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Editorial Notices.

Articles, Correspondence, Reports, Items of News, on all matters of novelty and interest bearing upon the Textile Industries, home or foreign, are solicited. Correspondents should write as briefly as possible, on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication, but as a guarantee of good faith. When payment is expected, an intimation to that effect should be sent with the contribution. The Editor will do his best to return ineligible MSS., if accompanied by the requisite postage stamps, but will not guarantee their safe return.

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 Their names will not be published unless requested.

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

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THE NEW COTTON MILL FIRE INSURANCE TARIFF.

We learn from *The Policy-Holder* (Manchester)—an insurance journal published in the interests of insurers rather than of the offices—that the new Cotton Mill Tariff was agreed to at the special general meeting of the Fire Offices Committee, held on Friday of last week. It comes into operation for all insurances effected or renewed as from the 16th ult.—the date of the circular announcing the pledge given by the offices not to quote any rate for cotton mills except in accordance with the rates to be fixed by the new Tariff. In the opinion of our contemporary this new Tariff is by no means

too strict, as will be seen by a recapitulation of its leading features as compared with the Cotton Mill Tariff of 1880, upon which it is based; but providing it is strictly adhered to it is a considerable improvement upon the state of things that has been for some years prevalent. The most important variations from the 1880 tariff are (1) revised rates for spindles; (2) revised rates for fire-proof mills, both buildings and contents; (3) revised rates for power-loom factories, for silent mills, and for blowing and mixing houses; (4) the abolition of the 20% reduction previously allowable to the assured; and (5) the allowance for automatic sprinkler installations. According to the new Tariff the normal rate remains the same as in 1880—Class I., 15s.; Class II., 28s.—but with this difference, that 20,000 spindles are now allowed free instead of 10,000 as formerly. Taking a mill with 50,000 spindles, under the 1880 Tariff, the rate would have been

Normal for 10,000	15/-
Additional for 20,000	4/-
Additional for 20,000	6/-

25/-

But under the present one it would be

Normal for 20,000	15/-
Additional for 30,000	6/-

21/-

It has further to be noticed that under the new tariff, in computing the number of spindles, two throstle or ring throstle spindles are to be counted as equivalent to one mule spindle; while under the 1880 rate, throstle, ring throstle, and mule, were all counted as spindles. The normal rate for fire-proof mills is fixed at 2s. 6d. for the buildings; if over four storeys, the additional rate is 1s. for the fifth storey, 2s. for the sixth, and 3s. for the seventh. Contents are to be rated at a normal rate equal to double that for buildings, with the additional rates for height as above. Taking a seven-storey mill, these rates compare with the 1880 tariff as follows:—

BUILDINGS.	1880.	1892.
Normal—4 storeys	5s.	2s. 6d.
Fifth Storey	1s.	1s. 0d.
Sixth Storey	1s.	2s. 0d.
Seventh Storey	1s.	3s. 0d.
	8s.	8s. 6d.

Under the 1880 Tariff spinning mills and weaving sheds were charged: Class I., 7s. 6d., and Class II., 14s.; the rate is now: for spinning mills, 7s. 6d. for both classes; and for sheds, 7s. 6d. in Class I., and 10s. 6d. in Class II. Blowing and mixing houses shew no change in rating, but in the case of power-loom factories and sheds the new rates are as follows:—

Sheds or factories of a ground floor only	3s.
Factories or buildings wholly or partly of two storeys, and two storeys and attic	4s.
Factories or buildings of more than two storeys and attic	5s.

against the 1880 rates of 5s., 6s., and 7s. 6d. respectively. Each storey of a fire-proof factory is to be rated now at 2s. 6d. for the building, and 3s. for contents, against the 1880 rate of 5s. If only fire-proof on ground storey, the rate for building and contents will be 3s., against 5s. as in 1880. Silent mills, blowing and mixing houses—the rate for ordinary is 10s., and for fire-proof 2s. 6d., against 5s. and 3s. 6d. The allowances for appliances are as follows:—

Small manual fire engine, with water and sufficient hose, buckets of water on each floor	5%
Steam or stationary fire engine, or fire pump or fire plugs	10%
Steam fire engine, manual fire engine, boiler pumping engine, fire plugs, buckets, cans, extinguishers, and a trained fire brigade of not less than eight men	15%
If, in addition to the 10 per cent. requirements and six buckets of water on each floor, an approved installation of automatic sprinklers is fitted	60%

It is, however, expressly stipulated that the net rate for any one item after deduction of this allowance is in no case to be less than 1s. 6d. per cent. for buildings and 3s. for contents, or 2s. 6d. for contents of weaving sheds. The reduction of the *sprinkler discount* allowable is heavier than would at first sight appear. In many instances before the passing of this tariff, the discount amounted practically to 80%. Taking a premium of £100, the two discounts work out as follows:—

Premium	1891. £100	1892. £100	
80% discount	80	60% discount	60

Left to cover risk. £20

£40
This may be taking a rather high figure, but the increase in the amount of premium available for insurance, according to *The Policy-Holder*, will certainly be about 75%. The remuneration to the agent is strictly limited to 10%. It now only remains to be seen whether this tariff will be adhered to.

"TIED HOUSES" IN THE TEXTILE TRADES.

The Leicester Manufacturing Co., which was formed eighteen months ago, and which, according to the prospectus, was expected to earn dividends of 20 per cent., does not appear to have had a particularly happy experience, judging from the reports which have been published in the press. One of the ideas of the promoters was to apply the "tied-house" principle to the hosiery trade. "The large profits made by brewers," said the prospectus, "and the manner in which the shares of brewery companies are sought after by the public, is mainly owing to the tied-house principle, by means of which not only is there a regular market for the output of the manufacturer, but the risk of bad debts is reduced practically to nothing." The company was formed with an authorised capital of £120,000, for the purpose of purchasing and working the extensive and valuable freehold mills and hosiery manufacturing business carried on for fourteen years past by Messrs. Sheen and Hackett at Leicester, together with fifty well-established retail shops in London. In a circular convening a meeting of the company for the 29th ult., it was stated that "the company bought several businesses. . . . The businesses now being carried on, five in number, are not proving satisfactory, but are at the present time being carried on at a loss." Then follows a suggestion that it will be preferable, in the interests of the shareholders and creditors, to carry on the businesses temporarily, in the hope of selling them as going concerns! Briefly, the venture has proved a failure, for no mill was bought, and the elaborate series of figures prepared by the accountants are paper estimates only. But although in this instance disaster has overtaken the efforts of promoters, the tied-house principle as applied to the textile trades is not only not new, but has actually been proved workable in the existence of firms carrying on business today. The Rothwell Hosiery Company, of Bolton have a large number of retail establishments directly under their control; and the worsted-knitting yarn spun by Messrs. Fleming, Reid, and Co., of Greenock, are chiefly disposed of through the firm's own shops, which are scattered throughout the country. In the boot trade the principle has been successfully acted upon for a considerable time past both by Leicester and other concerns. Tied textile houses, therefore, are not a novelty, and the system has been proved remunerative. Moreover, it presents no facilities for forcing inferior productions upon the public, as the brewers do. Competition is not so restricted in the case of ordinary shops as it is in the liquor business, and the absence of opposition to new

ventures ensures the public against the abuses which the modern Bang is guilty of.

THE CHEAPNESS OF RAW SILKS.

We have on several occasions alluded to the extraordinary fall in quotations of all classes of raw silks during the past season. This fact, taken in conjunction with what would, it was hoped, prove a revival in the demand for silk piece goods, owing to the fashionable demand promised after the Royal wedding, greatly encouraged the friends of the industry. To a certain extent such hopeful anticipations have been disappointed, but there is still ground for the hope that silks will revive before the year is out. In 1877 Lyons quotations for 22/28 first-class organzines were 90 to 92 francs per kilogramme. In 1878 they fell to 78, in 1882 to 69, in 1890 to 58, and at the close of last year to 52. Below we give a table shewing prices of other grades at the close of the years 1877, 1882, and 1891. The rates are francs per 100 kilos:—

ORGANZINES.	1877.	1882.	1891.
Piedmontese (1st qual.)	81/88	69/71	52/53
Italian (2nd qual.)	80/83	65/66	48/49
TRAMS.			
Italian (2nd qual., 26/28)	78/80	62/64	46/47
Chinese (1st to 2nd qual., 40/45)	65/68	56/57	40/43
RAWS.			
Italian (2nd qual., 10/14)	74/78	56/58	43/44
Tsatlee (4th qual., 10/14)	52/53	43/44	35/36
Bengal (1st qual., 10/16)	52/56	44/47	34/36

The striking character of the reductions will be apparent from this comparative table. It may be added that stocks are not regarded as large at the present time, and that both in the English, French, and American markets the consumption is growing visibly. From the United States Consular district of Lyons shipments to the United States during the last quarter of the year shew important increases over the corresponding period of 1891. Both Lyons and St. Etienne firms state that their business has not been seriously affected by the McKinley Act. It is important to note that the fashionable demand appears to be directed largely towards pure silks, sometimes of medium and even inferior quality, in preference to mixtures of silk with cotton or wool. The very finest goods made of the best growths of silk, both in plain and fancy weaves, are in limited demand, as they always has been, and wise manufacturers, recognising the truth of this fact, devote a great portion of their attention to the production of cheap fabrics of a slightly character. In 1891, we may add, the exports to the United States from the Lyons Consular district were valued at \$7,659,462, against \$8,217,031 in 1890, a reduction of \$563,569. Had it not been for an increase of nearly a million dollars in pongees the decline would have appeared much greater. These goods are chiefly of Eastern manufacture, and come to Lyons to be dyed or printed and finished, a fact which strengthens the hands of those in France who view with disfavour proposals to put a tax on such cloths. A report from Yokohama, concerning a proposal to place an export duty on Japanese exports of silk, may be referred to here. The raw silk merchants of the commercial capital have held a meeting to discuss the question, but opinions differed widely, and one gentleman, who approved of the duties, took to the novel argument of pelting his opponents with all the articles within reach, which naturally caused the meeting to break up in some confusion. "It is thought very improbable," says an unconsciously sarcastic report, "that any united action will take place again on behalf of the abolition of export duties for some time." It would be unlike intelligent Japan to run the risk of fettering an important industry by placing a burden round the necks of persons engaged in selling Japanese silks abroad. For the present, therefore, the matter

may be dismissed as beyond the range of practical commercial policies.

THE HOSIERY INDUSTRY OF CHEMNITZ.

According to a recently published work by a professor in the Technical School of Chemnitz, it was from France, into which Lee's stocking-frame had been introduced by its inventor himself, that the industry of hosiery was imported into Germany by Protestant refugees. Indeed French designations of the different parts of the loom are still current at Chemnitz. It was introduced into Saxony about 1728. About the same time it was established at Limbach by John Bache (born 1682, died 1732), and there is no reason for doubting that to him belongs the merit of the great development which has been attained by this industry in that populous district. The district of Saxony in which the hosiery industry has principally developed, and of which Chemnitz may be considered the centre, is situated in the basin of the Chemnitz, but has now extended to the neighbouring basins of the Zschopau and the Zwickau. This industrial tract of the country is bounded approximately by Augustsburg, Zschopau, Thun, Zwonitz, Lossnitz, Hartenstein, Waldenburg, and Burgstadt. It is partly in these towns, but especially in Chemnitz, Stolberg, and Limbach, and in the villages of that region south and west of Chemnitz, that the export trade of manufactured hosiery is carried on the largest scale. In several towns are Guilds of hosiers, the whole number amounting to 22. That of Limbach was founded in 1785, and that of Chemnitz was confirmed in 1765. As early as 1787 this district produced 74,000 dozen stockings; in 1840 the number had risen to 2,000,000 dozen, and in 1856 the value of the goods, made by means of 44,000 stocking-frames, had risen to 7,000,000 thalers. Chemnitz owes its fame, which is spread throughout the world, chiefly to the fact that it is the centre of the hosiery production of Saxony. This industry gave employment in 1882 to 32,000 persons. At Chemnitz itself forty factories furnish employment to about 5,500 persons, of whom about 1,000 are occupied with tricots. The value of the production, which in 1879 amounted to 45,000,000 marks, last year reached 70,000,000 marks. Chemnitz alone sends to the United States more cotton hosiery than England sends to the four quarters of the globe. Cotton hosiery is made principally in Chemnitz, in Stolberg, and in the villages south and west of Chemnitz. Gloves are made particularly at Limbach and in the outskirts. Woollen jackets and waistcoats are made at Wittgendorf, and Markersdorf, near Burgstadt. In several instances certain articles are made in certain villages just as is the case with toys. One of the most important places for the manufacture of cotton stockings, if not the most important on the Continent, is Stolberg.

THE BRITISH TEXTILE TRADES AND THE MCKINLEY TARIFF.

To discuss the conditions of the textile trades as affected by the American tariff adopted in October, 1890, is to refer to a subject that has already, to a considerable extent, been thrashed out. At the same time the matter is one of some importance, and any fresh references to it may be regarded as worthy of examination. The Dundee Courier has been to the trouble of making a series of special enquiries throughout Great Britain for the purpose of ascertaining the effect of the McKinley tariff on our trade with the United States. The present is no doubt a most suitable period for such an investigation, as shippers can more readily perceive the real nature of their

position. The result of our contemporary's examination is that, all things considered, British industries have come out of the ordeal to which they have been subjected surprisingly well. In no quarter, we are told, has anything like panic been manifested, "this nation of business men" having been able to hold its own. As to this, opinions, of course, differ. The chairman of Messrs. A. and S. Henry and Co., Limited, speaking the other day at Manchester, said that the McKinley tariff had cut off a good deal of our trade, and would continue to do so until altered. The speaker was specially qualified to judge, seeing that the great Manchester house with which he is associated possesses one of the largest American connections. The tariff has had little effect on Dundee cloths, but spinners have been affected, owing to the admission of raw jute duty free. The value of jute yarn shipped last year from Dundee to the United States was only one-third that of exports in 1890. Scotch tweeds have not suffered noticeably; but hosiery manufacturers are despondent, their trade having for some time been a declining one. The same remark applies to the English section of the industry, so that the experience of Scotch concerns is not exceptional in this respect. Some time ago we drew attention to the fact that the attempts of a Lancashire firm of hosiery manufacturers to open up an American connection had not been satisfactory, and that although some accounts had been secured, the idea had for the moment been practically abandoned. This concern, it should be noted, enjoys the reputation of being amongst the most enterprising firms in the country—reference being made to Messrs. Rothwell and Company, Limited. It is curious that the ill-fated Leicester Hosiery Company did not complete the purchase of the factory at Leicester, owing to the coming into operation of the McKinley protection tariff, which in its operation would of itself have prevented the company carrying on a manufacturing business at a profit. The recent stoppage of Oldham looms was, of course, due to the heavy supplies of cotton pile fabrics shovelled into the American market before October, 1890. Stocks of these, as of some other goods formerly in excessive supply, have been largely reduced as a result of the past twelve months' trading, and orders are again coming to Manchester, with the result that there is more work for manufacturers of velvets. Such goods as cotton sleeve linings are still in demand, apparently to as large an extent as before. Bradford's trade in twelve months fell from an average of five millions a year to two and a half millions, the reduced yardage being 27,500,000. Although silks, seals, and plushes have suffered in Yorkshire and Lancashire, corresponding industries have scarcely benefited in the States. The references made by the Courier to this fact might have been supplemented by the statement that sellers of spun silk yarns consumed in the American plush trade are not now operating to any appreciable extent—a sufficient proof that the plush industry has not yet become a factor to be reckoned with in the United States. This, it should be added, is chiefly due to a change in fashion, although conclusions of a different kind have been deduced by those who wish to shew that protection does not protect. A Dumfries firm manufacturing the better classes of woollen gloves had forty hands engaged in this branch a year ago, but only has twelve now. One Hawick concern is of opinion that, notwithstanding the increased duties, the trade of the South of Scotland with the United States has in many respects increased. Messrs. Joshua Wilson and Sons, of Leeds, say that the effect of the McKinley Tariff Act has

been disastrous as far as Leeds manufacturers are concerned, and more particularly with regard to medium-class goods. Since the coming into force of the tariff, orders have been almost nil; but this is in some measure owing to the previous rush that was made by American houses to get a large supply before having to pay the higher duty, with the result that they have become overstocked. They do not think, however, that this state of things will last so very long, and anticipate that in another six months or so, when American firms will have exhausted their stocks, the trade will return to its normal condition, and orders will come in as freely as they used to do, although not to such an extent as immediately before the passing of the McKinley Tariff Bill. Another Leeds firm states that Leeds is not much interested directly, as such goods as are made in the immediate district for the States are of a better class than the mills in the States have been able to turn out, and these are still sent, and the only difference is that the American consumer has to pay a higher price for them. Machinery which has run in Bradford with low coarse worsteds has been thrown out, and whilst seeking new outlets has a little competed with some in the Leeds district for a time, but not to any serious extent. Of course, also, any goods that are made for the market have to be prepared with extra care, as when landed and duties paid it is difficult to dispute claims made by the importers there; still, in the long run, this only increases the cost to the consumers there, and does not affect the bulk of business done. In the Bradford district there is an unpleasantly large number of idle looms, but during the last few months there has been a partial compensation in other quarters for the losses incurred in the shipping trade.

THE FRENCH TARIFF DUTIES AND SILKS.

The other day Messrs. Ramsden, Sykes, and Ramsden, of Huddersfield, issued a circular intimating that their clients, Messrs. Henry Lister and Co., Ltd., silk, plush, and worsted manufacturers, had suspended payment. The reason given was, it need scarcely be said, the diminution of the American demand on account of the notorious McKinley tariff, combined with the heavy decline in the silk market, which has been disastrous to many firms engaged in the trade. It is hoped that arrangements will be made for the reconstruction of the business. In Macclesfield the new French duties are viewed with much alarm. A duty of 1s. 2d. per lb. on thrown silks, and an increase in the impost on cotton mixtures, will seriously affect an important branch of the Cheshire silk industry. It is interesting to note, in connection with the new French duties, that the pongees (corahs and tussahs) are admitted free if of extra-European origin, manufactured with unbleached silk, and unprepared either by dyeing or printing. As far as English throws are concerned, the French trade has for a considerable time been a falling one, and the sales made during the past few years have not been of great importance. Italian throwsters have been for some time the great competitors of French houses, British concerns not having been regarded as factors in the situation. On pure silk goods, hitherto free, five per cent. duty is now imposed. The Macclesfield trade, so far as it consists of supplying goods to Paris concerns, who afterwards reship them to all parts of the world, will be severely affected, as will all trades which dispose of any important section of their production in the same way. It remains to be seen whether English merchants will step in to secure the connection which Paris houses now hold, but which will have to be supplied from other sources, if it is still to remain in the

same hands. The increases just imposed were quite unnecessary in the opinion of most experienced judges, seeing that, even on a level, French silk firms occupy such a strong position. It seems relevant to ask why a nation which occupies the foremost position in the world as a silk manufacturing country should find it necessary to increase its protective duties as France has just done. Even on woollens added duties were surely unnecessary excepting as a studied act of aggression, seeing that Roubaix, Elbenf, and Sedan can teach Yorkshire as much as it can learn from the manufacturers of the neighbouring county. The position of the French woollen trade during the past two years may, in a measure, be gauged from the following figures, which relate to the five great conditioning centres of the Republic:—

	Worsted Yarns.		Woollen Yarns.	
	1890.	1891.	1890.	1891.
Rheims	7,940,823	7,577,594	581,367	706,630
Roubaix	23,768,066	24,072,190	4,276,039	5,295,684
Tourcoing	16,197,852	15,984,350	3,756,329	4,006,397
Amiens	756,479	511,940	759,712	804,319
Fourmines	2,477,854	2,419,412	4,624,395	4,364,000
Total kilos. . .	51,139,254	50,586,486	14,012,752	15,077,620

THE COTTON THREAD TRADE.

Imperfectly informed persons have affirmed during the past few days that the reported intention of the Messrs. Coats to lower quotations was a false rumour, and that no such scheme has been under the consideration of the Paisley house. It has been furthermore asserted that there will be no reduction of prices. Positive assertions of this kind should not be made by 'authorities' desirous of maintaining a reputation for accuracy. It may be remembered that a few years ago, when an announcement concerning the contemplated formation of a cotton thread syndicate was made, the report was indignantly denied in two or three newspapers, but the Central Agency is nevertheless existing to this day. So much for "authoritative denials." The actual facts with reference to the movements of the Paisley thread companies are not to be heard of on the Manchester Exchange. From Paisley itself, and from agents of Paisley firms, however, it may be learnt, by those who know where to enquire, that the question of reducing quotations has actually been under the consideration of the firms referred to by us last week, and that Messrs. Coats resolved on the reduction to 12s. 6d. of six-cord 200's. After this resolve had been made, there was an attempt to patch up a truce between the competing firms, and the Messrs. Coats decided to postpone the issue of their reduced list for a month in order to give time for the arrangement of the dispute. A well-known home-trade house also expressed its willingness to act as arbitrator and to fix a minimum rate for the products of the Paisley mills. But it is untrue to say that the reports so widely circulated in Glasgow, Manchester, and London during the past few weeks have no foundation. In any case, the Central Agency will have to reckon with firms outside the Association, for as long as the latter adhere to low quotations the Agency will be compelled to retaliate. Since writing the foregoing the statement has been repeatedly made that Messrs. Clark and Messrs. Coats will not oppose each other in the markets; but that the attitude of outsiders—by which the English section of the trade is referred to—is uncertain, and tends to prolong the prevalent feeling of uneasiness. If the attitude of firms on this side of the border continue hostile they will naturally have to be fought, and this cannot of course be done without a reduction of rates. The first of March is spoken of as the date when any decisive change will be made should competition of an aggressive character be

decided upon by the parties interested. The Agency rate is, we now understand, 16s. for 200 yard six-cord and 23s. for 300 yard reels, new lists having been issued by Messrs. J. and P. Coats and others on the basis of these quotations; 400 yard six-cords are advanced from 29s. to 30s. Although these facts indicate the present condition of the market, it is significant that a further revision is spoken of at the beginning of March. The present arrangement, therefore, is purely experimental. The following letter from a correspondent bears upon this matter:—

The differences in the thread trade have opened the eyes of investors to an unlooked-for danger, which may overtake the fortunes of this company at any time and seriously affect profits. But, apart from this, I ask, Are the £10. shares of a commercial trading company paying 8 per cent. worth anything like even their present price? It is an axiom with business men that trading profits should give a return of 10 per cent. as capital to remunerate the risk. Why not so with public companies? It may be said this company could have paid much more than 8 per cent. Certainly; but last year was an exceptionally good one. The directors recognised this by carrying forward such a large sum to reserve, and, having adopted this sensible policy, is it likely they will reverse it in less favourable times? A "thread war" may break out at any time, and it is wise to be prepared for it by holding a large reserve fund for immediate disposal. If the company continues to pay its present dividend, it will pay better than the vast majority of public commercial companies. At the same time, considering the risks inseparable from such business, I should say a fair price for the ordinary shares would be about £11, giving a return of about 7½ per cent.

HOW TO PROMOTE FREE TRADE: A SUGGESTION.

A Conference of the United Empire Trade League was held in Manchester on Tuesday afternoon, followed in the evening by a public meeting, reports of which will be found on another page. With hostile tariffs smothering our trade in every quarter—some of which, as that of the United States, have been planned with the deliberate and avowed intention of working this country an injury—there is a *prima facie* case for action in the matter on the part of the United Kingdom. All our commercial rivals and would-be rivals have gone out of their way to tell us in most unmistakable terms that they intend to wreck and ruin our trade by every means, fair and unfair; that not one cent of money shall we earn from them if they can prevent it; and that, notwithstanding all this, they themselves will continue to reap the rich commercial harvest of these islands and of the wide domains that British enterprise has opened up to commerce, on a footing equal with or easier than our own. Under such circumstances it savours of crazy fetish-worship to continue piping "There's a good time coming, wait a little longer,"—as does the otherwise sensible *Manchester Guardian* whenever a foreign tariff is raised against us by another ten per cent. or so. But the day is at hand when the people will tire of dancing to this tune. Unfortunately, however, the brunt of the battle is borne by employers: come fair, come foul, the working-classes manage to secure high wages, and as they manipulate our Parliamentary marionettes, the Tariff Play is never placed before the British public. A few years more, however, and the pinch will be felt by them—as, indeed, is already the case in Bradford and Sheffield—and then, perhaps, what would now be an easy task, and will then be a difficult one, will be attempted. And that task will be to utilise the enormous purchasing power of this country, coupled with the extreme anxiety of every other nation to trade with us, as a means for compelling them to concede us Free Trade, or something approaching thereto, in our dealings with them. This desirable object—an object that will become an absolute necessity to our national

prosperity—can, we hold, be achieved without any considerable sacrifice; but even were it otherwise, it should be attempted at all hazards, for not to sacrifice a present good for a future greater good is to adopt the economics of savages. Whether the end could be attained by the means which the United Empire League advocates is a matter open to discussion, but that organization at any rate deserves the public goodwill for its services in calling attention to the disadvantageous position in which this country is placed. As certain suggestions of *The Textile Mercury* on other matters have been adopted in high quarters, we venture to recommend the advocacy by the United Empire League of a fighting tariff on the following lines, which we feel convinced would result in an approximation to Free Trade between ourselves and all other countries at a very early date. As a first step, existing treaties would require to be terminated, in accordance with the programme of the League. After this, tariff-bound countries should be dealt with separately, *one at a time*, with ample notice given of our proceedings to the rest of the world. Thus in dealing, e.g., with the United States, twelve or eighteen months' notice might be given that at the end of that time a duty would be levied on say, American-grown wheat, but that the same article grown elsewhere would be admitted, as before, duty free. This would ensure the growing of so much more wheat in Canada, South America, Russia, India, and other places, that when the tariff came into operation against the United States, wheat would probably be sold in London at the lowest price ever recorded—certainly not at any enhanced figure. After experiencing for a season or two the delights of protection as against themselves, the American Government would be eager enough to purchase an unrestricted entry into our markets at the cost of a substantial reduction of their own hostile tariff; but to expect any such reduction without putting on the screw to obtain it, is to indulge in the dreams of a visionary. Having secured fair treatment from the States, a similar course could be adopted with, say, Russia, following with other Continental nations, but always one at a time. Even fanatical Free Traders—and of such there are unfortunately a few—could hardly construe such a plan as a measure of protection; for, once in operation, even while they were denouncing it, the anti-British tariffs of the world would be collapsing on all hands. The power, however, to achieve such an end depends upon the eagerness of other countries to trade with us; but when our wealth has been frittered away, and our purchasing power has become a *quantité négligeable*—then it will be too late, and we may prepare for the coming of the artist New Zealander.

THE THREATENED STRIKE AT RADCLIFFE.

The strike in the coloured goods weaving trade in Radcliffe and Pilkington, which seemed to have come within measurable distance, has been averted—at least for a fortnight. At the eleventh hour the Bury and District Weavers' Association, under whose espionage the *furors*, which has been going on in the district for the last two months or more, has been conducted, placed their case in the hands of the Northern Counties Amalgamation, the Executive of which decided on Sunday to help the operatives in the dispute. A couple of representatives took the matter in hand, but found that the masters had themselves taken the bull by the horns and posted up notices in their mills to the effect that unless the list of prices which they had submitted were accepted by Wednesday, the 3rd February, the mills of all the employers connected with the Federation would be closed indefinitely.

The great vaunt of the operatives has been that they themselves were sufficiently powerful to cope with the strength opposed to them, but their second thought over the matter, upon things attaining an acute crisis, appears to have been that of a man whose moral courage required some good backers to bring it up to the scratch. Hence the solicited intervention of the Amalgamation. These gentlemen at once set about gaining time, and upon their application being refused, they went to their members with a fresh grievance—the masters were most intractable human beings; they were most inconsistent; they expressed a desire to settle the matter amicably, but refused facilities for bringing about such settlement; *ergo*, a monster meeting must be called in order to whip up the weavers to the necessary pitch of enthusiasm, which should make them willing to strike, regardless of the sufferings that such a drastic step would entail upon their families and children and the evil effects it would have upon the trade of the town. The leaders of the operatives seem to forget that gradually, but none the less surely, the once prosperous trade in the finer counts of goods in Radcliffe is ebbing away to other districts such as Colne, Nelson, Farnworth, and Manchester, and that this is owing in a great measure to the fact that the employers of Radcliffe are somewhat handicapped by the prices they have to pay for labour in these counts as compared with the districts named. They lose sight of the fact that if they insist upon the enforcement of their terms this ebb must continue, and that in the end the operatives will have to go elsewhere, probably to Nelson, Colne, etc., where they will have to work at exactly the same prices as are paid in those districts, whereas the Radcliffe employers propose those prices with ten per cent. added. Such being the case, their action seems suicidal; especially when it is borne in mind that the Nelson and Colne list has been sanctioned by the Amalgamation. The mention of this reminds us that if the employers of Radcliffe are inconsistent, they do not seem to be the only persons open to the charge: for how can the Amalgamation reconcile their interference in support of the operatives' arbitrary claim, when they have recognised a list to govern the same trade which actually gives ten per cent. less as a standard list to be paid in the trade? Of course, the postponement has a twofold object in view: besides giving the representatives of the Amalgamation time to investigate the *pros* and *cons* of the case, it enables the operatives to strengthen their position as an association, which is anything but strong, seeing that they have barely one-half of the operatives connected with it. Under such circumstances, we think the masters would have been within their rights, to say the least, if they had adhered to their refusal to postpone their notices. However, we are pleased that the masters, in their desire not to inflict unnecessary suffering and hardship upon their workpeople, consented at their meeting on Tuesday night to postpone their notices for a fortnight, during which we hope some means will be found of settling amicably the points in dispute. We would ask the employers to note if they get any return for the consideration they have shewn.

A NEW TRADES-UNION LIGHT.

We discover from the organ of the Operatives' Association that a new light has sprung up in their midst. This is Mr. E. Jones, secretary of the Oldham Cardroom Workers' Association, and successor to Mr. Silk, who appears to have gone out of trades-unionism into the outer darkness. Mr. Jones had a meeting of his Association on Saturday week, and fell foul of *The Textile Mercury* for its criticism of the

proceedings of trades-unionists in relation to their action respecting non-unionists, whereby it was shewn, and we think very clearly, that they are acting in contravention of the law of the land, and are rendering themselves liable to a criminal conviction. Mr. Jones holds different views. Of course we never expected that he or any of his co-workers in the same field would concur with *The Textile Mercury* in its conclusions. Perhaps, however, he may agree with us that law is a very uncertain thing, and that the deductions drawn from it are more uncertain still, and therefore that it is hardly safe to look upon the law as it affects combinations as being clearly and irrevocably established by the decision of the Court repealing the judgment of Mr. Recorder Bompas. One high Court, it is well known, can give a strongly worded decision one day, and another higher Court the day after will reverse it, as happened in the celebrated Jackson matrimonial case. Our views are that the administration of our laws are simply a disgrace to any community claiming to be civilised. But passing over these generalities, let us see what Mr. Jones says *re* our remarks upon the legality of the proceedings of himself and his *confrères* in relation to non-unionists. That he has ventured to speak at all shews he has the courage of his opinions. He is brave, and we admire brave men: he will be a better man for defending the interests of his clients, providing he can persevere in such a course and preserve himself from the wiles of the cardroom Dillahs. We shall see.

Mr. Jones tells us he has a belief, which we admit he is perfectly entitled to hold,—it is that his association guarantees the protection of the rights of all cardroom workers. Non-unionists believe these associations do no such thing, and therefore refuse to join them; and these people have as much right to hold and put in practice their views as Mr. Jones and those who believe with him. Mr. Jones maintains that many advantages flow from the union, and that all who share in them should contribute to the cost of the organization which he alleges procures them. Non-unionists by their action deny this, and virtually affirm the contrary. They have, therefore, quite as much right to demand from Mr. Jones and his constituents not only that they shall not molest them for refusing to combine, but that he and his followers shall break up their union, disband their forces, and treat with their employers in everything relating to their work in their individual capacity. This is the converse of the position Mr. Jones and all trades-unionists take up. But Mr. Jones would deny this, and in doing so would be denying to others rights that he demands for himself. This is arrogance, though Mr. Jones may not know it; and when he proceeds to compel others to submit to his views and contribute to his union it is tyranny. If, therefore, we have charged the cotton trade-unionists with being arrogant and tyrannical our charge is perfectly justified.

Mr. Jones is argumentative. This is a trait that we admire, and it is one that is unfortunately somewhat rare amongst his companions, which is to be regretted. In order to destroy our argument that the action of the trades-unionists is a contravention of the liberty of the individual, a truth we supported by adducing the legal dictum of Lord Bramwell, he repudiates his lordship and proceeds to compare things that are essentially different, and which are not properly comparable at all. Says Mr. Jones:—"A man, even in this country, could not bestow his talents as he might think fit, neither had he perfect freedom of either mind or body. A burglar might be very clever and talented, but when he was

caught using these 'talents' according to his own mind and will, what became of his personal liberty? 'Personal liberty' was a very vague term. Well might Madame Roland exclaim, "Oh, Liberty! what crimes have been committed in thy name!"

Here Mr. Jones shews how innocently unconscious he is of the confusion of his ideas. Lord Bramwell is speaking of the only liberty that exists in civilised lands, namely, social liberty; and Mr. Jones confounds this with the natural liberty of man in a savage state, which was simply the liberty of wild beasts to devour one another. When men come to live together in society they abandon a considerable portion of these rights, and receive in return a guarantee that they shall be protected in their exercise of the remainder. And it is a portion of this remainder that Mr. Jones and his associates are attacking. In reality the action of the trades-unionists is an endeavour to establish an *Imperium in Imperio*, one power within another. He arrogates for his society the right to levy taxes in the form of subscriptions to support it. There have been times within the history of this country when such a pretension, if endeavoured to be carried into effect, would have speedily led to his being, as a plebian traitor, introduced to the hangman; an aristocrat doing the same would have got to feel the headsman's axe. We leave Madame Roland's characteristic exclamation out of the reckoning, as of no value. Mr. Jones proceeds:—"He should like to ask *The Textile Mercury* if any man had personal liberty with regard to Imperial taxation? A man might say, 'I will use my freedom of mind, and refuse to pay any Imperial taxes, because I need no protection from the Government. The army and navy are of no use to me. I have no quarrel with any foreigner, and I need no protection; and as Imperial taxes are chiefly used for what is called the defence of the country, I will refuse to pay these taxes.' The *Textile Mercury* would at once say that as the Imperial Government defended the whole of the community, of which this man was a unit, they must of necessity be protecting him as well, and they would compel him to pay his quota of this necessary taxation. This was just their position at the present time. They protected the whole of the card and blowing-room workers' community, and as long as a man or woman remained in that community he or she must contribute something towards the maintenance of the society."

Mr. Jones does not improve in his mental perception even when he endeavours to illustrate his views. Here again is the confusion between natural and social liberty pointed out above. A man who acted or proposed to act as he supposes would be both ignorant and foolish to an unspeakable degree. No man continuing to live in a civilised community can possibly lay down the advantages it confers upon him, nor would be permitted to evade its obligations. In the first place, the freedom he is supposed to declare he will use is a natural freedom, which he has never possessed, and which is quite outside the limits of social freedom. "He will take this course because he has no need of protection from the Government." Suppose he possessed a considerable amount of money and other property, and the Government heard of and accepted his declaration, and allowed him to pass outside the pale of the law's protection. In this case no one would be punished for anything they might do in the way of stripping him of what he might possess, and of slaying him if he made resistance. In this highly-civilised England, even, how long would he be above the sod of the cemetery? Certainly not long, though he might have no quarrel with either native or foreigner, and might, in fact, be the most peaceably disposed

man within the kingdom. If, with all the laws, prohibitions, and punishments, robbery and murder cannot be prevented entirely, how much more abundant would it be were there no such laws! Then, again, nations don't wait for quarrels any more than lawless individuals when they are animated by a desire to acquire the territories and possessions of their neighbours; a state of preparation to repel an attack is the only security of those who are liable to it. But Mr. Jones wants to accept this position in order to affirm an analogy between the position of the Government and that of his association. This, however, is altogether erroneous. There is no more analogy between the two than can be found between a dog's hind leg and a parallel ruler. In the first place the card and blowing-room workers do not form a community in the sense of that of the State. Mr. Jones evidently does not know the meaning of the word. As a class of workers the card-room hands have no enemies against whom they need to be defended. Their employers do not stand in a position of antagonism towards them, as trades-unionists endeavour to make them believe. So far as the card-room hands have any of the characteristics or perform the functions of a community their association can, in the eye of the law, be only a voluntary one, the members of which either join or retire when they like, or at least when they can mutually agree. But in attempting to coerce individuals to join and compelling them to pay contributions to their funds they are usurping the functions of the paramount government, and setting aside its authority. If they doubt this let them sue a non-unionist in the Courts for arrears of subscription, and see what the verdict will be. They are attempting to levy taxes for a purpose inimical to the welfare of those against whom the force derived from their expenditure has to be directed. This is treason in a minor degree, and a government that permits it is recreant to its duty. Our old-time kings would have made short work of any such pretensions. And so would public opinion in the healthier days of the Commonwealth, when politicians regarded principle more than the prestige that membership of Parliament accords, and would have scorned to sell the interests of the country for the privilege of a seat in Parliament. Charles I. levied ship money without authorisation of the Parliament, and the people arraigned him for treason, found him guilty, and brought him to the block. The actions of trades-unionists to-day are identical in principle, and if they met with strict political justice a similar fate would be meted out to them.

After delivering himself of the political wisdom embodied in the above, Mr. Jones got excited and perorated, during which he shewed that the lawyers were a trade, and so were the doctors. Well, we are not concerned to defend either body of them, believing as we do that both of them professionally are as undesirable acquaintances as are trades-unionists, and that the less one can have to do with them the better. Said Mr. Jones, in his final passage:

Individualism must always stand on one side when the rights of the community were in danger. They were working for the rights of the community—the right to a fair share of the profits derived from labour, and in working out their new departure they believed they were working out the social salvation of their workers, and no vapid ravings as to "prosecution for conspiracy" would have the slightest effect of turning them from their path. They threw back into the teeth of *The Textile Mercury* the charge of arrogant tyranny which they used against trades-union leaders, and ventured to assert, without fear of contradiction, that there was more arrogance and tyranny and arbitrary conduct used by managers and over-lookers and carders in one month than there had been used by the leaders of the trades' organisations since they began to exist. (Loud applause.)

Well done, Mr. Jones! Mr. Jones, judging by

his name, is a Welshman or of Welsh extraction, and has gone into the "hyswel"—a state of inspiration, a fact which we advance as an excuse for the above. As to the plaudits by which it was received, those who gave them may be excused also—they know no better.

We have discussed the views of Mr. Jones at this length, not because they are of any particular importance, but because they are those that are being assiduously inculcated into the minds of the operatives, to the unspeakable injury of their best interests and prospects, and of those of their employers and the community at large. Trades-unionist leaders of to-day are enemies who are sowing tares in the fallow fields of the working man's intellect, and by-and-bye the reaping time will come. What will the harvest be? Let working men carefully seek to find an answer to this question, and they will then withdraw their ill-bestowed and much-abused confidence from where they have placed it.

Bleaching, Dyeing, Printing, etc.

METHODS OF WOOL DYEING: THEIR PRINCIPLES AND PRACTICE.—III.

(Continued from page 79.)

Third Method.—This method consists in dyeing the wool in a bath containing the dye-stuff, a little acid (usually sulphuric), with the addition of Glauber's salt or some other alkaline salt, the essential feature or principle being that the bath is an acid one. This method is applicable to the large group of azo dye-stuffs derived from coal-tar, and also to the acid dyes prepared from the basic coal-tar colours by the process of sulphonation. It is also used to apply indigo carmine to wool—probably the only good example of a natural dye-stuff applied by this process. Most of the natural colouring matters, such as logwood and fustic, belong to another group of dye-stuffs.

The simple azo dyes are combinations of two or more organic bases, united together by a peculiar and characteristic group of nitrogen atoms. Such azo colours are, however, insoluble in water, and therefore they cannot be used in dyeing or textile colouring, although the firm of Messrs. Read Holliday and Sons years ago patented a process whereby these insoluble azo colours could be developed on the fibre direct, and thus fabrics could be dyed in fast colours. When these insoluble azo colours are treated with sulphuric acid they are converted into sulpho acids, undergoing what is called sulphonation—an operation of the greatest importance and value in the preparation of dye-stuffs. The preparation of indigo extract or indigo carmine from indigo is also a case of sulphonation. The sulpho acids of the azo colours, of the basic dyes, and of indigo, are usually insoluble in water, although there are great differences in their properties in this respect. They will combine with bases such as soda, calcium, and potash, to form salts which are soluble in water, and it is usually in the form of sodium salts that these azo and acid dye-stuffs are sold to the dyer and calico printer. It is this power of combination with bases that makes them of value in wool dyeing. As Knecht and other authorities have pointed out, the wool fibre contains a basic principle capable of combining with acid bodies, and, in wool dyeing, with the colouring matters under discussion; this combination occurs between the sulpho acid of the dye-stuff and the basic principle of the wool fibre. This points to the fact that the dye-stuffs of this class do not combine with the wool in the form in which they are supplied to the dyer as sodium salts, which is shown by a property that many, if not all of them, possess, of not dyeing the wool fibre in a neutral bath. If a piece of wool be immersed in a solution of, say, a scarlet or of indigo extract, which is neutral, it is not dyed. The dye liquor may penetrate

thoroughly throughout the fabric, but if the piece of wool be lifted out and allowed to drain, nearly all the liquor will drain away and leave the wool nearly if not quite white, shewing that the dye-stuff in the form in which it is sold has no affinity for the wool fibre. If now a few drops of sulphuric acid be added to the dye liquor the wool will become dyed. The sulphuric acid liberates the free sulpho acid of the dye-stuff, and this is now in a form to combine with the wool fibre, which it does. This is the fundamental principle underlying the acid method for dyeing wool with the acid group of colouring matters.

The practical application of the principle laid down above is a matter of simplicity compared with other methods of dyeing. The composition of the bath is given above; it is best to enter the wool at from 150° to 160°F., and then to slowly raise the temperature to the boil. This method of proceeding gives time for the free colour acid to be liberated from the dye-stuff on the one hand, and for its combination with the wool fibre on the other. In dyeing pale tints with acid dye-stuffs it is a good plan not to add the acid until after the goods have been entered into the bath and worked for a short time to enable them to become impregnated with the dye liquor; the acid may then be added, and the dyeing may be finished as usual. By this plan of working more even dyeings can be obtained than by simply entering the goods direct into an acidified dye liquor.

Any kind of acid may be employed, but generally sulphuric acid is used, partly because it is cheap and partly because it is the strongest acid known.

(To be continued.)

NICKEL AS A MORDANT IN DYEING.

Nickel is now only rarely applied as a mordant in dyeing, partly on account of want of information as to the effects which may be produced by its aid, and partly on account of its expense. This latter feature may be overcome as new sources of nickel are opened, so that it is quite likely that some day this metal will take its place beside chrome, iron, and alumina, as a regular dyers' chemical. It may be useful to give the results of using nickel as a mordant in dyeing and calico-printing with the most common of the mordant-dyeing dye-stuffs. With alizarine it gives a reddish violet lake, yielding the best results when fixed on the fibre by means of oil in the usual way; it is dyed, and then steamed and soaped. The red so obtained is fiery, and rather more blue than the corresponding alumina red. The use of lime salts is not advantageous. Alizarine orange gives brownish or orange-red shades, which are not so fast as those with alizarine. Alizarine blue gives excellent results with nickel; the blues are very pure and beautiful. The nickel is fixed on by means of oil, and the dyeing is done by entering into a cold bath, working for 15 minutes, then slowly raising to the boil and working for an hour longer; the shade then is a bluish-green, but on soaping it turns to a pure blue. The shades are very fast. Cœruleine is dyed with nickel mordants in the same way as alizarine blue, and it gives yellower shades of green than can be obtained with alumina and iron. With nickel, galloxyanine gives blue-violets, which are very fine. Galleine also gives very fast blue-violets. Persian berries give yellows resembling those obtained with chrome, but if anything rather faster. The red-woods can be applied with the aid of nickel, but the results are not very satisfactory. A brown can be dyed with nickel, by first fixing it with caustic soda and then treating with bleaching powder—the same process as is used for dyeing manganese brown. Nickel can be used in calico-printing; the best form is the acetate, which may be obtained by precipitating a mixture of lead acetate and lead nitrate with nickel sulphate, and using the clear solution after the lead sulphate has settled out. The best proportions to use are equal molecules of alizarine and nickel oxide. It is best to print on oiled cloths. The goods are printed,

steamed, rinsed, soaped, and finally washed in water. Alizarine gives good results, the whites being left very clear. Alizarine orange gives red-brown to orange, the whites not being affected. Alizarine blue gives bright shades not unlike those obtained with methylene blue, but much faster. Cœruleine gives a yellow green; galloxyanine blue-violets; and galleine blue-violet shades, fast to soap, but not to chlorine. Galloxyanine does not give good results. Persian berries give a good yellow. Cutch gives a good brown.

NOTES ON RECENT PATENTS IN DYEING.

The Farbenfabriken of Elberfeld have lately taken out several patents relating to the preparation of colouring matters. One of these is for the manufacture of mordant-dyeing dye-stuffs from alizarine cyanine G, by the action of fuming sulphuric acid in the cold. Some oxidising action is set up and a new dye-stuff is formed, which dyes alumina-mordanted wool pure blues of a more greenish tone than the dye-stuff from which it was originally obtained; and with chromium mordants greenish blue shades of blue are obtained, which like all alizarine colours are fast to light, etc. Besides alizarine cyanine G, other dye-stuffs of a similar character may be treated in the same way, and give new colouring matters analogous to the one just noticed.

Another patent is for a method of preparing indigo carmine artificially. The patentees start from phenyl-glycocoll, which has already been used for the same purpose by other chemists; but whereas so far only indigo itself has been obtained, the present patentees prepare indigo carmine. They have found that when this phenyl-glycocoll is acted on by ordinary sulphuric acid no effect is produced, but that if fuming sulphuric acid be used, then the phenyl-glycocoll undergoes both sulphonation and oxidation, the result being that indigo carmine is formed. The operation is carried out by treating one part of phenyl-glycocoll with 20 parts of fuming sulphuric acid containing 80% of anhydride, when a yellow solution is obtained. This is now mixed with ordinary sulphuric acid of about 66° Be. strength, when a blue solution is obtained, from which the indigo carmine may be precipitated out by adding salt. The dye-stuff so obtained dyes wool or silk in the same way as the natural product, but gives rather brighter shades. It is doubtful whether this artificial product will come into the market, as at present it costs more to make than the natural product. Cost is the ruling spirit in most commercial transactions, and influences the use of a good many products in such arts as those of textile colouring.

DR. CHARLES DREYFUS, of the Clayton Aniline Co., has taken out a patent for the production of lake pigments from aniline dye-stuffs. Some time ago Müller Jacobs patented a process for preparing lake pigments by the aid of rosin, which he first converted into a soap, and then used this for preparing the lake from the dye-stuff. Dr. Dreyfus's process is an extension of this. He prepares a rosin soap in the usual way, and then precipitates this with sulphate of zinc, whereby he obtains a precipitate of zinc rosinate, which will now combine with a dye-stuff to form a lake pigment. He finds that only the so-called basic aniline colours are available for this purpose, but out of these he can prepare a wide range of pigments. Instead of sulphate of zinc he can use the chlorides of calcium or magnesium, but he finds that these salts do not completely precipitate the rosin soap—a fact which, he says, is now for the first time recorded; and certainly we have not seen it stated before. On adding a solution of these chlorides to a solution of rosin soap, part of the latter is precipitated, but the precipitation is completed on adding a solution of the colouring matter that it is desired to make into a lake pigment. These lake pigments are soluble in a large number of volatile solvents, like carbon bisulphide, benzol, solvent naphtha, etc., and can be used for colouring varnishes, making printing ink, etc.

ACID VIOLETS have hitherto been prepared by first making the violet, and then sulphonating by means of sulphuric acid. A German firm of colour makers have patented a process whereby these acid violets can be made directly by a synthetical method, and by a modification of the process acid blues and acid greens can be obtained. The patent specification is full of technical language only comprehensible by a chemist versed in the mysteries of the nomenclature of organic compounds. Some of the colouring matters described have been placed on the market, and are very good products.

WASTE SOAP LIQUORS are the subject matter of a patent taken out by Messrs. Kimmins and Craig. These are produced in the process of scouring wool. The method commonly adopted for dealing with them is simply to collect them in large tanks and treat them with sulphuric acid, which decomposes them, causing the fat they contain to rise to the top. This is then collected and pressed in a hot press, and the grease so obtained is sold for a variety of purposes. The patentees point out that there are two defects in this method, both of which arise from the use of sulphuric acid: First, at the temperature which is used there is some risk of the grease being discoloured, owing to charring; and, secondly, the acid also acts on the metal work of the press, causing its corrosion and reducing its working life. The patentees' process aims at reducing these defects. They treat the waste liquors with a mixture of calcium chloride, lime, and bleaching powder, whereby they obtain a greasy mass, consisting chiefly of a lime soap, but containing also some free fat. This greasy mass is treated with sulphuric acid, which separates out the fatty matter, which is then pressed as usual. The patentees say that one object of their invention is to do away with sulphuric acid for reasons stated above, and yet they add it as a final step in their process. The bleaching powder will act as a bleaching agent to the fat, and thus a better-looking product will result; otherwise there does not seem to be much improvement in this over the ordinary process, but in all cases of this sort it is very difficult to give an *ex cathedra* opinion.

Designing.

NEW DESIGNS.

WEAVE TWILLS.

A favourite method of producing figured grounds for waistcoatings or dress fabrics in which an extra weft figure or spot is to be developed, is shewn in Designs 8 and 9. Design 8 is composed entirely of the two-and-two-twill, the figure produced being the combination of an upright and ordinary twill, the following particulars for production being suitable:—

Warp.

All 2/40's fancy mixture; 9's reed 4's.

Weft.

36 sk. fancy mixture woollen; 36 picks per inch.

An effective modification of this design will be to change the twill in one direction into a three and one weft face effect, when the following sett should be adopted:—

Warp.

All 2/40's black worsted; 12's reed 4's.

Weft.

All 25's black mohair; 48 picks per inch.

Of course the above effect may be woven for a piece-dye. The above setts are for dress fabrics. For heavier cloths suitable for waistcoatings or mantlings the following are useful particulars:—

Warp.

All 2/36's dark blue; 14's reed 4's.

Weft.

All 18's dark brown mixture; 56 picks per inch.

The construction of Design 9 is based upon the fact that the eight-end sateen coincides with ordinary twills, and therefore may be combined in a perfect manner with them. A finer sett is required than in the foregoing, say 2/36's worsted, with about 64 threads per inch. Many other effects on a similar principle will no doubt be suggested.

COTTON DRESS GOODS DESIGNS.

When the period for mourning garments expires, there will be an impetus in the home trade for coloured fancies in every possible textile material. As we at one time prognosticated through these columns that Scotch clan tartans would be revived, which really took place shortly after we had given patterns for same, so again we are called upon to a forecast in the same direction. These tartans seem to command attention at all times and seasons. Perhaps one main feature in connection with their popularity is the consummate colour arrangements of the crossings, independent of the weave, and now that we have so many bright brilliant dyes for enhancing the ornamentation of all tissues, no wonder or surprise need be felt at Scotch plaids, clan tartans, and their modifications in stripes, taking a leading position.

In the spring, cotton canvas in light neutral shades, as well as same in decided dark colours, will be in use for daily wear as serviceable costumes, while white and printed muslins will compose toilets for more dressy occasions. Zephyrs and other fancy cotton gingham cloths will be used for plain morning gowns.

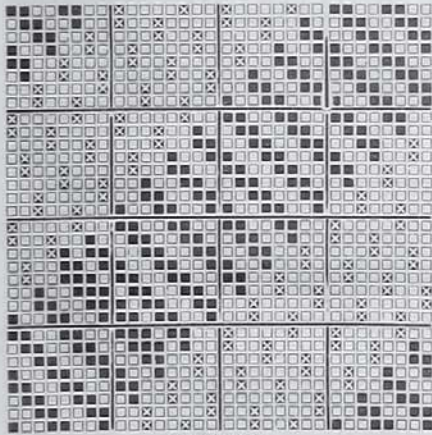
Design A now given is somewhat of a novelty so far as weave, combination effects, and all-over diagonal in cotton dress goods are concerned.

It may be found useful in a variety of fabrics; in fact it is so constructed that any counts or material in shirtings, vestings, or coatings can be utilised by this weave. It is on 13 shafts, straight-over draft, with 52 of a round. This necessitates a dobby, and as any class of fabric, heavy, medium, or light, may be produced from it, particulars can scarcely be given without going through the different qualities; but we may just point out that for dress goods 20's cotton warp, 64 ends per inch, 16's weft, 64 picks, will form a guide. It may be woven in solid colours, or piece-dyed. Contrasts may be made to create capital effects, the warp grounds being all very dark or extremely light tints. Uhlán blue is a favourite shade. Weft grey or cream, warp grasshopper green, with faint pink weft; warp Dahlia-red, weft grey; heliotrope or brown warp, with orange weft; billiard green warp with the brightest blue weft obtainable,—these will give some idea how beautiful and effectual contrasts may be formed.

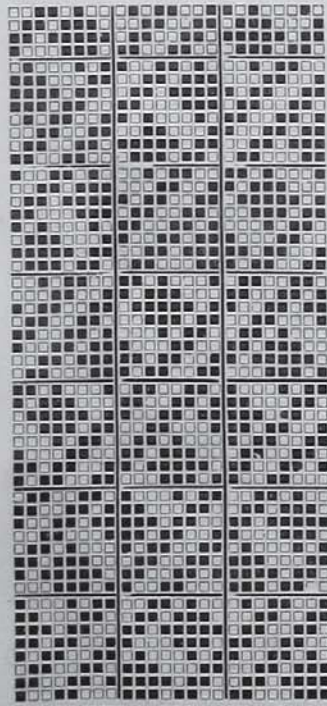
Design B is for cotton suitings, which will be in vogue for the various out-door pastimes. This is a fabric that must be made from the best of materials and without stint; a very simple weave, on 16 shafts, 16 to the round.

straight-over draft, 18's cotton warp or 36/2 fold, 80 ends per inch or say 20 dents per inch, four in a dent, and 60 picks per inch of 12's cop weft: the least twists per inch possible. This will give a good cloth. For a heavier fabric shewing up the patterns more boldly, 20/2 fold for warp, and 8's weft, 72 ends per inch, 18 dents, four in a dent, 56 picks per inch, good finish. Both sides of this cloth should be examined before deciding upon the class of finish requisite.

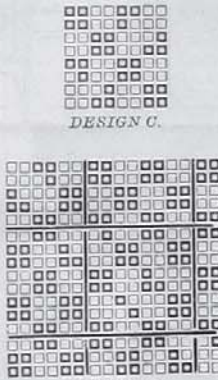
Design C is merely a variation on 8 shafts, straight-over draft, 8 to the round, same particulars as B. We have given this arrangement for limited weaving machinery, where perhaps 16 shafts would be unattainable. The product will be found equally valuable as a cloth, and as there seems some desire for a special back to these goods for the purpose of acting as a substitute for linings and a rough carded surface, we will endeavour in our next issue to furnish weaves for this purpose.



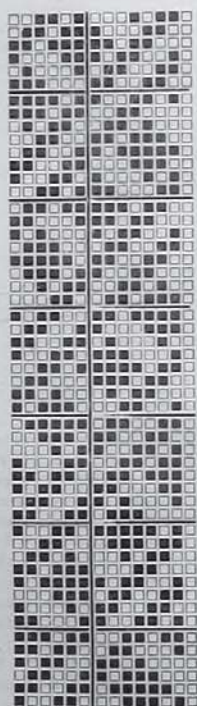
DESIGN A.



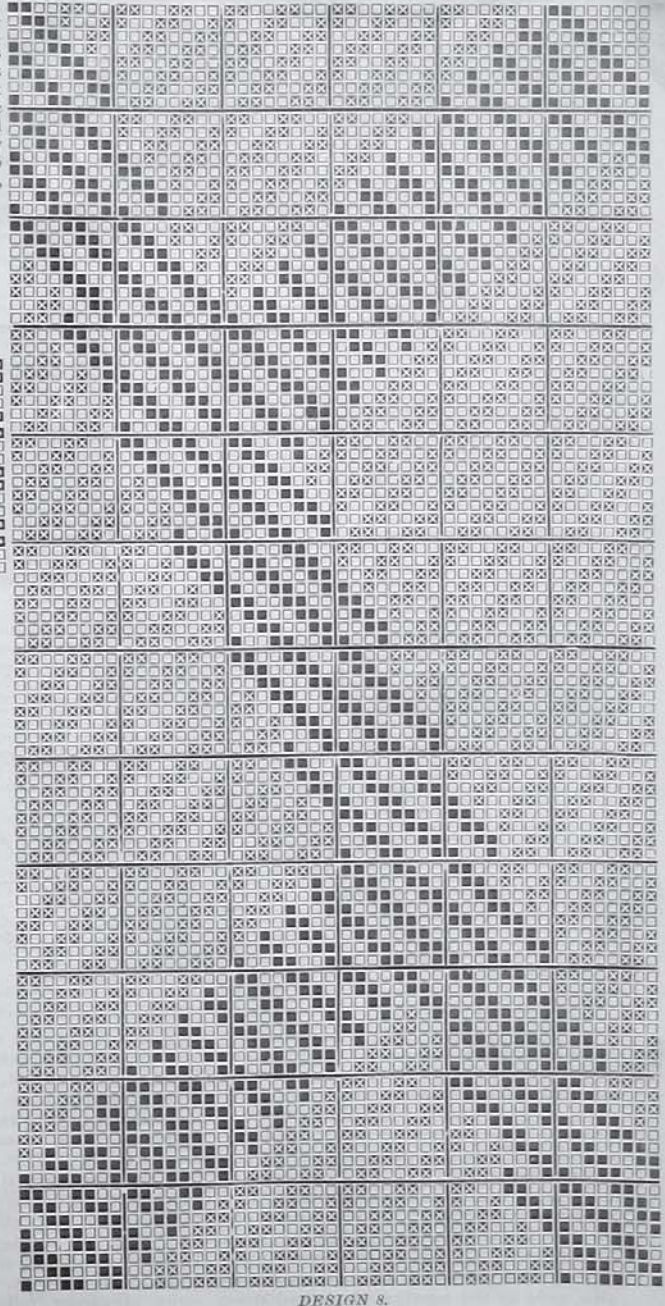
DESIGN A: DRESS GOODS.



DESIGN B.



DESIGN A: PEGGING PLAN.



DESIGN C.

Machinery and Appliances.

IMPROVED REVERSING ARRANGEMENT FOR CYLINDERS OF DRYING MACHINES.

MAKER: MR. LANG BRIDGE, ACCRINGTON.

Amongst the numerous machines to be found in textile fabric bleaching, dyeing, and finishing establishments, the drying machine occupies a conspicuous and important position.

to permit of the admission of steam and the discharge of the condensation water. To effect the latter there is constructed within each cylinder an ingenious conduit system which by the revolution of the cylinder automatically scoops up the water of condensation, and discharges it into a central conical reservoir, whence it makes its exit through the hollow axis on which the cylinder is mounted. The cylinders are the best and most effective in their drying capacity when composed of copper, owing to the superior heat-conducting power of this metal over tin plate.

The fabric having been placed in the machine

that the cloth passes from one end to the other through both tiers of rollers with only what may be termed its back in contact with the cylinder. The driving gear of both these arrangements has been of an unchangeable type. It has also implied the necessity of having two machines, one for each description of work. This has long been felt to be a drawback, and has entailed the outlay of capital upon two machines, and housing the same where one ought to have served.

The desirability of this coming under the notice of Mr. Lang Bridge, whose experience in the construction of this and similar classes

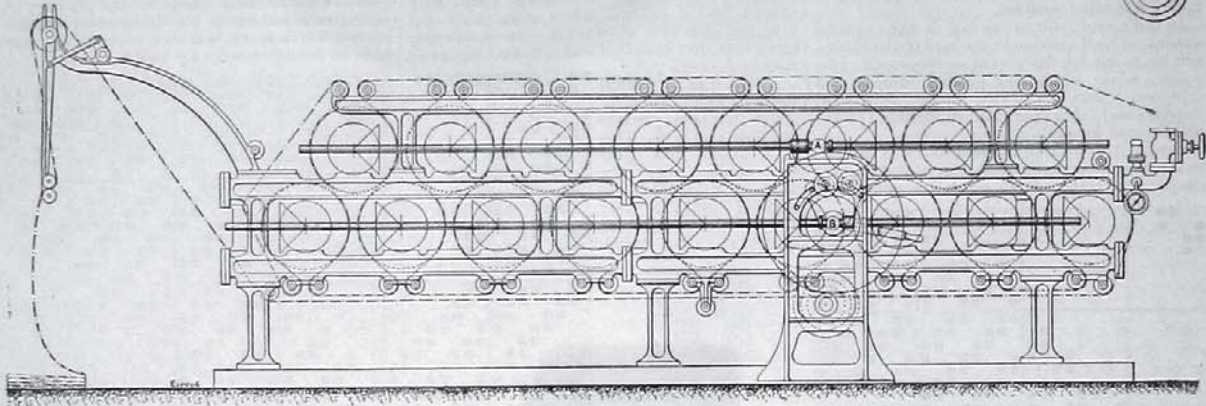


FIG. 1.—ELEVATION IN OUTLINE.

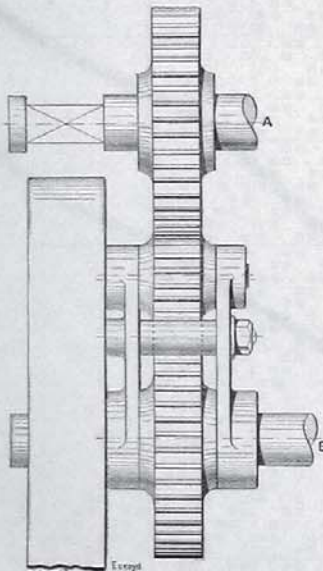


FIG. 4.—END VIEW OF FIG. 2.

The ordinary drying machine consists of a series of cylinders, mounted in a frame either in one or two tiers generally in the latter for economy of space. These cylinders are made of tin or copper sheeting, and driven by bevel gearing. The cylinders are strengthened so as to resist, as much as possible, the internal pressure of the steam used for drying when at work, and the risks of compression from atmospheric pressure by the formation of a vacuum on the condensation of the steam within them. But besides this, other provisions for the prevention of these results are also made by the insertion of air and steam valves. The axes of the cylinders are hollow,

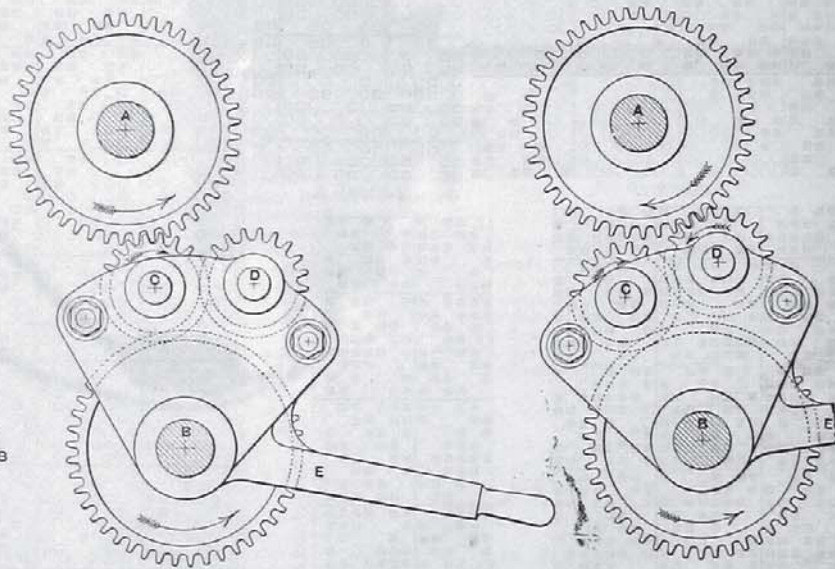


FIG. 2.—GEARED THROUGH CARRIER C.

is passed under and over the cylinders in succession until it emerges at the last one. Such an arrangement, of course, ensures a thorough drying, as the fabric on one side or the other is in constant contact with heated cylinders. This, of course, means that it is dried from both sides. It happens, however, that there are several classes of fabrics in which it is highly necessary, in order to get the full and best effect of the finish, that they shall be dried from the back only. In this case it is required to modify the ordinary machine by the introduction of a series of carrier rollers, as shown in our illustration, Fig. 1, in which it will be seen

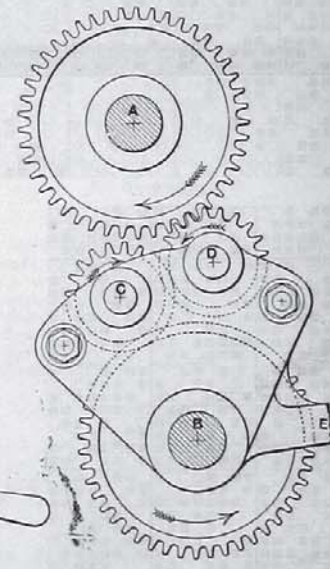


FIG. 3.—GEARED THROUGH CARRIERS C AND D.

of machines is great and wide, he set to work to effect the necessary improvement, which was speedily accomplished in the simple and effective manner illustrated herewith, which is a system of reversing gear.

In the arrangement of the ordinary machine, when the drying is from both sides of the fabric, the top tier of cylinders all revolve in one direction: that is, away from the feed; the cylinders of the bottom tier, which receive and dry the fabric upon the opposite side, revolve in the contrary direction. In our principal illustration, Fig. 1, the machine is arranged to dry upon one side only, and is, therefore, furnished with carrier rollers for both tiers of

cylinders. If the cloth be traced from its entrance into the machine to the delivery at the scray or plaiter, it will be found that one side only is, throughout the passage, in contact with the face of the cylinders.

Of course, machines have long been, and are now, constructed with permanent driving arrangements to do this work, but what has always been wanted has been a convertible arrangement that could be changed from one to the other and back again as often as required without either expense or inconvenience. This want has been supplied in the arrangement we shew in Figs. 2, 3, 4. Instead of the driving and driven wheels directly gearing into each other as in the ordinary manner, there is a loose quadrant mounted upon the axis B, to one side of which a hand-lever E is cast or otherwise attached. Upon the upper side of this bracket are mounted two small carrier wheels, loose upon their studs, and of the same pitch of teeth as the driver and driven wheels. These wheels c and d always gear into each other, and c always with b. By a simple movement, depressing the hand lever to the position shewn in Fig. 2, the power from the driver b is transmitted merely through the intermediate wheel c to a, causing both tiers of cylinders to revolve in one direction as required when drying the fabric from one side only. In this case the wheel d is simply idly revolving on its stud. When it is desired to work the two tiers of cylinders in opposite directions, the hand lever is raised to the position given in Fig. 3, which throws the wheel c out of gear with a and brings d into gear with it. The wheel d thus becomes a working wheel, and the power from b passes through the two intermediates c and d to a, causing a and b to revolve in opposite directions as they would do if immediately geared together. This, Fig. 3, shews the arrangement of the gear when working to dry the fabric from both sides. The great facility with which the change of driving is effected will be self-evident, as also will be the great merit of the invention, as it renders one machine capable of doing the work that previously required two, thus saving, as observed above, the outlay upon one machine and the provision of standing space for it.

A drying machine with this improvement will be found of great advantage in the finishing of plushes, velvets, cords, all pile fabrics, and many others where the peculiarity of the finish requires the face of the cloth to be kept from contact with the heated surface of the cylinders. Those of our readers who desire any further information regarding it will obtain same by applying to the maker as above.

News in Brief.

ENGLAND.

Accrington.

At a meeting on Tuesday night, the spinners and cardroom hands (300) out on strike at the Accrington Spinning Co.'s Mill, Accrington, decided not to give way, and to take measures for keeping out on strike for a lengthened period. The Masters' Association are also determined to hold out, and are supporting the employers.

Batley.

Over 200 weavers in the employ of Messrs. M. Lobley and Co., Dock Ing Mill, Carlinghow, are out on strike. They held a meeting on Wednesday morning, at which it was stated that the firm wished to reduce the price paid for weaving 4s. per cut. It was decided to adjourn the meeting until yesterday, and not to approach the employers in the meantime. A great number of the weavers joined the Weavers' Association, which will assist them in their resistance to the proposed reduction.

Bradford.

The spinning department at Manningham Mills (Messrs. Lister and Co., Limited) resumed full time on

Wednesday morning, having been working short time since December 29th.

The annual dinner of the members of the Bradford Designers' and Managers' Club was held at the County Restaurant on Saturday evening last. About forty members and friends were present. After dinner the chair was occupied by Mr. Edmund Dracup, the president, who, in a short preliminary address, defined the position of the society, and its objects and utility. Subsequently Mr. James Andrews made a few remarks respecting the present position of designers and managers. The musical part of the programme consisted of songs, recitations, and instrumental solos.

One of the most destructive fires which have occurred in Bradford for months was discovered on Wednesday morning on the premises of Messrs. John Hill and Sons, worsted manufacturers, of Richmond-road. The premises have an extensive range, and when the fire-brigade arrived they found that one portion was wrapt in flames. In a large shed adjoining the burning premises there were 180 large looms, but the prompt attention of the firemen fortunately preserved them from injury, and a number of valuable carding machines were also saved. The portion of the premises in which the fire broke out is entirely gutted from the basement to the roof. The damage, which is fully covered by insurance, is about £15,000.

The London correspondent of the *Scotsman* writes:—"I understand the Mayor of Bradford has been in communication with the Chartered Company of South Africa to see whether they can afford any facilities for introducing the manufactures of that town into Mashonaland, and that other manufacturers are anxious to open up trade with the new country. So far the Chartered Co. have not attempted to do much more than to provide for the wants of their own people, and the probability is that they will not undertake the management of a regular trading concern, especially as they view with favour the establishment of the South African Trading Expedition, to which I have already referred. It is the intention of the trading expedition, if the land is given to them, to establish dairy and cattle farms in different parts of the country."

Brighouse.

An intimation of the death of Mr. J. T. Clay, of Rastrick, has been received this week from Cannes, where the event occurred. Mr. Clay was until recently at the head of a successful firm of worsted cloth manufacturers, and was widely known and much respected.

Blackburn.

Mr. Frazer Johnstone, cotton manufacturers' traveller, died suddenly in the street, last week, of syncope. The deceased gentleman, who was a son of the late Mr. Francis Johnston, J.P., of Viewfield House, Oozehead, leaves a widow and three children.

Bolton.

Messrs. James Marsden and Sons, of the Albion Mills, Bolton, have just placed an order for a quantity of new mules with the old-established firm of Richard Threlfall. These are to replace self-actors of another make. Threlfalls are also supplying mules at present to the Jackson-street Spinning Co., of Manchester, and Messrs. Heaton, Lostock Junction.

A meeting of the Technical School Committee was held last week, Mr. Alderman Fielding presiding. It was reported that Messrs. Houston and Laurish, dyers, etc., Manchester, had presented 23 specimens of pure dyes, Messrs. Chatwood (Bolton Safe and Lock Co.) a safety lock, and Mr. William Midgley (curator at Chadwick Museum) a case of 25 lantern slides. The work of the school was reported as progressing very satisfactorily. The gearing in the spinning and weaving rooms is completed, and some of Messrs. Dobson and Barlow's workmen are fitting up the machinery. Six looms of various sorts are being fixed. Messrs. Scott, Mountain and Co., electrical engineers, have laid all the courses and fixed the lamps for the electric lighting, and at present are engaged in laying down the dynamos, etc. The engines are being erected by Messrs. Dick, Kerr, and Co., Kilmarnock. There will be sufficient power for 350 lights, arc lamps, each light to be 16-candle power. A sub-committee, consisting of the Chairman (Ald. Fielding), Councillor Entwistle, and Messrs. Robinson and Tunstall, was appointed to deal with the question of procuring the necessary appliances for use in the school. Arrangements were made for a test examination of the pupils in the cotton spinning class. At present the classes are held in the Public Salerooms, there being over 360 students. It is expected that the schools will be ready for opening about the middle of March.

Braintree.

Owing to the unusually large demand for mourning throughout the country in consequence of the death of the Duke of Clarence and the high rate of mortality of the last few weeks from influenza, a great impetus has been given to the crape manufacture in Essex, which for some time had been very dull. The factories at Braintree, Halstead, and other places in the country

have commenced working full time, and in some cases overtime.

Bury.

The Bury Spinners' Association report that there have been 81 members on the funds during the month, or an aggregate of 20.1 per week, and that the income has exceeded the expenditure by £49 12s. 4d.

The Committee of the Bury Spinners' Association have instructed their secretary to tender notice to leave work on behalf of the spinners at a mill where bad spinning was prevalent, unless the employers would guarantee to remove all cause of complaint.

Messrs. Musgrave and Co.'s men, who have been carrying out the repairs to the running machinery at Messrs. Walker and Lomax, Limited's, Old Mill, completed their labours on Friday last week, the spinners and card-room hands resuming their work on the following morning, after a stoppage of nearly three weeks.

Church.

The old-established business of chemical manufacturer, formerly carried on under the style of Messrs. William Blythe and Co., has been taken over by a company, with a registered capital of £50,000 in £10 shares; and, together with the business formerly carried on under the style of Messrs. Blythe Bros., Manchester, will now be known as "William Blythe and Co., Limited." The first directors are: Messrs. W. S. Blythe, F. C. Blythe, H. Rawcliffe, and G. Walker.

Halifax.

The Technical School Committee at Halifax are about to make an appeal to the public for subscriptions towards the sum of £20,000 required for the establishment of the proposed Technical Institute.

Hadfield.

The death is announced of Mr. John Broadley, manager of the printworks of Mr. John Dalton, Hollingworth, in his 61st year.

Huddersfield.

In the Chancery Division on Saturday, Mr. Justice North had before him a petition by Messrs. Thomas Broadbent and Sons for the winding up of H. Lister and Son, Limited. The petition stated that the company was incorporated in February, 1889, with a nominal capital of £80,000, divided into 2,500 preference shares of £10 each and 5,500 ordinary shares of £10 each, and the amount of capital paid up or credited as paid up was stated at £60,169. The objects for which the company was established were to take over the undertaking known as Henry Lister and Son, carrying on business at Ash Brow Mills, Huddersfield; Ford Mills, Horbury; and Bow Lane, London; and to carry on the trades of silk, woollen, and worsted spinners, manufacturers of and dealers in imitation sealskins, plushes, curls, rugs, shawls, astrachan, and other mantle cloths, fancy woollens, worsteds, and other textile fabrics, and of proprietors of colliery and other works. The petitioners were creditors for £95, and the petition was unopposed. Mr. Justice North made the order for a compulsory winding up.

The annual meeting of Messrs. Wm. Thomson and Sons (Limited), woollen manufacturers, Woodhouse Mills, was held on Saturday afternoon. Mr. George Thomson, the manager, presided, and there was a large attendance of representative and working shareholders. The chairman, referring to the report and balance sheet, said that after paying 5 per cent. interest on capital, they were enabled to pay 10d. in the pound to labour on wages received, and 5d. in the pound on the purchases of co-operative customers. The report of the auditor shewed that the sales of the concern during the past year had been 36 per cent. more than in 1889, and 11½ per cent. more than in the previous year. Mr. J. O. Lodge (Deighton), Mr. Henry Hirst (Huddersfield), and Mr. William Hirst (Golcar) were re-elected as members of the Committee of Management; and Mr. William Brooke (Huddersfield Trades' Council) was appointed to fill the vacancy caused by the death of Mr. John Hoyle.—A special meeting was afterwards held to consider a proposed partial amendment of the rules so as to allow a portion of the surplus profits being set aside as a pension fund for the workers. After discussion it was unanimously approved. Tea was afterwards served in one of the rooms of the mill, and about 300 persons sat down. Dancing, etc., followed.

Leeds.

The members of the Yorkshire College Textile Society held their annual conversazione on Saturday, in the Textile Department of the college. The society, which is under the Presidency of Mr. W. W. Whitehead, of Leeds, seeks to touch the textile trades by bringing together those who are interested in their development and extension. It is not merely a students' association; manufacturers, merchants, and designers are equally eligible for membership; and each succeeding session brings within their ranks more business men. During the current session several

lectures have been delivered before the society by gentlemen engaged in the fancy trade at Huddersfield. These have been well appreciated, and have resulted in certain subjects connected with the production of yarns and cloths being for the first time systematically investigated by practical experts. One question brought before the society, namely, that of textile museums, has occasioned considerable discussion amongst the makers of woollen goods. It was dealt with by Professor Beaumont in his lecture at the opening of the session. The members of the society feel convinced that if the matter is only thoroughly taken up, it would tend largely to perfect the training of those engaged in weaving and designing. About 200 guests were invited to the conversation, and they were received in the Art Room by the President and Mrs. Whitehead. The various apartments had been effectively decorated with plants and shrubs, and the electric light cast a brilliant glow on all the surroundings. Several selections of music were played in the Art Room by Mr. H. R. Horn's orchestral band. These were interspersed with piano-forte duets and songs. In the lecture hall there were recitations by Mr. W. Roscoe, and an exhibition of lantern slides by Mr. J. W. Addyman. The weaving sheds of the department were open for inspection, the guests thus having an opportunity of seeing the different types of work done by the students.

Macclesfield.

A leading firm of silk manufacturers in this town have recently placed in one line what is probably the largest order for jacquards ever given. This consists of 200 machines, and it follows one of 100 machines and 70 harness. Mr. M'Murdo, of Miles Plating, Manchester, is the recipient of the order.

Macclesfield seems to be having a turn of luck, as trade has been good for some time past, and this has had a beneficial influence. Messrs. Smalls are extending and putting in new machinery, amongst which may be mentioned 200 power-looms, which are being supplied by Messrs. Smiths, Heywood.

Manchester.

The Directors of the Manchester Chamber of Commerce met on Wednesday, and elected Mr. J. Thewlis Johnson president and Mr. S. Ogden vice-president for the ensuing year.

Mr. Mitchell Henry presided on Monday at a meeting of the shareholders of Messrs. A. and S. Henry and Co., Limited. He stated that the net profit for the year was £79,000, and this enabled the company not only to pay interest on the debentures and preference shares, but to give to the ordinary shareholders a dividend of 8 per cent.—the same as in previous years—the respectable balance of nearly £14,000 being carried forward. Mr. Mitchell Henry said the past year had been one of great anxiety to business men. The McKinley Tariff had told heavily on their trade with America. The Americans expected increased wages under the tariff, but, instead of that, wages had been reduced. The farmers and consumers in America would learn before long how dearly a Protectionist policy cost them. The new French tariff would in the same way curtail our trade with that nation.

Oldham.

No manager has yet been appointed by the directors of the Pine Mill Co.

The directors of the Parkside Spinning Co. have entrusted the carrying out of the steaming and gaslighting arrangements with Messrs. Dowson, Taylor, and Co., Limited, Manchester and London.

Messrs. Pollitt and Wigzel, engineers, of Sowerby Bridge, have commenced the erection of the triple-expansion steam engines required by the Holly Mill Co., which are expected to be completed in about a month.

The Crompton Spinning Company are placing in additional new boilers; indeed, the directors are determined the concern must be kept up to the mark, and be able to compete with other similar concerns.

Mr. George Slater, a spinner at the Windsor Mill Spinning Company, has been promoted to the position of mule overlooker under the same firm, vacated by Mr. G. Leigh, who has transferred his services to the Pine Mill Company.

The steam engines of the Pine Mill Co. are expected to be completed in about six weeks, while in the course of a fortnight machinery is likely to be delivered. We understand the directors find no encouragement in the present state of the spinning trade to push on the work.

The death is announced of Councillor W. T. Rayner, of the firm of Messrs. Joseph Rayner and Co., Cambridge Ironworks, Oldham. Deceased, who was 41 years of age, was connected with several of the local spinning companies in an official capacity, and was greatly respected in the town.

On Tuesday morning an accident occurred to the steam engines of the Central Mill Co. by which the end of the high-pressure cylinder was blown out and otherwise damaged, while the other cylinder also sustained injury, and portions of the engines, which are

of the horizontal-compound type. Some three or four weeks are likely to elapse before the mill is at full work again. It is expected, however, that the engines will be uncoupled and thus a portion of the machinery brought into operation.

Reports are in circulation that several Oldham gentlemen have lost considerable sums of money on speculations in "futures," so that the spinning companies are not by themselves in having cried "bull" when it should have been "bear." Indeed, in one instance no secret is made of the matter by the person concerned, consequently it has become almost common knowledge amongst commercial men. It is supposed that a ring had been formed, but the lesson in this instance is even the same as in others.

Messrs. Platt Bros. and Co., Limited, have presented the Oldham Mutual Technical School with a lapping machine, to which are attached all the latest improvements. The school has now got new machinery throughout, with the exception of a slubber, and the members are highly delighted with the latest addition. There are now about 100 members, while there are still plenty of applications for admission. The other day the members paid a visit to the card-making works of Messrs. Dean and Needham, Crossbank-street, Oldham.

At the annual dinner of the Oldham Chamber of Commerce, Mr. J. M. Maclean, M.P., in the course of a speech, referred to his opposition to the Bill for amending the Companies Acts. He said he had always been of opinion that the State ought to interfere as little as possible—and only when the clearest and most urgent necessity was shown—in any way for the purpose of restricting either the freedom of trade or speculation. When people found a bill amending the Companies Act, being promoted by gentlemen who were themselves private capitalists and large employers of labour, others began to have some kind of suspicion that their intentions towards the limited liability companies were not quite so good as might possibly be desired. That was a suspicion they repudiated as perfectly incompatible with the characters of the promoters of the bill, but still opinions of that kind might arise, and were intensified by the fact that the bill was rushed through the House of Commons without any discussion, and then referred to a Select Committee. It was decided by the Committee that the bill should be discussed in the House, so that public opinion should be brought to bear on it. He hoped, however, it would be fully discussed next session, and that all the arguments would be known to the public.

Oswaldtwistle.

Owing to the prevailing epidemic most of the mills in this district are running with a greatly reduced staff of hands, and although the greatest sufferers seem to be weavers the infection is by no means confined to the sheds.

Ramsbottom.

The outlook in the cotton trade of Ramsbottom is brighter now than it has been at any time during the last 18 months. Nuttall Mills, Messrs. Harrison and Sons' Mills, and Rose Mills are all working full time now, and at the latter mill the remaining portion of the looms which have been standing idle up to now are being gaited-up gradually, and before long it is expected that the whole of the 900 looms which the mill contains will be in full swing. The building operations at the new Star Manufacturing Company's Mill, better known as the Coldden Mill, have been resumed, and the work is being pushed forward with all possible despatch. It is thought that the mill may be started just after next Good Friday.

Stalybridge.

Castings, weighing about 350 tons, for a large new cotton mill have recently been despatched via Liverpool, to South America by Messrs. Milburn and Sons, Limited, Stalybridge. It is computed that if the Ship Canal was open there would be a saving in transit charges on this consignment of £60.

The long continued strike at the Stalybridge Spinning Co.'s mill was settled on Saturday. On the previous Thursday morning the mill doors were thrown open to all the operatives who might choose to return to their work. In the meantime, however, it had been decided, at a meeting of the operatives, that as the strike had not been settled to the satisfaction of their committee, they should remain out, and this led to a meeting on Friday night of the directors and the employes' representatives, at which, after some discussion, an agreement was arrived at, and notices were at once issued to the hands that they might resume work on Monday morning, which was accordingly done. The dispute is said to be one of the longest known in the district.

Todmorden.

Messrs. Wilson Bros., bobbin manufacturers, Limited, of Cornholme, have acquired the plant of Mr. James Earnshaw, shuttle maker, Calder Vale Mill, Cornholme, which will be removed to Messrs. Wilson's works. In thus adding shuttle making to their extensive bobbin business, it is the intention of Messrs.

Wilson to place a superior type of shuttle on the market.

Walkden.

The employes of Messrs. Burgess, Ledward and Co., Wardley Mill, also of Messrs. H. and C. Cooke, Boatstated Mills, held their annual tea party and social gathering on Saturday last. At the former both of the masters were present and addressed the workpeople in a pleasant and encouraging manner.

SCOTLAND.

Dundee.

The Dundee jute importers have formed an Association to protect themselves against loss which may be caused by damaged cargoes of jute being landed at Dundee.

Amongst the accepted tenders for navy supplies exhibited at the Admiralty last week were the following:—Duck cloth, Messrs. Baxter Brothers and Co.; coal bag cloth, Messrs. Baxter Brothers and Co.; twines, Messrs. Baxter Brothers and Co.

A considerable amount of machinery has already been stopped in Dundee. Many workers are without employment, and the Factory Workers' Union has difficulty in securing places for them. It is stated that there is a demand for good weavers in Forfar. In one factory there 150 looms are idle for lack of hands.

The question of running short time in Dundee is the general topic of discussion. There is, however, a pretty widespread feeling that it will be difficult to obtain an expression of unanimity to a proposal to reduce the working hours either by making Saturday an off day or by beginning operations for the week on Tuesday morning. With a view to learning how many millowners would be willing to shut their works on Fridays, a sheet was circulated on Saturday in the market for the purpose of securing the signatures of those who would be willing to run short time conditionally if something like unanimity were arrived at. By Monday it was reported that millowners representing a total consumption of upwards of 500,000 bales of jute per annum had signed the document. Amongst those who have adhibited their names are several of the large manufacturers. It must, however, be kept in view that the total consumption of jute in Dundee is 1,200,000 bales per annum, so that, according to these figures, hardly a half of the employers of jute labour in Dundee have agreed to go on short time. Amongst those who have decided not to adhere to the proposal are Messrs. J. and A. D. Grimond, Bowbridge Works.

Forfar.

Increases of wages varying from 2½ to 5 per cent. have been granted to the dressers employed at Canmore Works, Forfar.

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 of the previous week. 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.	Continents.	Totals.	Totals for year to date.
£75,502	14,293	3,479	—	3,232	3,222	98,728	431,592
486	19,794	289	—	23	21	20,523	108,797

The following are the total values of the exports for the same five weeks of last year:—Cotton, £425,118; linen, £100,487.

Kirkcaldy.

A considerable amount of activity at present characterises the floorcloth industry, both floorcloth and linoleum being in pretty good demand.

Paisley.

At a conversation held last week under the auspices of the Philosophical Society, it was stated that Mr. James Coats had announced his intention of presenting to the Paisley Observatory a number of meteorological instruments, to increase its endowment from £4,000 to £6,000, and to extend the accommodation by the purchase of adjoining property.

Perth.

The magistrates, after meeting a deputation, consisting of Mr. Robert Pullar and Mr. Peter Campbell, jun., dyers, have fixed the holidays under the Factory and Workshops (Scotland) Act, 1888, for Monday, 18th April, and Thursday, 25th August.

Vale of Leven.

The Scotch railway agreement has been further cemented by an arrangement just entered into between the North British and the Glasgow and South-Western, whereby the extensive output from the calico-printing works in the Vale of Leven will be transferred from the North British to the South-Western system at Sighthill, Glasgow, and then sent direct to Manchester. The new arrangement will save one day, and enable the Scotch manufacturers to compete on better terms with Manchester. The goods were formerly sent via Edinburgh.

IRELAND.

Belfast.

Mr. Thompson, from the firm of Messrs. Ross, has recently accepted a post with the Clarence Mill Co., Limited. This firm is going into the damask trade, and has recently placed an order for jacquards with Mr. M'Murdo, Manchester.

The gigantic works of the Belfast Ropeworks Co. Limited were visited yesterday week by the Marquis of Londonderry, Sir West Ridgeway, and a number of other prominent men in public life, who were much interested in what they saw of what is apparently going to become one of our principal industries. The directors are considering plans and estimates for the erection of large additional works to supplement their present production of binder twine, to enable them to fulfil the numerous orders for this kind of stuff which they are receiving from the United States. The company is to be congratulated on being able in this line to compete successfully with the United States makers.

Coagh, Co. Tyrone.

Samuel E. Ekin, Esq., J.P., who, for a long generation, has been extensively engaged in the hand-loom linen manufacture, is retiring from the business. Mr. Ekin is held in the highest esteem by all who had mercantile relations with him, as well as by a large circle of friends and acquaintances.

Miscellaneous.

JUTE IN TRANSIT.

It is now but a few years short of a century since the directors of the East India Company received the first consignment of jute sent to this country. The consignment was a small one—in fact it took the shape of a single bale. The manifest alludes to it as “the jute of the natives,” a description clearly indicative of the specimen bale being regarded rather in the light of a vegetable curiosity than as a fibre of any commercial value to western civilisation. It is matter of wonderment that the East India Company were so slow in recognising the true value of the jute fibre. They were usually but too keenly alive to the adaptability of Indian native products to British markets. The policy which asserted—

Ours is the harvest, where the Indians mow;
We plough the deep, and reap where others sow,
would never have sanctioned the leaving unexploited such a source of wealth. But the brittleness of the fibre of “the jute of the natives” was long held an insuperable barrier to its taking any important place among the woven fabrics of British industry. Yet sugar, rice, and pepper had been imported into this country enclosed in gunny bags, woven from jute, ever since commercial relations had been established with India and the East.

About the year 1830, however, the suitability of jute fibre for the manufacture of coarse carpet and bagging was effectually demonstrated, and since that date the jute-trade has increased by leaps and bounds, until it has attained its present enormous dimensions. As is well known, Dundee is at once the great jute-port and also the principal centre of the manufacture of those articles in which jute is the chief constituent. It can hardly claim, however, to be the pioneer of the British jute industry, as some years prior to 1833, the year which saw the inception of the Dundee industry, a factory for coarse carpets of jute was in working at Abingdon. The business done, however, could only have been very trifling, as it was not until 1829 that the Customs authorities assigned a separate heading to jute on their list of imports. The total quantity, however, imported in that year only amounted to three hundred and sixty-four hundredweight! Since that date, jute cargoes have rapidly increased, until at the present time the sea carriage of jute finds employment for a very considerable section of the vessels of our mercantile marine. While our trade in jute has been in the main marked by steady increase, there are two periods in its history which interfered, the one beneficially, the other adversely, with its rate of development. The Crimean War caused a diminution in the imports of flax into this country, and jute was requisitioned to supply some of the goods

formerly manufactured from the coarser qualities of flax. The American civil war of 1861-63 deprived the British jute factories of one of their chief markets; for the exportation of cotton from the United States having practically ceased, there was consequently no demand for the coarse bagging which the Dundee mills had long supplied for enveloping the cotton bales. Even this check, however, severely as it was felt at the time, was not an unmixed evil, for it led to the employment of jute in new branches of textile industry.

In discussing the question of the transit of jute, it must be remembered that the sea voyage forms but a part of the vicissitudes to which it is subjected while *en route* from its native fields to the British factories.

The jute-plant thrives best upon an alluvial soil and under a hot and moist climate. Such a condition of things is best obtained on the banks of rivers; and as these inland waterways afford a ready means of communication with the coast, the land contiguous to them is usually selected for the sowing of jute. The seed is sown from March to May, and the harvest is reaped from August to October, and is best secured when the plant is in flower, as the fibre becomes hard and brittle if the plant is allowed to seed. The reaping is accomplished with a sickle or bill-hook, and then follows a process very much resembling that of retting in the preparation of flax. The jute in some cases is carried at once to a ditch or other reservoir of water and allowed to soak, the soaking process taking on the average a fortnight to accomplish satisfactorily. The most successful jute raisers adopt the plan of stacking the jute before soaking, the fibre resulting from this more tedious method being, it is stated, of a far superior quality to that obtained by carrying the jute to the water as soon as it is cut. The fibre is easily detached from the stalk, and afterwards sun-dried. It is then packed and pressed, bought by the traders, and conveyed to the coast, where, if the pressing is not satisfactory, it is redone, each bale weighing on the average four hundred pounds. The cost of production is extremely low, and each acre will yield with ordinary care something like thirteen to fourteen hundredweight. The principal factor determining the acreage sown with jute each season would seem to be the price of the other native products that the same soil would produce during the preceding season. Thus, if a planter saw from the market price of rice that he was likely to realise a higher remuneration from that crop than jute, a certain acreage would be withdrawn for rice cultivation.

It is gratifying to British industry to know that nine-tenths of the jute exported from India comes to British ports. The proportion of exported jute carried in British vessels is even in excess of this fraction, so that Great Britain and her mighty dependency practically enjoy the monopoly of the world's trade in jute and its products.

Among the vessels employed in the sea carriage of jute are to be found the finest sailing vessels afloat, and competition is keen among them as to the possession of the record for fast jute carrying. The specific gravity of jute even when tightly compressed is not very high, and the consequence is a jute cargo renders a vessel, in nautical phraseology, ‘lively.’ It is nevertheless a popular cargo with seamen; and sailing vessels employed in the jute trade experience, by reason of the time they leave Calcutta for home, and home for India again, climatic conditions which are very favourable when compared with those obtaining in other trades. The year 1890 marked the largest importation of jute direct from India into Dundee. No fewer than 77 vessels arrived from Calcutta and Chittagong. Their united tonnage amounted to 151,957, and they carried into the port of Tay 1,260,019 bales of jute. In 1889, eighty-one vessels arrived, but their tonnage was only 149,896 tons, and their importations of jute 1,295,730 bales. Thus there is an increase in favour of 1890 of 2,061 tons and 54,289 bales. Of the seventy-seven vessels from India, thirty-six sailing ships and twenty-two steamers were from Calcutta; and sixteen sailing vessels and three steamers from Chittagong. The voyage from Calcutta to Dundee

via the Cape of Good Hope is a lengthy one; yet the average passage of the fifty-two sailing ships was but one hundred and twenty-five days! The smartest passage was made by the *Gowanburn*, which accomplished the run in ninety-seven days. The *Earl of Shaftesbury* and the *County of Selkirk* took two days more; while the longest passage of all extended to one hundred and ninety days. Of the steam jute carriers the fastest voyage was made in thirty-four days. Statistics for the year 1891 will doubtless shew a material increase in the tonnage of the vessels and the amount of their cargoes, the movement in favour of large sailing vessels influencing the sea carriage of jute as well as other trades.

Such large shipments as those we have alluded to above cannot be carried over sea without incurring risk of fire and other damage. The energetic action of the different sections of merchants interested in jute has, however, reduced these risks very much. Fires on jute ships are not nearly so common as they were in the early stages of the trade's history. They may happen either at the port of loading, any point on the voyage, or at the discharging port. Occasionally an outbreak of fire on board a jute ship may get the upper hand and burn the ship out; but such complete disasters are happily of very rare occurrence. A catastrophe of this type, however, overtook the *Dalswinton*, fifteen hundred and fifty-four tons, while homeward bound from India in December, 1889, with a cargo of jute. The master of the vessel feared that his ship was too light, and accordingly he put into the harbour of Galle to “stiffen” her by discharging some jute and taking on board some stone ballast. Smoke was discovered coming from some bales of jute; and although all the fire-extinguishing power of Galle was requisitioned to quench the flames, all efforts were ineffectual, and the cargo was totally consumed, nothing being left but the shell of the vessel. The district judge, who held an exhaustive enquiry into the cause of the disaster, and carefully sifted all the procurable evidence, expressed his verdict in the following terms: “I have no doubt that the fire was caused by spontaneous combustion in a highly inflammable cargo.”

Many fires on jute-ships are traceable, no doubt, to accidental causes, carelessness, exposure of greasy waste, etc. But to prove the exact cause to which an outbreak of fire in a jute cargo is due is a very difficult matter indeed. That spontaneous combustion is a fire-producing agent in damp jute there is strong presumptive evidence to shew; but exact knowledge as to the chemical conditions under which this combustion occurs is far from finality. Shipmasters who have long been engaged in the jute-trade believe it is responsible for most of the fires on jute-ships; and these are the persons possessed of most practical knowledge on the subject. Some little while back, a meeting was held at the International Shipmasters' Club, Calcutta, to discuss the questions of the stowage of jute and fires on jute-ships. The captains who took part in the discussion were experienced men, well acquainted with the details of the sea-transit of jute—most of them, in fact, commanded sailing vessels which were lying at Calcutta awaiting jute cargoes. One of the conclusions which the meeting was unanimous in expressing was that cargoes shipped between the first of August and the first of November were more likely to shew damage than jute shipped after that date. “Cuttings” and “rejections” were a more dangerous cargo than ordinary jute. Cuttings are the woody ends of the jute-plant; and rejections are the lowest class of fibre, which can only be used in the manufacture of the coarsest of jute products. As stated above, the jute harvest extends from August to October, so that jute shipped during the period deprecated by the shipmaster must be hurriedly harvested and ineffectually dried. The moisture must of necessity damage the bale, as in the close hold of a ship free evaporation cannot take place. Cuttings would naturally necessitate a more thorough drying than jute; and where due care is not exercised, damage and risk of fire are inevitable. The early shipments of jute, too, are often cut too early—in fact, the

jute is "green;" and with these cargoes heating is very likely to ensue. Jute of this nature has every facility afforded it, so to speak, of taking fire. In many cases it is carried from the harvest-field to the jute presses in uncovered boats or "trucks," is exposed to occasional heavy showers and a scorching sun. In this condition it is pressed, and the heat, to express the matter nautically, "banked up" in it. The friction on shipboard, accelerated by bad stowage, may supply the extra heat necessary to produce an outbreak of fire.

Jute bales have been known to burst into flames when discharged from a vessel's hold; and it has been noticed that in such cases the fire surged along the bales, producing great heat, and passing from one bunch of looser fibres to another. Further, it has been repeatedly remarked that damp jute "rolls and crumbles to a powder." Of course jute in this state is extremely liable to take fire. A thorough circulation of air throughout the ship seems to be a consummation to be aimed at by all interested in the carriage of jute; and practical men maintain that this is best effected by leaving a space between the top of the cargo and the lower edge of the beams. In order, however, that the damage to jute cargoes may be reduced to a minimum, the best method of stowage and ventilation must be settled upon, and that plan must be carried out by all vessels in the trade, as far as their structural qualities will allow. Merchants are willing to do their share by offering a bonus to vessels carrying out their suggestions; but it is not until hearty co-operation between the jute planter or his agents, the shipowner, the shipmaster, and the merchant is secured, that the dangers incident to the transit of jute will be reduced to a minimum.

We have briefly alluded to the demands of the United States for jute-packing. Attempts have been made over and over again to acclimatise the jute plant to America; but the native jute industry makes little headway, and the States is still mainly dependent upon Indian grown jute. A more dangerous attempt has been made, however, than this, to wrest a portion of the jute trade from India. Early in the spring of 1881 there were exhibited in Dundee some samples of jute grown in Egypt. Those qualified to judge of the value of these specimens expressed the following verdict: "Reports on quality are varied, but, considering it is a first attempt, it is on the whole satisfactory. It proves beyond a doubt that Egypt is capable of producing this material; and for the trade of the district this is a matter of great importance, as having the fibre grown nearer at hand will enable our manufacturers to compete more successfully in all markets with the Indian mills."

India's position as a jute-raising country is, however, unaltered, her soil, her climate, and the cheapness of her human labour, placing her beyond reach of any rival. The amount of gunny cloth and bags which the native mills produce is enormous. Ten million yards of cloth and one hundred million gunny bags are an astounding quantity; yet the jute products of India are vastly in excess of this amount. Even the old gunny bags and the poorest quality of jute fibres are put to a useful purpose and utilised in the manufacture of rough paper.

British industry and British capital have imprinted their mark upon the jute industries of India, many of the mills being practically British speculations; and the improvements in the raising of jute, and the mechanisms used in its preparation and manufacture, are mainly due to the invigorating intusio of British enterprise and scientific knowledge. There is something very striking in the sharing of the jute-trade of the world between England and India. The old Sanskrit word for the plant *Corchorus capsularis* was "jhot." The ancient dwellers in the valley of the Ganges used its tender shoots as a potherb; they wove from its long fibres most textile fabrics of domestic use. They even established a foreign trade in gunny cloth and gunny bags; but the knowledge of the plant and its uses was for long unknown to the commerce of Western Europe. Now, the western branch of

the great Indo-European family of nations uses jute or jhot as familiarly as did the Hindus of old. It has become with us a household word. The world grows smaller. The inhabitants of the brightest jewel in the British crown are brought into closer contact with their brethren in Britain; and not the least factor in linking together the eastern and western families of the Aryan race is the humble plant the "jute of the natives."—*Chambers's Journal*.

THE BRITISH EMPIRE COMMERCIAL UNION.

A Conference of gentlemen interested in the fiscal reform of this country, and who desire to see England and her colonies united in a commercial trade league, was held on Tuesday afternoon in the Board-room of the Manchester Chamber of Commerce. Mr. Robert Boyd occupied the chair, and amongst those present were Lord Masham, the Right Hon. James Lowther, M.P., Colonel Howard Vincent, C.B., M.P., Colonel Bingham (Sheffield), Major Stephenson (Londonderry), Mr. T. Sturtard (Manchester), Mr. Henry Hibbert (Chorley), Councillor Groves (Salford), and Mr. E. Burgess (secretary). The attendance was not large.

The CHAIRMAN said they had met for the purpose of taking into consideration the position of this country with regard to our colonies and dependencies. We often had impressed upon us the vast extent of our possessions and their enormous importance to this country. They formed an outlet for our surplus population, and were sources from which we might draw our supplies and luxuries. But in looking at the position which we occupied with regard to our colonies, one thing could not escape notice—that somehow we did not seem to satisfy them. (Hear, hear.) It was true that we performed services for them of an important and costly nature, for which we asked them to make no reimbursement to the Imperial Exchequer. But they hardly concealed from us that they did not like to be treated as weakly offsprings. Our colonies had come to manhood, and felt that they could conduct their affairs satisfactorily and successfully. They evidently preferred to be treated with greater confidence, and to feel themselves in close unity with the mother country. They were prepared to assume a share of responsibility, and there could be no doubt in this case that it was the mother country that showed the cold shoulder. (Hear, hear.) The United Empire Trade League was a society which had been founded for the purpose of furthering a better feeling, a better understanding, and better relationships between ourselves and our colonies.

Mr. JAMES LOWTHER, M.P., said that as chairman for the current year of the Council of the United Empire Trade League it was at once his duty and his pleasure to accept the invitation to be present. The position taken up by the League was no doubt well known to many who were in the room, but there might be many outside not yet acquainted with its aims and objects. Their object, first of all, was to recover for this country and the colonies our fiscal freedom. (Hear, hear.) That was to say, to untie our hands from the thralldom of the treaties entered into many years ago, without understanding what their effect would be, with the German Zollverein and with Belgium. The effect of those treaties was to preclude us from entering into trading relations with any of the colonies which would place them in a better position from a trading point of view than the countries to which the treaties applied. Against the further continuance of such an embarrassment we had a right to protest. A deputation had waited last summer upon the Prime Minister to point out what in their judgment was the serious national disadvantage involved in the continuance of these treaty obligations. The Prime Minister had practically endorsed the views of the League with regard to these treaties, speaking of them as "unhappy treaties," and expressing his wonder how they came to be entered into at all. At the same time, the Prime Minister had pointed out that entering into a treaty was one thing and freeing ourselves from it was another. In the programme set before the country by the League there was nothing which made it necessary to go back upon the past history of fiscal controversies. Many of their members had been staunch believers in what was known as the Free-trade movement, while there were others who had never been able to share those views to the extent to which they had been carried. (Hear, hear.) But these things possessed merely a historical interest. The question which, as practical men, they had to consider was—what was best for the commercial interests of this country in the year 1892? (Hear, hear.) What might or might not have been good for those who went before us 50 years ago was a matter which really did not practically concern us at all. A policy which might have been extremely good 50 years ago might be out of date now. When there was a chance of foreign nations

adopting our views there were strong grounds why we should persevere in the course we had adopted; but there seemed a very small prospect of anything of that kind now. The new commercial arrangements just made in Europe all pointed one way. In America, too, a similar state of things existed. And it had come to this, that the whole world outside the British Empire, he might say, was at this moment more determinedly Protectionist than it had ever been. This might be to some people a matter of regret; others might regard it as confirmatory of their anticipations; but in any case we found ourselves, for fiscal purposes, having the whole world arrayed against us. We saw other countries making arrangements against us, sometimes on an isolated basis, sometimes in groups of States, making their arrangements according to their own requirements, and in no way regarding the preachings and lecturings administered to them by the British press, and wholly ignoring those interesting leaflets which were distributed by the Cobden Club. (Hear, hear.) Turning to the colonies, the hon. member pointed out that they also adopted a system of Protection. He also remarked upon the assumed leanings of Ireland to a Protectionist policy. It was therefore, he argued, for us to consider whether England and Scotland, forming less than one-twelfth of the British Empire, should continue to think they could force upon the rest of the British Empire a system which all the self-governing countries that were associated with us were unanimous in repudiating. The policy which the League sought to bring about was this—that every component element of the British Empire should retain, after being freed from the shackles of the treaties alluded to, its absolute fiscal liberty, and be enabled to regulate its own economic affairs as it thought best. They might have free imports or greater or less duties, as they thought best for themselves. The only point where the League stepped in was here. They proposed that all those who were associated together for this purpose should be bound to place all products within the limits of the British Empire upon more favoured terms than the products coming from outside the Empire. That was the policy of the League. They avoided dictation to the great independent communities associated with them in the Empire, and while they left each to arrange its tariffs as it thought best, they invited it to give an undertaking that it would give a preference to British as opposed to foreign goods. (Hear, hear.) The old arguments, he thought, were fully played out—the arguments that countries which did not adopt our policy were their own enemies. That was a piece of hectoring and lecturing of which free communities were a little bit tired. He might be told that in coming to Manchester and asking Manchester to take this important step and recede from the principles which she took so prominent a part in endorsing something like half a century ago he was displaying something like audacity; but, on the other hand, he said that as Manchester took the lead in the Free Trade movement against the rest of the country, there was a sense of fitness in asking Manchester again to assert her independence and declare in favour of the principles advocated by the United Empire Trade League. (Cheers.)

Colonel HOWARD VINCENT, M.P., said that Manchester took a foremost place 50 years ago in the Free Trade movement, and it had lately taken a very active part in endeavouring to awaken public attention to the evils resulting from one-sided Free Trade. The Manchester papers of that very day supplied a strong argument in favour of the policy advocated by the League. At the meeting of the Chamber of Commerce on the previous day Sir W. H. Houldsworth had given statistics shewing to what a considerable extent foreign trade had decreased, and it was to remedy this state of things that the League had been founded. The League was started a year ago, and had already won to itself an enormous number of adherents of all classes, not only in the United Kingdom but throughout the Empire. Last year he had visited Canada, and found everywhere the same feeling in favour of a preferential trade with the mother country. It might be said that Canada was ready enough to accept a preferential trade but was not willing to give us a preference. But he could assure the meeting that was not so. Canada was willing and anxious to give us a preference. (Hear, hear.) The League hoped to have the same response in Manchester it had met with in Birmingham, Nottingham, Sheffield, and other towns. They hoped to find that public feeling was awakening on this question, and that the English electorate would make up its mind not to submit longer to a shackled trade with the colonies. It was said by one of the local papers that the new commercial arrangements of the Central European Powers were an advance in the direction of Free Trade; but as a matter of fact the only advantage we were likely to reap from the new arrangements would be from the knowledge that they would not be altered for the next 12 years. In concluding, Colonel Vincent said he would be glad to answer any questions as to the constitution or programme of the League.

A gentleman remarked that of course it would be

very nice if we could get preferential treaties with our colonies, but how was it possible to secure such treaties?

Mr. LOWTHER replied that the League had no idea of coercion. If any colony refused to join in the proposed arrangement, it would be left to its own way.

Mr. ELIJAH HELM said it had been stated that the aim of the League was to establish trade between the mother country and the colonies upon the principle of mutual preferential treatment in the way of Customs duties. He therefore wished to know whether the preferential arrangement was to be permanent; or transitory, with a view to a future object. He had been told that the object was to secure the spread of freer trade on the part of foreign nations by compelling them to reduce their duties through their finding that they would not be able to trade with either us or the colonies upon the same terms with which we traded with each other. If the aim were ultimately to induce or to allow foreign countries to come into the circle, it should, he thought, be declared beforehand.

Mr. LOWTHER said that, so far as he understood the aim of the League, it was to enable the whole of her Majesty's dominions to be treated for commercial purposes as one unit, and to place each other, as regarded their commercial relations, upon a better footing than those outside the empire. That, in his opinion, would be as far as the word "permanent" could be used. The League would be extremely foolish to depart from that platform. They had never sought to dogmatise as to the degree of preference which should be acquired or the machinery by which the arrangement should be carried into effect. They had never laid down any dogmatic programme of that sort, their idea being that these things should be determined at a conference of representatives of the whole Empire. He should say there ought to be no idea of immutability, no idea of absolute permanency.

Mr. MOLESWORTH-HEPWORTH asked what would be the effect of shutting China out of the proposed union. Would not China be likely then to favour America in preference to England?

Mr. LOWTHER said they did not seek to enter into mutually advantageous relations upon a preferential basis with any person outside Her Majesty's dominions. What right had China or any other country to come and dictate what arrangements we should make? She might as well complain of the absence of duties between Lancashire and Yorkshire or Bavaria and Saxony. We had as much right to be united for commercial purposes as the German Empire or the French Republic.

Colonel VINCENT said that, having just got back from China, he was in a position to speak on this subject. The principal import was tea, and it was going down fast, while Indian and Ceylon teas were going up. Every year saw us less dependent on China for the supply of tea. With regard to the development of our trade with China, it must be through British Burmah. A railway was being constructed for the development of our trade on the south-west of China, and were we going to let German textiles and American cottons to go into British Burmah on the same terms as Lancashire cottons? If so, he did not see why we should not call upon them for a contribution to the cost of the acquisition of Burmah, or of constructing the railway on the south-west of China.

Lord MASHAM said that eleven years ago he was in Manchester advocating very nearly the same thing that was now being advocated by the United Empire Trade League. The leader of the movement then was Mr. Croft, and they advocated preferential duties and an arrangement with the colonies on that basis. What they asked then from the colonies was that they should put the mother country on a better basis than foreign nations, and that was what he understood the League proposed now. At that time it was thought a matter too visionary to be talked about; now it was a question of the day. (Hear, hear.) He did not see any reason why, year after year, the foreigners should put on new duties in every direction and we should take no measures to prevent such a state of things. It would be easy enough, with the assistance of our colonies, to do so. A great necessity of our trade was a permanent market, free from such fluctuations as were caused by the McKinley tariff. His own business with America had dropped a third in consequence of the McKinley tariff. And in the same way that Sheffield had been hit, France was now going to hit Bradford. We must, as a nation, rebel against this state of things. He was told there were thousands in Manchester of their way of thinking, but who had not the courage of their opinions. Well, he was glad to say he had always had the courage of his opinions. He supported Cobden in the early days, and he had now the courage to support what he believed would have been Cobden's view had Cobden been alive. (Hear, hear.)

Colonel BINGHAM (Sheffield) spoke in favour of the objects of the League.

Colonel VINCENT, in answer to a question, said that the immediate object of the League was to get rid of the two treaties to which reference had been made.

Mr. T. STUTTARD, Major STEPHENSON (London-

derry), Mr. Joseph WRIGHT (Macclesfield), Mr. Councillor GROVES (Salford), and other gentlemen took part in the discussion.

PUBLIC MEETING.

A public meeting in furtherance of the objects of the League was held in the evening in the Gentlemen's Concert Hall, Manchester. Lord MASHAM occupied the chair, and amongst the gentlemen supporting him were the Right Hon. James Lowther, M.P., Colonel Howard Vincent, C.B., M.P., Mr. E. Burgis (hon. secretary), and others.

The CHAIRMAN stated at the outset that the United Empire Trade League had been formed exclusively for commercial purposes. That was, if possible, to bring about a federation of the empire upon preferential duties. As an old man he naturally claimed the privilege of looking back. He recalled the days of fifty years ago. He recollected Cobden's days, and the time when he acted as his chairman, when Cobden was returned unopposed for the West Riding of Yorkshire. His belief was that if Cobden had been here now he would have advocated precisely what the United Empire League advocated. He thought he would be able to shew clearly that Cobden would have acted as members of the League now proposed to do. Writing from London on February 8, 1844, Cobden said: "If we bought largely from America the Americans would be obliged to take our manufactures in exchange, and this would lead to an increased demand for labour in the manufacturing districts, and a rise in wages." Now take the present state of things. Instead of America considering she was "obliged" to take our manufactures, she said we were obliged to take her corn, but she would not take our manufactures—just the opposite of what Cobden proposed. Writing on the 15th January, 1846, Mr. Cobden said that if England adopted Free Trade, there would not be a tariff that would not be changed in less than five years. It was clear, therefore, that Mr. Cobden was wrong twice over—wrong in saying the Americans would be obliged to take our goods, and in saying that the various communities of the world would in the short period of five years become Free-traders. Mr. Cobden was an enthusiast; he was wild then, as he had a right to be; but what did he do? If he had waited he would have said, "If we cannot have Free Trade, we must have the next best thing." He acted in that spirit, and said if we could not have Free Trade, we must arrange commercial treaties. That was what the League wanted to-day. They wanted to follow in Cobden's steps, and arrange commercial treaties with our colonies.

The people who had departed from Cobden's example were the Cobdenites—the men who said "free buying," but no "free selling." In his view free buying without free selling was the most ruinous fiscal system that any country could possibly labour under. (Cheers.) Their desire was to educate the working men on this question. Let the working man be convinced that he lost by the system now in force, and he would ask for a change, but so long as he felt there was a doubt on that he would not take any interest in the matter. Take the article of corn, and suppose a duty of 5s. were placed on each quarter of imported corn. Supposing that 28,000,000 quarters be the quantity imported, that would mean an addition of £7,000,000 to the cost. Supposing, again, that the total sum expended on imported corn was £60,000,000, and we sent goods in exchange to that amount, the profit would probably not be less than 10 per cent. to the merchant, and that would represent six of the extra seven millions caused by the 5s. duty. But that was not all. For every hundred pounds' worth of goods exchanged, he assumed that 30 per cent. would go to the advantage of the nation. If we sent £60,000,000 worth of goods, the probability was that from twenty to thirty millions would be beneficial to the whole community, not the working classes merely, but the shopkeepers and all engaged in trade and commerce. Hence what they wanted was the exchange of commodities. Besides that they wanted sure markets, and in case of war that we should have a sure supply of food from friends and not from enemies. (Cheers.)

Mr. LOWTHER, M.P., said the chairman had very faithfully described the aim and objects of the League. Their object was to establish mutually advantageous trading relations, upon a preferential basis, between the various component elements of the Empire and the mother country. Speaking with the authority and experience of one who had been a supporter of Mr. Cobden, the Chairman approached the subject from a standpoint which could not be gainsaid. The League confidently appealed to Manchester for assistance in obtaining a fair and impartial consideration at the hands of the people of our present fiscal policy. He was not prepared to endorse the fiscal policy of the country during the last fifty years, but no one could be charged with inconsistency who said that a policy might have been right fifty years ago and not be right now. The requirements of this country from an

economic point of view should be fairly considered apart from prejudice; and if we failed to take advantage of the present opportunity we might afterwards seek for it in vain. All the States of the world had protected themselves with hostile tariffs against the trade of this country. Of course it was possible that all the world might be wrong, but as he was not a doctrinaire pedant he would not presume to say that all the rest of the world were fools. They were often told that Protectionist tariffs were only injurious to the countries which were foolish enough to adopt them; in other words, that we were the only wise political economists. He ventured to think that this was somewhat presumptuous language. He contented himself with the fact that all the world was opposed to the fiscal policy of this country. And nowhere was the difference more marked than in our own colonies. The experiments made from time to time in the direction of Free Trade in the Colonies had been steadily waning, and had now been practically abandoned. Our colonial fellow-subjects would have none of it; and why should we rigidly adhere to the policy we had pursued during the last fifty years? If we persisted in hugging our fads we stood a very great risk of entire economic isolation. We must not forget that the hand of commercial fellowship was now extended to us by our fellow-subjects in the colonies; and if we fooled away our time in wrangling about comparatively minor political questions the great prize of commercial supremacy would be seized from our hands, and our colonies, who were bound to look to themselves first, would take measures to protect themselves from financial ruin. The policy of the League was not to interfere with the absolute fiscal freedom of the colonies. What the League wanted was that, in making their tariff arrangements, the colonies should give a reasonable preference to goods from other portions of the Empire. It was surely desirable that we should have a sure and certain supply of bread-stuffs produced within the limits of the Queen's dominions; and under the shadow of the Queen's sceptre there were soils and climates capable of producing inexhaustible supplies of everything we wanted. The League sought to develop British trade and to afford opportunities for the employment of British industry without in any shape or form hampering legitimate trade. (Applause.)

THE LABOUR COMMISSION.

THE BRADFORD TRADE.

Section C of the Royal Commission on Labour, that dealing with the textile trades, resumed its sittings on Tuesday, at Westminster. The Commissioners present were Mr. Mundella, M.P., who presided; Mr. Courtney, M.P., Mr. Bart, M.P., Mr. Tunstall, Mr. Austin, Mr. Livesey, Mr. Mawdesley, and Mr. Tait.

Mr. E. P. ARNOLD-FORSTER, in answer to Mr. Mundella, said that when he was last before the Commission he stated that an enquiry was being instituted by the Bradford Chamber of Commerce in conjunction with representatives of the working classes as to the average earnings of weavers in the Bradford trade in the district from Halifax to Skipton inclusive.

Mr. MUNDELLA: And that committee has done its work, and you are here to report the result.

Mr. ARNOLD-FORSTER: And I appear now with the sanction of the chairman of that committee and of the new president of the Chamber of Commerce. The committee which was appointed consisted of seven members of the Chamber, viz., Messrs. G. Hoffman (president), F. Willey, F. Craven, and Charles Fawcett, Mr. H. A. Foster, myself, and Mr. W. A. Whitehead. There were also seven members named by the Yorkshire Weavers' Association, the Power-loom Overlookers' Association, and the Trades and Labour Council. The Trades Council was represented by Messrs. S. Shaftoe, E. Hatton, and A. Hopkinson; the Weavers' Society by Messrs. W. H. Drew and Allan Gee; and the overlookers by Messrs. Alwin Pinder and R. Wilson; there were thus fourteen in all.

Will you kindly tell us the mode of procedure?—There were two meetings of this joint committee. At the first meeting most of the time was spent in deciding on what basis the average should be struck, and after a great deal of discussion it was finally decided to ask for it in the form given in the circular, which I produce. [The circular requested the manufacturers to whom it was sent to give the average earnings of their weavers during the entire fifty-two weeks of each year, without any regard to holidays, breakdowns, or slackness of work—in fact, to divide the total earnings of each year by the number of weavers who have earned them.] In order to avoid confusion, Mr. Arnold-Foster continued, a specimen reply was sent out with each circular. At the second meeting Mr. Drew argued that he had not intended to include "worsted coatings" when he spoke of the "Bradford worsted trade," but only referred to stuff goods.

What proportion do the worsted coatings bear to the

general stuff trade of Bradford?—I could not say exactly. I should say it is an increasing ratio, and becoming more and more important.

Is it 25 or 20 per cent?—I should not like to commit myself to that; it is certainly increasing, while the stuff trade is going down. It was shown also from the verbatim report corrected by Mr. Drew that he had made no such reservation, and that any impartial person reading his evidence must naturally conclude that his remarks as to earnings applied to the earnings of all weavers engaged in the "Bradford worsted trade," as commonly so understood. Mr. Drew, who, I am sorry to say, is very ill, still demurred to this interpretation being placed upon his language, but it was decided by a majority of 8 out of 12 (two remaining neutral) that he must be held to his statement before the Commission. It was agreed, however, that his protest should be noted in a footnote to the report of the committee. The management of the enquiry was then entirely handed over to Messrs. J. and A. Heslton, chartered accountants, who issued the paper of questions to all who, in their own estimation, were, or might be, worsted manufacturers within the prescribed limits. Replies were requested to be sent in by January 31, 1892, and that day falling on Sunday, Messrs. Heslton made up their return to January 30, and on that day reported to the chairman of the Joint Committee. Three questions were asked—(1) "How many weavers have you employed on an average from January 1st to December 31st in each year?"—the two years being 1890 and 1891; (2) "What were the average weekly earnings per weaver employed from January 1st to December 31st in each year?" and (3) "What, in your opinion, would be the percentage of broken time from all causes during 1890 and 1891?" Messrs. Heslton asked 435 firms to give particulars, of which, for the year 1890, 209 replied. Of these, 100 contained no information, the firms stating that they were spinners, had no looms, etc.; and 109 contained the particulars asked for, representing 11,779 weavers. The weekly earnings per weaver for this year give 13s. 5-880d. The average estimated percentage of "broken" time was 7-825 per cent.

Do we understand that, notwithstanding what you term "broken" time, which amounted to nearly 8 per cent., the average weekly earnings per weaver were 13s. 5d.? I have not seen Messrs. Heslton since they sent in the report, and I have been careful to ask no questions while the enquiry was proceeding. It was explained over and over again that these questions were intended to be separate, that the answer to the second one about the wages was to be complete in itself, and the third also, and then it was left to anybody to deduce what they pleased. For the year 1891 210 replied, 92 containing no information. As in the case of the other year, many were sent to old addresses, which were taken from the directory, or the recipients in many cases proved to be spinners only. For the year 1891 118 replies contained the particulars asked for, representing 11,625 weavers. The weekly earnings per weaver for this year gave 13s. 3-840d., and the average estimated percentage of broken time was 9-216 per cent. The particulars, according to Messrs. Heslton's report, include returns from both small and large manufacturers, and so, they think, may be accepted as a general average. I should just like to add that some people are apt to consider that the wages of a weaver for one week really represent what a household has for its sustenance. It should be borne in mind that a weaver in the Bradford district is not the sole prop of a household. The weavers are nearly all women, and the vast majority, so far as I can learn, are single women; and the probability is that the weavers' wages—not high in themselves at the best of times in this district—in most cases go to supplement the earnings of male members of the household, gained in other employments. The greatest difficulty in connection with this enquiry would be the reply to the third question about the broken time. I don't know how it was answered generally. I answered it in this way. In the year 1891, for instance, I found that the waterwheel was standing owing to floods 12 hours and 50 minutes; 16 hours were lost owing to putting in new looms, 33 hours lost owing to weavers waiting for warps and weft, and the aggregate time lost by individual weavers absent from sickness, etc., was 23 hours and 34 minutes, and extra holidays represented 27¼ hours. The total number of factory hours is 2,899, and deducting the statutory holidays, amounting to 60 hours, leaves 2,839 available factory hours. The items I have just read total to about 112, and the percentage of the 112 hours to the 2,839 amounts to about 3-99 per cent.

Mr. Drew and the representatives of the Trades Council and other bodies agreed to refer this question to Messrs. Heslton?—Yes, entirely.

Mr. Drew's only dissent was as to whether he included the worsted coatings in his calculations when he appeared before the Commission?—That is so.

He affirmed that he had no intention of including worsted coatings—we take it for granted that is so—he had no intention of including worsted coatings?—That is what he said to the Commission, and no doubt

meant, but we have to consider the impression created by his evidence.

In answer to Mr. Tunstall, Mr. ARNOLD-FORSTER said that the wages paid by his own firm for the same period were 13s. 8d. and 14s. 8d. respectively.

In answer to Mr. Mawdesley, Mr. ARNOLD-FORSTER said that there were very few men weavers, and they did not earn any more than women. As a rule weavers minded two looms. Three-loom weavers were very rare. He did not know why the wages in the worsted trade were so much lower than in the cotton trade, but the fact was notorious.

Mr. ARNOLD-FORSTER, addressing Mr. Mundella, said it was only fair to point out that the number of weavers of whom Mr. Drew spoke was 32,000. Mr. Drew, in answer to the Commission, had said that there were about that number of weavers. If that was correct the joint committee's return had not apparently reached the whole of them. He did not know how Mr. Drew had arrived at his figures.

Mr. COURTNEY: If the stuff trade were alone considered, would Mr. Drew's statement be entirely accurate?

Mr. ARNOLD-FORSTER: I should still think, sir, that it would be below the mark, but the result would be considerably less than it is now.

Mr. R. Wilson (president of the Bradford Power-loom Overlookers' Society) and Mr. Alwin Pinder (assistant secretary of the same society) were examined together.

Mr. WILSON, in answer to Mr. Mundella, said that the society numbered about 600 members, and there were about 850 overlookers in the district. He had heard the average wages mentioned by Mr. Arnold-Foster of 13s. 6d. for 1890 and 13s. 3d. for 1891, and he thought those figures would be rather too high for the state of trade in the town.

Mr. MUNDELLA: Perhaps you are speaking without having taken out any facts?

Mr. WILSON: I may say, sir, that both Mr. Pinder and myself are members of the committee who had this matter in hand. The committee have not met since the averages came in, so we have not had the same opportunity as Mr. Arnold-Foster of verifying them, but I know that the average amount of playing short time has been far greater than that shown by the returns.

There is no doubt that Messrs. Heslton have given correct information?—I don't doubt the returns which have come in; I simply wish for the returns that have not come in.

In answer to further questions from Mr. Mundella, Mr. WILSON said: A system of fines is in operation at some places where, if we make a mistake, and either make a wrong twill or put too many or too few picks in the piece, the overlooker is expected to take the piece and pay for it; but the society will not recognise it, as we think it is not legal; and if a member loses his situation through refusing to pay, we grant him the benefits of the society. Much has been said before the Commissioners about shuttle-guards, but the amount of trouble they are to the weaver and overlooker makes them very unpopular in the trade, and the great majority of our members do not know of a really satisfactory one in operation, and would beg the Commissioners to wait before applying compulsion until a better one is brought out. In some places also the shafting is too near the wall and the roof for the overlooker to get to the right side of the drum in order to put on the belt; and eighteen years ago a man in our district had both arms torn off by being at the wrong side of the drum. The man is living yet. In other places it is the want of a ladder, or something that we can reach the shafting without having to stand on the loom top and steady ourselves as best we may. I myself in 1884 had my left arm broken in three places through having to stand on the loom top with nothing to hold on to but the shaft. The strongest objection to the shuttle-guard comes not from the overlooker but from the weaver. The weavers' vision is limited, and they can no more see through an iron bar than anybody else. The best guard I have seen is at Messrs. Fison and Co.'s, in Wharfedale. The least objectionable one I have seen so far is a net fixed to the loom end. The only objection I can see to the patent at Messrs. Fison and Co.'s is that it is not automatic. The weaver can push it out of position and leave it there. Then it is absolutely of no use, and the manager who invented the guard says that occasionally he has to tell the weaver to put it back. I am aware that accidents occur with the shuttles, and I should welcome a perfect guard. Since I had the accident of which I spoke in 1884, another man has had a similar accident, and our society granted him £50.

On the question of inspection, I am instructed by our committee to say that I cannot speak too strongly. The fact of men working ten, fifteen, or twenty years and never having seen an inspector ought to speak for itself. I have been in the mills about twenty-seven years, and I have only seen an inspector twice—once when I was a lad, when the overlooker hid me under the loom, and once about eighteen months since, when he was present at a meeting of the Bradford Trades Council.

You are an overlooker, I understand. In what mill?—Messrs. John Rand and Co.'s—one of the oldest mills in the borough.

How many weavers?—There would be when we have all on a little over 200.

How long have you been there as an overlooker?—I have been away twice during the time. I have worked altogether about fifteen years.

And during that fifteen years you have not regularly and periodically seen the inspector inside the mill?—I have never seen him in the room where I am employed.

You know him?—Yes.

You mean to say that if he had come in?—I should have seen him, or the weavers would have told me, and they have not done so. I don't say that it is an impossibility he could have come.

Do you confirm that, Mr. Pinder?

Mr. PINDER: Yes; I have been a factory operative for over twenty-two years, and I have not seen an inspector in the factory yet. I have seen him at the Trades Council meeting, and that is the only time.

How came the inspector to be at the Trades Council?

Mr. WILSON: It was after a resolution had been passed by the Chamber of Commerce and the Trades Council in favour of the appointment of working men as assistant factory inspectors, and the inspector came to shew, which he did during the day, where he put in his time. The inspector was asked to attend another meeting, but he said he should be at that time on his holidays. Our society emphatically advocates increased inspection. We say that the early training of the inspectors under the present system makes them entirely out of spirit with the workers. We want men who have spent their time at the mill, and not at Eton or Rugby, or Cambridge or Oxford. Inspectors are often hoodwinked, and the working of overtime by women is a pretty frequent occurrence. At a place I know they work sometimes until 4-30 on Saturday afternoons. In another case they work sometimes up till nine o'clock in the evening. I saw it only a week ago—both being in the public thoroughfares of the town.

Mills?—Workshops. I know that they start at 6-30 in the morning. I would have sub-inspectors taken from the mill and workshop itself to work under and with the present staff. We find rather too much dignity ourselves in the inspectors generally.

Is there anything else you would like to say, Mr. Wilson?—I should like to have a few words on the new Factory Act. In our district we are finding it to a large extent practically inoperative; and this in the respect most desired by the operatives, namely, the particulars that should be granted to weavers. We find that the masters, some of them, are putting on part of the particulars that we wish for. Others are leaving out the main thing that we want.

But if any employer does not furnish the necessary particulars have you not your remedy under the Act?—I don't know how we are going to do without finding ourselves changing places.

What do you mean?—Simply that I know that if men complain of this kind of thing, or the weaver, he or she would lose their situation. On the general subject of the shortening of hours I should like to make a suggestion which is fifty years too early. Seeing the large number of unemployed in the textile trades both in this and other countries, which seems to be a chronic state of things, and seeing the way in which machinery is perfected, it seems to me that we have got beyond the demand of the world as regards clothing. I should like to know whether it would not be wise on the part of this and other nations to meet in conference similar to the Berlin Conference on the short-time question, in order to see if there could not be a general reduction of the hours of labour, say, by one hour and a half per day. I don't expect that there would be success all at once, but judging from the last conference and the results that followed from it, I don't despair that great good might come of another conference.

Did you agree with what was done at the Berlin Conference?—Yes.

How was it that you so strongly opposed its principal provisions in Bradford?—Because of the poverty of the parents of the children.

What is the use, then, of holding conferences if the working people themselves oppose their decisions when they come into operation?—I don't think that the country people generally can be said to oppose the findings of the Berlin Conference. I was opposed to raising the half-time limit to twelve and thirteen all at once. I want it to come gradually, with an interval of three or four years, so as to fall as lightly as possible.

Mr. MUNDELLA: You express dissatisfaction with the twenty-fourth clause of the new Factory Act as to the furnishing of particulars. Does not the Act make the employers liable to a fine of £10 for the first infringement?

Mr. WILSON: The Act provides for these particulars, but they are not given as they should be.

Why does not your trades-union take the matter up.

What does it exist for?—This is a matter for the Weavers' Association, not for ourselves.

Why should not the Weavers' Association do it then?—The simple fact is that the weaver who asked for the particulars and pressed for them would lose the situation.

Surely the association would take care of one weaver?—The association is a very young one in our district yet, and it has very few of the weavers in it.

On Wednesday the further sittings of Group C, dealing with textile and other trades, were resumed in the Commission Room, Westminster Hall, Mr. Mundella presiding. The other members present were the Duke of Devonshire, Mr. Burt, M.P., Mr. Courtney, M.P., Mr. Austin, Mr. Mawdsley, Mr. Tunstill, Mr. Tait, Mr. Trow, and the secretaries.

The minutes were read of the meeting held in private on Tuesday, from which it appeared that the section had decided that it was desirable to have women sub-commissioners; and they recommended the names of Miss Orme, Miss Collett, Miss Abraham, and Miss Irwin.

THE JUTE TRADE.

The first witness called was Mr. ALEX. BEAN, secretary of the Brechin Factory Workers' Union, Forfarshire. He said there were about 2,200 workers engaged in the manufacture of linen in the Brechin district, and of this number 1,125-764 females and 361 males—were members of the union. Their union was federated with other unions in the district, and out of these a federated council was formed, before whom all questions in dispute must go previous to a strike. The women were paid about 10s. per week for weaving; and the men, who were engaged in other work, received from 22s. to 31s. per week. There was no board of conciliation or arbitration, and the workers never communicated personally with the employers, but always by writing. He thought, however, that the Brechin workers were in favour of the formation of joint committees to settle wages disputes. The present method of factory inspection was very deficient, and he advocated the appointment of additional inspectors, including some females. He thought the sanitary condition of the mills should be improved and that the half-time system should be abolished. He advocated more efficient factory inspection, shorter hours of labour, the abolition of half-time, and a board of conciliation to settle wages. He was prepared to prohibit people working more than eight hours a day, notwithstanding that their competitors in Belgium, Germany, and Austria worked 10, 11, and 12 hours per day. They now worked 56½ hours per week.

Mr. W. RITCHIE (of the firm of Ritchie and Son, Stratford, London) was called to give evidence in contradiction of some statements made by Miss Hicks, a previous witness. He said his firm was in the jute business, and they employed 750 workpeople, 200 males and 550 females. Their firm had been charged with cruelty and oppression. They had not interfered with any one joining the union, and there was no question of their being dismissed if they joined the union. The sanitary condition of their mills was perfect, and there was no ground of complaint on that score. The wages of all the employes in the works had been advanced 8 per cent. since 1887, and the wages of the women spinners had not been reduced from 12s. 3d. per week to 10s. as stated. If the hours were reduced to eight per day in the jute trade it would be utterly destroyed. The looms and spinning frames were driven as quickly as they could be, and the production would be reduced one-seventh by the proposed lessening of the hours. In fact, two jute mills that were close to his own factory had lost, in one case about £200,000 and in the other £118,516. These jute mills had increased enormously in Calcutta and in Germany. The Germans did not compete in the home markets, but they did in foreign markets.

Miss HICKS was re-called, and stated that her testimony referring to employers deterring women workers from joining the union did not apply to Mr. Ritchie's or any other firm, but to women workers generally fearing dismissal by their employers. As to the locking of the doors, one of the working women who was present would state that the doors were locked on the occasion spoken of. Witness read a letter from one of the workers in Messrs. Ritchie's firm who had been there 17 years, stating that after working hard all the week they could not earn more than 10s. per week, and that the average was from 7s. 4d. to 8s. 4d. per week. Although there had been advances in Messrs. Ritchie's firm, there had also been reductions.

Mr. RITCHIE here interposed, and stated that there had been no reduction in wages since 1887.

The CHAIRMAN said that it would be better to take the evidence of the women before the sub-commissioners, who would report to the Commission.

THE HOSEY TRADE.

Mr. B. C. WATES, a partner in the firm of Whitmore

and Company, worsted spinners, of Leicester, said he was deputed by the Leicester Chamber of Commerce to give evidence as to the state of the industries in that district, and the relations subsisting between capital and labour. So far as concerned the hours of labour, regularity of employment, tri-monthly inspection, efficient sanitation of the workshops, and cordial relations between capital and labour, the employes of Leicester had little to complain of. His firm employed 250 workers, mostly women, and the wages now were 25 per cent. higher than they were 20 years ago. The women spinners earned from 10s. 6d. to 13s. per week, and those on piece work from 13s. 6d. to £1. The sanitary condition of the spinning mills generally was good, and there was a system of inspection by Government inspectors. The hours were generally from 6 a.m. to 6 p.m., with two hours for meals, and 6½ hours on Saturday. The workpeople were generally well employed, and as a rule there was no overtime. Any reduction of this time would greatly injure the spinning trade, owing to the keen competition carried on with Germany and other foreign countries. As to the elastic trade, there was a slight falling-off owing to the small demand now for elastic-side boots, but the workers in this trade were well satisfied with their condition. Generally, witness said moderation and good sense prevailed in labour disputes in Leicester. Trade and the population were increasing. Each trade in the Leicester district had its own committee or board of conciliation for the settlement of disputes, and there was also a supreme board consisting of a certain number of the members of the Chamber of Commerce and trade representatives, but this board only acted when the local committee failed to settle a dispute.

Were the wools bought in the London market and sent to Germany, and re-shipped from Germany to compete in Leicester?—Yes. The explanation was, in part, this—that the Germans had a peculiar method of dealing with some of the finer yarns, and we have not yet got the machinery fitted for that.

If you reduced your hours of labour in Leicester, and they were not reduced in Germany, the Germans would walk off with your trade?—There is no doubt about it. We work now 56½ hours per week; and three-fourths of their mill work was piecework. The witness further said that men were better informed for positions of inspectors than women. As to the board of arbitration that had been established in March last with nine representatives of employers and workmen, their services had not been called upon.

Mr. J. HOLMES, the president of the Midland Counties Federation of Leicester, was next examined. He stated that there had been a strike in Leicester, where the workmen actually struck to compel the masters to reduce their wages by 7½ per cent. It appeared that the frame-workers in the villages around Leicester offered to do the work at 5 per cent. below what was being paid to town workmen in order to get the work, and the town workmen retaliated by offering to do it for 7½ per cent., and because the masters would not reduce the wages they struck. Probably the townsmen were afraid that if they did not meet the competition from the country villages further reductions might take place.

Was it not an attempt of some of the hand-frame workers to get work to compete against the steam power?—No.

The witness (continuing) said:—We would not go in for an eight hours' day; but we object to people taking work home from the factory, for it turned home into anything but a home. Married women did considerable harm, for having husbands they could work for less money, and they did so, thus reducing young women's wages. The average wage received was not more than 8s. per week, and this was not sufficient for them to live upon, and this tended to immorality amongst them. With regard to the effect of the workmen's union, it had managed to agree with the employers, and it was putting a stop to the cutting down of prices, which was at one time ruining the trade.

Mr. S. BOWER, of the Midland Counties Framework Knitters' Federation, expressed the view that the middlemen who had got machines worked by steam-power were sweating the workpeople and becoming a curse to the trade. He said that in one factory there had been women working for 15 hours per day for three months, and having to walk four miles each way to their work. They kept factory inspectors, but they got no convictions from the complaints made to them. The Factory Act was practically in abeyance. The introduction of too much machinery had produced depression in the hosey trade.

By the DUKE OF DEVONSHIRE.—You say the men should decide whether there should be an eight hours' day?—Yes.

Do you say the masters should not be consulted?—Well, they are in a minority. (Laughter.)

If the shortening of the hours of labour would reduce the earnings, what then?—The workmen all feel confident that that would not be the case; at any rate, they are willing to take their chance.

The Commission adjourned.

TRADES-UNIONIST CIRCULARS.

The following are copies of circulars issued by Mr. Thos. Birtwistle, the secretary of the United Textile Factory Workers' Association, which is practically the whole confederacy of factory operatives, and Mr. E. Entwistle, the secretary of the Darwen Powerloom Weavers', etc., Association. They were received together by the manufacturers of Darwen and district last week. We make no comment upon them at present:—

THE UNITED TEXTILE FACTORY WORKERS.

Dear sirs,—I am directed by the Council of the above association to call your attention to the Factory and Workshop Act, 1891, which came into force on the first instant. There are many provisions with reference to safety and sanitary matters that may require attention. The Council, however, wish me specially to direct your attention to the following changes it will effect:—Section 17 prohibits the employment of a woman within four weeks after she has given birth to a child. Section 24 reads as follows:—

"Every person who is engaged as a weaver in the cotton, worsted, or woollen, or linen, or jute trade, or as a winder, weaver, or reeler in the cotton trade, and is paid by the piece, in or in connection with any factory or workshop, shall have supplied to him with his work sufficient particulars to enable him to ascertain the rate of wages at which he is entitled to be paid for the work, and the occupier of the factory or workshop shall supply him with such particulars accordingly.

"If the occupier of any factory or workshop fails to supply such particulars then, unless he proves that he has given the best information in his power with respect to such particulars, he shall be liable for each offence to a fine not exceeding ten pounds, and in case of a second or subsequent conviction within two years from the last conviction for that offence not less than one pound.

"Provided always that in the event of anyone who is engaged as an operative in any factory or workshop receiving such particulars, and subsequently disclosing the same with a fraudulent object or for the purpose of gain, whether they be furnished directly to him or to a fellow-workman, he shall be liable for each offence to a fine not exceeding ten pounds.

"Provided also that anyone who shall solicit or procure a person so engaged in any factory to disclose such particulars with the object or purpose aforesaid, or shall pay or reward such person, or shall cause such person to be paid or rewarded for so disclosing such particulars, shall be guilty of an offence, and shall be liable for each offence to a fine not exceeding ten pounds."

Many difficulties have been urged with regard to the carrying out of this clause, but we see no real difficulty.

The Council recommend that when weaving plain cloths the following particulars should be given with each warp:—

1. Width of loom from fork-grate on the one side to back-board on the other.
2. Width of cloth.
3. Number of threads per inch in the reed, or total number in the warp.
4. Picks per ¼ inch, or change wheel and dividend.
5. Length of cloth.
6. Counts of yarn. Where the twist is from 28's to 45's, and the weight from 30's to 60's, "medium counts" is sufficient.

Note.—When weaving other than plain cloths, such additional particulars should be given as will enable the weaver to ascertain at what price he or she is being paid.

When working under the Burnley list the width and length ought to be given as that for which the cloth is bought and sold.

When working under the Blackburn list the length of cloth should be given in yards or in laps of a given length in each piece, thus: 37½ yards L. S., 40 yards S. S., or 75 yards of 36½ inches, etc. Long stick under the Blackburn list is 36.923 inches; short stick 36 inches.

In giving the counts of reed when making dhooties, the number of ends per inch or counts of reed in the middle or body of the cloth need only be given.

In giving particulars to winders you should enter the counts of twist, and the weight of yarn in each can or skep in the winder's check book, and to beamers or warpers, the number of ends and length of each warp, and in the case of fine or coarse yarns, it would be well that the counts should be given also.

Many employers seem to think that all that is necessary to be done is to post up the particulars in the room or shed, but this is not so. Each person should be supplied separately with these particulars, in the case of weavers with each warp, and winders with each weight, and so on.

It is urgently desired that you should forward me a copy of the particulars supplied by each firm as early as convenient.

With a view to the full carrying out of the New Act, your Council desire me to ask you to report to me here all dangerous and unsanitary buildings, as well as all dangerous unlicensed machinery, especially carding engines, where the takers-in are not fenced, and looms subject to throwing shuttles, to which shuttle-guards are not attached.—I remain, yours faithfully,

THOS. BIRTWISTLE, Secretary.

Ewbank Chambers, Accrington, Jan. 16th, 1892.
P.S.—We have again to urge upon you to report to us all violations of the Act, especially as to cribbing time and excessive steaming. These complaints may either be sent to me here, or to the Chief Inspector, Home Office, London, with or without signature or address.

DARWEN POWER-LOOM WEAVERS, WINDERS, AND WARPERS' ASSOCIATION.
21, Victoria-street, Darwen,
January 21st, 1892.

To the Cotton Manufacturers,
Gentlemen,—I am directed by the Council of the above Association to inform you that they decided on Wednesday evening, the 20th instant, to take legal proceedings against those manufacturers of cloth who do not conform to the Factory and Workshop Act, 1891 (which came into force on the first instant) on or before the first day of February, 1892. Each employer has to furnish with the Beam Ticket the following particulars:—

- (1) Width of loom from fork-grate on the one side to the back-board on the other.
- (2) Width of cloth.
- (3) Number of threads per inch in the reed, or total number in the warp.
- (4) Picks per ¼-inch, or change wheel and dividend.
- (5) Length of cloth.
- (6) Counts of yarns for medium counts, or any finer.

Yours truly,

E. ENTWISLE, Secretary.

The directors of the Bremen (Blumenthal) Wool-combing Company recommend a dividend for 1891 at the rate of 18 per cent. A dividend at the same rate was declared for 1890.

SHORT TIME IN CALCUTTA MILLS.—Five or six of the jute mills in Calcutta are now running only five days a week. This has been brought about by the short supplies of jute on hand, and it is expected that other mills will be put on short time almost immediately. In one or two cases, however, where the mill-owners have been foresold for a considerable time, and where they have large quantities of jute at their disposal, the machinery will be kept running full time.

Textile Markets.

COTTON.

MANCHESTER, FRIDAY.

We have to record another dull week in the cotton trade. Prices have steadily declined until they have not only lost the recent advance but have sunk below and touched a point not hitherto attained in this remarkable decline. Middling American is now officially quoted 3½d. per lb., whilst there is nowhere any strong evidence that it may not even yet go lower. Fourpence per lb. has in many cases been regarded as the extreme limit of possibility, but those who have entertained such a view have now got reason to acknowledge their mistake. The contest amongst dealers, merchants, and spinners, as to the ultimate amount of the current cotton crop is being waged with diminished ardour. The men who so persistently held that it could not exceed 7,500,000 bales have nearly all abandoned their opinions and at least have added some 500,000 to the estimates they were before willing to admit it might attain. The men who held medium views have correspondingly in most cases increased their estimates, and these now stand mainly at about 8,500,000 bales. As the readers of this report well know, we have all along maintained the great probability that even if next year's heavy crop would this year be exceeded. Messrs. Neill Bros. admit the possibility of this, if not the probability, whilst the augmentation of the actual receipts at the ports after a fortnight's reduction arising from bad weather for the haulage of cotton, do much to substantiate the views herein put forth. Should the full tale of last year's crop be attained, or should the actual figure reach 9,000,000 bales, there is every probability that spot cottons will descend to 3¼d. The enormous and unprecedented stock in Liverpool, the excesses

over last year at every centre of accumulation, and, to say the least, the great possibilities of the still invisible stores that have to come forward, strongly accentuate this contingency. And it can hardly be denied that the trade has at least an average supply in its hands or under contract. From one cause or another trade is universally dull, and nowhere on the commercial horizon can the promise of better times be discovered. Famine in Russia, revolution in the commercial relationships of most of the States of Europe to each other, the institution of high protective tariffs in others, almost national bankruptcy in Portugal, the general disorganisation of political and financial matters in the States of South America, scarcity (if not famine) in India, and a considerable depression of trade in China and Japan, in the former owing to political disturbances, and the latter to the occurrence of disastrous earthquakes—to these causes must be set down our present depression and the darkness of our future prospects. When we add to this black list the further fact that the operatives are in an exceedingly restive mood, incessantly urging claims and demands upon their employers, for which there is not the slightest justification, and harassing them in the conduct of their business operations on every side, it will be admitted that spinners and manufacturers occupy no enviable position. Why then should they take upon themselves the burdens of cotton-growers and merchants?

COTTON.—Cotton again became very weak on Saturday last, shewing that the sanguine people dealing in it are neither sufficiently numerous nor strong enough to send up prices, or even to sustain them, though receipts had fallen off considerably. Futures opened weak, and finally finished 4 to 4½ lower from the preceding night's close. All growths of spots were quiet, with the turn easier, white Egyptian being exceptionally reduced ½d. per lb. This depression continued unchanged on Monday, and led to a further decline; holders, evidently being frightened at the resumption of large deliveries at the ports, offered freely, and spot prices declined ¾d. Other growths were also quiet, East Indian receding ¼d. Futures, after slight fluctuations, declined, and closed 2 to 3 points lower on the day. On Tuesday there was a further accession of depression. Sellers were easier to deal with, and under the temptation offered, buyers bought a little more freely both of spot and for gradual delivery than was at first expected. Other sorts remained unchanged. Futures, after some slight fluctuations, closed, recording a loss of 1 to 1½ points on the day. On Wednesday the market was very flat, and made another step downward. Though in spot cotton a fair demand prevailed, so sick were holders that they pressed sales, leading to a reduction in the official figures of ¾d., carrying them to a point previously untouched during this long decline. The future market was almost in a panic, and at one moment prices were 4 to 4½ down, but subsequently regained 1 point. All other growths were quiet or dull. Yesterday there was a very unstable market, many fluctuations occurring, the reason for which could hardly be divined. They were also of considerable range. Finally the market closed irregular at ½ to 1 point advance on the preceding night's close. A good demand arose for spots, but it barely had the effect of steadying prices. Brazilian and East Indian declined ¼d. Egyptian was steady.

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

	Import.	Forward.	Sales.	Stock.	Actual
American	76,839.	63,511.	50,970	1,422,010.	2,652
Brazilian	2,780.	2,033.	490.	39,810.	—
Egyptian	3,752.	8,110.	2,700.	122,150.	833
West Indian	2,034.	1,059.	1,270.	28,160.	—
East Indian	1,098.	626.	1,710.	48,190.	435
Total	86,513.	75,339.	57,140	1,660,320.	3,920

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

	G.O.	L.M.	Md.	G.M.	M.F.
American	3½	3¼	3¼	4½	4¾
	M.F. Fair. G.F.				
Pernam	4½	4½	5	5	5
Ceara	4½	4½	4½	4½	4½
Paraiba	4½	4½	4½	4½	4½
Maranhm	4½	4½	4½	4½	4½
	Fr. G.F.F. G.F.G. Gd. F.G.Fine.				
Egyptian	4½	4½	4½	4½	4½
Ditto white	4¾	4¾	—	5¼	5¼
	Fr. F.F.G.F. F.G.F. Gd. F.G.Fine.				
M.G. Broach	—	—	—	3½	3½
Dholerah	2½	3½	3½	3½	3½
Oomra	3	3½	3½	3½	3½
Bengal	—	2½	3	3½	3½
Tinnivelly	3½	—	3½	3½	—

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

PRICES OF FUTURES AT 1.15 P.M. EACH DAY.

	Satur-day.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day	Friday
Jan., Feb.	3-59 60	3-59 60	3-56 57	3-54 55	3-52 53	3-50 51
Feb.-Mar.	3-59 60	3-59 60	3-56 57	3-54 55	3-52 53	3-50 51
Mar.-April	3-59 60	3-59 60	3-56 57	3-54 55	3-52 53	3-50 51
April-May	4-1 2	4-1 2	4-1 2	4-1 2	4-1 2	4-1 2
May-June	4-4 5	4-4 5	4-4 5	4-4 5	4-4 5	4-4 5
June-July	4-7 8	4-7 8	4-7 8	4-7 8	4-7 8	4-7 8
July-Aug.	4-10 11	4-10 11	4-10 11	4-10 11	4-10 11	4-10 11
Aug.-Sept.	4-12 13	4-12 13	4-12 13	4-12 13	4-12 13	4-12 13
Sept.-Oct.	—	4-15 16	4-12 13	4-10 11	4-9 10	4-8 9
Oct.-Nov.	—	—	4-12 13	4-10 11	4-9 10	4-8 9
Nov.-Dec.	—	—	—	—	—	—
Price of Mid-American.	4 1-16	4	4	3 15-16	3 15-16	4 15-16
Estimated Sales including Spec. and Export.	6,000 500	10,000 1,000	7,000 500	10,000 1,000	12,000 1,500	10,000 1,000

YARNS.—Last week's business in yarns totalling up badly from a seller's point of view, not having equalled the production by a considerable amount. Stocks seem to be accumulating in first hands. On Saturday the turn of prices was towards ease, but, as usual, there were hardly any attempts to do business. On Monday the market was flat under the weakness of Liverpool, and spinners were willing to make concessions, especially for prompt delivery. Prices shewed some irregularity. On Tuesday there was a very disappointing time for spinners. The market continued flat in every department, and prices were weaker, but so general was the disinclination to do business in view of the renewed breakdown of Liverpool, that the aggregate fell far below an average turnover for a Tuesday. Spinners in many cases were anxious sellers, but this had no effect in stimulating purchases. On Wednesday there was exceedingly little business obtainable in any section of the yarn market, and matters, from a spinner's point of view, seem approaching such a crisis as to induce the stoppage of spindles or an extensive resort to short time. Yesterday the market all round was in a most dull state. Spinners were anxious to do business wherever possible, but few opportunities were given them, either by manufacturers or merchants.

CLOTH.—The enquiry for cloth is of the most limited dimensions, and except in the cases of a few standard makes, manufacturers' order lists are inconveniently near exhaustion. Unless an improvement soon occur, a considerable number of looms are likely to be stopped. Current rates will not permit of further reduction, even on the present low basis of cotton and yarns. There was only a very small enquiry met with for cloth on Tuesday, and this at prices that were in most cases out of question for acceptance. The stoppage of looms was a preferable alternative, and this must shortly be the resort with numerous manufacturers unless a speedy change for the better occur. Wednesday brought with it no improvement in the cloth demand, and only a disappointingly small business was put through in any section. Yesterday no improvement could be reported. There was no increase of enquiry in any direction, and the business put through was mainly by the acceptance of offers previously refused.

To-day cotton is again easier, and futures lower than ever. The business passing in yarn is of a very retail character, though a few tentative offers for considerable lines have been spoken of, but it is not stated that they have been put through. In cloth only the smallest retail business is passing.

SILK.

LONDON.—Messrs. Durant and Co., in their circular dated 3rd February, say:—We have to report a very quiet month in silk. Owing doubtless to the prevailing sickness and mourning, the apparent promise of larger transactions as the year opened has not been fulfilled. Under these exceptional circumstances it has been decided not to hold the usual public sales this month, they therefore stand postponed until May.

Arrivals in January.

Bengal	51 Bales.
China	1,422 "
Japan	66 "
Canton	50 "
Tussah	33 "

WOOLLENS AND WORSTEDS.

BRADFORD.—Half-bred hogs and wethers, and Shropshire, Kent, and Irish wools have been in better request. Quotations are kept up at a satisfactory level. Yarns shew little change. Shipping orders are not numerous, but spinners on the whole appear fairly well engaged on orders booked a short time ago.

The home demand for piece goods is satisfactory. Many worsted coating looms are idle. Italians and Camlets are said to be more frequently asked for. The United States trade still keeps slow, and merchants express disappointment.

HUDDERSFIELD.—The year has not opened satisfactorily, business being very dull. The home trade has been slightly more active, but the strain upon manufacturers has in several instances proved heavier than they could bear. In the Colne and Holme Valleys, and in the town itself, half time has been largely resorted to. Yarns are quiet.

KIDDERMINSTER.—The demand for yarns keeps poor, and spinning frames are not all engaged. Wool values are unchanged. For carpets the enquiry is slightly more active, but not sufficiently so to relieve producers of the anxiety which the recent conditions of the trade has given rise to.

LEICESTER.—There is more doing in raw wool, and prices are firmer. The advance is not large, and buyers resist it vigorously. Choice lots of fine soft fleeces are more in favour, and command 25s. to 25s. 8d., while strong lustre fleeces only make 20s. 6d. to 21s. 6d. per tod. Skin wools sell readily, and there is a much better enquiry for colonial cross-bred wools. The yarn market is active, deliveries are heavy, and spinners are very firm in their demands, stocks being very low. The hosiery trade is healthy, with a full business doing, and the prospects of the spring trade are very encouraging. Elastic web fabrics are in better demand, and a fair business is doing in specialities for home and Continental markets.

LEEDS.—In our cloth market numerous orders are placed for next winter, because the quotations at the wool sales indicate that prices of manufactured goods will remain steady. The spring and summer trade does not proceed very briskly. Considerable stocks of light fabrics are still to be met with at the warehouses, but no alteration in prices has occurred, nor is any downward tendency likely. The turnover of serges is fully maintained. Not long ago it was thought worsteds would come again in their room, but that has not happened yet, for buyers give now more than ever the preference to cloths having a woolly, soft-handling surface, whether in mixture fabrics or dyed goods. The market for tweeds is but a sluggish one. Producers of dress and mantle cloths are fairly well off for orders. Dark brown mixture chevils still hold a good position for suitings, although some low-priced worsted in nice designs and of good quality are preferred to them by some of the largest ready-made clothing manufacturers. Printed meltons, principally in check designs, are somewhat neglected, so that in some places stocks are increasing. There is no change either as to army cloths, blankets, or flannels.

ROCHDALE.—The flannel trade is quiet, although retailers' stocks are said to be rather low. Prices shew no change, and machinery is fairly well employed.

FLAX AND JUTE.

DUNDEE, WEDNESDAY.—Stagnation is the word which represents the state of the Dundee jute trade. Jute is so far above the price of cloth that it is impossible for the manufacturer to buy jute and not possible to sell cloth at anything approaching a price to pay; so that business is rendered impossible. It may be that in the end, jute being manifestly very short, the price of the fibre may keep up, and so force up the price of the goods. At the moment, however, a kind of crisis has been reached, and the result is stagnation. Men wait till they see the turn things are to take. Short time has been agreed upon by the bulk of the trade, but only upon condition that it is universal. Several firms being engaged in special trades and others having large stocks of cheap jute, they are not prepared to run short time. Jute is in some cases a shade easier, as the speculators are anxious to secure their immense profit. A rise of more than a pound per bale tempts some of them to realise, and in some cases a little under the highest prices are taken. On the other hand, when a very large transaction is done in R.F.C. at £23 10s.—jute which a few months ago could have been bought at £14 to £14 10s.—one sees the immense rise. Jute yarns are held at prices manufacturers cannot touch. For 8 lb. cop 2s. is asked, and for warp 2s. 1d. Business is being done at irregular prices, say 1s. 11d. for 8 lb. cop to 2s. for warps. In jute goods the quotations from America render business impossible, as Hessians are lower in New York than in Dundee. Twopence halfpenny is the nominal quotation for 10½ oz. 40 in. Flax is dearer quite 10s. to £1, especially for good brown Petersburg sorts. For good K £18 is obtained. Pernam is well reported on, the quality being soft and kindly, but the prices are relatively too high to lead to business. Tows have risen quite 30s. to £2 a ton. Flax yarns are firmer again, buyers reluctantly paying a small rise in good warps. For tow yarns there is a better demand, and a rise of ¼d. has been established with buyers over. Arbroath

alone continues exceptionally dull, heavy *canvas* being made to stock. The demand for *linens* is excellent, the looms in Fife and Forfar being all well engaged. Dundee, in all its fancy jute trades, feels the effects of this sharp rise in jute, and buyers only begin to know that jute has risen from 75% to 100%.

HOSIERY AND LACE.

NOTTINGHAM.—Cotton yarns are rather dull. Curtain counts keep slow, and prices are weaker, although the fine numbers used in other branches of the lace trade are firmer in comparison. The cotton hosiery manufacturers, judging from the existing demand for yarns, are not busy. The silk section of the lace trade is quiet, and purchases of raw material poor. No visible improvement has, in fact, taken place in the demand for silk Chantillies, and even Calais is said to be in a poor way.

DRY GOODS.

MANCHESTER.—The position of the silk trade is referred to at length in "Current Topics." It only remains to add here that while the demand for silk crapes—essentially, by the way, an English industry, and one which the foreigner, despite repeated attempts, has not been able to shake—has improved, owing more to the deaths amongst ordinary citizens than to the recent Royal bereavement, there are not so many signs of mourning as some reports make it appear. To state that the country is draped in funeral garb, as do some London fashion journals and "fashionable" dailies, is as ridiculous as it would be to state that Europe is a huge gambling concern because a portion of it, the little principality of Monaco, exists on the profits of the tables. The West End is not the country, and the returns of the wholesale houses shew that black is not so much worn. Sober colours are, however, seen more frequently. The ribbon trade displays activity in *noirs maerés*. Carpets are quiet, although complaints regarding idle machinery are not so frequently heard. The jute trade is hampered by the high price of raw material relatively to quotations for cloth. The lace trade gives cause for dissatisfaction, even the demand for curtains having fallen off, short time being worked by some of the mills. The sales of linen goods are maintained.

Joint Stock and Financial News.

NEW COMPANIES.

LINCOLN LONG-WOOL SHEEP-BREEDERS' ASSOCIATION.
Registered by S. Upton, Temple-gardens, Lincoln. Objects, the breeding of Lincoln long-wool sheep at home and abroad, the maintenance of their purity, and the establishment and publication of a flock book relating to the same. The company is declared to consist of 300 members, with an individual liability of £1.

FLEMING, BIRKBY AND GOODALL, LIMITED.
Capital £100,000 in £10 shares. Object, to acquire the following businesses, viz.: The business of a tanner, currier, leather merchant, machine band, and needle and diamond-point card maker, heretofore carried on by Thomas Fleming, Son and Co., at West Grove Mill, Halifax; the business of a needle and diamond-point card and wood-card maker, wood-card and leather belting manufacturer, hitherto carried on by J. and W. Birkby, at Woodfield Mill, Liversedge; the business of flax, card, clothing and belting manufacturers, carried on by Goodall and Sons, Brighouse; the business of card makers carried on by H. Mallinson and Sons at Liversedge; and the business of needle and diamond-point card makers, heretofore carried on by A. Mallinson and Sons at Cleckheaton, and generally to carry on and extend the said businesses.

F. Fleming, West Grove Mill, Halifax	.....	1
T. B. Birkby, Woodfield Mill, Liversedge	.....	1
J. T. Goodall, Clifton Bridge, Brighouse	....	1
W. Wright, West Grove Mill, Halifax	.....	1
C. H. Mallinson, Halifax-road, Liversedge	..	1
R. M. Houldsworth, 3, Bunhill-row, E.C.	..	1
T. W. Fleming, West Grove Mill, Halifax	..	1
J. Townsend, Parkinson-lane, Halifax	.....	1

The first directors are F. Fleming, W. Wright, T. B. Birkby, J. T. Goodall, and R. M. Houldsworth. Qualification, £1,000; qualification of managing director, £10,000. Remuneration: Managing director (F. Fleming), £600; ordinary directors, £100 per annum each.

SPRING BANK LOOM AND POWER CO., LIMITED, NELSON.

Registered on the 21st ult., with a capital of £15,000, in £10 shares, to carry on the business of spinning,

weaving, manufacturing, or dealing in cotton, woollen, or other fibrous substances. Subscribers:—

J. Moorby, Hollin Bank, Brierfield	.....	1
J. Hargreave, Carsfield House, plumber	.....	1
J. Gott, 84, Manchester-road, Nelson, rope-maker	.....	1
S. Whitehead, 45, Carr-road, Nelson, architect	..	1
W. Haighton, The Firs, Nelson, ironfounder	..	1
S. Gott, 58, Manchester-road, Nelson, draper	..	1
J. Greenwood, 27, Carr-road, Nelson, school-master	.....	1

The first directors are S. Gott, J. Gott, J. Greenwood, J. Hargreave, J. Moorby, W. Hartley, W. Haighton, and M. Hawley; qualification, 20 shares. Registered office, Craven Bank Chambers, Nelson.

Gazette News.

PARTNERSHIPS DISSOLVED.

J. R. Hudson and H. Pinney, Sheffield, woollen and fent merchants; as regards J. R. Hudson.
A. Robinson and W. T. Pearson, Bradford, commission weavers; as regards W. T. Pearson.
T. Anderson and T. Cockroft, Brighouse, card wire manufacturers; as regards T. Cockroft.
J. A., and M. Smethurst, Osborne-street, Rochdale-road, Manchester, cocoa fibre and hcard mill manufacturers; as regards J. Smethurst.
C. F. Rich and W. H. Fletcher, Bridge Mill, Carruthers-street, Ancoats, Manchester, smallware manufacturers; as regards C. F. Rich.
J. Schofield and J. Ashworth, Kenyon-street Mills, Ramsbottom, and Charlotte-street, Manchester, cotton manufacturers; as regards J. Ashworth.
W. Arlingstall and W. Woodhead, Bradford, worsted manufacturers; as regards W. Woodhead.

Patents.

PATENT OFFICE. DUTTON & FULTON
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ESTABLISHED 80 YEARS.
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SPECIFICATIONS PUBLISHED.

- 1891.
- 348. ASHWORTH and ORS. Card setting machines. 11d.
 - 619. HUTCHISON. Jacquard machines. 8d.
 - 1,569. OLDKNOW and HARDY. Imitation twist lace fabrics. 1s. 3d.
 - 1,827. GODFREY and ORS. Floor-cloth. 8d.
 - 2,005. DIXON and LEE. Spinning and twisting frames. 6d.
 - 2,891. EYES. Preparing flax, etc., for spinning. 6d.
 - 3,235. BEGG. Looms. 6d.
 - 3,243. ROTHWELL. Opening and cleaning cotton fibres. 6d.
 - 3,310. PRESTON. Milling and fulling woollen, etc., fabrics. 8d.
 - 3,485. PICKUP and KNOWLES. Cloth expanders. 8d.
 - 3,574. HURTLBY. Baling warps. 6d.
 - 3,700. REYNOLDS. Spinning and twisting frames. 6d.
 - 3,738. MARX. Electrolysing and bleaching. 8d.
 - 3,753. COOPER and ORS. Stockings, etc. 8d.
 - 4,095. JAGGER. Paper cop tubes. 8d.
 - 4,543. JOHNSON (*Badsche Anilin & Soda Fabrik*). Dye-stuffs. 6d.
 - 4,584. EDELSTON. Weaving crape-like fabrics. 4d.
 - 3,511. BRIERLEY (*Moog*). Carding engines. 11d.
 - 4,688. JOHNSON (*Badsche Anilin and Soda Fabrik*). Colouring matters. 6d.
 - 5,908. DULIER. Destroying smoke. 6d.
 - 6,154. CHEETHAM. Spinning, etc., mules. 6d.
 - 11,249. BRADBURY. Carding engines. 6d.
 - 15,009. SHARP and METCALFE. Preparing wool. 8d.
 - 16,062. WHITAKER. Selvages for cotton piece goods. 4d.
 - 17,531. HOLTHAUS. Jacquard looms. 6d.
 - 20,037. KELLNER. Bleaching powder. 8d.
 - 20,304. BINZ. Looped fabric. 6d.
 - 20,866. HUGHES (*Tibergshien*). Dyeing, etc., textile fibres. 8d.
 - 20,931. WELDON. Yarn dyeing machines. 8d.
- SECOND EDITION.
- 3,513* (1878). ASHWORTH. Wire cards. 8d.
 - 18,631 (1888). BILDERBECK - GOMES. Transferring animal fur, hair, etc., to artificial backings. 6d.

ABSTRACTS OF SPECIFICATIONS.

12,043. August 5, 1892. **Spinning.** K. T. SUTHERLAND, 8, Pritchard-street, C.-on-M., and G. ESDALE, Platt-lane, Rusholme, both in Manchester.

Mixing fibres.—When a bad spinning and naturally short staple fibre, such as vegetable silk, etc., is mixed with a good spinning one, such as cotton, the fibres are treated, either before or after mixing, according to the process described in Specification 12,032 (1892). Before mixing such fibres as china grass and other long staple vegetable fibres, which are artificially shortened, with short staple fibres, the fibres are treated either according to the process described in specification 15,333 (1892), or to that described in specification 18,032 (1892). 4td.

12,102. August 5, 1892. **Yarns, preparing for weaving.** J. C. HOWARTH, Newson Heath, Manchester; and J. H. SPOTT, Basin-street Works, Rochdale.

Relates to the "dressing" of warps after they have been dried, sized, etc. Portions of the warp, in each of which the yarns are arranged in the order required in weaving, are dressed separately, and are wound upon blocks, rollers, or beams, which are then placed together in a loom, or from which the threads are wound on to a beam to be placed in the loom. In some cases the threads may be wound from the latter beam on to the loom beam. 8td. **Drawings.**

12,224. August 5, 1892. **Spinning.** H. H. LAKE, 45, Southampton Buildings, Middlesex.—C. O. EYNTON, 85, Water-street, Massachusetts, U.S.A.

Bebbins and spools.—The head is strengthened by means of a metal rim, which is pressed firmly round the edges of the head and into grooves at the sides. 8td. **Drawings.**

12,220. August 5, 1892. **Cotton seed delinters.** E. J. O'BRIEN, 673, Constance-street, New Orleans, Louisiana, U.S.A.

Relates to the construction of machines for removing lint from cotton seed. The seed is fed into cylinders containing rotary shafts carrying strikers arranged alternately with cup-shaped discs having holes. The cylinders communicate with a central cylinder, in which works a rotary shaft carrying a number of saws arranged alternately with spacing discs. The saw teeth are reduced in thickness towards their outer edge, and the serrations are so made as to cause the lint to fly off by centrifugal force. Comb teeth attached to plates remove the lint from the saws. The lint collects in lint chambers, and is removed by an air current. 8td. **Drawings.**

12,230. August 5, 1892. **Coated fabrics.** T. CHRISTY, 25, Lime-street, London, E.C.

Relates to the manufacture of the waterproof, fireproof, or impermeable material, described in Specification No. 13,917, A.D. 1888, and its application as a substitute for gutta-percha, rubber, leather, oiled silk, and the like, or for use as a grease-proof impermeable paper. For making a thin material, a fibrous fabric, such as unsized paper, or a woven fabric, is saturated with a solution of glue or agar-agar, to which has been added glycerine, and a solution of a chromium salt, such as bichromate of ammonia or potash, to which liquid ammonia has been added. The material is then hung up to dry and bleach, being then ready for use. The material may be applied to the following purposes:—Surgical bandages, compresses, and pads, coverings and sheetings, antiseptic or medicated; linings and stiffenings for hats, bonnets, and the like; artificial flowers and floral decorations; theatrical decorations; ballet skirts and dresses; carpet felts; pianoforte dampers; lallooms; steam-packing; tent coverings; curtains; veils; fans; packing wrappers for cotton and jute bales; carpet linings. 6td.

12,250. August 7, 1892. **Dyes.** J. JOHNSON, 47, Lincoln's Inn Fields, Middlesex.—*Baillie & Anlin and Sola Fabrik, Ludwigschafen-on-the-Rhine.*

Consists in reacting with the symmetrical dihydroxybenzoic acid (COOH:OH:OH, 1:3:5) upon the nitroso derivatives of tertiary aromatic amines, such as dimethyl, diethyl, methyl-benzyl, or ethyl-benzyl-aniline. The condensation can be effected in aqueous, alcoholic, or in some cases acetic acid solution, and the free nitroso compounds or their salts may be used. The new colouring matters separate out as a paste which may be used directly in dyeing. They fix themselves on wool without a mordant, and will also dye mordanted wool without affecting the mordant, so that other colouring matters, such as alizarine blue requiring a mordant, may be also fixed upon the fibre. 6td.

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J. Jones, Dukinfield.

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Hurst, W., & Co., Rochdale.

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Horrocks, Jno., and Son, Manchester.
Lees, Asa, and Co., Limited, Oldham.
Platt Brothers and Co., Limited, Oldham.
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