STEAM USERS.

The textile mercantile of Berlin is full of steam users. A number of the more important individuals have begun to exert themselves for the revival of Irish industries of several kinds, and amongst these the flax and hemp industry came in for a share of attention. The latter, however, is not likely to thrive unless machinery be introduced, and of this we have not yet heard. The only important innovation in another direction is by Messrs. Malony Brothers, Cork, whose well-known productions in tweeds enjoy a well-deserved reputation. They have, however, few imitators. As observed above, there is no appearance as yet of the near advent of any competitor in this field of textile industry.

The Linen Trade of Ulster.

The linen trade of Ulster is far and away the most important of the textile industries of Ireland, and is apparently destined to long remain so. Somewhat the same state of things has been the case in the cotton trade also. The number of factories at work is greatly increased, and the production has been increased in consequence. The linen trade is said to be in a prosperous condition, and the demand for Irish linen is said to be very great. The exports of linen to America have been greatly increased, and the imports of Irish goods into America have been equally so.

The Spindles of Lancashire.

The manufacture of cotton goods in Lancashire is said to be in a flourishing state, and the exports of Lancashire goods are said to be increasing. The prosperity of the Lancashire trade is said to be due to the introduction of machinery, and to the adoption of the system of factory management. The number of spindles in Lancashire is said to be very great, and the production of cotton goods is said to be very large.
reverend gentleman, who would have been better employed in making a close study of the industrial situation, when it might have dawned upon him that it is not such as would justify him, or any sensible man, in encouraging the ignorant folly of the working classes in their action in the manner in which they are harassing their employers in the conduct of their business.

There is hardly a trade in the country in which the greatest difficulty is not experienced in keeping the operatives employed, and that at prices that barely return to employers the amount they have to pay out in wages, let alone repaying them for their labour and the capital invested in their establishment. In a few years we will have a new recruit to the crowd of mischievous who, in the various industrial centres, are battering upon the labour of the workers whilst engaged in planting the seeds of dissension between them and their employers.

The fruits of their work may be seen in the strikes at Newcastle and in Durham, in which whole districts have been reduced to a condition of poverty from which it will take them many years to recover. Halifax will therefore, if it be wise, take warning, or its fate may soon become very much of a kind with theirs.

THE WOOLEEN TRADE IN BELGIUM.

Verviers is one of the most important manufacturing towns in Belgium. It is only about a dozen miles from Liege, and is therefore in the centre of the busiest district of the most populous little State on the Continent. Its woollen trade is very extensive, one yarns being shipped very largely to this country, (the Scotch manufacturers consume largely,) to France, Germany, and elsewhere. It is the custom of the Verviers Chamber of Commerce to issue yearly a report on the local trade. The document is generally most interesting one. Last year the trade was affected by the remarkable decline in the two important staples, wool and cotton, the last-named being an important one to the spinners of the town. Wool in December was 12% cheaper than at the beginning of the year, and it was thought the consumption of it will be stimulated by this circumstance. Unluckily however, there was a lack of confidence in the trade. Speaking of yarns the Chamber refers to the action of the Government in separating, at its request, the duties relating to worsted yarns from those affecting woollen yarns in the official returns of imports and exports. Unfortunately merchants have not all conformed to this agreement, but the result desired has not yet been arrived at. The Chamber considers that the duties are inexact as far as their 5th division goes, although the totals will of course be correct. The figures referring to exports of worsted yarns are stated by the Chamber. According to the returns they exceed 5,000,000 kilos, whereas the entire production in Belgium does not exceed 2,500,000 kilos, of which at least one half are consumed in the country. Many of the worsted yarns entered as worsted must therefore be set down as woollen. Putting the two quantities together we have the following total of yarn exports from Belgium, omitting 1860—

<table>
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<th>Country</th>
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<td>Germany</td>
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<td>France</td>
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<td>Belgium</td>
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<td>Switzerland</td>
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<td>Holland</td>
<td>600</td>
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<td>Total</td>
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The increase in sales of Belgian yarns to France is remarkable. On the whole there is an increase over 1890, but the turnover is less than that of 1865. The returns relating to imports of woollen goods are also of interest. Casimirs and similar cloths have entered the country in smaller quantities than in either of the two preceding years. Out of a total value of 1,966,600,200, the contribution of 1,450,400 francs worth. The trade in coatings, duffets, and other heavy cloths has grown since 1855. Last year the Belgian imports were valued at 4,000,000 francs, which we supplied with 1,129,900 francs worth. In goods of a lighter texture, however, the demand for semi-finished goods is not as great. 

The figures relating to this trade are of special interest, as it is of larger dimensions than those referred to above. It will be observed that in 1860 we occupied a position midway between Belgium and France and England, and are now placed as on the list, Germany having made tremendous strides since 1855—a result of the more remarkable seeing that France and England have also increased their sales.

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<th>Country</th>
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<td>Holland</td>
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<td>Total</td>
<td>3500</td>
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The result of the year's trade with the United States in what it may have been expected. The returns for the South American markets, which we have not reproduced, also show a fall of the quantity of clothing and other goods. The worsted cloths, and other heavy woollens, were last year 317,210 kilos. Of this quantity England took nearly a third, and the Congo 42,440 kilos. In the case of cotton, Belgium's consumption has been cut down so that the thickly peopled territory watered by that noble stream, have, we may add, grown considerably in volume since 1855. The shipments of light woollens from Belgium were last year 871,450 kilos. Of these we took 124,650, the Congo 170,940 (against 215,870 in 1850), France 112,720, and Holland 202,720 kilos. The total trade with the United States for the year was valued at 2,102,013 francs, according to the invoices legalized by the United States Consul. The causes which have contributed to the decline of certain branches of the Belgian woollen trade of late have, of course, equally affected other nations. The disturbances in South America have had a very considerable effect on other branches of the country, which, however, have on the whole maintained themselves fairly well, as the above interesting tables shew.

THE RADCILLIF COLOURED GOODS LIST.

Our Radcliffe correspondent writes—Some curious shuffling appears to be going on in the game of cards in Radcliff and Pilkington district in regard to the new list of prices for the wearing of coloured goods. For some months past negotiations have been in progress between the officials of the duty, Radcliffe, and District Weavers' Association, and representatives of the Radcliffe and Pilkington Employers' Federation, with the object of drawing up a list of duties, and after an almost interminable number of meetings one was agreed upon. One half the weavers appear to favour the list agreed upon by the two committees, while the other half are somewhat violent in their declarations against it. The list was rejected by the officials of the old Radcliffe Association, and they certainly seem to have been actuated in their opposition by personal pique at not being among those chosen to draw up the list. The oppositionists hold a meeting the other night, at which it was stated that the new list was a reduction of something like 30 or 40 per cent. on the old list, and that the prices fixed for circulars were too per cent. The money is in the hands of the committee and secretary will probably be vindicated. In any case, it is understood that the list will be adopted by the employers as arranged, and will become the standard of the district.

SETTLEMENT OF THE DAVIES MILL DISPUTE.

Bury.

At last, after exactly a month's stoppage of the mill, the dispute at the above-named place has been brought to a close by the masters agreeing to pay an extra 2s. 6d. per cloth, of worsted, upon the weavers taking up, as before, the responsibility for the counting of pieces and the weight of cloth, in lieu of the burden being shifted from their shoulders to those of the over-lookers. Once again we have an exemplification of the avaricious and grasping spirit by which trades-unionists are actuated, and of the fact that generally, but none the less so, they are drifting into rank socialism, a socialism that has for its ideal a division of wealth so long as the portion they have to from such division and the like. They are thus committed to the compulsory sale of all goods they themselves are not paying for was a "principle"—but from the result it would appear that the "principle" which most concerns them is simply one of 2s. 6d. The conditions upon which the strikers have agreed to resume work will admit of no other interpretation, and the whole affair is certainly one that does not reflect on the credit of the operatives affected. There is one point about the dispute that should perhaps be allowed to escape notice, and that is the attempt made to get at all the other mills in Bury and district, and at mills in the neighbouring towns, the overseers are responsible for the counting of pieces, and that it is this general custom of the trade. We have reliable information to hand that such is not the case; that the general custom of the common trade is that the weavers shall have such responsibility entirely on their own shoulders, so that the overseers are neither permitted nor consistently responsible. In Bury there are only four firms at which the overseers are responsible, while the only other mill within our knowledge, where the overseers obtain is one at Littleborough, where, however, this practice is forced upon the firm in consequence of a patent letting-off motion attached to the beam, which the overseer is bound to keep under his control. With the exceptions
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named, the custom of overlookers being responsible for the picks and the weight of the cloth is generally unknown throughout the whole of the cotton trade. Nor is there evidence wanting that where the work has been done by the overlookers, and reports have been made to the other plan, the latter has been productive of far better results, both as regards weight of cloth and the regularity of the picks, and this evidence points conclusively to the fact that the weaver, and the weaver alone, ought to be responsible. We are of opinion that the masters have not done a very wise thing in granting a sugar plum of 1d. for the mollification of the operatives. They have done this work for approaching 25 years, and then become three or four of the operatives become dissatisfied, and work the remainder up to fever heat, the employers must break through the good old custom of a generation, and run the risk of losing a good name in the market for a specialty of cloth, or pay something over above wages, which have not for one single moment in the dispute been held up as being bad or even indifferent. If it can be confined to the same mill, so far so good. The only way we have is that the prospect of getting a similar concession from other mills will open up the faces of you to something else, and provide food for an agitation that may do much injury to both masters and men. In case of such an attempt, we would suggest that a firm stand be made, and a strong and united effort made to nip in the bud the growing spirit which seems to have blinded the vision of those who are doing their best to drive trade to other lands. It is worthy of note that this point was not brought to the front until the strike had been in progress some time.

THE NEW FRENCH FACTORY LAW.

This measure, which has passed the Chamber of Deputies, and of which the Senate has already adopted some clauses, casts the keenest interest amongst French manufacturers and spinners. The feeling amongst these classes is well expressed in a report just issued by the Elbeuf Chamber of Commerce. Each time that this body has been approached on the matter it has pronounced energetically in favour of the absolute freedom of adult labour from legislative control, the forbidding of night work in the case of women and children, and the regulation of the labour of children under 16. The measure of 1885 was held to be responsible for the welfare of the persons who were to accept an eleven-hours day, but they point out that if by the new law women are to be restricted to less days, factories in which both sexes are employed will be thrown into confusion. The conditions of modern factory life, in which the home employment of women, although formerly the spinning mills were the only places of the kind where they could be engaged, other work having to be done at home. Power-loom weaving and the development of preparation machinery have, however, opened a new avenue of employment in the case of the old-fashioned hand work. It appears that the law referred to provides for a ten-hours day for women, and one of eleven hours for men, the employer, as those interested have very quickly pointed out, would result in the stoppage of a portion of the machines, an hour before the regular time—a system which would possibly result in the displacement of female labour. While agreeing theoretically with the argument that the place of the woman is at the foreside, the president of the Elbeuf Chamber, in a recent common-sense address, roundly denounced the usurious and opium-like tactics of the legislators in the necessities of existence. The proposal to divide all labour in mills into two shifts of eight hours each, working between four a.m. and 10 p.m., is bitterly opposed by French employers. After mature deliberation on the recent results which have been passed by the Elbeuf Chamber—

Seeing that the working day for females cannot, without serious consequences, be made shorter than that applying to men:

That the proper place of the woman is at the family side and that the mills, as in our case Monday, therefore, be forbidden.

That the term working day" includes the periods between 9 p.m. and 6 a.m.; and

That the eight-hour day should be forbidden to women and girls:

That this shall be supposed to include the hours between 9 p.m. and 6 a.m.;

That the division of working operations into two shifts of eight hours, working alternately between 4 a.m. and 10 p.m. should not be authorised for women.

A copy of these resolutions has been forwarded to the Minister of Commerce and Industry, the local Senators and Deputies, and the Chambers of Commerce in France.

THE TEN-HOUR VIEW.

On the other hand, advocates of a ten-hours day are to be found amongst the ranks of the employers. Amongst the most influential of these is M. Badin, of Haretin, Seine-Inférieure. This gentleman has just addressed a long communication to the Minister of Commerce, in which a copy has been placed at our disposal by a correspondent at Lille. M. Badin advocated the ten-hours day in 1879 when he was a member of the Conseil Général of his department. He is of opinion that the adoption of a ten-hours day would result in a poorer result in the ten-hours day all round. The Elbeuf Chamber, on the other hand, as we have pointed out above, that such a measure would simply result in driving female labour out of the market. M. Badin does not recommend the immediate enforcement of a ten-hours law. He is in favour of proceeding towards the desired goal slowly, so that there may be every opportunity for preparation. Nor does he anticipate that it will be first possible to produce as much in the ten-hours day as in the present one of eleven hours, although he is apparently of the opinion that in the end, provided that the operatives co-operate cheerfully, the desired result will be arrived at. "The English," he says, "have accomplished this object, i.e., the producing of as much or more in the ten hours as in twelve previously in less than 44 years. M. Badin's point here is not clear. If he means to imply that the workman of to-day produces as much in ten hours as his predecessor of 44 years ago did in twelve, he is no doubt correct; but the fact has been rendered possible by improvements in machinery. M. Badin states that at first English wages were lowered as a result of shorter hours. He does not, in view of these and other facts, favour the immediate application of the ten-hours law, but would rather have one of eleven hours first. He points out that the proposed restriction of the labour of children will have a serious effect upon the heads of large families, and more especially on widows with young children. He states that in his mill there are 1500 employees, belonging to two families, each of which numbers twelve, exclusive of the parents. He depreciates the action of those who forbid the employment of this labour, but recommends the adoption of the English law as to half-timers for children of eleven years. In raising this suggestion he speaks of our conditions as gens très prospères. M. Badin also urges the advisability of adopting the English system of half-a-week days on Saturdays, the last half-time to be made up by a slight addition to each of the other working days. The result of the act of the legislature is not yet certain; but the proceedings so far are interesting, as show that the agitation has not been without effect. But it is possible that the treatment of factory workers is beginning to have a salutary effect in France. The danger in cases of such weakening of the moral stamina amongst our competitors is that they may go too far, and so injure the interests of the employers in their desire to secure the greatest possible advantage to both. But perhaps the French are not gènes frivòles.

"THE FUTURE TRADE RELATIONS OF GREAT BRITAIN AND THE UNITED STATES."

Under this heading Mr. R. S. McCormick, the Resident Commissioner for Great Britain for the World's Columbian Exposition (most unchronically of titles) has read an address recently before the Society of Arts. The reprint occupies some twenty pages of the official journal of that body. A careful perusal of the document convinces one that Mr. McCormick had set out for himself the task of muffling the angry British manufacturing public which refuses to patronise the 'shorn,' by reminding his hearers that England, too, was highly protectionist once upon a time. His views he expresses by a quotation from Sir Donald MacKenzie Wallace, who says, "The chief Great Britain is at present in the position of a successful manufacturer who has outstripped his rivals and has produced a superabundance of a considerable amount of jackboots and ensigns. To justify these feelings a peculiar economic theory had been invented. England's constitution, according to her politique d'exploitation, the great blood-sucker of less advanced nations. Having no cause to fear competition, she advocates the insidious principles of free trade, and deluges foreign countries with her manufactures to such an extent that national industries are inevitably overwhelmed. In the pride of their hearts the manufacturers and merchants of Manchester and London may exclaim—using the quaint old words of the poet Prior—

'Gold, though the heaviest metal, hideous seems.
One is the harvest where he sows now.
We plough the deep and reap where others sow.'

Thus all nations pay tribute to England, but this cannot last for ever. The futilities of free trade have been detected and exposed, and the nations have found in the benediction of power of protection a means of escape from 'British dominion.' As we have stated, Mr. McCormick endeavours to justify the protectionist policy of the United States by pointing out that the American producers (who, of course, were not then as wise as they are to-day) once believed in taxation of competing imports. All his proofs are drawn from Mr. McCormick's paper; in effect, a summary of the commercial progress of England. It no doubt cost him some trouble to compile the facts it contains. He shows that the United States is still one of the best markets for British products. The assertion is, of course, beyond dispute; but it has little bearing upon the question at issue. As we have already pointed out, those who refuse to exhibit are quite aware of the size of the American market, and their action in refusing to exhibit is due to considerations which are not taken into account by Mr. McCormick. The Commissioner tells us that the cotton factory should be near the cotton field. He forgets that there are other considerations that may require to be taken into account besides proximity of raw material. In some classes of cotton goods the cost of the cotton itself forms a very small proportion of the total cost of production. This is particularly the case in connection with damasks, Turkey towels, and high-class products of the kind. Therefore, that Mr. McCormick's views (which are those of a large section of his countrymen) will not bear close examination.
THE POSITION OF AFFAIRS IN THE COTTON TRADE.

Our readers are sufficiently familiar with the general aspect of affairs in this dispute to know that no improvement has taken place or is discoverable in prospect. The fancied offer of arbitration, when there is really nothing to arbitrate about, is not likely to be put into effect. If Messrs. Mawdsley, have not met with the reception any sensible man would have predicted. It has practically been shelved. The impudence of such a demand would be about parallelled in the case of a brutal bully of a man making an unprovoked attack upon an inoffensive individual, and then, when remonstrated with, proposing to arbitrate whether or no he had a right to the contents of the pockets of the man he had knocked down. The proper course would be to bring the offender to justice, punish him, and compel him to pay an indemnity for the damages committed. So it should be in this case.

The unprovoked and gratuitous attacks the operatives have allowed their offices to make upon the Stalybridge Spinning Company and the Accrington Spinning Company, have inflicted great damage upon themselves, and might have had very serious results had they not been defended by their respective associations. In order to defeat these attacks, the operatives are perfectly justified in the course to which they have resorted, and they would be justified to the full in both the cases in putting the aggression by demanding an indemnity from the operatives' accounts for all the loss incurred, and that may yet result from them. This should be accurately estimated and a claim put forward for indemnification on account of it. It would be useless, for the operatives to plead that they neither would nor could pay it, because the whole struggle having been resisted to the arbitrament of the force the latter side will have to submit to the victor chooses to impose. If, therefore, the masters win the dispute, they will have a perfect right to impose such an indemnity upon them. As instances by the resolutions of the various operative organisations have pointed out that their members can afford to pay weekly contributions of from 3s. to 3s. 6d. each in support of the dispute, it would inflict no greater damage upon them if they continued until their employers had recouped their losses. In the event of there being any difficulty in the collection of the money, the employers can do it easily by means of a reduction of 10 per cent., to endure until the sum has been paid off. This may seem a very hard and unfeeling suggestion, and in fact it is so, but we hold it is the only one by which the justice of the case can be met, and it is essential in the interest of both the employers and employed, and the preservation of the trade for the country. The menacing tricks in which the leaders of the cotton operatives have been indulging, and in which they have been backed in the main by their constituents, would justify the anticipation that there will be severe consequences of fail amongst them.

But, leaving this aspect of the question, we may say that the trade is to be congratulated upon the stand it is making against the wanton and unprovoked attacks that have so long been indulged in without resistance. The old adage says that "the trodden worm will turn," a truth which has been exemplified at last in this case, where, after being kicked in the face by the masters, after being kicked in every infernal manner, the trade has turned upon its oppressors. And it should not cease the contest until it has taught them a lesson that will not soon be forgotten. Messrs. Mawdsley and Co. are now beginning to seek to make capital out of the allegation that the employers are showing a vindictive spirit in locking out the whole trade because of a dispute, and unscrupulous men are speculating on a single mill in which the only sum of about £28 was involved. But this is not a true statement of the case, and had they so regarded it they would not have kept the workpeople idle for seven months at a cost of £1,000 a week to the industry, according to their own reckoning, and of over that to the employing firm. With them it has long since been a fact for mastery: they felt they could not afford to be beaten, or to acknowledge the blundering of those they had seen this, and they cannot afford to be ousted from the management and direction of their own business establishments, whilst they are still to be held responsible for the payment of wages and trade liabilities. Therefore if they have not to submit to extinction they must win in this struggle, whatever be the cost. These are truths that ought to be brought home to every man's mind in the trade. It is, therefore, gratifying to record the spread of a determination in this respect throughout every industrial centre in the trade, to put an end once for all to the mischievous and dictatorial interference of which they have already been too long submitted. There is the greatest unanimity amongst the firms already stopped to repulse the attack made upon them, and other adherents are steadily coming in. In the Rochdale & Accrington districts, which did not make a start to the dispute, it is to be hoped that the growers will appear at first to appreciate the gravity of the situation, and that when the moved of last week has not yielded the companies a foretaste of the early notice to terminate their engagements with them. In the East Lancashire districts this is the customary notice. Bolton is considering, and by the time this reaches the eye of our readers will have decided the matter, and it is anticipated that action of an important character will be taken to support the Employers' Association. Several leaders are looking forward to the reception of heavy contributions from the fine spinning centres. Should the anticipated step be taken these will be eat off. That it will be a wise action on the part of the governing bodies of the trade admitting of no dispute, as they themselves are sufferers from the same aggressive and harassing policy of the mill-heads as the spinners of low counts. In proof of this we need only point to the "Diary of Mr. T. Fielding, J.P.," the secretary of the Bolton Operatives' Association. In the event of the employers attempting to resist this gentleman's important interferences with their businesses, they would, inevitably be confronted with the utmost hostility of the battalions commander of the cotton operatives. It will be always a sad thing that the cotton operatives will have to run all day long, and they could possibly enlist it on their side. A victory won by the South Lancashire districts will be a victory for them in the future, whilst we are sure they will be a defeat for the masters. These remarks apply with equal force to the spinning establishments of Burnley, Blackburn, and Preston, indeed to every mill in the country. The cotton spinners may be divided into two classes, one of which is related to combined spinning and weaving, the other to establishments that do not apply with the same degree of force, but even in respect of these we hold that the force is steadily increasing, and is now only very little less, and may, if the stoppage endures for a short time longer, become no less serious. The spinners in the spinning department will make their contributions to the funds, that go to sustain their side in the contest, and by affording this encouragement they become to the employers, and in the course of the struggle against their own side. They have, we suppose, adopted this policy of working mainly on the day shift, who do not go on business all night, and they are afraid that they may get some advantage over them. That this is a groundless fear it is not necessary to demonstrate.

There is another aspect of the matter, which we reproduce from a communication addressed by the writer to the Manchester papers yesterday: "It is perfectly obvious that if the spinning districts remain idle the weaving districts cannot work for any great length of time, as a yarn cannot be very soon reeled. This being indispensible, the question arises whether it will be necessary to the interest of manufacturers to stop them immediately rather than use up every skin of yarn existing, and then be compelled to stop, because another crop cannot be obtained to every person in the possession of any unseen form that there can only be one answer thereto, and that is that it will be immediately and immediately. An opposite course implies two serious disadvantages, the first being that they will, by causing a dearth of yarn, raise the price very greatly and the second that the cotton business is exceedingly bad, and if not impracticable, as they cannot possibly obtain corresponding advantage. These rules could in the course of time impose, if not be followed, they must know from bitter experience in the past that it will not take from months the time before stocks of yarn can be so far replenished as to admit of a fair equality of division of profits. It would be imperative that there are any between the two sections of the cotton trade. This is to look at the matter purely from the manufacturers' standpoint. It is also another, and the general interest of the trade. For the manufacturing section to continue working means that there cannot be any great surplus for yarn, in which demands will be made upon spinners for supplies under threats of the cancellation of the orders by the importers if not complied with. The disastrous effect of this will be that many spinners will be tempted to break away from their Federation and, so induce a complete failure of the present course of action. This would be as injurious to trade as to spinners, as it would destroy the organisations now engaged in the contest, and would disorganise the trade. In the South Lancashire and Cheshire districts, the trade, as a general point of view, and from that of its best interests, is committing a serious blunder in not shutting down, and especially in the establishments in which spinning and weaving are combined and in which independent spinning and weaving establishments stand side by side, as they are directly in both cases contributing to the defeat of that portion of the trade to be in the present case. We need only add that as this article is being closed numerous evidences are appearing of the necessity of determining the trade to act upon the lines of these suggestions."
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Reviews of Books.


In the pages of the Dyers during the past year there has appeared a dictionary of the coal-tar colours. This is now sent out in a complete cloth cover; a small edition of 500 copies only being printed. This book will supply a want among dyers and users of coal-tar colours, who have long required a handy book of reference, which to their ends they wanted to know what sort of a thing a particular colour might be, and how it was used. Being arranged in dictionary form, no time and labour is lost in looking up tints and shades of any one colour. All the information given about a coal-tar dye is: its trade name, its chemical formula, method of making, properties, the colour and manner of dying, with the red, yellow, and blue statements, and a statement as to its fastness to heat, alkalies, soap, and light — one of the utmost values to a dyer. This part of the book is well done, and evidence is evident from the remarks which are given under these heads that Mr. Hurst has given here the results of many of his own observations, and the value of the book has been enhanced thereby. The descriptions of the coal-tar dyes, in the book, there are a number of special articles included in the work, on methods of dyeing and printing, and other auxiliary topics. The dictionary is well arranged, and the colurings, tonalities, and sootings, are excellently done.

Socialism. By Stephen Williamson, M.P.

Kilmarrock: Dunlop and Trusdon.

This is a reprint of an address delivered by Mr. Williamson to the Convention at Kilmarrock in December last, together with some accompanying documents with the Rev. John Herkell of Tannadice. Mr. Williamson has told some well-known truths in a plain and forcible manner, and the working classes were among those who heard his address. The composition of a speech is a knowledge of the mind of the three or four working classes, which does for the future of the constitution of the narrow sphere of life in which their time is passed, forms the fertile soil from which these classes are fed, and which forms the basis of the constitution. The social classes of the narrow sphere of life in which their time is passed, form the fertile soil from which these classes are fed, and which forms the basis of the constitution. The social classes of the narrow sphere of life in which their time is passed, form the fertile soil from which these classes are fed, and which forms the basis of the constitution.

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THE TEXTILE MERCURY.

The report states that the income for the past year had amounted to £20,996, which has followed first subscriptions and donations, £17,715; school fees and weekly amounts received from students for materials, £5,875. The total expenditure had been £28,375, leaving a balance of £7,414. The amount voted by the council for the central institution at the beginning of the year was £12,000, and the expenditure £11,492. The students' fees amounted to £4,026, and the net cost of the instruction, after deducting the student's fees, etc., was £7,403. The amount voted by the council for the maintenance of the Technical College, Finsbury, was £5,372, and the expenditure these fees amounted to £3,889. The students' fees amounted to £2,352, and the net cost of the college, after deducting student's fees, etc., was £5,372. The expected income available for general purposes for the present year amounted to £31,572. Lord Selborne, in the course of a speech, referred very favourably upon the work accomplished in all departments. The work carried out at the central institution during the past year could not be done without that attained by any scientific institution in the country. He concluded by moving the adoption of the report and balance sheet. Mr. D. Macnay (Lewisham) seconded the motion, which was adopted unanimously. The treasurer, the auditors, and the members of the council were then re-elected, and the meeting concluded with a vote of thanks to the chairman. 

DESIGNING.

NEW DESIGNS.

VESTMENTS, Etc.

This is a season of novelties. All the well-known weavers are in demand, but the search is still for the original pattern. The old styles of by-gone decades are now brought to the front and made fashionable in the new shades of mauve, mohin, fawn, and violet. We give some suggestions, which may be utilized for many fabrics either in silk, cotton, or linen; the ground, which is shown in the accompanying pattern, may also be utilized. The repeat takes place every 147 threads, as the rounds all solid colours, piece dyed, or bleached. If such fabrics could be produced for vestments by the use of fancy-coloured spun silk for the weft. We indicate a few arrangements: with all a prominent colour or the light, light green, light buff, dove, light green nearly approaching yellow; then the spun silk worst mixed as a multicolour—that is, two or three-fold wound together on a bobbin without any twist—red and white, brown and white, lemon and dark green; the diagonal by this means would be merely as it were outlined with a graceful charming effect.

SHAPING PATTERN.

A matting on four shafts, 1 and 2 for first shed, 3 and 4 for second shed, all two in a dark orange, the diagonal, being 16 threads per inch, 4 in a pattern. A warp of:

- 2 white, 1 light blue, repeat 20 ends of each
- 4 dark brown
- 2 light brown
- 2 white
- 2 orange

And repeat from the first 2 white and a light blue. The weft pattern the same; two picks in a shed, 6 white and dark orange. The lengths of the threads are separated from each other by the picks, so that both the warp and weft have a diameter of say, 3/16 of an inch (6.5 threads will be laid side by side in one inch), only 36 threads can be used, since there will also be 36 intersections of weft. The following rules may be made: the basis warp in the approximate set required for any weft:

Rule 1. The number of weft ends (say, there are 36 intersections of weft) divide the number of picks in the length of warp, obtaining the number of repeats of the 3/16 inch line. Rule 2. (2) the threads in the given plan, thus obtaining the thread per inch. Example. Required the ends per inch to use with the 3 and 3 twill (Design 25). Count of warp and weft, 3/16 woven as 1/16, 3/16 inch distance.

(1) 6 threads in 2 intersections give 8 units in one repeat of pattern.
(2) 120 (diameter of thread) + 6 = 15 repeats of 3/16-inch twill in one inch.
(3) 15 x 6 = 90 ends per inch to use, the other 30 units of space being occupied by weft intersections.

This is a very simple method, and gives fairly accurate results, but a system of diagrams, particularly of dress fabrics, greater accuracy is necessary, an essential condition for the most ambitious effect being that the weft shall make with the warp an angle of 60°. Taking Design 25 again as our example, the difference between the basis warp and the other full diameter of the weft yarn, a point which is important in the application of the rules respecting the diameters of yarns, and consequently through the centre of the
warp threads. Then the angle of weft with warp — i.e., \( \alpha \) — must be one of 60°, and the set must be selected to give this result. To obtain this it is evident that the length \( AB \) — i.e., the base of the triangle — must be ascertainned, since this will represent the space req

The length of \( AB \) may be deduced as follows:

The perpendicular \( c \) is half the diameter of both warp and weft — i.e., it equals the diameter of either warp or weft—which for simplicity may be taken as 1 inch. Now, since the angle \( c \) is one of 60° and \( a = 30°\), the triangle \( A B C \) is evidently half an equilateral triangle, as shown in Diagram 25, and consequently the side \( a \) (the hypothenus) is exactly twice the length of \( c \), which is taken as 1 inch; thus \( a = 2 \) inches.

From this data proceed as follows to obtain the length of \( h \). Since the angle \( c \) is a right angle, the following formula is correct:

\[ B + C = A \]

Now, inserting the figures given above:

\[ B + C = 18 \times 2 = 36, \quad B + C = 3 \times 2 = 6 \times 2 = 12 \times 2 = 18 \]

That is, if the diameter of the yarn is \( c \), then the space occupied by a thread and intersection is \( = x \times 18 \times 2 = 36 \times 3 = 54 \times 2 = 12 \). 

**Example 1:** A 2/36's yarn has a diameter of \( \frac{1}{2} \). Find the number of ends per inch for plain. Then \( \frac{1}{2} \times 1732 = 95 \times 1732 = 35 \) threads per end.

**Example 2:** A 2/32's yarn has a diameter of 2. Find the number of ends per inch only would be calculated, so there is evidently a considerable difference in the case of the plain weave.

Another example may be taken to show the application to other weaves.

**Example 2:** A 2/32's stranded 2. Find the number of ends per inch only would be calculated, so there is evidently a considerable difference in the case of the plain weave.

Now, if the warp and weft did an equal amount of bending, the following would be the result:

\[ (1 \times 2 + 1 \times 2) = a \times b \]

...
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MACHINERY AND APPLIANCES.

ELECTRICITY IN TEXTILE FACTORIES.

Mr m. Woodhouse & Rawson Limited, 88, Queen Victoria-street, London, and Cowick, Manchester.

The increasing number of cotton spinning and weaving mills and bleaching, print, and finishing works using the incandescent electric lamp as their illuminant, is conclusive proof that the advantages of this mode of lighting are becoming more widely appreciated. The recent publication in our esteemed contemporary, The Engineer, of the result of six years’ trial of the electric light in a large floor mill at Barnsley, where the lamps have been installed, proves its economy. Here the dynamo is driven by a small 5 h.p. Marshall’s engine, supplied with steam from the works’ boilers. In calculating the cost it has been assumed that 75 pounds of coal would be burned per hour, and that the electric light lamps are powered by the engine indicated by the engine—a not too liberal estimate.

In the year the average number of hours during which the lamps were required was 1550, and, calculating for the assumption of a rate of No. 5 burner consuming 0.25 cubic feet of gas per hour, the cost of lighting by means of gas would be 48s., or nearly 50 per cent of that which the entire electric light installation cost.

The above shows how economical the electric light may be in mills and factories or other establishments where long hours of work are necessary, and where a portion of the steam generated in the general works’ boiler may be used, as in this instance.

But another and highly important advantage in the use of the electric light, especially in mills making colour goods for shipment works and warehouses, is found in the fact that it gives the daylight hues of all colours, so that the operators need not despair in the use of colours in the selection of them from which to choose. To confer this advantage with certainty, and to induce the fullest assurance in colour work, 100 colour standards were worked out, and where a portion of the steam generated in the general works’ boiler may be used, as in this instance.

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The rapid improvement in electrical appliances, and the steadily extending use of electricity as a motive power, a source of power, and an instrument of rapid communication, renders it very desirable that manufacturers and others should frequently review the subject very carefully, as it will not do in these days of progress to continue relying upon judicious judgment for the foundation of which the materials of which the subject are at present only some available.

Should one desire information upon the probable cost or particulars of an installation, or judging on any other arrangement, they may draw advantageously apply to Messrs. Woodhouse and Rawson.

FACTORY INSPECTORS.—We hear that Mr. Godfrey Forder, the inspector for Norwich district, has resigned, and that Mr. J. P. Jones, of Manchester, is to be transferred to Plymouth district, which will probably be filled by Mr. Shaw, at present assistant inspector for a London district. Whysong, the chief inspector, is away on sick leave.

OPENING OF BRITISH TRADE IN EAST AFRICA.—The British Vice-Consul at Quelimane in Portuguese East Africa, in his last report, points out that there is only one British firm doing business in that country. There is no doubt, says the Vice-Consul, that a British house, with a fair capital, in strong position, and an experienced and reliable manager on the east, well informed, will support, and expect it to be in the future, but who can say it will prove profitable business. Within the past three years only one German, one French, one Indian, and one Portuguese, have commenced trade in this country. Another British firm is soon to begin business. All European and some Indian firms have shown a disposition to do business largely from England all sorts of goods, whilst from Batavia considerable quantities of Chinese manufactory goods are sent, as well as Indian. A well-managed Indian agency, could be made to do a large trade, according to the different parts of the coast and the landed connection with Bombay.
METHODS OF SILK DYEING: THEIR PRINCIPLES AND PRACTICE.—IV.

The fourth method of dying silk resolves itself into a group of processes which are used in the application of the adjective or mordant-dyeing dye-stuffs, both of natural and artificial origin. The number of these dye-stuffs is great. Those of natural origin have long been in use for dying silk, although a few have been more or less displaced by the coal-tar dyes. The artificial dyes that require a mordant are numerous, but have been largely neglected by the silk dyer, although they are capable of yielding fine, bright, and fast tints.

The dye-stuffs applied by the methods of dying now to be described comprise cochineal, madder, logwood, woad, and various other substances.

A NEW COTTON MILL IN FRANCE.

Mr. James Patterson, who has been for some time engaged in the business of importing silk from the East, has recently opened a new and extensive mill at Le Havre, France. The mill is built on the site of one of the old Lancashire mills, and is of a more modern design. The mill is said to be one of the largest in the world, and is capable of producing a large quantity of silk.

The mill contains ten looms, each of which is equipped with the latest machinery. The looms are driven by steam engines, and are operated by a force of skilled workpeople. The mill is situated in a pleasant location, and is surrounded by fields and meadows.

The mill is owned by Mr. Patterson, who is also the manager. The mill is well supplied with raw materials, and is situated near the sea, which is a great advantage for importing silk from the East.

In conclusion, it may be said that the new mill is a great improvement on the old, and is likely to be successful in producing high-quality silk.
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THE USE OF METALLIC SALTS IN DYEING.

Although it was known that in dyeing cotton with euch and other natural dyes-stuffs, a subsequent passage through a solution of metallic salts, such as bismuth, copper or sulphate of copper, had some influence on the quality and depth of colour of the dyed fibre, yet it is only recently that attempts have been made to ascertain the action of metallic salts upon the shades obtained in dyeing cotton with coal-tar colours. The earliest notice of such an attempt appears to be that of Foyle, given in the *Moniteur Scientifique* in 1845. Foyle gave a description of a modification of Dreschel's process for dyeing rosewood brown, and says that if the brown-dyed fibre is passed through potassium bichromate solution, considerably darker shades are obtained. The author has dyed two patterns with Helvetia brown R: one dyed in the ordinary way, the other dyed first in a solution of potassium bichromate and antimony oxide; the other dyed by first boiling in a bath of the dye stuff and salt and then passing it through the bichromate and antimony oxide. The shades differ very much: the second is the darker and is faster to light than the first, while the second is not so to washing. In only a few cases can bichromates be used advantageously, as with indamine blue, blue phenylene blue, and other blues of a similar composition. In all cases, however, the shades obtained are less fast to light than those fixed on the cotton with tannin and tartar emetic: if they are simply dyed with salt and sodium acetate then the action of the bichromate results in the destruction of the blue colour. In the case of the mordanted blue the colour becomes rather duller and darker by the bichromate treatment, and does not appear to be so solid.

F. Beyer and Co. have patented a process whereby fast dyes are obtained from dyestuffs derived from dimethylaminoethers, the process consisting in treating the dyed fibre with solutions of sodium nitrite or sodium aluminate. Benzakarmin, lycopodin, azoviolet, chrysine, and other colours derived from tetrazo- diphenyl ethers and dioxysulphaline sulphonic acids are differently brightened: the second has a very positive action on chrysamine, but this cannot be taken advantage of in practice, as the shade obtained by dyeing cotton with chrysamine by treating cotton dyed with chrysamine with copper sulphate better results are obtained, the shade being almost identical with that obtained from wassing.

The author has made experiments with prussian blue, Prussian blue, and Spiller, or the azouline of Reudt laky and Spiller, in the development of a red by dyeing the fibre in the usual manner with 5% of dye stuff and 20% salt, then treating with 10% nitrate of soda and 3% sulphuric acid; next, developing a red with beta naphthol, after which the fabric is washed well. The solution is then treated with copper oxide and washed. The red is obtain very fast to light, to washing, alkalis and acids, and is not affected by salt. The salt does not give the same results as copper, the shades not being so fast to light. They are also more expensive. Zinc salts do not alter the shades so much as copper salts, though not so much improved in fastness over the untreated colours.—*Sohlett*, in *Farb. Must. Zeit.*

PRINTING TULLE AND GUARD WITH ANILINE COLOURS.—M. Michel de Villant, in his "Practical Treatise on Printing," gives the following directions for boiling a thickening, which is used in mixture with alcoholic solutions of aniline dyes, for printing tulle and guard in the piece. In one litre warm water 75 grams of powdered gum tragacanth are steeped for about 6 hours. To 4 litres of water is added, and the mixture is tacked to complete dissolution of the gum. While heating upon an "open fire" the mixture is continually stirred in order to avoid burning of the gum, and at the same time 3 kil. of purified anil is added. When all are dissolved, the solution is passed through a sieve. On the other hand, 245 grams of aniline oil are stirred into 3 litres water, boiled for a few minutes, and the aniline solution added and boiled for five or six minutes. When the mass is taken off from the fire and passed through the sieve, it is colourless. The alcoholic solution of the aniline dyestuff is added, the whole is again passed; and this colour printed and steamed, but not washed. The colour leaves the fabric white and transparent and produces a pretty effect.

Painting red or alizarin on an indigo-blue ground has always been a difficulty, owing to the fact that the alumina required to act as the mordant for the alizarin cannot be used by the usual discharge process to be fixed on the piece. In the latest issue of the *Bullent de la Société des Arts de la Manufacture* there is a communication from M. Brandt, describing two discharge mixtures, which, if printed on the cotton according to the directions given, will enable the indigo to come off, blue and cause a fixation of the aluminia on the fabric at the same time. One of these has been in use at Reudt for a long time, although the second has not found its way into the text books in this method a discharge is made by taking a solution of permanganate of potassium to 15% by thickening this with aloe, then to every litre adding 200 grammes of brome of sodium and 25 grammes of chloride of copper and iodide of potassium. This mixture is printed on, and the pieces are steamed for one minute and a half, and finished in the usual way. The advantage which this substitution of copper has is its advantage in the depth of colour as with indamine blue, blue phenylene blue, and other blues of a similar composition. In all cases, however, the shades obtained are less fast to light than those fixed on the cotton with tannin and tartar emetic: if they are simply dyed with salt and sodium acetate then the action of the bichromate results in the destruction of the blue colour. In the case of the mordanted blue the colour becomes rather duller and darker by the bichromate treatment, and does not appear to be so solid.

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A strike occurred in the early part of the week at the Coalbrookdale Mill, Chorley, the weavers leaving their work on the groundless assumption that their trade-union committee had left his employment through being made uncomfortable at his work. For this suppression there was not the slightest ground, the men having left, as he stated, for purely different reasons, which did not afford a shadow of justification for their action. Their course of conduct was a most serious reflection on the generality of those who make use of the most foolish vagaries that may inflict inconvenience and loss upon their employers.

At the annual meeting of the Accrington Mechanics' Institution on Wednesday night, the Town Clerk (Mr. Aikman) said the Town Council had made overtures for the purchase of a plot of land in exactness for the purpose of erecting thereon a Technical College. This was very much needed as an office of the land to the Corporation. The family who made the offer were very much interested in technical education. The Council desired of the offer were very much interested in technical education. The Council desired of the Town Council if possible, and request the directors to take such steps they may deem desirable to secure this end.

Mr. Beale is reappointed as the representative of the Chamber of Commerce on the Council of the Technical School. He has agreed to accept the offer of the Council if possible, and request the directors to take such steps they may deem desirable to secure this end.

The silk dressers' strike is still in progress. This is now the fifteenth week of the struggle. On Tuesday a meeting of the dressers with Messrs. Ommered Bros., one extending over two hours. Mr. Hanson Ommered expressed himself in favour of the men. In 1882 he was appointed a magistrate (Mr. Charles J. Ommered) will not concede the demands for an advance of a halfpenny per pound for a certain class of silk, and refused to start the arbitration.

A deputation from the Central Association at Manchester will attend a special meeting of the Jury Federation of Employers with the view of urging them to join the general movement, and either "shut down" or "go on time" until the Stalybridge dispute is settled.

On Tuesday evening, the local Carlisle Operatives' Association called a meeting of its members in regard to increasing their boxes to the Amalgamation of the Carlisle Operatives' Association. Mr. Ellwood, of Accrington, and Mr. Ayton, the local secretary, addressed the meeting, and it was resolved that the subcommittee which was formed last week by the men, 31, by letters, and 21 by back-tellers. It was also decided that if it's lock-out takes place in jury, the men will not attend another coming work. The Rainstorm and Summer branches of the same association have agreed to a similar levy.

We regret having to announce the death of Mr. R. Brown, of the printing and packing firm of R. Brown, which occurred on Monday morning. Deceased was 97 years of age, and was a Conservator and a churchman. He was held in high esteem by his workpeople, and was greatly respected throughout the town. It is rare to find a man who will go into the market.
Colne

It is expected that the famous Bridge weaving Shed, which will hold 500 looms, will shortly be occupied by Mr. R. Boughton, manufacturer, of Moklin Cotton Colne.

Glossop

The employes of Glossop town cotton spinners, have subscribed for a very handsome present, which will be conveyed to Capt. J. Wood, on his return from his honeymoon. The gift consists of a pair of solid silver fish, carvers and 12 pair fish carvers, embossed ratchet, silver plate with appropriate inscription. The total weight of silver is 55 oz.

There are no signs of a resumption of work at the mills in Glossop. In the immediate district other mills have ceased work, and there is a prospect of still more being affected. At Cauton about 200 operatives have been forced out of employment by the stoppage of Messrs. Orr’s Mill. The majority of these operatives, who were spinners and carders, are connected with the Rochdale associations, but 70 to 80 of the weavers and wrappers are in the Heywood Weavers’ Association, and will be shown 50% on the funds. The employers in Heywood are leaving the decision when to resume the funds of the Masters’ Federation, and the operatives appear to be content to have their intervals.

On Saturday afternoon the famous stone of the Burscough Spinning Co’s mill, Mochendale-street, was laid by Mr. Henry Balfour, of Heywood, the secretary. The mill is being erected on the site of the Gorton Mill, and is to be known after the proprietors. Mr. J. W. Heywood, chairman of the directors, presided on the occasion, which was attended by a large concourse of townsfolk.

Keighley

The social meeting of the members of the Keighley Weavers’ Association was held on Tuesday. In the course of the evening the report of the general committee of Mr. Price Proctor, local teacher of the association, was read. The balance sheet showed that the expenditure had been £9109 5s. and the income £11,687. The Chairman (Mr. Alderman John Gregg) observed that he congratulated the large adverse balance, more apparent than real, owing to the rounding-off of accounts. The office bearers of the association were again re-elected, and Mr. H. Balfour, being re-elected president, and Mr. John Church treasurer.

Keighley

We deeply regret to announce the death of Mr. Robert motorcycles, of Keighley. He was an old resident of the town and had been active in local affairs.

Manchester

The building of the Manchester Spinning Co. has been a major event in the city. The mill has been completed and the machinery installed. It is one of the largest in the region, and will provide employment for hundreds of workers.

Northallerton

At a recent meeting of the shareholders of the Maple Mills, the directors proposed a dividend of 20% to be paid to the shareholders. This is a significant step in the company's growth and will provide financial stability for the future.

Nottingham

Mr. R. B. Bennett, the secretary of the Nottingham branch of the Miners’ Union, received a letter from the Foreign Office containing some new regulations issued by the Spanish Government.
with regard to certificates of origin of goods for Spain, and also the two following. The bill was at the cost of great importance to Nottingham traders:—

To prove the transit of the products of treaty countries, the envoys of the treaty countries, a certificate shall be had from the Customs House of origin of the treaty country, or from the customs officers of the treaty country, as the case may be, and they shall be sent to Spain, and in this certificate shall be specified the class, name, and number of the goods, and the nature of the contents of the packages, and the name of the station whence the goods were forwarded, and that of the country to which they were consigned, or to be consigned, in Spain.

This may be given separately, or may be written on the certificate of origin according to the convenience of the persons forwarding the goods.

Oldham.

The directors of the Oakhill Spinning Co. are making arrangements for the tripleing of the engines, to be carried out during the period of the lock-out.

The house-power of the steam engines of the Holly Mill Co. is 1,200, and not 1,900 as inadvertently stated in our last week's issue.

Mr. Nicholas Shaw, of Crompton, who has recently returned from Brazil after fulfilling an engagement, has been appointed earliest to the Ellesmere Spinning Co., which will be shortly at work.

The cotton-machines are very busy with jilling work at the respective mills in the town. Millowners are having their machinery put in order, to begin work at the earliest moment.

The Pine Mill Co., whose premises are on the point of being erected, have fixed one of Messrs. Green's (of Wakefield) combustors, specially designed to work with high-pressure boilers.

On the afternoon of the students of the cotton classes held at Holmebrook Store and King-street Store, paid a visit, under the leadership of their teacher, Mr. J. M. Wynne, to the Holmebrook Co.'s mill.

The number of male spindle-stops in the Oldham district employed by the employers' lock-out is about ten million, represented by 182 firms, while about 1,200,000 are working, and 1,000,000 are idle. Of the 182 firms, 88 have stopped, and 8 have partially worked.

The Elms Spinning Co., which has been filled with male spindle-stops in the district, has continued to work, and recently decided a dividend of 30 per cent. on the half-year's working. This company is being careful with its work, and it is understood that the working of the machinery commenced from beyond the local border.

The advantage of the lock-out is being taken by the Prince of Wales Spinning Co. to have new spindles placed in and the steam engines converted to triple expansion. The total number of spindles are now being increased by Messrs. J. H. Lloyd, of Holmebrook, while the work in connection with the engine is being carried out by Messrs. J. G. Williams, of Stowford Bridge.

The whole of the alterations are expected to be completed in about another week.

A meeting on the lock-out was made at the meeting of the Crompton Spinning Co. on Tuesday evening. The Chairman remarked that it was understood that the company should stop for the present lock-out on the night of the stock-taking, and that the local industrial warfare in the district, when the mill was closed until the following quarterly stocktaking, and he wondered whether it would be so on the subject of things in regard to their boilers. Although the shareholders of 45 per cent. the company has now a reserve fund of £3,495.

Meetings have been held this week by the branches connected with the Oldham Operative Spinners' Association relating to the cleaning question. Two proposals it seems, were placed before the meetings. One was to the effect that all minders be forbidden to do any cleaning during meal hours; the other being that no minder be allowed to clean, oil, or piece strips or hands during the meal hours. The respective divisions, the meeting was unanimous on the subject of stopping work during meal times, and there is a strong disposition that a certain time should be set apart for cleaning purposes, and an account kept.

At the meeting of the Council of the Oldham Chamber of Commerce and Industry this week took place on the Boiler Inspection and Registration Bill. Mr. E. Ingham (consulting engineers) in supporting the Bill explained that all the boilers in a district shall be examined once in thirteen months by the municipal inspector, or some competent person, at the expense of the owner. A detailed report should be kept of all boilers which shall be declared to be in unsafe condition of some competent person. So far as Oldham district was concerned, he said that the law was very favourably indeed. The far greater majority of the large manufacturers in the town were all periodically inspected; but in some of the other large manufacturing towns there was an awful condition of the task, and that the largest number of steam boilers of any town in the world, we had fewer explosions, owing to the fact that we had a proper class of fitters and men to look after them. It was a matter of grave importance. Granby (Aberdeen) had asked for the number of live years by those 'wicked men' who did not insure their boilers. He understood there was a sort of idea that they were making all that bother about a policy 15, whereas in other things they were losing hundreds. He could show through his figures that no one could compare it with their insurance. raspberry they were losing hundreds of lives every year by filling little boys' basins with jam, and here they were not for their life, and without a bill account of the loss of 14 lives. He asked them as business Oldham men, was it reasonable, was it right, to have anything at 10s 6d. on account of the loss of fourteen lives—it may be there were zero or if there were 100, when they were losing more in other respects. He held up the report of the law committee, and oppose the Bill. It was decided to support the steam engines (except those in charge of insurance companies).

Proston.

About 3 a.m. on Friday of last week the night watchman engaged at Messrs. Irwin, Mclaren, and Co.'s mill, Fargrass, was shot and seriously wounded by a shot fired from a small shot. A young man who had shortly before been in the company has disappeared.

The members of the Harris Institute Cotton Class is drawing to a close, and the last of the arranged visits today, was to Mr. Alderman Maynard's Bold-street Mill. Mr. Tipping, the manager, conducted the students through the mill. Mr. Neill, male operative manager, explained the mill and also acted as guides. The visit proved very instructive, and on the motion of the teacher, Mr. Hannan, elected by Mr. Bilbrough, a vote of thanks was passed to the firm for allowing the visit.

In the Preston County Court on Tuesday, Reginald Eccleston, a four-loom weaver, used Mushal, Walsh and Co., manufacturers of Ashton, for 17s. 6d., in lieu of a weekly payment that he had not appeared to pay for the plaintiff.—The evidence adduced was that on the 30th of March, Robert Dawson, teller, of the defendants, had charged the plaintiff to have his washing done while he was under her, and when he was not under her was not expected to wash the clothes.—The defence was that the weavers had to clean their clothes, and some of them had done so.—His Honour. Judge Cowley, said that, as the plaintiff was engaged as a washer and not to wash the clothes, she was entitled to recover, and he therefore found for the association.

Rochdale.

The Rochdale Cotton Employers' Association on Saturday received notification from the Federation of Master Spinners, and in response to their appeals decided at once to suspend work until a settlement of the present difficulty was arrived at. The mills in Rochdale are therefore closed.

Sowerby Bridge.

A fare bulb on the Sowerby Bridge mills of the large mill of the Shepherd and Blackburn Cotton Spinning Co., Ltd., by which damage amounting to £2,000 was done.

Ruford.

Messrs. Gask and Messrs. Don, manufacturers, have resolved to close their factories on Saturdays until further notice, owing to the scarcity of jetty.

The following table gives the value and destination of the exports of cotton and linen goods from the Clyde by the monthly return of last week, and also the year before.

The first line refers to cotton goods, and the second to linens.

IRELAND.

Belfast.

On Friday afternoon of last week, the annual meeting of the Flax Supply Association of Ireland was held at the Royal Hotel, Belfast. The secretary having submitted the report, which dealt largely with the growth of flax in Ireland, the Chairman agreed to the adoption of a voluntary flax price. He said that when they considered there were between 60,000 and 70,000 hectar of land employed in the trade, and that they had 200,000 spindles, it was not surprising that the committee, in framing the report, took a wide view, and looked into the condition of the trade. The export of the island's flax was 26,000, and the report recommended that these should be kept for further spinning. It was right that every effort should be made to induce farmers to grow flax.

COMMERCIAL IMPERIAL FEDERATION.

The following important telegram was despatched from Ottawa, Canada, per Pent. & Co., agency, on Tuesday—

"The Dominion House of Commons yesterday discussed a motion made by Mr. McNeill, to the effect that Great Britain admits Canadian products to the British markets on more favourable terms than it grants to foreign producers. Consideration is to be extended corresponding advantages of reduction of duties to British manufactured goods. Mr. McNeill, in his eloquent speech, contended that Great Britain was the exporter, and were not to be excluded because the conditions of the treaty were to be mutual advantage in the mother country and the Colonies. If a pecuniary arrangement were made, he said, shaping in that direction. Colonel Dejardin, member for L'Islet, seconded the motion, which was supported by Messrs. Sexen and Skinner. Mr. Gilmore
The textile industry is facing a challenging situation due to the combined effects of various factors. The recent developments in the market, such as increased competition, changing consumer preferences, and technological advancements, are putting pressure on textile manufacturers. Companies are looking for new strategies to remain competitive.

The textile industry has traditionally been dominated by large-scale manufacturing, which has resulted in high production costs. However, with the rise of new technologies and the increasing demand for sustainable and eco-friendly products, companies are shifting towards more efficient and sustainable production methods.

One of the key challenges faced by the textile industry is the need to innovate and adapt to changing market conditions. Companies are investing in research and development to develop new products and processes that can meet the changing needs of consumers. Additionally, there is a growing focus on sustainability and environmental responsibility, which is driving the industry towards more sustainable practices.

Despite these challenges, the textile industry remains an important sector of the economy, contributing to employment and growth. Companies in the industry are working together to address these challenges and find innovative solutions to remain competitive in the global market.

In conclusion, the textile industry is facing a complex set of challenges that require a combination of innovation, sustainability, and adaptation. Companies that are able to embrace these challenges and seize new opportunities will be best positioned to succeed in the future.
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Yarns.—Owing to the exceptional circumstances of the market on Saturday yarns maintained to the full the firmness that had arisen during the week, and showed a decided advance from Tuesday. So far as the last week was concerned, however, it seems to have been from the basis of the highest rates demanded on the market. The quotations on home-trade yarns are: 40s. per lb. for the lowest points touched, and on shipping yarns 22s. to 23s. It is reported that Liverpool had captured all the advantages. On Monday the market continued to show a firm tendency, although the prices did not harden as much as on the whole transactions on the table. The demand on the home-trade account was not large, but a slight increase in the prices of goods for export, in which the foreign trade accounts for the larger part of the demand, as one of the objects of the present situation of the market, seems to have been increased at the expense of the lower rates demanded on the shipping yarns. All classes of yarns were being purchased in small quantities, especially in velvets, becoming daily more scarce. The deficiency in this respect threatened to stop ships very largely considerably before any yarns are exhausted. Customers are already showing great hesitation about giving any further orders at present prices, as the prices are being abandoned. Yarns are becoming scarce on every hand, and the demand on the shipping accounts, and the prices being demanded, especially for velvets. Not much business, however, is being done, with a strong tendency to maintain prices to the old levels that they had better close their sheds than pay the prices now demanded.

Cotton.—The market developed no change in the cloth division on Saturday from its quiet during the week. There was the same proportion of demand, nearly equal, on both divisions; the possibility of securing any improvement in prices is on the shipping yarns, considering the scarcity of goods and the prices being demanded, and the lack of facilities for filling orders, and the possibility of securing any improvement in prices is very slight. The situation of affairs is therefore very similar in the two divisions. On Wednesday this situation continued without much change, though there was a considerable increase in the prices of goods for export, special and well known makers of both shantings and velvets. It was reported that such business resulted, as the forces influencing the market are of a very conflicting character and uncertain in their influence. Manufacturers, however, fail to see the de- cision of yarn stocks will have given spinners a great command of the market at their expense, which may endanger for months to come, and that they are therefore very unwilling to lose it, as they can only avoid it by lowering the prices of goods for export, or for the slightest sign in any direction of a change in the marked. On the shipping division, where the trade was in vain for any improved demand for their productions, or for the slightest sign in any direction of a change in the marked. On the shipping division, where the trade was in vain for any improved demand for their productions, or for the slightest sign in any direction of a change in the marked. On the shipping division, where the trade was in vain for any improved demand for their productions, or for the slightest sign in any direction of a change in the marked. 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the drivingивание, when the web is broken at the opposite side of the loom to the usual take-off, an additional fall, 1 suspended above the top beam, and upon the edge of the take-off is a spring, so that if the web breaks, it will be broken and the loom stop automatically.

320. November 15th, 1893. Spinning Machine. - 7. THOMSON, Manchester. Brookand's and flat-top milling machines are used with a drop motion. The motion is obtained by the revulsion of the circle, supported between the two middle sections of the roller, which, in turn, revolve on the axis fixed in the center of the roller. The motion is transmitted to the roller by means of a distinguishing weight, when the web is torn by the motion of the roller. When the web is torn out, the weights roll, and the motion is transmitted to the roller, the web falling off.

12,077. November 18th, 1893. Spinning Machine. - 7. THOMSON, Manchester. Brookand's and flat-top milling machines are used with a drop motion. The motion is obtained by the revulsion of the circle, supported between the two middle sections of the roller, which, in turn, revolve on the axis fixed in the center of the roller. The motion is transmitted to the roller by means of a distinguishing weight, when the web is torn by the motion of the roller. When the web is torn out, the weights roll, and the motion is transmitted to the roller, the web falling off.

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