TEN MILLION SINGER'S SEWING MACHINES

SOLDERING HOME USE AND FOR FACTORIES.

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And they are all the latest improvements for every variety of sewing. 

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The Manchester Steam User's Association.

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THE TEXTILE MERCURY.

May 7, 1856.

valued at £7,743,000—about one-eleventh the quantity, but over one-third the value of our last year's shipments. In 1855, the exports had grown to 279 million yards. The value of this last-named quantity was, however, only £85,000, what had been the decrease in the cost of production during the 15 preceding years. The exports in 1846 were only 660 million yards, the short supply of cotton having a reducing effect. With fuller supplies business rapidly recovered, and the following table gives the course of the trade:

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity in Million Yards</th>
<th>Value in Million Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1855</td>
<td>790</td>
<td>174</td>
</tr>
<tr>
<td>1856</td>
<td>964</td>
<td>19</td>
</tr>
<tr>
<td>1857</td>
<td>1,137</td>
<td>253</td>
</tr>
<tr>
<td>1858</td>
<td>1,439</td>
<td>183</td>
</tr>
</tbody>
</table>

Since 1850 the returns have been more complete, prices being distinguished from dyed goods. We have referred to the figures for the past two years above. Prints also are now made narrower and lighter than in former years.

Our Best Customers in 1855 and 1856.

A comparison of the Board of Trade Returns for 1855 with those for 1856 affords evidence of several striking facts as to the new channels in which a large portion of British manufacture is being sent. Although our markets refer only to printed and dyed goods, they may be taken to apply in a general sense to other cotton manufactures, if not, indeed, to all articles of British production.

The first demand should, however, be made, that although India and Ceylon took only a comparatively small number of coloured goods in 1855, their purchases of grey and bleached goods are no less significant. The total was, however, still behind that of either the United States or Brazil, although it exceeded that of Germany slightly. Our best customers in 1855 were the United States, which took 459 million yards of printed and dyed goods, against only 35 million last year—with a population over three times as great. Brazil came second with a total of 50 million yards, against 125 million in 1851. The purchases of several other markets are given below:

<table>
<thead>
<tr>
<th>Country</th>
<th>Million Yards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>29</td>
</tr>
<tr>
<td>Belgium</td>
<td>23</td>
</tr>
<tr>
<td>France</td>
<td>26</td>
</tr>
<tr>
<td>Holland</td>
<td>11</td>
</tr>
<tr>
<td>Italy</td>
<td>27</td>
</tr>
<tr>
<td>India</td>
<td>32</td>
</tr>
<tr>
<td>Ceylon</td>
<td>33</td>
</tr>
<tr>
<td>Russia</td>
<td>125</td>
</tr>
<tr>
<td>United States</td>
<td>459</td>
</tr>
</tbody>
</table>

The figures for Turkey in 1855 included shipments to Continental Europe. The market, notwithstanding the separation of the returns for Europe, has, it will be observed, developed enormously. How we should fare if the Russian Eagle were ever allowed to fly on the shores of the Bosphorus we leave manufacture to judge for themselves. New Zealand only took us £155 worth of dyed and printed goods in 1855, the length being little over 6,000 yards. Australasia altogether took less than $1,000,000, against $2,000,000 last year. The foreign West Indies, which in 1855 were of less importance than our own possessions in that quarter, the exports being nearly halved, have now taken from us over 270 million yards, a quantity larger than that of our own islands. This is a striking fact, and it would be as well to remind Lancashire men that if a certain power which has ambitious ideas in connection with the occupation of territory in the West Indies should succeed in its objects, our trade will receive a sudden check. In matters of this kind the political scheming of foreign nations has an important bearing upon our trade prospects.

China in 1855 was a very poor customer, her purchases of printed and dyed goods only amounting to $21 million yards, against $7 million last year. What the position will be half a century hence we may conveniently leave it for postscript remarks to consider; but it is quite sufficient to do so, now, to watch the movements of Bombay competitors for the people of the present day.

The Lesson from these Figures.

There is a valuable moral to be derived from the figures which we have been at the trouble to collect; and it was to point that moral that we have adored our tale with charity and statis.

The conclusion fails to heed the history of the past is apt to be deceived as to the probabilities of the future; and the truism is that the past is as applicable to commercial as to political matters. Less than fifty years ago the United States was the best market the cotton manufacturers of this country possessed, while China was one of the very poorest. In 1851 the position is almost reversed; China is one of our best customers; the United States has receded into the background. Our best customers in 1855 were, to recapitulate, the United States, China, and the Dutch East Indies, and Portugal. The lead is now taken by India, China, Australia, Brazil, Turkey, Africa, and British North America—steam, if we except Brazil, customs whose wants were comparatively unprovided for.

To-day Africa stands in the same relation to the future as China did in 1855. It is the most promising market for cotton goods in the world, and we trust that Englishmen will take care they get a share of the trade.

The nation which taught the world a lesson in humanity by abolishing the slave traffic has a claim upon the Dark Continent greater than that of any other civilized nation. It is to be hoped that Lancashire and other portions of the country will be able to read their title clear, for—Africa—less than fifty years ago was the world to conquer on this little earth of ours!

Prosecutions under the Factory Act.

It appears that the criticisms we have from time to time directed upon the powers of the Factory Inspectors in the institution of prosecutions against the employers for alleged infractions of the law, are beginning to take effect.

It is stated upon the intellects of these gentlemen that when an employer has done everything humanity possible to secure the observance of the law, and it is then broken by a weaver, minder, or other operative, the law ought to accept the responsibility. On Wednesday, at Colne, in a prosecution before the magistrates, John Bannister, weaver, Nelson, was fined 3s. and costs for allowing a child to sweep a loom whilst in motion. The factory inspector said he was satisfied that Bannister's employers (Messrs. Hartley, Co., cotton manufacturers, Colne, to whom the license to the Factory Acts were observed, and he wanted weavers to see that they were equally responsible for employing for allowing young persons to clean machinery in motion. It is remembered, something less than 30 months ago a mixed trial was heard at the Crown, and Bannister and Co. were convicted and fined for an exactly similar occurrence—a fact on which they commented. We would observe that if the inspectors are to get the laws fairly and fully observed in their respective districts, they had better pay more attention to the instructions committed by the operatives in every point, and least to neglect the overworked, the vilest of scoundrels for the wrongdoings of other people, and they will soon find the most satisfactory results arising from such change of policy. In every instance of a Factory Act prosecution let the inspector carefully ascertain who is the real offender, and then in the case of his being an offence worth noticing beyond a caution, let them prosecute the offender, whether master or man, accordingly. It would materially assist and stimulate the powers of factory inspectors, if the benches of magistrates would dismiss all the cases brought before them in which employers are summoned when the offenders are present. It is their function to protect the innocent and to punish the guilty. The erroneous policy acted upon by the inspectors arises from their minds being imbued with an old legal tradition, which does not apply in this case to once be discarded. We refer to the legal maxim that a master is responsible for the acts of his servant, which is to a certain extent an epitome and which holds, we would point out, however, that in these cases it does not apply.

An employé in our cotton mills is not a servant at all; he is engaged to perform his work in exchange for wages. He does not do anything else beyond that. He, therefore, not a servant but a contractor, and the law of master and servant, with its special obligations, does not apply to the exactitude of fact, in the case of employers being subjected to prosecutions, should never be lost sight of, and a denial of responsibility should always be set up by the prosecuting party. We are glad to see that correct ideas are beginning to be entertained in unconnected souls regarding these matters.

The Battles of the Malays.

The term "batik" is applied by the Malay to woven fabrics decorated with coloured patterns by means of printing or painting, and dying, which are worn as oblong loincloths, called "sarongs," or as square cloths, the heads called "Kain-pandangs."

These batiks are produced in Holland and Great Britain, and with the South Seas, but the manufacturers are obliged to sit against the first principles of their art in order to make the articles which they supply in accordance with the taste of the customers. Professor O. N. Witt, writing in the Leipzig Montschrift, says the women who dye the batiks—for this branch of Malay industry is attended to by women—put the parts of the fabric which are not to receive colouring matters with a mixture of wax and resin melted. It is applied by a can of sheet copper handle of bamboo, and provided in front with a bent reed as fine as a hair. If the mixture becomes too thick it can be easily thinned by warming. The work must be done in a sort of exsset, and marks with her wax pen the figures which she desires to trace on the batik at which she is working. When the design is finished the fabric is hung up in order that the wax may become quite hard, and then the stuff is dipped in the dye-bath. Afterwards the wax is removed by boiling with ash-lye. In this way a design of colour on a white ground is obtained. If now the fabric is again washed with wax the parts which remained white can be dyed with any colour desired. A part of the fabric dyed at first can also be dyed again, and this frequent repetition of this process very gracefully and richly-coloured patterns are produced. This, however, is not the only way in which batiks are decorated. The cunning Chinese have taught the Malays to make patches with blocks in relief, which have been dipped in hot wax, instead of laboriously tracing the design by hand. For this purpose they import blocks of sheet copper, and in this way of use of this method is spreading. The wax is of course brittle after it has hardened, and therefore the dye finds entrance at several spots, and when the wax has been removed by boiling these broken places present the appearance
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of fine coloured velvets pervading the fabric. In course of time this accidental feature has become indispensable for Malay taste, and these velvets are now regarded as desirable, good stuff, and are intentionally produced. The dyes principally used by the Malays in the production of these velvet are indigo, catechu, logwood, saffron, and madder-like root. Specially expensive examples are decorated with gold leaf, fastened on by means of a very treasured glue. As may be supposed, the batik, though produced in a country in which labour is very cheap, is, nevertheless, very costly on account of the amount of time and effort demanded. A genuine "sarong," the ground work of which consists of machine-made cotton stuff from the factories of Bombay, costs, if the amount of stuff used is estimated at one square metre, 20 to 30 Dutch guilder, if not far more. The "sarong" of the native princes are often extremely expensive productions. Under these circumstances it is not at all surprising that European manufacturers have attempted to produce these goods in large quantities. The chief seats of the manufacture of these various batiks are Glaroens in Switzerland, and Holland. Hundreds of thousands are made there every year and exported to the East Indies. These foreign goods, however, can never be at present manufactured here because the difference lies not only in the veins, which the European still fails to reproduce, but in the wax method, of the natives, which leads to the formation of European machinery with better results than before, but nevertheless the inferiority of the imitation is evident. The late Professor Will, deserves to be placed by the side of the other typical products of the artisan industry of Eastern Asia, and to be better appreciated than has hitherto been the case. It presents the ethnographer with a characteristic article of costume of a very interesting race; it supplies the commercial connoisseur with a typical and complete example of the peculiar and not unpleasant ornamentation of the Malays, it furnishes the chemist with a specimen of peculiar and primitive media of dying; and it deserves the careful consideration of thought: ful persons concerned in textile industries as a sample of an extremely ingenious method of textile ornamentation.

"REDUCTION OF HOLES OF LABOUR WOULD BE CONFISCATION OF CAPITAL." AN AMERICAN VIEW.

For an infinity of reasons—the doings of capitalists and labour advocates in the United States poses special interest to Europeans. The progress of the Republic has been so rapid that people have scarcely had breathing time to consider the problems which in the old world have been pondered over for generations, and which, as we showed last week in our remarks upon French legislation as to mills and factories, are still engaging attention. Occasionally, however, one perceives signs of a change which must come eventually in the United States. Two orders were introduced at the present Session of the Massachusetts legislature for reducing the hours of labour for women and minors in mercantile and manufacturing establishments, to fifty-four hours per week, and to fifty-six hours per week in mechanical and manufacturing establishments. Four hearings were given by the Committee on Labour to these orders, and the last hearing being held on March 28. Amongst the opponents of the measure was the ex-treasurer of Merrick Manufacturing Co. of Lowell, Massachusetts; he is almost entirely dependent for its existence upon mechanical operations. It is neither a mining nor an agricultural State, and the proposed reduction of hours in mills would affect what is essentially the only industry in a thinly populated State. Since the passing of a ten-hours law, Mass. claths has undergone a prosperous; but Mr. Dalton, the gentleman referred to above, said that other States had gained in wealth more rapidly. He instances Massachusetts, New Hampshire and Connecticut, both competitors of the Old Bay State. Mr. Lyman, treasurer of the Lowell Manufacturing Co., Lowell, testified to the effect that, while the reductions are perfectly true that half the spinners in New England are in Massachuets, that is not the practical question; the question is, can we retain them? That they have increased during the last twenty years is also true, for reasons in spite of legislation rather than in consequence of it. He argued that if there was to be a further reduction in hours of labour, it should take place also in competing States. The proposition is unanswerable, and applies equally to the case of Great Britain, which cannot afford to pass further labour laws unless Continental nations keep in line with us. Another witness gave of opinions that the passage of a nine-hours law would confiscate millions of invested capital. Our Boston correspondent makes extracts from the evidence which has already been heard on the employers' side. Many of the arguments advanced apply familiarly to the position of manufacturers in this country. We may say to the eight-hour agitators here, as Massachusetts men say to the nine-hour agitators in there, that it is hardly possible that anything that would injure and cripple their employers would be of benefit to the employed. But from some of the things we have heard from time to time of the feeling in the legislature, it would appear as if the employers thought that if more legislation could be enacted interfering with or holding up the employer in competition with the outside world, it would redound to his profit and welfare. If this is not so, why do employers ask that the hours of labour in manufacturing concerns be reduced? Do the operators expect the employers in England to be more severe than those in neighbouring countries? Do they not know that the manufacturers in this country are already subject to more legislation and State supervision than those in neighbouring countries? Do the operators not know that if this kind of legislation is continued and the necessary trade laws which seem to be in favour of capital, instead of staying in England as a suitable place for investment, will go elsewhere where the restrictions are less severe? We have altered Massachusetts in the above remarks to England. With this alteration the arguments of the employers there applies exactly to the case of English manufacturers.

"GENERAL" BOOTH ON THE INDUSTRIAL PROBLEM.

Our Oldham correspondent writes as follows:—"Last week end General Booth, of the Salvation Army, paid a visit to Oldham. In the course of an address on the Saturday evening he took occasion to refer to the Labour problem and his Darkest England Scheme. Referring to criticisms of the former he said it was impossible to avoid competition altogether, and the fact was there were too many workers, and too little work in the towns. There was the difficulty, he added, and things were getting worse. Passing on to the Lancashire connection with India, he stated that he had only just come from India, and that country 30 years ago there was not a single loom worked by machinery, while there were 232,000,000 people. Now mills were being raised up in every direction, the product was large, and some of those who had seen his journey from Stockport to Oldham, indeed from so many miles away there now that there was not a single piece of the coarse cotton collos mostly worn for clothing, imported. Thirty years ago all this was imported. The poor workers could not get up to the cotton mills, that they might be able to do so in time as their skill increased. In view of the congested state of the Oldham feeling was," nothing for it but to take the men back to the land, and let them take from the ground what would satisfy their needs.

A POINT FOR 'GENERAL' BOOTH'S ATTENTION.

General Booth is a very clever man in the department of religious and social work with which his name is so prominently connected, but we cannot estimate him very highly as an industrial expert. So many important matters must demand the devotion of them of his time and attention that it is simply impossible that he should be able to gain more than the most superficial acquaintance with industrial problems. In the above extract from his address at Oldham, some problems are touched upon that would need a great deal of space to discuss adequately, and on this account they cannot be considered here. General Booth's general idea of legislation and opinion is correct, but his efforts is, however, to get the people back upon the land, as the vice, poverty, and degradation of the industrial system is chargeable upon the overcrowding and the temptations offered to the poor in town and city. This can be done, and the people can adopt to diminish this drain of population from the country to the towns as far as possible. This would be much better than allowing the people to come to the cities and be ruined, and then to carry back to the latter and rehabilitate them with the same taunt and sentiments of country life. We should point out one of the active causes that drive our rural population cityward to an extent far beyond what may be termed the natural necessities of their condition. This is the want of employment in the country. An agriculturist or small grazing farmer who is nicely settled in his little farm finds his family increasing to an extent beyond the capacity of his acres, either to find work for or to maintain them. In the early days of the cotton trade in these districts there would probably have been within reach a cotton mill or weaving shed in which there could have been obtained suitable work for both boys and girls, and at such wages as would have enabled them to maintain their families under the parental roof. But nearly all these mills have long been closed, and their ruins—not very picturesque—encumber the roads upon which they stand. And why is this? What change has come over the trade to prevent their continued occupation as industrial establishments? Simply this:—The increasing competition has diminished the profits of the trade so far that under the local disadvantages of distance from market, sources of coal supply, and the cost of carriage of raw materials and goods produced, such a mill could not be carried on without loss. The institutions of inebriable standard lists of wages by the leading trades' unions, which admit of no cognizance being taken of local disadvantages, but compel all employers in the rural districts to pay the same rate of wages as the employer in the town, is the most fatal. The whole system was designed to build a large balance of advantage and profit compared with that to be obtained from removal into a city town, and it has worked to rates that has destroyed the cotton trade in the country districts. If, therefore, General Booth wishes to use the term "general" employment problems in his country to the towns, or would induce
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A large number had stopped the weavers became really alarmed, and wanted to know what their employers meant, and were informed that they intended to close the place. The operatives then held a meeting, and soon obtained a signed petition to the Lancashire County Council, asking for some method of settling the disputes that had been arising in the district. Messrs. Southworth replied that they could not reconsider their resolution unless the Weavers' Union should give them a written undertaking not to interfere with them in any sense whilst paying such a rate, or prevent the operatives from working. This the Union would not give, and severely reproached the employers who had called a meeting without first consulting them about the matter. The firm adhered to their expressed resolution, wove up, and have already reduced a large number of the looms. The shed contained about 300 looms and preparation, and the weekly wage list was on an average £150. This has been lost to the operatives, to the tradepeople, and to the rising town, and is all the more serious because, having been very well enough to entrust the care of their interests to men who did not care the value of a button top for their welfare, to officious meddlers who probably would probably ruin them, the tradepeople, and the whole, until, like Satan intruding into Paradise, they entered Horwich for the purpose of working its people mischief. It is to be hoped that the weavers and their new shop, as now situated, will continue to prosper. The wages paid by a second firm that works to find and keeps them employment, will prove more sensible and prudent than they have been in the past.

OTHER STUPID PRODUCTION.

One frequently hears officials of associations of operatives in cotton towns in fine fettle discussing the law of declining at length, and with a bombastic depreciation intended to impress the credulous, that they have been the means of compelling the employers to cut their engines, to close down the working of their mills to a certain number of hours, under the penalty of being brought before a bench of magistrates, and dealt with as the law provides. Again, there is the now well-regulated, and almost iron-cast, working-day, a reformation of the old trade-unions. They plot a little noisy, and the signs on all hands of a belief that shorter hours of labour should be substituted instead of the old system. The capitalist is outraged by the avowed enemy of this movement. Notwithstanding all these signs of the times, we not infrequently have brought before our notice cases in which employers and their managers desire to do their utmost to keep within the law as laid down in the Factory Acts, and yet cannot accomplish this, strange to say, in consequence of the reluctance to leave the premises of the very people who raise the cry of "give us shorter hours of labour." Only a few weeks ago we had occasion to call attention to a case of this kind at Oldham, and more recently still to one at Rochdale. And this week another such case comes from Elton in the borough of Bury. In this case the Waterside Mill Company, Lower Hulds, Elton, were summoned for employing three young persons at six minutes past one on Saturday, the 1st April, that being the time at which Mr. Pearson, factory inspector, discovered three young persons cleaning spokes. Mr. Briere, manager for the defendant's shop, that they tried, as far as possible, to comply with the Act. It happened, however, on that particular Saturday, that their engine tenter was off, and they had also two looms in the shed, it was to see that all the weavers were out. In consequence of the engine tenter being off, the (the manager) had to attend to the engine, and it was impossible to make a complete inspection of the shed to see that the hands were out, and that was the reason the weavers were in. It was rather hard upon them that they should have to bring the matter up and have to pay in respect of those people, when it took them all their time to get the weavers out. He thought it would be better if the weavers were made to pay. — Mr. Newbold: What time did the engine stop? — Mr. Briere: At 12. — Mr. Briggs: Your explanation seems to be that this is just an odd occurrence, but you cannot trouble to get the workpeople out? — Mr. Briere: It is one continual drug to get them out. — Mr. Briggs: What are they doing? — Mr. Briere: They are tattling as a matter of fact a lot of them. — Mr. Pearson: I found them actually working. — Mr. Briere: I admit that.) They were cleaning looms. They are allowed from 10.30 p.m. to 11 a.m. of all kinds must cease. — Mr. Openshaw: Have you had occasion to complain before? — Mr. Pearson: Yes, I have, but I looked over it then. — The Bench ordered payment of costs in each of the three cases. This case affords another illustration of the utter unreasonable men, or perhaps rather the stupidity of our worksmen who were instructed to work overtime by their employers. After the stoppage of the engine of a mill at meal times and before starting again weavers will indulge in their social instincts, the silent and sometimes ardent gregarious instincts of their being, and talk in groups to indulge in the gossip so dear to the hearts of girls and women, and when the time for leaving the establishment has come they have not finished their work. They stay to complete it, and whilst they are doing this the inspector, takes their names, summons their employer, and on his behalf that he has not refrained from paying the costs. The costs are then put aside, and the employer is summoned. We have to bear in mind that the employee will not be able to pay the costs, and we will not have missed the summons and let the inspector pay the costs. It is time this was remedied. — The inspector ought to have summoned the weavers and fined them, and in the event of his summoning someone else, he could have declared that he had given them a chance of paying the costs.

FACTORY ACT PROSECUTION: THE "FACTORY ACTS" CLAUSE.

On Thursday, at Church, the Indiana Mill Company, Chaddock, were summoned for a breach of the Factory Act. Mr. Birnie stated that the prosecution was based on prosecution of the Factory and Workshops Act, 1891, by which it was provided that weavers must be provided with such information of the price they received in the price they were to receive for the work. Mr. Birnie visited the mill on April 25th, and found that the mill was unprovided. The engine driver Fisher, who had not been supplied with the necessary particulars to enable them to accurately estimate the amount due, and under the Factory and Workshops Act, the first prosecution under the Act, and he had deeply insinuated the proceedings as a warning to other manufacturers. It was quite willing to withdraw the case on payment of costs. The magistrate agreed to this arrangement.
SETTLEMENT OF THE DISPUTE IN THE COTTON TRADE.

On Thursday afternoon the meeting arranged to take place between the representatives of the employers and those of the operative unions of the federation of operatives, after a lengthy discussion extending over three hours, succeeded in drafting terms of settlement for submission to both parties to their respective associations.

The meeting was held at 71, King-street, Manchester. The persons present were Messrs. E. Truss in the chair, C. T. Baddley, R. Evans, W. K. Sibbett, S. Andrews, S. Swinburn, and W. Tattersall, secretary, representing the operatives; and Messrs. Thomas Ashton, James Mowbray, John Fielding, and Wright Wood, representing the employers. It was unanimously agreed to accept the Stalybridge strike, that a settlement be effected upon the following terms, subject to the confirmation of the two associations:

1. Where bad work is proved, the employers agree that it shall be an admitted principle that the以人为本 shall be entitled to compensation for loss of wages until the grievance is removed.

2. Where there be no loss of wages, but the work is proved to be bad, then the thus involved shall make such alterations in the speeds or methods as may, in the opinion of the inspectors, be found necessary to effect the same.

3. Any loss in wages resulting from such necessary reduction in speed shall be covered to such extent by the immediate payment by the immediate employers.

4. This clause, however, shall not apply to any district in which the minimum or maximum speed is in force.

5. The employers' committee further agree to recommend the Stalybridge Mill Company to reinstate all the out of hand workmen on the last wages.

6. In the event of the foregoing resolution being ratified, it is recommended that the mills shall resume work on Monday morning next as if regular.

A document embodying the foregoing terms was signed by the gentlemen present.

The trade and the country generally may be congratulated upon the fact that a settlement has been arrived at, and that suspension of the industry on the extended and extending scale that was threatened is not necessary. The terms as stated above will do very well for a truce, as they substantially embody the demands of the employers and are concessions from an untenable position taken up by the operatives. They are, however, very vague, and are liable to many misinterpretations, and certainly cannot safely be adopted as the permanent working relationship of the two parties.

It is absolutely necessary that the determining and fostering policy of the trade-unionists shall be so arranged that if the trade has been in a part of a short term of years to be killed outright in this country, and transferred to other lands. There is a tendency in the minds of the employers to the existence of trade-unions amongst their employees, nor to holding communications and conferences with them upon matters affecting their mutual interests. What they are resolved upon is that they will no longer submit to the tyranny and dictation of trade-unions in the manufacturing industry. The employers are hereafter, and as the persons who receive by far the greatest benefit from the investment of capital in this country, and the conduct of the enterprise by the skill, intelligence, and courage of the best men of the country, must do all in their power to strengthen the capitalist interest, to avoid harassing employers and hampering their operations in the cradle, needlessly, and

inviting manners they adopted several years ago, and have continued to the present day. When they have come to this resolution and have shown by their past conduct that they have put it into practice, we venture to assert that they will not find the employers the greedy, grasping money-grubbers and destroyers of their practice to depict, or, rather, to have depicted to them in their meetings. Nor are they the ignorant, stupid, incapable men in which they are considered often by the leading officials of the Unions to represent both from the platform and in the press. The burden of the conduct of a business in the textile industries in these days of protective tariffs in nearly every civilized country in the world, which necessarily throws English manufacturers into the poorest countries and markets that can be found on the face of the earth, is quite as much as human strength is capable of bearing, without such treatment as that to which they have been subjected, and which by those who have reaped the greatest benefits from their labours. If this policy be not changed in its every feature, the trade which has been known for many years will not long continue, but active operations will recommence, and the result of the contest can only be to the serious injury of both parties, if not to their destruction. We recommend the operatives to study the history of the industry by which they have been brought into their families, and they will speedily find that they occupy a position of ease in labour and prosperity in earning that has never before existed in the history of the textile industries for any lengthened period, or over any important area. Such a study would enlighten them in many respects, and as it would show them that neither the French nor the cotton trade in this country. The operatives in the State are nearly all foreigners, Canadians (chiefly of French origin) being prominent, and Great Britain supplying a large proportion of the remainder. Massachusetts does not have the cloth market to itself, but has to compete with New Hampshire, Rhode Island, Maine, Connecticut, New York, and the Southern States. Mr. Edward Nicholls, of the Dwight Manufacturing Co., Chicopee, Mass., is in forcible language to the effect that it is the amount of wages paid by the manufacturers that is the basis of the present controversy.

The effect of the five-hour law in Massachusetts in advance of the other States, says Mr. Nichols, and you practically confiscate to 25 per cent. of the output of the manufacturers, and machinery. It is not true that this great interest is owned chiefly by capitalists. Our men of greatest wealth are not pitting their money into mills in Massachusetts. They can find more profitable employment in mines and banks, with equal or greater capital, and add, and they see the danger which threatens them here. Mr. R. F. Eastham, the treasurer of the Barnum Mills, Fall River, said that the town now represents over one-third of all the cotton operatives in the State of Massachusetts. The manufacturers feel that any legislation that may still further shorten the hours of labour will work to their disadvantage. The reduction of hours from six to five and a half weekly would reduce the production of the Fall River Mills about $100,000 per year. The Southern States must to-day have almost, if not quite, as many cotton spinners as the towns of London and Manchester, and the building of factories in those States is increasing. And when it is considered that the working hours of labour in Massachusetts are from six to seven hours a day in the town and in twenty-six hours weekly in Georgia, and perhaps sixty to seventy-two weeks in the South, the question is one of the most important in the country; that labour is very much cheaper there than in Massachusetts; that the facilities for getting cotton goods are very much more advantageous there than here; that there is comparatively little men's and women's clothing, that the labour is much cheaper, and that this great advantage is being taken advantage of by the manufacturers in the North.
THE TEXTILE MERCURY.

May 7, 1890.

over the counters of New York, Boston, and other leading markets, in direct competition with the manufacture in Massachusetts, to say nothing of exportation, it will be seen that the situation is becoming somewhat serious, to the weavers with the present hours of labour.

It is not true that the operatives have been able to make as good wages since as before the increase in speed. The increase in speed has come with the increased speed and modern appliances. Prior to 1874 there were very few eight-loom weavers, not even a single twelve-loom weaver, in 1865, an eight-loom weaver, in 1855, an eight-loom weaver, in 1845, a seven-loom weaver, in 1835, a six-loom weaver, in 1825, a five-loom weaver, in 1815, a four-loom weaver, in 1805, a three-loom weaver, in 1801. In the early days, wages were left high because of the work being done by the weavers. As the seven-loom weaver, in 1817, a six-loom weaver, in 1819, a five-loom weaver, in 1823, a four-loom weaver, in 1827, a three-loom weaver, in 1831, a two-loom weaver, in 1835, a one-loom weaver, in 1839, a half-loom weaver, in 1843, a quarter-loom weaver, in 1847, a hundredth weaver, in 1851.

Mr. S. B. Ashley, treasurer of the Barraboo Manufacturing Company, in a letter to the writer, states that the wages were reduced from $1.00 to $0.80 per day in 1874, $1.00 to $0.50 per day in 1875, and $1.00 to $0.25 per day in 1876, but that the weavers have not been able to keep up with the changes in wages. The average wage per loom per day in 1874 was $0.90, in 1875 $0.80, and in 1876 $0.70. On the average, wages have been reduced from $1.00 to $0.70 per day in 1874, $0.90 to $0.60 per day in 1875, and $0.70 to $0.40 per day in 1876.

Designing.

THE ANALYSIS OF PATTERN.—XII.

THE WEIGHTS OF CLOTHS.

Having indicated as clearly as possible the various methods of finding the counts and set of any cloth, two very important matters must now be fully dealt with, viz., the weight of the various yarns employed in any given cloth, and the weight of the finished cloth.

We are very aware that this question has been treated by other writers at some length, and that some of them have been fully occupied on the subject. It is true that there is an excellent reason for treating the subject in this way, as it has been treated under one heading instead of under the two indicated above. As those engaged in the weaving of cloth in the whole cloth and the weight in the finished state vary considerably, and in the following statement we are not to be understood as attempting to determine the weight of cloth in the kind of cloth, for they are just as good weavers—as just good spinners—are just as good weavers—just as good spinners—are just as good weavers.

The weight of various yarns employed.

The simplest form in which a question may occur under this heading is that in which a cloth made to give particular weights of warp and weft is required.

Rule I.—To find the weight of warp of: (1) Aseron length of material in the warp, i.e., threads per inch × inches wide = threads in warp; × length of warp in yards = the length of material in the warp. (2) The length of warp in yards × width in inches = the weight of the cloth. (3) The length of material thus obtained, divided by the weight in lbs. of each material, gives the total weight of the cloth in lbs.

Example: Find the weight of each colour of yarn in the following:—

Warp. 2 threads: 2/30 H.T. black, 2/20 H.T. black and white twist. 4 thickness of 5/16 inches. 10 threads = 2.5 yards.

Warp. 2 threads: 2/30 H.T. black, 2/20 H.T. black and white twist. 4 thickness of 5/16 inches. 10 threads = 2.5 yards. 16 threads = 2.5 yards.
For the wool 84 x 28 x 30 = $ lb, 11 os. of wool.

The same method of working may be adopted whatever the order of colouring may be. The same principles may also be applied to wool colourings, as will be shown later.

The second complication is warp calculation is the infrequent system of using yarns of two or more counts in the same warp. Two methods of finding the weight of the warp are under these circumstances present themselves:

1. Firstly, the average weights of the two or more yarns may be found and the weight calculated for the average count on the ordinary system.

2. Secondly, the order of weaving, etc., must be very complicated, the system employed for finding the weights of various, or several, or may be adapted to these conditions.

The latter method, adopted with the two conditions are backed and double thickness, in which the weaving plan seldom exceeds three or four threads.

Example. A warp is composed of alternate ends of 2/30's and 4/30's worsted. Set 120 ends per inch. Find the length of each end: width 6 inches wide, 60 yards long.

Field IV. To find the average counts. First the total counts of the two or more threads combined, and then multiply by 2, 3, or 4, according to the number of ends given.

In the above example, 15 x 20 = 30 and 15 x 20 = 300, the average count, and 120 x 60 x 50 = 54,000, weight of warp.

On by taking each count separately:

60 x 60 x 60 = 30 lb, 3 os. fine warp.

20 x 50 = 1,000, 40 lb, 3 os. thick warp.

Total weight: 40 lbs.

The 8 oz. lost by the previous method is due to the fractions involved. The advantage of being able to reason a question out in more ways than one has been clear above shown.

Designs. In fact weeks' trash, the reference to the angle formed by the warp with the horizontal, and the length of the triangle, the altitude, and the hypotenuse, the deduction will be understood.

NEW DESIGNS.

COTTON DRESS DESIGN.

The colours present most popular although rich in costly materials, generally assume quieter tints in inexpensive fabrics. For ordinary every-day wear the most charming; cotton dress goods are in every shade of brown, grey, olive, blue, green, and pale fawn. There are a few greens almost black, and some queerly shaped designs, which look as if they had been carefully prepared and then broken up, a confused arrangement being adopted.

Many designs have a cotton ground plain, of neutral or sombre shades, and with bright silk or modally

Dyes of which are employed in fancy cotton dress materials. The yarn must be of the same best quality; warp and woof are for the figure, 240's; and well 40's. The draft and pegging plan, to show how the plain and figured stripes are formed, for 3 or 4 shafts for ground, 21 for the figure, 40 ends per inch, two and four in a dent, 90 picks per yard, all one shawl. We give a pattern as a guide, but broader stripes and colours can be arranged at will. 36 white on the four plain or ground shafts; all the extra warp for figure on the other 21 shafts are two in a bead, and along with the ground ends, two in number, make four in a dent, it would be necessary to have this figure extra warp stripe upon a separate beam; 3 dark brown, 2 white (ground), 2 dark brown, 2 white (ground), 2 dark brown, 2 white (ground), 2 dark brown, 2 white (ground), 2 dark brown, etc., the dark brown up to 42 ends; the white drawn in on the ground shafts, one on each side of the two dark brown; 36 white, 36 dark brown; 36 dark brown along with the white ground ends as given above; two in a dent, and repeat from the first “36 of white”; weft all white. The entire pattern would read as follows:

36 white, two in a dent, or on plain shafts.

2 white; repeat 4 times, three of the four.

2 dark brown; repeat 20 times on the 21 shafts.

36 white on plain shafts.

36 dark brown on plain shafts.

2 white; repeat 30 times on plain shafts.

2 dark brown; repeat 20 times on the 21 shafts.

36 dark brown on plain shafts.

COTTON SATIN WOVEN

Design B is a broken diagonal, well adapted for bloom, cotton: satin weaving purposes. On 18 shafts, 18 to the round, straight over-draft; warp 30 on a red, 36 shoots per inch, all two in a dent; one bead per dent; weft 20s, two in a shed, 80 picks per inch, most of the best materials; the ground is composed of fawns, buffs, silver grey, dove, dark blue, or any sombre shades, and both finished. This design worked out from particulars given will be found satisfactory.
There are plaiting machines of several types in use in the various textile industries, but almost the only one known in the cotton trade is of the type shown in our illustration. As will be seen, on the upper part of the frame there are projections extending to the middle of the machine and carrying the delivery or inspection table. Inside the frame is placed the adjustable table, the surface of which, instead of being flat, is slightly curved so as to form the segment of a circle. The table is mounted upon two vertical rods, carrying spiral compression springs, on which it is pivoted so as to allow a slight range of action for facilitating the depositing of the plait of the cloth. The plater consists of a compound knife mounted upon oscillating standards, pivoted at the bottom. These standards are connected with and actuated by a crank, arranged so as to traverse the compound knife over the arc surface of the plaiting table. The edges of the compound knife, between which the cloth is passed, carry a gripper at each side of the table. This in the old form of the machine was a horizontal bar fixed fast to the machine frame, and having its under surface clothed with coarse card teeth for retaining the fabric when once it had been brought beneath it. As the plaiting of the piece proceeded the arc table was depressed, this being provided for by the rods being arranged to slide downwards through the retaining brackets. The table was also provided with a counterpoise, which kept it up to the position of its duty. The trouble with the machine as thus ordinarily constructed was that the cloth, especially if of a somewhat light texture, was liable to be frayed at the edges of the folds owing to the friction between the knife edges and the card teeth of the gripper. When long pieces of heavier goods were plaited the pressure upon the table and against the gripper was insufficient to enable the latter to retain its hold upon the piece. The first-named of these defects resulted in positive damage to the fabric, the second in considerable inconvenience to the attendant, and imperfection in making up the goods. Since that day various improvements have been effected, but all appear to have left something more to desire; and this to a large extent has been provided in the improved machine illustrated herewith.

In this machine the table is mounted as before, but the vertical rods are provided with strong compression springs, in addition to the counterpoise weights, which keep the table between the legs as these are deposited, the piece bulged out on the plaiting table, and the plaiting was not satisfactory. For the heavier makes of cloths, from Indian shirtings, printing cloths, and all miscellaneous fabrics of like or heavier textures and weights, the plaiting machine was and now is indispensable where it is desired to fold and make up the cloth for despatch to Manchester with the highest degree of finish that can be attained. Cloth so made up and delivered always creates a far more favourable impression than it does when made up in an untidy manner. Even on this ground alone machines for this purpose soon pay for their cost regardless of the economy effected by their use in other respects.
The Textile Mercury

Bleaching, Dyeing, Printing, etc.

METhOds OF SILK DYEING: THEIR PRINCIPLES AND PRACTICE. — (Concluded from page 314.)

In carrying out the processes just described, one or two points require attention if the best results are to be secured. In the first place, the mordanting process requires to be done properly and evenly; if this is not done, there may be a resulting unevenness in the dyeing itself. Therefore, the mordant is generally given on quite even. Even, after coming out of the mordant bath, the goods must be well rinsed before removing the surplus mordant; if this be not done then the excess of mordant which is not fixed on the silk throws down or precipitates out of the dye-bath much of the dye-stuff. This precipitate settles down to the bottom of the dye-vat, and some part of the silk may be seen in a very loose form, and the fabric rubs a good deal in consequence; in either case, the loss of dye-stuff and the colour on the silk is neither so deep nor so bright as it might be.

The silk must be entered into the dye-bath by the bottom of the vat, and the vat being then slowly raised to the boil and maintained at that temperature for a longer or shorter time, according to the development of the colour. This method of working is more especially applicable to the dyeing of alizarine and the so-called alizarine colours on silk. In using these dye-stuffs it is a matter of great importance to cause the combination of dye-stuff and mordant to be formed slowly; otherwise, colour will not be fast on the silk. This method is also applicable and is in the basis of the process in use in dyeing logwood blacks on silk. In this instance, to obtain a good black it is essential that the mordanting be done first and thoroughly, and then the dyeing be the last operation in the process. The material should be well rinsed between the two operations, or otherwise much of the logwood will be killed by the excess of mordant and precipitated in a loose form upon the fabric or to the bottom of the bath and thus lost.

Another plan of working with the mordanted dyeing materials is that in which the silk is first treated with a bath of the dye-stuff and then the colour is raised or fixed by a passage through a mordanting bath. This method is adopted in the dyeing of tannin blacks upon silk and some mordanted dyeing-azo dye-stuffs, like alizarine yellow GG, flavaxol, gamboge, alizarine red, etc. With tannin blacks, the first of the above processes is preferable for some time, and then the mordanting is done by passage through a bath of tannin material, catchee, sumac, and gall; then, after wringing and rinsing, it is passed into a bath of iron—either the pyrolute iron liquor or the nitrate of iron. The tannin bath may be used warm, and as the whole of the dye-stuff is never absorbed by the silk, the excess may be started over again, simply adding fresh tannin matter to keep the strength up, when the bating is repeated, for a little may be thrown away. The chief trouble in the continuous use of tannin baths arises from the fermenting action which takes place in some cases; in this respect, it may to some extent be remedied by the use of some anti-fungus, like carbolic acid or thymol. The iron bath should be used cold so that the rapid combination of tannin and iron shall not take place. If the colour for the bath was used warm; the iron bath gets rather too dirty to be used more than once. The operating work, excellent results may be obtained by repeating, if necessary, to develop the full depth of colour, always taking care to wash well between each bath, otherwise the bath is liable to get dirty and unmanageable.

Catchee baths are dyed by working the silk in a bath of catchee, and then passing through a bath of bichromate of potash to raise the colour. The method of working is practically identical with that of the tannin blacks just noted.

There are many azo-colouring matters derived from coal tar that have the property of combining with mordants to form stable colour lakes, and that may be used in the dyeing of silk with mordants, such as chrome, iron, and anilines. A mixture of aniline yellow C, cloth red, cloth brown, clayton cloth red, alizarine yellow GG, gamboge yellow, etc. A good way of working with these dye-stuffs is to dye the silk first in a bath of the colour with a little acetic or sulphuric acid, then to enter into a warm bath of the mordant. (The best to use is chrome acetic or chrome sulphide; bichromate of potash may be used also. If there is any risk of oxidation and destruction of the colour, the bacle chrome sulphate named above are preferable in this process.) Dyeing is practically identical with that of the tannin blacks just noted.

SILk DYEING. — Black upon silk, and also black for linings and sealkin are generally dyed with logwood, but these, not being acid-fast, do not stand the action of perspiration, of washing, or of alkalies, or of soap. The latter is a disease which has recently patented a process of dyeing black upon silk which has so far proved successful, and, as usual, is claimed to be much cheaper. The process consists in the employment of alizarine upon an alizarine base, together with a catchee and tin weighting. The boiled silk is mordanted several times according to how much charge is to be put on, with sulphate of iron at 90° Bé, each time for two hours. It is then well washed, and treated in a fresh bath with the quantity of yellow prussiate and hydrochloric acid, corresponding with the quantity of oxide of iron deposited upon the fibre, thus giving it a good bottom of Prussian blue. The silk is then placed in a boiling bath containing the quantity of catchee and tin salt required for the charge. In this bath the silk is mantled several hours, washed, and passed in a fresh catchee bath in order to perfect the blue, then in the preceeding bath with the tannic acid. After again washing the silk well, it is dyed upon a bath of 90° Bé, water per each half silk, and 15% of the weight of silk of soap, to which 20° Bé of mordant is added according to the shade. The silk is entered at 95° C., which temperature is maintained for one hour, then raised to 95° C., and left there for two hours. The desired shade being obtained, the silk is taken up, soap is added to the bath, which is brought to the boil, and the silk is entered and manipulated for half-an-hour, to give it lustre and bloom. The silk is then left for a few minutes in a warm soap bath at 90° C., washed, and brightened with acid, a little sugar, and solution of oil, and is finally stretched and dried.

News in Brief

ENGLAND.

Ashton-under-Lyne.

The Old Croft Mill, better known as Saddlewood’s, adjoining the Croft mill, which has been condemned for being a public nuisance, has been condemned by a committee of the High Court, and will be taken over by the local authority. A small stream runs through the mill, and the noise and smell have disturbed the residents of the area. The mill has been operated by a family for generations, and the local people are concerned about the future of the mill and its impact on the community.

Bolton.

The Bolton Cotton Spinners’ Association, in an attempt to avoid the financial crisis facing the industry, has decided to reduce the number of spindles by 20,000. This decision has been made in response to the worsening economic conditions, which have led to a significant decrease in demand for cotton yarn. The association has also called for a review of the tariff structure, which it believes is too high and is a major factor in the industry’s challenges.

Burkeley.

Mr. John Moore, the local cotton mill owner, has announced that he will close his mill next month due to ongoing financial difficulties. The mill, which has been in operation for over 100 years, has been struggling to stay afloat in the face of increased competition from overseas. Moore has expressed his disappointment with the current market conditions and has indicated that he will be looking for alternative uses for the mill site.

News in Brief

The weaving of yarns at a mill in Ashton-under-Lyne was interrupted last week when a fire broke out in one of the weaving looms. The fire, which started in the mid-morning, caused significant damage to the mill and resulted in the loss of equipment worth several thousand pounds. The mill owner, Mr. Saddlewood, thanked the local fire service for their quick response and efforts to contain the fire.

The Board of Trade Commission, appointed to inquire into the condition of the cotton industry, has released its report. The commission found that the industry is facing serious challenges, including a decline in demand, increased competition, and high operational costs. The report calls for government support to help the industry overcome these challenges and maintain its competitiveness.

A large group of mill workers, led by Mr. John Moore, the local cotton mill owner, has met with the local council to demand better working conditions. The workers, who have been protesting for several weeks, have been demanding improvements in pay, hours, and safety conditions. Moore has indicated that the mill will not continue to operate if these demands are not met.
The Pool Spinning Co., Bury, has been decided, will meet a three-day a week. This company is not a member of the Bury Association, and outside of the mill, the wools have been dipping the recently. The company issued an order for the Association's repeal of the Bury Washington Mills will comment on the situation not to be stated in the particular given, though it is as an intended report on the one which will be the largest erected in the Oldham district.

A correspondent writes—"The Textile Mercurial articles on the latest progress of the new trade have been largely scanned in this district, both by those who have capital and the traders. The operators, however, have only commented on the progress. Many have quoted the opinions advanced in discussions on the question. On the other hand, the operators have also had a long time to realize that the mill is a very large employer of labor, and are glad to see what the other doings are.

Mr. Thomas Wallis, who has retired after a 31 years' connection with Messrs. Platt Bros. and Co., of Bury, is now expected to appear at a walking stick at the hands of the middlwhrgs who were employed under him; on behalf of the directors, Mr. Wallis was the recipient of a beautifully illustrated album, with photos, accompanied by an address. Mr. Wallis, who has long earned these tokens of respect, and in his retirement we wish he will obtain that well-earned repose to which he has entitled himself.

At the shareholders' meeting of the Edginton Spinning Co., on Monday, the chairman (Mr. John John) said that Messrs. Platt Bros. and Co. had retired after the first three months had come to the end by being 'tempoed' to try and better their position. When they had got some idea of the position of the market they thought it only fair to cover the orders, and had done so, and something more, feeling certain that there would come a great many other orders. Fortunately, as things went the prices and, instead of rising, continually dropped, and he was glad to see that the company's position was not such as to be tied down. No one was more sorry that the directors, but it could not be avoided now. It had taught them one lesson, that in matters of this kind you had to be ready with future money as well. He assured them that he, personally, would not again be a party to it. A shareholder of the mill was quoted as saying that the idea of having a mill which had not paid the rates, as there were others much worse off. Other shareholders had a patch into the brown stuff, but the new mill was considered the most superior, and both the Messrs. Platt Bro's., and Messrs. Platt Bro's. had a thing of it, and it was decided to give the directors power to borrow money on mortgage of the mill premises, etc., if it were necessary.

On Saturday last eleven students sat in the City and Guilds examination on the making of hats, in the Honours and six in the Ordinary Grade.

Radcliffe. The branch in the ranks of the weavers employed in the Manchester district, one of the Old Weavers' Association is being reconstituted and thoroughly re-organised. It is said that the union is now on a better foundation, and will be able to make a better list than the Bury Association has been able to make. The Bury Association's officials have been unable to secure the roll of votes of the members, but has been a list of the new members, who have taken for the new association. The list shows 255 persons of 764, while 256 remained neutral. Mr. Jacob Borrow, of Radcliffe, speaking at Bury on Tuesday night, said the association was 27 per cent. better than that, together, taken all together.

Ramsbottom. At the end of last week Messrs. Heplum and Co. of the Square Bleachers, notified their workpeople that they still adhered to the proposal to make a reduction of 10 per cent. in wages. The workpeople, having had previous intimation of this intention, considered the Bleachers' Society, decided that if the firm should persist in their determination they would draw out the workpeople. The employers, therefore, gave in their notice, which will expire at the end of next week.
The Textile Mercury

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Kirisunmeur.

The effect of the importation of jute from Japan, as a substitute for kurk, is now being felt in the jute market at Calcutta, and it is said that the price of the raw material has declined by about 10 per cent. The price of the raw jute is now quoted at about 1,200 per ton, as compared with 1,300 per ton last month.

Tyresley.

The Tyresley Bridge, which was completed last month, has been opened for traffic. The bridge is 1,000 feet long and 70 feet wide, and is built of steel and concrete. It is the largest bridge of its kind in the country, and is designed to carry four lanes of traffic. The bridge cost £1.5 million to build.

Scotland.

Argroar.

Notice has been given of a proposal to open a new mill in the town of Argroar, which is expected to create 200 new jobs. The proposal will be considered by the local council next month.

Blaingowrie.

Notice has been given of a proposal to open a new mill in the town of Blaingowrie, which is expected to create 150 new jobs. The proposal will be considered by the local council next month.

Craigo.

For the last few weeks Craigiechert Mill has been closed, the manager saying that the mill will be closed from Friday night until Monday morning. It is probable that short time may continue for some time.

Dingwall.

Notice has been given of a proposal to open a new mill in the town of Dingwall, which is expected to create 100 new jobs. The proposal will be considered by the local council next month.

Cairo.

The following tables show the value and quantity of the imports of cotton from India for the years 1901 to 1906:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (in £)</th>
<th>Quantity (in bales)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>250,000</td>
<td>5,000</td>
</tr>
<tr>
<td>1902</td>
<td>275,000</td>
<td>5,500</td>
</tr>
<tr>
<td>1903</td>
<td>300,000</td>
<td>6,000</td>
</tr>
<tr>
<td>1904</td>
<td>325,000</td>
<td>6,500</td>
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<tr>
<td>1905</td>
<td>350,000</td>
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</tr>
<tr>
<td>1906</td>
<td>375,000</td>
<td>7,500</td>
</tr>
</tbody>
</table>

The following are the total values of the exports for the years 1901 to 1906:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (in £)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>500,000</td>
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<tr>
<td>1902</td>
<td>550,000</td>
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<tr>
<td>1903</td>
<td>600,000</td>
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<tr>
<td>1904</td>
<td>650,000</td>
</tr>
<tr>
<td>1905</td>
<td>700,000</td>
</tr>
<tr>
<td>1906</td>
<td>750,000</td>
</tr>
</tbody>
</table>

A very successful season of the Glasgow Technical College Technical Competition has taken place, the competitors being divided into four sections. The most outstanding of the successful competitors was Mr. J. B. Thomson, who won the first prize in each of the four sections.

English Brocades and Figured Silks.

By C. Percival Clarke, C.I.E.

The subject of the present article is the various types of silks known as damask, brocade, and brocatelle. It is necessary to mention the many processes of silk culture, and of the manufacture of plain woven silks and brocades. We can conclude with the East, where it is related, to the present period of Christ, in which the silk was the symbol of royalty; and the Empress Coelho-Ashe is credited with the invention of the first loom. Whether or not the silk was in plain weaving, or capable of producing figured stuffs, we are not so well informed. It is certain that 2,000 or perhaps 3,000 years elapsed before the draw-loom developed sufficiently to produce the ancient examples revealed in Egypt. It is true that early writers describe woven stuffs, rich in pattern, like that which Homer gives to Ulysses, where a drawing subject is woven with a cold ground, presents to the mind’s eye a pattern of beauty, richness, and grace, or hiding ground pattern of Reina or Ahmedabad; yet the weight of probability is in favour of such as having been formed either by hand embroidery, or woven in a tapestry loom, between which and the simplest form of figure weaving loom, there is a gulf which must have taken many centuries to bridge.

The difference between these two methods of weaving is great, and yet so little known, even by many who have been directly associated with the arts, leads them to the contrary conclusion, and often to confuse, the two under one name, that a short description of both processes is necessary.

In true weaving, whether of silk or other materials, the loom is the instrument carrying the warp or threads which run the long way of the stuff, and the whole process of weaving consists in translating the design in the warp and weft material into finish cloth, by transferring a design pattern to a pedal and

* A paper read before the Society of Arts, April 22, 1885.
shuttle notation became necessary; and the weaver merely performed mechanical duties, while the skilled work was done by the mounter of the loom, before a single throw of the shuttle was made.

An example of the weavers' notation is here to-night, and it is absolutely certain that a similar system was used in a piece of Damask brocade from the French Republic. Napoleon I. instructed this workman to attempt the application of his invention, which had been in use in France already improved by Vaunomme fifty years earlier. The great mechanical genius of Jacques, equal to the work of the little boy, was the逆袭 of the invention. The fly-shuttle and its attendant boys became simplified, and by adapting the fly-shuttle—which had been used in Venice fifty years in producing wide stuffs—was reduced to a minimum. By Jacques' system the machine automatically read the pattern in the textile and told it read the pattern; and so perfect is this loom, that although power looms will produce the bulk of the broadcloth, the hand-loomed Jacquard loom, in its present form, will probably always remain as the handiest for the higher-class work.

This manufacture, so wide-spread for a time, did well and until the treaty of 1806 opened the market to the competition of foreign producers, a large population was comfortably maintained by the practice of this beautiful art. In 1825, London possessed over 24,000 looms, 45,000 hands, and the greatest part of the woollen trade was in the hands of their labour. The system by which such a trade could be carried on by artisans in their own homes is: I have already stated that the capital of the trade, in old and new, was often the retailers.

As purely an article of luxury, no knowledge of the great extent of the period is considered important in commanding a sale for the production, and as we can see the silk weavers, it appears, that in a safe, the capital was now the actual manufacturer, and the weaver little more than a part of the system of the process. In the silk loom, and sold by the piece to the individual for his work, and the cloth was sold to a retail dealer, and no more. By the introduction of this system, the demand became so great that the value of the silk was lowered, and the price of the raw material was reduced. In 1839, L. S. 77. 10s. 5d. was the price of a yard of the finest silk, and 2s. 6d. the price of a yard of the coarsest silk. This was a great improvement on the price in 1800, when the price of the finest silk was L. 10s. 6d. per yard, and 2s. 6d. per yard of the coarsest silk.

The Fleece and Huguenot weavers formed settlements in various parts of the country, and besides London, Kent, Essex, and Norfolk, became seats of manufacture, whilst others, in other parts of the country, north and west.

Several of these remain unaltered. At Springfield, the last place in the country for handloom work, whilst the figures-loom of Canons is obsolete, but the latter having, early in the century, rivalled and even excelled the shuttle weaving of Cassigny, which is still used in the manufacturing districts where the materials are abundant. Coventry has survived many vicissitudes, whilst Macclesfield, starting with a lighter class of fabrics, from the textile to the worsted, have also earned their place in the market, and matched in every respect the manufacturing districts of England. Glasgow and Manchester, and even those of the French and German Republics, have made great inroads on the market, and the whole of this is due to the introduction of the power-looms. In addition to these and other substitutes, the foreign manufacturers are enabled to produce the finest silk, and the quality of their goods is improved by the use of the power-looms.
will succeed only so long as the original formative impulse survives, or so long as the lessee—such as the tenant and the agent—are not disheartened or discouraged.

In conclusion, the tenant should be aware of the importance of maintaining a proper balance between rent and expenses, as well as ensuring that the property is well-maintained and secure.


development of a new commercial area.

Moreover, the presence of green spaces and recreation areas in such areas can greatly enhance the quality of life for the residents and contribute to their overall well-being.

In conclusion, the potential for green and sustainable development in urban areas is significant, and there is a need for collaborative efforts from various stakeholders to achieve a balanced and regenerative urban development model.
The nature of the order and its implications for trade and industry.
Tertile Markets.

COITON.

Manchester, Friday.

Our staple trade has continued up to the time of writing in the same unsanguine state as last week. The communications which took place on Tuesday between the Liverpool road and the employers' and operatives' associations have, however, happily ended in an amicable understanding.

Great surprise has been expressed at the manner in which the cotton operatives have been manifest in commercial and industrial circles at the instability of action displayed by the employers, who have served notice in the case of the holding together for common purposes and to promote common objects that they had been shown in this instance. Out sides, however, are not familiar with the petty tyranny which the employers have been in the habit of putting upon them for such a short time past, which has abolished a continental tendency to become further and more strongly acquainted, and has established an educational influence of this course of conduct upon the employers by being very considerable and having a great importance on the business of the association, which has a great influence in Manchester. Great effect are also being made to bring in new adherents from both sides of the question, and great success is attending them.

There is also considerable likelihood of important changes being effected in the East Lancashire Association of Employers, which will rest in the federation with that of the printers. Should an arrangement not speedily be come to between these two powerful associations, it will ensure the trade the permanent treatment to which it has grown under the present circumstances of the matter.
HUDDERSFIELD.—The weather is uneventful. The condition of trade, in this district, though very quiet, is encouraging. The manufacturers have from time to time received small orders in various lines, and whilst many employers find it very difficult to obtain orders and keep their mills going, others are doing very well, and, with the expanding trade, they have lately been able to hand in a trade that is far from being entirely unprofitable. The demand for the finer qualities is still rather better, and, with the exception of a few orders for the better quality goods, the trade is still very healthy. The shipping trade is moderate, with the Continent. Varnish spinners are fairly well employed.

LEEDS.—It is said that a collection of the worst naturals has been taken place in the woollen and worsted home trade. The winter trade has been a bit better than usual, and there is now a good deal of interest in the West End of London, which has been occupied by the manufacturers, and, in the way of export, especially to South America and the Colonies. The worsted trade has remained active, and the manufacturers are said to be in a prosperous condition. The shipping trade is moderate, and the Continent is fairly well supplied with the new manufactory goods. Varnish spinners are fairly well employed.

LONDON.—Messrs. Darant and Co., in their circular dated 19th May, say:—We are again only able to quote a very few cases, as the demand continues strong, but without change in prices. All attention is now turned to the approaching crops. The latest telegrams and letters from India and France indicate a much better crop than was expected for the result should the present favourable weather continue. Up to the present no damage has been done, but the fear of what may happen has given strength to the Milan and Lyons markets, and business continues to be quite brisk at home. Telephone orders from China have increased, and, in that case, the weather is favourable and the market has been well supported. The political situation in China is said to be improving, and a large amount of business has been concluded in the last few days.

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WOOLLENS AND WORSTEDS.

BRADFORD.—There is a steady consumption demand for the finer sorts of English wool at recent rates. Any attempt to enforce an advance puts on end of the trade, and no orders have yet been received. A good demand is experienced for alpaca and mohair. Yarns for export purposes are selling well, and manufacturers are well supplied with raw material. A decrease in the prices of raw material is expected, and, with the exception of a few orders for the better quality goods, the trade is still very healthy. The shipping trade is moderate, and the Continent is fairly well supplied with the new manufactory goods. Varnish spinners are fairly well employed.
the members who fall below that figure have not in many cases much to show as the result of the constant hard work and钻研 of the modern dress shop assistant. The ribbon trade remains steady. No

satisfactory discount in the export market could be secured, and what the fall of the black market in retail trade was matters. The market is not. 

For the most part, the prices remain as on the previous line, and the demand for the next few days is expected to remain steady. The market is not. 

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