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The Textile Mercury.

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NOTICE.

"THE TEXTILE MERCURY," 121, NEWGATE STREET, E.C.

The present number commences the 25th
volume of *The Textile Mercury*. Coincident with
its issue we have to announce the removal of
the Editorial and Publishing Offices from 23,
Strutt Street, to

CARR STREET, BLACKFRIARS,
Manchester—still within two minutes' walk of
the Royal Exchange. The new premises will
afford accommodation commensurate with the
greatly increasing business of *The Textile
Mercury* office, and as they have been secured
upon a lease, with ample reserve of room for
further extensions, we are not likely to have to
announce another removal for at least a con-
siderable number of years. Readers of this
publication know that we have never indulged
in certain journalistic quarters, but have preferred
rather to let the quality and position of *The
Textile Mercury* be assessed by an impartial
public. The result, however, has been emi-
nently gratifying: wherever mechanical textile
operations are carried on, *The Textile Mercury*,
we are assured, has earned for itself the
character of

"THE FIRST TEXTILE JOURNAL IN THE WORLD,"
that is, of course, the first in point of excellence.
—(The claim to be the first in regard to advent,
which is pretentiously put forward by a generally
belated monthly contemporary, is of course un-
warranted, as the oldest textile journal in the
world is a certain American monthly.)—The
premier position thus attained by *The Textile
Mercury* will, we are confident, be maintained
and further improved upon with our increased
facilities for publication, seconded by arrange-
ments just completed for additions to our
editorial staff. In connection with this depart-
ment of the journal we hope to be able to make
an important announcement very shortly. In
conclusion, we take this opportunity of most
heartily thanking our readers and advertising
patrons for the substantial support they have
accorded us in our endeavour to supply the
textile world with a thoroughly representative,
up-to-date, and reliable journal. By concen-
trating the entire energies of a competent staff
solely upon its production, instead of spreading
the same over a hotch-potch of sporting, betting,
and theatrical sheets, the conductors of *The
Textile Mercury* hope to continue worthy of the
trust reposed in them by a world-wide textile
constituency.

MR. THOMAS BIRTWISTLE'S PROMOTION.

The rumour that Mr. Thomas Birtwistle,
J.P., of Accrington, secretary of the United
Textile Factory Workers' Association, had been
appointed to the office of Examiner of Partic-
ulars under the 24th clause of the Factory
Act of 1891, has been confirmed, and the
appointment made. We need not reiterate
our objections to this clause, as they are already
sufficiently well-known. All we shall repeat is
that in the first place the clause was not
needed; in the second, there was no justification
for it; in the third, nobody can comprehend
it; and in the fourth, no sense can be made of
it without violating a leading principle govern-
ing the interpretation of all law, i.e., importing
into it matter which the Act does not contain
within its four corners: namely, the standard list
of the district in which it is sought to be enforced.

These constitute the negative aspects of the
clause. Its positive ones are no better: it can-
not do any good; it will not raise wages; it
will not prevent frauds, because—with one
exception—none have ever been proved; it can
never be put into force without causing much
irritation and engendering ill-feeling; and it
can only be used for the purpose of harassing
employers. Such is, in brief, the character of
this mischievous legislation. Until this appoint-
ment was made we were quite unable to find a
reason why the clause was ever enacted.
Probably, however, the appointment explains it:
it may have been necessary to make a berth
for somebody. "The labourer is worthy of his
hire" is an affirmation coming from an
authoritative source. But on this point
we will say no more; we only trust that
the public may receive the benefit that
ought to accrue from the expenditure entailed
by this new berth in the Inspectorate. If
the clause has not to remain absolutely dead,
which we maintain ought to be the case, then it
will need a special inspector to see to its
enforcement, and in that case we have only one
objection to offer to the acceptance of the office
by Mr. Birtwistle as the most likely man: it is
that he will come to the work saturated with the
idea that the clause refers to and really includes
the standard list. This, however, we reaffirm
it does not, and Parliament never intended it
to do; and such an assumption it will be the
imperative duty of the trade to resist. We trust,
therefore, that the matter will be taken up by
the employers in this sense, and a test case
carried, if need be, to the ultimate court
of appeal, the House of Lords, thus
settling the matter once and for all. Pro-
viding the construction that Mr. Birtwistle
will no doubt endeavour to put upon
the clause be affirmed, it will be the duty of the
trade to at once set to work to obtain its
repeal amongst the many other unjust pre-
scriptions of the statute which urgently demand
revision and amendment. There is one further
satisfactory feature about this appointment,
and that is that it severs Mr. Birtwistle's con-
nection with and breaks the link between the opera-
tives' associations and the Inspectorate, which
existed while Birtwistle *was* their chief
secretary and Birtwistle *is* a sub-inspector on
ground covered by the operations of the cotton
trade unions. Such an arrangement was a
violation of all propriety, and how it ever came
to be made, or was allowed by Mr. Matthews to
continue, is a thing beyond all ordinary com-
prehension. Mr. Birtwistle by his resignation
of his secretaryship of the United Textile
Factory Workers' Association has put an end
to the anomaly, and we trust that in future no
such arrangements will ever be permitted to
arise.

TRADE-UNIONISTS TAKING A STEP UP.

The promotion of Mr. Thomas Birtwistle,
referred to above, has made a vacancy in the
ranks of the trades-union officials, which it has
been deemed necessary to fill at once. We
understand that Mr. Mawdsley steps into the
secretaryship of the United Textile Factory
Workers, thus leaving vacant the presidency
which he occupied, and into which Mr. David
Holmes is hoisted from the vice-presidency,
thus making room for Mr. Mullin, of the Card-
room Workers' Association. At present we
are somewhat at a loss to know how
Mr. Mawdsley's previous experience, either
as a worker or as a union official, has
given him any qualifications for the post
he has taken. Mr. Birtwistle has a know-
ledge of the Standard Lists for weaving, and
therefore in treating with him matters could
not get very far astray. Should Mr. Mawdsley
be wanting in this respect, he may soon

unwittingly provoke an incalculable amount of mischief, which it will take much more than his capability to undo. We have had to make very serious complaints against the manner in which he has conducted the affairs of the Spinners' Association, and trust that he will be more prudent in his new post, and more judicial in his investigations of the complaints that may be laid before him—many of which he knows have been of the most foolish kind. The cotton trade is passing through a crisis that will admit of no folly in the management of its interests on the part of either employers or operatives, and if the facts of the case be truly and properly brought before the notice of the workpeople, they are far from being as unreasonable as people would be justified in concluding was the case from the exhibitions they have made of themselves during the past few years, during which they have not been prudently advised. We trust that the policy of "egging" them on to make demands upon their employers that nothing will justify, will be abandoned.

THE INDIAN MONSOON FORECAST.

The Indian monsoon, or rainy season, is always a matter of great importance to Lancashire. We have pointed out previously that an abundant rainfall means fertility and good harvests; a deficient one scarcity; and a very poor one—practically a miscarriage of the rain and its deposition in the neighbouring oceans—means famine. Last year we drew attention to the forecast, the prospects of which were far from favourable, and we regret very much that they were to a great extent realised. Mr. Elliot, the Government meteorological reporter at Simla, issued his monsoon forecast for this season at the beginning of the current month. It is a very full and exhaustive one, and, we are glad to say, indicates on the whole more satisfactory results than that of last year. These predictions, it may be observed, are not mere guesses, but scientific deductions from observed facts, which have for a series of years been carefully recorded, tabulated, and compared with the phenomena of the rainy seasons; hence the generalisations from which these deductions have been made. We are glad, therefore, to note that Lancashire may look for the beneficial influence of the monsoon making itself felt on her staple industry in due time. The course of the rains since the issue of the forecast has been very fairly in accordance therewith.

THE CLEANING QUESTION AT OLDHAM.

Our Oldham correspondent writes:—"At two spinning firms in Oldham the mule piecers have struck work against being employed for the purposes of cleaning during mill hours. At other concerns notices have also been tendered that this practice must be abolished, and that machinery must be stopped during working time to allow of cleaning being carried out. I am further informed that since the Whitsuntide recess this question has been pushed very much to the front by the cotton operatives in Oldham district, and consequently is causing some amount of uneasiness to employers. The matter, I understand, is under the consideration of the local Employers' Committee, and has also been brought before the notice of the Council of the Employers' Federation. The conversation in commercial circles is to the effect that the time cannot much longer be delayed, in face of the depressed condition of trade, when some action must be taken to have a thorough understanding as to the whereabouts of both parties. The reduction in wages, it is thought, will be the point upon which the employers will unite, and 20 per cent. is the figure mentioned as in all likelihood that

which they will demand to be written off the wages bill. At any rate, we seem to be on the eve of a struggle in the cotton trade between capital and labour. Each side appear to be preparing for the coming battle, which bids fair to bring about a curtailment of production by a total cessation of the mills from work."

WOOLLEN GOODS IN ROUMANIA.

It is said that there are in Roumania at least 4,584,776 sheep, yielding on the average two kilns per head of good wool, and yet there is not a single weaving factory in the whole country. Woollen fabrics have therefore to be imported in large quantities. The first place amongst importers is taken by England, from which, in 1889, woollen goods to the value of 9,116,820 fr. were imported. The figures for 1889 were much higher than for 1887, but the distance between the imports of England and those of Germany were much less, the increase in the German exports being very marked. France, on the other hand, though importing more, cuts a very poor figure indeed. The reason is said by a French journalist to be that French manufacturers do not like "to run risks in such distant countries," thus leaving the field open to competitors.

THE CALCUTTA JUTE TRADE.

The semi-famine in jute caused by the failure of the last crop has greatly disorganised the trade both at home and abroad. The opportunity has been seized—it was too good a one to be missed—by speculators to play with the supplies of the raw material in their accustomed manner. The result is, as usual, utter confusion and inability to work the mills with any assurance that heavy losses will not be incurred. In these difficult circumstances we are not surprised that the Indian mail received this week brings us news that a proposal has been made, and favourably entertained, that for the four months from July to October inclusive, the jute mills at Calcutta should work only four days per week; and in view of the present depressed state of the trade the local opinion is that the proposal is a good and reasonable one. The production of the mills at the moment is more than the demand, and unless prompt steps are taken things will speedily go from bad to worse. "It is a curious commentary on the recent new mills and extensions," says *Capital*, "that this should be the case, but none the less the position is a very weak one and can only be strengthened in the way suggested. Large 'bear' sales have already been made by speculators in ginnies, and unless the mountain rill is stopped, there will soon be a raging torrent to deal with."

TRADE IN CALAIS.

French lace manufacturers appear to be agreed that business during the past season has not been satisfactory with them. They are now devoting attention to the production of goods for autumn. Few of them have formed any decided opinion as to the probable direction in which fashion is likely to run in the near future, although all are studying the matter with the closeness which the importance of the subject deserves. Nottingham competition has been keenly felt by French houses of late, and Plauen firms have also made considerable inroads into their markets. The Paris warehouses are, however, said to be overstocked with Nottingham goods at the present time, and Calais firms are disposed to think that the tide will shortly set in their favour. It is not yet too late in the year for such a change to take place. The substitution of Lyons fustard for the *robe de chambre* previously in vogue was a blow to the lace trade, as the former article lent itself readily to trimming. It is thought, however, that the *robe de chambre* will again come to the front. A

source of frequent dispute in Calais of late has been the price to be paid to the operatives in connection with the making of *point d'Irlande*. The Committee of the Men's Union have therefore addressed a communication to the President of the *Chambre Syndicale* asking him to receive a delegation for the purpose of discussing the matter with a view to arriving at a common understanding. Hearing of this, the *Chambre Syndicale* of tulle operatives asked to be allowed to take part in the discussion, as several of its members were unable to agree with their employers owing to the lack of such an arrangement as the deputation desired to effect. The desire of the tulle workers' union was to discuss the business fully and seriously in the presence of representatives from each of the men's organisations. This request was granted, and the joint deputation was received by an employers' committee, consisting of Messrs. Cadart, Bassett, G. Arnott, and A. Topham. M. Dutertre, on behalf of the "Union," expressed his surprise at hearing that the *Chambre Syndicale* of tulle workers would be represented at the Conference. The "Union," he said, had always kept aloof when representatives of the rival organization conferred with the employers; and on this occasion the Council of the former body expected that the proposed negotiations would be conducted privately. Such is the jealousy existing between the two organizations that the Union officials, on meeting the employers, refused absolutely to discuss the matter in the presence of the other delegates; although the latter expressed themselves as ready to proceed with the consideration of the list prices for *point d'Irlande*. Nothing, therefore, resulted from the meeting and the deputation withdrew. The Employers' Committee will, however, call another meeting of the two unions; and their Chamber commending this resolution, recommends it to pursue its enquiries whether one of the worker's organizations abstain or not. Another matter which has had the attention of the Calais employers relates to the question of dismissal. Rule 4 on this subject, drawn up by the Chamber, should, it is proposed, be suppressed, as it is always liable to be commented on adversely in the courts. There are articles in the *French Cafe* to the effect that all contracts between employes and employer fixing fines or indemnities, in the case of a sudden suspension of relations are null and void. The following resolution has been proposed in substitution of article 4:—

All operatives or apprentices absenting themselves from employment without leave will be no longer considered as a part of the staff, and cannot claim indemnity.

The further consideration of this matter has been postponed. We may add that, with regard to the *point d'Irlande* list, the opinion of Calais houses is that payment should be based upon that of Nottingham. A copy of the Nottingham list has therefore been procured and considered. We hope shortly to be able to give the decision of the Calais employers in connection with the matter.

FRENCH LACE AT CHICAGO.

The Calais Chamber of Commerce has offered a contribution of 2,000 francs towards the expense of making a show of French lace at the World's Fair, on the condition that the display is collective and anonymous. The conditions are regarded as onerous by some manufacturers, who do not think individuals will be inclined to go out of their way if the exhibition is to be collective. This is not the general opinion of the Calais houses, however. It is obvious that New York importing houses would scarcely view with satisfaction an exhibition which would teach the customers the names and addresses of the European manufacturers

whose products they are in the habit of buying from the importers. The latter is certainly worthy of consideration, although we fancy many manufacturers will think it a hardship if they cannot claim credit for their work. The question is one which concerns English as well as French manufacturers. Several French manufacturers of laces and embroideries have been appointed members of a committee which is looking after the interests of the trade at Chicago.

THE WINDSOR TAPESTRY FACTORY.

Times are greatly changed from the old days when the patronage of kings, princes, and powerful nobles was as the breath of life to the poet, the literary man, and the artist. The bourgeoisie of the day in the aggregate is now much more powerful than the most powerful monarch, and can maintain any or all of the above classes in a far more satisfactory manner than could the richest princes. Even the modern democracy is not an insignificant factor in its contributions to the support of the lower grades of art industry. The ability of kings, princes, and statesmen has become much reduced, and their inclination has changed in a corresponding degree. There are now no more Gobelins Tapestry Works or Sevres China Factories attempted to be established by Royal patronage. The old Mottlake Tapestry Factory, established by one of our princes, never attained a reputation to correspond with that of France, though it achieved some good work. Its revival by the late Duke of Albany was a praiseworthy attempt, but it ended as might have been expected—in failure. His early death rendered this a certainty; and even had this misfortune not befallen it the probability is that it could never have become a vigorous institution; although some of the very beautiful tapestry panels woven in these Windsor looms were purchased by the Queen and other members of the Royal family, and many specimens adorn the town and country mansions of patrons of the factory. But the spirit of the times has so completely changed, has become so commercial in its nature, that it rigorously exacts so full an equivalent for what it may pay for in which it buys, that the leisurely work of the olden time is impossible. Artists then laboured more when the inspiration was upon them, and they were in their happiest moods: hence the very high results attained. Now they work under the drive of necessity, and often when their hearts are not in their work. Hence the inferiority in many respects of the results produced. Whichever way it may be looked at, it will be seen that such an establishment as the Old Windsor Tapestry Factory could hardly hope to hold its own. It is, therefore, not a matter of surprise to see it announced that the picturesque group of buildings erected a few years ago for the manufacture of English art tapestries is shortly to be sold; and thus ends a very interesting and praiseworthy effort at reviving a notable branch of textile industry.

THE JAPANESE COTTON TRADE.

A Japanese native paper reports that there has been a pause in the recent outburst of prosperity in the Japan cotton spinning mills. A considerable number of contracts taken some time ago, it is true, have not yet been fully executed; but as these run off buyers shew hesitation in ordering fresh supplies, and prices have tended downwards. The spinners of Hirano, Settsu, and Amagasaki have held a meeting, and agreed to form a kind of "pool," so as to prevent ruinous competition. It is stated, however, that the weavers of Harima, Izumi, and other places have begun to purchase Bombay yarns, finding them preferable to those of home manufacture. Foreseeing some such

contingency the Home and Foreign Cotton Mill Company some time ago ordered a quantity of Indian cotton. The supply of foreign yarns in the market being small, their price is maintained independently of the temporary turn against the home manufacture. It is reported that the Osaka dealers lately purchased 3,288 bales of English and Bombay yarns from the foreign importers in Kobe—an exceptionally large quantity.

CHRISTOPHER COLUMBUS FROM A TEXTILE STANDPOINT.

As so much is said and written just now about the bearing of the discoveries of Columbus on modern life, it is not inappropriate to quote a few words from a clever paper by Professor Kielmeyer, dealing with the relation of those discoveries to the textile industries. When, on Oct. 12th, 1492, Columbus landed on the island of San Salvador and was greeted by a horde of naked savages, there was no glimpse of any possible relation of his discovery to textile operations. In fact, the Professor asserts that he has not been able to glean any hint from the description of this voyage and the other voyages of Columbus of any possible harm resulting therefrom to the Florentines, who were at that time the silk and wool dyers of Italy; nor of any palpable advantage likely to accrue to the wool dyers and wool and linen weavers in the Netherlands, Germany, and France. Columbus died in 1506, in the firm conviction that he had discovered the eastern coast of China, or the Indies. He must have met now and then with a few weavers, principally of cotton, but neither he nor his companions attached the smallest value to these circumstances. When Cortez, in the year 1519, subdued the kingdom of Montezuma, he found among the Aztecs of Mexico a highly-developed cotton industry, and the breeding of cochineal; but he too set little value on this non-metallic, non-glittering gold. In 1532 Pizarro conquered Peru, where the Incas cherished not only the cotton industry but likewise a woollen industry, developed up to the point of art. But all these textile finds, which are so full of interest for the intelligent student, had no significance whatever for the Spaniard, who wanted nothing but gold, bright gold, which proved, when he got it, to be a consuming curse. The first effect of these discoveries on textile industries was indirect. The successful voyages of the Spaniards in the West stimulated the researches of the Portuguese in the East, with the result that in 1498 Vasco de Gama arrived at Kalkat in the East Indies, thus proving that it was possible to reach India by sea. Other nations speedily followed in the wake of Portugal, and Europeans were brought in closer contact with the cotton industry of the East, an enormous trade between Europe and the Orient being thus called into existence. One single ship-load in the port of Lisbon or Amsterdam surpassed in amount and value the stock of the largest caravan conveying similar goods by land. Among these goods were woods and roots used in dyeing, "devil-eating" indigo, silk and silk-stuffs, cotton and cotton fabrics. These articles, however, had to be paid for, and the money was supplied by the gold and silver of the newly-found America, so that in this way the discoveries of Columbus influenced the development of textile manufactures. Gradually the cultivation of cotton was introduced into America. In 1748 the competition with Indian cotton began by the forwarding to England of seven bales of American cotton, and since then, as everyone knows, the West has outstripped the East both in quantity and quality. Since the American war of secession, India has vainly endeavoured to regain the lost ground:

the West maintains its superiority. Countless cotton mills are supplied with cotton from America, so that it may be truly said that at the end of the nineteenth century textile industry is reaping a glorious harvest from the seed sown in ignorance by Columbus towards the end of the fifteenth.

LIFE OF WORKING MEN ABROAD.

English working men and women who are discontented with their lot and are therefore liable to be led astray by smooth-tongued agitators, who endeavour to persuade them that they are tyrannised over by capitalists, would probably have their eyes opened if they could see and hear for themselves how some of their brethren and sisters fare in other countries. In Austria, for example, a state of things prevails of which most of our British operatives have no conception, and the bare suggestion of which would make them furious. In Galicia, out of 593 works which were examined by the Government inspector, only 134 were provided with lists of the persons employed, and only 245 were furnished with books registering the work done. Provisions are dear, lodgings are dear, and wages are miserably inadequate. What would the operatives of our Lancashire towns think if they had to live in places which can be fitly compared to hen-coops, and which can only be entered by crawling in on their hands and knees? What would be the feelings of our operative spinners if they were offered about 3s. 2d. a week, and discovered that the highest figure likely to be attained was about 4s. 4d.? How would people accustomed to have the whole of Sunday and half of Saturday to themselves appreciate the condition of the woollen mill operatives of Brunn, who have just been informed by their benevolent employers that they will be excused working on Sundays for the months of June, July, and August? A small dose of Austrian life would probably exert a most beneficial effect on some of the well-paid and well-fed malcontents who do so much to embitter the lives of British manufacturers.

THE COMPETITION OF INDIA WITH LANCASHIRE.

We have for a considerable time been pressing upon the attention of the working classes engaged in the Lancashire cotton trade the extreme folly of many of their proceedings, and especially of those connected with the trade-unions. Perhaps the following expression of Indian opinion may penetrate to the minds of the more intelligent of them, and convince them that there really is some truth in the statement we have made and so often reiterated—that Indian competition is a reality and not a fiction of the imagination. At a meeting of the Bombay Millowners' Association, Mr. Dinshaw E. Wacha said "there had been a little depression of late, but there was a combination of circumstances which led them to hope that cheerfulness and prosperity were not far remote. It appeared from the statistics given in the report that China was consuming the cloth manufactured by Bombay mills in larger quantities, and the increase promised to go up by leaps and bounds. Whatever the Lancashire millowners might say or do, the geographical position of Bombay made it a strong and a healthy rival and competitor in the matter of piece-goods in Chinese markets. The silver question had nothing whatever to do with the exports. Whether the price of silver went down to one shilling or rose to two shillings, their exports would go on increasing, because there were certain conditions of the local trade which would fetch better rates of yarn and cloth than Lancashire would ever expect to obtain." Possibly, in view of facts and statements of this kind, Lancashire operatives may find it desirable to change their

tactics, and, instead of harassing their employers, as has so long been their practice, may deem it expedient on mature consideration to co-operate with them in resisting this competition. Their failure to adopt this course will only accelerate the ruin of the industry by which they live.

OUR AMERICAN EXPORTS.—THE DECLINE SINCE 1889.

The writer of the article on the "Prospective Decline of Lancashire" in the current number of *Blackwood* refers to the loss of the United States market as one of the causes which have operated to place the staple trade of the country in its present condition. Recent consular statistics supplied by American officials show that the falling off in the demand for foreign textiles in the Republic has been very great. The value of exports from Great Britain and Ireland to the United States for the years ending September 30, 1890 and 1891, was, respectively, \$205,507,499.69 and \$176,315,826.70; showing a decrease for the latter year of \$29,191,672.99, or about 14 per cent. The value of exports for 1891, compared with 1890, showed an increase, from eight of the twenty-four consulates, of \$3,400,000; the increase consisting chiefly of tin plates from Cardiff, worsteds from Huddersfield, woollens from Bristol, and china clay from Falmouth. The decrease in value from the other sixteen consulates consisted chiefly of stuffs from Bradford, woollens and worsteds from Leeds, cottons from Manchester and Glasgow, and linens from Belfast. Two-thirds of the decrease consisted of textile fabrics, principally stuffs and woollens from Bradford and Leeds. These two consulates were seriously affected by the decrease in the export trade with the United States, more so than any of the others. More than half of the net decrease of all the consulates was sustained by these two. For the three years previous to October 31, 1890, the average yearly trade of Bradford with the United States was \$22,000,000. The year following this trade fell off to \$11,000,000, and, as was shown by the reports in our columns at the time, much suffering prevailed in Yorkshire, owing to the stoppages of machinery that resulted from this condition of affairs. About 80 per cent. of the trade consisted of woollen, worsted, and silk (chiefly plush) goods. The loss, in the words of the *Boston Journal of Commerce*, was like stopping half the woollen mills in Connecticut and three-fourths of those in New Hampshire. In 1889 the American trade of Leeds amounted to \$6,000,000, which represents the best year the town had had. One-third of this trade was lost in 1890, and the tariff of 1891 curtailed it a third more. Manchester and Glasgow have not suffered so much in comparison since the passing of the McKinley Bill, for the all-sufficient reason, in the case of Manchester, that a decline had been going on for some years. As far as last year is concerned, the local trade showed a slight improvement over that of the preceding twelve months. Velvetens form a large proportion of the textile exports from Manchester to the United States, the trade being one which has not so far made progress across the Atlantic. If we are to believe some people, however, it will not be long before goods of this class are produced extensively by New England houses. Lawns and other fine cotton goods are already being manufactured in excellent quality by American firms, and there appears no reason for thinking that the progress which has marked the history of the trade during the past few years will be retarded. The condition of the American trade is well illustrated by the latest figures of the Bureau of Statistics up to the end of April.

For the ten months of the fiscal year the imports were valued at \$105,233,030, against \$118,003,147 during the corresponding period of 1890-91, a decrease of \$12,770,117. There was an increase of \$1,860,414 under manufactures of flax, but all other divisions showed a decrease, manufactures of cotton falling off \$1,949,756, of silk \$6,818,345, and of wool \$5,862,430. The increase under flax was chiefly in burials and bagging, which were \$1,930,644 over a year ago. Under cotton, grey and plain decreased \$54,802, but bleached and coloured increased \$212,867. The other important changes were decreases of \$1,123,016 in knit goods, and \$1,256,801 in all other. Laces, embroideries, etc., increased \$335,600. Under silk, ready-made clothing increased \$72,581, and laces and embroideries \$1,090,396; dress and piece goods decreased \$695,520, ribbons \$236,556, and all other \$7,049,252. Under wool, only cloth showed an increase, viz., \$429,183. Carpets decreased \$101,291, ready-made clothing \$311,592, dress goods \$2,013,098, knit fabrics \$133,472, rags, shoddy, etc., \$358,922, shawls \$316,699, yarns \$403,465, and all other \$2,653,084. Particulars follow:

	1890-91.	1891-92.
Cottons—		
Cloth, grey and plain	\$99,820	\$154,622
Cloth, bleached and col'd.	4,067,890	3,855,023
Clothing, r'd-made, etc.	1,041,400	1,004,607
Knit goods	5,115,969	6,239,885
Laces, embroideries, etc.	13,121,409	9,785,809
Threads, yarns, etc.	555,003	657,300
All other	3,035,992	5,192,703
	\$24,940,343	\$26,890,999
Flax—		
Bags and bagging	\$963,080	\$497,479
Burials (except bagging for cotton)	5,960,262	4,504,286
Cables, cord, and twine	68,411	82,736
Yarn or thread	507,221	895,404
All other	14,745,254	14,412,642
	\$22,232,668	\$20,392,554
Silks—		
Clothing, r'dy-made, etc.	\$2,069,126	\$1,996,545
Dress and piece goods	8,555,266	9,250,786
Laces and embroideries	3,933,572	2,843,176
Ribbons	1,477,307	1,713,837
All other	10,922,435	17,971,687
	\$26,957,706	\$33,776,051
Wool—		
Carpets and carpeting	\$1,023,562	\$1,121,853
Clothing, r'dy-made, etc.	1,351,699	1,661,281
Cloths	10,807,411	10,438,228
Dress g'ds, women's, etc.	14,731,538	16,744,636
Knit fabrics	1,015,581	1,149,054
Rags, man., shod., etc.	67,148	426,080
Shawls	375,379	642,078
Yarns	642,385	1,045,890
All other	1,058,399	3,711,383
	\$31,082,013	\$36,944,443
Aggregate value	\$105,233,030	\$118,003,147

Quantities, so far as given by the Bureau for the ten months, are reproduced below. They show, in conjunction with the above values, the average value per yard of imports of grey and plain cottons was 8'55c. per yard, against 9'47c. in 1890-91, and of bleached and coloured cottons (printed, etc.), 13'95c., against 13'71c. In the woollen division, cloth averaged 94'92c. per pound, against \$1.01 per pound, and dress goods 21'25c. per yard, against 21'28c. Quantities:—

	1891-2.	1890-91.
COTTONS.		
Grey and plain, sq. yds.	1,466,597	1,646,924
Bleach and coloured do.	29,152,192	28,113,236
Thread, lbs.	1,471,852	1,475,984
WOOL.		
Carpets, sq. yds.	506,054	562,173
Cloth, lbs.	11,448,946	10,324,365
Dress Goods, sq. yds.	69,305,668	78,667,176
Rags, man., etc., lbs.	109,262	1,174,011
Yarn, lbs.	1,687,131	1,784,129

The carpet trade, it will be seen, continues to decline. The business now is in comparatively few hands and is scarcely worth following.

"THE PROSPECTIVE DECLINE OF LANCASHIRE."

The place of honour in *Blackwood's Edinburgh Magazine* this month is accorded to an article under the above title from the pen of Mr. W. A. Abram, of Blackburn, one of the best-known literateurs of Lancashire. It is an article that, both on the ground of its subject and the ability of the writer to deal therewith, ought to arrest the attention of every thinking man in the country. It is clear, concise, and succinct; and without being argumentative is written in a convincing style, and free from technicalities, which might confuse its meaning to the reader unacquainted with the inner workings of the great industry of which it treats. Mr. Abram is a Lancashire man, who has dwelt all his life within the county's boundaries, and has taken a deep interest in its industrial, social, and political life. Without being directly interested in the cotton trade he has had it under observation and been constantly in the closest touch with it to our knowledge for nearly 40 years. He brings to the task a keen power of observation, analytical ability, and great general intelligence, along with a very full knowledge of the early history of the trade and its development—the result of a special study of the subject. It will be generally admitted that the opinion of an observer thus qualified demands the careful consideration of every man interested in the welfare of the cotton trade and its subordinate industries. Especially should it receive the attention of the working classes and their leaders, who through the hostile attitude they have so long held towards their employers have done an amount of harm to the interests of Lancashire such as can hardly be expressed, but the consequences of which will never be shaken off. This, we have no doubt, has been quite unintentional on their part, and has arisen from their ignorance of the inner conditions of the trade. But the injury is none the less real for all that, and a perusal by their leaders of this article may bring home to them a conception of the magnitude of the interests with which they have so long been trifling, and the extreme danger resulting to the vast population of Lancashire directly and indirectly dependent upon the prosperity of the cotton trade for its welfare. In the hope that we may induce our readers to peruse the article itself, we briefly indicate the salient features of the paper.

Mr. Abram, in opening, briefly comments on the surprise that the title of his paper is likely to evoke in the minds of persons unfamiliar with the inner condition of the cotton trade, and those who merely give it superficial attention. In a short review of its history, beginning with 1850, he points out its times of prosperity and adversity, showing how it passed through each of the latter with unimpaired though gradually diminishing strength until 1875. That year may fairly be termed the centenary of the foundation of the cotton trade, as it was about one hundred years before that Arkwright got his mill at Crossford to work. In 1875 the trade began to feel sharply the effect of the obstacles almost everywhere placed in the way of its further expansion in the shape of adverse tariffs, and of competition fostered by protective duties in countries that had hitherto taken its productions with comparative freedom. The establishment of a competing industry in India under the shelter of an import duty upon cotton goods, which had all the effect of a bounty upon the Bombay mills, aided largely in arresting its progress. Since that time, and especially and markedly so during the last ten years, the trade has ceased to advance, notwithstanding numerous manifestations that, if superficially read, might be regarded as proof to the contrary. These mis-

leading evidences Mr. Abram estimates at their true value, and in his conclusions simply coincides with the opinions of the most intelligent persons and observers more closely connected with its conduct than he is himself. From 1875 up to the present has been emphatically a lean time, which, like the seven lean years in the ancient Egyptian famine, has eaten up the fruits of the better times preceding.

On this review, Mr. Abram concludes that the cotton trade of Lancashire has come to a dead halt, if, indeed, retrogression has not commenced. The extension of the spinning division of the trade in Oldham and district is hardly an expansion, it being rather a concentration of the industry, brought about at the expense of its almost complete decadence in East Lancashire, from Preston to Colne. But, worse than this, the weaving industry has also ceased to grow. In the district of which Blackburn is the centre hardly a new shed has been erected for the past ten years, whilst many of the existing looms cannot be kept regularly at work. That the population of Blackburn and most of the East Lancashire towns is increasing in a ratio far greater than the means of employment is obvious to anyone having a lengthened acquaintance with their aspects. Passing through the streets of the town one of the days of the present week we were struck very forcibly with the different aspect they presented from what was the case 20, 30, or 35 years ago. At nearly all the periods mentioned, during the hours at which the mills were working, scarcely an operative could be seen in its streets. Now there were almost everywhere little knots of men, old, middle-aged, and young, but mostly the two former, bearing the marks of their occupation, wandering aimlessly about, or idly passing away their time gazing into vacancy. Women and girls of the same type were also numerous, singly or in groups. This all indicated to us that the labour supply was rapidly running into stock, like Oldham yarns, notwithstanding the stream of migration that has set in so long and so strongly in the direction of Burnley and Nelson, where, as we have often pointed out, the trade-unions permit the people to work at prices the acceptance of which they refuse in Blackburn. Thus East Lancashire seems clearly on the down grade, and this is a fact that demands very urgently the attention of our operative and employing classes, our merchants, and our statesmen. It is quite time that the causes of this premature decadence were thoroughly investigated and remedies sought. Our commercial policy requires closely scrutinizing and examining to ascertain whether the theories on which for forty years it has been conducted are wearing well, or whether our experience has not revealed some serious flaws in them.

Mr. Abram dilates, though not at any length, upon the well-known unprofitable state of the Oldham spinning trade, the expansion of which, as observed above, he does not regard as an evidence of prosperity. It is the result of the action of special causes that are operating less forcibly or not at all elsewhere—a fact with which every intelligent observer is well acquainted. The growth of Burnley and Nelson amongst the weaving towns is also attributed to its true causes, and these constitute no evidence of healthy vitality. Mr. Abram very properly compliments Lancashire men upon the dogged pertinacity with which they endeavour to drive business forward when once they have entered into it, but even he is compelled to take note of the tone of almost despair that now pervades their views regarding the future of the cotton trade. He next, at considerable length and

in a very instructive manner, proceeds to consider the circumstances which by their combined action have brought the Lancashire cotton trade to a stand, and threaten to bring about its irremediable decline. This part, like the whole paper, is exceedingly well written, and, with a strong recommendation to our readers to go to the article itself for its perusal, we leave the subject, once more saying this is a warning voice that ought not to be disregarded. The observer can generally see more of the battle than those engaged therein.

Foreign Correspondence.

TEXTILE MATTERS IN THE UNITED STATES.

BOSTON, JUNE 21ST.
CONCERNING CARPETS.

The representatives of the various carpet houses are soliciting orders for Fall with satisfactory results. Philadelphia standard ingrain is selling at 5½¢, 10¢ lower than the Lowell price. This change was looked for by the trade in general. The Bigelow Imperial Axminster has advanced 25¢ per yard, the price being \$1.65, against \$1.40 last season. While the Bigelow Co. has made no formal announcement regarding the price of their Brussels, they will not probably hold the umbrella up to shelter their competitors, but will consult their best interests when it comes to a question of price between them and the buyer. Buyers seem satisfied with the prices ruling, and a good season's business appears probable.

The list of applications of carpet manufacturers for space for exhibits at The World's Fair at Chicago, as reported to this date, comprises the following names:—Hartford Carpet Co., Thompsonville, Conn.; Griset Carpet Co., San Francisco; Roxbury Carpet Co.; Bigelow Carpet Co.; Lowell Manufacturing Co.; Burlington Carpet Co.; Joseph Wild and Co.; Beunley Manufacturing Co.; John Beunley and Sons; McCallum and McCallum; Dorman Brothers; and Thomas L. Leedom and Co.

KNIT GOODS NOTES.

Mr. A. L. Brown, manager of the hosiery department of Mills and Gibb, has just sailed for Europe. He intends to make careful choice of the latest novelties in fancy hosiery.—Mr. C. F. Ballard, foreign hosiery buyer for Carson, Pirie, Scott, and Co., Chicago, is now about arriving in Europe.—The Hon. Titus Sheard, of Little Falls, N.Y., one of the largest manufacturers of knit goods in the State, and ex-Speaker of the New York Assembly, sailed for Europe on the 9th inst., expecting to be abroad until Fall.

The *Knit Goods Review* belauds home manufactures. "There is a prejudice," it appears, "still existing with many consumers, who are ignorant of the real beauty and superior excellence of domestic knit fabrics, in favour of anything that is foreign; 'imported' is still a word of potent significance to these, and they will often turn from a better garment of domestic make to purchase imported trash at a higher price; and so forth. It is hoped, however, that a very comprehensive exhibit of domestic knit products at Chicago next year may knock some of this nonsense out of many heads, as previous like general exhibits of home productions have destroyed, in a great measure, the as yet almost unconquerable prejudice in favour of foreign silk and other goods."

Nearly every mill in Cohoes and Amsterdam is being operated to its fullest capacity, night work also being resorted to. Even with this, however, and with the large number of new establishments and of extensions recently made, orders are far in advance of production. At some of the mills, indeed, the production is sold many months ahead, and leading manufacturers are refusing orders at the low prices and concessions as to terms, dating, etc., lately offered. This expansion of the knitting indus-

try in Cohoes, Amsterdam, and district has caused a demand for hundreds of additional hands, which, however, are not always to be had when wanted. An Amsterdam newspaper remarks on the situation as follows:—

The mills are taxed to their utmost capacity in order to turn out goods fast enough. The putting into operation of the Globe Mill and the Nelson Mills has given employment to about five hundred hands, some new and some old employes, who were either idle at home or had gone elsewhere to find employment. All are now busy. A dozen or more mills are running at night. The manufacturers are all so intent upon taking advantage of the present improvement in business that, like last year, there will be few vacations taken by manufacturers this year.

COTTON GOODS FOR CHINA.

Ten carloads of sheetings and drillings manufactured by the Stark corporation left Manchester, N. H., June 21, for Vancouver, to be thence shipped to Shanghai, China. This is a portion of an immense order which the Stark Mills are filling. It will take 28 carloads in all to ship the 3,000 bales required. It will take four days and nights to complete the packing of the cars, a large force being employed in the work.

WOOL GATHERINGS.

At Rockville, Conn., the woollen mills are all very busy, and a large number of orders promise a lively summer. Many of the mills are already at work on special designs of cloth for exhibition at the World's Fair. The Hockanum, Springville and New England mills have engaged space, and the Rock and American Mills will also be well represented. The display of the Rockville mills will be one of the main features of the woollen exhibit.

A MONSTER PETITION AGAINST FREE WOOL.

Mr. Springer's Bill, placing wool on the free list and reducing the duty on woollen goods, is, of course, extremely unlikely to pass the Senate. Nevertheless the National Association of Woollen Manufacturers is protesting against it by means of a petition to the Senate, signed by manufacturers in all parts of the country. Manufacturers, of course, are greedy enough for free wool, but as for free wool *plus* free woolens—never! Hence these tears, and fears. The following is the text of the petition, which was presented on the 8th inst., by Senator Aldrich:—

The undersigned respectfully petition the Senate of the United States against the passage of House Bill 6,007, "to put wool on the free list, and reduce the duties on woollen goods," on the ground that the present law has but recently been enacted; that it is working to the advantage of manufacturer and consumer; that it should be given a fair trial; that the proposed rates of duty on woollen goods are improperly adjusted and wholly inadequate; and that the woollen manufacture of the United States, after a long period of tariff agitation, dating from 1878, is entitled to an opportunity to recuperate from the harmful influence of constant agitation of tariff changes affecting this industry.

This petition was signed by 917 of the 1,000 manufacturers to whom it was sent. In opposition to the Bill a pamphlet, entitled "An Analysis of House Bill 6,007, with a reply to arguments in its behalf," has been printed, with a view to show "the necessity, the efficiency, and the advantages of the duties on woollens, etc." The analysis sets forth that the machinery capacity of the manufacturers who ask Congress for the passage of the Bill is represented by about 700 cards and 50 combs. To the petition are signed names of establishments representing 5,846 sets of cards, and 750 combing machines. In addition are the names of a large number of woollen and worsted manufacturers, who do not employ either cards or combs, but are engaged only in the more advanced processes of manufacture, buying all their yarns. Of the cards actually employed in the wool manufacture proper, this petition is claimed to represent about 80 per cent., while of combing machines in active operation in the United States the proportion represented on the petition is over 95 per cent. The petition tends to show that the attitude of the National Association of Wool Manufacturers, as set forth in the memorial to Congress adopted at its annual meeting, January 8th, 1892, represents the views of those engaged in this great industry more

generally than was ever before the case since the organisation was founded in 1867.

FACTORY LEGISLATION.

New Jersey manufacturers are waiting with much interest to see whether or not the new Factory Act, reducing the hours of labour to 55 per week, and practically interdicting all overtime, is to be rigidly enforced, as its operation would place them at a very serious disadvantage in competing with other States, wherein the laws permit much longer hours—all the way from 60 per week to whatever the millowner and his hands may agree upon between themselves. This new law is supposed to be operative now.

The adoption of a 58 hours-a-week time-schedule for the Commonwealth of Massachusetts is virtually an accomplished fact, and it is predicted that a further reduction in the hours of labour will follow within the next year or two. Manufacturers are greatly stirred up over the matter, and with good cause, as the enforcement of the measure will handicap them seriously in competing with other States, and most especially (in case of the cotton industry) with the South, of which they are beginning to get rather apprehensive—and not without cause.

COTTON ITEMS.

Imports of Egyptian cotton for nine months of the current fiscal year have exceeded by nearly 50 per cent. the imports of that commodity for the same time last year. This cotton all goes to the New England mills, and the movement indicates that there is an increasing tendency to improve the quality of the goods manufactured in that section. Finer yarns are being spun each year, and a better quality of goods placed on the market.

According to consular advices, the popularity of American prints in the South American markets is increasing under the stimulus of the recently established policy of reciprocity. During the past year the exports of prints and other cotton fabrics of American manufacture to the southern countries have been larger than ever before, and a steady enlargement of American trade in this direction is confidently to be expected.

THE IMPORTATION OF DRESS GOODS.

Protectionists are grieved and enraged to find that the sale of foreign dress goods is almost as large as ever, notwithstanding the high tariff of 1890. The April returns show that the value of the imports of women's dress goods for that month was \$727,125 against \$510,704 in 1891. Under the heading of "cloths," there is also an increase, the figures being \$588,000 and \$519,000 respectively. The increases in the figures for ten months preceding April are very marked, and if the April returns are kept up during May and June, the imports during the twelve months will be larger than has been known for some years, with the exception of 1890, when the totals were swollen from exceptional causes. In the case of dress goods, should the importations continue to the end of the fiscal year the same as for the month of April, which averaged less than for the previous ten months, they will nearly equal the average value of those for the years 1884 to 1891, notwithstanding present values are on a lower basis. That such things should be is a source of much annoyance to McKinleyites, who thought that Bradford and other European centres would be entirely crushed by the latest tariff.

JAPANESE vs. ITALIAN SILK.—An American merchant at Yokohama, who has recently made a tour in the silk manufacturing districts of Europe and the United States, has put on record for the benefit of Japanese silk producers his impressions as to the relative qualities of Italian and Japanese silk. At present the latter is marred by defects. The first defect is that of variations of colour. A bale of Italian will run off at one unvaried tint throughout, because the cocoons are carefully assorted before reeling, while in Japan there is no such system of rigid selection. Again, there is a similar want of uniformity in the size, or "counts"—to use the term current in the cotton trade—of Japanese silks. In Italy silk of, say, 13-15 deniers will not be found to vary beyond the indicated limits, and the average will be very nearly 14 deniers. A similar description of Japanese often contains all sizes from 10 to 15 deniers, and manufacturers cannot possibly make an even cloth from such material. With respect to cleanness of thread, too, there is a wide difference between the two growths. In 100 skeins of

Italian there will hardly be found a single "rib," whilst many would be discovered in a single skein of Japanese. These various defects can all be removed by greater care in winding, and the writer intends to publish in Japan the results of his investigations. He warns the Japanese that Chinese silk growers may begin to give attention to the reforms he suggests, and if they should do so Japan will have a more formidable competitor to deal with than Italy is now.

Designing.

NEW DESIGNS.

TWEEDS.

These goods are now made in such a variety of ways, with such a variety in yarns, make, and finish, that although good patterns are more easily produced than heretofore, novelties are few, and only the result of mature thought and calculation—excepting, of course, the few effects produced by accident. To some it may appear that the production of excellent patterns is at all times rather haphazard, depending largely upon circumstances outside the control of the designer. In other words, they would say—let a man put together a large number of pattern ranges and he is certain to produce some effects of the kind required. This may be true in some degree, but only those who have practically studied pattern production realize how, without judgment, sound common-sense, feeling for good colour-combination, and systematic work, the designer has an insurmountable barrier between him and the coveted success: he cannot with any degree of certainty design effective pattern ranges. Now a great deal of the success in putting pattern ranges together depends upon the mental vision with which the designer can foresee the result of the proposed combinations, and this foresight can only be obtained from the organization of previous research. How important then is the thorough organization of all research work, how much time may be saved by such organization, and what a field for future enterprise it opens to him who will bear in mind the above facts and order his work systematically!

An example of the method of procedure in conducting a research into the colour and weave effects produced by the three-and-three twill may here prove useful. As a rule it will always be found advisable to arrange colourings in numbers, the same multiple of the weave to be employed, thus: for the two-and-two twill, one and one, four and four, etc.; for the three-and-three twill, three and three; six-and-six, nine and three, etc. Since in compound schemes of colouring, warp and weft of necessity cross in a variety of ways, producing other effects than those arranged for, in the following list more colourings are given than may be deemed necessary. Still we would recommend a complete list at least being drawn up for each weave, even if every scheme be not worked out.

THREE-AND-THREE TWILL COLOUR AND WEAVE EFFECTS IN TWO COLOURS.

Warp.	Weft.			
	1	2	3	4
(1) 1 black 1 white	1 black 1 white	2 black 2 white	3 black 3 white	All black or white
(2) 2 black 2 white	2 black 2 white	1 black 1 white	3 black 3 white	All black or white
(3) 3 black 3 white	3 black 3 white	1 black 1 white	2 black 2 white	All black or white
(4) 6 black 6 white	6 black 6 white	1 black 1 white	2 black 2 white	3 black 3 white
(5) 6 black 3 white	6 black 3 white	2 black 2 white	3 black 3 white	6 black 6 white
(6) 9 black 3 white	9 black 3 white	3 black 3 white	6 black 3 white	6 black 6 white

This exhaustive list may seem rather too extensive for completely working out, and there is really no need to do so, as it will be found that many schemes are repeated twice. For example, every one-and-one effect of any value will be found under Warp 1, therefore all others may be crossed off; similarly every effect of

any value in two-and-two warping will be found in the second warp. By this means it will be possible to practically complete the working-out of the list with very little trouble.

With three colours more thought in the selection of crossings, etc., is needed, but the following list gives the prominent schemes:

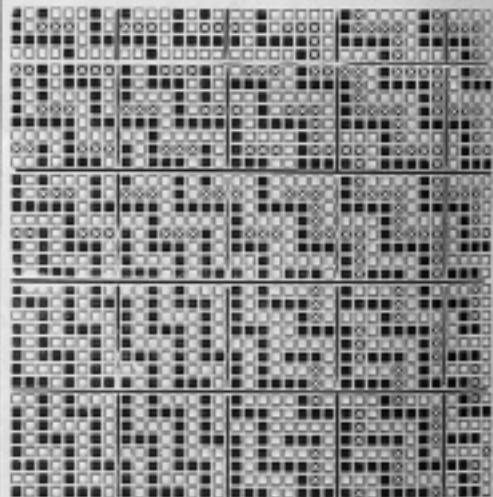
THREE-AND-THREE TWILL COLOUR AND WEAVE EFFECTS IN THREE COLOURS.

Warp.	Weft.			
	1	2	3	4
(1) 1 black 1 grey 1 white	1 black 1 grey 1 white	2 black 2 grey 2 white	3 black 3 grey 3 white	4 black 4 grey 4 white
(2) 2 black 2 grey 2 white	2 black 2 grey 2 white	1 black 1 grey 1 white	3 black 3 grey 3 white	4 black 4 grey 4 white
(3) 3 black 3 grey 3 white	3 black 3 grey 3 white	4 black 4 grey 4 white	6 black 6 grey 6 white	All black or dark colour
(4) 9 black 6 grey 3 white	9 black 6 grey 3 white	3 black 3 grey 3 white	9 white 6 grey 3 black	All black or dark colour

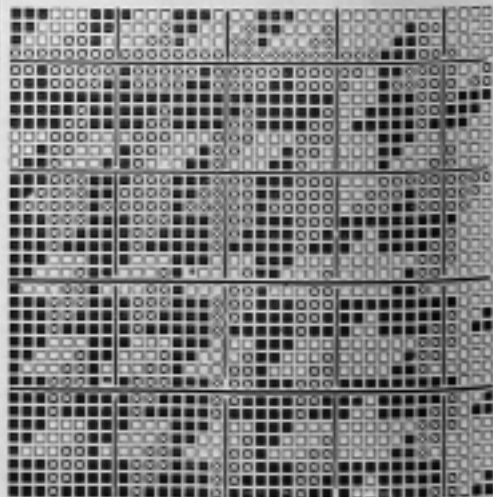
This list is not quite so systematic as the previous one: still it will be found to contain most of the best colour and weave effects; should any designer, however, wish to draw up the lists more completely, the system for doing so is here fully indicated.

A few ideas may now be given of applying some of the above effects to tweed colourings.

In the two-colour effects we find a one-and-one effect in black and white, and in the three-colour effects we also have a similar effect. These, combined, give us a check as shown in Design A, the particulars being as follows:—



DESIGN A.



DESIGN B.

Warp.
 1 thread black } for 18 threads.
 1 " white }
 1 thread black }
 1 " grey } for 18 threads.
 1 " white }

Woff.
 1 pick black } for 18 picks.
 1 " white }
 1 " black }
 1 " grey } for 18 picks.
 1 " white }

Any dark, medium, or light colours may be used for the black, grey, and white respectively. Another effective pattern is as follows:

Warp.
 3 threads dark brown } for 18 threads.
 3 " black }
 3 threads black }
 3 " medium olive } for 18 threads.
 3 " medium brown }

Woff.
 Same as warp

Of course the size of the pattern may be altered at will. This effect is indicated in Design B.

A principle of even greater worth is to replace some of the threads in the foregoing with threads of a distinctive colour, as indicated in the following:—

Warp.
 1 thread grey and white twist } for 12 threads.
 1 " fawn and white twist }
 1 thread lemon and white twist } for 4 threads.
 1 " fawn and white twist }
 1 thread grey and white twist } for 12 threads.
 1 " fawn and white twist }
 4 threads grey mixture } for 24 threads.
 4 " fawn mixture }

Woff.

To be the same as warp.

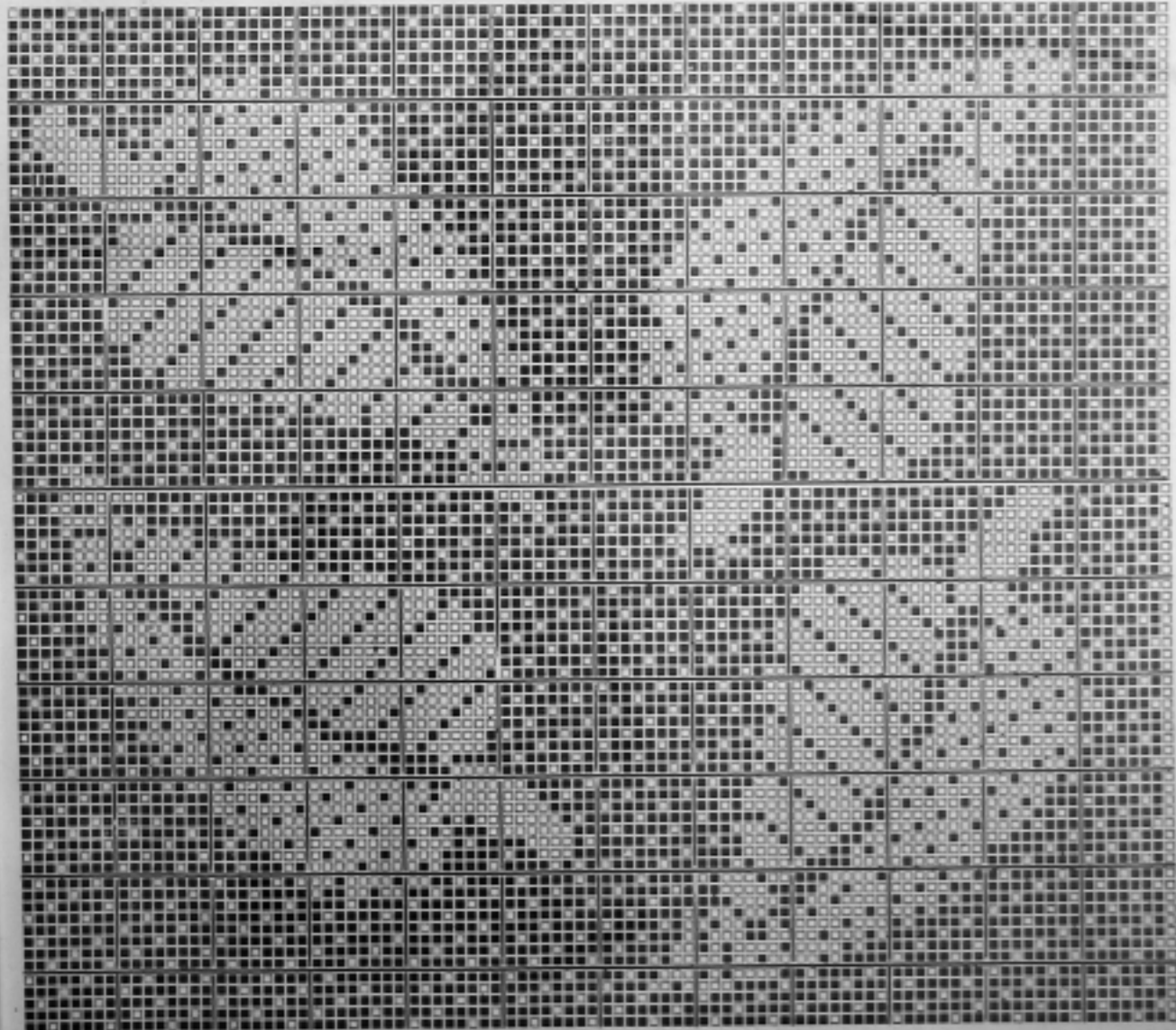
This scheme, properly carried out, will give a most pleasing result, and its value as suggestive of others is great. It should, however, be noted that in all the foregoing some little experiment may be useful to ascertain the best "footing," i.e., relationship between weave and colouring.

SILK VESTINGS, ETC.

Limited space has prevented us from developing the full motive of Design C. Sufficient however is shown to convey some idea of its nature and utility. The warp ground is a 5-shaft satin, although any other satin twill might be as effective. The leaves are formed by the weft picks, or the ground may be a sateen, and the figure a warp face. For dress-goods a spun silk warp, all white or cream, 44 double threads, that is 88 single ones, two in a mail, four in a dent, then a band of 5-shaft satin 88 single threads, two in a mail, 72 single

ends, two in a mail. As will be seen from the design, one figured stripe has the leaf inverted cross-ways, and in the third stripe the leaf is inverted lengthways, giving a variety by being irregular. The silk tram weft on the warp ground to match the band dividing the two figured stripes. A pattern as follows would be found suitable:—The two figured stripes, dark emerald green, brown, blue, cardinal, puce, or tan; the dividing band all white or cream; the weft all white or cream. This is merely an indication of what may form patterns for stripe goods.

For vestings, a great quantity of warp threads would be required, say 25 dents per inch, 5 in a dent, all single in the mail, with 60's two-fold China silk. The leaves in their four positions to form an all-over pattern, based on a satin arrangement, so that the leaves would be equally distributed over the surface of the fabric. The warp and weft to be of different or opposing colours. Any arrangement may be used if suited to the size of the leaf, and the space it occupies in the repeat. The design is simply suggestive, and to obtain pleasing effects will very much depend upon the treatment adopted. Fancy vestings are very popular, and likely to continue so for a time. Novelty and good colourings in these fabrics command a ready sale, particularly in simple floral patterns.



DESIGN C: SILK VESTINGS, DRESS GOODS, &c.

Machinery and Appliances.

THE "WESTON" IMPROVED PATENT SELF-BALANCING HYDRO- EXTRACTORS.

MAKERS: MESSRS. WATSON, LAIDLAW AND CO.,
ENGINEERS, DUNDAS STREET, SOUTH,
GLASGOW.

Years ago, in the manipulation of textile and many other articles, it was found very desirable to extract the water or other fluids with which they were saturated, more speedily and by other means than passages between compression rollers, by which especially the lighter and finer classes of textiles were very liable to be injured. The heavy textures, even in a greater degree, needed improved means of getting out the water when the old processes of drying were considered, because it was only by the aid of such means that they could be rapidly dried or fitted for subsequent treatment. After being long subject to this want the ingenuity of inventors provided these means in the various arrangements generally known as hydro-extractors, and which, in the workshop, are designated whizzers, buzzers, centrifugal wringers, and by other names originating in the more or less active fancies of the workers who have charge of them in the different districts in which they are in use.

We have already on more than one occasion drawn the attention of our readers to this type of machine, and, therefore, need say nothing more as a preliminary introduction to this notice of the "Weston" self-balancing hydro-extractor. In loading the baskets of hydros with the goods to be dried, it will be observed that it must always be impossible to place in the load so evenly that the burden shall be equally distributed. Hence when the machine got to work it was found that a greatly disproportionate amount of power was required to operate it over a theoretically sufficient quantity. In fact an unevenly loaded hydro-extractor basket was like an unbalanced bobbin on a ring spinning-frame spindle: too much power was required to drive it; too much wear and tear took place; too much oil was consumed in lubrication, and the work was not as well performed as it ought to be, and would have been with a well constructed bobbin. And it was even much more difficult to balance the basket than the bobbin. But the same principle has solved both difficulties, and that is the introduction to both machines of a gravity or self-balancing spindle. The machine under notice, the "Weston" Hydro-Extractor, is constructed on the principle of allowing the revolving basket to oscillate within certain limits, so that it may be free to assume, as a centre of gyration, the centre of gravity of the basket and its load; thus balancing itself, and reducing to a minimum the power required to drive the machine, as also the amount of vibration transmitted to the frame or building to which it is attached. The means by which this oscillation is at once permitted and controlled, is an elastic buffer through which the stationary spindle passes and from which it depends. Whenever there is an unequal load there is a tendency on the part of the basket to oscillate, and this is permitted by the elastic buffer within the limits required by the load. This simple yet valuable invention has solved many difficulties encountered in the working of hydro-extractors. The advantages secured are that the machine can be driven at the highest speed with the smallest consumption of power, and without vibration to frame or building. This diminishes wear and tear, dispenses with massive foundations, or brick pits, and permits it to be worked in places where other types could not be introduced.

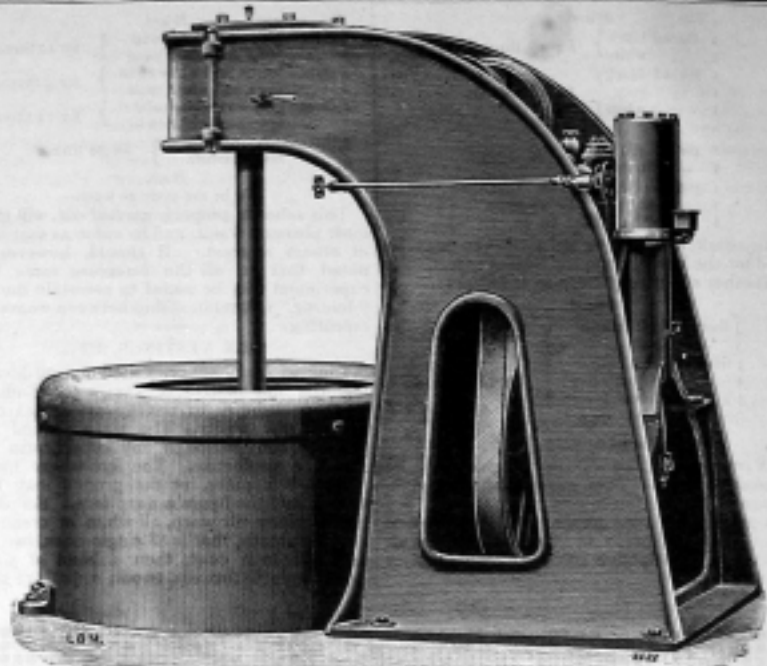


FIG. 1.—PATENT SELF-BALANCING SUSPENDED 45-IN. HYDRO-EXTRACTOR.

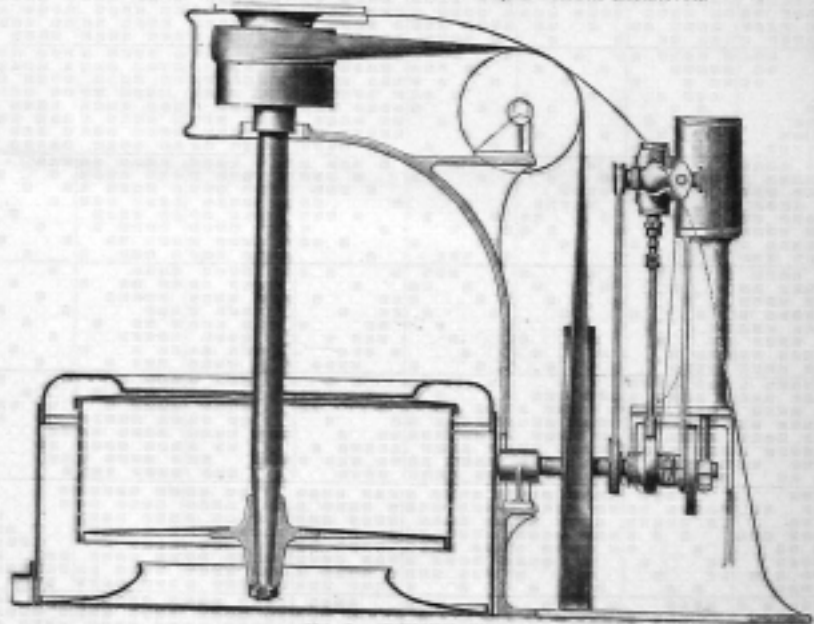


FIG. 2.—SECTIONAL VIEW.

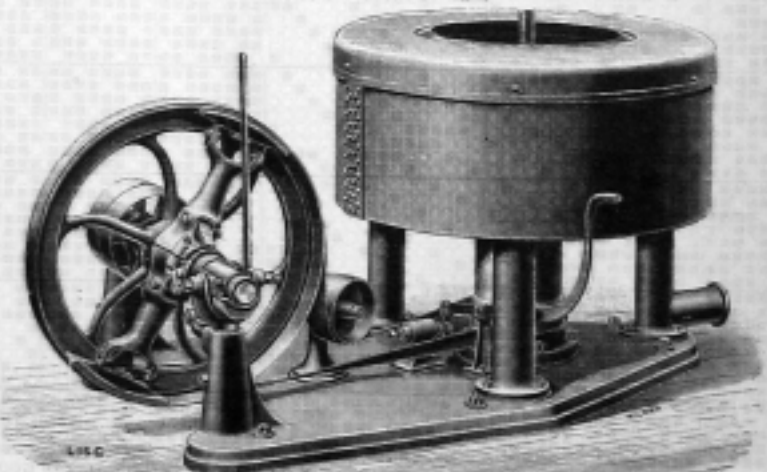


FIG. 3.—PATENT SELF-BALANCING PIVOT OR UNDER-DRIVEN HYDRO-EXTRACTOR.
(From a photograph of a 30-inch Machine.)

HYDRO-EXTRACTORS BY MESSRS. WATSON, LAIDLAW, & CO., GLASGOW.

Messrs. Watson and Laidlaw make two types of this machine, one over and the other under-driven. Our illustration Fig. 1 is a view of the suspended or over-driven type, and is engraved from a photograph of a 48-in. machine and adapted to be driven with a special high speed steam engine governed by Macfarlane's patent safety governor. Fig. 2 is a sectional view of the same. Besides the general advantages obtained from self-balancing machines, now universally recognised, the makers claim great steadiness, stability, and general cleanliness, there being no risk of oil getting upon the goods from the spindle bearings. Perfect safety to the attendant is ensured in the event of a breakage or an accident through the corrosion of the basket, by the surrounding casing, which is made of mild steel. This avoids all the risk attendant upon the use of a cast iron casing, which is liable to break and fly into pieces. All the parts are easily accessible for examination, are on the floor level, and do not interfere with drains or pipes that may be underneath.

This type is also made to be driven with the firm's automatic friction driving pulley recently described in these columns, and this method is recommended where power can be conveniently taken from a shaft. This type thus driven is especially adapted to the requirements of bleachworks, dyeworks, laundries, etc., in all of which it will be found to be an efficient machine.

The second type made by the firm, the pivot or under-driven machine, is also illustrated here-with (Fig. 3), as arranged to be driven from a shaft, and through the patent automatic friction pulley. It can also be had fitted with a special high-speed engine. Being fixed to a substantial cast-iron sole plate, it can be put down at a nominal cost for foundations, any ordinary good flooring being sufficient to place this machine upon without fear of causing vibration. As no part extends under the floor level, these machines do not interfere with pipes or drains underground. By means of the automatic friction pulley it can be rapidly set in motion and brought to rest again without the necessity of shifting the driving belt from fast to loose pulleys. In consequence the driving belts last a long time. The objections hitherto raised to belt-driven extractors have been entirely due to the expense and trouble of keeping belts in a proper state of repair when fast and loose pulleys are employed for starting and stopping the machine, and these are completely obviated by the method here adopted. The best material and workmanship are put into every machine.

The firm will be pleased to furnish any other information that may be desired upon application as above.

Bleaching, Dyeing, Printing, etc.

TOURNESOL.

In France two distinct colouring matters are known by the name of *tournesol*. These are described by Charles Dreyer in a recent number of the *Monsieur de la Teinture*, from which source we take the following account: The first and most important of these two colouring matters is *tournesol*, better known in this country as *litmus*—a product obtained from lichens. From the observations of M. Geles it is found that the blue colour develops from lichens by fermentation in the presence of alkaline carbonates. When the liquor obtained by digesting the lichens in water is submitted to the slow action of air and ammonia, it forms the red colouring matter known as *orchill* or

archill; but if to these two bodies there is added carbonate of soda or potash, then the operation proceeds somewhat differently, and instead of the red archill the blue *turnesol* or *litmus* is produced. This colour is due to the combination between the colouring matters of the archill and the alkali, because if the latter be neutralised by an acid the red colour comes back. On the other hand it is important to note that the red colour of orchill is not turned blue by alkalis, which seems to show that it is in some way different from the colouring matter of litmus. On this point, however, information is scanty, but there is no doubt some relation between the two colouring matters.

The second colouring matter is known in France as *lorswood* or *drapacour*, and in England as "dyers' croton," although if a dyer was to make any enquiry for it he would not be able to get any, its use in this country being now quite obsolete. This colouring matter is delivered to dyers for use in the form of rags impregnated with the blue colouring matter. This dye-stuff is obtained from the morelle, and is quite distinct from that obtained from lichens. It is reddened by acids, but the blue colour is not restored by ammonia, as is the case with litmus. These shreds of cloth are employed for colouring Dutch cheeses, preserves, and liquors of all kinds. The morelle from which the colour is prepared grows in the South of France, the *croton drapacour* of Linnaeus, belonging to the family of *Euphorbiaceae*. The berries and the tops of the plant are collected, and the juice they contain extracted. In this juice shreds of cloth are dipped, and are then hung over a heap of horse dung or a manure heap, the cloths being turned over from time to time to ensure that every part of the surface is exposed equally to the action of the vapours which ascend from the heap; also because too prolonged exposure would result in the destruction of the colour. After this the cloth is dried and then steeped in a mixture of the juice and urine, and is finally dried by exposure to sun and air. M. Joly's researches show that the colouring principle lies in every part of the plant, being resident in the vegetable tissue in an undeveloped state, but when exposed to the action of air, etc., it gradually develops into a blue.

PRINTING HOSIERY GOODS.

By reason of the ease with which the Benzidine dye-stuffs are applied in the dyeing of cotton, they have met with extensive applications in the dyeing of hosiery goods. They are mostly dyed at the boil in an alkaline bath; made with soap and alkali. The following recipes give good results, the proportions being for 100 lb. of goods:—

RED.

6 lb. Benzopurpurin 4 B,
20 lb. Glauber's salt,
5 lb. soda crystals,
2 lb. soap.

ROSE.

½ lb. Titan pink BB; 20 lb. salt.

PINK BLUE.

1 lb. brilliant azarine 5 G,
10 lb. Glauber's salt,
2 lb. soap.

INDIGO BLUE.

8 lb. brilliant azarine 5 G,
1½ oz. chrysamine B,
20 lb. Glauber's salt,
2 lb. soap.

TOURNECO-BROWN.

½ lb. Titan yellow R,
1½ lb. benzo brown BN,
20 lb. Glauber's salt,
20 lb. salt.

In each case the dye-bath is not exhausted, and may be retained for future lots, and only about two-thirds of the above quantities of dye-stuffs are required for each succeeding lot of goods.

When the hosiery goods have thus been dyed, designs in white and colours may be printed on by making use of discharge colours. To do so the goods, after dyeing, are well soaped, and then passed through an alkaline Turkey-red oil bath, containing one pint of 50% oil in 10

pints of water, the liquor being made weakly alkaline by adding a little caustic soda. This treatment enables the colour on the hose to be faster to light, acids, etc. The goods, after being treated, are wrung out and dried, when they are ready for the printing of the discharge colours, which are made according to the following recipe:—

WHITE DISCHARGE.

20 oz. gum thickening, 1 oz. tin crystals,
1 oz. acetic acid, 11 T.W., 20 oz. acetate of tin.

This is printed on, the goods are dried, steamed without pressure for half-an-hour, washed in luke-warm water, and dried.

The acetate of tin is made as follows:—Two solutions: A, made from 20 oz. tin crystals, 2½ oz. glacial acetic acid, and one pint boiling water; and B, made from 34 oz. lead acetate and two pints boiling water. These solutions are mixed, when cold. The precipitate is allowed to settle, and the clear liquor of acetate of tin is ready for use.

With very dark colours, the whites may have a yellow tint, in which case the addition of a little Prussian blue to the discharge colour will neutralise the yellow tint.

YELLOW DISCHARGE.

Made with

85 oz. white discharge,
8½ oz. Persian berry liquor, 30° Bc.,
2 oz. acetic acid, 5° Bc.,
¼ pint water.

Print and steam as for white.

BLUE DISCHARGE.

6 oz. gum thickening,
3½ oz. yellow prussiate of potash,
1 oz. red prussiate of potash,
7 oz. water.

all dissolved together, then add

4½ oz. tartaric acid,
¼ oz. oxalic acid,
5 oz. ferrocyanide of tin,

and, before printing,

1½ oz. white discharge.

RED DISCHARGE.

10 oz. gum thickening,
1½ oz. tin hydrate,
1½ oz. oxalic acid, 16° Bc.,
4 oz. sulphocyanide of aluminium, 19° Bc.,
2½ oz. acetic acid, 40%
1½ oz. Persian berry liquor, 30° Bc.,
6 oz. alumina for reds,
½ oz. castor oil,
1 oz. acetate of lime, 17° Bc.,
1 oz. sulphocyanide of potassium,
20 oz. acetate of tin.

Print, steam, soap lightly, wash, and dry. BLACKS may be printed on the dyed hosiery by any of the following methods, or even on undyed hosiery the same recipes will give good results:

STRAM BLACK.

3½ lb. starch,
1 lb. destine,
2½ gallons water,
2 lb. acetic acid, 40%
1 lb. quercitron extract, 30° Bc.,
1½ lb. cotton oil.

Boil together for one hour, then add

10 lb. reduced black.

Before printing, for every 3 lb. of the colour add ¼ lb. acetate of chrome of 20° Bc. Print, steam for half-an-hour, wash and dry.

ANILINE BLACK PRINTING COLOUR.

1 lb. starch,
1 lb. destine,
3 gallons of water,

boiled for one hour. To the thickening when cold, add

14½ oz. chloride of soda,
2½ lb. aniline salt,

and make the whole up with water to 52 lb weight. Before printing, add for every 4 lb colour,

12 lb. aniline oil; 28 lb. vanadium solution,

made from vanadate of ammonia, hydrochloric acid, and glycerine. After printing, the goods are hung in a chamber at 30° C. for 24 hours, are then passed for five minutes through a cold bath of bichrome (one bichromate of potash, four of ammonia, in 100 water), washed well, worked for 10 minutes at 35° C. in a weak soap bath, washed and dried.—*Kaiser's Journal*.

RECIPES FOR DYERS.

The following are mostly translations from foreign sources. We do not guarantee the results from these recipes, but give them for the purpose of showing our readers what their foreign competitors are doing:—

FAST BUFF ON COTTON YARN.

For 100 lb. cotton yarn, work the yarn for half-an-hour at a temperature of 30° C. in a bath of permanganate of potash at 1° BÉ; then, without washing, pass at once into a bath of 10 lb. of copperas. Work to shade, lift, run through weak bath of sulphuric acid, wash, and dry.

GREEN ON JUTE YARN.

For 100 lb. jute yarn, dye at about 180° F. in a bath of

1½ lb. iron green; 5 lb. alum,

until colour is developed; then wash and dry.

DARK LAVENDER GREY ON WOOL.

For 100 lb. wool, prepare a dye-bath with

10 lb. Glauber's salt, 1½ oz. acid violet N.,
2 lb. sulphuric acid, 2 oz. orange II.,
½ lb. patent blue.

Work at the boil to shade.

DARK HELIOTROPE ON WOOL.

For 100 lb. wool, prepare the dye-bath with

10 lb. Glauber's salt, 2 oz. fast acid violet R,
2 lb. sulphuric acid, 2 oz. patent blue.

Work at the boil to shade.

BLACK ON WOOL.

For 100 lb. woollen goods, prepare a dye-bath with

50 lb. direct black (Read Holliday's),
2 lb. oxalic acid.

Enter at 120° F., raise to the boil, work from 1½ to 2 hours, lift, wash, and dry. If the dye-bath has a sherry colour, it indicates that there is an excess of oxalic acid present, which would prevent the dye from going on properly; this defect can be remedied by the addition of a little ammonia. On the other hand, a cloudy bath indicates a deficiency of oxalic acid. The bath is not completely exhausted, and for future lots only 40 lb. direct black is required.

FERMENTATION VATS IN INDIGO DYEING.

During the last few years there have come into use to a very large extent indigo vats that depend for their reducing action on the indigo they contain upon the action of a certain bacteria, which develop in the vat, and which by causing the evolution of hydrogen in a nascent condition gradually bring about the transformation of the dye-stuff in the vat into white and therefore soluble indigo. To some extent, the old woad-bran-indigo vat belongs to this class of fermentation indigo vats. The principal advantages which these vats possess over the other kinds of indigo vats for wool dyeing are that they are more cleanly, and the wool is left softer, more silky in texture, and less harsh in every way; which is owing to the fact that there are no metallic salts, such as lime, or iron, or zinc compounds, which getting into the wool give a harsh feel and take away from it its lustre. The following are a few of the vats that have been prepared and used for wool dyeing:—

WOAD VAT.

This is a very old form of indigo vat, much used in the wool-dyeing trade. It is prepared in several ways, but the following may be taken as a fairly representative plan of working:—

Indigo, 24 to 30 lb.,
Woad, 300 to 400 lb.,
Madder, 10 to 20 lb.,
Quicklime, 8 to 12 lb.,
Water, 2,000 to 2,500 gallons.

Others are the:

INDIAN VAT.

Indigo, 16 to 20 lb.,
Madder, 2 to 12 lb.,
Beans, 10 to 12 lb.,
Potash, 30 lb.,
Water, 800 to 1,000 gallons.

GERMAN INDIGO VAT.

Indigo, 12 to 16 lb.,
Madder, 2 to 8 lb.,
Beans, 100 to 120 lb.,
Quicklime, 4 to 8 lb.,
Soda crystals, 24 to 30 lb.,
Water, 800 to 1,000 gallons.

COMPOUND WOAD VAT.

Indigo, 12 to 16 lb.,
Woad, 100 to 200 lb.,
Madder, 16 to 20 lb.,
Beans 40 to 50 lb.,
Quicklime, 8 to 10 lb.,
Potash, 12 to 16 lb.,
Water, 1,000 to 1,200 gallons.

This vat, it will be seen, is a combination of the first and second vats, and is fairly good and workable.

BENOIST AND COLLINS' INDIGO VAT.

Indigo, 16 to 20 lb.,
Soda crystals, 3 lb.,
Caustic soda, 11 lb.,
Flour, 32 lb.,
Glucose, 16 lb.,
Magnesia, 2 lb.,
Water, 1,600 gallons.

This vat works well; if anything it is slightly too alkaline, but it works cleaner than those vats containing quicklime.

The following is a very peculiar

VAT.

Indigo, 10 lb.,
Turneps, 400 to 600 lb.,
Caustic soda, 12 to 16 lb.,
Water, 1,000 gallons.

In this the probable reducing agent is the pectin of the turneps.

There is no doubt that these vats owe their efficiency to the propagation of fermentation bacteria, which, acting on the carbohydrates present, convert them into lactic acid, butyric acid, carbonic acid, and hydrogen. The latter acts upon the indigo present and converts it into white soluble indigo. The vats should be slightly alkaline, but too much alkali must be avoided, as then the ferments cannot live.

BISSET'S process for the dyeing of all animal fibres (wool, silk and feathers), an ungreencable aniline black, consists in placing the fibre in a bath of 1,000 litres of water, 30 litres of aniline oil, and 100 kilos. of bichromate of potash. This is used cold, and the goods are well worked in it so as to get them thoroughly impregnated with the material. After thus working, some sulphuric acid is added in small quantities at a time, until the black is fully developed. The goods are now washed and dried, when they are ready.

A NEW RED colouring matter has been patented. It dyes cotton, wool, and silk, the latter from plain baths; the first probably requires to be previously mordanted with tannin. It is obtained in the form of small needle-shaped crystals, of a greenish metallic lustre, soluble in water and alcohol. The shades it dyes have a fluorescent appearance. Chemically it is the hydrochlorate of amido-cresol-dimethyl-phthalein. Nothing is said as to the fastness of the dyeing to light, air, etc.

News in Brief.

ENGLAND.

Accrington.

The half-yearly meeting of the members of the Accrington Power-loom Weavers' Association was held on Monday. The members protested against the "uniform list" as it stands at present on account of enough not being allowed for fine counts of yarn up to 100's wels. The meeting also passed a resolution, against the wish of the committee, ordering that notice be sent to the committee of the Northern Counties Weavers' Association to rescind the resolution accepting the new uniform list. The society decided to withdraw from the Accrington and District Trades Council, owing to the levies having been doubled of late.

Ashton-under-Lyne.

At the annual meeting of the Association of Certifying Factory Sergeants, held at Sheffield, Dr. W. H. Hughes, of Latchford House, Ashton-under-Lyne, was unanimously elected president for the coming year. Dr. Walmsley, of Manchester, on retiring from the presidential chair, received a hearty recognition and warm eulogy for past services rendered to the Association.

Ashton Borough Court, on Monday morning, Thomas Lynch, a picket during the recent Stalybridge strike, was committed to goal for two months with hard labour for assaulting a non-unionist hand named Elizabeth Ashton on the 25th May. The prisoner, who had only just come out of goal for another assault, went to the

complainant's house late at night, kicked her brutally on the body and head, threw a paraffin lamp at her and her husband, and smashed some of the furniture in the house.

Bately.

The Chamber of Commerce report for June says that the period of the year when the heavy woollen trade is at its best has nearly arrived, but it has not brought the usual amount of business. The impending general election will no doubt also interfere with mercantile transactions. In army cloth of low qualities a fair number of orders are in hand. Woollen yarns have not been much influenced by the London sales, values being about the same as before. In cotton warps there is no material alteration in price, quotations remaining low. Shoddy is in only moderate request at late rates. Mergo is not selling freely, and prices are a little depressed. The engineering and machinery trades are well employed.

Blackburn.

Messrs. Birtwistle and Thompson's Stanley-street mill was the scene of a fire on Thursday. The boiler house and tape-siding room were gutted, but the spinning and weaving departments were saved.

At the monthly meeting of the Blackburn Chamber of Commerce, Mr. H. Harrison presiding, the following extract from the trade report for 1891 of the China Imperial Maritime Customs was read:—"Imports of American drills show an excess over 1890 of 265,000 pieces, and American sheetings of 807,000 pieces—the total arrivals of the latter (2,000,000 pieces) being the largest on record."

At the County Court, on Monday, before His Honour Judge Courtney, Priscilla Harwood, weaver, sued Mr. W. H. Almond, manufacturer, of Excelsior Mill, Harwood-street, for £2 14s., a fortnight's wages, in lieu of notice. The facts of the case are as follows: A dispute arose between plaintiff and the overlooker as to the mending of a defective shuttle, and on going to the mill at the usual time next morning she was told by the overlooker that he had got another weaver in her place, and turned her out of the shed. For the defence it was stated that the plaintiff had discharged herself, and afterwards wished to recommence work. The plaintiff's husband had seen the manager after the summons had been taken out, and the latter had offered to pay all costs if the plaintiff would resume work. A verdict was given for the defendant.

Bradford.

The death has occurred at Brussels of Mr. John Scriven. Mr. Scriven was well-known on the Bradford Exchange, and the intelligence has been received with general regret. For some years he was wool-buyer to the firm of Sir Titus Salt, Sons, and Co., but afterwards went into business in the wool trade on his own account. Recently he gave up this business, and was on a visit to Brussels, when he was suddenly taken ill and died as already stated. He was about 65 years of age.

Burnley.

The names of the following gentlemen have been placed on the commission of the peace for Burnley:—Messrs. George Walsley, cotton manufacturer; Thomas Barrow, cotton manufacturer; and Thomas Chaffer Holden, iron merchant.

Bury.

The Bury and District Cardroom Operatives' Association have taken fresh office in Union Chambers, Union-street.

Messrs. N. Worsley and Co's Mills, Barn Brook, Bury, have stopped this week until after the election is over. The state of trade in the town is anything but cheering. It is rumoured that most if not all the mills in the town will stop on Wednesday, which is the day of poll of the borough of Bury, and it will be observed as a general holiday.

The spinning mill of the Wood-street Spinning and Manufacturing Company, Elton, stopped on Saturday and on Wednesday and Thursday in accordance with the agreement come to by the members of the Bury and District Federation of Employers to stop three days each in connection with the Stalybridge dispute. Other firms have followed the same course, no definite date being fixed for the stoppage, but each studying its own convenience.

At several mills in the town a portion of the operatives have been stopped owing to the removal of looms, repair of winding frames and looms, and slight break-downs, these including Messrs. K. and S. Alcock, Hudcar; Messrs. W. and G. Openshaw, Pinhole; Glen Mill, Totington; Messrs. W. Kamey and Co., Charles-street, Bury; Barn Brook Mill; Red Bank Mill, Radcliffe; Messrs. Ashworth and Scholes, Radcliffe; and Messrs. Makin and Co., Cocker Moss, near Radcliffe.

Crawshawbooth.

Crawshawbooth people are attempting to float a Rooms and Power Co. Several sites have been offered, and the committee have secured a number of substantial guarantees from intending shareholders and

others. A large new weaving shed to hold about 1,000 looms will probably be erected.

Farnworth.

Messrs. Harwood and Sons' Colden Mill, Moses Gate, is being enlarged by the addition of several looms to the spinning department.

Halifax.

Subject to the approval of the Council at its next meeting, the Technical School Committee of the Halifax Corporation have accepted tenders for the erection of the building. These amount to £12,700.

On Saturday the death occurred of Mr. Henry Hoyle, manager for many years for the firm of Messrs. John Whiteley and Sons, of Brunswick Mills, from which position he retired some time ago.

Haslingden.

Grange-road Mill (late Messrs. Berry and Evans'), has been started again after seven weeks stoppage, by the operatives themselves, as a limited company on the self-help principle.

Heckmondwike.

The following is the trade report for June of the Heckmondwike Chamber of Commerce:—"Blankets: The trade is now in full swing, and likely to remain so for some months. There are numbers of shipping orders unable to be placed, owing to exchange values.—Carpets: Brussels and tapestry are well employed. Yard-wide, Kidderminster, and art-scarve looms are only poorly employed.—Railway rags: For shipping these goods are in rare demand, as are also lustre rags for the South African trade.—Sealskins have been ordered more freely than in recent seasons, and there seems likely to be a fair business for the next few weeks.—Engines and ironfounders are at present fairly well employed.—Machine-makers are rather quieter than last month."

Keighley.

A costly clock which has been placed in the tower of the Keighley Institute in memory of the late Mr. Prince Smith, loom maker, was set going on Wednesday, by Mr. Prince Smith, who referred in simple but most effective language to the homely and sterling qualities of his father. The Mayor, Mr. Holden, and Mr. Andrew Carnegie, the American millionaire, who is staying at Oakworth House, assisted at the proceedings.

Leeds.

On Wednesday a serious fire occurred at the Albion Dyeworks, Guiseley, in the occupation of Messrs. C. Bessfield and Co., dyers and sizers. A large quantity of material was destroyed, the damage being estimated at from £500 to £600.

In consequence of Messrs. Hattersley and Co., spindle and flyer makers, Arnsley-road, having given notice of a reduction of wages of five per cent., about 200 of their employes have struck work. The men have appointed a committee, and appear determined not to resume work until the notice of reduction is withdrawn.

The Chamber of Commerce report for June says that the winter home trade has been rather poor, but a fair amount of orders for spring have been placed. The shipping trade remains in a languid condition, the exceptions being the South American Republics, the improvement noticed last month continuing in these markets. The French trade shows more life, and prospects for the autumn are, upon the whole, more hopeful.

Leicester.

The hosiery glove hands employed by Mr. Brooks, Hathern, having joined the Hosiery Trades Union Federation, have been locked out, the manufacturer at Leicester (Mr. Ellis) declining to employ union men. In connection with the National Amalgamated Hosiery Federation a public meeting of framework-knitters, etc., was held in the Co-operative Hall, Hathern, on Monday evening, there being a large attendance. Mr. Cook (secretary of the Loughborough Branch of the Federation) occupied the chair.—The Chairman said that employers always endeavoured to present their employes from amalgamating to protect their interests. There was the general election close on, and they wanted the Factory Act amended with regard to intimidation. He had seen Mr. Johnson-Ferguson (Radical candidate for Loughborough Division) and he was pleased to find that Mr. Ferguson would support such an amendment. (Cheers).—Messrs. Tordanson and Chaplin, of Leicester, addressed the meeting, urging the importance of men joining trades-unions, and Mr. James Holmes, general secretary of the Federation, also spoke, assuring the men who were locked out that the union would stand by them, and that they would grant them while locked out 15s. per week.—A resolution was carried condemning the action of the employers, asking all the men locked out or dismissed for belonging to the union to stand firm, and promising their support.

Manchester.

Advantage is usually taken of the holiday season to effect repairs in shafting, gearing, walls, etc. in our

industrial establishments, and the late season did not differ from others in this respect. Messrs. Fox and Williams were kept exceedingly busy working night and day in effecting repairs and solidifying and strengthening damaged and shaken walls, etc. Amongst others an important job was executed by them for Messrs. Goldworthy and Sons, emery manufacturers, Ellicott Mills, Manchester, in repairing, solidifying, and strengthening the foundation and walls, and fastening fixings and wall boxes with their fusible cement.

The quarterly representative meeting of the Amalgamated Association of Operative Cotton Spinners was held on Saturday afternoon, in Manchester. Mr. Thomas Ashton, J.P., of Oldham, presided. The meeting granted £20 to the Trades Union Congress, and appointed Messrs. T. Ashton, Alfred Ogden (Oldham), Stephen Joale (Bolton), and James Mawdsley, the general secretary, as delegates to the Congress in Glasgow.—The next matter raised an unusual amount of interest.—The Mosley delegate moved that Mr. James Mawdsley (secretary), Mr. Thomas Ashton (president), Mr. Wright (Ashton), and Mr. John Fielding (Bolton), who formed the committee to meet the masters, and who settled the Stalybridge dispute, be called upon to resign.—A heated discussion followed, and lasted about two hours.—In a long speech the Mosley delegate contended that these gentlemen in the settlement of the dispute had betrayed the confidence reposed in them, and had lost on every point.—The Stalybridge delegate seconded, and delegates from Hoyle and Stockport and other places spoke in favour of the resolution.—Mr. Ashton made a long statement in reply, and was followed by Messrs. Mawdsley, Wood, and Fielding, who expressed their willingness to resign their position if they were not above suspicion of having betrayed the society.—On the resolution being put to the meeting, eight voted for it and 77 against it. Some thirty delegates did not vote either way.

Oldham.

Mr. Nicholas Wood, carder at the Ellersroad Spinning Co., has been appointed manager at the Acorn Mill Co., Lees.

Messrs. Hetherington have during the past few weeks been replacing mules at the Smallbrook Spinning Co.'s mill, and about six pairs are expected to be at work next week.

Mr. John Harrop, lately with Messrs. Leatham, belting, etc., manufacturers, Oldham, has been appointed salesman to the King-street Ropery Co., Limited, Oldham, in place of Mr. J. H. Barlow.

Messrs. Saxson, of Openshaw, are carrying out repairs to the steam engines of the Ridgefield Spinning Co. It seems that at the end of last week the flywheel shaft was found to be "cracked." This is being replaced, and new eccentricies are also being put in.

The death is announced of Mr. Edward Milne, secretary of the Best Spinning Co., Shaw. The deceased has been for a number of years closely identified with the local limited liability movement, and was, previous to his appointment at the Best, the secretary of the Woodstock Spinning Co.

The results announced during the week by the Oldham spinning companies are much better than anticipated, though in one or two instances the losses are rather heavier than were expected. They have disclosed a better state of things than the trade during the past three and six months, taken in conjunction with the lockout, seems to warrant, but this is accounted for to some extent by some progress having been made in the delivery of the higher priced contracts on the books. If these could only be completed some of those concerns would occupy a far different position, so well have they been sold abroad.

The death occurred on Saturday evening of Mr. Henry Henkin, at the age of 69. He was one of the first directors of the Sun Mill Co. He made a model of the mill premises for exhibition in the London Exhibition of '52, but through some unfortunate circumstances, when the box in which it was enclosed came to be opened, it was found to be smashed to pieces. The model was inspected in Oldham, prior to being sent to the metropolis, and it was pronounced excellent workmanship indeed. The fragments of the model, which were preserved, are to-day spoken of in a similar manner. Deceased was one of the early members of the Oldham Industrial Co-operative Society, and also assisted in the floating of several of the local spinning companies.

It is reported that several of the Oldham spinning companies have not done reckoning with their dear cotton, almost the whole of which was bought to cover yarn orders, which probably will never be completed, because, diplomatically speaking, the exigencies of circumstances will, no doubt, so intervene to prevent this coming to pass. Pressure, however, is being brought to bear upon agents and users to accept some portion of the contracts, but little progress is made. Spinners are coming to look upon these orders as very doubtful assets, and we learn that in one instance, at any rate, the directors have taken the course of writing them down by a very substantial amount. As to cotton,

a story is going the rounds that a manager at one concern has declared he will not use a certain class of cotton, purchased by a previous manager at prices much higher than those ruling to-day. It has been bought some time, and stands like a monument ready to be unveiled.

Rochdale.

Mr. John Hoyle, manager at the Whitworth Manufacturing Co.'s mill, died on Saturday last.

Stockport.

On Monday, the fancy dyers in the employ of Messrs. Melland and Coward, dyers and bleachers, Heaton Mersey, struck work owing to a difference with their employers. Twenty-six left their employment, and their action will affect others in connection with the dyeing department.

SCOTLAND.

Dundee.

Messrs. John Watson and D. W. Wybeants have purchased the jute spinning mills of Messrs. Watson, Robertson, and Co., Dundee. The price paid is said to have been £25,000.

On Monday, a fire broke out in a two-storey brick building constituting part of the waste works in Park-street, belonging to Mr. George Craikbank. The fire was first observed amongst a quantity of waste in the top of the building, but it spread to a two-storey building adjoining. About 70 tons of cleaned flax and jute waste were destroyed, as also a large quantity of lines waste. The buildings were greatly damaged. Loss, between £800 and £1,000.

Miss Irwin, one of the female Labour Commissioners, is investigating in Dundee. She has visited a large number of mills and interviewed many of the workers. It is expected that Miss Irwin will devote special attention to the half-time system, and that she will not only make enquiries as to the method of working, but as to the physical and social aspects of the question. According to the mandate given to the Lady Commissioners by the Royal Commission of Labour, the subjects upon which the Assistant Commissioner desires to obtain information are (1) where women are chiefly employed, and (2) where women are employed as well as men, but under different conditions. The points upon which special information is required are (a) differences in the rate of wages of men and women; (b) the alleged grievances of women; (c) effects of women's industrial employment on the health, morality, and the home.

Glasgow.

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

	India and China	U.S. and Canada	W. Indies & S. America	Australasia	Africa and Egypt	Continents	TOTAL	Totals for year to date
£	604,175	8,275	4,307	19,027	777	779	115,285	2,056,101
100	25,599	—	21	5,211	—	51	37,884	450,352

The following are the total values of the exports for the same twenty-six weeks of last year:—Cotton, £1,989,357; linen, £383,372.

IRELAND.

Belfast.

On Saturday the employes of Messrs. Lindsay, Thompson, and Co., spinners, manufacturers, etc., Malhouse Works, held their annual picnic, the places selected for the rendezvous being Warrenpoint and Rostrevor.

According to the report of the Flax Supply Association, there has been no report for years in which the statements respecting the crop have been so confusing and unsatisfactory. At one time the decrease was estimated to reach about 15,000 acres, at another it was hoped it would be almost inappreciable; but a careful scrutiny of the different estimates in the report would lead to the belief that the decrease will amount to about 10,000 acres, or perhaps a little more, giving in round figures an area for 1912 of about 64,000 acres.

The Belfast Mechanical and Engineering Association paid a visit on Saturday to the Wolfhill Spinning Co.'s mill, on the invitation of Mr. John Erskine, hon. president of the Association, and manager of the company. The members, who left town in buses, were met by Mr. Erskine and his staff of officials, who conducted them to the engine-house preparatory to going through the extensive and complete works. The backing-room was then visited. At this stage the splendid engines, erected by Messrs. Victor Coates and Co., Belfast, were set in motion, when the members witnessed the backing machines at work, with Erskine's patent ending machine attached, which performs the delicate operation of squaring the ends of the flax, formerly done by hand. The preparing and spinning rooms were next inspected. In the latter a number of

Mr. Erskine's patented improvements were seen in operation. His clearing rollers for removing all superfluous matter of the wool pressing rollers, thus presenting a clean face to the fibre, operates at this very important point. The members familiar with fax spinning were specially interested in his patent compressed larva boxes, which offer a brilliant and homogeneous surface to the fibre. On completing the inspection of the works, the members and the Wolfhill Company's officials sat down to a sumptuous repast, prepared by Mrs. Erskine and a number of ladies. Afterwards a musical programme was gone through, and a pleasant evening was brought to a close by the vice-president, Mr. James Gamble, proposing a vote of thanks to Mrs. Erskine and the ladies who assisted her, also to Mr. Erskine, his officials, and those who took part in the programme, to which Mr. Erskine suitably replied.

Miscellaneous.

THE CONGRESS OF CHAMBERS OF COMMERCE.

SIR THOMAS FARKER ON FREE TRADE.

On Wednesday the proceedings of the Congress of Chambers of Commerce of the Empire were resumed, under the presidency of Sir JOHN LURBCK. The discussion was continued of a resolution proposed by the London Chamber of Commerce expressing the opinion that any fiscal union between England and the colonies should be based upon the principle of Free Trade, and that to base it on the principle of Protection would be politically dangerous and economically disastrous. To this an amendment had been proposed by Sir C. TUPPER in favour of differential duties being imposed by England in favour of colonial products. The discussion was resumed by

Mr. W. McMILLAN (Sydney, New South Wales), who argued that the imposition of a 5 per cent. duty, or even a 1 per cent. duty, on corn involved all the difference between Free Trade and Protection. He believed that if England abandoned in any degree the principle of Free Trade it would be the signal for the decadence of her commercial prosperity.

Mr. J. W. TONKS (Birmingham) considered that the time had come when some modification of the Free-trade principle should be tried, and even if it involved some sacrifice on the part of the people of this country, that ought to be borne in order to secure the friendship of the colonies.

Mr. M'ARTHUR (Liverpool) supported the resolution, contending that the whole focus of the case proved that Free Trade had tended to increase the prosperity of the country. He doubted whether the United States under Protection were as prosperous as had been represented. Their trade, at all events, had not increased at anything like the rate ours had. He contended that it was to our advantage that we bought corn from the United States, and not primarily to the advantage of the States, and it would be indeed a foolish thing for us to abandon this advantage because the United States did not see it was to their advantage to buy in the cheapest market. Looking at the particular branch of trade in which Liverpool was interested—the shipping trade—there was no doubt that Free Trade had resulted in England acquiring what was practically a monopoly in that trade throughout the world.

Mr. HUDDART (Melbourne) was in favour of the formation of a commercial league between England and her colonies against the rest of the world.

Sir THOMAS FARKER considered that there was something immoral in arguing this question generally—in arguing that by shutting out our best markets we could improve the supply, that we could increase the price of a commodity to the seller without necessarily increasing the cost to the consumer. He would not further argue a question from such a point of view. For himself, he had come to the conclusion that it would be better to conclude no more commercial treaties: Such treaties put both parties in a false position. We believed it was to our advantage to open our doors freely to all foreign countries believed it was to their advantage to close their doors. Therefore when we came to make commercial treaties we were pretending to make sacrifice in matters where it was really our own advantage we were seeking, and of course we were placed at a disadvantage accordingly. But what Canada now proposed was that we should exclude the produce of foreign countries in order to increase the price of Canadian produce in the English market. Looking at the proposition which our trade with Canada bore to our trade with foreign countries—our imports from Canada being about 2 per cent. of our total imports, and our exports to Canada being about 2 per cent. of our total exports—we should indeed be loath to cut off our foreign trade in order to gain some problematical increase in the Canadian trade. Even taking the whole of the colonial trade, it was not more

than one-fourth of our total trade, and the proportion had not greatly varied during the past half century. But he earnestly failed to see how such an arrangement as was suggested in Canada could improve the good feeling between England and Canada. Suppose we had to go to the workpeople of London, of Yorkshire, and of Lancashire, and say to them that the price of their food and raw material had been increased in order to benefit Canada, would that be likely to improve the relations between the two peoples? On the other hand, suppose the Canadian Government had to say to their people that they could not permit any reciprocity arrangement with the United States because they were pledged to the mother country to impose differential duties in favour of England, would that be likely to improve the feeling of Canada towards the mother country? He could not see that any good could result from a return to the principle of Protection. All experience showed that the only safe course was to endeavour to remove all artificial restrictions on trade all the world over.

Mr. W. ADAMSON (Singapore) considered that it would be rainous to abandon the principle of Free Trade.

Mr. BULFREL (Plymouth) also objected to any interference with the policy of Free Trade.

Mr. D. PLUMES (Toronto) supported the amendment, and urged that the effect of the policy it set forth would be to induce emigrants to settle in Canada and become purchasers of English manufactured goods, instead of going to the United States.

Mr. J. W. JAGGER (Capetown) spoke to the disastrous effects that would ensue from putting differential duties on raw materials.

Mr. B. C. WATTS (Leicester) also argued that the effect of such duties would be to destroy all those trades in which the British manufacturer was already closely competed with by foreigners.

The CHAIRMAN did not see how a duty of 5 per cent. could be imposed on corn without increasing the cost to the consumer, and he was quite convinced that it was out of the question that this country would ever submit to the taxation of its food supply. Whatever might be the views of a few who suffered from the present depression in trade—due, no doubt, in some measure to hostile tariffs—there was no question that the trade of the country as a whole was prosperous, and he did not think that England was prepared to abandon the principle of Free Trade.

Mr. J. S. BUCKINGHAM (London) spoke in favour of the amendment, and Mr. J. C. HORSFALL (Keighley) in favour of the resolution.

After some further discussion Sir C. TUPPER, with the consent of the meeting, altered his amendment to read as follows:—

"That in order to extend the exchange and consumption of home staple products in every part of the British Empire, a slight differential duty not exceeding 5 per cent. should be adopted by the Imperial and Colonial Governments in favour of certain home productions against the imported foreign articles."

The discussion was continued by Mr. J. A. BRYCE (London), Mr. T. F. FRYER (Hedonwoodville), and by Mr. BALLENTYNE (Ontario), who desired to disabuse the Congress of the idea that Canada was Protectionist. The demand for Protection was got up by a few interested manufacturers, but the farmers and agriculturists only wanted Free Trade—direct access to the markets of the world—and they feared no competition. Free-traders in Canada and the United States wanted all the encouragement they could get in the battle they were waging, and he greatly regretted that Lord Salisbury had given rise to the idea that England was about to abandon her policy of Free Trade, and to admit that it was a failure.

A vote was then taken on Sir C. Tupper's amendment, and on a show of hands it was defeated, 34 being in its favour and 79 against. Sir C. Tupper requested that a vote by Chambers should be taken, and the Chairman agreed to take such a vote this morning.

The Congress then adjourned.

UNITED EMPIRE TRADE LEAGUE.

An Empire Trade Conference was held last week in connection with the annual meeting of this League at the Westminster Palace Hotel. The Right Hon. James Lister, M.P., chairman of the council, presided, and there was a large attendance of gentlemen interested in promoting the objects of the conference. These objects, as defined on the agenda paper, were to acquaint the Empire, and particularly the mother country, with the unparalleled resources of the Empire, and to show our independence of foreign nations and the practicability of commercial federation. In addition to those who spoke at the meeting there were also among those present Sir F. Young, Mr. M'Master, Q.C., Colonel H. Vincent, M.P. (secretary), Hon. F. Halliwell, Mr. F. Dawson (Glasgow), Mr. D. M'Rae, Mr. Lowells, Sir G. Bowen, Mr. C. Fane, etc. Representatives of the Boards of Trade of Montreal, Halifax, Toronto, and Vancouver, and representatives of

chambers of commerce of many places in South Africa and Australia, were likewise in attendance.

The CHAIRMAN, in opening the proceedings, said the League was composed of upwards of 5,000 members, of whom no fewer than 300 were members of legislative bodies in one portion or another of the British Empire. (Hear, hear.) Among its members were to be found those who differed very widely on fiscal questions, but all were united on this one solid basis—namely, the conviction that, having regard to the conditions of trade throughout the world, the time had now arrived when those who had the interests of British trade at heart should cast aside all preconceived opinions and prejudices and should unite for the furtherance of the common aim—the development to the utmost capacity of trade within the limits of the British possessions. (Cheers.) The League was formed for promoting mutually advantageous trading relations between the different parts of the Empire, founded on the basis that preference should be given to trade with the colonies over that with countries outside the Empire. He was glad to be able to say that their cause had made considerable progress during the past year. The Parliament of Canada had unanimously resolved to vote an address to the Crown praying for the renunciation of particular portions of treaties between Great Britain and certain foreign States, and the House of Commons of the Dominion had passed a resolution on the matter the importance of which could not be exaggerated. That resolution declared that when the British Parliament admitted Canadian produce to the markets of the United Kingdom upon more favourable terms than were accorded to products of foreign States the Parliament of Canada would be prepared to accord corresponding advantages by a substantial reduction of the duties it imposed upon British manufactured goods. This showed that Canada, as a whole, was in favour of preferential fiscal relations between the various parts of the Empire, and the other colonies would follow her. It had been stated that even if the League succeeded in inducing the British public to accept their platform there would be no guarantee forthcoming that the colonies as a body would be prepared to second their views; but he was glad to say that all the indications were now to the contrary. (Hear, hear.) Although Parliament had not regarded the matter with due importance, Lord Salisbury had handled it in a statesmanlike way, and had shown that he was no longer satisfied to ignore the essential elements of the commercial situation of the country; and, though his lordship might not endorse the precise principles of the League, he had clearly intimated that the narrow prejudice which had long surrounded the question did not command his approval. (Cheers.) The League did not in any form seek to fetter the freedom of action of the self-governing colonies in all fiscal matters, for no greater mistake could be made than to resort to dictation in the matter. All that they laid down in their constitution was that, subject to the condition of affording a reasonable preference to inter-British trade, absolute fiscal freedom should remain. (Hear, hear.) He hoped representatives of all the colonies would shortly assemble in England to practically consider the important question together, and in that conference the colonies could be left to settle details for themselves. After a few other remarks the Chairman called on

Sir CHARLES TUPPER, High Commissioner of Canada, who remarked that, although the United Kingdom was obliged to import over £200,000,000 of food products for annual consumption, it was satisfactory to know that in the outlying portions of the Empire almost everything that she required could be produced. He had been requested to say something as to the wheat-growing capacity of Canada. Canada covered a larger portion of the continent of North America than the United States, excluding Alaska, and comprised one-third of the area of the British Empire. A considerable portion of it lay within the wheat zone, and was admirably adapted for the growth of cereals and cattle. The average yield of wheat in Manitoba and the North-West territories might be stated at from 20 to 25 bushels to the acre—a much larger yield than in the United States. This great undeveloped granary had only recently been rendered accessible by the construction of the Canadian Pacific Railway. The estimated crop of last year, raised by 19,000 farmers, in Manitoba was 23,000,000 bushels of wheat, over 14,000,000 bushels of oats, 3,200 bushels of barley, and 2,200 bushels of potatoes. As only the fringe of this great wheat-field had been cultivated, some idea might be formed from those figures of its population and capital could accomplish at an early day. The import of wheat and flour into England in 1890 from foreign countries represented about 120,000,000 bushels of wheat, and of this the United States supplied about 78,000,000 bushels. The average yield per farmer of wheat in Manitoba and the North-West of Canada being over 1,500 bushels, it would be seen that, with an export of but 1,000 bushels from each farm, it would take only 120,000 farmers to supply the whole demand in this country. It seemed impossible to doubt the practicability of producing within the borders of the Empire all the food products

required by Great Britain, and it was equally obvious that the competition between India, Australasia, and Canada might be safely relied upon to prevent an increase in the cost of such commodities. The advantage of being independent of foreign countries in a question so vital as the necessary supply of food would be greatly enhanced by the increased demand in all those great outlying portions of the Empire for the products of British industry in these islands, while, at the same time, powerful British communities would be rapidly growing up in Australasia, South Africa, and Canada, making the Empire strong where it was now weak.

Sir CHARLES MILLS, Agent-General of Cape Colony, next addressed the Conference. He remarked that he was not at liberty to say how far the Government he represented adopted the policy of the League, but he could say that they were entirely in sympathy with its main object. He was glad to find that while there was a desire both at home and in the colonies that the whole Empire should be regarded as one in blood and in interest, there was, at the same time, every readiness to give the colonies full freedom of action in regard to their fiscal arrangements with surrounding countries. (Hear, hear.) He then gave a number of statistics relating to the production of the colony in wheat, wool, wine and spirits, tobacco, minerals, etc., and said the two great necessities of the colony were railways and irrigation. Railways, as the first necessity, were being rapidly extended, and with an efficient system of irrigation the resources of South Africa would be boundless. (Cheers.) The fruit industry had just been commenced in South Africa, and already it had been attended with satisfactory results. The seas round the coast of Africa were swarming with fish of a most excellent kind, and here again was an opening for a great industry, and another important means of food supply to Great Britain, if trade could be carried on under favourable conditions, such as the League proposed.

The Hon. GEORGE DIBBS, Prime Minister of New South Wales, having remarked that that was the first time he had addressed a public audience in this country, observed that all that had been said of the resources of the other colonies might be said with regard to Australia as a whole. It was apparent to him that a feeling had been recently growing up in Great Britain that the fiscal policy of the country during the last 50 years was not now regarded as entirely satisfactory. It was certainly not regarded as satisfactory in the colonies. He was a free trader once, but when he found what the war of tariffs was doing to New South Wales was the only free-trade colony out of the seven colonies forming Australia, he was bound, in sheer protection of his own colony, to place it on all fours with the others. In adopting a protective tariff in New South Wales they had done two things—increased the power of production in the country, and increased the wage-earnings of the labourer. (Hear.) They adopted that tariff last April, and it had already been found advantageous. Under reasonable fiscal arrangements with the colonies England could certainly make herself independent of foreign countries in regard to the supply of food. In Australia they had a territory which was unequalled for variety of soil and climate, and capable, in fact, of producing everything required by the civilized world. Having referred to the productive resources of Australia in cattle, meat, and wool, he said he hoped the time would come when England and her colonies would be closely bound together by mutual trade and interests—not by Imperial federation, the meaning of which he did not exactly know, but rather by a commercial federation. (Hear, hear.) People in Australia thought that Imperial federation was an unnecessary move, from a political point of view, because they held themselves to be still a part of the British Empire. No one could bind England and her colonies together better than a commercial one. Railway extension in the various colonies would shorten the distance between England and Australia, and thus greatly increase trade. All that was wanted to give enormous development to the trade of the colonies with the mother country was a liberal protective system such as was now established between the colonies themselves. (Cheers.)

The Hon. J. MUNRO, ex-Prime Minister of Victoria, said the colonies of Australia were protectionist because they found it necessary in order to provide employment for their own workpeople, and because they desired, in case of war, that such colony should be able to produce sufficient for its wants within itself. (Hear, hear.)

In answer to Mr. LORRA, Mr. DIBBS said no special favour was shown to German goods in Australia. But the German Government had recently subsidised a line of steamers to Australia, and the result was that German goods were sent into the Australian markets freight free at a great disadvantage to English goods. (Hear, hear.)

Sir J. ROBINSON, of Natal, next read a paper on the capacity of South Africa to supply the needs of the mother country and the Empire. Having given statistics to show the financial and commercial progress

of Natal in particular, and having given a list of the many productions of South Africa, he said that in his humble judgment it seemed certain that any scheme of Imperial fiscal union must await for its realisation the federal union of the greater groups of colonies themselves. The broad issue was really whether the Empire was to be maintained or not. Everybody was agreed that the maintenance of that Empire depended upon the maintenance of a fleet adequate to the defence of British shores and of British trade. It was but right, he thought, that the colonies should in some way contribute, either in ships or in money, or in local defences, to this common charge. How this was to be done remained to be seen, but the problem would no doubt be worked out, as other problems had been, by the common sense and the patriotic intelligence of home and colonial statesmanship.

In reply to Mr. DUNCAN, of Glasgow, Mr. DIBBS here said the protective tariffs imposed by the Australian colonies had not checked the natural flow of trade.

Sir JULIUS VOORL, formerly Prime Minister of New Zealand, spoke on the general question, and said he thought Imperial federation was impossible unless it was preceded by some well-defined and rational fiscal arrangement. He also quoted statistics to show that by far the greater proportion of the duties paid by England on imports was paid to foreign countries and only a small proportion to our own colonies, and urged that this state of things ought to be reversed. (Hear, hear.)

Sir GUILFORD MOLLWORTH read a very interesting paper on the ability of British India to supply the mother country with wheat, cotton, coal, etc.; and

Mr. CARL FANK read a paper on the productive capacity of Newfoundland.

A general discussion on the whole question was then entered upon, and among those who took part in it were Mr. McFee, Major-General Dashwood, Mr. Ross, Mr. D. C. R. Dawson, the Hon. H. Culbrook, of Canada, and Sir D. Smith.

Mr. HENRIER HEATON, M.P., briefly congratulated the League on the success of the meeting, and on their having included in their programme the great question of securing cheap postal and telegraphic communication.

Sir C. TAPPER then proposed the following resolution:—"That this convention impresses upon the Empire the unlimited productive resources of the world-wide realm under the British flag, and their full ability, on the expiration of adequate notice for development, to supply the needs of the mother country and the other portions of the Empire in every substance required by any British subject independently of foreign nations. It urges the concentration of all patriotic efforts in Britain and Greater Britain upon pressing this home on the minds of the people, with a view to the extension of inter-British trade, the territorial security of her Majesty's possessions, and the personal advantage of each individual." He concurred with the chairman that the question was one on which both free-traders and protectionists could unite in pressing the subject on the attention of the people at home and in the Colonies. He had always refused to consider the question of free trade as an abstract principle, because what might suit one country might be suicidal to another, and what was beneficial to a country in one age might require to be greatly modified in another. *The Times* had stated that if the other colonies were prepared to sustain the policy of Canada the time had come when due weight and consideration should be given to the question. The other colonies, he believed, were prepared to follow Canada. (Hear, hear.)

Colonel HOWARD VINCENT, M.P., seconded the resolution.

Mr. DIBBS, in supporting the resolution, said he approved of all that had fallen from Sir C. Tapper. Free trade might have been wise and necessary in Great Britain 50 years ago; but the conditions of life and trade had greatly altered, and the time had certainly arrived when Englishmen should reconsider the whole question.

The resolution was then unanimously adopted. In response to a vote of thanks for presiding,

The CHAIRMAN said what the League had endeavoured to do was to place a distinct policy before the country and to show the people that it was practical. The great difficulty they had had was as to whether the colonies as a whole would be prepared to carry out that policy, but seeing what had taken place at the conference, and that among the many colonial representatives present not a single syllable of dissent had been uttered, he thought there could no longer be any doubt on the point. (Cheers.) He thought, therefore, they were now in a position to approach the Government with a view to an Imperial conference being convened on the question. (Cheers.)

The proceedings then terminated, the conference having lasted more than four hours.

THE cotton-weaving factory of Becker, Delesner, and Adler Brothers, in Bocholt, has been destroyed by fire.

PARTY COLOURS.

Trouble about party colours, says the *Wareham Observer*, arises at every general election, and once again there is thought given to the pitiful condition of poor illiterates who always vote, not so much one way, as one colour, and who may, through change of residence, possibly go against their own party, so far as they can be said to have a party, because bias happens to be the Tory colour in one place and Liberal in another. When it comes to national questions being influenced by people who know nothing more about them than that, it is time for distinguishing colours to be dropped altogether. But, beyond doubt, such woody citizens are exceptional, and common practice need not be changed on their account. Not that there is much prospect of change at all, except in still further moderation of what was at one time a lucrative if irregular source of drapery profit. What was spent at one time upon rosettes, scarves, flags, streamers, and in every other possible way, can only be left to conjecture, but the amount must have been considerable. There was in former days one colour to each party, all the kingdom over. It is thought that subsequently the colours changed with the candidates, the liveries of the opponents being adopted by their supporters; but the number of cases in which one colour now represents opposite opinions in constituencies would suggest that there has been a change—sometimes in principles rather than in representatives. Any argument that is employed cuts both ways. Either red, or blue, or yellow, the colours which are most generally used for political purposes, but all indiscriminately, have at times been particular to one party. Red, which is less common than the other two, is Liberal here and Tory there throughout the country, but was once Tory everywhere. "In Fitz's early days," we are told, "his party wore red waistcoats, while the Whigs continued staunch to yellow. In a number of a well-known periodical for 1855 there is an account of parties in Edinburgh, where the feud between red and yellow ran very high, though," it is added, "in what the red waistcoat originated is not known with any certainty." It may have been taken from the military uniform, is one suggestion, but Spalding shows that a ribbon of "red flesh colour" was worn by Montrose and his men as "the royal ribbon," in contrast to the Covenanters with their blue ribbons; and not long after, in the prologue of a play by Banks, a dramatist now well-nigh forgotten, there is another reference to the use of red in politics, apparently by the same party:—

"He brings before your eyes a modern story,
Yet meddles not with either Whig or Tory;
Was't not enough, vain men of either side,
Two roses once the nation did divide?
But must it be in danger now again,
Retwist our Scarlet and Green-Ribbon men?"

COMPETITION FROM THE SOUTH.

The *Manufacturer's Review* (New York) has the following article on the competition of the Southern States in cotton manufacturing with the mills of the New England States:—

Southern cotton manufacturers have always claimed that the proximity of the Southern mills to the cotton fields gave them such an advantage over their northern rivals that, in time, the south was bound to be the home of cotton manufacture. They now declare that this view has been amply confirmed by the protests which have been put forward by New England manufacturers against the bills before the legislature of Massachusetts to reduce the hours of labour for women and minors in that State. In the testimony taken before the Committee on Labour some very significant admissions are made by prominent manufacturers of the State. One of these came from an officer of the Dwight Manufacturing Company, of Chicopee Falls, who stated that, in addition to the fact that their labour was already of the cheapest character, mostly foreigners, and the greater proportion of these women and children, the competition from the southern mills was so intense that the outlook for the northern mills was far from cheering. This witness declared that he would not invest or advise a friend to put one dollar into any new cotton factory in Massachusetts. Capital could find much more profitable employment elsewhere, especially when the danger of its investment in cotton manufacturing at home was so plainly apparent.

According to an officer of a prominent Fall River establishment, the New England manufacturers have been obliged to increase their speed, reduce wages, and introduce new appliances in order to maintain an existence against the sharp competition from the South, and the situation was becoming so serious that manufacturers were at a loss to find some means for self-preservation. A Lowell manufacturer asserted that the Southern mills were taking away his contracts, and even getting ahead of him in the China trade. All this, of course, is very gratifying to the Southern manufacturers, and there is no doubt that the competition of the mills in that section of the country has

been severely felt by the older establishments of the New England States. They are backed by ample capital, and have secured skilled operatives of the highest class, and it is not to be wondered that they can make a class of goods which compares favourably with those produced at the North.

The idea, however, that the Southern manufacturers are eventually going to force their Northern competitors out of the business is absurd. In dull times the competition of the South is naturally felt more severely in New England, and manufacturers, under such circumstances, and especially when, in addition, their narrow margin of profits is threatened with a further reduction, may be induced to exaggerate the seriousness of the situation, in an effort for self-protection. Taking the cotton manufacturing industry of New England at the present time, however, there is not the slightest ground for the fear that Southern competition is bound, sooner or later, to gobble up these thriving industries at the North. It seems to us that our Southern friends are somewhat too hopeful when they assert, with so much confidence, that, because they can get their raw material a cent per pound cheaper than our Northern manufacturers, they are bound to speedily drive them out of the business. The South is to be congratulated upon the progress already made in its cotton spinning and weaving industry, and its prosperity will certainly increase, but not at the expense of the southern mills or northern capital. The latter will continue to hold their own in the future as they have in the past, unless unwise legislation interferes so materially with their operation that they are actually placed at a decided disadvantage with respect to their rivals. We do not think that such a result is to be apprehended.

PARLIAMENTARY CANDIDATES INTERESTED IN TEXTILES.

The following gentlemen connected with or interested in some branch or other of textile manufacturing are among the candidates in the General Election now pending. Their names are grouped under counties, and are followed by the names (in brackets) of the Parliamentary divisions they are contesting. "C" signifies Conservative; "L," Gladstonian Liberal; "U.L.," Unionist Liberal; and "Lab.," Labour Candidate. "M.P.," at the end of a paragraph signifies that the candidate was a member of Parliament at the recent dissolution.

ENGLAND AND WALES. CAMBRIDGESHIRE.

DUNCAN, SUER WILLIAM (Cambridgeshire, North or Wisbech) (C), of Hornsford Hall, near Leeds. From 1857 he carried on business as a bleacher and yarn merchant in Leeds until 1869, when, upon the collapse of this branch of Leeds trade, he transferred his works to Germany, but subsequently retired from business.

CHESHIRE.

ASHTON, THOMAS GAIR (Cheshire, Hyde) (L), of Hyde. Cotton manufacturer and merchant. M.P.
BRUNNER, J. T. (Cheshire, Northwich) (L). Head of Brunner, Mond, and Co., alkali manufacturers, Northwich. M.P.
LEIGH, JOSEPH (Stockport) (L). Was for many years a member of the firm of T. and J. Leigh, cotton spinners, Portwood Mills, Stockport.
M'LAUREN, W. S. B. (Cheshire, Crewe) (L). Formerly a partner in firm of Smith and M'Lauren, worsted spinners, Keighley. M.P.
SIDEBOTHAM, J. W. (Cheshire, Hyde) (C), of Bowdon. A director of Jones' Sewing Machine Co. M.P.
SIDEBOTTOM, T. H. (Staffordshire) (C). Cotton spinner, manufacturer, and merchant; owner of extensive cotton factories in Derbyshire and Cheshire; member of the firm of T. and W. Sidebottom, Pall Mall, Manchester. M.P.
WHITELEY, GEO. (Cheshire, Northwich) (C), of Beechwood, near Blackburn. Cotton spinner and manufacturer.

CUMBERLAND.

AINSWORTH, DAVID (Cumberland, West or Egremont) (L), of Cleator, Cumberland, and London. Is a flax manufacturer and ironmaster.

DERBYSHIRE.

CHEETHAM, J. F. (Derbyshire, High Peak) (L). Cotton manufacturer at Salford.
JACOBY, J. A. (Derbyshire, Mid) (L). An extensive lace manufacturer at Nottingham and elsewhere, partner in the firm of M. Jacoby and Co. Has been president of the Nottingham Chamber of Commerce and chairman of the Technical Schools Committee. M.P.

FLINTSHIRE.

SMITH, SAMUEL (Flintshire) (L). Commenced business as a cotton broker in Liverpool in 1860, founding the firm of Smith, Edwards, and Co., and in 1864 joining that of James Finlay and Co., merchants; retired 1883. M.P.

GLoucestershire.

DEBENHAM, FRANK (Cheltenham) (L). Head of the firm of Debenham and Freebody, textile warehousemen, of London; and chairman of Davenère and Co. (Limited), lace manufacturers, Calais and London.
WINTERBOTHAM, A. R. (Gloucestershire, East or Cirencester) (G). Partner in the firm of Heot and Winterbotham, woollen manufacturers, at Carr, near Dursley, Glos.

KENT.

JONES, BEN. (Woolwich) (Lab.), of Norwood. His father was a dyer's labourer and his mother a weaver. Born at Manchester.

LANCASHIRE.

ARMITAGE, BEN. (Salford, West) (L), of Chorley, Pendleton, cotton manufacturer at Manchester, managing director of Sir Elkannah Armitage and Sons, Limited. M.P. Salford 1880-85 and West Salford 1885-6, unsuccessful 1886.
BRIGHT, JACOB (Manchester, South-West) (L). Cotton spinner and carpet manufacturer, at Rochdale, member of the firm of John Bright and Brothers, Limited. M.P.
CODDINGTON, WM. (Blackburn) (C). Senior partner in the firm of Messrs W. D. Coddington and Sons, cotton manufacturers. M.P.
FORREST, ALEX. (Salford, South) (L), of Gleniffer, Heaton Moor, Stockport. Oil merchant; son of an employe in Coats' Thread Factory, Paisley.
HASLAM, LEWIS (Lancashire, South-East, West-boughton) (L), born 1856, and educated at Castle Howell School, Lancaster. Cotton manufacturer; a director of John Haslam and Company, Limited, of Bolton, and of Haslama, Limited, Manchester.
HERMANS-HODGE, R. T. (Lancashire, North-East, Accrington) (C), son of a member of the well-known firm of Horrocks, Miller, and Company, manufacturers, Preston. M.P.
HEYWORTH, ELI (Blackburn) (L). A large cotton manufacturer at Blackburn.

HOLLAND, W. H. (Salford, North) (L), of Broughton-park, Manchester. Cotton spinner; a director of the Manchester Chamber of Commerce.
HORNBY, W. H. (Blackburn) (C). Cotton spinner and manufacturer; head of the firm of W. H. Hornby and Company, Blackburn. M.P.
HOULSHWORTH, SIR W. H., Bart., (Manchester, North-West) (C). In large business as a cotton spinner. M.P.
JONES, W. C. (Lancashire, South-West, Leigh) (C). Merchant, cotton spinner, and manufacturer; head of the firm of Jones Bros. and Co., at Leigh, and 12, York-street, Manchester.

LEAKE, ROBERT (Lancashire, South-East, Radcliffe-cum-Farnworth) (L), of Whitefield, near Manchester. Head of the firm of Lockett, Leake, and Co., engravers to calico printers. M.P.
MADREN, J. H. (Lancashire, North-East, Rossendale) (L). Cotton spinner and manufacturer, member of the firm of John Madren and Son, of Springholme, Throstle, and Lee Mills, Bacup, and 18a, Monks'-streets, Manchester. M.P.
MATHER, WM. (Lancashire, South-East, Gooson) (L). Calico printers' and electrical engineer, being senior partner in the firm of Mather and Platt, engineers, Salford. M.P.
MELLOR, JOHN JAMES (Lancashire, South-East, Radcliffe-cum-Farnworth) (C), of Whitefield, near Manchester. A cotton manufacturer.

FOTTER, T. B. (Rochdale) (L). Formerly a merchant at Manchester. M.P.
ROBEY, H. J. (Lancashire, South-East, Eccles) (L). Joined in 1874 the firm of Ermen and Engels, sewing cotton manufacturers, Pendleton, soon changed to Ermen and Roby. M.P.
SCHWANN, C. E. (Manchester, North) (L). A merchant in Manchester; a director of the Manchester Chamber of Commerce. M.P.
SHERPHEED-CROSS, HERBERT (Bolton) (C). Son of the late Mr. THOMAS CROSS, banker and cotton spinner, of Bolton-le-Moors. M.P.

STOREY, SIR THOMAS (Lancashire, North, Lancaster) (U L). Head of the firm of Messrs Storey Brothers and Co., table hair and leather cloth manufacturers.
HOLLOWAY, GEORGE (Gloucestershire, Mid or Stroud) (C). Cloth manufacturer in Stroud, head of one of the largest manufacturing firms in the West of England, with branches in London, Liverpool, Birmingham, Bristol, and elsewhere. M.P.
TAYLOR, WM., J. F. (Blackburn) (L), of Blackburn. Cotton spinner and manufacturer.

WILLIAMSON, JAMES (Lancashire, North, Lancaster) (L), of Lancaster. A large manufacturer. M.P.

Leicestershire.

WHITEHEAD, SIR JAMES, Bart. (Leicester) (L), of Highfield House, Calverton Bridge, Kent. Up to 1881 was in business in London as a merchant in the Bradford trade; is now a director of J. and F. Coats, thread manufacturers, Paisley; and of Pawson and Co., Limited, warehousemen, London.

Middlesex.

ILACSON, F. W. (Tower Hamlets, Stepney) (C). Was for many years in the silk trade, but now connected with the coal and iron trades. M.P.
RITCHIE, Right Hon. C. T. (Tower Hamlets, St. George's) (C). Is a merchant, jute spinner, and manufacturer, partner in the firm of W. Ritchie and Son, of 6, Lime-street, E.C. M.P.

MONTGOMERYSHIRE.

HANBURY-TRACY, Hon. F. S. ARCHIBALD (Montgomery District) (L), of Montgomery. Chairman of the Montgomeryshire Flannel Company. M.P.
FRYCE-JONES, Sir Price (Montgomery District) (C). A merchant and manufacturer of woollen and other fabrics at Newtown, Montgomeryshire. M.P. 1885-6; unsuccessful 1886.

SOMERSETSHIRE.

BARLOW, JOHN EDWORTH (Frome) (L), of Stockport, partner in T. Barlow and Brother, of Manchester and London, and Barlow and Co., of Calcutta, Shanghai, and Singapore.
MORLEY, CHARLES (Somerset East) (L), of Stamford. For many years a partner in the firm of I. and R. Morley, Nottingham.

STAFFORDSHIRE.

NICHOLSON, J. O. (Staffordshire, Leek) (L), of Macclesfield. A silk manufacturer, president of the Macclesfield Chamber of Commerce, chairman of the Technical School.

SURREY.

STAPLEY, R. (Brixton) (L). A manufacturer and warehouseman, partner in the firm of Stapley and Smith, of London.

SUFFOLK.

EVERETT, R. L. (Suffolk, South-east) (L), of Ipswich. A yeoman farmer in Suffolk. Married a daughter of Mr. Obadiah Nussey, J.P., cloth merchant and manufacturer, of Leeds.

WARWICKSHIRE.

BRIGHT, J. A. (Birmingham, Central) (U L). Director of John Bright and Brothers (Limited), Rochdale, cotton spinners and manufacturers. M.P.

YORKSHIRE.

BARRAN, JOHN, Otley (L). A merchant at Leeds, head of the firm of John Barran and Sons, wholesale clothing manufacturers. M.P.
CRAYN, JOSEPH, Shipley (L), of Ashfield, Throston, near Bradford. Joined his father in the business of worsted spinning, etc., in 1847, retiring in 1875. M.P.

CROOK, H. T. (Sowerby) (U L), civil engineer, Manchester; son of the late Mr. Henry Crook, of Mearns, J. Crook and Sons, spinners and manufacturers, Bolton.
CROSLAND, SIR JOSEPH (Huddersfield) (C). Member of the firm of George Crossland and Sons, woollen manufacturers, Huddersfield.

HOLDEN, ISAAC (Blackrod) (L). Member of the firm of Isaac Holden and Sons, woollen manufacturers, Bradford.
HOLDEN, ISAAC (Keighley) (L). Head of the great woollen manufacturing concern of Isaac Holden and Sons. M.P.

ELLIS, F. (Spenn Valley) (C), of Dewsbury. A woollen manufacturer and merchant.
FISON, F. W. (Yorkshire, East Riding, Buckrose) (C). Senior partner in the firm of William Fison and Co., of Greenholme and Bradford.
ILLINGWORTH, A (Bradford) (L). A partner in the firm of D. Illingworth and Sons, worsted spinners, of Bradford. M.P.

LEUTY, T. R. (Leeds) (L). A linen and jute manufacturer at Leeds.
OLDROYD, M. (Dewsbury) (L). A woollen manufacturer and merchant at Dewsbury, chairman of M. Oldroyd and Sons (Limited). M.P.
PRET, THOMAS (Shipley) (U L). A worsted manufacturer.

PRESTLEY, BRIGGS (Fusbury) (L). A worsted manufacturer at Bradford, member of the firm of Briggs, Priestley, and Co. M.P.
SUGDEN, JOHN (W. Riding, South) (U L), of Huddersfield. Chairman of Hartley Silk Spinning Co., Meltham; director of Hutchinson, Hollingworth, and Co., loom makers, Dolores, and of the Slaihawkite Spinning Co.

WAYMAN, THOMAS (Elland). A woollapster at Halifax. M.P.
WOODHOUSE, EDWIN (Fusbury) (U L). Cloth manufacturer, proprietor of the Belle Vae and Sundrybank Mills at Farsley.

SCOTLAND.

Ayrshire.

ARROL, SIR WILLIAM (Ayrshire) (U L). At the age of eight started as a piccer in a cotton mill. Is now senior partner in the firm of William Arrol and Co., engineers, Glasgow, the firm who constructed the Forth-bridge.

BIRKMYRE, W., (Ayr) (L), of Inneslan, linen and jute manufacturer. In 1874 he transferred his business, in company with three brothers, to India, under the firm of Birkmyre Brothers, Calcutta and Serampore, where they have since carried on business as manufacturers and merchants.

DUMFRIESSHIRE.

WYLIE, ALEXANDER (Dumfriesshire) (C), of Renton. A Turkey red dyer and calico printer, a director of the Glasgow Chamber of Commerce.

VALUATION OF WOOLS.

Raw wools contain much dirt, grease, etc., the quantity of which varies in different kinds of wool, and even in wools from the same district. The best plan to obtain some idea of the actual quantity of wool fibre is to take 1 lb. of the raw wool and immerse it in a weak alkali bath, made from $\frac{1}{2}$ lb. soda crystals dissolved in 4 gallons of water. Work the wool in this for some hours at from 150° to 160° F., then boil in clean water once or twice to free it from all impurities. The washed wool is then allowed to dry in a warm room—which operation will take a few days—and when dry it is weighed. It may further be dried at a temperature of 100°C., when the actual amount of wool fibre is then ascertained.

The following table is taken from the *Moniteur Scientifique*—

	Loss, Wool dried in water, at 100°C.	Additional loss	Actual wool fibre.
Algerian wool	53.50 %	4.65 %	41.85 %
Spanish (fine merino) ..	57.02 ..	4.28 ..	38.70 ..
" superfine ..	67.00 ..	3.10 ..	31.90 ..
Russian	68.20 ..	3.90 ..	28.30 ..
Australian	53.80 ..	5.10 ..	41.10 ..
Hungarian	31.90 ..	7.79 ..	60.61 ..
Wartensburg	21.40 ..	8.88 ..	69.80 ..
Naples	28.10 ..	6.46 ..	65.44 ..
Africa	61.76 ..	3.39 ..	34.65 ..
Turkey	48.36 ..	3.92 ..	47.72 ..

This table shows the wide range in the actual value of wools so far as regards quantity of fibre is concerned. Of course the length of the staple is also a factor in the valuation of wool.

DIRECT IMPORTATION OF JUTE INTO DUNDEE.

The jute trade in Dundee has for a considerable time been in a very dull state, and it still remains very unsatisfactory, the working week finishing in most cases on Thursday nights; but it is expected a larger amount of machinery will shortly be kept going till Friday nights, a firmer tone having of late been noticed in the market. The importation of the raw material for the six months just ending is considerably less than in the corresponding period last year. The number of vessels which arrived at Dundee direct from India from January to the end of June this year is 28, with a registered tonnage of 52,975, importing 424,378 bales, showing the very large decrease when compared with the first six months of 1891 of 18 vessels, or 34,516 tons, and 259,823 bales. There are two vessels still on the passage—one from Calcutta and one from Chittagong—with cargoes of last year's crop. One of these ships is now due, and may be expected to arrive shortly. The following table shows the number of vessels in each of the last five years which at this date were on the passage from Calcutta or Chittagong with jute cargoes for Dundee—

	SAILED FROM CALCUTTA.		SAILED FROM CHITTAGONG.	
	No.	TONS.	No.	TONS.
1888, ..	7	13,629	1	1,999
1889, ..	10	16,716
1890, ..	9	18,207	1	1,319
1891, ..	13	26,317	1	2,095
1892, ..	1	2,075	1	2,205

Advices from India state that 12 sailing ships and 20 steamers at Calcutta, and 13 sailing vessels and two steamers at Chittagong have been chartered to load the new crop. The vessels have all been chartered with option of other ports; but it is probable they will all, or nearly all, come to Dundee.

DISSOLUTIONS OF PARTNERSHIPS.

John Lees, James Bell Martindale, and John Johnston Martindale, woollen merchants, Manchester; as regards J. Bell Martindale.
J. Lodge and Sons, worsted manufacturers, Bath Mills, Huddersfield.

The final Session of the twelfth Parliament of Her Majesty's reign was brought to a close with the usual formalities on Tuesday.

MORE strikes are reported from the Continent, one being in Venice, where the hands in the cotton spinning factory are proving refractory.

On June 14th, the factory of Boehler and Dressel, in Lengenfeld, was burnt down. The damage is serious, and no fewer than eighty persons have been thrown out of work.

The Carl Scheibler Cotton Manufacturing Company of Lodz (Russian Poland) has declared a dividend of 7 per cent. for the past financial year, and the Warsaw Coal Mining Company a dividend of 6 per cent.

The balance-sheet of the Russian branch establishment of the Baden Aniline and Soda Manufacturing Company in Butirki, near Moscow, shows a profit for the year of 129,950 roubles, after allowing 5 per cent. interest on the capital (\$50,000 roubles) employed and providing appropriations for the depreciation and suspense accounts.

It is reported from Barchest that the attempt to evade the high duties on woollen goods by importing them not made up may be regarded as successful. Common stockings imported from Germany have also to pay only the lower duty, as they show a seam, and therefore are not regarded as woven in the technical sense by the customs authorities.

TEXTILE WORKERS AND BIMETALLISM.—The Legislative Council of the United Textile Factory Workers' Association has sent a circular to each Parliamentary candidate in Lancashire and other places containing textile factories, enlarging on the importance of the re-establishment of a staple par of exchange between the moneys of gold and silver-using countries, by means of unrestricted coinage of gold and silver at a ratio fixed by International agreement. They ask the candidates' views on this point.

The balance sheet of the Ludwigshafen am-Rhine (Oppenheim) Cotton Spinning and Weaving Company for the past financial year shows that the net loss has been increased from £12,645 at the end of the previous financial year to £18,628, after allowing for the appropriations to the depreciation and other accounts. The share capital of the company is £85,500, and there are preference shares amounting to £18,728—this time having apparently been reduced from £21,900 during the past year—and other liabilities amounting to £40,600.

A NEW MILL AT WARSAW.—A WARSZAW (Russian Poland) correspondent sends a description of an extensive addition which Messrs. Briggs, Fossell and Co. have made to their premises at Marki, near Warsaw. The extension is a new mill capable of holding spinning machinery to the extent of 25,000 spindles. The building is five stories and basement in height, and twenty windows in length. Messrs. Briggs, Fossell and Co. have ordered in England a steam engine of 2000 indicated horse power, similar to the one already at work in the old mill. The demand on the Continent for "English-combed" yarns is at present a somewhat limited one, and therefore only about 12,000 spindles will be run in the new mill. The yarns to be spun will be Botany, very little of which has hitherto been used. It is hoped that ere long the large Russian weaving establishments will be induced to take Botany yarn up to the full producing capacity of 25,000 spindles. The dyeing department at the Marki Mills was enlarged last year. The premises are fitted throughout with electric light and the Grinnell sprinklers. Some 2000 hands are employed by the firm, and they are treated particularly well. They are provided with dwelling houses built of stone, each having proper cellars in addition to a garden and stable. One row of houses is specially reserved for English employes, and more tenements are in course of erection. A school-house was built last year, and a hospital is to be commenced shortly. Ten years ago Marki was a squalid village, renowned only for the dirtiness and vice of its inhabitants. All this has, however, been changed now, and there is a general air of prosperity about the place. A special feature has been made of the sanitary arrangements, and altogether Marki is a thriving village.

DESIGNS AND TRADE MARKS.—Some interesting facts are brought to light in the report for 1891 of the Comptroller General of Patents, Designs, and Trade Marks. Whilst there has been, since the Act of 1885 was passed, an uninterrupted increase in the number of applications for patents, a distinct decline has occurred since 1888 in those for designs and trade marks. This feature will be best brought out by quoting the figures for 1884, 1888, and 1891—

	Number of Applications.			Trade Marks.
	Patents.	Single Designs.	Sets.	
1884	17,110	19,515	215	7,104
1888	19,103	25,023	316	12,315
1891	22,885	21,673	777	10,787

It is quite likely that the falling off in the number of applications for designs may be due to the increasing

difficulty of devising forms which are absolutely new. Last year not fewer than 1,194 refusals of registrations occurred because of lack of novelty. In the case of trade marks there can be no doubt that the appropriation of distinctive and registrable forms is so great as to tax very severely the ingenuity of those who desire to find something new. The registration of trade marks in the cotton classes has always been more important than that in any other. For some unexplained reason, the number of registrations of marks for cotton piece goods in 1890 was extraordinarily large, viz. 913, whilst in 1889 it was only 543, and in 1891, 478. For cotton yarns the number was in 1889, 227; in 1890, 215; and in 1891, 161. The total number of marks registered in these two classes since January 1, 1876, has been—Cotton yarns 3,279, and cotton goods 7,712. In all the 50 classes into which trade marks are divided the registrations within this interval have been 66,976. It is remarkable that in recent years about one-half of the applications for patents have been abandoned.

LARGE ENGINE FOR A CALCUTTA MILL.—On Monday, at the Lilbank Engine Works of Messrs. W. B. Thomson and Co., Limited, Dundee, a large compound steam engine which has been constructed by them for driving the extensive works of the Serampore Jute Factory Company, near Calcutta, was tested under steam. The engine, which will be one of the largest in India, has cylinders 30 and 36 inches in diameter, both with a stroke of 72 inches, and is designed to indicate 1,400 horse power when running at 60 revolutions per minute, with a steam pressure of 120 lbs. per square inch. The fly wheel of the engine measures 25 feet in diameter, is grooved for 26 ropes, and weighs 40 tons, the periphery of this wheel having a speed of nearly a mile per minute. The fly wheel is also fitted with a barring rack actuated by a pair of independent barring engine for moving round the wheel to admit of the driving ropes being fitted. The crank shaft, which weighs five tons, is made of Sir Joseph Whitworth and Co.'s patent fluid-pressed hollow steel, and runs in massive pedestals, the main bearings being filled with magnolia metal. All necessary oil and tallow cups, etc., have been supplied of the most modern description, and designed for lubrication during continuous running. Instead of the jet condenser usual with this class of engine, the makers have in this case supplied and fitted a large surface condenser with solid drawn brass tubes and plates. This is to ensure a supply of clean distilled water for the boilers, as the natural water at Serampore Works is heavily charged with mineral matter, which is most injurious to the boilers. An efficient oil separator of a new type has also been supplied to extract the oil which passes from the cylinders, and prevent it finding its way into the boilers. Both cylinders are fitted with an improved type of double period Corliss valve, the high pressure having an automatic silent trip gear, and an effective runaway gear which automatically stops the engine in the event of any accident happening to the governor. The low pressure cylinder is fitted with an improved type of positive Corliss cut-off gear, both gears working with absolute precision. Altogether the engine is of a most massive and highly finished description, and reflects the greatest credit on the makers. The steam test was witnessed by a large number of factory proprietors and managers, as well as other engineers, who all expressed themselves as highly satisfied with the appearance and performance of the engine.

ANSWERS TO CORRESPONDENTS.

- C. AND CO., LONDON.—Mr. Arthur E. Piggott, 15, High-street, Manchester, is the secretary of the Silk Association.
- A. H., ROCHDALE.—Apply to the Maschinenfabrik Kappel Company, Kappel, near Chemnitz, Saxony, who will probably be able to supply you with machines for embroidering children's and ladies' flannel underclothing; Singer Machine Co., Foster-lane, London, E.C.; The "Victory" Three-stitch Sewing Machine Co., Ltd., 61, Old Broad-street, London, E.C.
- W. AND H., LTD., BARRROWFORD.—John Butterworth's "Trancon on Cotton" is out of print. Possibly you may obtain a second-hand copy by advertising for same.
- N., MANCHESTER.—Fossell's "Jacquard Machine" may be obtained from these offices, post free, 15s.

QUERIES.

Would any of your numerous correspondents give me through your columns a little information about the standard number of yards or weights of the counts in silk warps and wefts—organize and tram, or to make my request more clear of comprehension: If a No. 1 count of cotton has 840 yards, and a diameter of 29 inch, what would be its equivalent, same diameter in silk? A reply would be a great treat to one who is—**PERPLEXED.**

Textile Markets.

COTTON.

MANCHESTER, FRIDAY.

The stagnation in our staple trade continues without mitigation. Many are turning with relief to electioneering in the hope that by the time the contest has been decided some improvement may have sprung up; but whence this may come or is expected few venture to say. The only reasonable anticipation that seems to be entertained is that the Indian Monsoon may break in sufficient copiousness to relieve all apprehensions as to a possible scarcity of rain for a second season, which, coming upon an impoverished condition of the country, would intensify the effect of the distress beyond its average. Cotton is again moving steadily down, and has reached 4d. for Mid. American. It will be remembered it formerly touched 3 1/2d., and on any basis of intrinsic value it certainly ought not to have gone up more than 1/4d. from that point. The causes of the renewed descent are, first, the impossibility of getting business through on the present basis in yards and cloth; and, second, the good outlook for the growing crop, which will soon begin to be delivered upon a present reserve of about 1,350,000 bales of American. The ridiculously low estimates put forward by Messrs. Neill Bro., and by the Agricultural Bureau, have received no attention, being utterly discredited, whilst even if they were likely to be approximately near the truth that would be no reason why the trade should buy heavily of existing stocks at current values. Hence, in the way of acting as buttresses of values at the time they were issued, they have been almost total failures. The trade are anxiously looking out for a change for the better, and will be glad to give it welcome from whatever quarter it may fall. Attention, however, is now very visibly detracted from business to electioneering matters, and the attendance upon Change has been markedly thin.

COTTON.—The market has been very dull throughout the week, with a downward tendency. In the closing half of last week, from being moderately steady it fell away into great irregularity, though in American not sufficiently so to lower the quotations. Egyptian was very much depressed, and selling at rates from 3/4d. to 3/8d. below the official figures, which remained untouched. On Monday the market opened without any change for the better, and the downward movement continued. On Tuesday Americans were reduced 3/4d. and Egyptian brown a similar figure. On Wednesday there was again a very small demand, with a further manifestation of weakness, though a slight increase of enquiry was felt. Prices continued irregular, and futures lost two points on the day. Yesterday the demand was again seen to have grown somewhat in volume, and prices steadied considerably; futures made a gain of 3/8 to 4 points on the day. All the other growths of cotton have been in very poor request throughout the week. The total turnover, as will be seen from the figures below, is very poor.

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

Table with 5 columns: Import, Forward, Sales, Stock, and Actual Export. Rows include American, Brazilian, Egyptian, West Indian, and East Indian.

Total .. 47,567 .. 44,707 35,470 1,589,890 .. 4,837

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

Table with columns for various cotton types: American, Peruvian, Ceara, Paraíba, Maranhão, Egyptian, and Dingo white. Each type has sub-columns for different quality grades.

* Nominal.

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

PRICES OF FUTURES AT 1.30 P.M. EACH DAY.

Table with columns for days of the week (Sat. to Fri.) and rows for futures dates from June to Feb.-Mar.

Price of Mid American 4 3/4 to 4 1/2

Table showing Estimated Sales in bales for each day of the week.

YARNS.—Yarns have been on the down grade throughout the week. Producers, finding very little business offering anywhere, have gradually yielded in price until values are fully 1/4d. down from those current at this time last week in all yarns made from American. Other sorts are moderately steady, though only a very small business is passing. Stocks are very generally accumulating in first hands, and if produced from at current prices, a considerable loss upon them is not an unlikely contingency.

CLOTHS.—In cloth the market remains in the same unsatisfactory state as last week, with increased difficulty in selling. As orders run off manufacturers are stopping looms, and small additions to the number are almost daily being made. There is still some demand in the market, but it runs very largely with the same figures attached as when cotton was 3/4d. per lb. lower, and is therefore impedeable. Very little business is expected to be done until the election is practically concluded, as attention is to a large extent diverted from business.

To-day there is no improvement; prices are unchanged in cotton, yarns, and cloth. Is no departure is there an approach to a satisfactory business. The election is engaging a great deal of attention, and the attendance on Change has been very meagre.

WOOL, ETC.

BRADFORD.—Yarns are quiet, and little new business can be secured either for home or for export. There is no improvement in twofolds; singles remain about the same. There has been a falling-off in the demand for alpacas and mohair. The piece trade is still flat and unprofitable. The trade in cheap fancies has been very slack of late, but it is now moving. The designers, who have had very little to do, are now busy making new designs, mostly in larger styles of figuring.

HUDDERSFIELD.—There is little that is new to report. Some of the makers of the best qualities of worsteds are well employed, but others lack orders. In the Huddersfield and Colne valleys there is yet much short time. The demand for the summer makes of goods has been fairly good.

ROCHDALE.—The flannel trade is flat. The half-yearly stock-taking had a quietening effect. The manufacturers expect that there will be no improvement for at least a fortnight, but fortunately they have plenty of orders to execute.

LONDON.—Messrs. H. Schwartz and Co., in their report dated June 28th, say:—The following gives the total available and the quantities catalogued up to date:

Table with columns for Available and Catalogued wools from various regions: Sydney, Queensland, Port Phillip, Adelaide, Tasmania, Swan River, New Zealand, and Cape.

Total..... 382,000 Bales 184,645 Bales

The sales are well attended, and the home and especially the German competition, which from the outset gave the market its main strength, remain unabated; but the reserve of the French buyers has gradually produced a weakening effect upon prices, which, except in the case of really good greasy wools, may now be quoted about 5 per cent. lower than at the opening. All topmakers' wools, low Adelaide grease, frilly greasy pieces and

heavy New Zealand, are thus affected, and so in still greater degree are all seconds, the good as well as the inferior classes. But excluded, as before mentioned, are all the better greasy wools from 90. upwards, which continue to be upheld by German and American competition, and sell on a par with the close of last series. Crossbred sorts of medium quality are 1/4d. to 1d., coarse sorts a full 3/4d. lower than in May, whilst the finest sorts about maintain their former level. Cape wools, though in small supply, have also become weaker, and while at the opening they could be quoted if anything dearer than last sales, they now barely reach May closing prices. Heavy catalogues being offered daily, the series will probably be brought to a close three or four days earlier than originally arranged. Bank rate 2 per cent.

LEEDS.—The number of repeat winter orders placed is satisfactory, and prices keep steady. Buyers from the North of England are looking out for stock goods, of which there is too great abundance. Merchants holding such stock are eager to clear out, preliminary to stock-taking. Specialities in worsteds, vicunas, serges, and Cheviots for ladies' purposes are in good demand. The export sales at remunerative prices show no diminution. Prints, ordinary tweeds, and meltons are dull. The ordinary worsted coating trade keeps steady, and some makers are executing good orders for Canada and the United States. Manufacturers in the outlying districts as a rule are busier than they have been at any time this year before. Notwithstanding that the ready-made clothing factories are not very busy, there are some symptoms of discontent on the wages question.

FLAX AND JUTE.

DUNDEE, WEDNESDAY.—Jute continues to fall in value. To-day "leaves" offer fees, August-October selling, new crop, at £13. In face of this, spot jute has become almost unobtainable. A fall of 30s. a ton on the week is the result, with sellers over. In face of this, yarns are lower in price. For 8lb. cop, done a week ago at 15 3/4, sellers were willing to take 15. 4d. to-day, and for 8lb. warp, done at 15. 7d., sellers take 15. 6d. with sellers over. Hosiery also are easier to buy all round. The price now begins again to look safer, and any day the markets, which, owing to the greatly restricted output, are bare of stock, may be expected to show some signs of life. The unfortunate circumstance is that Calcutta has during the past half year forwarded her shipments to Dundee's chief market, New York, by quite 40 per cent. more cloth than she ever shipped in the same period of time. The competition with the low price labour of India has become a serious factor in the jute trade. Flax is firm in all positions. The Continent—and especially France, where the flax crop is late, and owing to unfavourable weather not looking well,—has been buying largely. Here spinners are well supplied, and they refuse to pay more money. First rate towls are very scarce and dear. Flax yarns are quiet, and low yarns are easier to buy. Lists are very quiet indeed. The General Election unsettles business, and adverse tariffs tell against certain classes of goods. One hears of proposals to restrict output. Flax is moderately busy, however, and it is hoped that when the distraction of politics abates the home trade may take off the production of Brochin and Fortif. Anasoth continues dull in all departments. In Dundee two works engaged in the fancy jute trade are meanwhile stopped, and this important department suffers. Only the very best goods sell. Thawer, cords, and ropes, are fairly active, notwithstanding the lower rates for jute.

HOSIERY AND LACE.

NOTTINGHAM.—Home orders are being placed rather slowly, and there is also less doing with America. The Leavers trade is not sufficiently active to keep all machinery fully employed. Several firms are still well employed in executing orders for the Irish Gaiters and pair laces, but the demand has fallen off to an important extent, and there is so great run upon any other class of fancy lace, either cotton or silk. The inquiry for embroideries, trimmings, statings, and warp edgings is not brisk. Curtains, window blinds, and lambrequins are slow. In the plain net trade very little change has occurred since last week. The demand is quiet, and makers complain yet of the inadequate profits. Orders for hosiery goods are placed rather slowly. The demand is principally for self-coloured and fancy half-hose, Hark Cashmere and merino stockings, and pants and shirts. Cotton hosiery is dull.

LEICESTER.—The yarn market is brisker, and large fresh contracts are offering for near delivery, but spinners are indifferent to business at the present very low rates. Lamb's wool and best cashmere yarns sell freely, but cottons are flat. The hosiery trade is improving steadily, and the autumn orders are coming more freely to hand. Elastic web fabrics are in fair demand. The annual wool fair was held in the Leicester Market-place on Tuesday. Buyers and

dealers were well represented, and the supply of wool was considerably larger than expected, considerable quantities being disposed of at supplementary sales held in the district. In addition to the wool stored in the fair, about 25,000 fleeces were sold by auction by Messrs. Hinde, Harrable and Lyall. The total quantity pitched in the fair and the sale amounted to about 55,000 fleeces, weighing about 12,700 tons. In addition to the wool actually staged, large lots were disposed of at the average price established.

DRY GOODS.

MANCHESTER.

There has been no feature of special interest in connection with the lace trade of late. The production of new designs for autumn absorbs a good deal of attention on the part of manufacturers. Nottingham goods have been bought freely, and the result of the year's operations has been very satisfactory. Calais houses have been unable to make much headway, and they have been troubled greatly by their rivals in France and Nottingham. The home-trade demand for dress goods is steady. The shipping enquiry is, however, rather slow, except for the United States, where sales have far exceeded the expectations of those directly interested. The demand this season for Bradford cloths has been satisfactory in view of the circumstance that the duties are so high. Shipments of Manchester goods have been slightly larger to the same market, and there has been a fair demand for fancy Glasgow makes. The handkerchief trade keeps steady. Some of the recent Appraisers' decisions have disturbed shippers somewhat. One consignment of 56-inch flannel from Manchester, entered at 2s. 6d. per yard, was advanced to 2s. 10d., and tennis flannel entered at 8s. 6d. was raised to 10s.

The plush trade is unchanged. The prices paid are not considered satisfactory, and an improvement is desired. The Cheshire silk looms are not yet busily employed. A feature of the electoral contest in the Macclesfield division is that protection forms one of the rallying cries. The constituency contains a large number of voters in sympathy with the policy of Protection of Fair Trade. At present the distress in the silk trade is very severe, and a large number of operatives are wholly or partially unemployed.

The demand for linen keeps fair. The home trade is not so brisk as could be wished, but shipping orders are fair. Yarns are not bought freely in the North of England. Quotations for the higher numbers are firm, but medium and low counts are weaker, although foreign spinners selling in this market have for some time asked advances. At the present quotations for Russian flax, spinners say they cannot make a profit, and their purchases of raw material are consequently limited. Flax prices are, however, very firm, and advancing for many descriptions of goods. Stocks of jute goods are slight, owing to the scarcity of raw material and the diminished production in Scotland and on the Continent.

The firm of J. F. and H. Roberts, Limited, Manchester, will pay a dividend at the rate of 7½ per cent. per annum as the result of its trading for the past half-year. The home is principally connected with the home "leazy" trade, although it has growing connections with the Antipodes. The dividend is considered large in view of the present unsatisfactory condition of business.

Joint Stock and Financial News.

NEW COMPANIES.

JOSEPH KUSHTON, LIMITED.

Registered by F. C. James, 9, Quality-court, Chancery-lane, W. G., with a capital of £2,500 in £1 shares. Object, to carry on business as importers of, and dealers in, jute, hemp, cotton, etc.

HEMP YARN AND CORDAGE CO., LTD.

Capital £300,000 in £5 shares. Object, to carry into effect an agreement made between A. Wainman of the one part and W. J. Hiam, on behalf of the other part, for the acquisition of the undertakings of manufacturers of hemp yarn, twine, cordage, netting, wool sheeting, hose pipe, belting, etc., and to carry on and extend the said businesses. Shares:

- H. H. Nelson, Bickley, Kent..... 1
- R. Briggs, Leeds..... 1
- W. Waites, Clapton West, Huddersfield..... 1
- J. W. Atkinson, Boholton Mills, Ripon..... 1
- A. Wainman, Philip's-park Mills, Manchester..... 1
- E. Grayson, Urmston..... 1
- M. Knowles, Southcoates, Hull..... 1

The first directors are A. T. Lawson, M. C. Thompson, H. Paterson, L. Frohman, and W. Smith, in addition to the above signatories to the memorandum of

association. Qualification, 200 shares of £1,000 stock. Remuneration, £2,500 per annum, and, in addition, 10 per cent. of the surplus profits remaining after payment of 20 per cent. dividend on the ordinary shares, divisible

Patents.

NOTICE OF REMOVAL AND CHANGE OF FIRM.

E. K. DUTTON & CO.
CHARTERED PATENT AGENTS,
(Late DUTTON & FULTON).

Removed from 4, ST. JAMES'S SQUARE, to QUEEN'S CHAMBERS, 5, JOHN DALRYMPLE ST., MANCHESTER.

SPECIFICATIONS PUBLISHED.

Each of the following Specifications may be purchased at the Sale Branch, 33, Currier-street, London, for the price of 8s., or may be ordered on the Postal Receipt, price 8s., which is now on sale at all the principal Post Offices in the United Kingdom.

- 1,396 FROELICH. Looms.
- 9,738 MANN. Cutting the pile of fustians.
- 9,760 WRISS. Embroidery machines.
- 11,309 PARKINSON. Carding engines.
- 12,781 HILL. Loom pattern mechanism.
- 12,856 SKINNER and MITCHELL. Stop-mechanism for gill-boxes.
- 12,921 DAWSON. Sewing machines.
- 13,046 LAW (Advised and inv.). Carding engines.
- 13,160 BURGESS and OTHERS. Loom doblers.
- 13,372 GRAVES. Furnace smoke preventers.
- 13,282 ROWBOTTOM. Driving belts.
- 13,511 DEY. Keeping uniform tension on moving thread, cord, etc.
- 22,273 CAMPBELL and GREENWOOD. Expanding pulleys for roving frames.
- 1892.
- 6,893 BURKLE. Loom jacquards.
- 7,358 ADAMS and OTHERS. Hosiery.
- 8,379 BARK. Winding thread.
- Reprint (with alterations).
- 13,633 CLARENBACH (1891). Giggling machines. Second Edition.
- 9,286 GATTY (1886). Dyeing wool, etc.

ABSTRACTS OF SPECIFICATIONS.

1,323. Jan. 26, 1895. **Drying fibres.** A. HATCH, First Royal Works, Huddersfield, and J. TAYLOR, Calderworth, near Huddersfield.
Relates to drying apparatus for animal and vegetable fibres combined with the feeding apparatus of carding-engines, combing-engines, gill-boxes, etc., or with the delivery apparatus of winding machines. The apron or lattice, which feeds or delivers, passes round a chest or a series of chests, through which steam, air, or water is circulated. The upper part of the apron, etc., bears on the steam chest, etc., and either one or the other may be provided with a number of rollers to diminish friction.

1,325. Jan. 26, 1895. **Woven driving-belts.** F. REIDMAN, Calcuttawest-street, Preston, Lancashire.
An endless belt is woven complete and without a joint by means of an ordinary loom frame having an extension carrying a roller. The endless weaves are led over the roller, the weaver beam and drawing roller, and between stopping rolls. The weaving proceeds until the leading end of the finished belt returns to the baulk, the last few picks being made by hand. *Drawings.*

1,417. Jan. 26, 1895. **Knitting.** R. W. SCOTT and L. N. D. WILKINS, both of 4, 299, East Chamber-st., Philadelphia, Penn., U.S.A.

Circular machines.—In machines of the class described in Specification No. 1,245, A.D., 1895, the feed side cones have a swinging cam between them, and sliding cones to operate in connection with the feed cones, which lift the needles to the operative position. Other details are given. *Drawings.*

1,528. Jan. 26, 1895. **Ropes and cords.** D. PRINGLE, Edinburgh Rope and Cable Co., Ltd., Leith.

The object is to indicate the quality of a rope of whatever material used, whether flax or wire, by spinning with one or more of the strands a thread having a distinguishing colour. Thus, e.g., a blue thread is introduced into the strands of the first quality of rope, a red one into those of the second quality, and so on. *Drawings.*

1,569. Jan. 26, 1895. **Lace-making.** J. OLSEN, a City, Bergen, North, and G. HARRY, 7, Lion Green, Long Eaton.

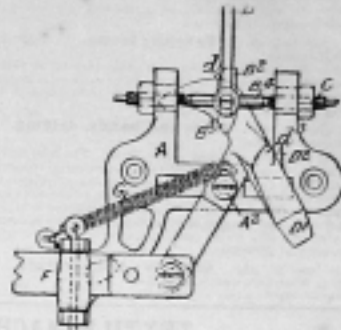
Rotation holders or twist lace bobbins are made on a machine similar to a warp lace machine, but having independent latch or bearded needles connected to a prepared warp loop. *Drawings.*

1,737. Jan. 26, 1895. **Dyes.** D. EMMET, Southampton Buildings, Chancery-lane, London.—(Action Graeflich /*vs*/ Anstalt Privatbank /*vs*/ Berlin.)

Alky dyes.—Consists in the manufacture of red substantive coloring matters by combining the intermediate product obtained as described in Specification No. 2,022, A.D. 1895, from equal molecular proportions of a tetrahydroxy salt and tetra-azophthalic acid G, with methyl ethyl, propyl, butyl, etc., esters of sulphuric acid or of a- or m-cresol carbon acids. The product may be alkylated in the usual manner by treatment with halogen alkyls, alkyl sulphates, or heavy chlorides. An example is first given in which the methyl ester of sulphuric acid is used in the first process and ethyl benzoate in the alkylating process.

1,750. Jan. 26, 1895. **Looms.** J. VICERONIA, a Union Buildings, London-road, Strand, Glas.
Warping machines.—The fork H is carried by a lever B, E, which is fitted with transverse R, mounted, as between cones,

on an screw C in the frame A, fixed to the lay-board. The fork H is raised and lowered by a pressed T-lever which is carried at A, and rocked by the action of a strap-connection F with the lowest beam, and by a spring G, the flat part of and the projection of being, respectively, and alternately, on the arms B, R,



When the web falls the fork falls into a recess in the lay-board, and works on the lever B, B, engages with the projection H, on the T-lever, and thereby obstructs the motion of the latter, so that, on the beam-up, the end D is held in position to operate the stopping mechanism. The details may be modified.

1,448. Jan. 27, 1895.

Knitting. W. F.

TENNISON, Lamb-street, Liverpool.—(J. L. BROWN, 206, 210, 5, John-street, Philadelphia.)

Circular Machines.

Loop-holders D, which feed forward or take up the fabric and prevent the fabric from sliding and moving with the needles, are forced as shown, and are caused to slide in grooves as it is the needle cylinder A and the bed B respectively by adjustable cases C, pivoted to the ring E, which is operated by levers L from the yarn-guide post F. The loop-holders may also be made to vary the length of loop.

1,530. Jan. 27, 1895.

Spinning. K. BERT

and U. ZECHNER, both of Leising, Saxony, Germany.

Carding-engines.

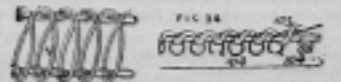
The cleaners are stopped by knives or connected together by linkwork, so that they move simultaneously. They are normally held against the cleaners by a spring catch, which is intermittently withdrawn by a rotary tappet, whence knives are turned on these axes by means of a weighted lever, and the shippings are projected into boxes A. The parts are retained to their working position by an arm or tappet on the side of one of the workers engaging with an arm or tappet on the side of one of the knives or the latter being forced into their extreme position, so that the arms or tappets no longer engage by means of the spring catch before released, which for this purpose is provided with levelled engaging surfaces.

1,532. Jan. 27, 1895. **Figured fabrics.** T. TAYLOR, and J. WAINMAN, both of Bolton.



Relates to improvements in the manufacture of fabrics of the kind described in Specification No. 15,274, A.D. 1895, the object being to produce a more clearly defined raised figure in the pattern, such pattern being woven in connection with a differently coloured ground, if desired. The web of the raised figure, upon having the figured portion, passes beneath the surface of the body or ground of the fabric in combination with other weaving, forming such or a portion of each body or ground, the web for which, on leaving the surface of each ground, is caused to pass underneath the surface of the figure, or a portion thereof, either as a loop to the same or otherwise. The figure is a section of a fabric with four picks to a row, a and c being back warps, and b and d of face warps, whilst fine and coarse wires are shown by small and large circles. The weaving may be varied.

1,765. Jan. 26, 1895. **Embroidery, etc.** E. and K. CONNOLLY, 23, Finsbury St. Paris, Paris.



Applying ornamental threads.—Two parallel lines of chain-stitching are connected at the side of the work on which the loops are enclosed, by a third thread c, which encircles the loops, and at the other side of the work by a fourth thread laid on edge under the loops. A cord may be laid between the lines of stitching so as to be reached by the third thread c.

A multi-needle machine with universal feed, for plying ornamenting threads as above, is described.

A machine with a *slip nozzle and finger* may be used to make a seam such as is illustrated in Fig. 34.

A *multi-needle machine with thread feed* may be used to form the first described sewing for edging, all the feed-directing connections being dispensed with. The two looper are carried by a horizontal bar which slides on a fixed pivot at its rear end, and is operated near its front end by a crank-pin on a piston engaged with an oscillating toothed wheel; the guide for the commencing thread below the work is suitably supported and operated by the same toothed wheel. *Drawings.*

1796. Jan. 20, 1891. **Fabrics; looms.** C. BOESMAN, Lappach, Germany.

Relates to the weaving of fabrics for stair carpets, scrubbing cloths, etc. with thickened parts produced by extra warp threads, the latter being drawn in groups, at such parts, through the heddle and reed dents. *Drawings.*

1797. Jan. 20, 1891. **Belts and bands, driving.** F. REISSNER, Pforzheim.

Finishing the edges of woven driving belts. The belts are run between a pair of grooved rollers mounted on brackets, adjustable by means of a ratchet and left hand screw, and rotated by means of a single belt passing over a pulley on a vertical spindle and over a tension pulley. The rollers may be plain or roughened in various ways, and more than one pair may be employed. The apparatus may be used by itself, or in combination with a stretching or other apparatus. *Drawings.*

1798. Jan. 20, 1891. **Carpets; table covers.** W. MITCHELL, Waterloo, near Manchester.

Velvet piled tapestry carpets and table covers are manufactured

by first dyeing the face warp to the shade or colour corresponding with the lightest shade or colour of the design to be produced, then weaving and cutting the piled fabric, with such dyed warp in the tapestry loom, and afterwards printing upon the cut pile surface thereof the remaining shades and colours necessary to complete the pattern.

1799. Jan. 20, 1891. **Printing fabrics.** J. V. HULME, 110, Upper Lloyd-street, Moss Side, Manchester.

Regular, irregular or non-descript patterns, such as are suitable for the Indian and other markets, are produced upon cotton or other woven fabric. The fabric passes over a guide roller, under a vertically adjustable roller, and over the printing roller, which runs in a trough containing indigo solution or other coloring or discharging substance. The printed fabric passes over guide rollers and through acidizing and washing vats. The printing roller has upon its periphery irregular pieces of india-rubber or lead, or pieces of rags, chain sawing, etc. for producing the irregular or other patterns. When a blotted effect is required, the fabric is passed under a squirting pipe or brush after leaving the printing roller, or in some cases two rollers, causing its water troughs are employed.

1804. Feb. 2, 1891. **Finishing pile fabrics.** H. HAYWOOD and J. HOLLAND, Spring Vale Works, Middleton, Manchester.

In pugging machines the pegs are mounted in fixed bearings, and the fabric passes over a revolving belt to obtain continuous or nearly continuous action on the cloth face. *Drawings.*

1805. Feb. 2, 1891. **Dyes.** B. WALLACE, 42, Lincoln's Inn Fields, Middlesex.—(Fabrication normale F. Bayer & Co., Elberfeld.)

Dyes derived from anthracene.—Relates to the processes described in Specifications Nos. 18,799, No. 17,753, and No. 17,715, &c. Also, relates, broadly, to producing sulphuric ethers of new alizarin dye-stuffs by the action of sulphuric anhydride in a very concentrated, or preferably in a gaseous state, upon dichloro- or dibromo-anthracene, instead of upon anthracene. These ethers dye with the aid of mordants, and are converted into highly soluble coloring matters by treating with alkali. Consists, secondly, in converting the coloring matters obtained by the action of ammonia upon the intermediate products resulting when alizarin Bordeaux, or the purpurin Bordeaux, or the purpurin Bordeaux are oxidized into the corresponding cyanides, or by the action of ammonia on the sulphuric ethers of the above mentioned Bordeaux, and upon purpurin Bordeaux, into sulphuric acids, by the action of sulphurating agents, preferably fuming sulphuric acid of 20%, free anhydride, at a moderate temperature, such as 100° C.

PATENTS.
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 - Rosedale Belting Co., Manchester.
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 - Hunt, W., & Co., Rochdale.
- Cop-Tubes:**
 - Jagger & Co., Oldham.
- Cop-Tubing Apparatus:**
 - Jagger and Co., Oldham.
- Cotton Driving Ropes:**
 - Hart, Thomas, Blackburn.
- Cryotoline:**
 - Wells, M., & Co., Manchester.
- Doffing Comb Motion:**
 - Brooks & Dooxy, Manchester.
- Driving Ropes, Bandings, &c.:**
 - Hart, Thomas, Blackburn.
- Drying Machinery:**
 - Hall, Robert, & Sons, Bury.
 - Whiteley, Wm., & Sons, Huddersfield.
- Electric Lighting:**
 - Woodhouse & Rawson, United, Ltd., London.
- Emery Filletting:**
 - Dronfield Brothers, Oldham.
- Engines (Gas):**
 - Campbell Gas Engine Co., Ltd., Halifax.
 - National Gas Engine Co., Ashton.
- Engines (Steam):**
 - Goodfellow, Ben., Hyde.
 - Maugrave and Sons, Ltd., Bolton.
- Fire Hose:**
 - Reddaway, F., & Co., Pendleton.
- Fire Pumping Engines:**
 - Merryweather & Sons, Ltd., Greenwich & London.
 - Worthington Pumping Engine Co., London and Manchester.
- Grinding Apparatus for Flats:**
 - J. Jones, Dukinfield.
- Fustian Cutting Machines:**
 - Lockwood and Keighley, Huddersfield.
- Humidifiers:**
 - Matthews and Yates, Manchester.
 - Parsons, P., Blackburn.
- Hydraulic Presses:**
 - Dickinson, Wm., & Sons, Blackburn.
 - Hall, Robert, & Sons, Bury.
 - Livesey, Henry, Limited, Blackburn.
- Hydro-Extractors:**
 - Broadbent, Thomas, and Sons, Huddersfield.

- Indicators:**
 - Orms, G., and Co., Oldham.
- Injectors:**
 - Postleif & Wood, Ltd., London.
- Jacquard and Card Cutting Machinery:**
 - Ayrton, Wm., and Co., Manchester.
 - Derope & Co., Manchester.
 - McMurdy, James, Manchester.
- Knitting Machinery:**
 - Harrison, W., Manchester.
 - Rothwell, W. & Co., Limited, Bolton.
 - Barker, Saspe, & Wilson, Bolton.
 - Lattices, Pegs, Jacquard Slips, &c.:
 - Livesey, Henry, Limited, Blackburn.
- Looms, etc.:**
 - Butterworth and Dickinson, Burnley.
 - Dickinson, Wm., & Sons, Blackburn.
 - Hacking and Co., Bury.
 - Hall, Robert, and Sons, Bury.
 - Hutchinson, Hollingworth, and Co., Deobross, Oldham.
 - Livesey, Henry, Limited, Blackburn.
 - McGowan and Hadwen, Manchester.
 - Plant Brothers and Co., Limited, Oldham.
 - Tattersall & Holdsworth, Burnley.
- Machinery (Bleaching, Dyeing, Printing, &c.):**
 - Dickinson, Wm., & Sons, Blackburn.
 - Hall, Robert, & Sons, Bury.
 - Klauder-Waldon Dyeing Machine Co., Huddersfield.
 - Mather and Platt, Manchester.
 - Whiteley, Wm., & Sons, Huddersfield.
- Machinery (Cotton Preparation, Spinning, Doubling, etc.):**
 - Ayrton, Wm., and Co., Manchester.
 - Bethel, J., Manchester.
 - Brooks & Dooxy, Manchester.
 - Coulthard, T., & Co., Preston.
 - Cartis, Sons, & Co., Manchester.
 - Dobson & Barlow, Ltd., Bolton.
 - Guest and Brookes, Manchester.
 - Hetherington, John, & Sons, Ltd., Manchester.
 - Hall, Robert, & Sons, Bury.
 - Howard and Bullough, Ltd., Accrington.
 - Lees, Asa, and Co., Limited, Oldham.
 - Lord Brothers, Todmorden.
 - Plant Brothers and Co., Limited, Oldham.
 - Stott, J. H., Rochdale.
 - Scobbs, Joseph, Manchester.
 - Tattersall & Holdsworth, Burnley.
 - Taylor, Lang and Co., Stalybridge.
 - Threlfall, Rd., Bolton.
- Machinery (Sewing and Card-lacing):**
 - Singer Manufacturing Co., London.
- Machinery (Thread):**
 - Ayrton, Wm., and Co., Manchester.
 - Brooks & Dooxy, Manchester.
- Machinery (Silk):**
 - Brooks & Dooxy, Manchester.
 - Coulthard, T., & Co., Preston.
 - Dobson & Barlow, Ltd., Bolton.
 - Guest and Brookes, Manchester.
 - Hall, Robert, & Sons, Bury.
 - McGowan and Hadwen, Manchester.
 - Plant, Brothers and Co., Limited, Oldham.
 - Scobbs, Joseph, Manchester.
 - Sykes, John, and Sons, Huddersfield.
 - Taylor, Lang and Co., Limited, Stalybridge.
- Machinery (Sizing, Filling, &c.):**
 - Dickinson, Wm., & Sons, Blackburn.
 - Hall, Robert, & Sons, Bury.
 - Livesey, Henry, Limited, Blackburn.
 - Whiteley, Wm., & Sons, Huddersfield.
- Machinery (Soaping, etc.):**
 - Mather and Platt, Manchester.
- Machinery (Woolen and Worsted):**
 - Brooks & Dooxy, Manchester.
 - Coulthard, T., & Co., Preston.
 - Currie, Sons, & Co., Manchester.
 - Dobson & Barlow, Ltd., Bolton.
 - Guest and Brookes, Manchester.

- Hetherington, John, & Sons, Ltd., Manchester.
- Hall, Robert, & Sons, Bury.
- Lees, Asa, and Co., Limited, Oldham.
- Plant Brothers and Co., Limited, Oldham.
- Scobbs, Joseph, Manchester.
- Sykes, John, and Sons, Huddersfield.
- Taylor, Lang and Co., Stalybridge.
- Tattersall & Holdsworth, Burnley.
- Whiteley, Wm., & Sons, Huddersfield.
- Needles for Hosiery, &c. Machinery:**
 - Ellis, Philip, Leeton, Nottingham.
- Oil:**
 - Wells, M., & Co., Manchester.
- Oil Cans and Oilers:**
 - Jagger & Co., Oldham.
- Oilcloth Machinery:**
 - Ayrton, Wm., and Co., Manchester.
- Patent Agents:**
 - Dutton E. K., & Co., Manchester.
 - Thompson, W. P., & Co., Manchester, Liverpool and London.
- Pickers:**
 - Bromley, Thomas, Bolton.
- Pistons:**
 - Lancaster and Tonge, Pendleton.
- Pulleys:**
 - Richard, Geo., and Co., Broadheath.
 - "Unbreakable" Pulley and Mill Gearing Co., Limited, Manchester.
- Pumping Engines:**
 - Worthington Pumping Engine Co., London and Manchester.
- Roller Leather:**
 - Meredith-Jones, J., and Sons, Wrexham.
- Rust Preventives:**
 - Wells, M., & Co., Manchester.
- Shuttles:**
 - Hall & Sons, Bury.
 - Kay, John, Rochdale.
 - Livesey, Henry, Limited, Blackburn.
 - Wilson Brothers, Limited, Todmorden.
- Shuttle Swells:**
 - Hall, Robert, & Sons, Bury.
 - Livesey, Hy., & Co., Ltd., Blackburn.
 - Whiteley, J., Blackburn.
- Sizing and Filling Preparations:**
 - Adley, Tolkien, and Co., Blackburn.
 - Eastwood, James, Manchester.
- Smoke Consumers:**
 - Automatic Smoke Prevention Syndicate, Ltd., Manchester.
 - Graven, W. McG., Manchester.
- Sprinklers, Automatic:**
 - Dowson, Taylor & Co., Ltd., Manchester and London.
 - Witter & Son, Bolton and London.
- Steam Traps:**
 - Lancaster and Tonge, Pendleton.
 - Whiteley, Wm., & Sons, Huddersfield.
 - Crowley and Co., Ltd., Sheffield.
- Temples, etc.:**
 - Elesard, James, and Sons, Padidham.
 - Brooks & Dooxy, Manchester.
 - Hall, Robert, & Sons, Bury.
 - Lupton Brothers, Accrington.
- Tools (Machine):**
 - Hetherington, John, and Sons, Manchester.
- Ventilation:**
 - Matthews and Yates, Manchester.
 - Parsons, P., Blackburn.
 - Pickup, J. H., & Co., Ltd., Bury.
- Warping Machinery:**
 - Bethel, J., Manchester.
 - Hall, Robert, & Sons, Bury.
 - Livesey, Henry, Limited, Blackburn.
 - Stott, J. H., Rochdale.
 - Whiteley, Wm., & Sons, Huddersfield.
- Waste (Cotton) Picking Machinery:**
 - Brooks and Dooxy, Manchester.
- Wool Extractors:**
 - Jarman & Son, Huddersfield.