STEAM USERS

Because of Johnson's patent, the textile industry has seen a significant reduction in costs and an increase in efficiency. This has led to a decrease in the cost of production, allowing for greater profitability and increased competitiveness.

EVIDENCES

- Mesers. Wiliams and Co., Manchester
- Messrs. Whitaker and Sons, Leeds
- Messrs. Eliot and Co., Sheffield
- Messrs. Parkinson and Son, Leeds

These improvements have resulted in a decrease in the cost of production and an increase in the efficiency of the textile mills. The conclusion is that Johnson's patent has been successful in reducing costs and increasing productivity.

Estimates and calculations of the potential for steam users have been made, and it is estimated that these improvements will result in a decrease of 25 to 30 per cent in the cost of production.

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COTTON CULTIVATION AND MANUFACTURE IN BRAZIL

It is not only with the cotton industry in the United States that the demand for labor is increasing. In Brazil, the cotton industry is also rapidly expanding. The climate and soil of Brazil are particularly suited for cotton cultivation, and the government has been taking measures to encourage this industry. The result has been a rapid increase in the production of cotton in Brazil.

COTTON MILLING AND MANUFACTURE IN BRAZIL

Despite the challenges of labor, transportation, and the cost of production, the cotton industry in Brazil is making significant progress. The government has taken steps to reduce the cost of labor by introducing new technology and improving the efficiency of the mills. Similarly, efforts have been made to reduce the cost of transportation by developing new methods of transportation.

COTTON MILLING AND MANUFACTURE IN BRAZIL

The production of cotton in Brazil has been increasing rapidly, with a significant increase in the production of cotton in the last five years. This has been aided by the introduction of new technology and the expansion of the mill capacity. The result has been a significant increase in the production of cotton in Brazil.

COTTON MILLING AND MANUFACTURE IN BRAZIL

In conclusion, the cotton industry in Brazil is making significant progress, with a rapid increase in the production of cotton and the introduction of new technology. The government has been taking steps to reduce the cost of transportation and labor, and the result has been a significant increase in the production of cotton in Brazil.
things, in the Prayer-book phrase, let and hinder the full success of Brazilian cotton, and yet Mr. Brunner believes that the disadvantages which would come with the apparent adoption of some system of small farming will, in the near future, materially increase the present production. It is a thousand pities that the country has been struck with a local censure which affects all South America, and that the long and judicious reign of Dom Pedro was summarily snapped short. With the establishment of the Empire this country is the one of the century to open new vistas to all industries, and cotton shared in the benefits of good government. From 1865 all factory spinning had been prohibited on the eve the manufacturers, by the increasing magnitude of the cotton cloth was injuring their trade; but this decree was at once repealed by the Emperor, and first bought, which had been forbidden, to be used, and later factories were established.

There are "now no less than fifty spinning and weaving establishments in Brazil," says Mr. Brunner. The industry is at present confined almost wholly to the provinces of Rio de Janeiro, Minas Geraes, Sao Paulo, and Bahia, where the demand for the better qualities of cotton cloth is greatest. But the factories have by no means done away with consumption of raw material. To the traveller in the interior of Brazil there is no more familiar sight than that of spinning with the ancient distaff and spindle. In this country his curiosity is at once common that the children learn it as a matter of course, and it would be very difficult to find a person who did not know how to spin.

In order to show the widespread knowledge of this art in the interior a Brazilian gentleman once assured him that it might be taken for granted that the then Brazilian Prime Minister could spin in this aboriginal fashion! Very nearly all the houses throughout the greater part of Brazil, together with considerable quantities of coarse cloth, are still made of thread spun in this manner. The direct domestic consumption is about 710,000 pounds annually, which, with the amount made up by the factories and used in the country, makes the whole consumption of raw material in Brazil 18,541,600 lbs. annually, since the factories began operation.

Stocktaking in the Oldham Mills.

Our Oldham correspondent writes:—During the past few weeks some 20 spinning companies in Oldham have been cleared. The results as a whole, they are regarded as more favourable than anticipated. It was expected they would be irregular, and this conjecture has turned out quite correct; while one announces a profit of £1,790, another shows a loss of £1,600. Still, the adverbs are no less important as those made known a few months ago. For the most part the losses are confined to a few hundred pounds. The difference in a profit or loss by common-sense is more acknowledged to be due to the adoption of a certain policy or a certain course of action. For instance, concerns which have declared profits are known to have cotton stock of late months, while others who have sold yarn pretty freely at current prices, and have been able to keep themselves free of raw yarn. Of course, this condition of things is the exception, and not the rule. On the other hand, those who have cotton stock on hand, it makes all the difference how they have valued the raw material—whether at invoice price or something nearer current rates. At any rate, it may be said that the directors’ feelings have been in the direction of adopting the latter course, though in some instances, it is believed they have been led by policy to not go far in the “dopping” business as they would like. Still, the experience now being undergone will have a salutary effect on the method of valuing stocks. “Get it low enough and keep it there” is now regarded as a sound policy.

Mule Spinners and Bobbin Carriers.

Our Oldham correspondent writes:—Mule spinners in distress! They are strongly re-organized, and the trade is doing well. It is regarded as making up the wages of bobbin carriers. It is contended that employers do not pay this class of labour a sufficient rate of remuneration, and mule spinners, as it has become the custom, pay them a few coppers for bestowing favours upon them in the way of placing the bobbins in the spot where they are wanted, thereby helping to speed up, and thus saving the minds of their pincers the trouble of carrying them there. The matter itself seems simple enough. But for all that, the strain has got so that the practice must be stopped, and that employers must pay the extra if anyone has to do so.

We would, to quote from the operatives’ official organ, caution mule spinners against the foolish practice of throwing themselves away for simple matters, which they should overlook, and not treat as being of any importance,” as “notwithstanding the number of new mills which are in the building or starting, there is a point in the mill where the men are, there is a great difficulty in mule spinners finding situations.” Is it not better, therefore, to bear the ill they have than to fly to others they know not of? At any rate, this view of the subject is worthy of consideration.

The Growth of the Co-operative Movement.

In a general way it is known in this country that the Co-operative movement in Great Britain is transacting in the aggregate a very large amount of business. We do not, however, think that many persons have anything like an accurate idea of what the dimensions of that business are. Even local merchants, themselves at the heart of this vast concern, have been known to utter remarks concerning Co-operation which proved conclusively that the speakers had not fully familiarized themselves with the subject they were discussing. In the narrow thoroughfares where commerce begins at the Corporation-street end of Balloon-street, Manchester, and extend for a considerable distance, the scattering of the business centre, are to be seen several vast piles of buildings, the property of the Co-operative Wholesale Society, Limited, in which is transacted a large portion of that of any other single house of the kind in the world. In 1890, the Society’s sales amounted to £102,479,972, the net profits upon which amounted to £5,190. The sales represent an enormous total even for a large wholesale house, and Messrs. Rylands and Sons, Ltd., must, we fancy, yield place to the “C. W. S.” as far as the magnitude of their transactions are concerned. Although the figure is tremendous, the business of the former is chiefly confined to textiles, while that of the Co-operative includes almost every article manufactured. The most striking feature about the Co-operative movement, as shown in the Co-operative Wholesale Annual for 1892, just issued, is the steady growth which has characterized it ever since its commencement—With the sole exceptions of the years 1878 and 1879. Wholesale trade has never declined, but have steadily grown. In 1864 they amounted to £51,587, in 1875 to £127,122, in 1885 to £1,339,815, and in 1895, as already stated, to £1,656,997. The figures for the year being over £2,000,000 in excess of those for 1885, which again showed an increase of £258,980 in comparison with the returns of the preceding twelve months. Taking the whole of the societies in

the kingdom for the purposes of comparison, it will be found that in only one year, 1879—did the total value of sales show a fall. With the increase the same has been steady, the sales in 1890 amounting to £40,674,673. These facts sufficiently illustrate the extent to which the movement has grown.

"C. W. S.,” as it is generally termed, the enquirer will for several reasons find details concerning its position of special interest. In the first place, the establishments in Birmingham strongly appear to be the most numerous of all, with those belonging to Rylands’ in the neighborhood of High-street. Secondly, the trade is purely a district one as far as the Manchester house is concerned, although the cloth and woollen trade and works of its various parts of the country, including a woollen mill at Batley. The Society is also agent for the Airspeed Manufacturing Society, Limited (lastly, Ital Looms, etc.), the Eccles Industrial Society (quilts, sheetings, etc.), the Hebben Bridge Fusian Society, and other organisations at Heckmondwike, Leek, Lichester, and elsewhere, manufacturing silk twist, carpets, and various classes of woollens. The “drapery and woolen cloth” trade of the Manchester Society amounts to about £40,000 a year, the stock being valued at £57,202 at the end of the year 1890. The amount of work done in the woollen cloth department fluctuates roughly between £7,000 and £9,000 a quarter, the stock at the date of the last available return being valued at £1,838. The figures have, however, so far as the first establishment is concerned, a slightly, a loss being made each year, with the exceptions of 1890-91. In 1887 the net loss was £1,838; in 1888 £1,693; in 1889 £5,418, and in 1890 £766.

EXPENSES OF DISTRIBUTION.

The “Co-operative Annual,” besides furnishing material from which we have made some extracts above, also gives a mass of information concerning the movement generally, with historical sketches on co-operatives, and essays on “The Rich Farmer, and the Poor Poorer”—a cartoon phrase, which, being half the truth, is worse than a lie. “The South Sea Bubble” is described, and the volume altogether furnishes nearly 600 pages of statistics and lighter reading matter. From the analysis of distributing expenses for the year ending December, 1890, some most valuable results are arrived at. The figures will prove of interest to many manufacturers, and to all merchants who have similar items of expenditure to meet every year. The figures, as concerns the “C. W. S.,” may, of course, differ in some details from the percentages of the rails, but so does the size of one private firm from those of another, the expenses in the case of a house dealing principally in light fancy goods such as ribbons and other classes of silk, feathers, and lace forming, naturally, a smaller percentage of the total cost of the sale, than in the case of one whose carriage charges are principally for the conveyance of such heavy fabrics as linens, woollens, or cotton goods. We should like to give the figures supplied in the “Annual” in full, but as they extend through the whole volume, a summary only can be presented. Thus, out of a total turnover of £68,312 in Manchester in 1890, the expenses amounted to £16,879, of which £5,206 was for wages,.
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£4.60 for travelling, £2.21 for stamps, and £2.95 for "interest." In the grocery department, with sales £3,571,141, wages figured for £1,667,959 of which £1,491 represents "interest." Below we give the items for two other departments:—

WOOLENS AND
DRAPERY.

Sold. 311.05 1,971.00 3,638.00
Wages .8669 .9724 .9026
Interest 2.9374 4.7478 5.2899

The sales at the New Castle and London branches amounted to £1,127,367, but with the expenses here we do not propose to deal at length. Below, however, we give a table compiled from the Society's figures, which shows that the distributive expenses of Manchester were far less than those of London or Newcastle, with the exception of furnishing and drapery, in which the Tyne town has a slight advantage over this city, London being far dearer than either. It is not a sufficient reason to explain the great difference in expenses by ascribing it to the larger business transacted here. London expenses in the furnishing department are, it will be seen, twice as great as those in Manchester. Besides, although the New Castle branch transacts a smaller trade than Manchester, its purchases are by two important departments actually less. Our figures, if they demonstrate anything, prove that a direct comparison between the centres London, Manchester, and Newcastle is much more expensive place than Manchester. The capital is many miles south of the centres of population, and if it transacts a trade equally spread all over the country, it is obvious that most of its goods will be burdened with the heavy cost of carriage from the almost extreme south of England to the Midlands and the north, which would be much more economically served by Manchester. It is merely an argument as far as supported by figures, representing results actually arrived at in ordinary business as is the case with this. The figures represent the expenses in all of selling each hundred pounds worth of goods:—

Georgy. Drapery Boot & Shoe, Furn'y
Manchester... 235 1,964 761 1,075
Newcastle... 290 707 799 532
Liverpool... 902 1,070 2,010

This table shoule prove of permanent interest. We cannot compare it with any figures representing results of great areas, as none such exist, and few would be disposed to give them. It may be taken, however, that the proportions given indicate in a general way the comparative expense, representing as they do actual results. The Co-operative Wholesale Society has not yet been able to conduct its textile manufacturing operations successfully as the particulars concerning Barley show. Its Leaders and Bailey ready-made works have also been conducted at a loss since their commencement a few years ago. Both, however, are comparatively new, and, as has been the case with the Soap, Biscuit, Boot and Shoe, and other factories of the Society are in a flourishing condition, the textile business may also be a success in a short time. In saying this, however, it must be borne in mind that many of these works of long experience deserve the practice of the combining the business of distribution and manufacturing. The successful merchant is he who buys in the cheapest market whenever he may, and not one who is tied to purchase certain goods from certain mills which he owns wholly or in part. The "C.N."

**MAKING ANY REPLY OR COMMENT ON THIS REPORT IS FORBIDDEN.**

THE most authoritative sources, it will be evident that the employers have determined to endure the mischievous wickedness of the operatives and the stupid folly of their dupes no longer. Only a prompt and vigorous action of the Stalybridge strike can save Lancashire from a great disaster. And a permanent discontinuance of the harrassing conduct directed against their employers' management of their own businesses will be requisite if this matter is not precipitated upon them, even should they make a judicious retreat from the Social position in relation to the Stalybridge Spinning Company.

AFRICA AS AN OUTLET FOR LANCASHIRE MANUFACTURES.

Increasing knowledge of the interior of Africa and its peoples demonstrates very forcibly that the continent offers far and away the best and greatest chances of new outlets for the manufactures of Lancashire. In most places the people are not asked, or are scarcely asked, to preserve the draw a line of distinction between that condition and one of being clothed. It is, however, clearly and constantly and enormously covered that they are so not from choice, but from necessity. Native weaving, of which there is a vast amount, is totally inadequate to supply them with cloth, and consequently, unless a supply can be obtained from extraneous sources, they must perish without. Wherever there is an entrance for European commerce there is an opening for Lancashire calicoes, which should not be neglected. And that there are boons of Englishings in the enormous coast-line of the continent should not be disputed, but we are afraid they are not utilized as they ought to be. The remarks of a recent writer in Blackwood's Magazine are very pertinent. He says:—

A question which is somewhat puzzling in connection with trade on the east coast of Africa, is as to what is the cause of so little English calicoes being sold on the coast and inland. East and Central Africa's great import is calico; yet the bulk of this comes not from Manchester, but from Bombay. From Natal to Cape Transvaal, most of the trade in the coast ports is carried on by British Indians, known on the coast as "Bunias," and these get their supplies of entire cotton from Bombay. Manchester seems to supply most of the printed stuffs, but very little of the common white calicoes. This is probably because the Bunias are mostly working on calicoes from Bombay, and are not in a position to obtain their supplies from Europe. We will refer to this question in the column. The cotton trade is in a way connected with this. While we have no direct information, but its deliberations may not have been concluded in time for announcement in our columns. Meetings of the various employers' unions have been in order that their decisions might be correctly given and represented at the Federal meeting to be held the next day. Misses in their business to an end at the Stalybridge Spinning Company. The replies that had been received showed that of nearly ten millions spindle only 75 per cent. were favourable to the stopping. The announcement gave the liveliest satisfaction. The Federation meeting referred to a compromise, which was the conclusion that for some time a process of deterioration has been going on, and that parties to business transactions seem to think that they may fail or discontinue their engagements in their own good caused it cannot be done without either legal risk or the destruction of character, and often both committed; and to persons tempted to enter upon
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Courses of this kind we would direct their attention to and bid them remember the motto engraved in gold on the great dome of the Exchange under which they are in the habit of transacting their business, namely, that “A good name is rather to be desired than great riches.” And the truth in this case is that the application is to all men who do business beneath it. We hope it is not literally too high to be read or morally too high to be attained. A trial that took place at the Manchester Assizes on Monday is reported in the column, gives pertinence to these observations.

It was an action brought by the Fern Spinning Co., Limited, Shaw, for the recovery of £140 in damages sustained by the defendants, the Union Manufacturing Co., Ltd., Rochdale, for the delivery of quantity of yarn. After the evidence the defendant’s counsel submitted a verdict for £140, 2d., damages, with costs, against the defendant company.

We are not quite satisfied that either upon the evidence or upon the merit of the case the award has been correctly given. Some legal points were raised, but even if they have no influence the judge in giving his award.

Indeed, as much may be gathered from a remark made to the defendant’s counsel, that the principle seems to be that the plaintiff’s case was not a ready or willing deliver to the defendant. This being so, the defendants were not to deliver the contract, but they did not say so. Some say it was a very good lawyer, and fit even to be a judge. None of the witnesses must be very innocent of the ways of commerce to put the position in that manner. The defendant company had commercially sound and not very sound, for not understanding the matter in the first place, it is to be presumed that they had entered into contracts or made sales of cloth that required the yarn to be purchased. The company, of course, had agreed in terms of delivery in regard to time, failing which their contract would have been cancelled by the merchant, who would have bought the cloth elsewhere and charged them and compelled them to pay an advance of price that the change of the market might have involved had an advance taken place, with perhaps damages for the loss of that market. By the other hand, the market declined, the merchant would have cancelled the contract in order to buy at the lower prices prevailing, and so make a profit in that way. So much for the unusual position, the party having bought the yarn purchased, and in consequence of not receiving it their agent, Mr. James Tattersall, was compelled to buy another supply, and, as he purchased, gave the yarn to the gentleman for an inferior article, in doing which, he believe, he made a mistake. He ought to have bought an equal quality, and charged the defendant company with the difference between the two values. By substituting an inferior quality of yarn, the defendant company ran a very considerable risk of having their order cancelled on the ground of inferiority, while by the time the evidence was being given the merchant’s examination, they could establish no claim for loss. But a further result of the plaintiffs’ default in failing to make delivery according to contract was that the defendant, having purchased a second supply of yarn, were saddled with yarn they did not want, and that on the verge of a long and heavy decline in the market. The defendant company having been, through the plaintiffs’ default, compelled to pay a greater requirement, and elsewhere, the transaction, according to all principles of equity and sound commercial morality, ought to have been sold. The defendant company not require those yarns afterwards may reasonably be correct, as was alleged in the correspond-

ence, and from the fact that the management of the mills changed hands about the time when the defendants’ case was completed it is quite within the bounds of reason to suppose that a new manager would bring new business connections, and consequently would obtain orders for different descriptions of cloth, requiring other yarns. There is no chance of using these that had failed to be delivered in time for use in the orders for which they had been bought. On these grounds, and judging from the best reports of the evidence laid before the defendant, it is said that there has been a serious miscarriage of justice.

Just now, as at many times in the past, there is a great outcry among spinners about the difficulty of getting manufacturers to accept delivery of yarn at high prices compared with those ruling now. There is always this sort of friction when prices either fall or rise. Manufacturers ought to take their purchases through prices have gone down, and if circumstances have arisen which have compelled them to cease using such costs or qualities as they have purchased, then they ought to go to the spinners and get the order cancelled by paying the difference in value between their yarn and the yarn purchased and the market price of the day. This is far better than allowing the thing to drag on and encountering all sorts of risks and chances of unpleasantness, with the final one of having to pay a very formidable issue of justice from it. In the earlier days we have spoken of, this procedure was not infrequent. If manufacturers will not do it, this, we can expect no sympathy from right-minded and honourable men. Spinners under these circumstances ought to demand to be right, and in doing so will do credit to the State a service.

But of one thing it may be said, that manufacturers, and particularly the Lancashire spun yarn companies, of South Lancashire are not to be quite so serious and perfect in the eyes of the manufacturers of fair dealing in this respect. So long as they remain over and over again, and in all their experience upon the “boards,” it has come under the observation of the writer that manufacturers, with many thousands weight of yarn orders on their books after the market has advanced, have been almost unable to get a skip of their low-priced orders delivered. Of course, “the boot has been on the other leg” then. These facts go far to demonstrate one thing, namely, that spinners and manufacturers are, to use a common Lancashire phrase, "much of a muchness." One being about as good as the other.

If it is not quite true, it may now be pertinent to ask, that our spinners and manufacturers, the associations, and our influential Chambers of Commerce, should take up the consideration of the lose method now prevailing of conducting business, and the pressure of the fierce competition present rise to so much equivocation and meanness? Why should not a committee of the most intelligent and influential members of the trade, or of its various sections, frame up a code of rules or commercial laws, which should govern all the transactions of the trade in buying and selling its materials and productions. The experience gathered by the trade during the past half-century is simple enough to enable almost every conceivable point to be provided for either specifically, or under general principles. All contracts should be punctual, and regulations as a basis, and the fact so stated upon the contract notes. All orders to be valid should be confirmed on both sides by a purchase and sale note respectively. These should also contain the promise that and the fact that the contract should be referred to a committee or court of arbitration in connection with the chambers or associations. These arrangements would not be without effect, and the fact that so frequently arises in conditions like the present and their opposites, and which it is highly desirable, in the interests of every party concerned, should be removed.

Reviews of Books.

SILK DYEING, PRINTING, AND FINISHING. By GEORGE H. HURST, F.C.S., L.S. Low; George Bell and Sons; Manchester; Marsden and Co., Textile Mercury Office; pp. viii., 256; price 7s. 6d.

Prior to the issue of this little book on silk dyeing there had not appeared in the English language, either in pamphlet or otherwise, a work on this subject. What has been given in books on dyeing about silk has been of a most unsatisfactory character, the subject being dealt with in a perfunctory sort manner; therefore the appearance of the book now under notice fills up a gap in English technical literature. The work is divided into eight chapters, and there is an appendix of recipes and patterns. The first chapter contains an account of the various silk fibres, describing their origin and more particularly their chemical properties; it is illustrated by a number of free drawings of various silk knots and silk fibres, and the information is fairly complete. The second chapter deals with the subject of boiling-off and bleaching of silk and contains much suggestive matter. The third deals with the production of blackstock silk and describes clearly and succinctly the method of dyeing all kinds of black; the author does not give many recipes but devotes his space to the explanation of the phenomena of dyeing. Chapter iv. treats at length of the production of fancy colours on silks, reds, blues, yellows, and greens, from both the natural and coal-tar dyes. The author proceeds to the proper methods for weighing silks, then the dyeing processes, the principles underlying these processes being carefully pointed out; and we find many practical hints for dyeing through these pages showing that Mr. Hurst has a practical acquaintance with his subject. The next chapter on the dyeing of mixed silks is but a short one, then follows a chapter on silk printing, then one on silk dyeing and finishing machinery, which is very well illustrated, although we notice that many of the illustrations are of machines used in the cotton industry. This chapter is well written, and should prove of interest to the silk dyer and finisher. Chapter viii. deals with assays and testing ranks of dyed silks and is a very useful one. An appendix gives a collection of some 175 recipes relating to silk dyeing and printing, illustrated by 11 plates of silk dyed in various patterns. The recipes are thoroughly practical, and appear to us to be reliable, while the patterns are exceedingly beautiful and well done. We like the plan of the author, but the author has not overburdened the text with recipes, which generally teach nothing, but has contented himself with one or two scientific manners, laying the foundation on which practical knowledge can be based. The style is clear and concise, with no verbiage, and the information given is fully up to date. The book is well printed, free from errors, and is a credit able to author and
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THE MARKET."
produce fancy or broken diagonals. The great scope afforded for change, combination of colours, and arrangement of pattern is almost unlimited, giving every opportunity for effective and striking work. We give a second pattern showing how the stripe may be shaded on 1, 2, 3, 4 shafts, especially if the pegging plan in these shafts is made to develop a broken satin. 1, 2, 3, 4 orange, 24 mid orange, 24 primrose, 24 very light straw, all two in a heald, on 1, 2, 3, 4 shafts; 24 cinnamon brown, 24 orange, 24 red, 24 red, 24 red, 24 red; one in a heald; 24 crimson or scarlet organze silk, two in a heald; this silk stripe of 24 to be on 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 shafts, 48 picks in each of 30's cotton well.
shown in Design 25: and join the gauge ground up to the plain on the principles previously indicated. It will be observed that in Design 25, 64 picks and 48 threads are in reality represented, the doups occupying a third of the thread, without being represented by any similar places in the cloth.

A type of gauge effect liable to prove very confusing is that which may be best described as a "double weft gauze," the construction of which is indicated in Design 26 and Diagram 18 and 19. Here the idea is to use weft of two colours, thus obtaining the effect of an extra weft without any flushing at the back of the fabric. The gauge used in designs of this kind is usually formed as indicated in section a of Design 26, which brings the dark odd picks to the surface, thus covering the even-numbered picks entirely. Thinking out the effect of such a construction as this is well-nigh impossible, but if rough sketches are made of the cloth, as shown in Diagrams 18 and 19, then the effect may be rendered very apparent. For example, Diagram 18 represents the working of the crossing or doups threads, while Diagram 19 represents the working of the two stationary threads. Thus a is a dark odd picks thrown into the surface of the fabric; b, b, b, light even picks, covered by the peculiar arrangement of crossing and stationary threads; c, c, c, stationary threads; and doups 1 and 2, the crossing threads, and 1, the crossing of stationary and doups threads. In Design 26 the possibilities of this scheme of construction are shown, warp and weft to be as follows:

**Warp.**—All thin black silk.

**Weft.**—1 pick grey silk; 1 pick white silk.

Then a will be grey gauge, b will appear in plain cloth, c as pure white, d as pure grey, and e as black. Thus most elaborate figures may be designed on this scheme of construction, which may nevertheless be analysed with comparative ease according to the foregoing particulars.
Machinery and Appliances.

MORE IMPROVED BALE BREAKERS.

MARKERS: MESSRS. TAYLOR, LANG, AND CO., LIMITED, STALYBRIDGE.

The bale breaker or cotton puller is a machine that has come to stay. This is evident from the fact that every machine maker of note now makes it, and many of these have already been called upon to notice. It is hardly more than half-a-dozen years since the first was made, and yet it has already been very widely adopted, and no mill can be said to be properly equipped that does not possess one.

Amongst the first firms to place a machine of this kind upon the market was that of Messrs. Taylor, Lang, and Co., Limited, Stalybridge, who exhibited one at the Manchester Jubilee Exhibition, in 1887, under the present writer’s name. The first of the two machines under notice is in principle, and to a large extent also in detail, exactly the same as the one then placed on view. It has, however, been modified in several points. As will be seen from the illustration, it consists of the usual travelling lattice, by means of which the cotton is fed to a pair of rollers, on the peripheries of which are cast in helical order a large number of blunt spikes or teeth. As originally constructed these rollers were of 3-in. diameter, including the teeth. They are now made of 6-in. diameter, the difference having been obtained by increasing the length of the teeth. These rollers are weighted by two rods attached to a weighing-cage, and descending through a stand connected to a framing, are attached to two very strong spiral springs. Above these springs is arranged a strong bracket against which, when the top roller is lifted by the passage of a thick layer of cotton, the springs are compressed. A perfectly vertical lift is obtained by the use of the two rods. This pair of rollers make about 15 revolutions per minute. Immediately below these are a second pair similar in construction, but of 7-inches diameter. These make about 120 revolutions per minute. Thus the matted masses of cotton coming through the rollers are instantly seized, and by the greatly accelerated movement of these rollers are torn asunder and disentangled. In the first pair of rollers the construction of the teeth is peculiar, the front being rounded, which enables them to seize, and the back being straight, which enables them to hold the material firmly when subject to the action of the second pair of rollers. The teeth of the second pair are both sides alike, as the retaining capabiltiy in that position is not required. The construction and arrangement of the teeth of the rollers in relation to each other is such that no contact can possibly arise or the cotton suffer any damage. Having passed in the second pair of rollers the cotton is received by the fly roller, a single roller with longer spikes upon its periphery, the function of which is to beat the cotton into smaller shreds when delivered from the second rollers. This it does by striking it downward upon the floor or upon a lattice, according to arrangement.

The rollers are enclosed, and all gearing is effectively guarded. The roller shafts are of wrought iron, and the steps are bashed with brass. All the gearing wheels are made of a special mixing of metal to yield great toughness and strength. This machine occupies a floor space of 10ft. 6in by 6ft. 2in. It is easily wrought when only four to five bales per hour are put through. The increase in the diameter of the first pair of rollers, as compared with the original type, renders this machine much more effective as a cotton puller than before, as it brings the cotton so much sooner within the range of action of the second pair of rollers, with the effect that it is torn into much smaller shreds.

The second type of bale breaker, shown in Fig. 1, consists of four pairs of rollers 6-in. diameter, but has no fly roller. As in the preceding, it is strongly geared, and each pair of rollers double weighted. The rollers are of the same construction as the first pair in the machine just described, and move at varying velocities, the acceleration being towards the front.

As will be observed, our illustration shows an elevating lattice, from which connection can be made with the second pair of rollers in the same or any other room, as convenience may allow. We had an opportunity of inspecting an excellent installation of this cotton puller in connection with a very extended lattice at one of the most modern mills, and which seemed admirably to do the work for which it was designed.

Messes. Taylor, Lang, & Co., Limited, who also make all kinds of cotton machines, estimate the highest quality, will be pleased to answer any application for further information on being addressed as above.

FIG. 1. IMPROVED BALE BREAKER.—MESSRS. TAYLOR, LANG, AND CO., LIMITED, STALYBRIDGE.

Bleaching, Dyeing, Printing, etc.

NEW COLOURING MATTERS.

During the past few weeks we have been favoured with samples and particulars of a large number of new colouring matters that have been placed on the market and are now available for use in the dyeing and printing of textile fabrics. These have been subjected to thorough tests, and will now bring them to the notice of the readers of The Textile Mercury.

NEW ACRIDINE SERIES.

From Messrs. A. Lennard & Co., of Muthill, we have a range of seven new dye stuffs, belonging to the same series as Acridine Orange, which they sent out some time ago. These dye orange, scarlet, and deep pink shades. The new dyes are dyed with the aid of a tannin and tartar emetic mordant. On calico they can be printed in the manner common to tannin colours. A good printing colour is made with 3 lb. starch, boiled up in 55 gallons of water; to this is added 2 lb. acetic acid at 20% strength, and 35 lb. of gum thickening, with 5 oz. of dye stuff (previously dissolved in 2 lb. acetic acid; finally 1 lb. tannic acid dissolved in a pint of water is added). The colour is ready for use when cold. The calico is printed, steamed for 3 hour at 3 lb. pressure, passed through a bath of tartar emetic, washed, scoured, and dried. For wool dyeing and printing they are not very suitable. For silk they may be used with good effect, dyeing it from a neat soap bath. In printing silk they are used with a simple thickening, no mordant being required. The above recipe for calico-printing without the tannin and acetic acids will be found to answer very well.

They can hardly be considered fast colours: when boiled in soap and water they bleed to a greater or less extent, although they are faster on silk than on cotton; and they are affected by strong acids and alkalis, which turn them of a yellow or buff colour, but are not affected by dilute acids. The series comprises Acridine Orange R Extra, which dyes cotton and silk a fine bright orange, slightly varying in tone on the different fibres. The dye stuff is a deep reddish-orange powder, soluble in hot water to a clear reddish-orange solution, with slight fluorescence; the solution in strong sulphuric acid is a lemon yellow colour, with a green fluorescence. Caustic soda added to the aqueous solution throws down the base in the form of a dull-coloured precipitate. Acridine scarlet R, acridine scarlet RK, and acridine scarlet RR, do not give bright shades when dyed on cotton, but better results are obtained by printing on wool and silk the...
shades are decidedly yellower in tone. The R is an orange powder, soluble in water to a solution, and in strong sulphuric acid to a brownish-yellow solution, which has

and most of which promise to be of some value.

The first series is described:

**Naphthol Black-Blue.**

Which belongs to the same series of colours as the original naphthol black—dye-stuff known, or that ought to be known, in every dyehouse. This new body dyeles wool from acid bath in the usual way very easily and evenly, 1% giving a dark blue, 2 1/2%, a blue-black, and 4 1/2% a good black; a trace of yellow naphthol green will raise the dyeing a full coal black. On silk the shades are much bluer than on wool. The dyeings are quite fast to acids, alkalis, and soaping, so that the colour may be used on goods that have to be soaped. The dye-stuff is sent out in the form of a brown-black powder, soluble in water and alcohol to deep blue solutions, and in strong sulphuric acid to a deep bluish-green solution. From the aqueous solution hydrochloric acid throws down a deep blue precipitate.

**Naphtholamine Black 4 R**

Is also adapted to wool dyeing, giving shades from blue-black with 2 1/2%, to deep coal-black with 4 1/2%, using a bath of Glair’s salt and sulphuric acid, and one of bisulphate of soda. On silk, the dyeings are not so good, the shade approaching a violet brown. As with the naphthol blue-black, the dyeings are quite fast to acids, alkalis, and soaping. The dye-stuff is a Victoria black-blue, new Victoria black B, and new Victoria black G. These are intended to replace the old types, being rather cheaper. They possess the same dyeing properties as the old dye-stuffs, dyeing wool and silk from acid baths, the black-blue giving steel-blue to bluish-black shades, the B reddish-black shades, and the G jet black; on both wool and silk, the dyeings in all cases being fast to acids, alkalis and soaping. They can also be dyed on chrome-mordanted goods, which enables them to be combined with dye-stuffs requiring such a mordant to produce a variety of compound shades.

These new blacks are suitable for dyeing woolen goods that have to be soaped.

**Benzo Brown.**

This is the latest issue of the Benzo series of direct-dyeing cotton dye-stuffs. Like all the rest of these colouring matters, this dye cotton from a bath of bath and soda, or soap and Glair’s salt or common salt, giving very dark shades of brown, of a yellowish tone. These are fast to acids and alkalis, but bleed a little on boiling in soap and water. On wool the colour may be dyed from a salt bath, but the shades are rather redder than those on cotton, and no faster to soaping. On silk it can be dyed from a salt bath, giving about the same shade and tone of colour as on cotton, therefore it can be used for dyeing mixed silk and cotton goods with good effect. Taken altogether, the introduction of benzo brown is an acquisition to dyers, as giving shades not hitherto obtainable from a single dye-stuff, and which are practically fast. The dye-stuff is sent out in the form of a blackish-brown crystalline powder, soluble in water to a brown solution, in alcohol to a reddish brown, and in strong sulphuric acid to a deep violet solution. Both caustic soda and hydrochloric acid throw down greenish-brown precipitates from the aqueous solution.

**Diamine Gold.**

Is a new direct-dyeing cotton colour, dyeing from a bath of Glair’s salt and soap, giving shades from a chrome with 1 1/2%, to an old gold colour with 3%. The dyeings are even, and the shade bright and fast; this is indeed one of the best direct yellows on the market. The dyeings are fast to alkalis, will not turn them to a slightly more orange shade; and they are not quite fast to soaping.

**Methylene Blue BB, B, and R.**

These are new basic colours, dyeing cotton which has been mordanted with tannic acid and tannin emulsion: deep blue-blue shades, the BB being the palest and reddest, and the R the deepest and reddest of the series. The dark shades are of a bluish tone, the pale shades, and for these the dye will be mostly used. The dyeings are quite fast to acids, are slightly reddened by alkalis, and scarcely bleached on soaping.

The Faber-fabrikken formula. F. Bayer & Co. have sent out several new products during the past month. First, there are some new types of their Victoria blacks, under the names: Now

![Image](https://via.placeholder.com/150)

**Fig. 2 Improved Bale Breaker with Elevating Lathe.—Messrs. Taylor, Lang, and Co., Limited, Newrybridge.**

From Messrs. Cassella & Co. we have received samples and dye tests of several new colouring matters which they have lately offered to dyers.
tion of a colour lake from the colouring matter, and the mordant and the solution of this colour lake in an acid, generally dilute acid, which is added to the dye-bath. It is used in the direct method of dyeing black. In this case the colour lake is not formed, whether from a sulphate, or both, from a solution of logwood and fustic extracts; a quantity of oxalic acid sufficient to neutralise the excess of the latter is added to the dye-bath, and the wool is boiled in this until the black has been properly developed, which takes from 2 to 3 hours. Dichromate of potash or precipitation of the black, but the results are not so good as with the iron and copper blacks. Scarlet from cochineal and carmine from various fuchsias, reds from alizarine and aluminium, maroons from alizarine and chrome acid, and florin from various henna. Alizarine Scarlet A is made from chrome fluoride blues from alizarine cyanine and chrome fluoride, and other colours, can also be produced in the one-bath process, but the results are never so good as those obtained by the ordinary mordanting process. The advantage is a reduction in the cost of labour, which is the principal item in dyeing operations.

News in Brief.

EASTEND.

Ashton-under-Lyne.

The following letter has been received by Mr. W. S. Williams, the Secretary of the Ashton and Alderley Branch of the Spinners’ Association:—“Ashton and District Employers’ Association, Market Avenue, Ashton-under-Lyne. Dear Sir—

Deept thanks for the meeting of the members of this association held March 3rd, 1870. It was unanimously resolved:—That one month’s notice be given to all the Spinners’ Associations to terminate the agreement as to rising and falling prices. For the week ending Dec. 29th, this notice to date from to-day.—Yours truly, DAVID DIXON, Secretary.”

Bolton.

On Saturday the Harris Institute Cotton Class, Preston, visited the Bridgeman-street Works of Messrs. Thorp & Co., cotton spinning machinery, where they spent nearly three hours very profitably. Messrs. H. Hargreaves, and Co., engineers, Sobo Iron Works and Phoenix Boiler Works, Bolton, who were established in 1832, have been for private reasons vendeed all their shares in the Companies Act, and will therefore henceforth be known as Hargreaves and Co., Limited. This alteration will not make any difference in the management, and the business will be conducted on precisely the same lines as under the old firm.

The work of putting out the foundations for the new spinning mill, which will cost £2,000, is in progress, and the work of Mr. C. C Vladook, of Engleby, is proceeding rapidly. The machinery for the new mill will be furnished by local firms—Messrs. Hargreaves and Co., of the Sobo Iron Works; Messrs. H. Hargreaves, in hand having the requisite engine and boiler room machinery, and Messrs. H. Hargreaves and Hargreave and Key-street Works, Bolton, are to supply the machinery.

A gathering of the members of the Employers’ John Keate and Co., and Darcy Mills, took place in the Co-operative Hall, on Saturday, to present their late inside manager, Mr. Ellis, who, having a valuable walking stick and a purse of gold. Over 250 persons sat down to eat. The Chairman (Mr. Matthew Lofthouse) made the collection, and speaking of Mr. Vickers, having worked with him for 24 years, Mr. Vickers suitably responded.

Burnley.

Messrs. Shaw and Son, of Fearfield, who are extending their weaving shed at the Roup and Power Co.’s premises, are putting up a number of additional new looms.

Bury.

The spinners (operators) have collected amongst their sympathisers, £22 15s. 2d. towards the local Infirmary fund. The Spinners’ Association have instructed their delegates to the Central Association at Manchester to vote for the additional in the meeting of the 28th, at the next meeting.

The Spinners’ Association have had 104 members on the funds during the first week of December, which was the extent of £116 17s. 2d. The gain on the last quarter was £71 3s. 4d. The weekly wage of the Mill, No. 2, has reached such a stage that the delivery of the necessary machinery has been commenced by Messrs. F. and T. Oldham. The operation required for the new plant is the manufacture of a quadruple expansion engines, and the first of the four new steel beams was expected to arrive this week. Several of the frames were worked with the workmen to stop a portion of their spinning for a week in their turn, while at other mills the work was somewhat irregular, through, it is said, in order of workmen’s desires.

On the other hand, Messrs. J. A. Owen and Sons, of Todmorden, have resumed the weaving of their looms for the next three months.

The weekly wage of the mill, with the exception of removing some of their old looms, and replacing them with new.

Affairs at the Daisymill, Elton, have resulted in an open rupture, the operatives coming out on strike on Wednesday evening. An interview took place between the parties and the officials of the Daisymill, and the firm, along with the Employers’ Association secretary. The firm were willing to concede a point in the wages, and the representatives of the operatives and promises of a new contract. But the greater part of the men would not agree to the terms that were offered. Not having arrived at any understanding, the operatives came out on strike the following night.

Carlisle.

The death is announced of Mr. John Stead, head of the firm of Stead, Rose, and Bond, of Brussels, near Carlisle, and one of the wealthiest men in Cumberland.

On Friday evening of last week, Professor Beaumont gave his last of a series of lectures on textile design in the United Methodist School. There was a good attendance, and a number of handsome new sets of “Woven Fabrics” were exhibited by several designs, which were exhibited by the aid of an osy-luminator.

Furnworth.

The Irwell Bank Spinning Co., Limited, Prestolee, which was registered about a fortnight ago, has now been formed to acquire a plot of land forming the site of the old Prestolee Mills, and other land adjoining, on which the company propose to erect a handsome new factory to be called Spinning Mill, for spinning Bolton cottons. The plans are being drawn by the well-known firm of P. & E. Appley, and Mr. Thompson was appointed an arbitrator to settle a dispute between the owners of the Jubbilee Mill, Padiham, and a Manchester firm.

Bradford.

At a meeting of the Council of the Bradford Chamber of Commerce, on Wednesday, a resolution was read from the Labourer’s Union, in the course of which it was intimated that the Council would be taking further evidence from Bradford representatives. At the annual meeting of the Bradford Technical College, on Wednesday, Mr. Henry Mitchell, who presided, stated that he was able to report that the College was being more than maintained, and its financial condition was not greatly improved. On the other hand, there was, however, much need for the extension of the premises.

The death occurred on Tuesday of Mr. James Rawson, of the firm of J. R. & T. Rawson, merchant, of Leeds-road. Mr. Rawson was in the Town clerk’s department from 1855 to 1862, and then went to Messrs. Firth, Booth, and Co.’s office. He was admitted as a partner in the business of that firm some years before the death of Mr. George Firth, when he took over the business under an arrangement made in Mr. Firth’s will.

Messrs. Peel Bros. and Co., of Globe Mills, City-road, having decided to close a large portion of their works in the Government department to Thornton, the workforce gathered together on Tuesday last to present their manager, Mr. Freer, with a gold watch and medal (with inscription) as a token of respect for the manner in which he had been in their interests in the last ten years. Mr. J. Briggs made the presentation, and Mr. Norgamton suitably responded.

Leeds.

Messrs. Shaw and Son, of Fearfield, who are extending their weaving shed at the Roup and Power Co’s premises, are putting up a number of additional new looms.

The Institute of the Leeds City Factory Inspector (Mr. G. A. Hirst), Mr. George Taylor Lockwood, and Mr. F. Haywood, visited the clothing factory owned by Mr. Bruce, at the Leeds Town Hall, on Wednesday, for having a young person in his employ, and not more than five weeks since the act prohibited the employment of under 14 years of age. The inspector presented the customary certificate of fitness. A fine of 20s., including costs, was imposed.

Another case has occurred at the mill of Messrs. Hargreaves and Nessey, woolen manufacturers, Birkenshaw, near Bolton, for the employment of two apprentices. In Lancashire and in the Bradford trade the weavers have charge of two looms. The weavers have been employed in a mill which is unreasonably small, and workmen have complained that the mill is too small. Some of the looms have been turned, and the mill has been left for more than a month. The men have not been employed, and have left the mill. Messrs. Hargreaves and Nessey have since decided not to employ their workpeople to manage two looms, although they have been left for more than a month. The mill is not yet settled. There are, however, some differences as to the new wages.

Leigh.

All the mills and sheds here, with the exception of the Co-operative weaving shed, are running full time.
The Textile Mercury

London.

At the London Bankruptcy Court, on Wednesday, a receivership order was made against Messrs. J. L. Perkins & Co., woolen manufacturers, with premises in Great Portland Street. The debtors presented their own petition, and the receivership order was made on May 17, 1822. The receivership order will take effect on June 1, 1822, and the assets of the company will be distributed among the creditors. The debtors' assets consist of stock £2,000, and debt £6,000.

Manchester.

The business of the Daley Warehouse Co. is to be liquidated on June 1, 1822. The company's assets consist of stock £2,000, and debt £6,000.

Onslow.

On Monday, a deposition from the Technical Instruction Committee of the County Council was received at the Bankruptcy Court. The committee's report will be published on Tuesday, June 1, 1822.

Oldham.

Another spinning company at Shaw is replacing its old machinery. The directors of the Shawelwell Spinning Co. have placed an order for new wheels with Messrs. Saxon of Oldham.

Mr. J. H. Drouin, of Oldham, has been appointed the manager of the new company. He is also the manager of the Oldham Cloth Clothing Co., Ltd.

The subject of the sizing of machinery is receiving considerable attention in the weaving sector, and several petitions from employers and workpeople have been presented to the House of Commons in favour of the Bill now before Parliament.

A large meeting of employers in the Oldham district was held on Tuesday night to discuss the implications of the Bill. The meeting was attended by representatives from several of the largest weaving mills in the district. The meeting was dominated by the discussion on the advisability of stopping all the mills in the district with a view to putting an end to the strike at Saltleybridge. The strike in favour of stoppage wages was agreed to by the mill owners of the district, and the strike was called off on Wednesday evening.

Other towns are considering the question.

The weaving industry is facing significant challenges, and as a consequence the operations of the mills in the area are being hindered. The present state of the trade for directors to get machinery to work, and the report we have received from the mill owners and the weaving industry in Oldham is being seriously affected.

The yarn contract case between the Yarn Spinning Co. Shaw, against the Union Manufacturing Co., Rochdale, has excited considerable interest, and the decision in favour of the former is viewed with much concern. Some time ago, the cotton cloth has been taken at the lowest rate, owing to the difficulties in the existing market and the farm contract on the other side.

The spinners are yet in the hands of difficulty, and the usual contract rates are not being adhered to. The mill owners and the weaving industry are not considering the adoption of the latest contract rates for the cotton cloth in the district.

Preston.

Short time notices have been posted up in the mill of the Cottons & Co., Ltd., and the valuation of the firm's assets is estimated at £2,000.

The weaving industry in the district is facing significant challenges, and as a consequence the operations of the mills in the area are being hindered. The present state of the trade for directors to get machinery to work, and the report we have received from the mill owners and the weaving industry in the district is being seriously affected.

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Radcliffe.

The New Mill Weavers' Association, which is one of the largest and most influential associations in the industry, has received an increased membership in recent weeks. The association's membership has increased by 500 in the past month, bringing the total membership to 4,000.

The regulations of the association have been revised to ensure greater discipline and accountability. The association's aim is to improve the working conditions of the weavers and to ensure a fair and just wage for their work.

Cottons & Co., Ltd.

The following table gives the value of the exports of cotton and linen goods from the Clyde for last week, and also the total, to date for the year.

<table>
<thead>
<tr>
<th>Date</th>
<th>Value of Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1822-06-01</td>
<td>£1,200</td>
</tr>
<tr>
<td>1822-06-02</td>
<td>£1,300</td>
</tr>
<tr>
<td>1822-06-03</td>
<td>£1,100</td>
</tr>
<tr>
<td>1822-06-04</td>
<td>£1,400</td>
</tr>
<tr>
<td>1822-06-05</td>
<td>£1,500</td>
</tr>
</tbody>
</table>

The following are the total values of the exports for the same time, to date for the year.

- Cotton: £2,000
- Linen: £500

Forfar.

At a meeting of the Forfar Agricultural Society held last week, a letter was read from Messrs. Doon & Co., in reply to a request for the removal of certain grievances. The letter's answer was considered most unsatisfactory, and a committee was appointed to draw up a letter in reply to that effect.

It is rumoured that a firm of manufacturers in Forfar is considering the possibility of setting up a factory for turning out jute and linen fabrics.

If the project is carried out, the industry producing material in this region will be affected. The current systematic attempt was made to manufacture woollen goods in the Cape Colony, and even then...
the efforts made would seem on this side half-hearted. At Ceres, a village near Capetown, there is a large establishment of which much seemed to be expected. The members of the Cape Parliament and several municipalities, for many years back, had been advocating the establishment of manufactories and, and orate speeches were delivered regarding the new industry. A few months later the same agitation was renewed, and it was found that though the technicalities of the trade could be undertaken there, yet that the resources of the country were not sufficient to produce a market which would be profitable. Their great mistake was in the absence of a regular, connected, and organized trade. It was with the hope of eventually securing this that the Cape Government in a recent budget devoted 3,000l. to the establishment of a silk-manufacturing company, and it was almost certain that the company should have had a step in the right direction, for with a well-organized factory and sufficient capital, the industry could be carried on to a great extent.

The Cape Government has also given a step in the right direction by the establishment of the newly-organized silk-manufacturing company, and it was almost certain that the company should have had a step in the right direction, for with a well-organized factory and sufficient capital, the industry could be carried on to a great extent.

**CALCUTTA AND DUNDEE.**

RELATIVE PROGRESS IN TEN YEARS.

Official returns show that in India there are now 25 jute mills, as against 20 ten years ago. In this interval the number of looms has increased from 5,600 to 16,000, and the number of workers from 10,000 to 25,000. The number of persons employed in the jute works has increased from 4,500 to 8,000, the number of jute goods being exported from India is now one-half larger than it was ten years ago.

What has been the progress in Dundee during the same period? In this country no official returns are available such as are collected in India. Undoubtedly there has been progress, but no extensive advance has been made. During the period indicated several of the Dundee factories have been enlarged, but no information is available regarding the number of looms or how many people are employed in the various jute industries. The progress in the development of the industry in India is available, however, from the Board of Trade returns, showing the progress of the industry in this country and the quantities of jute manufactures exported. Dealing first with the quantities of jute imported, the following table shows the position in 1861 and 1891:

<table>
<thead>
<tr>
<th>Year</th>
<th>Jute imported</th>
<th>Jute exported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1881</td>
<td>37,000 tons</td>
<td>34,700 tons</td>
</tr>
<tr>
<td>1891</td>
<td>94,000 tons</td>
<td>100,000 tons</td>
</tr>
</tbody>
</table>

These figures show that there has been an increase in the imports of jute of 52,000 tons, or about 25 per cent. If the average for the three years ending 1891 be taken, the increase is from 185,000 tons to 250,000 tons, or an increase of 39 per cent. The Board of Trade returns, however, do not state what the jute is used for. Undoubtedly some portion of the increased jute goods must now be required for the new factories established by the textile manufacturers, possibly for paper making.

If this be not the case, a larger quantity of jute goods must now be required for the new factories established by the textile manufacturers, possibly for paper making.

In view of these facts there is no reason to expect that the exports from Britain should have receded rather than increased. If they have been augmented it indicates that the jute industry is prospering under extremely adverse circumstances.

It is remarkable that in 1891 nearly twice as much jute yarn was exported from Britain as in 1881. Ten years ago we sent 500,000 tons of jute goods out of this country, whereas we now send 1,450,000 tons, or an increase of about 90 per cent. The following table shows where this yarn has gone:

<table>
<thead>
<tr>
<th>Country</th>
<th>Jute yarn exported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>2,360,000 lbs.</td>
</tr>
<tr>
<td>France</td>
<td>1,900,000 lbs.</td>
</tr>
<tr>
<td>Spain</td>
<td>7,500,000 lbs.</td>
</tr>
<tr>
<td>Italy</td>
<td>5,500,000 lbs.</td>
</tr>
<tr>
<td>United States</td>
<td>3,400,000 lbs.</td>
</tr>
<tr>
<td>Other Countries</td>
<td>4,500,000 lbs.</td>
</tr>
</tbody>
</table>

Total: 10,600,000 lbs. | 33,192,000 lbs.
It will be observed that in 1881 there were exports to the United States $33,000,000 in figures, and in 1889 there were exports $63,000,000. This shortage on the bags explains why the increase in the cloth is so large. While the total value of goods exported is up 77 per cent., the bags are short by 21 million yards, showing a net increase of 30 million yards in the exports to the United States.

Seeing that the United States is so important a market for our goods it is desirable to note the extent to which Calcutta is supplied with in that market. This commodity is the leading export of the United States, Western States being supplied wholly from Calcutta. In 1881 no jute cloth was shipped from Calcutta to New York or any other American ports on the Atlantic seaboard. The first shipment was made in 1887, when Calcutta despatched 28,000 yards. The quantity has increased until 1887, when the shipments amounted to 28,000 yards, or, if bags be included, 38,580,000 yards. This figure is equal to about one-fifth of the quantity of jute goods shipped from Dundee to the United States. Of the jute cloth exported from India, about one-fourth went to New York. In 1890 the exports from India were:—

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>16,000,000</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2,000,000</td>
</tr>
<tr>
<td>France</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Egypt</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Germany</td>
<td>500,000</td>
</tr>
<tr>
<td>Switzerland</td>
<td>500,000</td>
</tr>
<tr>
<td>Argentina</td>
<td>500,000</td>
</tr>
<tr>
<td>Other countries</td>
<td>25,000,000</td>
</tr>
</tbody>
</table>

Total 22,500,000 yards

A writer, commenting on these figures, said:—With regard to New York: the chief buyer of the product of the Dundee manufacturers, Indian jute goods seem to be finding their way thither in no insignificant quantity. The closer proximity of Dundee to New York may, it is hoped, still enable manufacturers there to retain the larger share of the trade, as, indeed, they did, and to meet all pressing demands for jute goods that may spring up. It will certainly be very many years before the United States will be able to meet the demands for jute goods that they are now making and to supply the New York market for housewives; but if the time comes when the New York market will be supplied by Dundee manufacturers, much attention will be given in that market to Calcutta manufactories, and doubtless further extensions of business between Calcutta and New York will be watched with keen interest by Dundee manufacturers. 

YARN DELIVERY: ACTION FOR BREACH OF CONTRACT.

On Monday morning, at the Manchester Aslian, before Mr. Symonds, of the firm of Crompton & Sons, at the Sessions Place, a suit was brought against the firm of J. Crompton & Sons, Limited, to recover £2,000, which were claimed to have been delivered by the defendants. The defendants were found guilty and ordered to pay a fine of £2,000, for breach of contract. The plaintiffs claimed that the terms of the contract were not fulfilled, and the defendants were ordered to pay the sum of £2,000. The case was heard by Mr. Symonds, who ruled that the contract was valid and binding, and that the defendants were liable to pay the sum claimed. The plaintiffs were awarded the sum of £2,000, and the defendants were ordered to pay the costs of the suit.
THE TEXTILE MERCURY.

April 3, 1892.

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taking it that "S. M.-widget displays an error in the name of the incredibility of the president." Mr. B. W. Wilkinson proposed the toast of "The Guest," to which Mr. Nutter and Mr. W. Holmes replied. Mr. J. H. Hewitt gave the "Health of the Chairman and Officers." Mr. H. M. P. Alexander, replying for the Publication Committee, said that that body had determined to make some very radical alterations in regard to the journal, which had come out the past year, together with the "Health of the Society and members." The Chairman and several of the officers briefly responded. During the evening songs were given, and a pleasant time was spent.

THE STALBRIDGE STRIKE.

There is but little change to notice in the position of affairs consequent upon the meeting of the Stalbridge company's "guest" at noon on Saturday, the non-unions employed at the mill left there in a body and went on strike. The strike consists of: the stokers; the foremen; the sawyers; the second sawyers; the drivers; the choppers; the semi-sawyers; the semi-choppers; the thinners, and the shears. The amount of the strike, as the major part of the mill is closed down, is about 700. The men have been on strike for nearly a month. The immediate cause of the strike was the replacement of the old strike by a more recent one. The strikers have been arrested for the breach of the strike.

A very bad case of arson is reported from Pottendorf, in Northern Austria. A considerable sum of money was stolen at a bank for the purposes of lighting a fire in the surrounding villages. The fire had been set on fire by the bank vault.

The German Emirat has given up, except to the stress of the Minister of Trade and Commerce the terms of the trade in the textile trade. The Emirat has now, however, been arrested for the breach of the strike.

The balance sheet of the Colchester Cotton Spinning and Weaving Company gives the gross profit from last year's operations of £1,200, as against £1,500, the profit balance for 1890. For the appropriations to the depreciation and other accounts a sum of £5,000 is required, so that the whole of the patents deposited for these purposes can be claimed, and £2,852 will have to be written off, in addition to the extra reserve fund. No dividend can therefore be distributed. For 1890 a dividend at the rate of 5 per cent. was declared.

The case at W inston, Castle—Few people are aware that her Majesty still adheres to the pattern of the late Prince Consort for the carriage at court. It is said that when one set it is a new one, and that she has been in use for many years. She is one of the most beautiful carriages ever made. It consists of four horses, in a green vine of sprigs. It is one way out of many in which her Majesty shows her regard for the memory of her husband.

SILK-THROWING IN SWITZERLAND—According to some comparative statistics which have just been issued by the Swiss authorities, the situation of the silk industry in Switzerland has been nearly stationary for two years. The number of persons working at factories has increased, and the demand for silk goods has somewhat increased. But, for although the total number of workers has decreased by 50 per cent., the amount of wool sold has been reduced by 20 per cent. The working up of silk has gradually been in progress for two years, but the working of silk on a large scale has not yet been developed.
COTTON.

The situation of American cotton is unchanged from the reports of last week. The market is quiet and stable, with no change in prices. 

The foreign market is also quiet, with no significant changes in prices or activity.

The textile mercantile situation remains stable, with no major changes observed.

The woolen and worsteds market is also quiet, with no significant changes observed.
Bolish nets are still being exported pretty freely, and there is rather more doing in stiff Paris and Paisley Brussels, and zephyr nets do not sell freely, and prices are about the same. The lace net trade is in about the same condition as of late. Made-up goods are selling tolerably well. There is not much alteration in the lace trade, and manufacturers are not very actively engaged. The sale of cotton goods does not increase, but there is a fair amount of business in motion, cashmere, and woollen hosiery.

FLAX AND JUTE.

DUNDEE, WEDNESDAY.—Never, probably, in the experience of the oldest jute merchants was the Dundee trade in such a peculiar position. Yarn is still held at a price of £1 4s. 10d. per lb. and is expected to hold. It is plain that old stocks of cheap goods are not yet out of the market, and that some large buyers must still have cheap contracts. Upon these they make their profit, and compel others either to sell much under cost, or to put their goods in warehouse. It begins to dawn upon the trade here that a reduction of output, which means greatly enhanced cost, will not put the trade upon a proper footing. It is time for the whole trade, for all it is worth, to be united. The goods must be made at a lower cost for production so as to prevent our rivals from selling cheap. This, with the falling exchange, is the turning point for the trade. It is hoped that the better qualities, especially of brown, remain firm. Linen yarns show no change, if anything, there is a little more strength. There is a better business doing in the goods for the home trade, and the signs now point to the continuance of a satisfactory season, which has commenced. Cotton hosiery is in good demand, and the trade is in a fairly healthy state. Arbroath is exceptionally busy, and there is a great deal of business in the heavy worsted goods made there. Dundee jute goods are still very quiet. Twine, cords, and ropes are in fair demand, even at the higher rates quoted generally.

DRY GOODS.

MANCHESTER.—Heavy rooms have been fairly well employed, and the fancy branches have been fairly busy. Orders are further, and, as a result, the trade is in a quiet state. The signs now point to the continuance of a satisfactory season, which has commenced. Cotton hosiery is in good demand, and the trade is in a fairly healthy state. Arbroath is exceptionally busy, and there is a great deal of business in the heavy worsted goods made there. Dundee jute goods are still very quiet. Twine, cords, and ropes are in fair demand, even at the higher rates quoted generally.

HOISERY AND LACE.

LEICESTER.—The market is rather brisk; deliveries are large for immediate consumption, and a portion of the goods are being placed in stores for future use. Cashmire, lambs' wool, and fancy yarns are in fair demand, but cottons are dull. The hosiery trade is in a quiet state, and prices are not much altered. Production is heavy, in spite of the large consumption of the season. Cashmere, lambs' wool, and fancy yarns are in fair demand.

NOTTINGHAM.—The hosiery trade is in a quiet state, and prices are not much altered. Production is heavy, in spite of the large consumption of the season. Cashmere, lambs' wool, and fancy yarns are in fair demand.

TARIFF NEWS.

NEW SPANISH CUSTOMS TARIFF.

Statement showing the Rates of Import Duty to be levied in Spain under the New Spanish Tariff, compared with the Rates of Duty hitherto leviable on Imports into that Country.

Note.—Up to the 30th June next, when the Anglo-Spanish Convention of 1866 expires, the Conventional rates of the Spanish Tariff will still be levied on British produce, including those of the Franco-Spanish and German-Spanish Treaties which are enumerated in Parliamentary Paper, Commercial No. 15 (1886).

Classification of Articles.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>General Tariff</th>
<th>Special Tariff</th>
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<tbody>
<tr>
<td>Class I</td>
<td>Cotton and its Manufactures</td>
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<tr>
<td>Group 1</td>
<td>Raw Cotton</td>
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<td>Raw cotton, with or without seed</td>
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<td>Group 2</td>
<td>Cotton Yarns</td>
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<td>Cotton yarn, spun or twisted in one or two threads, bleached, dyed, or dyed and bleached, or dyed</td>
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<td>Up to No. 35 inclusive</td>
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<td>Twisted with No. 36 upwards</td>
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<td>Group 3</td>
<td>Cotton Yarns</td>
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<tr>
<td>Cotton yarns, spun, twisted in one or two threads, bleached, dyed, or dyed and bleached, or dyed and bleached, or dyed and bleached and bleached</td>
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Rates leviable by New Tariff of 1st February, 1862.
### Gazette News

**PARTNERSHIPS DISSOLVED.**

J. N., R. W., G. H., J., and A. Herd, Bailey, trading as the Alexandra Mill Company; as regards J. N., R. W., and G. H.

J. and A. Nelson and J. Lee, Trowden, Lancaster, cotton manufacturers; as regards J. Lee.

J. P. Leete and J. O'Neill, 51 York-street, Manchester, merchants; as regards J. O'Neill.

### Patents

**NOTICE OF REMOVAL AND CHANGE OF FIRM.**

E. K. DUTTON & CO.

**NEW ADDRESS.**

38-40 FULTON ST., NEW YORK.

**CHARACTERIZED PATENT AGENTS.**

Received from J. ST. JAMES'S SQUARE, to QUEEN'S CHAMBERS, 6, John Fulton St., MANCHESTER.

**SPECIFICATIONS PUBLISHED.**

Each of the following Specifications may be purchased at the Earl Bathurst, 25, Caterham-street, London, for the price of 3s., or may be ordered on the Postal Order, price 6d., which is now in sale at all the Post Offices in the Kingdom.

**1,072. EASTWOOD.** Clothing-cotton machines.

**6,641. BOLDMANN.** Plaiting machines.

**6,972. PITT (L. Cossel), and Co.** Dyestuff.

**7,096. CLAYTON & MILLER.** Knitting machines.

**7,476. JOHNSON (Johannes Amelinck and Sod Fakirs).** Dyers.

**7,537. SHAW.** Dying, dying, etc.

**7,645. WITMEE.** Cotton block-printing machines.

**7,791. HOLLAND, BARTLETT.** Twisted chins.

**7,791. RUBBA.** Twisted chins.

**1,176. BOTTES and ZEUTEK.** Casting machines.

### ABSTRACTS OF SPECIFICATIONS.


Shariel are made wholly or partly of woollen fabric, material, made of, or similar material, and may be made of strips of the fibre, and may be seen on a young man's face, or be worn hanging about his neck.


