will be clearly seen that a great diversity of patterns can be obtained, and the gauge stripe extended if desirable; but in no case so much as to weaken the fabric.

Design B extends to 42 ends before commencing a repeat, 21 weft picks. It will be seen from the design, which is fully carried out, that there are two distinct runs of the diagonal, though of the same character. We have constructed it as a suggestion for a mixed fabric of cotton and linen, suitable for rough out-door wear as a vesting, suiting, or dress material. We can only give a few details for a medium cloth. Warp all 2-60's cotton, 36 dents per inch, dark fawns, browns, blues, or deep greens; weft 30's single, 72 picks per inch, all canary for a ground of blue or brown, and coral for a ground of deep green. In the use of two colours for this class of fabrics, the contrasts must be carefully sought for. Perhaps a few remarks in connection with the rule for contrasts may be found useful. Simultaneous contrast indicates the giving of value to pure colours through the aid of each other. Blue and yellow are good if equal in tone. The word tone means really that if the shade of any colour deepens towards black, the tint to be employed as a perfect contrast of light and shade as well as colour ought to approximate in the same proportion towards white. In the case then of a very dark blue warp ground, the weft would, according to rule, go into the lightest yellow or straw, etc. Blue and scarlet, green and yellow, are good. For green grounds, wefts red and rose; for yellow grounds, wefts violet and purple; for orange grounds, wefts blue, though orange as a ground is if anything, too intense in textiles, except it be used sparingly or very much subdued in brilliancy. In green grounds with yellow wefts, the green should approach a yellow hue, and the yellow weft a primrose. A delicate green is very effective; cold light greens with lilac wefts are useful for contrasts; a blue green is the complement of lilac, and to harmonize a lilac with green requires a very warm yellow green. Brown grounds are excellent: almost any light tint of weft will be suitable for any shade of brown. Buffs form a good ground, better than orange. Green and violet are in what is called harmony rather than contrast. The most beautiful of all contrasts is a celestial or sky blue, with a weft having the warm tint of a delicate orange. A very fashionable colour, having many names, but which is in reality the tint of a greenish-blue duck egg, is a capital ground for a warp, and will give a splendid effect with wefts of soft delicate tints, browns, etc. These remarks will form a guide for obtaining the very best results from half-tones when in warp and weft, and can be amplified by experiments through the weft materials.

WORSTED COATINGS.

A simple yet pleasing stripe weave effect is given in *Design C*, simply consisting of a fancy 12-end warp rib combined with 8-end sateen. Any delicate colourings may be used to further develop the effect, or even twist yarns as follows:—

Warp.
24 threads 2-44's dark red, black and blue twist.
40 threads 2-44's black

20's reed 4's.

Weft.
All 20's black, dark blue, or dark brown; 80 picks per inch.

It will be observed that 24 picks are required to complete the pattern, since one weave repeats on twelve and the other on eight ends.

A class of goods likely to be more and more in favour is that in which loose, flimsy binding of the warp and weft threads is aimed at, with

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a slight addition to the stability of the texture in the milling to which the goods are submitted. *Design D* is an example of this style and effect, consisting of warp and weft ribs and warp twill. Here it is given in its pure form, but the addition of plain to the warp and weft ribs may considerably enhance the value of the effect; even then it will be found that milling has considerable power over the cloth. The sett should be in proportion to the following:—

Warp.

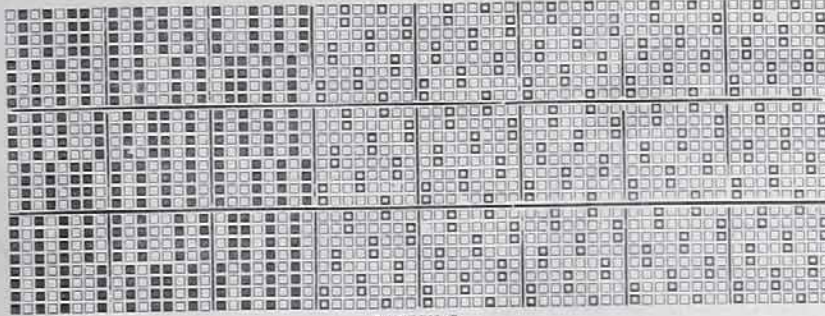
All 2-32's cross-bred; 13's reed 4's.

Weft.

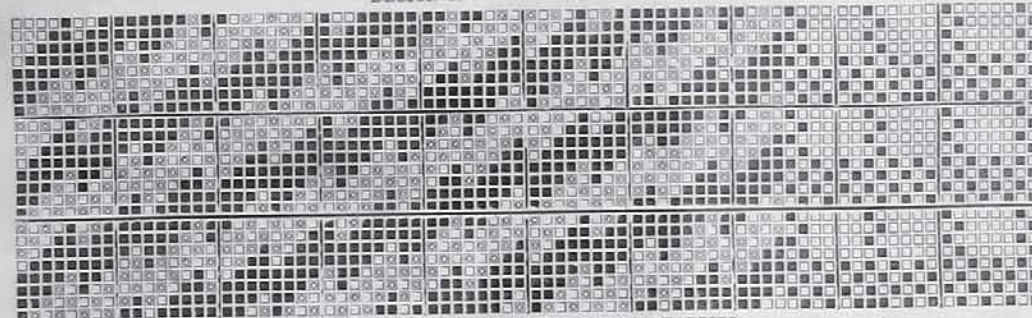
All 16's cross-bred; 52 picks per inch.

A modification of the 13-end corkscrew weave is given in *Design E*. As in previous examples given in these columns, it is formed by dotting

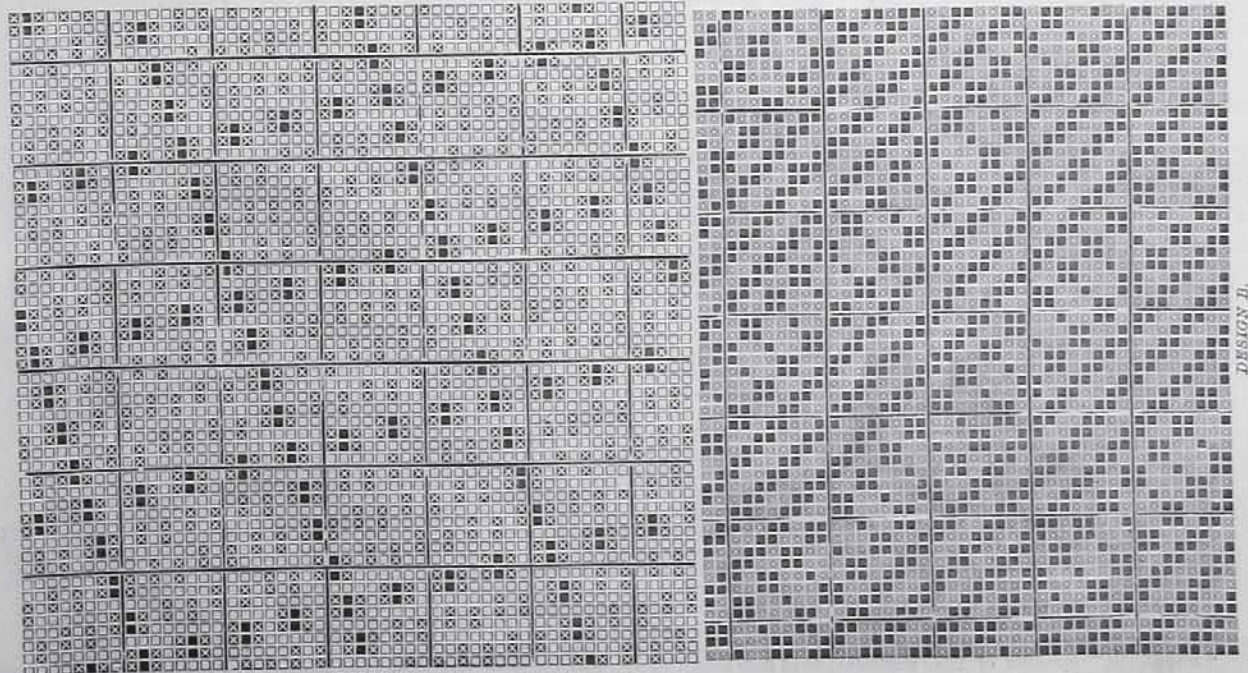
the pure corkscrew weave over a given number of threads and picks, and then dividing by means of a more or less strongly marked twill in both directions. If the number of small checks formed be counted there will be found to be thirteen, and if the design were placed on twice the number of ends there would still be only thirteen checks, but they would be twice the breadth. Fully realizing this, it is evident that there are some splendid effects to be obtained on this basis, the only drawback being the large figuring capacity required. The jacquard, however, is now so universally adopted that there is every prospect of such effects as these being experimented with more and more. Any sett suitable for the 13-end corkscrew may be employed with this.



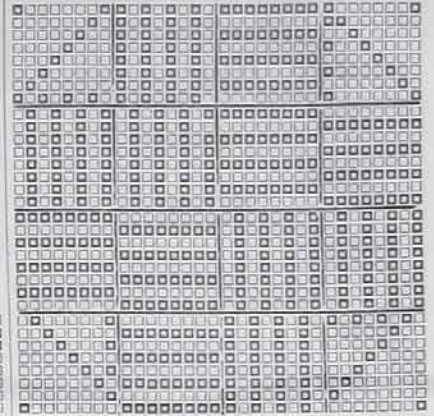
DESIGN C.



DESIGN A: COTTON, LINEN, OR SILK FABRICS.



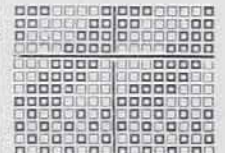
DESIGN E.



DESIGN D.

12
11
10
9
8
7
6
5
4
3
2
1

A: DRAFT.



A: PEGGING PLAN.

DESIGN D.

Machinery and Appliances.

UNBREAKABLE PULLEYS.

MAKERS: THE UNBREAKABLE PULLEY AND MILL GEARING CO., LIMITED, WEST GORTON, MANCHESTER.

It is singular and interesting to observe how the progress of science and art brings man back upon the earliest types of appliances which the world has often thought it had left far in the rear. Many instances could be given of this, but we will content ourselves with one pertinent to our present subject. The "wheel" or pulley of the ancient spinning wheel, at which the spinsters of Western Europe, including our own islands, wrought for about three centuries, say from the year 1500 to 1800, was a pulley that in a way would represent the most advanced type of to-day. It was entirely composed of wood, had a central boss, and a number of radiating arms exactly of the kind shewn in the large illustration herewith. The rim was of light, tough, flexible wood, which was bent round and securely attached to the arms, and was very wide considering the work to be performed, which was merely the driving of a single spindle. It was probable that this plain rimmed pulley was used in preference to a grooved one on account of the difficulty experienced with a narrow grooved rim of "keeping th' band i'th nick." This difficulty undoubtedly gave rise to the phrase we have used, which became a very popular one of wide-spread application in Lancashire and Yorkshire. It was used to express the difficulty of working harmoniously with an ill-tempered person. With the introduction of steam and water power as motors for the improved preparing and spinning machines, it became necessary to make the pulleys by which the motive power was transmitted from the shafting to the machines, much stronger and heavier. Heavy wooden shafting was employed, and this carried heavy wooden drums, at first solid, afterwards constructed hollow. It is very interesting in the light of the present-day advancement to go into one of the first mills erected for cotton spinning and find the old gearing, shafting, and pulleys of wood, and to contrast them with such as is now turned out from the establishment of the Unbreakable Pulley and Mill Gearing Company, Limited. It was a great step forward when these were superseded by cast-iron shafting and pulleys, and was hardly less so when these again were displaced by the light, graceful, yet exceedingly strong and remarkable pulleys that are rapidly coming into universal use. The almost general adoption of belt and rope driving systems for mills and workshops has given a great impetus to the improvement of their construction. Pulleys both plain and grooved are now made to transmit the largest powers, and their use in this capacity is found both advantageous and economical. We have much pleasure in bringing before the notice of our readers a specimen of high-class work in this department.

The accompanying illustration represents a large wrought iron belt pulley, lately constructed by the Unbreakable Pulley and Mill Gearing Co., Limited, of West Gorton, Manchester, for a well-known Yorkshire firm of engineers. Though not of phenomenal size, or by any means the largest constructed by the company, it is a fair specimen of their manufacture, and worthy of the fine new works which the company have recently erected at West Gorton. The "unbreakable" qualities of this particular pulley were well demonstrated when, in getting

it into position on its shaft, owing to the snapping of a chain, it suddenly fell from a considerable height upon a hard floor. Although badly dented, and having two of its arms forced through the rim, a couple of days' work sufficed to make good the damage, and the pulley was then as good as new, and has since been working in a perfectly satisfactory manner. It would be superfluous to point out the certain results of a similar mishap to a cast-iron pulley of these dimensions, and it would probably have taken as long a time to prepare the *débris* for the furnace as it did to repair this wrought-iron pulley, to say nothing of the fact that the unbroken half might have proved useless. Reference to the illustration, which has been prepared from a photograph of the pulley just after its manufacture was completed, will serve to shew the lightness and elegance of the construction. We are told that a cast-iron split pulley, capable of transmitting the same power, would weigh fully twice as much.

The increasing use of wrought-iron pulleys in preference to cast-iron is beyond question, and to meet the demand this enterprising company have laid out a large section of their extensive works for their production, and have provided themselves with a complete plant of special tools, wherewith a yearly output of many thousands of pulleys can be maintained.

Although their original speciality was the wrought-iron pulley, they have gradually added to their producing power, and are now prepared to completely fit mills and factories with shafting, bearings, gearing, and pulleys. We lately described their style of swivel adjustable bearings, etc., and strongly recommend to the notice of all users the very useful and clearly written work on the economical transmission of power, published by the company. Many firms of standing have adopted this system of adjustable and swivel bearings, and the company have supplied and erected their fittings with the best results. Amongst others Messrs. G. Kynoch and Co., Limited, of Birmingham, have put them into their extensive workshops, and the Birmingham Small Arms and Metal Company have over a thousand of the firm's wrought-iron split pulleys in their enormous establishments. Over 30 orders have been received from her Majesty's Government, and the company have lately completed entire installations at the mills of the Bolton Botany Wool Spinning Company, the new printing works of the *Newcastle Daily Chronicle*, the new works of Messrs. Moore and Co., of South Shields, and the new works of Messrs. Fraser and Chalmers, Limited, of Erith and London. With a view of further testing the system on a large scale, an eminent firm of Manchester mill engineers decided to fit one of three mills, which they had to erect near Lisbon, with these bearings and pulleys. The superiority of the swivel over the rigid type of bearings was so apparent that it was at once decided to adopt the system in the other two mills, and orders were placed with the company for the complete outfit. These facts and the company's increasing business tend to shew that the advantages which this style of mill-gearing offer are being largely appreciated.

The company's Indian agents have been successful in introducing this system into a number of mills and factories in that country, to the exclusion of the old-fashioned type of bearing, and a new mill in course of erection near Bombay is to be fitted therewith throughout.

The competition in cotton manufacturing and flour milling is now very keen, and improvements made in the driving for the former are quickly adopted by the latter. Several large flour mills, both at home and abroad, have fitted their extensions with steel shafting swivel bearings, and wrought-iron pulleys, made by

this company; and it is certain that no firm who wish to keep their running expenses down as low as possible can afford to employ the narrow rigid bearings as ordinarily constructed.

With a view of facilitating business with London and the South of England the company have opened offices at 56, Cannon-street, E.C., where they will also have a large stock of their standard manufactures. They will also be glad to afford any information required to applicants intending to erect or extend mills or works on application to them at the above address.

Foreign Correspondence.

TEXTILE MATTERS IN THE UNITED STATES.

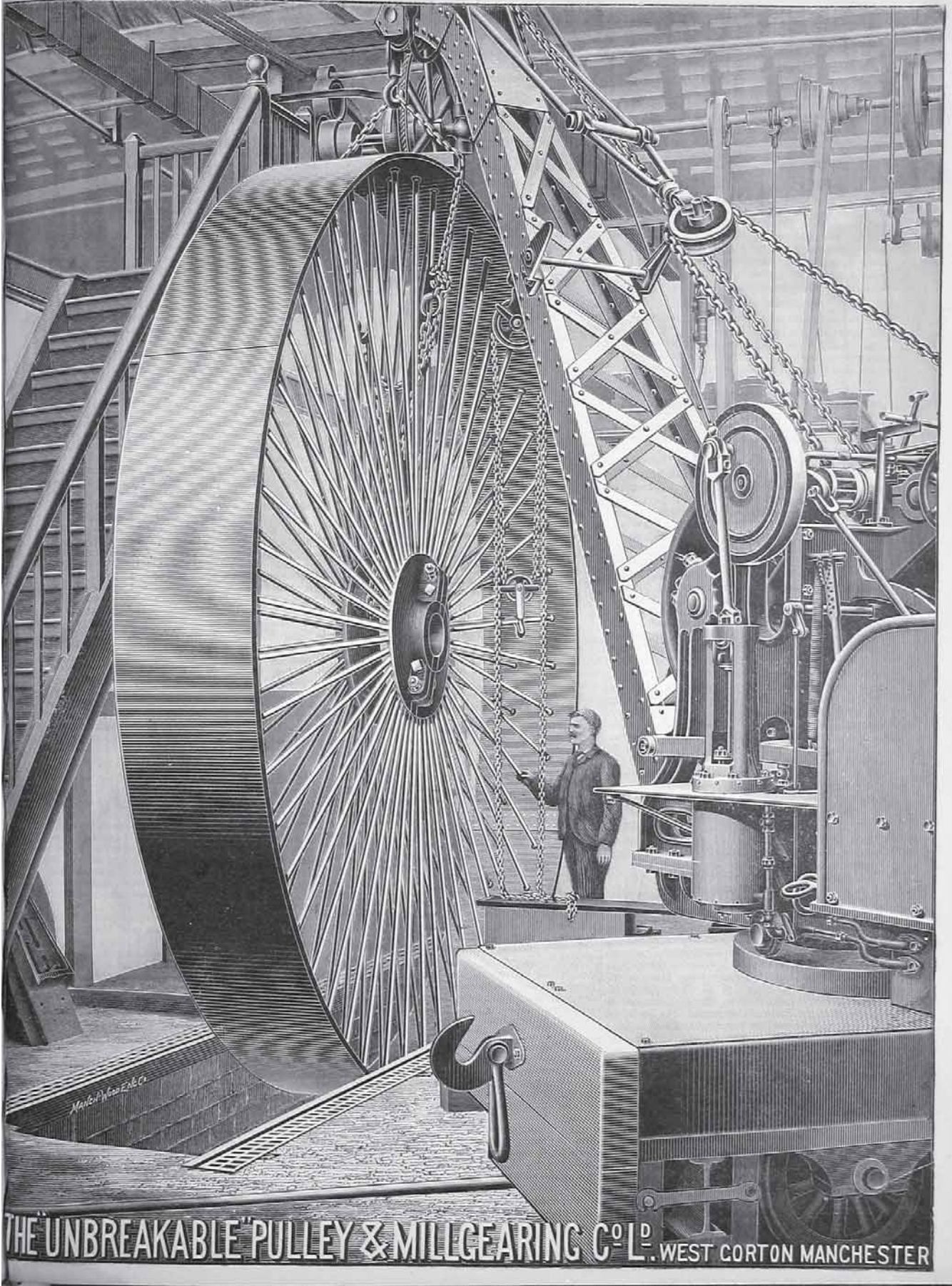
BOSTON, MAY 10TH.

"A BILL DESTROYING OUR CHINESE TRADE."

This is the description given to the Geary Chinese Exclusion Act by one of the most intelligent of American commercial critics. The measure forbids the entry of all Chinamen into the country, excepting the representatives of the Pekin Government and their families. All the Chinese now in the Republic must obtain a certificate of residence from the internal revenue department at a cost of \$3; and those found without a licence at the expiration of a year are liable to imprisonment for five years and expulsion from the country. The bill is in direct violation of the treaty with China ratified in 1880. Under this treaty China recognized the right of the United States to prohibit the importation of Chinese labourers whenever their coming should be deemed to be detrimental to our interests. In consideration for this privilege the United States solemnly agreed to the following:—"Chinese subjects, whether proceeding to the United States as teachers, students, merchants, or from curiosity, together with their body and household servants, and Chinese labourers who are now in the United States, shall be allowed to go and come of their own free will and accord, and shall be accorded all the rights, privileges, immunities and exemptions which are accorded to the citizens and subjects of the most favoured nation." It is a nice question whether under the circumstances American citizens in China can expect to have their 'rights' respected, seeing that the Washington Government has set such a precedent for Pekin to follow. China can go to Russia for petroleum, valued at millions of dollars per annum, now imported from the United States; and the cotton goods obtained from this country can also be obtained elsewhere if the Tsung-li-Yawen chooses to discriminate against American fabrics. China is the best foreign customer for cotton goods possessed by the manufacturers of the East; and vast quantities of natural and manufactured products reach the Empire through China and Europe.

LIABILITY OF COMMERCIAL AGENCIES FOR REPORTS.

The first suit in which any commercial agency has been held liable for an erroneous report sent out to a subscriber occurred recently at Birmingham, Alabama, the suit being brought by the City National Bank against Dun and Co. The suit was brought by the Bank on account of alleged false representations in regard to the financial standing of W. A. Kitts, a lumber merchant, of Oswego, N. Y., such reports being sent out in 1889 and 1890. They were that Kitts stood well in every respect, had a capital of \$10,000 in cash and real estate, and also controlled valuable patents. The Bank claimed that on the strength of these representations it discounted drafts accepted by Kitts for \$5,264. Evidence was also submitted in the form of depositions taken at Oswego, in which leading business men, lawyers, and both banks of that city, declared that Kitts's standing and credit were not good at the time these repre-



THE "UNBREAKABLE" PULLEY & MILLGEARING CO. L^D. WEST CORTON MANCHESTER

sentations were made. It was ruled by the judge in the charge to the jury that the defendants were not responsible for any negligence on the part of the agent or reporter employed in this case. The contract entered into provided that the agency would not be responsible for any neglect on the part of its servants, and that the agency should not be required to give up to the subscriber the name of its employé.

AN AMERICAN CONSUL ON THE EGYPTIAN WOOLLEN TRADE.

One of our Consuls in a recent report says that in Egypt the hand spinner gets about 1s. 3d. to 2s. 6d. per lb. The weaving is by the old-fashioned hand loom. At Akhmym, in Upper Egypt, the natives earn from 3s. to 6s. per piece, weighing 2½ to 3 lb. Of fine cloths they weave about one piece per week, and of coarse goods two pieces. The dyeing costs from 4s. to 10s. per piece.

PROBABLE WOOL PRICES.

Some time ago I noticed in your editorials a reference to the probable course of prices in the wool market. The subject has been discussed a good deal here, and the following table has been compiled by a Western authority:

Country.	Product, 1870.	Product, 1890.
Argentina	167,000,000 lb.	295,000,000 lb.
Australia	134,000,000	265,000,000
The Cape	46,000,000	55,000,000
United States	154,000,000	271,000,000

Totals 501,000,000 886,000,000

Although Australia is the leading wool-producing country in the world, there are more sheep in the Argentine Republic by 3,000,000. Among the 66,000,000 sheep in Argentina, over 51,500,000 belong to the rich province of Buenos Ayres; there are 17½ sheep per inhabitant, and their total value is \$147,233,702. The number of sheep in the United States in 1891, as estimated by the Department of Agriculture, was 44,938,365, an increase of 1,500,000 over 1890. The total washed and unwashed wool product for 1892 is estimated at 272,053,731 lb., an increase of 9,600,000 lb. over last year. Placing the proportion of pulled wool at 42,000,000 lb., this will give a total yield of 316,053,731 lb. of American wool in 1892, or, allowing 40 per cent. shrinkage in pulled wools, a scoured yield of 141,096,937 lb., an increase of 6,000,000 lb. scoured. The European stocks of wool are light everywhere, even the heavy supplies of 1891 being fully absorbed. There will probably be no such increase in supplies for 1892 as in 1891, and as this year starts with low prices, consequently it is safe to assume that 1892 will see a distinctive rise in values. In 1829 the London market price per bale of wool was \$133, but in 1891 it averaged only \$66.

THE CANADIAN COTTON SYNDICATES.

The affairs of the Canadian cotton combinations have attracted a good deal of attention during the past few weeks here. At a recent meeting of the Dominion House of Commons, Mr. Edgar moved for copies of letters patent of incorporation of the Dominion Cotton Mills Company, and of supplementary letters patent, increasing the capital stock of the company from \$100,000 to \$5,000,000, and all papers relating thereto; and also for a copy of all letters patent incorporating the Canadian Coloured Cotton Mills Company, for increasing the capital stock of the said company from \$100,000 to \$5,000,000; and copies of all correspondence and evidence submitted to the Government in support of the issue of the same. He made an attack upon these two companies for absorbing all the cotton mills in the country with the exception of the mills at St. John, N.B. It was announced in the newspapers that this gigantic monopoly had been founded. The Government liked these monopolies. It gave them a red parlour in Montreal as well as in Toronto. If the promoters of such a monopoly were not punished, the public would suffer, owing to the increased price of this staple article. Sir John Thompson, in reply, said if the prices of cottons were advanced as much as the honourable gentleman said they would be, it was pretty certain that other factories would be started. The honourable gentleman had spoken about the creation of a Montreal red parlour, but if it

had no more tangible existence, in fact, than the so-called Toronto red parlour, it had no existence at all. If, as was contended by the honourable gentleman, the protection of the tariff would enable the cotton company to create a monopoly, he could assure him that the tariff would not stand in the way very long. The motion was passed.

News in Brief.

ENGLAND.

Accrington.

The strike at the Accrington Spinning Co's mills has been substantially settled, the operatives accepting the terms offered them before they came out, namely, payment on the basis of wages paid for similar work over a radius of six miles from Accrington. A little rectification of some small matters of difference between the old and the new mill, amounting to improvements of, perhaps, 3d. per week in the wages of about half-a-dozen females, has been voluntarily offered by the firm. As to the claim of 5 per cent. for alleged bad work, this has been abandoned, whilst the firm on their side have offered to give 2½ per cent to the Blackburn Infirmary through the men, which will entitle the Union to the nominations accruing from the contribution.

Barrow.

A meeting of jute workers in Barrow was held on Monday night, when the Secretary of the Union (Miss Hindle) said she understood that there were some grievances prevailing at present in the weaving shed. A number of the looms which had been put off had again been started, with the object of getting the double loom weavers to work two looms without apprentices, and the cry of the masters was that it was done in Dundee, and why not here? The girls here were labouring under a dark cloud which had not to be contended with in Dundee. Miss Hindle then proceeded to explain some of the technicalities of the work, shewing that in Dundee they had less to do than at Barrow. The frames were now driven at such a speed that the girls were scarcely able to work them, and she had been told of a case in Dundee where, although they were only working 46 hours, they were taking off as much work as they had done in 56 hours. This was a matter that ought to be put before the manager, for she understood that the spinners here were being driven in a similar way. If the girls took two looms without apprentices they could depend upon it there would come a time when they would have to suffer for it. She had received a letter from Dundee to the effect that they expected there would be an improvement in about three months, and that then they would go in for an advance of wages. She thought, however, that the reductions that had been made were heavier than they should have been, and that too much had been taken off. She strongly advised all the workers to join the union, and wanted them to understand that the Local Committee of the Workers' Union and the Executive Council in Dundee would render them every assistance possible—A female worker said that two weavers were coming from Dundee to take two looms without apprentices. They had guaranteed to take off as much as the others with apprentices. Four apprentices had got notice to go. One worker had already come from Dundee.—A worker suggested that they should all stop when the two Dundonians started work; but the Chairman said before they struck they must have a more representative meeting, and consider the thing very carefully before they struck work. Let them call a meeting of the Committee, and place the position fully before them. This was agreed to, and the meeting then terminated.

Blackburn.

At the County Court, on Wednesday, ten summonses were taken out against Mr. Herbert Walmsley for running his mill, at Oswaldtwistle, seven minutes after stopping time for the dinner-hour on the 26th April. Defendant was fined £1 and costs in three cases, and the costs in the others.

Bradford.

Weaving in the Bingley and Cottingley districts is now better than it has been for the past few months. The loom makers in Bradford are getting busy again, and are going full time. One house, which had been stopped altogether for a month, and had been going only half-time for several months, is now starting full time.

At a meeting of the creditors of Messrs. Heymann and Alexander, yarn merchants, of Bradford, held on Tuesday, it was reported that the liabilities of the firm were £83,000 and the assets £56,000, and a resolution was passed accepting a composition of 12s. in the pound.

Bury.

The waiting for warps still continues at one or two of the largest mills in the town.

Messrs. Samuel Knowles and Sons, of Tottington Mill Bleachworks, has intimated to the secretary of the Labour Amalgamation of Lancashire that they are willing to concede the payment of weekly in lieu of fortnightly wages.

We much regret to announce the death, on Saturday last, of the wife of Mr. William Peers, spinner and manufacturer, after a brief illness. The deceased lady, who was in her 29th year, was the only daughter of the late Mr. William Hoyle, cotton manufacturer, of Tottington, who was so well and widely known for the able services he rendered to the temperance movement, especially in its political side.

The number of members who have received payment from the funds of the Spinners' Association during the month has been 164—an average of 41 per week—and the amount expended on them is £83 4s. The income is much in excess of the expenditure. The extra levy of 2s. per week on each member ceased last week-end. The local association have had only six members on their funds through the lock-out, these working in other districts.

Burnley.

On Monday morning the Queen-street mill, belonging to Mr. James Whitehead, commenced work again after a stoppage of eight or nine weeks. There are between 300 and 400 looms.

Darwen.

The weavers employed at Sunnyside Mill struck work on Tuesday, owing to alleged excessive fining. About 70 hands are affected.

Farnworth.

Messrs. Humphrey Lloyd and Sons, of this town, are about to transfer their weaving business to Droylsden, where they have arranged for more commodious premises.

Mr. Eli Dyson has now completed the tower on the Victoria Mill. The top is gained by means of a fancy iron staircase running on the outside. The whole structure makes a very ornamental addition to the mill.

The scheme for the erection of the Irwell Bank Mills is now likely to be successful. The Irwell Bank Spinning Co., Limited, has been formed, with a capital of £120,000 in 12,000 shares of £10 each, and it is intended to erect two fine cotton mills on the site of the old Prestolee Mills, which will be demolished. For the present the company's operations will be confined to No. 1 mill, which is to contain 130,000 mule spindles. Messrs. Stott and Sons, Manchester and Oldham, are the architects.

Halifax.

Consequent upon the recent death of Mr. Horatio Stead, governing director of the company of Elkanah Hoyle and Sons, Limited, (who had long been in failing health, and indeed had for some years been unable to take any active part in the business of the company), it is announced that the concern will in the future be superintended by Mr. F. Horatio Cliff, a director of the company, and the other executors of the deceased, thus ensuring its efficient working.

Haywood.

On Saturday, the Mayor of Heywood (Mr. Alderman J. Cronshaw) entertained about 150 of his tenants, in connection with the wedding festivities of his daughter and Mr. John Howarth, whose marriage he chronicled last week.

To-day the steam engines of the Yew Spinning Co. are to be christened, and the shareholders are to have a gathering befitting the occasion. Next Saturday it is to be the turn of the infants at the No. 2 mill of the Mutual Spinning Co. The former will contain about 112,000 spindles, the whole of the machinery is being supplied by Messrs. Hetherington, of Manchester; and the latter will hold some 77,000 mule spindles, the machinery being from the firms of Messrs. Dobson and Barlow, of Bolton, and Messrs. Lord Bros., Todmorden.

Huddersfield.

The fourth annual general meeting of Messrs. B. Vickerman and Sons, Limited, was held at the offices of Messrs. Armitage and Norton, on Saturday last, when the balance sheet and report were submitted. A dividend at the rate of nine per cent. has been declared on the ordinary shares, and the sum of £7,722 9s. 5d. has been added to the reserve fund.

Leeds.

On Wednesday a deputation from the Court of the Clothworkers' Company of London visited Leeds, and made their annual inspection of the textile, dyeing, and fine arts departments of the Yorkshire College, of which the company are munificent supporters. The deputation included the Worshipful Master of the Company, Dr. Child, and seven other members of the court, with Sir Owen Roberts, clerk to the Company. A meeting of the Textile and Dyeing Committee was held, presided over by Mr. O. Nussey. Reports were presented from the departments in which the Company are specially interested. These were of a highly satisfactory character, shewing that steady progress had been made. The members of the deputation were conducted round

the departments, and various matters were explained to them, with which they expressed their gratification. They also had the opportunity of witnessing the progress of the works in connection with the building of the college examination hall, which has risen above the ground, and will form, when completed, another handsome addition towards the finishing of the college buildings, as designed by Mr. Waterhouse, of London, the architect. The hall will fill up the gap between the buildings devoted to textile and dyeing and the engineering department.

Manchester.

We regret to announce the death of Mr. Francis Silkstone, who for many years has represented Mr. Robert Thatcher, cotton spinner, Oldham. Mr. Silkstone died at his residence, Gilmour Terrace, Blackley, on Saturday last. He was highly esteemed amongst a select circle of friends for many excellent qualities of character that were not obvious to the casual observer.

We regret to announce the death of Mr. James Franc, of the firm of Heyn, Franc and Co., of Manchester, Bradford, and Moscow, who died on Monday morning, at the age of 62. Mr. Franc, who came to Manchester 35 years ago, was one of the best known and best-liked men on the Manchester Exchange, where the regret felt for his death is universal. He was a Liberal in politics, and took great interest in the charitable and educational matters of Manchester.

On Wednesday, a meeting of the members of the Manchester Coarse Spinners' Association was held at the Federation Rooms, Manchester, when Mr. C. W. Macara was elected chairman and representative to the Federation Board. Mr. Thomas Chadwick was appointed treasurer. Arrangements were made for canvassing those firms who have not yet joined the association. Arrangements were now completed for a deputation from the Federation to meet the Rawten-stall and district cotton spinners. The committee of the North and North-East Lancashire Spinners' and Manufacturers' Association has been asked to receive a deputation from the Federation at an early date. It is expected that in a few days the Federation will hold meetings in Huddersfield and other districts.

At the Salford County Court yesterday week, the parents of a girl named Jardine, 15 years of age, sought to recover from Messrs. Renshaw and Co., flax manufacturers, Salford, the sum of £50 as compensation for the partial loss of two fingers on the left hand. The girl entered the defendants' service in September to "screw up" at a wage of 6s. per week. After a week, however, she was told by the overlooker to attend to a crimping machine and to knot flax. It was alleged that she received no instructions as to how to perform her new duties. After an interval, during which she worked at her original employment, she was again put to the crimping machine, when the accident occurred. For the defence it was urged that the machine was a perfect one, and only ordinary care was required in attending to it. Moreover, full instructions were said to have been given to the girl by the overlooker.—His Honour, in summing up, said that for his future guidance in such cases he asked the jury to consider whether, in any case, there was impropriety on the part of the defendants in putting a girl of such tender age as the plaintiff to attend to a machine of this sort.—The jury found there was no negligence, and gave a verdict for the defendants.

Oldham.

Mr. James Cocker, of Oldham, has resigned the management of the Atlas Spinning Co., Droylsden.

Mr. E. Fielding, late of the Garfield Spinning Co., has been appointed secretary of the Ellenroad Co.

Mr. John Cheetham, manager of the Equitable Spinning Co., is severing his connection with the company after several years' service.

On Sunday morning a fire occurred at the waste warehouse of Messrs. Hall and Platt, in Bell-street, the place being destroyed. The damage is £1,600.

The mill belonging to the Holly Spinning Co. at Royton has commenced operations, and yarn is expected to be placed on 'Change in the course of a few days.

The new mills in this district which will be got into working order this year are:—Earl, Pearl, Pine, Royal No. 2, Parkside No. 2, and Ellen-road. These will give a productive power of over half-a-million spindles.

The Radcliffe Mill Co., Limited, Lees, is obtaining tenders for the erection of a new mill to hold about 90,000 spindles. The architects are Messrs. Stott and Sons, Oldham and Manchester.

Messrs. Wood, of Bolton, are pushing on with the work connected with the triple-expansion steam engines which they are supplying for the No. 2 mill of the Royal Spinning Co.

Mr. Mark Chadderton has been appointed head carder at the Textile Mill Co. in place of Mr. O. Fitton, who has transferred his services to the Belgian Spinning Co. Mr. Chadderton, it seems, has already had about five years' service at the Textile.

A move is now being made for the building of a large mill in the district of Lees by the formation of a

limited liability company for the purpose. It is reported it is intended it shall be the largest mill in the district. The craze for large mills seems to be spreading.

Local spinners are complaining that matters are not much better after the three weeks of stoppage than they were previously, so far as trade is concerned, and also the margin. It now transpires that stocks have not been totally cleared out. The prospect, therefore, is not in any way so hopeful one, as many are strongly inclined to the belief that there was more, in fact, of a transference of yarn stocks from spinner to manufacturer than an absolute clearance. Any way, cotton share prices are on the down-grade, with little tendency to prevent lower rates coming to pass.

It is reported that a move is being made on the part of the leaders of the cotton operatives in the direction of bringing about a universal list to regulate the wages, etc., of mule spinners and other operatives engaged in the cotton industry. There are now several lists in operation, which differ in one respect and another in connection with the spinning department. The card-room workers, however, have as yet no list to regulate their employment, and should action be taken in the direction indicated it is probable the whole matter will be settled at one and the same time.

Mr. Ben Tillett, of Labour fame, paid a visit to Oldham last Sunday, and addressed three meetings. His addresses on Sunday were principally devoted to the religious aspect of the Labour movement. He did not forget, however, to give the usual dig at capital and capitalists. "There are more workers than drones," he remarked, "but the drones sneak all the honey. They hypnotise the bees, while they take all the honey from them, and tell the bees it is for their own good." And so on. One would like to hear Mr. Tillett's ideas on the rights of capital, and what return it is legitimately entitled to and ought to claim. Being one of the most reasonable and able of the London school of trades-unionists, he will, no doubt, concede that capital can lay claim to a share of the profits derived by a trading concern, and has a place equal in importance to labour as labour has to capital.

Dealing with bimetalism at the monthly meeting of the Oldham Chamber of Commerce, Mr. A. Emmott, (Mayor), of the firm of Messrs. Emmott and Sons, cotton spinners and manufacturers, who introduced the subject for discussion, asked in regard to the limited liability movement, which, he said, interested him, why mill followed mill when trade was so poor on the average? His answer was, "Because each was on the average built cheaper than the last." He also stated that the net result of fifteen years' work of Oldham limiteds was a profit of 1 per cent. Would the people of Lancashire, or any other sane people, he asked, continue to conduct great industrial enterprise for 1 per cent., when even Consols pay 2½ per cent.? He did not want to prophesy, and yet he would say that he believed the stock of money for building cotton mills was about exhausted, and that Oldham, Aye, and Manchester, too, had seen their best days unless they could stop that constant fall of prices, which told so much in favour of the fixed income, and acted so disastrously against the interests of the producer.—Mr. J. E. Newton, also a cotton spinner, replied to the statement that "mill building was now at an end" by saying he had good authority for stating that a mill to contain from 225,000 to 250,000 spindles was about to be erected near Lees station. That did not look as if people had lost confidence in them. In his opinion bimetalism was simply to take from those who had and give it to those who had nothing, and he did not believe that any practical result would come from it, or that it would benefit trade in the least. It would simply inflate the currency so as to make prices rise, but no advantage at all would accrue to the working classes. The discussion of the question was adjourned until the next meeting.

Ramsbottom.

Short time is being run at Messrs. Brooks and Co.'s Nuttall Mill, Messrs. G. Ramsbottom and Son's Lodge Mill, Mr. R. Nuttall's Turn Mill, the Kenyon-street Mill, and Rose Mill.

It is with much regret that we inform our readers of the serious indisposition of Mr. Henry Stead, of Carr Bank, and of the firm of Messrs. Lawrence Stead and Bros., who own five cotton mills at Ramsbottom. He has been unwell for some months, and there is no improvement in his condition.

The employes of Messrs. Hepburn and Co at the Square Bleach works are still out, with little prospect of an immediate settlement. The firm adhere to their proposal to reduce the wages paid to 10 per cent. The operatives are receiving support from other union branches, who have put special levies on themselves for the purpose.

Radcliffe.

Messrs. Pendlebury's mill is completely stopped for the putting in of a new boiler.

A meeting of weavers was held in connection with the Radcliffe Old Association for the purpose of forming new rules for the union. This is a further step towards discarding the Bury Association, which brought

about the recent arrangement with the employers, and the new list. It was decided to form new rules, and to do their best to strengthen the association.

Rochdale.

Messrs. E. and E. Clegg, woollen manufacturers, of Milnor, will shortly have a new triple expansion engine placed in their mills.

The will of the late Mr. James Heap, J.P., woollen manufacturer, Newhey, Milnor, who died on the 7th ultimo, has been proved at £67,938 3s. 10d.

Messrs. W. Sanders and Sons, Crawshawlooth, are replacing their flyer throstle frames with ring frames, but in them use the patent cone spindle with double-headed bobbins. Messrs. Lord Bros. are making the frames.

After a somewhat lengthy trial of roller and clearer *norm* revolving flat cards, Messrs. J. and G. Walker, Limited, have decided in favour of the former card, as suiting their requirements best, and have placed their order with Messrs. Lord Bros., Todmorden.

Stalybridge.

The engagement of the union hands to resume work in the Stalybridge Spinning Co.'s mill on Tuesday morning was carried out by the employes in every department of the mill, the old hands meeting and going in as a body. Order prevailed both in and outside the mill. In conference with the minders' secretary on Monday night the directors agreed to add two more to the number re-employed.

On Monday evening the non union hands employed in the Stalybridge Spinning Co.'s mill left in a body as usual at 5-30. The Chief Constable had deemed it unnecessary that the mounted police should appear on the scene, and when the hands turned out the general body of them were marched to the station under an escort of foot police. A crowd followed them to the station, but no disturbances then occurred. It appears, however, that three of the female hands residing at Dukinfield left for their homes unattended by police. They were followed by a crowd, the proportions of which were considerably increased on reaching Platt's-square. Hearing a great deal of shouting, Inspector Lowe, of the borough force, followed in that direction, and saw a crowd of several hundred persons going in the direction of Dukinfield. He found that the three women were being hustled and freely pelted with stones and mud. They endeavoured to seek refuge in a shop, but the owner fearing an attack upon his premises closed the door against them. One of the women was seized by a man and severely assaulted. Inspector Lowe, who was unsupported by any other police officers, did his utmost to get the square cleared and to protect the women, who were followed and pelted all the way to Dukinfield Police Station.—On Wednesday, at the Stalybridge Police-court, Mr. Foxhall, solicitor, made an application for the temporary release of a man named John William Lord, pending an appeal against the decision of the bench, who committed him for two months without the option of a fine on the Friday previous for assaulting Hannah Murray. The application was refused. Several cases were opened of assaults on non-unionists arising from the strike riots which occurred on Monday night. The cases were adjourned for fresh evidence to be obtained.

Wigan.

Messrs. William Brown and Nephews, cotton spinners, of this town, are refurnishing one of their large mills with new revolving flat cards, made by Messrs. Howard and Bullough, Limited, Accrington.

Wakefield.

The will of Major Joseph Barker, J.P., of Holme-field, Thorne, near Wakefield, worsted manufacturer, has just been proved. The personal estate is valued at £308,000, £15,000 of which goes to charitable institutions.

SCOTLAND.

Aberdeen.

Notice has been given to the employes of the Aberdeen Jute Co., at Sunnypark, that in consequence of the depression in the jute trade the working hours will be reduced from 56 to 50 per week. A fortnight ago the workers got intimation of a reduction in their wages at the rate of 5 per cent. About 400 people are employed by the company.

Arbroath.

A meeting of bleachfield workers in the Arbroath district was held on Saturday afternoon, at which, after an address by Mr. Philip Dundee, it was resolved to endeavour to extend the union by sending deputations to the outlying districts to get them to organise.

Dundee.

Notice has been posted in the works of Messrs. Gilroy, Sons, and Co., Limited, that the works will cease for the week on Thursday evenings at six o'clock. Since the short time movement was started Tay Works have been running until the Fridays. The Messrs. Gilroy employ about 2,000 hands.

Glasgow.

A boiler explosion occurred at the works of Messrs. S. Higginbottom and Co., calico printers, South Side, Glasgow, on Tuesday afternoon. Three men were killed and three boys injured, and the lives of two of the injured are despaired of. Two of the men killed were blown on to the roof of the adjoining works, and two of the boys were blown by the explosion over the wall of the works on to the Clyde embankment. The centre of the boiler shed was a complete wreck. The boiler which exploded was 12ft. deep by 6ft. across, and was what is known as a high-pressure bleaching pot, for bleaching grey cloth before printing. It was served by means of a steam-pipe of 50lb. pressure from main boilers which were some distance off, and was surrounded by other boilers, which, however, were not affected. It is difficult to indicate the cause of the disaster, as the shed and boiler are a mass of debris, and the only persons who could tell in what way the accident occurred are dead.

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 & S. America.	Australasia.	Africa and Egypt.	Continent.	Totals.	Totals for year to date.
£25,805	11,230	2,546	1,527	—	2,538	43,647	1,639,778
—	16,900	65	394	—	—	17,163	361,438

The following are the total values of the exports for the same twenty weeks of last year:—Cotton, £1,564,211; linen, £312,729.

Stirling.

The name of Mr. D. B. Robertson, manufacturer, has been added to the Commissioners of the Peace for the County.

IRELAND.

Ballaghaderreen.

A Sligo journal states that about nine months ago the Sisters of Charity of Ballaghaderreen commenced the manufacture of seamless hosiery upon knitting machines, in order to give employment to the young girls and women in the surrounding congested district. They commenced at first by starting a few machines, and from time to time added more, until at present they give employment to about one hundred girls and women. The factory is situated in the Convent grounds, and is a large, well-lighted building. All the machinery used is of the very latest and most improved make. Each worker is paid weekly according to the amount of work done, and already the earnings of many, who have been some months at the work, are considerable. Messrs. William Morris and Co., spinners of "Spider Fingering," Bradford and Belfast, are taking almost the whole of the hosiery produced.

Belfast.

The Flax Supply Association of Ireland reports again a decreased, though yet not definitely ascertained, acreage under flax in Ireland. In 1891 the area sown was 74,672 acres, against 96,896 acres in 1890, shewing a diminution of 22,224 acres, or nearly 23%. An abundant yield made good to a considerable extent the falling-off of acreage, but there is no hope of a similar compensation this year. The production per acre in 1891 was the largest which has been recorded since 1865. In the North of Ireland, where nearly the whole of the Irish crop is grown, the acreage varies mainly according to the prices of flax, but it is also influenced by competition with oats and potatoes, which are the alternative crops. Efforts are being made to extend the cultivation of flax further southward, and intelligible reasons have not yet been given against their success. Difficulties standing in the way of readily marketing the crop have been urged, but surely, if the earnest endeavours of the Flax Supply Association are not sufficient to extend the cultivation of a raw material so valuable for the support of the greatest of Irish textile industries, the failure must be ascribed to the better purposes to which Irish farmers can turn their land and their energies.

BELGIUM exported to the United Kingdom during 1891 16,227 tons of flax and tow, valued at £893,196, and of this total 14,464 tons were shipped at Ghent.

SCOTT'S FANCY YARN PATENT.—This matter came before Mr. Justice Kekewich on Saturday, on a motion by the plaintiffs to restrain Messrs. Quizzow, merchants, Bradford, from dealing in the patented yarn. Mr. Baker (instructed by Mr. England, solicitor, Halifax) appeared for the plaintiffs; and Mr. Gardiner (instructed by Messrs. Killick, Hutton, and Vint, of Bradford) appeared for the defendants. It was stated that the defendants had acted unwittingly in the matter, and they consented to a perpetual injunction as asked for by the plaintiffs.

Miscellaneous.

ENGLISH BROCADES AND FIGURED SILKS.*

By C. PURDON CLARKE, C.I.E.

(Continued from Page 354.)

The following firms contributed examples of their manufactures and designs:—

George Birmingham, Leek, Staffordshire.
B. Burnet and Co., King-street, Covent-garden.
Collinson and Lock, Oxford-street.
Debenham and Freebody, Wigmore-street.
Gillow and Co., Oxford-street.
Goodyer and Co., New Bond-street.
Helbronner and Co., Oxford-street.
Lasenby Liberty and Co., Regent-street.
J. Nicholson and Co., Macclesfield.
D. Walters and Sons, Braintree, Essex, and Holborn-viaduct.
B. Warner and Sons, Spitalfields and Newgate-street.
Thos. Wardle, Leek, Staffordshire.

There were also examples of silk brocades and dress stuffs from Glasgow, Halifax, and Patricroft, near Manchester.

The examples comprised plain and satin damasks, brocades with various grounds—some with gold and silver figures—broché and brocatelle, tabourettes or striped silks for furniture, figured silks for court and ordinary dress, figured silks for scarves and ties, and specimens of machine embroidered silks.

DISCUSSION.

MR. CUTHBERT QUILTER, M.P., said he represented a part of England where silk-weaving at one time was highly prosperous, but he was sorry to say that the county of Suffolk now possessed only a small number of silk-weavers. Even there, however, he believed the tide had turned, and the silk-weavers of Suffolk, although they did not produce such beautiful fabrics as the specimens exhibited, were occupied much more than they were some time back in producing umbrella and other silk of a useful character. There were one or two points in the excellent paper with which he did not find himself in complete accord, being a free trader, but on that occasion they were not met to discuss political questions, but rather to consider whether any combined effort could be made and maintained for bringing back prosperity to an industry in which this country formerly held such a proud position. What he had heard had opened his eyes considerably, as it showed that there were cases in which we could export our manufactures even to France, the land of taste and elegance, as it was generally called; and of all the beautiful specimens before him, his eyes and thoughts had been principally fixed on those which were made to adorn the walls of the *salon* in the Rue de Rivoli, and in the German Palace. If it could be done in one or two cases, why not in hundreds. He would never believe that an English workman could not do anything which the workmen of any foreign country was able to do. Give him a little more education, and that sobriety which he sometimes lacked, his insular hardihood, his strength of purpose, and his determination would carry him to the front in any industry in the world. Artistic education had been sadly lacking, but now every County Council was rivaling its neighbour in providing all sorts of technical instruction, and surely the outcome of that must be some practical good to the nation as a whole. Schools of instruction in design, and schools where could be seen all appliances in connection with weaving, were springing up in the North of England, which he hoped would some day rival the great school at Crefeld, where young men could learn everything connected with their art for a comparatively small sum. He was very thankful, speaking on behalf of a large number of workpeople, whose homes were very dark and dreary, wearily watching the throes of an expiring industry, to hear and see that the silk manufacture of England was not extinct, and as representing the descendants of those who left their homes for conscience sake, bringing their beautiful art to this country, he must say that nothing could be more delightful than to take a share, however humble, in bringing back prosperity to the industry in which their forefathers so excelled.

Lord STANLEY OF ALDERLEY, said he had hoped to see many well-known people from Macclesfield and Congleton that evening. He had no right to speak on this subject from an artistic point of view, but he was almost as deeply interested in the material prosperity of Macclesfield as if he lived within the borough. He congratulated the silk industry on this excellent paper, and especially on that portion which stated that before the Cobden treaty there

were 57,000 looms existing in five centres, and in the year 1885 they had been reduced to 4,400, because there were gentlemen in Macclesfield who maintained, notwithstanding the deserted aspect of the mills, that the town was flourishing, but when they were asked to produce a balance-sheet to prove it they invariably declined. He was also glad to see the merits of Mr. J. O. Nicholson recognised, for he had done a great deal to promote technical instruction; but when he was able to pass himself off as a Frenchman, he should believe that his fabrics would equal the French in excellence of design, but he did not think that would ever be accomplished in the higher branches of the art. Mr. Nicholson and his friends maintained that the silk industry was perfectly flourishing, but Mr. Ben. Elmy, of Congleton, would say just the reverse. The fact was these people spoke from preconceived notions, and those who were originally free traders stuck to their fetish, and would not allow that anything was wrong. But they should remember that the principle of free trade was that we should not tax anything which we could not produce ourselves, and therefore it was perfectly legitimate on the part of the silk industry to claim that that protection which figures shewed was necessary to it should be restored; whilst to avoid anything which would imply feelings of bad neighbourhood to France, they should urge the Chancellor of the Exchequer to follow the lines he had already taken in the budget. He had equalised the duty on French wines to 2s. all round instead of 2s. 6d. on sparkling, and 1s. on the common sorts, and if he would put a duty on French silks he would do something to restore the prosperity of the silk industry, and if he reduced the duty all round on French wines to 1s. or 6d., that would balance the loss to France, and give us something to bargain with. The Chancellor of the Exchequer was already coming round to the opinion that in order to secure justice from other countries, and to diminish the present severity of the highest tariffs, we should have something to bargain with, and he had threatened Spain, if it renounced the treaty lately made, that he would re-establish the alcoholic standard against its wines. Some persons thought that a duty on silk would raise the price of silk; but that would not be so, for if our own manufacturers secured the market, internal competition between them would keep the price to consumers down. He could remember that, formerly, in the neighbourhood of Macclesfield, silk pocket handkerchiefs were much more common than they were now. The effect of the Cobden treaty had not been to make commoner silks cheaper than they were. All farmers' wives used to like to have black silk gowns, and there was no reason why they should not be entirely produced in England, as design did not enter into the manufacture, the chief thing being solidity.

MR. THOMAS WARDLE said he must congratulate the Silk Association on the able advocacy it had received from so great a traveller and so experienced a textile man as Mr. Purdon Clarke. It was very gratifying and satisfactory to find that the Council of the Society of Arts included silk amongst the subjects to be discussed in the Applied Art Section, and he knew of no body which had done so much for the maintaining the art and industries of this country, and the functions of that section had never been discharged in so admirable a manner as of late. We had the misfortune to send every year £11,000,000 of our money to France, Germany, Italy, and Switzerland, for manufactured silks, and this had been going on for twenty-five years, so that no less than £270,000,000 sterling had passed from this country to other countries for doing that which our own artisans could and ought to do. The object of the Silk Association was to endeavour, by all means in its power, to discuss such remedial measures as might at any rate reinstate the silk industry in its former proportions; and having served on two Exhibition juries in France—namely, in 1878 and 1889—he did not see any necessity why we should go to any of these Continental countries for a single yard of silk. He would not discuss the question of free or fair trade, because, even if he had any pronounced views either way, it would not become him, as President of the Association, to discuss such a subject; nor was it the policy of the Association to allow any fiscal considerations to come in, consisting, as the Association did, probably of an equal number of fair traders and free traders. The question was, could not the Association do very useful work outside any such question. At the Paris Exhibition, in 1889, there was such an exhibition of foreign silks as was never before seen. The Lyons section was absolutely magnificent, and no one would wish to deny it, or would wish to deprive the French of the great consideration they deserved of being manufacturers of silk of great taste, and especially great knowledge of colour; but notwithstanding that, he came back quite convinced that, in the case of silk for upholstery purposes, in colour, in design, and especially in weaving, our English goods were quite equal,

* A paper read before the Society of Arts, April 12, 1892.

and in some respects superior, to the French. He need not mention the beautiful silks of Austria, Italy, or Russia, or say anything of Germany or Switzerland, because France stood admittedly at the head of all. With regard to dress silks, France probably would be acknowledged to take the leading part even to-day, but he was not disposed to admit it with regard to fabrics especially adapted for domestic uses, other than those for dress. With regard to the price of manufactured silks, it was a fallacy, as had been stated, to consider that the English makes were dearer. Very recently he went into one of the principal retail establishments in London, where he was told that English silks could not compete with foreign; and he was much astonished to find, on being shewn two samples—one of which he had with him—that it was priced at 28s. per yard retail, 60 inches wide. It seemed an astonishingly low price for silk of that character; and he was also shewn, at the same time, a brocatelle from Spitalfields, pretty much about the same substance, the price of which was about £4 a yard. He felt sure that there was some reason to explain the difference and asked to be allowed to examine it. He examined both, and found the Spitalfields to be absolutely pure silk, both warp and weft; but when he came to examine the other, he found there was not, strictly speaking, an atom of silk in it. It might be called silk, and was sent into England in great quantity as silk; but it might be useful for ladies to know how easily they might be deceived by prices with regard to such goods. The warp was spun silk, which was shewn to be manufactured from waste, and, of course, was much less expensive than that reeled from the cocoon. The weft consisted partly of cotton but chiefly of Tussore silk, and it was a remarkable example of utilisation of the wild Indian and Chinese silk. The price, roughly speaking, of thrown Italian silk to-day undyed was about 20s., the price of the raw Tussore in London was 2s. 6d., and the spun silk of which the warp was composed would be about 8s. or 10s. a pound. He shewed the sample to an English manufacturer that morning, and he said that he could easily make silk of the same materials for 15s. a yard. It was very desirable that ladies should be allowed to know what they bought, and the object of the Ladies' National Silk Association was not to ask ladies to wear English silk only, but to ask drapers and distributors to allow them to know what they are buying, and whether they were buying pure silk or weighted silk. If they found the silk was suited to their wants, and as good as that from France and other countries, they would naturally give a preference to the English. There was no desire to help on the silk industry of this country in a patronising sense, but simply that ladies should be allowed to know what they were buying. Last year the Association received a great shock from one of the leading distributors who, in the *Times* newspaper, said the "English people did not care for English silks because the foreign were better all round." Without going into details to disprove it, which he had fully done at the time, he was quite certain that, with regard to manipulation, colour, and dyeing, many of the silks now shewn could not be excelled in any continental country, either in cheapness, durability, or purity of dye. This was particularly so with patterned silks of the lighter and less costly kinds, and also with plain silks, and it was high time that this important fact should be generally known by ladies, who had for years been grossly deceived in this respect by statements to the contrary made by importers of foreign-made silks. The interesting and numerous exhibits around the walls fully bore out this. The principal utility and aim of the Silk Association of Great Britain and Ireland probably lay in what it was doing to promote technical instruction. They had in Coventry one of the most useful weaving schools in England, presided over by influential members of the Council; there was another at Macclesfield, and another at Leek, which in its various branches numbered nearly 500 students. Mr. Quilter had been too modest to speak of his own efforts in West Suffolk; being not only member for that division, but a member of the County Council, he had devoted a considerable sum of money to aiding in the development of the industry in Sudbury, Glensford, Haverham, and other districts, and he had heard lately from a Sudbury manufacturer, that the trade was looking up, and they hoped before long, with the aid of better technical instruction, to recover lost ground. In Manchester, the Council of the Silk Association was at work trying to found a central institution for higher technical education in throwing, weaving, dyeing and finishing, so that the sons of our manufacturers and managers might go there and receive such an education as was given at Crefeld. Mr. Wardle concluded by saying that he had received from the secretary of H.R.H. the Duchess of Teck a letter, saying he was desired to express her Royal Highness's regret at not being able to be present that evening, and how much she regretted what she feared must be the injury done

to the reviving silk industry by the recent national bereavement. He knew no one in England who had taken a deeper interest in the revival of the industry than H.R.H. the Duchess of Teck, and she was very pleased, in view of that recent anticipated event, which then promised to be so happy a one, that the whole of the silk for the royal wedding was to be produced by English looms.

Mr. LASENBY LIBERTY said it had been most interesting to follow Mr. Wardle with reference to the two examples of silk he had been comparing. He failed, however, to gather whether, in Mr. Wardle's opinion, it would be desirable for the British manufacturers to adopt the examples set them by their French competitors, that is, to compete with the foreign manufacturer by producing silken fabrics composed of the less expensive materials which Mr. Wardle found in the brocade to which he had called attention. At first he understood Mr. Wardle to say there was no true silk whatever in the French fabric, and, subsequently, that though none of the more expensive yarns were used, the fabric was, as a matter of fact, "all-silk." Mr. Liberty believed the more general introduction of the Tussore silk referred to would secure a two-fold advantage, for besides lending an element of greater durability, it fostered an important industry in which our fellow subjects in India were largely interested. Personally, he felt, though it was most necessary to assert our artistic and manufacturing superiority in the Spitalfields and other high-class brocades, it was not desirable to limit the British silk industry exclusively to the more costly goods, as comparatively there could then be but few purchasers, and the trade would be artificially cramped by an altogether unnecessary barrier placed in the path of the expansion and prosperity which could otherwise be attained. He believed the object of the Silk Association should be to secure for the British industry as wide an area of enterprise as possible, provided good and honest materials were used, and an intelligent selection of designs and colours made; and he was strongly in favour of inviting the public to share in every advantage and economy in the manufacture. He might add a recent instance within his own knowledge, in which an English house had been supplying English made silks to Paris and other Continental centres. They had not extended their operations very far, but the sale was gradually increasing, and it had excited a certain amount of antagonism in Paris, as evidenced by anonymous postcards being received, threatening with dynamite. That unpleasant episode might, he thought, be taken as a compliment to the merits of the English silk manufacture. With regard to the former use of silk handkerchiefs in the neighbourhood of Macclesfield being more general than at present, he had some doubt whether it depended so much on questions of free or fair trade as on a change of fashion, and the now almost total extinction of the habit of snuff-taking.

Mr. BENJAMIN WARNER, speaking as an old Spitalfields silk manufacturer, said he considered the very interesting paper just read would do a large amount of good. He agreed with Mr. Purdon Clarke in saying that we should endeavour to increase the practical knowledge we have in this country. In France, the State paid professors to give lectures in the manufacturing districts, and youths went through a thorough course of training in the theory of weaving, fitting them to occupy the position of manufacturers. It had been the fashion of late years to encourage everything foreign, resulting in many of our best men being driven away to enrich other countries. When he was a youth, the Spitalfields silk trade used to provide a living for about 100,000 persons, now it provided a precarious living for only very few. There were thousands in the east end of London who had no regular employment of any kind; the strongest got occasional work at the docks, and their families were assisted by the benevolent, but in his opinion the wisest and best form of charity was to give employment to the people, and unless they were better employed the nation must suffer. At the present time there was a sign of weakness; a few days back he received a paper from the London Chamber of Commerce, asking for replies to questions. The first was—"Did he approve of the £1 note?" to which he replied, "Certainly not;" to the second question, "If he did not approve of the £1 note, would he suggest in what way the gold could be kept in the country?" His answer was, "Encourage home productions of every kind." And from an experience of more than fifty years, he knew of no better employment for the working classes than weaving, which, being an indoor employment, was good for both sexes. The delicate treatment which silk required had a refining influence upon those employed, and amongst the weavers, types of men were found of whom any nation might be proud. The Silk Association had done some good, more especially the Ladies' Committee; they had given the manufacturers substantial encouragement, and he believed that they and Mr. Purdon Clarke would have the

satisfaction of knowing that their efforts would bring a blessing to the homes of the working classes.

Mr. J. H. DONALDSON said he was obliged to dissent from some of the views expressed by Mr. Clarke. While he much admired the paper, and felt that it would tend to benefit greatly the class he desired to help, there was nothing to be gained by attempting to conceal from ourselves the fact that there were certain things which the French could do with greater dexterity and skill than we could. There was a sensibility of hand possessed by French workmen by no means common amongst English workmen. Long years of encouragement, the peculiarities of race, natural taste, and, possibly, to some extent, the influences of climate, had resulted in producing a workman of great acuteness of mind, of much intelligence—far, he thought, in advance of the average English workman. The French workman had ideas of fashion, taste, elegance, and refinement constantly before him, and, having art all round him, he had brought his natural aptitudes to the development of art in relation to his work, and the result was that you had, for the production of the highest class of silk, a very superior kind of person to the average English workman. In 1889, he went round the Lyons Court of the Paris Exhibition with Mr. Wardle, and well remembered the enthusiasm with which that gentleman spoke of the splendid works there displayed. It must be admitted, even by Mr. Clarke, that nothing had yet been produced in the country comparable with the best work there shewn. They could well understand why that was so; there had been men of the higher class in France who appreciated these beautiful things, and, naturally, where there was the demand, the supply followed. It seemed to him only prudent to recognise these facts; not to attempt the production in this country of the highest class of work, but to adopt rather the suggestion of Mr. Liberty and produce a medium class of work, thoroughly good of its kind, which could be made use of by persons of comparatively limited means. No doubt, as machinery was perfected, as education advanced, and the people became more intelligent, there would be a nearer approximation to the high-class work produced in France; but you might as well attempt to produce wine in England as an article of commerce, as to produce the very highest class of silk work, such as was produced in France. Why did we pay eleven millions for French silk, and why did America, Russia, and all the great nations elect to go to France for their principal silk supplies, except because the highest class of work was to be found there? Polytechnics, to which Mr. Clarke had alluded rather disparagingly, were doing a very great and valuable work in developing the intelligence of the working classes. The system of apprenticeship prevailed much more in France than here; it was a thoroughly organised system there; but here the habit of apprenticing boys for five or seven years had nearly disappeared, especially in London. Consequently, there was not that rigid supervision and intelligent direction over the youth which operated so largely in France, and resulted in the production of a splendid and capable workman. They should seek by every means to extend the system of apprenticeship, and induce the masters to employ as many boys in their factories as the men would permit, such a system being the best security for the production of efficient workmen.

The CHAIRMAN said, although he believed Lister and Co. to be the largest silk manufacturers in the world, he knew very little of silk manufacture; his *forte* had been that of an inventor, of technical knowledge he had little. He agreed that if the silk problem was to be mastered, it would be through technical teaching, but though that would do much it would not do everything. It had been neglected in England for many years, and we should have been marvelously more forward if we had thought about it earlier; but somehow or other Englishmen always thought they could beat the world without troubling to learn. Now they were finding out that they would have to learn how to design, to dye, and to do everything else. Still it was a peculiar feature about Manningham that there was not, as far as he knew, a technically-taught person about the place. He himself was brought up for a clergyman, and learned Latin and Greek, and nothing else, but somehow he turned to that for which he was naturally fitted—invention. His first efforts were to beat the whole world in wool, and he created in ten years, from 1845 to 1855, the largest wool concern ever seen. He had five establishments in England, three in France, and one in Germany. Having exhausted the field of invention there, he turned to silk; he had no knowledge of it whatever, but he saw there was a field in silk, and set to work, by little and little, one thing after another, until Manningham became the vast concern it was. Their dyers produced as fine colours as any in the world, and yet he believed they had not one who had not learned simply by rule of thumb. That only shewed that if England could do this without technical education what might

she be expected to do with it. He did not suggest that they were any the better for not being taught; on the contrary, if we could beat other nations as we were, we could beat them vastly better when properly trained. In design, colouring, artistic knowledge, the assimilation of colours, and all that sort of thing, England was behind. Of course there were certain other difficulties, and he might easily be led into delivering a fair trade lecture, especially as he had one prepared to deliver to an audience of 2,000 or 3,000 last week, who would not listen to him, from ill-will caused by the strike; but they were not met to talk about fair trade, except on one point of view. He must say there was one thing which made him exceedingly angry. At Manningham, at that moment, they could beat the world, but half of the machinery was covered with dust, and 2,000 workmen were on the street, and that simply because America put on a duty of 100 per cent., in order to exclude English silks; they tried to do it with 75 per cent. and failed, but they managed it with 100 per cent. In Germany, which had a magnificent technical school at Crefeld, they would not allow English untechnical goods to enter. They came here and sold their goods free, but when Englishmen went there, they said, "Oh, no; we are technically instructed here; and we have learned, if you beat us, to shut you out; but when we can beat you, we come over to London as the best market." That was very provoking; and he could not understand why the English did not learn wisdom. Everyone who had read the history of the silk trade knew that at one time it was very flourishing in England, and they all knew why it did not flourish now. The year 1860 made the finish of it; it never recovered that blow. He concluded by moving a cordial vote of thanks to Mr. Purdon Clarke.

The vote of thanks having been carried unanimously,

Mr. PURDON CLARKE said he would confine himself to replying to what had been said by Mr. Donaldson, because he did not consider that Englishmen should be discouraged in trying to beat the French. We had proved our superiority in many other things, and he was confident, from what he had seen, that we should be able, if not to beat them, at any rate to rival them in the higher arts. Mr. Donaldson had explained the matter himself, when he spoke of the opportunity France had had. The specimens he had shown that evening were produced by a few manufacturers, working for a very limited market, but France was making for the whole world; and in the fine arts experiment and practice were factors as valuable as that intangible quality known as good taste. France had the advantage not only of that great market, but ideas and demands were sent in from the whole world, and they were all worked up in the Lyons factories. If Spitalfields were placed for a few years in the same position, we should soon level up, and if we had ten years, we would leave France behind. It was perfectly absurd to tell the countrymen of Flaxman, Turner, and Alfred Stevens that refinement in art must be left to the French. He was rather sorry that he had introduced political matters, but that was more the fault of politicians who meddled with questions of commercial expediency which they were either incapable of understanding or did not wish to. He felt very strongly that something should be done to secure a more favourable tariff for the entry of our silks to foreign countries, especially as France was re-adjusting the duties in an adverse manner, and, as Lord Masham had just informed them, the duty on some sorts of silk goods had been raised 100 per cent. in America. Perhaps the solution was to be found in a remark from one of the most important distributors, a Scotchman, and a free trader, who said that, whilst he had always been a free trader, and would remain one, he sometimes thought that a little vindictive retaliation might be useful, when other countries imposed prohibitive duties, and that, at the present time, something of the kind was necessary to help our silk manufactures.

Sir GEORGE BIRDWOOD writes as follows:—I deeply regret having been forced, by a severe accession of neuralgia, to leave the Society's Lecture-hall before the discussion on Mr. C. Purdon Clarke's paper was half over, and hope that the following remarks which, had I been present, I should have made in reply to Mr. Hunter Donaldson's despairing speech, may not be too late for publication with the official report of the proceedings on the occasion. Confining my defence of the natural artistic aptitudes of our English manufacturers to the proofs afforded within the range of the special manufactures treated of in Mr. C. Purdon Clarke's paper, I will merely say that having been afforded the opportunity, by Messrs. Collinson and Lock, of closely watching for twenty years past the growth and development of the lovely silks and brocades associated with the name of this firm, some of the best known of which were exhibited in the Society's Lecture-hall, I have long been convinced that for stateliness and grace of design, richness and delicacy of colour, and exquisite execution, and general originality of treatment, they are equal to the

finest productions of the famous looms of Lyons. I recollect when Messrs. Collinson and Lock first gave up having their silk stuff manufactured in France. They wanted to reproduce, in large quantity, for the late King of Bavaria, a fine old brocade of the last century, and the price asked by the Lyons weavers was so enormous that they resolved to have the work done at home, and, after many abortive trials, with the successful result seen in the beautiful brocade shewn by them under the name of "Malta," and sold by Messrs. Collinson and Lock at about half the price a Lyons silk manufacturer would charge for it. This was in the "seventies," and since then this pattern has been produced in every combination of colours, and hung in many historic houses, including the Imperial castle of Charlottenburg. Next, they brought out a number of pure silk damasks, dyed by Mr. Thomas Wardle, and sold them at the price of fairly good "tapestry." They are dreams of exquisite colouring, but substantial as "cloth-of-gold, of tissue." More recently, they have been systematically reproducing the noblest designs of the Renaissance period to be found in textile fabrics, and in novel combinations never before attempted—gold brocades, and silver and gold brocades and brocades of mixed threads of gold and silver and silks, and with effects of colour worked out entirely by Mr. George J. S. Lock, and peculiar to himself. They were hanging on the Society's walls last Tuesday; but it is at the Lyceum Theatre, in Mr. Henry Irving's mounting of *Henry the Eighth*, that they are to be seen in all their splendour and glory; and as I have referred to Mr. Henry Irving, let me add that no one has done more than he to promote the revival in our generation of the noble silk industry of England, so true is it that, as Cicero has said, all the arts are connected together:—"Omnes artes, quæ ad humanitatem pertinent, inter se continentur." Mr. Hunter Donaldson must have seen these things; and seeing them, should surely have perceived from them that in this country we have the means of accomplishing anything and everything that could be attempted in the way of artistic silk weaving, provided only the resources at our command are directed by knowledge, taste, and the high courage that can peremptorily and resolutely 'damn the expense.'

LORD SALISBURY ON TARIFF WARS.

In the course of a political speech at Hastings on Wednesday, Lord Salisbury said:—

There is another matter which occupies our minds, and in which, I think, the prosperity of this country is greatly involved. I allude to the question of our external trade. After all, this little island lives as a trading island. We could not produce in food stuffs enough to sustain the population that lives in this island, and it is only by the great industries which exist here, and which find markets in foreign countries, that we are able to maintain the vast population by which this island is inhabited. But a danger is growing up. Forty or fifty years ago everybody believed that free trade had conquered the world, and they prophesied that every nation would follow the example of England, and give itself up to absolute free trade. The results are not exactly what they prophesied, but, the more adverse the results were, the more the devoted prophets of free trade declared that all would come right at last; the worse the tariffs of foreign countries became, the more confident were the prophecies of an early victory. But we see now, after many years' experience, that, explain it how we may, foreign nations are raising, one after another, a wall, a brazen wall, of protection around their shores which excludes us from their markets, and, so far as they are concerned, do their best to kill our trade. And this state of things does not get better. On the contrary, it constantly seems to get worse. Now, of course, if I utter a word with reference to free trade I shall be accused of being a protectionist, of a desire to overthrow free trade, and of all the other crimes which an ingenious imagination can attach to a commercial heterodoxy. But, nevertheless, I ask you to set yourselves free from all that merely vituperative doctrine and to consider whether the true doctrine of free trade carries you as far as some of these gentlemen would wish you to go. Every true religion has its counterpart in inventions and legends and traditions which grow upon that religion. The Old Testament had its canonical books, and had also its Talmud and its Mishnah, the inventions of Rabbinical commentators. There are a Mishnah and a Talmud constantly growing up. One of the difficulties we have to contend with is the strange and unreasonable doctrine which these Rabbis have imposed upon us. If we look abroad into the world we see it. In the office which I have the honour to hold I am obliged to see a great deal of it. We live in an age of a war of tariffs. Every nation is trying how it can, by agreement with its neighbour, get the greatest possible protection for its own industries, and, at the same time, the greatest possible access to the markets of its neighbours. This kind of negotiation

is continually going on. It has been going on for the last year and a half with great activity. I want to point out to you that what I observe is that while A is very anxious to get a favour of B, and B is anxious to get a favour of C, nobody cares two straws about getting the commercial favour of Great Britain. (Cheers.) What is the reason of that? It is that in this great battle Great Britain has deliberately stripped herself of the armour and the weapons by which the battle has to be fought. You cannot do business in this world of evil and suffering on those terms. If you go to market you must bring money with you; if you fight you must fight with the weapons with which those you have to contend against are fighting. It is not easy for you to say, "I am a Quaker. I do not fight at all, I have no weapon," and to expect that people will pay the same regard to you, and be as anxious to obtain your goodwill and to consult your interests as they will be of the people who have retained their armour and still hold their weapons. (Hear, hear.) The weapon with which they all fight is admission to their own markets—that is to say, A says to B, "If you will make your duties such that I can sell in your market, I will make my duties such that I can sell in my market." But we begin by saying, "We will levy no duties on anybody," and we declare that it would be contrary and disloyal to the glorious and sacred doctrine of free trade to levy any duty on anybody for the sake of what we can get by it. (Cheers.) It may be noble, but it is not business. (Loud cheers.) On those terms you will get nothing, and I am sorry to have to tell you that you are practically getting nothing. (Laughter.) The opinion of this country, as stated by its authorized exponents, has been opposed to what is called a retaliatory policy. (A voice:—"No, no.") Oh; but it has. We, as the Government of the country at the time, have laid it down for ourselves as a strict rule from which there is no departure, and we are bound not to alter the traditional policy of the country unless we are convinced that a large majority of the country is with us—(cheers)—because in these foreign affairs consistency of policy is beyond all things necessary. (Cheers.) But though that is the case, still, if I may aspire to fill the office of a councillor to the public mind, I should ask you to form your own opinions without reference to traditions or denunciations—not to care two straws whether you are orthodox or not, but to form your opinions according to the dictates of common sense. I would impress upon you that if you intend, in this conflict of commercial treaties, to hold your own, you must be prepared, if need be, to inflict upon the nations which injure you the penalty which is in your hands, that of refusing them access to your markets. (Loud and prolonged cheers and a voice, "Common sense at last.") There is a reproach in that interruption, but I have never said anything else. (Laughter.) But there is a great difficulty. The Power we have most reason to complain of is the United States, and what we want the United States to furnish us with mostly are articles of food essential to the feeding of the people, and raw materials necessary to our manufactures, and we cannot exclude one or the other without serious injury to ourselves. Now, I am not in the least prepared, for the sake of wounding other nations, to inflict any dangerous or serious wound upon ourselves. We must confine ourselves, at least for the present, to those subjects on which we should not suffer very much whether the importation continued or diminished; but what I complain about of the Rabbis of whom I have just spoken is that they confuse this vital point. (Cheers.) They say that everything must be given to the consumer. Well, if the consumer is the man who maintains the industries of the country, or is the people at large, I agree with the Rabbis. You cannot raise the price of food or of raw material, but there is an enormous mass of other articles of importation from other countries, besides the United States, which are mere matters of luxurious consumption:—(cheers)—and if it is a question of wine, or silk, or spirits, or gloves, or lace, or anything of that kind (a voice, "Hops," and cheers)—yes, there is a good deal to be said for hops—but in those cases I should not in the least shrink from diminishing the consumption, and interfering with the comfort of the excellent people who consume these articles of luxury, for the purpose of maintaining our rights in this commercial war, and of insisting on our rights of access to the markets of our neighbours. (Cheers.) This is very heterodox doctrine, I know, and I should be excommunicated for maintaining it. (Laughter.) I am not sure at all that you will escape from a similar anathema, and, therefore, I warn you of the risks you are incurring in listening to me;—(laughter)—but, as one whose duty it is to say what he thinks to be the people of this country, I am bound to say that our Rabbis have carried the matter too far. We must distinguish between consumer and consumer, and while jealously preserving the rights of a consumer who is co-extensive with a whole industry, or with the whole people of the country, we may fairly use our power over an importation which merely ministers to luxury,

in order to maintain our own in this great commercial battle. (Cheers.)

Commenting on the above, *The Times* says:—"It is a mere dream to suppose that a war of retaliatory duties directed against a few Protectionist countries and allowing others to go scot-free would have any chance of acceptance in Great Britain, or that a serious proposal in that direction would not give rise to a bitter and prolonged political conflict imperilling the unity of the Conservative party as well as the alliance with the Liberal Unionists. In these circumstances it is to be regretted that Lord Salisbury thought it expedient to touch on a subject the discussion of which, though it has only an academic interest, tends to unsettle men's minds where clear and stable views are indispensable."

TECHNICAL INSTRUCTION IN SILK MANUFACTURE.

The Technical Committee of the Lancashire County Council received a deputation at Preston, on Monday, from the Silk Association of Great Britain and Ireland, consisting of Mr. Thomas Wardle, of Leek, president; Mr. Harvey Heywood, manufacturer, Middleton; and Mr. T. G. Lomas, of Manchester.

Mr. WARDLE said the silk industry had dwindled very much indeed, and they were extremely anxious as an association that not only Lancashire, but other centres of the silk industry in England, should obtain advantages from the County Council grant by way of technical instruction. As it was impossible for any small centre to adequately teach such a difficult subject as the manufacture of silk, dyeing, finishing, and all the other branches, the cost of appliances and good teachers being so exceedingly great, they were unanimously of opinion that it would be a good thing for the county if a central institution in silk teaching were established in Manchester. At the request of the Manchester City Council Technical Committee, whom they had approached very successfully, a report had been prepared, which he should be very glad to hand in there—though it was not intended for the County Council. Many of the members of the Silk Association had had great experience in the technical teaching of the Continent, as, for instance, at Lyons, Mayence, Basle, and Zurich, and they were of opinion that the only successful way of giving technical instruction in silk manufacture was by the establishment of schools in large centres. He believed it was quite possible to raise the industry to very much more than its former proportions. They paid £11,000,000 yearly to the Continent for manufacturing silks, all of which, with adequate technical instruction, he was inclined to think England would be quite able to make for itself.

Mr. LOMAS also spoke.

In answer to a question from the chairman, Mr. WARDLE stated that, in addition to providing fees for outside students, they might ask the County Council for grants towards the maintenance of an efficient teaching staff. They would also be glad if the fund for appliances were helped. They had not formed any estimate of the amount of grant they would like. The total cost, including appliances, would amount to several thousands a year. At any rate it would cost that the first year. A great deal of the teaching might be dovetailed. The dyeing of silk might be dovetailed with the dyeing of cotton, with the help of an assistant teacher; and in several other branches only assistant teachers would be required. It was suggested also that students might work on cotton looms for some time, and be taught by cotton instructors.

After a little further discussion the CHAIRMAN (Alderman Snape) said the questions would be fully considered, and the deputation then withdrew.

THE BENGAL JUTE MILLS.

Our Calcutta contemporary *Capital*, of the 27th ult., has the following upon the condition of the Bengal jute mills:—

"The present exceptional position of the local jute industry, when most concerns have evidently resigned themselves to running as long as their stocks of jute will last and then waiting for events to develop, offers, we think, a favourable opportunity for a reduction of wages in many, if not in all mills. Without any actual increase in rates all piece-workers have, during the past six or seven years, had their earnings augmented largely by the introduction of more and newer machinery, and in the case of weavers their earnings, we believe, have increased quite 17 per cent. to 25 per cent. without any addition to their working hours. This has been due to a number of causes, the first being the pressure to increase the out-turn due to the short-time movement, when four days working was in vogue. Then followed the restriction on the increase of looms, which led to all funds available for extensions and renewals being devoted to improvements and extensions in the spinning

and preparing departments (the departments in which money is made) which probably has had quite as much effect on increasing the out-turn as would an extension of looms have had worked on the old ideas. When most factories had daily a number of looms standing for want of yarn. This mode of working is now a thing of the past, and with better yarn, more of it—and with every machine working at high pressure—weavers have received their full share of the benefits of the past few years. So long as mills were working profitably, as they have been of late years, it would hardly have been worth while unsettling mill hands by attempting a reduction, and anything like combined action would have been impossible, but at present when one concern after another is reaching the point, when monthly estimates are shifting from a credit to debit, and everything points to a stoppage of from 2,000 to 3,500 looms for the months of July and August, with, as far as can be seen, little prospect of profitable working for the first months of the new crop, mills have an opportunity, which it is to be hoped will not recur, of reducing rates without the same amount of resistance and loss to both sides which would be the case were the matter of reducing wages taken in hand by mills individually from time to time. The stoppage of machinery, if it takes place, will undoubtedly press heavily on the female and poorer-paid class of workers, and with them we would not suggest any change; but with the weavers, the class with whom mills have, as a rule, most trouble, it is different, as they have been earning good wages for years past, and a couple of months of enforced idleness would not cause them much inconvenience. One thing, we think, is certain, namely, at no other description of work could they earn one-half of their current wages.

"What we would suggest is an addition of ten to fifteen yards per cut at all mills, the rates to remain as they are. Rates vary a good deal amongst mills according to situation and the command of labour, but at all mills the hands have benefited by recent improvements, and those concerns which some years ago were badly placed for labour, are gradually getting over their difficulties, and the above increase, if carried out unanimously, would leave the ratio but little changed. The concerns which, owing to their situation, pay most at present are the ones which need the reduction most, and while the weaving rates are probably the most important item, sewing-rates and other items of piece-work might be discussed by the mills as a body. There is no reason why the present state of matters should not, like short-time and other kindred evils, be turned to profitable account. Short-time working taught many lessons, but we are still a long distance from accomplishing all that might be done in the way of reducing manufacturing cost, and it is only at a time like the present, when all concerns are feeling the pinch more or less, that mutual jealousies will be dropped, and anything like combined action be possible."

SELVEDGE WEAVING APPLIANCES.

A case of some interest to manufacturers of narrow piece goods has just been decided. In October and November 1890, Mr. J. H. Clibran and Mr. G. Browning, of Manchester, applied for patents for improvements in weaving two or more independent pieces of cloth in a wide loom.

Opposition to the grant of the patents was commenced by Mr. E. T. Whitlow, patent agent, of Manchester, on behalf of Mr. William Simpson, of Salford, on the ground that the latter had a prior patent for the same invention, and that Browning, one of the applicants, while in the service of Simpson and engaged in assisting him in perfecting his invention, had thus become possessed of the invention.

The case was first heard by the Comptroller of Patents on March 1st, and on the applicants consenting to abandon two of their claims he decided to seal the patent.

The matter was reheard on appeal before the Solicitor General (Sir Edward Clarke), on the 12th and 13th insts., who, being of opinion that there was an apparent similarity between some parts of the rival inventions, decided that the patents could only be granted on condition that, besides abandoning the two first claims, the applicants should insert in their specifications a statement that they were aware of the existence of Simpson's prior patent, and disclaimed anything contained in Simpson's claims.

The applicants were ordered to pay £10 10s. costs to Mr. Simpson.

THE silk goods firm of Henneberg, in Zurich, proposes to erect a large silk goods factory in Wollshafen.

THE firm of I. R. Holdfeld, of Reichenberg, in Bohemia, is enlarging its shoe factory by the addition of a weaving shed.

THE RECIPROCITY GAME.—Some dissatisfaction is being expressed in Brazil with regard to the reciprocity treaty between that Republic and the United States.

Dr. Ray Barbosa, who was Finance Minister during the greater part of the negotiations for this agreement, says that Dr. Salvador de Mendonca, the Brazilian Minister at Washington, was most explicitly instructed that his Government would not agree to the proposed treaty unless it contained a stipulation that the United States should not come to a similar understanding with any European Power. This, Dr. Barbosa asserts, was agreed to; but on January 20, 1891, his Cabinet resigned, and the new Cabinet promulgated the treaty on February 5 following, without the stipulation referred to. This, he contends, is a sufficient ground for the demand for a revision of the whole arrangement. Mr. Blaine and General Foster have given a blank contradiction to Dr. Barbosa's version of the affair, asserting that no understanding as to a European treaty was ever sought by the Brazilian Government, and Dr. Mendonca hints that the whole story is a hobby-horse of the ex-Finance Minister, and that this is by no means the first time he has trotted it out. Meanwhile, the Hon. Hillary A. Herbert, in the *North American Review*, says that the scheme to monopolise South American trade for the United States by means of reciprocity treaties is a miserable failure. "The United Kingdom," he states, "buys from Latin America \$89,000,000; she sells them \$177,000,000, exporting two for one without making a threat of paying a dollar of bounty. We buy from the same countries \$207,000,000, and sell them \$90,000,000—more than two to one against us."

Letters from our Readers.

ASHWORTH versus LAW.

(TO THE EDITOR OF *The Textile Mercury*.)

SIR,—Had Mr. Hall understood what he read he would have known that the only meaning attached to the words—"grind to some extent," means a right to grind to any extent; the law does not stop short at $\frac{1}{2}$ of an inch. We have for years exercised our right to grind to any extent, and that right is now established by an unalterable decree,—indeed had we not always ground to any depth required by our customers the latter would have been the first to complain.

We are glad to observe that your correspondent at last sees his way to "leave the whole bearings of the case to the judgment of your readers." We only wish to say that if, as we understand, he is connected with the firm of Messrs. Ashworth, the plaintiffs, the attempt to minimise the importance of the judgment can hardly be regarded as other than *ex parte*.—Yours truly,
Cleckheaton, SAMUEL LAW & SONS,
17th May, 1892. LIMITED.

Textile Markets.

COTTON.

MANCHESTER, FRIDAY.

The cotton trade, so far as its relations with the operatives are concerned, seems to be getting into peaceful waters again. The lock-out is over, the partial fiasco which attended it in the Ashton and Stalybridge district having been settled, and so has the strike which gave origin to the whole struggle. The operatives of the Stalybridge Spinning Co., after having been on strike for about six months, during which time they have been maintained in idleness by the subscriptions of their fellow workers, have returned to their employment without having obtained the slightest advantage either for themselves or the class to which they belong. It is claimed by their leaders that they have got a principle recognised and admitted, namely, that they shall be entitled to ask for compensation when there is bad material to work up. This, however, is a very shadowy gain, if a gain at all, as it was already, and has been for a considerable time, a recognised and admitted principle. The trouble that may arise from it is that they will seek to give it a wider meaning and application than has hitherto been considered to belong thereto. Thus, however, will certainly be most strongly resisted. Steady progress is being made in the organisation and federation of the various employers' unions, the labours attending which are yielding the most gratifying results. The twin strike with that of Stalybridge, at Accrington, was settled on Wednesday, and again without any concession on the part of the employers beyond the rectification of a few slight irregularities in the wages list.

Liverpool has put on a bold front during the week, and has been favoured in so doing by the occurrence of floods in several of the principal American rivers, which are reported to have broken through their banks and overflowed several hundred square miles of territory. We shall perhaps discover in a week or ten days the real extent of these floods, and as has often been the

case before, may find that they have been greatly exaggerated. Meanwhile they will have served their purpose. The necessity of caution in accepting these reports as true cannot be too strongly impressed upon trade. They should remember their experience of last year.

COTTON.—On Saturday there was a very quiet and limited demand for cotton in the early part of the day, and the tendency of futures was downward, but there being few sellers, a rally took place, the loss was recovered, and by the close a gain of 1 to 2 points had been established upon the prices of the previous evening. Spots were also the turn dearer. Other growths were unchanged. On Monday there was no change in the characteristic symptoms of the market. A good deal of nervous feeling was apparent, making it extremely sensitive to the slightest external influences. After several fluctuations futures closed with a loss of 1½ to 2 points from Saturday. Spots were in rather more enquiry, but holders, ever on the alert to get an advantage, hardened their rates against enquirers, and consequently went without the business. Other growths were unchanged. On Tuesday, after a hesitating demeanour, futures went off in an advancing direction. The impetus starting this movement was Transatlantic news stating that the Red River had overflowed its banks, and caused serious damage to the crops. This is another instance shewing the way in which cotton values are juggled with in Liverpool. Surely it would have been more prudent on the part of buyers to have awaited particulars before paying more money for cotton in Liverpool. Futures closed with a gain of 2 to 3 points on the day. Spots continued to harden, though very slowly. Other growths were steady, Indian having a hardening tendency, and Tinnevely, owing to great scarcity, being advanced ½d. On Wednesday the improvement was carried further, which led to an advance of ¾d. in the official quotations, which again brought middling up to 4d. per lb. Brazilian was quiet and Egyptian firmer, while East Indian was advanced ½d. in all qualities. Futures, after several fluctuations, closed at an advance of 2 points on the day. Yesterday there was again a strong demand for cotton, the floods in America being a real god-send to the dealers on both sides of the Atlantic, in that they have to some extent frightened the trade into active operations on a scale to which sellers have long been strangers. Futures fluctuated somewhat, and closed with a gain of 1 to 1½ points on the day. Spots were again raised ¼d. all round, and large sales were made. A goodly business was also done on sealed samples for deferred delivery. Other growths were steady, and prices unchanged.

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 1.30 P.M. EACH DAY.

	Satur- day.	Mon- day.	Tues- day.	Wednes- day.	Thurs- day	Friday
May	3-58 b	3-59 b	3-60 s	3-63 s	4-1 2	4-1
May-June	3-58 b	3-59 b	3-60 s	3-63 s	4-1 2	4-1
June-July	3-60 b	3-61 b	3-61 b	4-0 1	4-3 s	4-2 b
July-Aug.	3-63 a	3-63 a	3-63 a	4-2 3	4-5 b	4-4 s
Aug.-Sept.	4-1 a	4-2 b	4-2 b	4-5 s	—	4-7 s
September	4-3 a	4-4 s	4-4 s	4-7 b	4-7 b	4-9 b
Sept.-Oct.	4-3 a	4-4 s	4-4 s	4-7 b	4-10 s	4-9 b
Oct.-Nov.	4-6 7	4-6 7	4-7 s	4-9 30	4-10 s	4-11 12
Nov.-Dec.	4-8 9	4-9 b	4-9 b	4-12 b	4-12 b	4-13 14
Dec.-Jan.	4-11 v	4-11 12	4-11 12	4-14 15	4-14 15	4-16 s
Jan.-Feb.	—	4-14	—	—	4-16 17	—
Price of Mid American.	3 15-16	3 15-16	3 15 16	4	4 1-16	4 1-16
Estimated Sales including Spec. and Export.	6,000 500	8,000 1,000	8,000 500	12,000 1,000	14,000 1,500	8,000 1,000

The following are the official quotations from the same source:—

	G.O.	L.M.	Md.	G.M.	M.F.
American	3½	3½	4¼	4¼	4½
Pernam	3½	4¼	4¼	4½	4½
Ceara	3½	4¼	4¼	4½	4½
Paraiba	3½	4¼	4¼	4½	4½
Maranhã	4	4¼	4¼	4½	4½
Egyptian	4¾	4¾	4¾	4¾	4¾
Ditto white	4¾	4¾	—	5*	—
M.G. Broach	—	—	3½	3½	3½
Dholerah	2¾	3	3¾	3¾	3¾
Omra	2¾	3	3¾	3¾	3¾
Bengal	—	2¾	2¾	3¼	3¼
Tinnevely	3½	—	3½	3¾	4*

* Nominal.

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 Export.
American ..	42,039	38,773	43,840	1,476,710	3,608
Brazilian ..	—	1,360	1,840	47,910	1,622
Egyptian ..	1,163	5,090	3,100	103,860	1,126
West Indian	515	542	510	34,250	175
East Indian	1,501	1,609	2,080	38,440	984

Total .. 45,218..47,374 51,370 1,701,170..7,515

YARNS.—As usual on Saturday, there was only a small attendance of buyers or sellers on 'Change, and little business was attempted. The week's aggregate sales of yarns were very small, and at irregular prices. On Monday there was again only a small enquiry for yarns, and sellers were easy to deal with, prices shewing no increase of strength. All classes remained very quiet. On Tuesday sellers could find no increase in their chances of business, and soon displayed some disposition to meet the views of practical buyers. In most cases rates were the turn easier. The aggregate business transacted was much below a fair average. On Wednesday the increasing firmness of Liverpool steadied prices somewhat in yarns, and led to a slight increase of business on several hands, but the increase in the turnover was not great. In the various classes of export yarns hardly any change from the late extreme dullness was discoverable. Producers were a little more uniform in their quotations. Yarns kept persistently sluggish yesterday in spite of the movement in cotton. Spinners "dressed up" their prices more in line with cotton, but found it exceedingly difficult to effect business at higher prices. There was a slight increase of demand at the rates of last week, but that was the extent of the improvement.

CLOTH.—On Saturday cloth remained unchanged in its main features, and there was scarcely any attempt to add to the small aggregate of transactions that had taken place. The demand from all quarters continued dull. On Monday the Eastern mail brought a slight increase of enquiries and low offers for cloth, but these were mainly of an unworkable character; consequently, little business came out of them. The demand for miscellaneous goods was about on a late average scale; that is to say, unsatisfactory in every direction. The number of looms stopped was still reported to be increasing. On Tuesday the increase in the enquiry for distant delivery was again a feature of the market, and the demand was of a wider character, covering more classes of cloth than recently. On the whole, more business resulted than of late, but the aggregate in normal conditions would have been regarded as small. On Wednesday the fuller enquiry continued, but on some quarters it was held to be in rather less force. Manufacturers, in the face of a strong Liverpool market, were levelling up their quotations, and irregularities were disappearing. Rather more business was put through than had been the case on most days of late. The activity in cotton seems to have at last stimulated cloth buyers into making enquiries, and a considerable increase in the number and weight of offers was apparent yesterday. Even prices were somewhat improved, though not to a corresponding extent with those for yarns and cotton. It was gratifying, however, to find that there was a little vitality in the market, and hopes were generated that it might increase.

To-day cotton is quieter; the sales of the week have over-estimated by 6,000 bales. The demand for both yarns and cloth is diminishing in strength, owing to the unsound foundation of the stimulus from which it sprang.

FLAX AND JUTE.

DUNDEE, WEDNESDAY.—The market for jute and all its products continues extremely depressed. Advices from foreign markets, and especially from New York, speak of accumulations of stock of the manufactured goods. The usual wire from Calcutta tells of large sowings of jute, and of good prospects of an abundant crop. In these circumstances there is little wonder that jute, which had risen from £12 per ton to £22, is now unsaleable save at a big fall. To-day it is difficult to get offers for jute on the spot at anything like rates current a few weeks ago. Yarns have been done at a fall of ½d. per pound on the week—say 1s. 5½d. to 1s. 5¼d. for 8 lb. cop, and for 8 lb. warp 1s. 7d. is the price for common. For the higher qualities, indeed, spinners still demand extreme prices; but even the best jute yarns are affected by the fall in the common. The wires give 5 cents, as the price of Hessians in New York. This is equivalent to about 1¼d. for 10½ 40 in. in Dundee. At this price there are no sellers, but to-day it is no longer possible to find buyers of common Hessian at anything more than nominal rates. Flax remains firm, especially for the best brown Petersburg. For superior tows also there is some enquiry, but for common sorts prices droop. Flax yarns of the best warp quality alone retain their value.

Common wets and low qualities of tow yarns are easier to buy. The demand for linens is less active. The unfortunate labour troubles in English industries have affected the home trade, and in Forfar one hears of short time. Still flax goods of all kinds are very cheap, and the foreign demand is good; and with returning confidence, the hope seems justified that this trade will rapidly right itself. Jute, on the contrary, is far above its normal price. Experienced men, therefore, do not expect a change for the better, until the buyers feel assured that the bottom prices are again reached. The Dundee fancy jute trade, long so healthy, languishes. The only branch in which there can be said to be a healthy demand is the trade in reaping twines and in cords. Arbroath, in the heavy canvas branches, remains still without sufficient orders to keep the machines running full time.

BELFAST.—The demand for linens is brisker, but prices do not appear to satisfy producers. Hand-loom descriptions are steady, and brown power loom linens move off freely. The home trade demand for bleached goods is not satisfactory, although there is a fair amount doing on foreign account.

WOOLLENS AND WORSTEDS.

BRADFORD.—Spinners are only buying for current wants, as there is an opinion amongst many consumers that quotations will fall when the new clip comes forward. Mohair and alpaca are firm; yarns are dull, and new contracts become difficult to obtain. Spinners, as a rule, appear busy, but complaints are made concerning prices.

LEEDS.—There has of late been a change for the better. Employment is general on all hands; stocks are not accumulating to any appreciable extent, and prices are leaving more profit, especially to those who have good stocks of wool to work upon, as raw material is still hardening. In the shipping branches trade is active, chiefly for the Colonies. The South American trade has been more active. There is a good run on vicunas and worsted serges. Fancy Cheviots are also in improved demand. Meltons are dull, but Morley unions keep well to the front.

HUDDERSFIELD.—Summer goods, as a result of the milder weather, have been more freely bought, and as a rule looms are better employed. The Continental and American demand keeps up. Spinners have benefited by the strike in Belgium, and the demand for yarns is therefore good.

ROCHDALE.—Nearly all the season's orders are now given out, and many of the merchants' travellers are already on their rounds visiting the drapers. Some of the manufacturers are so well supplied with orders that at the present time they are indifferent about receiving more at the ruling prices, which have an upward tendency.

GLASGOW.—Messrs. Ramsey and Co., wool brokers, in their report dated 17th May, say:—Wool: A fair amount of business has been done in wool during the week, chiefly on export account. The home trade is still rather languid, consumers only taking small quantities as they require. Prices are fairly well maintained. Sheepskins: The supply is well maintained and of good sorts, but weights are lighter; and as the prices for skin wools and pelts are still dragging, prices are rather irregular.

SILK.

LONDON.—Messrs. Durant and Co., in their circular dated 18th May, say:—The public sales commenced yesterday and are concluded. The quantity offered was about 1,150 bales China, 26 bales Japan, and 350 bales Canton raw silk, with the equivalent of about 170 bales English thrown silk. The attendance of buyers was smaller than usual, and there was but little disposition for business, notwithstanding the very firm tone and large consumption reported from the Continent. The prices realised mark a small reduction, Cantons and Taysaams being specially difficult of sale.

Deliveries 1st to 18th May 1892.	
Bengal	83 Bales.
China	508 "
Japan	91 "
Canton	102 "
Tussah	9 "

DRY GOODS.

MANCHESTER.—There has been a very fair amount of business done during the week in the fancy departments, laces and ribbons having shared in the activity. Prints, however, are rather dull, although a few large orders for South America are noticeable. Carpets are still dull, although some narrow width tapestries for South America have been bought more largely. The linen trade displayed no new feature.