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PLATES AND PUBLISHING BY P. NICOLL, MANCHESTER.

THE FLAX CROP AND THE LINEN TRADE.

Linen manufacturers are in the happy position of being able to boast that, while shippers of woollens and worsteds in the United Kingdom have suffered a serious diminution in their exports, they have been able to increase their consignments abroad during the half year just ended. For the first six months ending June 30th last, 87,149,100 yards of linens were shipped from the United Kingdom, as against 79,138,000 in 1873; the values being £1,959,280 and £1,847,461 respectively. That these values per yard were in 1873, as against 1874, for the previous period. If flax had been dearer, this reduction of nearly a third of a penny per yard would have given a significant good. Fortunately, however, the returns show that the average value of flax imports this year is less than that of 1871, the official figures indicating an average of £3 4s. per ton for the tonnage against £3 11s. 4d. last year; the quantities being 56,000 and 51,670 tons respectively. yarn averages are also lower, 17s. 6d. and 18s. 9d. per yard, representing the values in 1873 and 1874, the experts having increased by over 10 per cent. For the twelve months ending June 30th the results are not so satisfactory as those for the half-year. Speaking of piece-goods values only, we find from the Flax Supply Association’s figures that, during the year ending with the 30th ult., shipments were valued at £5,371,843, as against £5,371,240, a decline of 0.1 per cent. On the whole, these figures cannot be regarded as discouraging. Linen manufacturers, it will be seen, have been able to increase the sales abroad during the half-year, as compared with that preceding. This is a result of which firms in other trades would have been very glad to show. The United States and the Foreign West Indies—the two most important markets for our linens—showed a large increase in consumption, and although Mexico and Brazil have fallen off, the Colombian Federation has increased its purchases from 211,700 to 291,500 yards. South America is not yet able to resume its former position as a buyer of British and Irish goods. With reference to jute goods, the decline in shipments for the six months is shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1872</td>
<td>17,717,000</td>
</tr>
<tr>
<td>1873</td>
<td>17,717,000</td>
</tr>
</tbody>
</table>

The decline in this instance may be accounted for by the increased prices of raw material—a difficulty which has been removed with the approach of the new crop.

Colchester Says.

On Thursday and Friday in next week the Huguenot Society proposes to hold its summer conference at Colchester, carrying out, as far as it is possible in the limited time, the programme of drives and excursions, meetings and discussions, refreshments—mental and material—and other mild delights common to such occasions, but especially appreciated in view of which can be cordially approved. The intent and place of celebration are peculiarly in keeping. Those who are proud, and with such excellent reason, of their direct descent from the industrious and skilled Huguenot families who fled this country in this country open refuge from religious persecution in the sixteenth and seventeenth centuries, could have found few more suitable places in which to commemorate the event than the ancient, large, handsome, and populous town "—as Colchester was once described—which was so greatly indebted for its prosperity to the textile trade, either instituted or greatly developed by the immigrants. There is the testimony of old Thomas Fuller in his "Church History of Great Britain" that Colchester "owed the making of sarsies and segres, through the settlement of some of the artificers coaxed over from the Netherlands by the promises and per- sons of agents of Edward the Third; and this statement is, for a wonder, ascribed by mistake in the admirable volume upon "The Huguenots in England and Ireland," by Dr. Smiles, to the latter expatriation of Protestants after the fall of Antwerp. But even at the first of these dates there is no reason to suppose that Colchester was entirely destitute of textile manufactures. In 1391 there were only about nine towns in the Kingdom that exceeded it in importance, although it only paid poll-tax upon 1,215 heads. In 1418, the town had a clear view of the domestic and industrial circumstances of these days of long ago. The town in trade and household grandeur and wealth were estimated together at £3 17s. 10d. The stock of the only mercer in the town, consisting of a piece of woolen cloth, some silk and fine linen, flannel, silk gloves, cloth, leather purses, and needlework, was valued at £3 6s. 7d., and his "plenishing," as the Scotch would say, at another £6 1s. 9d. Less attractive life, the contemplation of a good start. On a fivewound note may now be added, although there were, of course, no five-pound notes in those times, that amount represented a considerable sum at that period; but, making all allowance for the difference in the value of money then and now, the particular disgust any idea of the twenty-one centuries. They are not twenty-nine trades carried on in Colchester in 1821 may be found the dyer, the fuller, and the weaver, and the woolen drapers, the woolen cloth and the linen and worsted and leather trade. The Brickmakers were also there in the trade of the Huguenot strangers settled there in Elizabeth’s reign. In 1622 "Colchester hays, perambulations, cheancies, and some other sorts of Norwich stuffs . . . the honour of a public seal, by which to be bought and sold here and beyond sea, as if it were upon the public faith of England; and wherein such seal is affixed to any commodity, I would desire the commodity should be exactly made to the institution, and always kept to its certain length, breadth, and goodness." Better evidence than this as to the commercial standing of Colchester could not be desired, and the "1620 Wallons and other persons of foreign parentage . . . resident in the town in 1609, had evidently made their mark there. It had become the heart of a busy manufacturing district, with many thriving villages round about dependent upon it, and in 1660 the sub- standing of an establishment of an important nature was paid to its fabrics. Another Act, of 1775, setting aside a restrictive bye-law of the Corporation, which would have confined the
privilege of the weaving trade to those who had served apprenticeship to it, so was not quite so complimentary, but was still expressive of prosperity.

In 1544, there were about 5,700 persons engaged in the industry; the number of spindles in the town was about 37,000. The estimated annual value of the trade was £10,000.

The happy comparison by Fuller in his "Worthies of England," which he likened Essex to, was described by Rathshe—she layeth her hand to the spindle, and her hands doth twist, "continued applicable to a comparatively recent date. But the course of textile empire has since taken its way, not westward, but northward, and, for one notable exception, an account of Essex textiles is a counterpart of the famous chapter on the snakes of Iceland. But this unavowedly slight sketch of Hugenot influence, in a typical instance, upon English manufacture, may be commended to the Fellows and Council of the Huguenot Society, with the hope that they will hold fast the traditions which so closely connect their antecedents with the growth and prosperity of their country. Some of the transactions or proceedings of the Society might, with advantage, be deviated to the history of Huguenots, some of whom are included especially; and it would be a graceful and appropriate recognition of what will no doubt be a pleasant visit, if one of the papers to be read on Thursday or Friday next shall be devoted to the bygone glories of Colchester textiles in fuller measure than has been possible in these columns.

THE TRADE OF CALAIS.

Calais affairs are of special interest to one section of our readers—those engaged in the lace trade—and to others also the trade of the energetic French town is more than passing interest. The course of the staple industry of the centre has been traced pretty fully during the past twelve months in our columns, and Conul Bonham's report for 1857 contains therefore very little information that has not already appeared in The Textile Mercury. Of the lace trade of the town, he says that during the year there was no improvement—that it was worse than usual. The short time last year trade was no doubt better, narrow frocques, especially fine goods, selling well. In the autumn, trade was dull, but towards the end of the year American buyers came earlier than usual, and gave a few orders. Hopes were then entertained, and apparently with reason, that the bottom had been reached. Great efforts had been made by the trade, especially by some of the large manufacturers, who went to great expense in producing novelties, believing that the tide had turned, that lace would come into fashion, and the demand in the early part of this year would be good. Their hopes have not been realised, and though some of those producing the higher-class silk lace goods have done fairly well, business in general has been very bad and instead. The dispute between employers and workmen in October, 1859, is said by some to have had a good result in levelling the scale of wages to a certain extent, and no doubt every possible device has been resorted to for the purpose of reducing expenses. Some of the workmen, it is stated, have attempted to have changed the trade by turning out interior goods. This is a statement that need not be regarded too seriously; for needy-makers everywhere must, and for inferior goods they will in all probability be very hard to compete on reasonable prices. Mr. Bonham says that the competition is very great, the number of machines at Calais having greatly increased. This is true, if new. He adds that Caudry has now become a great place for lace making, much machinery having been put up there, and a large number of persons being employed. Not only have the actual number of machines been increased, but such improvements have been introduced that a machine is capable of being made at nearly the same expense, much more lace than formerly. Consequently the capabilities of this part of the producing lace have so largely increased that, for the existing machinery, a full work for a former machine and lace would have to be immense; and it must be borne in mind that lace is produced in other places besides the north of France, notably at Nantong, the original seat of the trade, from whence it was brought to Calais. Nantong certainly competes successfully in curtains and cotton laces generally, though Calais has so far always preserved its pre-eminence, especially in the more expensive kinds.

The Consul is told by a gentleman who is in a position to form a sound judgment, that what in his opinion has chiefly interfered with the success of the trade this season has, been, firstly, the large and cheap production of cotton lace in Nantong; and, secondly, the beautiful new articles in guipure laces, and others in silk and lace from Saxony, has brought out, and which have had an unprecedented success. These articles have taken the place of Chantilly laces, for which class of goods manufacturors had made large and extensive preparations. It is no doubt true that the tide of prosperity in Calais has for the moment received a check, but it is difficult to say whether the enterprise with which the manufacturers of the town are deemed to remain under a commercial cloud for long. At the same time it is satisfactory to find that it is not at Nantong and Chantilly, and short articles, and if we are to believe Mr. Bonham, trade.there has been extremely good. With this assertion, however, we are not disposed to agree. Nottingham is not so badly off as it was a few seasons ago; but things are not so rosy there as our Calais Consul suggests. It would be of interest to know what amount of lace Calais shipped last year. Unfortunately, however, the only entry we have of such goods are probably included, is that relating to "tissues, various." Such a classification is course perfectly useless to those manufacturers in this country for which credit Mr. Bonham's report is apparently written.

THE TEXTILE RESOURCES OF PERSIA.

It is becoming impressed upon the public mind of this country that if England has to maintain its position in the world of commerce and industry, the best efforts must be made not only to maintain our position in neutral markets, but to improve it wherever possible. Beyond this it is equally important that we strain every nerve and use all force in the way of further developing those that have only hitherto been partially worked, and in the acquisition of new ones. Perhaps one of the most important of these is India, which has begun of late to attract a good deal of attention. It is unquestionable that much more use might be made of this country than has hitherto been the case in the way of manufacturing raw materials, of which it produces many available for the textile trades, and almost without exception all of them are capable of being greatly extended. The French Minister in Persia, M. de Ballotay, has just sent home a very interesting report upon the natural products of the country. This is an evidence of how keenly our neighbours are prospecting for openings for the extension of trade and outlets for their manufactories. The writer says:—

There are found to be in Persia not only the products of the temperate, but also of the high central plains, the mean altitude of which is 1,200 metres, and stretches of desert land alongside the Gulf of Persia. The climate is very hot, the winter often severely cold, and rain rare. The low coast stretches for 600 feet along the Caspian Sea, but is narrow and are cultivated: tobacco, coffee, and numerous tropical plants. On the borders of the Persian Gulf, on the southern coast, the climate is much colder, and the vegetation is the palm. Cotton grows everywhere, and linseed also to be forgotten. At Baku, rice, hemp, oil, silk, flax, fruits, gums, butter, sheep, and mules, all indicate the agricultural capabilities of the country, and shows that with the infusion of a little more enterprise, which would arise from more frequent intercourse with Europeans, and especially with Persia, in the future, there is a new field for the employment of the community, there is the promise of a considerable increase of trade, which it would be folly on the part of this country to neglect.

SILK AND COTTON CULTURE IN PERSIA.

The writer concludes:—

Since the commencement of the 17th century, silk and cotton culture in Persia, to which the present time, may be considered as the chief product of the country. The exportation of silk for 20 years, by the end of which time this industry has been losing its importance, so remedially having been found for this state of things. The most successful is the introduction of the cotton culture, which yields 7,336,000 of silk. The markets are at Meshhed, and to Moghitar. The quality is generally good, the silk is made into shawls from 76 to 78 centims in length; the price of it at Seistan is from 3 to 15 mohams, and in the shawls, or from 90 to 98 extra.

A portion of this silk goes to Russia, the greater quantity being consumed in the port. The Caspian province gives Gillian, 200,815 kols; and Musandem, 13,905. This is the silk in Persia; it sells from 50 to 103 per yard; the prices, from 90 to 95 cens., and the price from 74 to 85. A portion of this silk goes to Russia with that of Gillian. Kalak is the great market for these two provinces. The central districts show only the moderate production of 4,905,000, and the others which such goods are probably included, is that relating to "tissues, various." Such a classification is course perfectly useless to those manufacturers in this country for which credit Mr. Bonham's report is apparently written.

The quantity of cotton exported is estimated at more than 3,000,000 kols. It is grown in the districts of Kermans, Kerman, Kasan, and, and Kemman. The products of the south go to Russia, where it is commercialised in good quality, and, although the fibre is a little short it may be estimated at 25 per cent. above the price of the best cotton. We greatly doubt this estimate of value. The quantity named is not a great amount to export, being only about the equivalent of 12,000,000 to 15,000,000, and the quality is good, and so much spared of the crop from domestic consumption for export, in a proof that it needs little stimulus to increase the quantity. It may be sold at such a price, however, that the additional heavy charges of overland transit to the Russian centres of manufacture, and can compete with the water-borne cotton
of India, Egypt, and America, it must be sold at a price that will pay to place it in the Las- 
cashmere market, and make it worth somebody's while to do it.

PERSIAN WOOL AND CARPETs.

Wool is an article invariably associated with Eastern countries and the lives of their pastoral peoples. Of this article the writer named in the
preceding notes says—

The richest districts to regale wool are Khorassan and Kerman. In 1858, 1,200,000 bales were exported through Behar, Bushire, and Muscat, and
in weight to over 3,000,000 kilos. About one-third is sent to Bombay, the remainder to Basrah, where it is mixed with Turkish wool, and then sent to
Europe, chiefly to Marseilles.

The export is of about the same weight as that of cotton. It may be questioned whether the cattle country can be greatly stimulated, or whether it will ever be possible for Persia to become in any sense a successful competitor with the Australian, New Zealand, Cape, and South American wool-producing countries, seeing as they are by great capital and the highest science in pasteurology. They will, however, furnish a good manufactory for Persian wools,

Dubt doubt they will gladly dispose of for Western manufacturing. Of course wool has always been an article of manufacture amongst nomadic peoples, and domestic manufacture of Persia, especially of rugs and carpets, has long been

The City Hall, where the municipal departments are located, is the largest structure in the United States. This handsome building is not as yet
completed, but up to date the expenditure has reached $5,000,000, and it is estimated that another $1,000,000 is necessary to finish the structure, which is of white marble with lavish ornamentation. It is now proposed to erect a general Exchange in the same

wherein all commercial and stock exchanges will be located. The structure will be on

large scale, and will cost some hundreds of thousands of pounds.

SAD RESULT OF A STRIKE Rпотребау.

Our readers will have seen the account of the terrific strike which occurred at Messrs. Carnegie's iron mills, Homestead, near Pitts-

burg, Pennsylvania, last week. The iron trade in the United States is at this moment depressed, and this large firm, with an invested capital of over $5,000,000 sterling and employing over 40,000 hands, deemed it necessary to make a reduction of wages, to which the workers would not agree.

The consequence was a rupture in their industrial relations: the workers either left their own ancered or were locked out by the employers. From the account given it is not quite clear by what name we are to characterise the stoppage, but this point is quite immaterial; what is clear is that in both cases they were within their rights. But now comes the crucial point on which the conflict arose, and in which the workers were absolutely in the right. Having left their work or been dismissed, their duty in their own interest was to have sought work else-

where at more satisfactory terms to themselves than they were offered. They, in their own interest, proceeded to exercise their right of

engaging another complement of men who were willing to accept the wages demanded. These new men were also quite within their right in accept-

ing the engagement. But here the old employes step in, attack the rights of both, and by violence determine to prevent their exercise. To protect the men the firm called in the aid of a large detachment of "Pinkerton's men." This is a sort of private army, called a detective agency, which is open to engagement by anyone in

the States who can pay for the services of the organization. It is an Ingenium in Ingenium, and constitutes a force of great good, if used, where such services are required by anybody, of the law administration of the State laws of the whole country. The head office of the organization is located in Chicago. These men, who were engaged first, were such as required by anyone in the States who can pay for the services of the organization. It is an Ingenium in Ingenium, and constitutes a force of great good, if used, where such services are required by anybody, of the law administration of the State laws of the whole country. The head office of the organization is located in Chicago. These men, who were engaged first, were such as

The Commodore of Philadelphia.

Consul-General Booker's report on the trade of New York for 1891 is state news to our readers. The report speaks of the dry goods trade of the city for 1891, as reviewed in our columns about six months ago. Consul Chipper's observations on the trade of Philadelphia, however, of greater interest in some respects, although he gives practically no information about the textile industries of the city. It is true that the principal source of employment for its workers is surprising, as Mr. Chipper's reports in previous years have been very interesting on account of the amount of information contained about the Philadelphia textile trades.

The Consul would earn the thanks of many of those interested in this branch if he would on future occasions repair the omission made this year. The city of Philadelphia has within the past few years made rapid strides in the way of improvements, increased trade, industries, and commercial facilities, and has also become one of the chief financial centers of the country. The future of the port and city is viewed so far as continent

THE TEXTILE MERCURY.
This is an instance of speed which is no doubt often seen in connection with goods that are shipped from ports on the Atlantic seaboard. The manner, however, having been personally brought to our notice, reference to it in detail may be of interest. In this case, the goods were shipped from New York to Liverpool, and the ship, the "Adriatic," owned by the American line of steamers, carried them from New York to Liverpool, and the voyage was made in the shortest possible time.

The ship was equipped with the latest improvements in the way of machinery and accommodation, and was considered by her owners to be one of the finest ships afloat. The arrangements for the comfort of the passengers were of the most approved kind, and the ship was well calculated to meet the demands of those who travel by sea. The voyage was made in the shortest possible time, and the passengers were carried to Liverpool without any inconvenience.

THE CHICAGO EXHIBITION AND ENGLISH MANUFACTURERS.

It will be remembered that at a very early period in the history of the Exhibition project we put forth our views as to its utter worthlessness, under the conditions then and now existing, to English manufacturers. We pointed out that the only advantage that could result to English manufacturers by exhibiting would arise from utilising the Exhibition as an opportunity of giving the people of the States an object-lesson of a thoroughly demonstrative character regarding the extent to which they were being taxed for the benefit of their own manufacturers. This we pointed out could be done by placing every exhibit its selling-place in this country, and its selling price in the States when the duties and profits of the traders had been put upon it. This might, we said, do something in the way of the general public and thus remove the tariff, with benefit to both the American people and English manufacturers. This course of action would be highly acceptable to English commercial and political circles, and the Exhibition Commissioners were interviewed upon it. It was also taken up very strongly by the English Chambers of Commerce in the manufacturing centres, the
result being that the promoters of the exhibition soon saw that if they had to expect any support whatever from English manufacturers they would have to come at their own point. It was therefore gradually and officially announced by the English commissioners through Sir Henry Truman Wood, their secretary. The English then made a subgrant of £5,000 towards the cost of an adequate representation of the British industries at Chicago.

Notwithstanding both inducements, however, and the raising of the grant to £10,000, so that exhibitors might be relieved from all charges for space, the proposal to take an important part in the display has been, and we think very properly, cold-shouldered. It is not receiving a tithe of the support anticipated on the other side, and for which space provision has been made. The prospects were so gloomy regarding it, that a special deputation visited Manchester and other industrial centres, with a view to stimulating interest in it, and inducing manufacturers to come forward and exhibit. The deputation had very little effect, as the reputation was considerably blemished, and got the advantage of listening to some very plain speech from the manufacturers. The main point was drawn attention to the concession that had been made in favour of foreign exhibitors in the matter of paying these prices, and advised all persons who might be interested in this inducement, be led to exhibit, to take the matter into consideration to see that the concession was a reality, and not a sham, and to have a guarantee that it should end before the period of the Exhibition.

That this was not an unnecessary caution very soon after became exceedingly obvious, by the instance of an official circular from the Board of Trade, distinguishing in relation to this point that exhibitors would be permitted to state upon their goods the cost of production, and the price at which they could be sold in the States when the duty had been paid. This is obviously a very different thing indeed from what had been demanded, and to this fact we promptly drew attention a few weeks ago. The world is getting a little bit awake to Yankee "smartness," and, in minute, with a little more experience, will perhaps become widely so.

This has not run for sometime, and, has, we believe, seriously injured what small prospect there ever was of inducing English manufacturers to exhibit. This has been discovered and well exemplified by Sir Henry Wood in his efforts to get exhibitors. This was no doubt one of the chief, if not the principal, reasons of his visit to the States, for which he left this country a few weeks ago, and to get the obnoxious circular recalled. In this he appears to have been successful, as we may credit a telegram from New York despatched on Tuesday. This telegram reproduces. It is as follows:

**NEW YORK, TUESDAY.**

Sir Henry Truman Wood, secretary of the British Royal Commission for the Chicago World's Fair, and Mr. C. E. Weston, the Cyrus Committee, the Exhibition, will sail for England to-morrow. The result of Sir Henry Wood's visit to the Exhibition has been an increase in the British sections in all the great governmental buildings of the Fair. During Sir Henry's first interview with Director-General Davis he called attention to the circular circular which was being circulated by the British section, and to the effect that it was in his opinion contrary to the Declaration of London and to the British Government. Director-General Davis was greatly annoyed at the position of the British section, but is quite willing to accommodate the British exhibitors. He stated that so many manufacturers would be willing to expose the business success of the goods and that the result would be more than a million or would be sold in America and the cost of market and the expense are subjoined to this of the British exhibitors. He stated that so many manufacturers would be willing to expose the business success of the goods and that the result would be more than a million or would be sold in America and the cost of market and the expense are subjoined to this of the British exhibitors. He stated that so many manufacturers would be willing to expose the business success of the goods and that the result would be more than a million or would be sold in America and the cost of market and the expense are subjoined to this of the British exhibitors.

**Foreign Correspondence.**

**TEXTILE MATTERS IN THE UNITED STATES.**

**BOSTON, JULY 4TH.**

**The Trade of Providence.**

During the year 1891, 205,586 bales of cotton were entered at Providence Market, against 204,190 bales in 1890. This may not show an increase in cotton manufacturing, as the low price of cotton fed manufacturers to buy largely in accordance with requirements. It was believed that prices would not decline further. The increase in sales was in the finer grades. The dividends of New England mills averaged about one-third less than in 1890, and the dividends of 1890 were twelve to thirty per cent. The story of cotton manufacturing in New England.

**PRINT CLOTHING.**

At Fall River the reported sales for the week ending June 25, 1892, were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 x 64 cloth, spots at 12½c.</td>
<td>3,000</td>
<td>$2,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>64 x 64 cloth, to be made</td>
<td>6,000</td>
<td>$9,000</td>
<td></td>
</tr>
<tr>
<td>64 x 64 irregular cloth</td>
<td>1,000</td>
<td>$2,000</td>
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Total | $23,000 |

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<td></td>
</tr>
</tbody>
</table>

Total | $23,000 |

The contract sales at Fall River were: For July delivery, 35,000 pieces; August, 102,000 pieces; September, 75,000 pieces; October, 17,000 pieces; November, 12,000 pieces; December, 8,000 pieces.

The closing quotations at the several centres Saturday, June 25, 1892, as compared with the corresponding week in the previous two years, were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall River manufacturers</td>
<td>50,000</td>
<td>$25,000</td>
<td></td>
</tr>
<tr>
<td>Fall River speculators</td>
<td>50,000</td>
<td>$25,000</td>
<td></td>
</tr>
<tr>
<td>Providence manufacturers</td>
<td>350,000</td>
<td>$350,000</td>
<td></td>
</tr>
<tr>
<td>Providence speculators</td>
<td>18,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total | $409,000 |

**xFFFFFF**
Weller, and Co., which has held for the past six years and up to the last.

The hosiery trade is quiet. Spring goods have been ordered in large quantities by Western houses. With reference to foreign hosiery, there have been some repeat orders for autumn goods, and prospects have improved during the past four weeks.

A new curtain fabric, by the Micheline process, has appeared in Philadelphia, and is being shipped to buyers of fall goods. It is said the patterns are extremely beautiful, while the novelty of the material is such as to command unusual attention among those in quest of attractive goods. The company which controls this novelty have also introduced a quilt made of the same style of fabric. Both the quilt and curtain come in a variety of patterns, and many different designs in colour and decoration work.

The Pioneer Silk Company of Paterson, which employs about 200 hands, is making a few velvets, but it is principally engaged in the production of the cheaper grades of silk pluses for upholsterers and box makers. The fact that velvets are being manufactured by this firm, however, of some significance to Manchester men. Can, I do not think that a long period will elapse before this country is producing much larger quantities of velvets than it is to-day.

The difficulties to Americans are not insuperable.

MACHINERY NOTES.

At a recent meeting of the directors of the Portland (Me.) Plun Mill Corporation, Mr. Ackroyd was instructed to go to Europe to buy more machinery. He will leave on the City of Paris last Wednesday. In two or three weeks President Robie or Treasurer Tilton will follow him.

It is said that German and French machinists have been making enquiries about the "Impregnable" and "Wollow Spindle" made by Taylor, Shaw, and Cocker, silk machinists, of Paterson.

Reviews of Books.

The KINDER PRINTING CO.: ITS STRANGE HISTORY. By "Kinder," Manchester: Sty Office.

This is a pamphlet unique in its way. It deals with the origin, growth, and decay of one of the best-known calico-printing concerns in the world, although many of its pages relate to personal matters, on which we cannot be supposed to comment. There is enough information of a fascinating portion of the work to repay outsiders for the labour of perusal. As a picture of life behind the scenes in a printing works, the book is specially worthy of notice.

There are many chatty details, too, of a friendly character, regarding well-known print men, both at the Manchester and at the works of various firms, with some reminiscences of a school of print buyers, such as old Captain Farr, of Henry's (whose hats must, we fancy, be especially made for him), now rapidly passing away. As a sample of the class of information given by the author, we reproduce a cost sheet which is said to represent prices paid at the Kinder Works in 1853—

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>$0.00</td>
<td>Denim</td>
<td>0.09</td>
</tr>
<tr>
<td>Dark</td>
<td></td>
<td>Starch and blue</td>
<td>0.25</td>
</tr>
</tbody>
</table>

THE TEXTILE MERCURY.

THE ANALYSIS OF PATTERN.—XIV.

CHANGING THE WEIGHTS OF CLOTHS. (Continued from page 385.)

An example will perhaps render the demonstration of the underlying principles more easy. Therefore, suppose a cloth is to be made to the following particulars: Warp all 36s. worsted 45s. threads per inch; weft 30s. worsted 64s. picked per inch; and a cloth 1-6 is heavier required, then, evidently, 6-6 must be made into 7-6, or the weight must be increased as 67. The correct procedure is as follows:

As 6-6 : 67 = 36 : 35 = 26 counts per inch; or

As 7-6 : 67 = 26 : 36 = 26 counts required;

and since the sett of a cloth must always be varied according to the square root of the counts, or diameter of the yarn employed.

As 56 : 25 = 64 : 55 threads per inch; or

As 7-6 : 67 = 26 : 35 = 35 threads per inch.

This latter procedure—the reduction instead of increase of the threads per inch for extra weight, seems strange; but the following explanation will, probably, clear up the matter.

10's

As already intimated, the counts of the cloth must not be changed in direct proportion, or a perfect cloth cannot be formed. Since, however, the counts are changed, a relatively similar change must be made in the ends per inch to preserve a perfect structure.

Now changing in the proportion as 7-6 : 67 = 6-6 > 6-6 greater is a change than changing in the proportion as 7-6 : 67.

As 7-6 : 67 = 40 : 50 = 40 : 50 and


FIG. 20.

The following formulae may occur as follows:

As 66 : 111 = 36 : 55 = 36 counts required, and

As 67 : 111 = 35 : 36 = 35 threads per inch for the cloth 1-6 heavier.

For the 3-4 and 4-4 twill, however, a further calculation is necessary according to the relative number of intersections in the respective weaves.

Now, 8 threads of 2-4 and 4-4 twill yield 12 diameters, while 8 threads of 4-4 and 4-4 twill only yield 10 diameters; therefore, to change from the 2-4 and 4-4 twills into the 3-4 and 4-4 twills—1135 ends 0 12 12 80 80 80 80 80 80 and 8 repeats of the 4-4 and 4-4 twill are made.

As 67 : 111 = 35 : 36 = 35 threads per inch.

But this is an increase of weight in the proportion as 35 : 36, therefore, the weight must be reduced in this proportion.

As 7-6 : 67 = 49 : 69 = 49 : 69 and

As 7-6 : 67 = 34 : 39 = 34 counts and

As 7-6 : 67 = 33 : 34 = 33 threads per inch.

Therefore, a cloth made of 25's yarn with 77 threads per inch, is the heavier than a cloth made with the same yarns 64 threads per inch, while the perfection of structure is preserved even in changing from the 2-4 to the 4-4 and 4-4 twill. It should be noted that the return to the 25's counts is merely a coincidence. In decreasing the weight, the same principles apply, in decreasing a weight of one-fifth the proportion will be

As 5-6 : 49 = 67 : 34 = 34 counts and

As 5-6 : 49 = 77 threads per inch.

The weights of finished cloths.

The treatment of the relationship between the cloth woven and the cloth finished is usually ignored, or is treated in a very brief manner in most textbooks; and since we have

LIST VII.

<table>
<thead>
<tr>
<th>Yarn</th>
<th>No. of Yds.</th>
<th>Greasy Weight, in Grains</th>
<th>Average Greasy Weight, in Grains</th>
<th>Average Scoured Weight, in Grains</th>
<th>Loss per lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grey</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>2. Grey</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>3. Grey</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>4. Grey</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>5. Dark Brown</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>6. Dark Brown</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>7. Dark Brown</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>8. Dark Brown</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
<tr>
<td>9. Dark Brown</td>
<td>32/34</td>
<td>166.5</td>
<td>166.4</td>
<td>166.54</td>
<td>159.99</td>
</tr>
</tbody>
</table>

* The colour is stated, since some colours (such as indigo) are liable to affect the results.
been at some trouble in collecting the following particulars, and, for readers, may prove useful to
This easy matter to calculate
the weight of a cloth as woven, but it is quite
another matter to estimate the weight per yard
when finished. The chief causes of variation
are loss of oil in scouring; loss of fibre in mill-
ling; increase of weight per yard owing to con-
traction in length, which contraction may be
varied, within certain limits, at will; and lastly,
in the felling of put into cotton and cloths.

The loss of cloth in scouring, must first be
considered. Practically, all wool yarns are
spun with oil, that when a yarn is delivered to
a certain count, it is only that count so long as
the oil remains in it; therefore, it will evidently
be advantageous to ascertain the probable loss
in scouring, by reeling, say, 100 yards of the
cloth, accurately weighing, scouring with soap
at about 90° F., drying, and leaving, say, a
couple of days to regain the natural moisture,
and weighing again to estimate the loss.

A series of such experiments are shown in
List VII.

A curious point is here revealed, viz., that a
marked difference frequently occurs in the
weight of the same yarn in the same state
weighed at different times. These variances have
been very carefully tested, and may be taken
as an indication of what actually occurs in prac-
tice, the weather materially influencing the
weight of the wool; or more correctly the
amount of moisture in the wool. Another
point that should be carefully noted is the heat
at which the yarns are scourd. This should
not exceed 90° F., and guess-work will not do.
A pocket thermometer may be purchased for
about 15s., which will answer every requirement
for exact work, and should always be used
in testing the heat of the bath.

It will be observed that only one example of
wooden yarn is given, and not even one of
cotton. We have not gone further into this
matter, simply because the conditions will vary
so much, owing to the oil in the case of wooden
and filling in the case of cotton, that any further
particulars than those given would really be of
little service. The analyst should carefully

\[ \text{NEW DESIGNS.} \]

\section*{COTTON DRESS GOODS, ETC.}

Spots are very much in vogue at present,
especially white spots on a dark-blue ground.
The simplest of all, on satinette, are pretty and
effective; for whether these spots be close
together or far apart, large in size or small,
they always stand out well on a satin material.
The sea-side costumes made in this style from
all-cotton warp and weft are generally white
spots on a cardinal-red ground; cream, red,
and blue are favourites.

For tennis dresses, cotton canvas cloths still
retain their popularity; they are really much
cooler for hot weather than any other washing
material yet produced. Mainly as a colour in
coming very much to the front, especially as a
foundation for gauze fabrics of pure white or
pale blue.

new design A will be found useful, not only as a
species of ornamentation for dress and shirting
goods, but by an increase of warp and weft
would be very effective as a ladies' vesting
pattern. It is 30 shafts, 30 to the round,
straight-over draft, and may be made a warp
or weft figure. The pegging plan gives the
embossed square as well, which with slight
advantage be of some height materials—
either spun silk or linen. Warp 30's twist, in
30 deniers per inch, three in a dent; weft 24's
quantity of picks to be regulated by quality of
cloth required; less warp yarns for very light
fabrics. In fact, as it is a suggestive design,
very much may be left for consideration of
materials and quantity. All light ground for
warp; dark dyes, such as cream ground,
purple or brown weft, etc.

Design B will give a shaded stripe, the weft
crossings breaking up the colours in the stripe
from a perpendicular line, but at the same
time giving each its proper effect in varied
groups. Warp 30's twist, 40 deniers per inch,
two in a dent; weft 50 picks per inch of 30's
cotton or spun silk; 24 shafts, 24 to the round,
in straight-over draft. We give a pattern from
which any number may be formed by rearrange-
ment of colour and increase or decrease in size
of stripes.

Warp pattern: 15 brown, 3 white, 15 brown,
3 white, 15 brown, 2 white, 15 royal blue, 3
white, 15 blue, 3 white, 15 blue, 3 white,
2 brown, 2 blue, 2 brown, 2 blue;
and repeat first 15 of brown; weft all
white.
Machinery and Appliances.

IMPROVED DOFFING ARRANGEMENT FOR REELS.

Messrs. Brooks & Doxey (late Samuel Brooks), Union Ironworks, West Gorton, Manchester.

Yarn reeling, for home and export combined, is a not inconsiderable branch of the cotton trade. There are straight-reeled and cross-reeled bundles, and long and short bundles; there are end of the reel. Various arrangements have been invented to ensure freedom from this risk, and herewith we have pleasure in drawing attention to the latest, now being introduced to the trade by Messrs. Brooks and Doxey (late Samuel Brooks), Union Ironworks, West Gorton, Manchester.

The new arrangement consists of a projection or standard cast upon the frame of the machine, which contains a horizontal stud or pin, upon which are mounted two curved levers, one the readjusting lever, and the other the doffing lever. The first-named is fixed upon the stud by a set screw, while the second is loose. Upon when the lever is lifted to elevate the reel for the purpose of doffing. In this illustration the machine is shown with all the parts in position as when at work. When the banks have been completed, and are ready for doffing, the reel is made to collapse, the banks are thrown to its end, and thrown into the curve of the levers of which we have been speaking, where they hang down, as shown in Fig. 2. The reeler next draws back the doffing lever, which brings its lower projection into contact with, and lifts the reel into position for doffing. Upon the doffing lever hangs a latch which engages with a flanged stud bolted to the framing. The action just referred to precess back a detent in the fulcrum, which supports the first lever to the action of a spring, and this throws it back into the position alongside the doffing lever as shown, thus opening a way for the removal of the banks.

This position is fully seen in Fig. 2. When the banks have been removed, and it is desired to resume work, the first lever is pushed up into its former position, and thereby releases the latch on the doffing lever, which then falls away to its working position, the bush upon the end of reel shaft drops into its first seat. The position is now as it was at first, as seen in Fig. 1. This performance is of course gone through in much less time than it takes to describe either by pen or voice. To ensure freedom from oil stains the pivot of the reel shaft at the doffing side is bushed, as previously stated. The outward extremity of the bush which is closed, contains a small chamber for the reception of any excess of oil that may be used for lubricating, and there is a channel set inside its surface to perform the same service of preventing the emission of any superfluous oil that might find its way upon the external surface of the bush, and so lead to stains. These means seem effectually to prevent all possibility of such occurring.

The machine is made for winding both from cups and ring bobbins. Fig. 1 shows the construction for cups, and Figs. 2 and 3 for bobbins. The workmanship and material employed in construction are of the best, and in keeping with that of every machine that issues from this firm's establishments. The makers will be pleased to show the machine in operation, and afford any further information that may be desired, on application.

IMPROVED METHOD OF DRIVING CONE DRUMS.

Messrs. Dobson and Barlow, Limited, Bolton.

The driving of the bobbins of the shiver, intermediate, and roving frames of a cotton mill by means of the cone drums has long been regarded in many respects as unsatisfactory. The fact that the drums are coned and not parallel is one element of the trouble, because when driven by a single strap it is impossible to get the working surface of the strap to grip the lesser circumference of the periphery of the cone upon which it is working as firmly as it does the larger one. The strap has therefore to perform its task really with little more than one edge, instead of its whole breadth. It is thus unduly strained and is liable to slip—a contingency that often occurs. The defect is not removed by the presence of the second cone; it is only to a limited extent neutralised, and this by putting a similar strap on the lower cone, the first was from above, upon the second edge. The line of greatest strain upon the strap when thus working is a diagonal one across its breadth, and extending from the highest part to the lowest part of its contact with the cones. These, it will be obvious, are not conditions that even approximate to theoretic perfection. A second defect is
their arrangement over one another, and the limited space in which they have to work within the frame of each machine. They are thus brought so closely together that only a very short strap can be used, which must necessarily be kept very tight, be greatly strained, and work under much disadvantage. As is well known, the wear and tear of these straps is excessive over that normally occurring with other straps. Many devices have been resorted to in order to obviate these difficulties, but as usual in these matters there is something left to be overcome by others following after.

all the differentiation of the driving has to be obtained in this method from one cone, it follows that the taper must be much greater than, indeed double, that of an ordinary cone, and so is made to yield the same drive as the two cones in the old form. It is, therefore, constructed with a taper of four to one.

As the periphery of the friction pulley is parallel with its axis, and the cone drum has to act as the driver, the difficulty experienced with the ordinary cone and its strap was liable to recur by the drive having to be accomplished by the action of a very narrow ring of the periphery of the cone upon the edge of the driving pulley. This invention is a development upon the old plan, and our practical readers will, we think, be quite as able to appreciate and accurately estimate its value as we are, and this we leave to them to do. Messrs. Dobson and Barlow, Limited, will be pleased to answer any enquires that may be made for further information upon application as above.

**IMPROVED SELF-ADJUSTING BOBBIN RAIL BALANCE.**

**MAKERS: MESSRS. DOBSON AND BARLOW, LIMITED, BOLTON.**

The traverse or bobbin rail of the slubbing, intermediate, and roving frame, which carries the bobbins vertically upward and downward through a space corresponding to the length of the tubes and the size the bobbins have to be made, is naturally of considerable weight, and when loaded with its bobbins becomes heavier by the added weight. To keep this constant movement would naturally absorb a considerable amount of power, and consequently would entail a great cost in providing it. To reduce this requirement the provision of balance weights by one expedient or another was very early resorted to. The rail at different times has had various arrangements for this purpose applied, but we need not review these. The surviving one, and that now in common use, is a fixed weight, about equal to the rail plus its service of empty bobbins. This, as it is well known, is a permanent weight. As the bobbins fill with the material, the balance becomes deranged, attaining its maximum of imperfection when the bobbins are full. Thus there is, with every set of full bobbins produced upon the series of machines to which our remarks apply, a certain excessive expenditure of power—that necessary to move through the traversed space the unbalanced portion of the weight carried. But this is not all. As the bobbins gradually fill, there naturally arises a disturbance of the balanced arrangements previously existing, and this greatly increases the friction upon the rail slides, and consequently consumes more than a corresponding amount of power to overcome it. These defects has it been held desirable to remove.

The invention under our notice is an appliance designed to preserve a perfectly balanced condition of the traverse rail throughout all the changes of weight from empty bobbins to full ones, thus economizing power and diminishing wear and tear. It consists of a balance lever, mounted inside, and parallel to the machine frame. This lever carries a weight, which by means of a screw inside the lever is thrown away from the fulcrum of the lever a short space for the deposition of every layer of the material upon the bobbin. Each movement in this direction, it will be obvious, is in effect the application of more weight to the balance, which is thus preserved. The movement of the screw is obtained from a long threaded rail in connections. When set it is automatic in its action, needing no attention at any time from the operator in charge, as it is readjusted by the same means, the same action, and at the same time, as the cone strap in the ordinary drive, or the cone-friction pulley referred to in another
article, is reset. The appliance is fixed about midway in the length of the machine, and is connected by link chains with the lifting slides of the rail.

It is an improvement in a detail that will, we are confident, commend itself to the judgment of our readers. The makers will be pleased to supply any further information that may be desired.

**IMPROVED ANTI-DEFLECTION GRINDING APPLIANCE FOR REVOLVING FLATS OF CARDING ENGINES.**

**MAKE: MESSRS. DORSON AND BARLOW, LIMITED, BOLTON.**

The amount of attention devoted to the improvement of the carding engine in its different phases is, as our readers are well aware, often expatiated upon in these columns. There is therefore no need to go over this ground again. The subject of our present note is another improvement in grinding appliances, the specific object of which is to overcome the consequences of the deflection of the flat when in its working position. The periphery of the cylinder is rigid enough; but not so the flat, which, as we have often explained, when suspended upon its extremities across the face of the cylinder, from its own weight bends from a true parallel line into a curve towards the latter. The maximum deflection of this curve is in the middle, and if the flat were permitted to work in this condition, it would inevitably make bad work, owing to the impossibility of setting a curve and a straight line, together with their respective parts, equidistant. Many inventions, possessing considerable merits, have already appeared, having for their object the overcoming of this difficulty. Most recent ones have been based upon the principle that to effect this the flat must be ground resting upon its working surface, and there can be no doubt about the correctness of this view. This principle is also adopted in the improvement under notice. The deflection of the flat can hardly be altogether eliminated without making it disproportionately strong and heavy for other requirements, and therefore on all hands it has been deemed desirable that the clothed face of the flat shall be ground down to such an extent that at the position in which deflection takes place, the clothed face shall offer a line to the cylinder perfectly parallel with that across its own periphery.

The grinding apparatus we have now to describe is a modification of that invented and applied by the makers in the Centennial Simplex Card described in these columns some time ago. The modification has been made to enable it to be used in connection with all revolving flat cards, to which it can be applied for a very reasonable cost. Fig. 1 gives a perspective view of the arrangement when in position applied to the card at the taker-in side and just above that roller. Fig. 2 gives a view of the details, only shewing in connection therewith just sufficient of the card itself to render the description comprehensible.

In applying this invention there is attached to the ordinary slide which carries the shaft and bowls upon which the flats travel as they enter upon the flexible bend, an arm D, to which is pivoted a lever B for the reception of the grinding roller as shown. This lever is partially balanced, and is kept up to its work by the helical spring E. The upper surface of this lever forms a curved incline, constituting a cam P. Projected upon the shaft of the flat carrier bowl is a radial or bell-crank lever B, in the pendulum arm of which is a slot or slide, and in this is fitted an intermediate piece C, the upper surface of which is constructed to conform in the most accurate manner to the radius of the flexible bend. The lower surface of this piece has a projection or finger which slides in contact with the incline or cam P. The horizontal arm of the radial lever B has a spring S attached to it, the tendency of which is to keep the pendulum arm in the position in which the grinding of the flat commences. In the arrangement illustrated here, the sliding intermediate piece C is pressed by the cam lever D against the working surface of the flats, which is outwards, the flats in travelling towards the cylinder coming into contact with the grinding roller. There is also upon one end of the intermediate piece C a spring catch having an incline, and shown just to the piece C upon the face of the cam, cause the grinding roller to approach or recede to and from the flat so near and so as to grind in a very accurate manner the bevel desired. When the flat has passed the surface of the grinding roller, the catch incline C comes into contact with the left hand incline T on the cam lever shown in dotted lines. The incline C slides down this, and so disengages the catch, which allows the spring S to return the radial lever B and its attachment to its first position, ready to engage the next flat and begin operations anew.

Attached to the lever B is a small finger, which is arranged and pivoted in such a manner as to ensure the gradual elevation of the grinding roller to the proper position for the reception of the next flat, thus controlling the action of the spring L, which might otherwise throw the roller upwards too sharply.

The cam lever D, to which frequent reference has been made, is constructed in two parts, so as to more readily admit the introduction, adjustment, and withdrawal of the grinding roller when required. When the grinding has been completed the roller can be taken out for use upon another card. If not required for that purpose the mechanism can be thrown out of gear, and the roller left idle.

It will be obvious from this description that the adaptability of this arrangement to all makes of revolving flat cards, and the capability of fixing it either over the taker-in, as we have
become useful as a source of dye-stuffs possessing very valuable properties.

Oxyphlor is so named because it is obtained from purpurin by the action of fused caustic potash. So far it has no technical applications, its dying properties being too weak and poor; but treated as anthraehyos in it might yield useful products.

Quinonoides is obtained by heating allirin with sulphuric acid at a high temperature. In this compound the hydroxyl atoms are evenly distributed between the two benzene rings, and, of course, in positions different from those they occupy in anthraehyos. Although capable of dyeing unmodified fibres, yet, owing to a variety of circumstances, it has met with no applications in the textile colouring arts.

Anthraehyos is capable, like the last, of dyeing mordanted fibres, but the colours it gives are so poor that it cannot be used satisfactorily in liquids; by dissolving in sulphuric acid with the production of differently coloured solutions; by pyrolysis, variously coloured tar, for instance tar with chrome, iron, bismuth, and lead salts; by giving, when dissolved in alkaline solutions, different absorption spectra; by melting at various temperatures; and by other points of difference.

The pentaminoanthraquinones are by no means so well known as the less complicated ones already described. Alizarin cyanine, which dyes chrome-mordanted fibres a fine blue, is one. This is prepared by action of a mixture of Bordeaux fumigating solution, hydrochloric and alcoholic solution, on the dye-carbon. It can be obtained by heating gallic acid with ammonium persulphate and a-cyclic acid and ferric chloride together for a short time; this has dyeing properties, but it is not used for that purpose.

One hexa oxyanthraquinone is known, and has been named oxygallic acid. It is obtained by heating gallic acid with sulphuric acid, and has the formula \( C_9(H_2O)_2CO_3 \). Such dyes, when mordanted with alumina, show that the six hydroxyl groups are equally divided between the two benzene rings. Ruhigallic acid possesses dyeing properties, giving browns with alumina mordants, while with iron mordants blacks are obtained. There is still room for further investigation in the chemistry of the oxyanthraquinones; they are, as a rule, very valuable dye-stuffs, possessing the useful features of being fast to light, soap, acids, and other influences that usually act upon and destroy colours.

DYEING OF LOOSE WOOL.

The efficient dyeing of loose wool is not a matter easily attained. From a chemical point of view it is easy enough; the difficulty is purely mechanical, and in practice, lately taken up, is the necessity of carrying on the operation at the boil. Now if this be done in a simple tub, heated by an open steam pipe, the results are not good even unless the wool be well worked; but the heat of the dye-bath and the working are liable to cause felting, which spoils the wool for spinning; moreover, the steam from the steam pipe is liable to act upon the wool fibre and somewhat deteriorate it in quality. Steam-jacketed dye-pans present some advantages over the direct steam-heated pans, but still they require the wool to be worked, and thus the liability to felt is present. Patent apparatus, like Obermaier's, have been invented and used with fair satisfactory results, but still there is some tendency for unevenness of dyeing and a difficulty in matching-off. Some little time ago a German mechanist invented a dye-vat that has been found to give perfect practice to possibilities. In shape it is globular, with a prolongation at the bottom, into which is placed a coil for open steam. This is separated from the main body of the boiler by means of a perforated plate, which prevents the plate from coming into contact with the loose wool and so deteriorating it. Besides this, the main portion of the boiler is jacketed so that if necessary the dye-vat may be heated indirectly. There is no trouble in matching off shades if such a procedure is required.

HENRI SCHNEIDER, in the Chemiker Zeitung, subjects Grawitz's latest patents for the dyeing of aniline black on textiles to a scathing criticism, with a view to show that what Grawitz now proposes to do has been done many years ago, and he says that the process given in the patents will not produce a black.

The back of the chromium tree contains about 7% of tannin, while the wood contains a little more than this. Tramline in one sample found \( 7.13 \) and \( 7.35 \)%, respectively, and from other experiments he came to the conclusion that the tannin principle in each was identical; so that the cotton manufacturer's art complete body, in making chestnut extract from both the bark and the wood in one operation. A green dye-stuff of a basic character, allied to the rosamine series, is prepared according to a German patent by taking a body known as tetramethyl diamine, and acting on this with boric acid and sulphuric acid, then throwing the mixture on ice,
and afterwards diluting with water. Caustic soda and sodium acetate are added to the solution to obtain the linen base of the new colouring matter. This linen base is now oxidised by the use of red lead, when the new green colouring matter is formed. This has been found best to send to dyers in the form of a paste.

Alice Benecke is, as most colour chemists are, a deceiver of alizarin. It is also alizarin cyanine. Now alizarin colours are imported free of duty into the United States, and so the cost of the dyes to the United States has not been increased. It is possible the two dye-stuffs in question would all be dearer free. However, such is not the opinion of the ap觖ors of the American Custom House, who have decided that they are alizarin cyanine, and consequently liable to a duty of 35% of their value.

M. Graus, in his latest patents for the production of aniline black, makes use of a comparatively large proportion of sodium acetate. Such addition has been made by previous experimenters, who have placed on record the results they have obtained. The universal opinion or experience of those chemists is that it in 100 large amount Kertesz in 1869 gives it as that quantity required to neutralise the hydrochloric acid which is present—the acetate predominates the combination of the black. As Graus uses rather more than this it seems to follow that black cannot be obtained by his process.

The new weaving shed for Musco. Hallen Brothers, Spring Gardens Mill, Waterford, is now ready for slitting. When finished it will hold 1,500 looms.

Coventry.
A society paper says: "Miss Bonnie Frey, whom we reported the other day as being a member of the Grenadier Guards, will marry at the Wellington barracks Chapel next week, the daughter of Mr. G. H. Frey, of Frey Brothers, Exeter Street, Coventry. Her dowry will be £2,000. Colonel Eaton met with a fall on the grounds of the barracks. He is a son of Lord Charleville, who makes his fortune by the manufacture of silk at Coventry, and is forty-five years old.

Darwen.
All the cotton mills in this district will be closed on Thursday in order to obtain repairs. At the Country Police Court, on Monday, Messrs. J. T. and T. T. Goodall, owners of the Green Mill, Padfield, were summoned for a breach of the Factories Act, 1859. Mr. C. H. Osborn, inspector (Manchester), and J. T. Goodall, engaged the Cotton Factories Inspector. It was a simple case, and he understood defendants would plead guilty. On the occasion of the visit of Inspector Williams to the defendants' shed he found that one of the hydrometers, which had to be fixed in the order, the machinery being dry, and both columns of the thermometers showing an identical degree, which could not possibly be so, if the thermometers were not attended to, it was impossible to tell whether the Act had been carried out. Defendants had attended to the instrument, and contended it was an oversight. Fine £5.

Bury.
Messrs. T. E. Schlesinger & Co., Limited, report a profit of 2½ per cent on the past half year. A dividend of 26s., or £3½ per cent, was declared. The income for the past quarter of the Bury and District Card-room Association shows that the exigeniary amounted to £250. The members number 1,350, a decrease of 34% on the previous quarter.

Bolton.
The overseers employed at the mill of Messrs. Cowleys and Dowsett's, Ltd., Nelson-street, with their wives and few children, had their annual picnic on Saturday, the place selected being Southport.

Buxton.
A receiving order was made at Blackwell Bankruptcy Court on Wednesday, on the deponents' own petition, against Messrs. John Sharples, Robert Edmund Sharples, and William Henry Sharples, of the Sharples & Son clothing manufacturers, at Middleton. The petitioners are John Sharples and Co., clothing manufacturers, at Garden-street.

Bedford.
The overseers employed at the mill of Messrs. Cowleys and Dowsett's, Ltd., Nelson-street, with their wives and few children, had their annual picnic on Saturday, the place selected being Southport.

The Times is a newspaper that includes various articles and news stories. The text includes information about different industries, such as linen production, and social events like picnics. It also mentions political and social figures, such as Mr. J. T. Goodall, who was convicted of an offense under the Factories Act, and Miss Bonnie Frey, who was supposed to marry. The text is a transcription of the events and news as they were reported in The Times.
and affairs of the firm had, however, been investigated, and it was able to say that there would be about £3,000 at its liabilities. Mr. Godsiff, having answered a number of questions put to him by correspondents, stated that the firm had reviewed its position in the market before coming to the decision in regard to the future of the complications associated with it, which have naturally formed the subject of much talk in the trade.

London.

The third series of London Colonial wood sales closed on January 18, with prices generally quite firm and crossings abroad on a par with last May. The Eastern Staves and Boxes Capes and small running orders were being shipped and doleful wood generally per cent. down.

Manchester.

The death is announced of Mr. W. K. Clarke (jnr.), F.C.A., of W. R. Clarke & Son, chartered accountants. The deceased gentleman was originally engaged in the firm of W. H. Kennedy, and continued by his son, Mr. W. K. Clarke (jnr.), A.C.A.

The funeral is arranged of Mr. B. Smith, cotton printer, at his residence, Rye Bank, Chorlton-cum-Hardy. The deceased, who passed away at the age of 56, was a long-established member of the cotton printing trade, and his death has given rise to much sympathetic comment in the trade.

At the Manchester City Council on Wednesday, Sir John Harwood, one of the Corporation directors of the Ship Canal, said, in answer to questions, that the canal could not possibly be opened before the end of next year, and it would need more money than even three times the Corporation had already got power to advance, but he did not think the case could be so pressing as to engender any prospect of its being delayed. He hoped that the canal would be laid with such great rapidity that the money already spent would have brought ships to Manchester by now.

New Mills.

At the New Mills Petty Sessions, on Wednesday, Messrs. E. R. Romney and Co., cotton printers, New Mills, were summoned for employing at work overflow six children under 14 years of age. Five of the youths had worked from 6 a.m. to 7 p.m., and a sixth from 6 a.m. to 11 p.m. The industrial offence was charged, and as extermination the bench imposed a fine of £5 and costs in each case, total £4 5s.

Nottingham.

A general meeting of the Nottingham Rotary Frameworkers' Society was held at the East End Schools on Friday, and a vote of thanks was passed to Mr. W. Potter, secretary, and there was a full attendance of members. A question was raised as to the appointment of Mr. B. Tookey, an executive, in supporting Colonel Seely against Mr. Henry Brodrick in West Nottingham, and after a somewhat interesting discussion the resolution of confidence in Mr. Barlow was carried unanimously.

Oldham.

It is again reported that a new mill is about to be erected in the Lee district. It is intended to build about 500 spindles, and is to be laid out for the spinning of Egyptian cotton.

The death is announced of Mr. George Heywood, late of the Eaves and Heywood Ltd., millwrights, engineers and surveyors, Queen-street, Oldham. The deceased had been connected with the firm for 30 years, and was identified with the Oldham limited liability movement, and was for a number of years a director of the Journeymen Spinning Co.

The closing question is engaging the attention of members of the Oldham Operative Spinners' Association, and at the monthly meeting of the Shaw branch on Wednesday evening, a resolution was passed that no minder or picker clean the "nude ends" or "fillers" with anything but waste, and to clean them with "burning powder" anything else was "contrary to the spirit of the new rule."

The dispute that took place at the New Mills Mills Co. on Tuesday was not very serious, and the closing question has not been settled. It occurred through the pieces striking work because their demands were not once coupled with, and without legal notice having been given to them. A workman is understood that spinners and other operatives are being supplied with the funds of their respective associations.

Mears, Swainson and Birley's mill is not ready to start, after a stoppage from last November, caused by the collapse of a new engine and building a new engine house.

The profits of the Locksilk Hall Spinning Co., Ltd., after deducting depreciation, were £6,119 11s. 6d. for the last year, enabling a dividend of 5s. 6d. per share, or over 5½ per cent. to be paid.

Pudsey.

Mr. B. Friendley (L), a worsted manufacturer at Bradford, has been re-elected M.P. for the city.

Rochdale.

Rapid progress is being made with the new mill being erected in the east side of Hilson, Clegg, woollen manufacturers.

At the meeting of shareholders of the Elswick Spinning Co., Milton, the chairman (Mr. Emanuel Clegg) stated that everything was being done to make the mill one of the most modern in the country. There were now 70 pairs of motors at work with card-room preparation of covers, and they were giving every satisfaction. The works were being very well planned with the intention that the erection of machinery was progressing rapidly, and in saying that taking the Elswick Mill all round it was second to none in Lancashire.

Saltaire.

Mr. J. H. Mades (L), cotton spinner and manufacturer, has been elected M.P. for the city.

Stalybridge.

At the quarterly meeting of the Operative Spinners Association on Wednesday the secretary read out the names of non-monopolists.

Stockport.

Mr. D. Walsley, M.B.E., Inspector of Factories at Liverpool, has been appointed to the Stockport district in place of Mr. Stokes, who recently resigned. Mr. Walsley was a works manager for Messrs. J. and T. Brookland and Sons, Manchester, prior to his appointment as an inspector. There is now several vacancies, and it is believed that a competitive examination will shortly be held, with a view to filling same.

Scotland.

Ayr.

Mr. W. Buttersyke (L), worsted and jute manufacturer of Collochton and Serrapoo, has been elected M.P. for the city.

Dundee.

A serious fire occurred at a warehouse in Commercial-street, on Monday. The building was filled with jute, flax, hemp, and coddils, and the value of the stock was about £2,000, while the building was valued at £2,500. The fire brigade got the flames under within the hour, and the loss was not too great as no stock was lost in the building. The loss, which is covered by insurance, is estimated at over £1,500.

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

<table>
<thead>
<tr>
<th>Week</th>
<th>Cotton Goods</th>
<th>Linen Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>£1,200,000</td>
<td>£400,000</td>
</tr>
</tbody>
</table>

The following are the total values of the exports for the same twenty-eight weeks of last year (Cotton, £1,400,000; Linen, £450,000).

IRELAND.

Lisburn.

On Friday evening of last week the threadworks of Messrs. Wm. Barbour and Sons, Hilden, Lisburn, were broken into by the visit of a distinguished party, which consisted of the Marquis and Marchioness of Dawn- doun, Lord and Lady Arthur Hill, Lady Beatrice, Lady Turner Hill, the Hon. Iris Hill Treves, and the Hon. Miss Hill. The visitors were received by Mr. Frank Barbour, managing director, and Mr. J. Milnes Bar- bour, who conducted them through the various departments of the extensive works. It was greatly expected that the general head of the firm, Mr. John D. Barbour, D.L., was unavoidably absent. The visitors were much interested in all they saw in the great concern, and expressed their thanks before leaving to the Messrs. Barbour. As they passed through the mill yard loud cheers were raised by the workers for the young Marquis and his mother, the Marchioness, also for Lord and Lady Turner Hill.

Whiteabbey, Co. Antrim.

The employés of the Whiteabbey Flax Spinning and Weaving Co., Ltd., gave a grand military parade on Saturday, the place selected being Portmarnock, where sports were held. Hunter, presented the prizes to the successful competitors.

Two firms of Johann Rechak propose erecting a power-loom works near Waukegan, in Illinois.

Two firms of Schouler and Wagner, power-loom weavers in Greece, are erecting a new factory in a district which, it will be hoped, commence working in October of this present year.
ANOTHER "PARTICULARS CLAUSE" CASE.

At the Créton monthly review on Wednesday, the Rev. J. H. Fordyce presiding, the Créton Manufacturing Company were charged under the 24th section of the Factory and Workshops Act, 1895, with not having supplied a weaver named Betty Trafford, who was in their employ and paid by the piece, with sufficiently particular clauses to enable her to ascertain the rate of wages she was entitled to be paid for her work, contrary to the allegation regarded as so very important, being the first brought under the new Act in the district. -Mr. Holdin, of Bolton, appeared for the plaintiff, Mr. Fordyce, for the defendant company. -Mr. Holdin said the case was one which had been referred to him by Mr. Fordyce that there was no dispute in the matter. The proceedings were taken under the new Act of 1895, and it was to be observed paid by the piece in any factory or workshop should be supplied with particulars as to the rate of wages; and to which he or she was entitled to be paid, the liability in default of which was one not exceeding £10. In case of that kind of complaint power was given to send inspectors from other districts as experts, and that had been done in this case. It was said to the attention of the fact that however small the amount of wages which might be saved to the employer in a few cases, it was a matter of importance, which, taking the year round, in many other thousands of cases, the amount of wages was great, and that was blue in a fraction of 2s. It was moved by the Chairman, the report of the two inspectors appointed to inquire into the case, that on May 4, 1895, they found at the Jellisbro Mill, Créton, a piece of cloth woven by a weaver employed there, the ticket on which was for 110 yards, but which proved to the 172 yards at 12 inches, or as claimed by the firm at long sign, 114s. 4d. yards, the weaver being determined to the extent of 42s. 4d. Two other cases were also given in which the result was to the extent of 4s. 2d. so that in the same the £10 fine was there an average of four yards which the weaver had won for which he or she would be entitled to. For the defence, it was pleaded guilty to the technical offence. He contended that the amount of value taken from the accused the weavers was not more than a few pence per yard, and that the amount of saving in that particular case was nothing more than the amount of the bend said that after serious consideration they had come to the conclusion that they ought to inflict a penalty in each case of £2 towards costs. The three cases amounted altogether to £9 3s.

TRUE BLUE.

Without in any way encroaching upon the beneficial results in relation to politics, we are able to look into the origin of true blue, since Liberals and Conservatives are equally concerned in it. According to history, in 1791, a "Pamphletian true blue" mentioned in *Kiddle* has been found on 29 letters, which were sent to the Kiddle family and have been preserved by the children of Israel. But the number of these letters is so small that it is impossible to find them before the story of this particular blue has been written down. In fact, the most remarkable fact is that these colours contain the constancy and in his Court of Law makes it clear.

To-would be to choose as the kind in blue, They were the colour, ap, and ever shall, In age they were and ever shall be taken.

In all probability the colour is really connected with all the hopes which lie beyond the "Parley" of the present time. The theory there is every reason to believe that Dr. Brerow cleverly is credited with the true blue. "As true as Coventry blue," although he gives the greatest prominence to a more doubtful attribution to the true blue. It was not until the rhythm of the phrase that gave it currency; for Coventry was famous for its fast blue dyes, in threads especially, and as long ago as the reign of Henry V., the impression of Coventry asked Parliament for permission to choose four of their number yearly to which the dyers of the town were widely used in embroidery, especially of headkerchiefs, which passed as tokens or tokens between those who wore them. Therefore a body of a number of men the Coventry blue was generally worn, and is the designation of the blue dyed in their blue hem, which took part in one of the pages presented to Queen Elizabeth on her visit to Kenilworth, it is said that such a headkerchief, which was then in handkerchief. These articles evidently had a tenancy in the presents at the court, and these are then distributed as souvenirs.

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an attempt is being made to form a company for the purpose of carrying out the project, and the Secretary is Mr. H. Aug. H. Martens, who has had considerable experience in such business at Shanghai.

The New Production and Marketing Acts, and the General Liabilities Acts, and will consist of an issue of 20,000 shares of £1 each, and £50,000 to be issued in such a manner as to be paid up; the reserved liability serving to facilitate the credit of the company for the purchase of silk reeled on the Chineses and French silks.

A board of directors would be appointed in London who would be responsible to the shareholders. The meetings would be held by the Shanghai. The prospects say. It is universally recognised by experts that the Japanese and the Chinese are two of the most accomplished in the world, particularly the Japanese. Woung, however, to the primitive and imperfect master in which these colours are reeled by the Chinese, the silk produced from them is irregular in size, "nobby," and far inferior to that from China. That is the opinion of the writers. The method of reeling.

It is not possible to be accurate in the description the difference between the average price paid by the Chinese and the silk produced by these methods, it may be stated that at 5s. 6d. per lb. In considering the character of the trade, the European silk thrower or manufacturer using native-reeled Silk, incurs an estimated expense of 8s. 6d. In a few cases of various qualities, it can be seen that the thread carried off to countries which, though less richly endowed with heres, have more readily adopted it. This is because, taking into account the standard of the thread has been produced, though from inferior cocoons, yet the general tone of the threads is better than that which the world's trade is with increasing he has been reduced from 5s. 6d. to 5s. and of valuable, the trade is with increasing developments.

The trade carried off to countries which, though less richly endowed with heres, have more readily adopted it. This is because, taking into account the standard of the thread has been produced, though from inferior cocoons, yet the general tone of the threads is better than that which the world's trade is with increasing developments.
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houses, or "tables," which by reason of their low cost and tested efficiency, are perfectly adapted to the end point of the present adoption of which by the penman will bring about the desired improved and important result.

The proposed Billtre will be erected in Shanghi on a scale adequate to the annual production of 5,000,000,000 yards of worsted, and necessary to the construction of the machinery the period of the contract usually takes from two to three months, according to the intelligence of the prop. An abundant supply of labour can be considerably relied on.

From this Billtre the roving apparatus would be supplied by the weavers at representative prices to all applicants in the silk districts, and as it is extremely simple, it can be adapted to the cottage industry which is already furnished those supplies of silk which are so indispensably identified with the name and technical history of the country.

The total quantity of native reeled silk now annually exported from Shanghi is about 4,000,000,000 yards, while the improved European methods yield at most 100,000,000. It will therefore be seen that a large field exists for the immediate operations of the company, and for the further extension of its benefits.

The following is the estimated cost of a Billtre of 500 houses and the expense of working it to be £10,477 8s. 4d.

A plot of land about 4½ acres can be secured for £1,693 10s. 0d.

A building to be erected for £3,956 13s. 4d.

A house to be inhabited for £1,419 13s. 4d.

Filter bed for cleaning water for £791 0s. 15s.

Fence and fittings, for £86 2s. 6d.

Office and ink room, for £107 14s. 2d.

Dwellinghouse for Europeans, including furniture, for £85 8s. 4d.

£10,477 8s. 4d.

No provision has been made for steam turning power, and houses are intended to be moved by manual or manual labour.

A year will comprise 300 working days, and the Billtre will be a complete concern in less than two years from the day it is put in motion, if the workmen turn out the very moderate and regular number of 8 hours per day.

One pound of silk will require 4 ½ lbs. of dry cotton, or about 13 lbs. of coarsen cotton. The latter will cost laid down in Shanghi an average price of R. 50, per pound, and as a quantity of 900,000,000, must be bought in single forgings, and a cost of £2,955 will be required; the total factory charges on this quantity of cotton is estimated at £1,419 13s. 4d., the working expenses at £625 12s. 6d., and if there is added to cover interest of money and incidental expenses a sum of £1,710 16s. 4d., the capital outlay on the Billtre will come to £10,477 8s. 4d, and if there may be estimated from £10,477 8s. 4d.

Sales of interior cotton and waste: 5s. 4d. per lb.

An average price of £5. 3s. 6d.

£10,477 8s. 4d.

Without a sufficient supply of capital to purchase the Machinery and Enterprize, and to pay the salaries and wages to the workmen for the Billtre, it is quite useless to rely on a large scale. The first step in its formation is to introduce the establishment of Billtre that can be carried on in every village, but until the Chinese become accustomed to dry their coarsen, store them and red them off at leisure in the Italian methods, it is idle to think any improvement in the state will be made.

At the opening of the new silk season in China about 1,000,000 persons will be engaged roughly reeling off coarser into silk, the condition are alien, and if the work is not completed by the time the rain partakes the coarser, it is then only used for carding purposes. The rotters in the native system amount about 45 per cent. during the reeling season of a fortnight and afterwards betake themselves to other pursuits.

Baker Ludwig Kreithen intends to build a wool shearing factory to the silk market.

The late and cordial friends of D. H. Bower and Son, in the late and cordial manner, toward, near Warrn, have been destroyed by fire.

This damage done by fire in the cotton spinning mill of H. M. Smithson and Son, near M. Gladsail, is estimated at £600.

The first bag of the new crop of American cotton is reported by cable as having made its appearance at Houston, Texas.

COTTON.

Manchester, Friday.

Business has been interfered with throughout the entire week under the shadow of the Decrease of the General Election. This has ceased as a good deal of distraction of attention from business on the part of more frequenters of both the Liverpool and Manchester Exchanges. The former however has had other exciting causes of distraction in the collapse of a great 'bull' movement in cotton, which is shocked to its foundation upon endorsement and fraud. It is a sad story, but one that does not call for further enumeration here. It is probable that the spread movement against which we warned operators in the trade in this column all the time it was in progress was entirely started by the panic which is rooted in our commercial life. It is stated that it has entailed a loss upon them of one hundred and thirty and to one hundred and thirty thousand pounds, and from which was abstracted from the coffers of their employers, and most of it lost in cotton. The incident has brought one old and respected house to the ground, and its disastrous consequences would have been far more extensively felt had it not been that the fraud was committed upon one of the very strongest houses in Liverpool, which will not be injuriously affected in its credit or financial condition by the embarrassment. The market was very much shaken when the revelation was made, and would probably have suffered a disastrous collapse had a syndicate not been immediately formed to take over the current contracts of the fraudulent operators, which are being placed upon the market quietly and slowly so as not to break prices. There is no material change in the market, which is still firm at Manchester, or as seen therefrom. It is as sluggish as usual, but prices are fairly steady, on a basis which cannot easily be altered without a violent and real change of opinion. It would be interesting to note in this connection that the receipts of English Cotton from the middle west of America have been reported from Houston, Texas, and Baltimore, New Orleans.

Cotton—With this introduction such as the above no brilliant report of the cotton market can be expected. The full force of the incident referred to above was experienced yesterday. The prompt action taken to stave off the consequences induced a large fall in prices and some recovery of prices on Friday and Saturday, and on Monday the trade and its consequences are becoming known. From Tuesday the prices are fairly steady, on a basis which cannot be altered without a violent and real change of opinion. It would be interesting to note in this connection that the receipts of English Cotton from the middle west of America have been reported from Houston, Texas, and Baltimore, New Orleans.

The following particulars of the week will be from the official report issued by the Liverpool Cotton Association.

<table>
<thead>
<tr>
<th>Date</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th July</td>
<td></td>
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<td>14th July</td>
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<td>21st July</td>
<td></td>
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<tr>
<td>28th July</td>
<td></td>
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</tbody>
</table>

Prices of Futures at 11 a.m. each Day.
### THE TEXTILE MERCURY.

**Yarns.**—As may be naturally expected, there has been a very considerable trade in yarns. Producers are in many cases anxious sellers, whilst buyers are very reticent and very cautious in a mood of restraint. The transactions of the week were nearly all on a very retailed scale, and prices are, where changed, the trend lower.

**Cloths.**—In the cloth section of the market there is an abundance of enquiry, but the troubles about this is that it is at prices below the prejudice of business on any adequate scale for keeping cloth at work, and it seems the emotions have moved out of the way, that it will be possible to effect such sales. It will not admit of orders of more weight being brought to book. Egypt and the Mediterranean markets generally are sending slightly more cheerful and active orders to all manufacturers of a somewhat similar character. There is, however, still a considerable number of looms standing idle, and it will need more improvement than is yet visible on the commercial horizon to get them to work.

**WOOLLENS AND WORSTEDS.**

**Huddersfield.**—Some manufacturers still keep well engaged on orders for the finest qualities of fancy worsted goods, but there is a great deal of short time prevalent. There is a fairly good trade being done with the Continent and with some parts of America, but the exports are not as large as in past years.

**Leeds.**—There is no feature of special importance in the woollen trade this week. Prices, though not actually advanced, are, on the whole, firm, and in many instances an upward tendency is noticeable. Stocks are somewhat more advanced in the Colonial districts, and Continental houses are taking larger quantities of certain goods.

**Gloucester.**—Messrs. Ratney and Co., worsted manufacturers, in their report dated July 14th, say:—Our trade is steady. The demand for the goods going to America is not equal to that of last year. The competition is fairly vigorous, and full values are maintained.

**London.**—Messrs. H. Schwartz and Co., in their report dated July 14th, say:—The third season of London sales of Colonial wool, which commenced on the 24th June, closed today, the following quantities having been catalogued:—

<table>
<thead>
<tr>
<th>Country</th>
<th>Sold (Bales)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney</td>
<td>58,015</td>
</tr>
<tr>
<td>London</td>
<td>32,185</td>
</tr>
<tr>
<td>New Zealand</td>
<td>21,724</td>
</tr>
<tr>
<td>Cape</td>
<td>18,325</td>
</tr>
<tr>
<td>Total</td>
<td>121,245</td>
</tr>
</tbody>
</table>

The net total amount amounted to 352,000,000. Of these, 352,000 bales have been sold, 135,000 bales for home consumption, and 217,000 bales to America, leaving 40,000 bales to be offered to next sales. The sales advanced with prices for merino wools on a par with closing rates of the preceding series, and on this level the sales have been very steady. Prices may be said to have steadily maintained themselves to the end. Medium and inferior grades gave way to

<table>
<thead>
<tr>
<th>Quality</th>
<th>Price per lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4</td>
<td>6.25</td>
</tr>
<tr>
<td>4/4</td>
<td>6.25</td>
</tr>
<tr>
<td>5/4</td>
<td>6.50</td>
</tr>
</tbody>
</table>

after the first week, owing chiefly to the passive attitude of the French buyers, and though relatively more active towards that quarter, an equable quotation took place. Scoured wools also declined to the extent of 2/3d. to 6d. per lb., and this applies alike to good and inferior descriptions. Wherever, in fact, the market was not subject to competition prices fell by 5 per cent. below the May level. On considered, the situation—5½ per cent. relatively stronger, owing, no doubt, to the large supply and the low prices of the home produce. The competition for these sales was, however, keen, and the position of the coarse sorts has lately again become stronger. Cotonets on a par with May rates, and at first improved, especially in the case of the better qualities, but they lost ground subsequently, and stood now for some, while 5/4d. under last sales’ closing rates. The sales close with fair spirit, and taken in the result may be said to be as good as the insufficient condition of the trade. For the present the sales of colonial wool as compared with last year:—

<table>
<thead>
<tr>
<th>Market</th>
<th>Hold over</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>4,000</td>
</tr>
<tr>
<td>Liverpool</td>
<td>2,000</td>
</tr>
</tbody>
</table>

**Dried Purchase.**

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign</td>
<td>20,000</td>
</tr>
<tr>
<td>Foreign New and Old England</td>
<td>15,000</td>
</tr>
</tbody>
</table>

**Total Consumption.**

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Consumption</td>
<td>30,000</td>
</tr>
<tr>
<td>Foreign</td>
<td>15,000</td>
</tr>
<tr>
<td>Total</td>
<td>45,000</td>
</tr>
</tbody>
</table>

**Total Deliveries.**

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>52,000</td>
</tr>
</tbody>
</table>

The quantity sold in London in the first three weeks amounts to 100,000 bales last year shows an increase of 25,000 bales, the direct purchases at 45,000 bales against 40,000 bales, giving a surplus of 124,000 bales in the total deliveries to the trade. This, with the 54,000 bales already received in excess in November, is more than the expected Colonial increase, and the supplies for the next series will therefore, notwithstanding the large quantity held over, probably fall short of last year’s total available by about 30,000 bales. Of the 124,000 bales surplus in the deliveries, the house trade, it will be seen, takes only 13,000 bales. The next series is to commence in the early part of September. The following are the fresh arrivals up to date, and, so far as an estimate can be formed at so early a date, the probability is that the next series will arrive early in September.

**FLAX AND JUTE.**

**Dunfermline.**—The market for jute has been more active and at from £4 to £12 10s. according to the reputation of the first marks. A large number of small orders for the Newcoun trade. On the spot jute continues to drop, and one hundred per cent. of orders for 400 bales at a full of £6 to £71 a ton the prices paid for the same jute only a few weeks ago. In these circumstances there is little wonder to the steady quotation and that trade is greatly discouraged. Today there is some indication that the market has touched the bottom. Sellers are this morning asking for more. Yarns are still rather depressed, and, indeed, the price is low. Flax is still in good demand at £3 10s. with sellers over. For 8f. ware 10s. 6d. is all that can get, and some lots have been offered at 11s. 6d. Even in the higher qualities the depression is felt but business is difficult to carry through. Jute cloth is in all positions down 20 per cent. of the prices of last year, and being stopped. Advices from all the chief markets report flax and jute in a steady condition, no export orders for any other branches considered desirable for Dominions. Flax is normally easier to buy, but when one comes to examine qualitatively the price of good flax is really higher, and the news of the growing crop is not very favourable. France and Italy jute are to be found in the market, but none are easy to buy and very low in price. Linnen is at the same time very active. The house trade is generally intermixed with the General Export trade. A fair foreign demand, however, and Fife is specially active. Greenhouse jute orders are selling fairly well. Yarns are quiet indeed and orders are difficult to find. Only the very best makers are busy. Twines, etc., and ropes are in excellent request, and a large branch of the jute trade alone is busy.

**Hosiery and Lace.**

**Nottingham.**—Some novelties in millinery laces meet with support, but trade is on the whole unsatisfactory. Irish guipures and laces do not meet with so much attention as formerly. Some grades of fancy laces and trims are being bought for export. Fancy silk looks quiet. Silk veils meet with a steady sale. There is no improvement in the demand for lace curtains, and although the output is large it could be much increased if all the machinery were fully engaged. The plain net branch remains quiet, and prices are at an an unsatisfied level. The velvet branch of the trade is not very active. There is no new feature of importance in the worsted trade. LEICESTER.—Yarns are in steady request, lams’ wool being in good demand. Cotton descriptions are, however, not very active. Hosiery manufacturers are not engaged, and for elastic wools there is a steady demand.

**Joint Stock and Financial News.**

**NEW COMPANIES.**

**JAMES MILLS, LIMITED, HEDWORTH.**

Registered by W. H. Cato, 32, Bourne-street, E.C., with a capital of £20,000 in £5 shares, to acquire the undertaking of an existing company, now carried on by S. Mills at Moss Foundry, Hedworth, Lancashire, in order to develop and extend the business. Registered without special articles of association.

**GERMAN ROAD MANUFACTURING COMPANY, LTD., HAMBURG.**

Registered by S. Czarnik and Co., 9, Eastcheap, with a capital of £20,000 in £5 shares, to carry on the business of constructing and maintaining roads for motorists carried on by Evans and Berry, at Grasmere Mill, Oldham, and the manufacture of road-making machines generally. Most of the regulations of the Table A apply.

**STEWART FULLE'S EARTH COMPANY, LIMITED.**

Registered by Waterloo Brothers and Layton, Birchin-lane, E.C., with a capital of £60,000 in £1 shares, to construct, maintain and work, or to market, and to carry on the business of contractors for the making of roads and streets by methods other than those of the common mode of road-making, by means of the Fuller's earth. H. Dyrseg is managing director, his resignation has been accepted, and his position taken up by F. Layton. Registered without special articles of association.
Each of the following Specifications may be purchased for the price of $8.00, as may be ordered on the Form published herewith, which is sent on application to the Principal Patent Office in the United Kingdom.

1. 9,026 Archambault. Looms for cloths, etc.
2. 9,027 Archambault. Looms for chenille carpets.
3. 10,134 Eve and Hopkins. Treating and covering wool.
4. 10,248 Clarke. Loom picking bands.
5. 12,526 Lane & Co. Dyeing matters.
6. 13,102 Canton. Bleaching and treating tin plate.
7. 13,579 Treating and finishing textile fabrics.
8. 13,733 White and Mills. Spinning knitted fabrics.
10. 13,808 Kuchenreuter. Spinning machines.
11. 13,808 H. Self-taught, self-taught finishing machines.
12. 13,867 Appenzeller and Fisken. Testing strength of cotton, etc.
13. 14,065 Cotton. Flyers for twisting frames.
15. 14,258 Crochet, E. and E. Embroidering machines.
18. 16,621 Huyck and Allen. Spindle attachments.
19. 17,498 Bonden and Walker. Spinning yarns from hemp.
20. 18,375 Guerin. Treating wool washings.
21. 18,945 Thumby (Haffringer). Bleaching compound.

Abstracts of Specifications.

RAW MATERIALS, SPINNING and WEAVING.


Mention is made of a new system for storing cotton, such as would be equipped with doors, windows, ventilators, which can be tightly closed in the event of fire.  Drawings.


In the manufacture of linsey-woolsey, or other plaited carpets, a single plaited band is laid over another plaited band, the appearance and effect of distinctness, and is then pressed and stretched in one plane, so that the fabric is the same as is the color of the surface, in such a shape, that the body is covered by a proper size and form, obtained by adding cotton to the surface of the material, by means of cotton wools.  The carpet is then dried, and the coloring matter is applied by a printer's brush or roller, or by means of a printing machine.  The carpet is then dried, and the material is washed, softened, and dried again.


In the manufacture of fabrics, the warp is fed into the loom, and is threaded through the reeds and the reed, the weft is then picked up over the loom, and the weaving machine is moved over the loom, and the loom is moved to its place, and the weft is again picked up.
INDEX TO ADVERTISERS’ NAMES.

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Warrington Pumping Engine Co., London and Manchester

PATENTS, DESIGNS, AND TRADEMARKS ACTS, 1883 TO 1883.

NOTICE IS HEREBY GIVEN THAT SAMUEL KNOWLES AND JOSHUA KNOWLES, both of Nottingham, near Bury, Co. Lancaster, have applied for LEAVE TO AMEND the Specification laid in pursuance of the Application for Letters Patent No. 7,184 of 1892 for improvements in machines for printing stains, soaps, and the like. Particulars of the proposed amendment were set forth in the Illustrated Official Journal (Patents) issued on the 6th July, 1893, and any person may give notice of objection to the amended form of the Patent in the Official Journal within one calendar month from the date of the said Journal.

(Signed) H. H. BULLOCK.
Comptroller General.
17, St. John’s Square, Manchester.

NOTICE.

By Professor Roberts Beauchamp, of the Textile Industries Dept., the Yorkshire College. With 32 original plates and numerous Illustrations. 2s. 6d.

The illustrations are the result of the kind we have yet come across, and the publication can be congratulated on the general excellence of the work. A "wonderful work on the application of colour to woven design."—Trans. Wool. Soc.