Hooghly Mills of Meers, Gillanders, Arbuthnot, and Co., are instances of factories belonging to the Company. The latest order is for 12,000,000 yards, a sufficient stock to stock a moderately sized mill, and serves as an indication that Calcutta is still going ahead in the jute trade. As time progresses, it becomes obvious that Dundee manufacturers are increasing rather than decreasing their advantage in the competition of our Eastern dependency, for the jute trade of the Eastern and other markets. The best plan is to maintain a steady competition, and the one which appears to have commended itself to this society directly concerned, is for Dundee to develop by every possible means its fancy trade, which has already attained considerable dimensions.

THE SILK INDUSTRY IN THE UNITED STATES: \& FRANCE: A SUGGESTION.

An American journal summarizes the salient points of the history of the silk industry in that country. There is, of course, nothing new in the matter beyond the condensation of the information within a small compass. While the American silk industry is usually dated from 1829, when there were silk-workers in the country long before that year. The first factory of which there is any record was founded at Mansfield, in Connecticut, in 1829, and in 1831 Mme. Ynadis, in Philadelphia, established a small factory, which is now the oldest in existence in the United States. In 1849 the first home-made silk ribbon was produced at Baltimore, but it was undoubtedly after the panic of 1837 that the industry began to assume fair proportions. In 1850 the value of the native silk productions was about $6,500,000; in 1850 it was $12,500,000; and in 1855 it was $35,000,000. New Jersey, in the leading place in the industry, followed by New York, Connecticut, Massachusetts, and Pennsylvania, in this order. It is estimated that in 1851 there were 54 factories engaged in one branch or other of the silk industry, and that the value of the product was about 50 millions of dollars. It is said that American manufacturers have now taken the entire home market for certain styles of silk, fabrics from the leading silk producing houses, the French, and other foreign competitors, who previously supplied low and medium-priced staple silks. Although the progress of the home silk industry is great, the country from which our wealth has been transferred upon the domestic silk trade that has brought about the great extension here recorded. In seven years in this country we could produce a greater result than this if we applied the same expenditures of capital and labor to other products, which had been devoted thereon for commercial purposes. This has poured wealth into the hands of the inhabitants of the United States, and it is the absolute monopoly of this rich market which has been conferred upon the domestic silk trade that has brought about the great extension here recorded.

A TAILORS' BLACK LIST.

Shall tailors be included amongst textile artisans? We think they may. They cut, carve, and sometimes spoil the handsome fabrics presented to their hands at great expense of time, labour, and material. They fit these fabrics to the human form, and make them fit, and upon the manner in which they handle them, and the results they produce, often depends success or otherwise of a manufacturier's efforts to please the public taste. The tailor, in fact, is the last artisan in the long list of those engaged in the construction, decoration, and embellishing of the textures fabricated in our looms. His occupation is to a large extent a survival of the now almost obsolete series of domestic industries, but his position has of late years been strongly assailed by the "ready-made" or factory system of producing garments. But against the further progress of this system there is a barrier which will always preserve the best section of the tailor's business from extinction. This is the necessity of "fitting" the individual. So we have shown the tailor to be a textile artisan, and thereby justified the reference we have made to him. Like others who have come under this designation, the tailors have joined together in trade-union, and we suppose that every considerable town has its organization. As usual, we find that they like to have certain liberties and privileges that trades-unionists always deny to others. They don't like black sheep, and do all they can, by every means in their power, to prevent non-unionists amongst them getting or retaining employment. But, on the other hand, they don't like the application of these methods to themselves, and are abundantly shown by a case that has just occurred in Sheffield. During a strike the Sheffield branch of the Master Tailors' Association circulated a "black list," which, among other names, contained that of a journeyman, Robert Jameson, a milkman, who brought an action against the officers of the society for conspiracy to prevent his obtaining employment. This, of course, was a great crime, and the jury, after some discussion, must be punished; but it would have been a perfectly righteous thing for a body of working tailors to have laid down their needles and sent their goods to the burner, non-unionist scissors or cutter laid come amongst them. It would have been patriotic to have deprived him of all chance of obtaining employment, and thereby of maintaining himself and family. But it is entirely different when the employer exercises the same right. The law must be appealed to. A complaint was therefore laid in the County Court. The judge, however, decided in favour of the defendants, holding that the masters were within their rights in the course they took; that they were not actuated by malice; and that their combination was not for the purpose of disabling the man, but merely to protect themselves in their business. This did not "suit" or "fit" the notions of the tailors at all. There were many creases and wrinkles in it, and altogether it was contrary to the feelings of the men. They were regarded as a very indifferent tailor, to suit them to go higher, and get a patch put upon his work. Accordingly, they lodged an appeal in the Court of Queen's Bench, and this has recently been decided by Judges Matthew and Smith. The case for the appellants was heard, and their lordships, without hearing counsel for the respondents, dismissed the appeal with costs. We trust the master tailors of Sheffield may get their costs! The lesson for spinners and manufacturers in the textile industries is obvious: when they, unfortunately, get experience of some mischief makers, they will be quite within their rights in handing them over to the law, and also in warning their friends and neighbours. This is a decision, when found, which deserves to be made a note of.

OUR TRADE WITH THE PHILIPPINES.

The importance of the Philippine Islands as a market for British goods is greater than many persons imagine. Since their discovery by Magellan, and their annexation by Spain over 300 years ago, many fortunes have been made by Spanish and other traders from the products of the group, whose population is variously estimated from 7,000,000 to 9,000,000. The figure is much in excess of that which appears to represent in the popular mind the number of inhabitants in these valuable possessions of the Spanish Crown. In no area, too, the Islands exceed that of Great Britain, Luzon and Mindanor, on the former of which the town of Manila is situated, are each about 40,000 square miles in area. As the source of Manila hemp, the Islands possess special interest to many British manufacturers, this country being the principal market for the fibre. Last year the shipments from Manila, Cebu, and Hilo were as follows. All these were exported in value. The total exports were 655,247 bales of 74,483 tons, against 63,256 tons in 1870. The quantity sent to this country last year was equivalent to 15,000 tons. According to English official returns, we re-exported in that year 50,000 tons out of total imports amounting to 102,000 tons, leaving 47,000 tons available for home consumption. It is obvious that the amount of one-half of hemp is intended for foreign manufacturers. The report of Consul Turner, of Manila, on the trade last year does not exactly agree, as far as statistics are concerned, with our own Board of Trade returns, which place the hemp imports for the year at 44,000 tons. The Spanish hemp arriving after March 31st. Spanish manufacturers during the year made considerable headway with their goods, which enter duty free, and in many kinds of raw goods they have, to a considerable extent, prevented imports of Lancashire goods. In white staples, printed and woven goods, they have competed with British and Continental manu-
THE TEXTILE MERCURY.

The Textile Mercury.

The second instance is one in which the banker has been served with the notice that the... bank, and the result has not been so pleasant, if we may use the expression in its usual sense. Amongst all the peculiarities... agreements invented by Mr. Blaine, the... text. The American Congress is now considering a reciprocity treaty with Brazil, provided for under less restrictions than those from other countries, even the Customs... home regulations of the United States were copied, requiring every detail of manufacture, such as have to be given to the American consumption of the United States, with their... 1879.

A WARNING TO COTTON MANUFACTURERS.

Some time ago our Boston correspondent drew attention to a movement which had been commenced in that city with the object of detecting what it pleased those interested to stigmatize as "favors to the cotton growers" brought in by the foreign merchants. They are now being earnestly discussed by the Government, as the effect of such a movement might be to convert the trade into the hands of the manufacturers, by the adoption of the new system.

The Board of Trade Returns for April

The Board of Trade Returns for the past month, even after making due allowance for the lower working days and the disturbance due to the Easter holidays, are again distinctly unfavourable. The volume of business done and lowering of prices being traceable throughout the trade. The total imports amounted in value to £3,409,127, a decrease of £1,898,265, or about 34 per cent, and the exports of British and Irish produce to £3,136,826, a decrease of £3,051,500, or about 45 per cent. The value of exports abroad and colonial merchandise is £4,085,160 in excess of last year, being £3,645,825, but that is due entirely to the much larger shipments of sheep's wool. In textiles the articles of import that have been received more freely were flax and hemp. The low prices of raw cotton are tidings upon the shipments, and the larger countries, except Egypt, are sending less. Although the evidence of wool is less for the month, yet there is a large increase for the four months of the year. The price of this staple has been touched bottom, but there was a recovery during the last sales from the previous ones. The decrease of cotton is more noticeable than in the imports, raw, piece goods alone, amongst textiles, showing increases. The requirements of the United States account for nearly all this increase. Cotton yarn and piece goods showed a decrease shipment at reduced prices. In the case of yarn, Japan is the only country which in a consistent manner has taken more. Of cotton piece goods, Chili took 100,000, 200 yards, compared with 1,667,100 yards, shipments last year, but France took less. Of course, checked by the civil war. The Argentine Republic has nearly doubled its purchases, and China and Hong Kong took more, but Turkey took less. Of wool and worsted, the United States took more, but France less. On the Board of Trade received for March, the imports of silk, lace, and cottilon, were excessive, down to 5,765,457,809. The printed figures are 37,047,020, being 38,209,020, being 1,898,265, being 1,754,156. Appendixed are particulars of the imports and exports of textiles, etc., for the month.

INCONSISTENCY IN THE UNITED STATES.

To outsiders there is hardly anything more curious than the inconsistency of the public policy of the United States. Conducting a trade between the two countries, there seems never to have been regulated by principle, but always by the impulses of the moment or the prevailing sentimentalism. It is this the case in matters of industry and commerce. A couple of illustrations of this have just come to hand. In the first we see that in consequence of a restrictive strike of engravers at many of the United States printworks, some of the leading calico-printers have arranged for the importation of copper rollers, already engraved, from this side of the Atlantic. This seems to be a very proper thing to do in the circumstances, as doubling the dispute has arisen upon the question of wages, and if the calico printers really cannot afford to pay the price demanded we can see no reason why they should not obtain their rollers elsewhere, if they can do it at prices satisfactory to themselves. But this is only a part of the story, for there is in the United States a public that consumes printed calicoes, and when the calico printers struck against the prices the public were paying for their goods, they banded themselves together and, in alliance with other people of the like disposition, and having the same view, objected to the American public importing calicoes from the European side of the Atlantic, and put several and sundry obstacles in the way called tariff laws, the basis of which is known as the McKinley Act. Cannot the calico printers' engravers "go and do likewise?"
by the law is not more than enough, but whether it be enough or more than enough, the involved industries have a clear right to rigid enforcement of the law." It is proposed to supply the customs officials with expert evidence bearing upon dyeing and printing, and that all of the experts will be American mechanists or connections of theirs, it is a foregone conclusion which way their evidence will go. It is also proposed to obtain a reversal of previous customs decisions which have marred the efforts to favour the European manufacturer. Those interested in these matters would do well to watch closely the further progress of the scheme which has been put forward by the Manufacturers' Club of Philadelphia.

**THE FIASCO IN THE SETTLEMENT OF THE COTTON TRADE DISPUTE.**

We are embarrassed this week by the number and richness of the topics offering themselves for comment, each of which deserves an article to itself to have anything like justice done to its merits or importance. Happily, however, a number of them will bear adjourning to a more convenient season. Amongst those that cannot be subjected to this treatment is the fiasco in the settlement of the cotton trade dispute. The associations of employers and operatives in the cotton trade, on the basis of which work was resumed in the spinning mills of North Carolina, have not been as resounding a success as was anticipated in the mill of the Staleybridge Spinning Company, but was not, though this was the original cause of the quarrel. Our readers will remember that we stated in last week's edition that the settlement effectuated last week, as we distinctly spoke of it as a truce that left everything to be discussed over again, more clearly defined, and subsequently requested to such terms as could be embodied in something like a permanent treaty of peace. The negotiators on both sides came in for a heavy share of blame amongst those they represented, but, to their honour, be it said, the employers abode by the engagements arrived at, and endeavoured to carry them into effect. They would have been quite justified in at once abruptly closing their mills again until the Stalybridge operatives had returned to their employment according to the terms they would have been justified in much more than this, considering the brutal manner in which the non-unionists have been treated and threatened, and the necessity the Corporation authorities have been placed under of again importing a large amount of foreign police aid to protect the non-unionists from the assaults of the strikers and ironside clergies, which, without such protection, would have been freely applied, and which, even in spite thereof, were to some extent brought to bear. With anything like efficient generalship on the part of the Employers' Association, this question of unionists versus non-unionists would have been removed to a large extent from the field of contention. In Oldham alone it was discovered during the stoppage, that, in spite of the brawling of the workers into the unions that has been in progress for the past several years, there were about 5,000 members who had preserved their independence. There was no strike pay for these, and they were innocently involved through no fault whatever of their own in the midst between the two contending parties. The workers ought to have been invited to report themselves for registration by and with the Employers' Association, which should then have started 5 or 6 of its own free workers, distributed in localities accessible from their dwellings. By so doing the employers would have preserved them from being involved in a conflict in which they were no parties. The management of those cotton mills and unionist shops would have been of enormous advantage both to the independent operatives and the employers. At present it is "either join the union, or submit to constant persecution, or starve." These are the only alternatives before them. It was due to these workers, therefore, that the employers should place something else before them—and that was employment where they would be absolutely free to work; unfettered by the unionists' funds, persécution, or ejection from their work by or at the instigation of the petty tyrants of their trade, by whom they are surrounded. We have strong reason to believe that if they were given this choice, these free mills would soon have the choice of the steadiest, most industrious, and most skillful workers in the trade, who are now hopelessly looking for some means of emancipating themselves from the hard toil under which they are subjected, but who, unaided, can never maintain their freedom. Not only would this occur, but there would soon be applicants to these mills who would gladly furnish an addition to their mills with staffs of free hands, as whilst they were relieved from the tyranny of the trades-men, they would also be from 5 to 10 per cent. of their present wages in a better position to contribute to the union funds, and be freed from the risk of strikes and lockouts. Working in honest, harmonious co-operation with their employers, there would be no need for the extravagant waste of profits and material inland and abroad that under the present régime we commend this matter to the earnest and immediate consideration of the various local associations of master spinners, and also to the Federals, who, when united to insist upon and enforce an entire change of policy and conduct upon the associations of their workpeople, providing they demand only what is just and reasonable. Their opponents, on the other hand, are strong only because they have not resisted: everything has been given them that they have asked for. Recognition of firms, single-handed, have cared to fight them. As they have strength to fight them, they have grown in arrogance and tyranny, and to maintain the terror of their organisations that they have succeeded in evoking, they have kept up a succession of attacks upon individual firms both in the spinning and manufacturing branches, of which, in the former, the demands upon the Staleybridge and Acorngate Spinning Companies are illustrations. And in the midst of all this ferment in the trade, the prime mover, Mr. James Mawdsley, as before, is on the lookout, as a man and a man having authority. We should have thought that his energies would have been better employed in the endeavour to restore order out of the confusion for which he is principally responsible. And we think also that a large number of the workers in the many households that have been involved in serious loss, debt, and in many instances in want, will agree with us upon this point.

Referring to Mr. Mawdsley's fondness for going upon deputations to London, or on journeys thereto in his capacity of Royal Commissioner, we are informed that on Tuesday the chief spokesman in a deputation from the Parliamentary Committee of the Trades-union Congress to the Home Secretary, who had the object of what was required to secure a further increase in the number of Factories and Work shop Inspectors. Mr. Mawdsley is reported to have said that "there was no wish on their part to harass employers, especially in view of the increasing difficulties which they laboured under in competing with foreign countries." This was an admirable sentiment wherewith to head a request to a Government official for addi-

Boston, May 1st.

The New York Cotton Exchange recently passed a resolution reflecting seriously upon the methods pursued by Mr. Dodge in compiling the following statement to the cotton.

The exchange entered its urgent protest against the handling and recasting of the basic report, unwise, indecent, and uncalled for, and beyond the powers delegated to the department by the people, and requested representatives in Great Britain to give the producers protection against all such reports on the part of the government.

The resolution recommends that the Department of Commerce should be empowered to take its reports to the facts and the actual position of the industry, and not to gross statements to that department is believed by the hands of the producers unmasked.

The origin of the trouble is due to the publication of the report of the 11th March last, and the statement that the report has been the cause of a great financial loss to the people of the United States, causing an immense decline in the values of the two greatest American export articles, to wit, wheat and cotton, by the issue of the following note to cotton: "These facts show clearly what the matter with cotton growing; it is suffering from a Government taxation. In the last two years this country has produced more than 2,000,000 bales, above the requirements of consumption.

In reply, Mr. J. R. Dodge, statistician of the Department of Agriculture, furnishes for publication the following statement.

The resolution passed by the St. Louis Cotton Exchange, and the New York Cotton Exchange, and the London Cotton Exchange of Liverpool, an authority to the effect that the Government should act for the better gain.

The movement of the crop of 1896 exceeded 9,500,000 bales, but Mr. Hunter, the authority of the New Orleans Exchange, says that the crop is about 3,000,000 bales, which is nearly as much as the average annual consumption of the factories of Europe, and America for five years past according to Elliston; and such large crops prove good, as is anticipated from the nice weather, business will be excellent.
with the task of negotiating a treaty whereby greater reciprocity in the commercial relations of the two countries may be established. The reason that the market for the better grades of goods now controlled by Great Britain, France, Germany, and Belgium, is open to American manufacturers, is that they can obtain the discriminating duties, and that if instead of discriminating duties unrestricted reciprocity prevailed between this country and Mexico, the exercise of a little enterprise on the part of our manufacturers and our producers of food would give them almost absolute control of Mexican markets.

A new concern, which is about to locate in Alabama is the Coleman Cotton Mills, a corporation made up of a number of practical Massachusetts men, who have organized, with $500,000 capital, for the purpose of specializing in cotton goods at Nottingham. A large tract of land, sufficient for an extensive plant, to include corporation dwelling-houses, has been donated. About 20,000 spindles will be started at first.

The Textile Mercury.

From the schedule which was embodied in the last report of U.S. Consul Myers, of Victoria, British Columbia, it appears that in the fiscal year ending June 30, 1909, of all other cotton goods, Great Britain furnishes a dependency quantities valued at £3,400, of which the cotton goods imported, the value of the cotton and cotton flax received from the United States was nearly seven times that of the British importation in that year:

<table>
<thead>
<tr>
<th>Description</th>
<th>U.S. G.B.</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denims, cotton flax</td>
<td>$145.35</td>
<td>$2.88</td>
</tr>
<tr>
<td>Prices</td>
<td>390</td>
<td>140</td>
</tr>
<tr>
<td>Linen</td>
<td>250.50</td>
<td>21.09</td>
</tr>
<tr>
<td>Others</td>
<td>277</td>
<td>2.33</td>
</tr>
<tr>
<td>All other manufacturers</td>
<td>6.10</td>
<td>24.71</td>
</tr>
</tbody>
</table>

The figures, which is inferred from the data, show a growing tendency for the British to use American goods in the manufacture of goods for British use. These goods by British Columbian merchants are mostly made directly in San Francisco.

The Lace Industry.

The export trade in lace is recovering in all parts of Europe, and the industry is now making rapid strides. The Wilkesbarre Lace Manufacturing Company, which carries on the business of the firm of P. H., Jr., and E. L. Mead, has been selling its goods for some time recently, and is now making rapid strides in this direction. The Horner Carpet Company has been issuing a factory in the year 1891, and early in the following year it was列入 running order. The factory is situated on the site of the old factory, and is occupied by twelve looms, which are now in operation. The majority of the workers are of the younger and more vigorous class, and are said to be in good health. The Scranton Lace Works, of which Cregg and Burch are the agents, is probably the most complete plant of its kind in the country. A plan drawn by a Nottingham architect, and the company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant. The company have in this instance the factory and the central office for the entire plant.

The Wyoming Mills, of Wilkesbarre, Pa., have been in full operation for some time, and have so far been devoted to the production of the higher class of goods.

The Frank Wilkinson Company, who bought the old Old (formerly known as the Wheelers) mill at Easton, Conn., have the looms formerly run at Foreland, N.Y., but are importing machinery from their Nottingham plant, and will ultimately have one of the largest factories in the country.

Rowland and Schmidt have put into the old Priory Mill, the machinery to make 1,000,000 machine-embroidered goods, and expect to make 2,000,000 goods in the coming season. They have turned out no goods at all. The New England Lace Company are erecting a brick factory, 300 by 60 feet, three stories high, at Nottingham, N.H., to cost $500,000. The capital stock is $500,000. The machinery will cost $250,000, including the machinery and fixtures. It will manufacture lace and do all the work of the New England Lace Company, and estimates the output of the concern, when in full blast, at $500,000. A. C. Campbell and Co., of Philadelphia, are about to start a plant at Columbus, Ohio. It is said they will employ 200 operatives.

Bleaching, Dyeing, Printing, etc.

New Colouring Matters.

Samples of several new dye-stuffs have recently been sent to us by different cotton manufacturers of the United States, and have been found to be of the highest quality. These new dye-stuffs will be described in our next number.

Diamine Y R.

The new dyes are claimed to be superior to the old dyes in that they are more stable, more fast, and more resistant to light. They are also claimed to be less expensive than the old dyes. The new dyes are said to be used in the manufacture of various goods, including cotton, wool, and silk.

Nyanza Black B.

This dye-stuff is said to be superior to the old dyes in that it is more fast and more resistant to light. It is said to be used in the manufacture of various goods, including cotton, wool, and silk.

Chloramine Yellow.

This dye-stuff is said to be superior to the old dyes in that it is more fast and more resistant to light. It is said to be used in the manufacture of various goods, including cotton, wool, and silk.

The next dyes to be described are the productions of the Clintonville Co., and the M. N. Co., who have lately placed on the market a new class of dye-stuffs under the name of "Nyanza Black B." and "Nyanza Black Y R."
NEW DESIGNS.

MATING CLOTH.

A mating cloth in plain weave, two in a heald and two in a shed, as follows: 2/2 cotton warp and weft, 2/2 ends, and 2/2 picks per inch, 30 inches out of bow in width; good heddle finish; best cotton materials; fast colours suitable for the washing process.

Pattern: 6 chocolate, 2 light fawn, 2 white, 2 light grey, 2 light blue, 2 dark grey, 2 dark blue.

Design 1: The pattern consists of interlacing the warp and weft threads in such a way that the resulting fabric has a mottled appearance.

Design 2: The pattern is based on a motif of interlocking loops, creating a texture that appears to be both smooth and textured.

FIGURED MANTLING.

As the characteristics appertaining to the various weaves used in worsted goods become better known, and more control is exercised, we may expect a very decided development of the figured mantle style. Almost all the figures have been utilized in the production of weave figures of considerable merit. In Figure 6, Design 1 is demonstrated a system of development which from much may be gained. In the first place note should be made of the fact that simply warp and weft weaves and a simple twist are the only effects used, but it need hardly be stated that there is something more about the combination than appears at first sight. Why have not used 3/3 and 4/4, or 4/4 and 3/3, of the pure warp and weft weaves?

Now the designer of experience knows that the 4/4 diagonal yields a very characteristic effect when rightly treated; he also knows that to add a dot to the pure system, either at the top or side, may mean more than is apparent at first sight. These are the means of developing a figure, which I have yet to be seen, and our readers will do well to thoroughly understand them before going to the principles here briefly indicated.

Respecting the figure, we need only say that it is of the figured mantle type and is here given rather as indicating weave development than as a specimen of figure. The working drawings, etc., given below will yield a pleasing effect:

 Warp—All 2/2 worked; 1/2 red, 1/2.— 3/3 worked; 1/2 red, 1/2. 1/2 black. Cotton Fabrics.

The designer's and manufacturer's skill is directed in every possible way to combine weaves, colours, and materials that will produce goods to captivate the taste of the public and command a ready sale, particularly in the home market. There seems to be a growing desire for cotton fabrics, especially in dress materials, the reason adduced for this change being the fact that they are less costly, quite as durable, and more cleanly, while the colours always appear brighter; and when washed, they are more fast, they can be washed, and come out of the laundry bright. In this respect, it is said that about 90% of the fine cottons are now used for decorative purposes than for dress. For effect, it is said that a few designs in which a room is to be furnished as perfectly as possible for the exact effect which is to be obtained, and the same effect is also given in a Cotton mantles with fringes of Macclesfield silk. This Cotton work is entirely hand-made, and the designs are vegetable. The fabric looks almost 'for ever,' and the colour is scarcely more influenced by time. In the exhibition are also some lovely brocades, and French design from Brussels, brocades from France, and a Christian Copic tomb of the ninth century. The design has been reproduced, and is simple and effective. There is also a series of Chintz designs of a George I period, which cannot be described in words, and which is really a combination of the latter modelling as to shape this peculiar industry ought to follow.
in new shades for covering settees and cushions are likewise becoming popular, and are fast displacing expensive embroidery; there is a wave of economy, and King Cotton is once more in the ascendant. In shirtings some very neat and effective patterns are being prepared, all cotton, for summer wear. We will give a few of these really handsome stripes and checks as early as possible. We now submit a design, A, for a cotton blouse or apron material; it is merely indicative of style, and may be constructed to suit requirements. We have reduced it to the lowest working point, as may be seen by the two pegging plans. The object held in view relative to this design is to give a ground and small figure of a stunning cloth—that is, with a certain amount of porosity, which seems very desirable for all summer fabrics, especially when worn during active exercise. It may be made on 8 shafts, straight-over draft, either with the first pegging plan, 46 to the round, or with the second pegging plan, 24 to the round; in the latter case the weft would have to be

A: 2nd PEGGING PLAN.

wound double on the bobbin for the shuttle; the warp to be drawn in two in a heald, all dark brown; the weft grey, cream, or very light tint of the ground shade; violent contrasts are out of date, and not permissible except for export goods.

GINGHAM DIAGONAL.

Design B is a diagonal for a fancy dress gingham in cotton; warp 40s, in 40 dents per inch; weft 30s, with 80 picks per inch. It is on 17 shafts, straight-over draft, 17 to the round. The great peculiarity in this running diagonal stripe is that any pattern in the warp cannot be continuous, but will be broken up, and take a new direction on account of the odd number of shafts. For instance, 6 coral, 6 white, would have an extent of 204 warp ends before the measure of 17 would be met; and with a pattern of 8 and 8, two warp colours, 272 ends would only meet the measure. Thus will clearly indicate the almost unlimited scope of varieties that may easily be obtained by altering arrangements in the warp, without taking into consideration the innumerable changes obtainable by weft checking. As an example with three colours, say simply 6 red, 6 blue, 6 white, in this warp pattern, 360 ends would be the repeat; and if the weft pattern crossed these with three shuttles, a novel melange of 360 weft picks in a mingling of shade would be produced with 6 fawn, 6 dark green, 6 cream. It will thus be seen without further examples, and with a change of the pegging plan to some other broken twill within the compass of the 17 shafts, that the variations are scarcely within the bounds of calculation. A fabric of this peculiar disposition is capable of producing patterns that should command a market as dress goods.
Machinery and Appliances.

A NEW VISCOMETER.

Maker: G. H. Hurst, 22, Blackfriars Street, Manchester.

The viscosity of an oil possesses an important bearing on its lubricating power; the more viscosity, the better, as a rule, will be its powers of lubrication. This has long been recognised in a crude and imperfect manner by both oil dealers and users, the former of whom are fond of distilling upon the "body" as they term it, of their special line of oils; and most managers of spinning mills have had much said to them by would-be oil sellers on this point. Notwithstanding all this, however, few oil dealers or oil users have much idea of the true bearing of viscosity on the lubricating power of an oil. This arises from has a very ingenious and yet simple mode of heating—for it has been designed to test the viscosity at any temperature from 60° to 200° F. The oil is placed in an inner vessel, which is fitted up to a certain mark or gauge; and this vessel is surrounded by a water jacket. A thermometer in the oil and in the water serve to record and regulate the temperature at which the viscosity is being determined. The operation is a simple one; thus, when the required temperature of the oil is reached, a graduated flask is placed under the apparatus, the valve is lifted, and the oil allowed to flow out; and the time it takes for 50 c.c. to run out is taken as a measure of the viscosity of the oil. Consequently, the viscosity is affected by an increase in temperature, the better is the oil for any purpose of lubrication.

This viscometer has several advantages over the old glass apparatus: it requires less oil, the temperature of testing is known with certainty, which is not the case with some other forms; it is durable, easy to manipulate, efficient, etc.

HURST'S VISCOMETER.

606 Piano Reading-in and Stamping Machine—Fig. I.

Several readers of The Textile Mercury will be familiar with the appearance of this machine, and therefore we have thought it in order to include in our notice a brief description of the same, as made by Messrs. Devoge and Co., of Manchester. A brief description will soon make its salient points comprehensible by the reader.

The illustration given on next page shows that what is technically called a 606 piano reading-in and stamping machine. It will also cut 600's, 200's, 300's, 400's, 500's, and 600's cards, and can be arranged to cut any special size. The operator having mounted the machine, which is upon a "piano," and the stand shown, stands himself at the machine in front of the table shown on the left hand. The machine is to be passed forward under the chuck block, the block having the horizontal base projecting from its side. The forward and is then taken hold of by the grip and the work blocked up under the "piano," and the machine is pushed forward under the table. This makes a card attached to it carry the weight shown, by means of which the card is drawn forward the block, and every time a row of holes has been punched
THE TEXTILE MERCURY.

May 21, 1829.

in the perforating cross-bar linked to the lifting lever $d$. This lifting lever $d$, as applied to existing machines, is extended backwards by the lengthening piece $d_1$, and connected at its extremity to an eccentric $e$ mounted upon a driving shaft $f$, working in bearings in the brackets $g$ affixed upon the inner faces of the end $b$ as shown. The shaft $f$ also carries one or more speed pulleys $h$ for receiving motion from a line shaft or other convenient motor. In this manner the inventors obtained the desired vertical reciprocating motion for the perforating cross-bar or oscillates (whilst the treadle is so depressed) it communicates motion to the rod $j$ and this in turn operates the rack-catch $i$ carrying the card a space forward from the front. When the treadle is released the rod $j$ is drawn back by the return spring $k$ and in this position the stud or arm $o$ has no effect upon such rod $j$ which consequently remains stationary.

The inventors have several alternative ways of applying their invention, but we confine our attention to the one just described, which they have adopted as the most approved. In Fig. 2 it is shown as applied to existing machines. The treadles $s$ and $a$ are retained, and the adjustable link $n$ is employed for connecting the rod $n'$ to a slotted bracket at the rear end of the treadle. The treadle $s$ carries a counter weight $w$, which gives a constant tendency of the treadle to a rise immediately the foot of the operator is removed. By this means the rod $j$ is forced back to its normal position with its projection $b$ out of contact with the stud $a$.

The machine can thus be worked either by manual power, or any other motive power. When desired to use the former it is only necessary to disconnect the adjustable link and the extension portion of the lever $d$ marked $d_2$. By this arrangement card cutters, manufacturers, and others, may avail themselves of the class of power most convenient at any time.

The relief thus obtained for the workers from physical labour must have much to do in securing an increase of production, as it will certainly enable them to devote closer and more continuous attention to their work when they have only to manipulate the keys in the punch block and read off their pattern. We feel confident the improvement will command the attention of all peculiarly interested persons, and these may see the machine at work alongside the manual ones upon application to Messrs. Dewogy and Co., at their establishment, Oldham-road, Manchester.

IMPROVED VARIABLE TRAVERSE MOTION FOR PREPARATION AND SPINNING FRAMES.

SOLE MAKERS: MESSRS. BROOKS AND DIXON
LATE SAMUEL BROOKS, UNION IRONWORKS, MANCHESTER.
(Messrs. Cooke and Harrison's Patent.)

One of the heaviest items of expense in a cotton spinning mill is the wear and tear of roller leather. Proprietors always look at this item with a longing hope and desire that the progress of invention may soon relieve them from it, but so far the anticipation has not been fulfilled. All substituents hitherto tried have failed to answer, and have only proved once more the truth of the old adage, that in this instance at least “there is nothing like leather.” Such being the case, inventors and others have endeavoured as far as possible to devise means that would increase the durability of the leather with which the rollers are covered. In this attempt it was obvious there was a fair chance of success. In times that are now becoming olden, the silver, steel, or rove, was sent through the rollers always at one point, the effect being that the covering was worn away or so far channelled as to be rendered useless. The leather on each side of the channel thus made remained perfectly good, and this suggested the introduction of a number of rollers traversing the covering away or so far channelled as to be rendered useless. The leather on each side of the channel thus made remained perfectly good, and this suggested the introduction of a number of rollers traversing the covering away or so far channelled as to be rendered useless. The leather on each side of the channel thus made remained perfectly good, and this suggested the introduction of a number of rollers traversing the covering away or so far channelled as to be rendered useless. The leather on each side of the channel thus made remained perfectly good, and this suggested the introduction of a number of rollers traversing the covering away or so far channelled as to be rendered useless.
production of other defects. From this spring attempts to introduce a variability in the traverse that should obviate these, and it is at this stage the course of improvement has arrived.

We have much pleasure in bringing before the notice of our readers an invention for this purpose, just perfected by Messrs. Cook and Harrison, who are and have long been connected with the firm of Messrs. Brooks and Doxey, in capacities that have given them the best opportunities of appreciating the necessity for improvement and the greatest facilities for accomplishing it. The arrangement, which is fully illustrated in the accompanying five figures, which show the front, back, and two sections, and also a fac-simile of full-sized diagram produced by the motion, is a variable traverse motion. The same letters and figures apply in each case, and the end sought is attained in the following manner:—Mounted upon a stud 4 fixed to the bracket 9 roller beam are two wheels 6 and 7, varying in their number of teeth either by one or any other desirable number. On each of these wheels is fixed an eccentric, and on each of these eccentrics works a rod or link 8 and 9; these two rods or links are connected to a common bracket 6, one link being secured to the bracket at the bottom, and the other link at any convenient distance from the bottom. The points of attachment are shown at 2 and 3. The opposite end of the bracket 6 is attached to the ordinary traverse rod by means of the adjustable stud 1, the stud passing through a hole in the traverse rod or through a bracket 5 fixed to the traverse rod. The stud 1 can be moved up or down the vertical slot, so as to give a longer or shorter extreme traverse. The wheels 6 and 7 are driven by a worm cut in the roller or fixed to any convenient part of the machine. As this worm drives both the wheels 6 and 7, and one wheel has more teeth than the other, one eccentric is continually varying its position in relation to the other; so that at one time the eccentrics will be moving both the links 8 and 9, and with them the bracket 6 in the same direction; and at another time one eccentric will be throwing its link in one direction, and the other eccentric its link in the opposite direction, thus giving a constantly varying length of traverse, as shown in Fig. 5. Supposing the motion were made so as to give an extreme traverse of 6 in., the least traverse would be 3 in., and assuming the two wheels to have 30 and 31 teeth respectively, the bottom back-fused roller would require to make 900 revolutions before the traverse changes from 3 in. to 3 in. and back again to 3 in., which is shown as follows: — When the back bottom roller has made 15 revolutions the 30 teeth wheel has gone half round and completed the traverse in one direction, and consequently
The method adopted of attaching the apparatus prevents the possibility of the traverse rod lifting. There are no springs used in any way, and consequently the disadvantage inevitably arising ultimately by reason of the same growing weaker with use is obviated.

The following advantages are, therefore, we may say, properly claimed for this invention:

1st. That it gives a varying traverse to the material upon the surface of the roller, as is shown by the diagram Fig. 5, which is a reproduction of the line traversed, in actual ordinary arrangement, 5th. There is a perfectly steady movement, all lifting of the traverse rod having been obviated. 6th. Fewness of wearing parts, and easier fixing and adjustment than in the ordinary methods, 7th. Great simplicity and ease in its adaptation for obtaining any throw that may be desired within a given range of limit, 8th. No backlash in any part, the construction being such as to produce an equal friction on each bearing surface.

It will be clear from this description that from several points of view it is highly desirable that the trade in its own interest should examine this invention. It may be seen, and any other information obtained, on application to the makers.

IMPROVED PATENT COMPOUND MILL ENGINES.

MAKERS: MESSRS. TIMOTHY BATES AND CO., SOWEKE BRIDGE.

Having regard to the objects with which all men enter business and which they entertain hopes of realizing, namely, a moderate income and a reasonable competency, it is obvious that if these expectations are to be realized in these days of severe competition, the person undertaking such a venture requires to display all the care and circumspection of which he is capable.

DIAGRAMS: TOTAL L-nil., 1,505.

Especially is this the case in both branches of the cotton trade. And amongst the first essentials of success in the spinning division of this business must be placed a thoroughly well-equipped mill, up to date in its structure, engineering, and machinery. Unless this be the case the chances of failure and bitter disappointment are not insconsiderable. As an element of such equipment, economical and steady driving is perfectly indispensable, and this of course depends upon boilers and engines. A short time ago we gave an illustration and descrip-
A new patent burring engine has also been
furnished with this engine. It is the invention
of Messrs. Greenwood and Whiteley, two of
the foremen in the establishment of the firm.
Its action is very simple and effective. A small vertical
engine drives the worm wheel through the worm
on the shaft; on the end of the worm
wheel shaft is the eccentric, which drives
the shaft horizontally on the shaft, and has on its side projections
cast like clutch grooves formed to a quick
thread. When the engine is not in use, the
piston is pushed into gear with the wheel,
and the small engine started. As soon
as the speed of the main engine overtakes
that of the boring engine, the piston is
disengaged automatically.

The engines commenced to work on May 23, with
and have continued at work ever since
without the slightest failure of any kind.
The accompanying diagrams were taken on the 11th
February last. The following particulars were
obtained at the same time—Power, 1,000
horse-power, total coal consumed per shunt, 94 tons;
total coal consumed per I.M. per hour, 24.1 lbs.;
total coal consumed per I.W. per hour
engine only, 30 tons; total coal consumed per I.M. per hour
engine only, 214 lbs.; Number of spindles, 107,000;
and preparation, 3,000. Total coal consumed per
spindles and preparation per month, 537,606 lbs.;
total coal consumed per 1,000 spindles per
month, engine only, 1,072 lbs.

The figures given here are a most satisfactory
exhibit of the working of the engines.
Steam is generated in six steel boilers, which
work at 100 lbs. pressure.

Messrs. Timothy Bates & Co. supplied all the
steam and water pipes, and the fittings
necessary to connect them with the engines.
They also furnished the shafting and gearing.
The line shaft in the spinning room makes 900
revolutions per minute. The mill is 350 feet
long, 130 feet wide, and five storeys in height.
It contains 107,472 male spindles and preparations,
and we believe supplied by Messrs. Platt
Brothers and Co., Linlithgow, Oval.

BOLTON MACHINERY IN JAPAN.

The Bolton Daily Chronicle says:—"Enquiries show
that the favourable impression made in the East by
Bolton made machinery, and particularly referred to
in our columns, is still deepening. China, India, Ceylon,
and Japan are among the countries where local
engineering and cotton-spinning machinery finds
way. As to Japan, recent consignments are
made with the greatest promptness of our machines.
Mr. James Eastham, who has just returned from
that country, has said that the machine work
that Messrs. Dobson and Barlow, Limited, have sent out
is obtaining the liveliest satisfaction to everyone concerned. It
is interesting to note that Mr. Eastham arrived in Osaka
the capital of Japan—in the year 1885, and
since then, charge of raising the National Cotton Spinning
Company's mill—100,000 spindle mill. The
whole of the machinery, as well as the preparations,
as supplied from the Kay Street Works, Bolton.
The factory is one mile only, the water-wheel standing by itself,
while the engine is on one side the mill machinery, the mill
moulds in the, the centre, and the road and
housing, being on the remaining side. From Osaka
Mr. Eastham went to Yawata, near Kyoto, to
superintend the erection and fitting of the Yawata
Cotton Spinning Company's mill of 8,000 spindles.
Again, the whole machinery, including gearing and preparation
machines, were supplied by Messrs. Dobson and Barlow,
and, as at Osaka, got a splendid start from the
start. Returning England, Mr. Eastham went out to Japan
again in the year 1890. The success of the
Bolton machine in the Natura Company's mill had
been so marked that the directors placed with Messrs.
Dobson and Barlow an order for the spinning
preparation machinery for 20,000 more spindles, and invited
Mr. Eastham to attend to the erection of this
mill. Accordingly, Mr. Eastham went out, but
conservative, as in many instances, had been from this
occurrence, in a really first-class manner At
Osaka, and in every respect. Messrs. Dobson and
Barlow's machinery is held in very high respect. Con
fiding that the climate is entirely suitable for the
machine to work there, Mr. Eastham states that their
spindles are perfect and he is quite satisfied.

News in Brief.

ENGLAND.

Ashdon-under-Lyne.

The building of the mill by the Scot Spinning Co. has reached its second story.

Blackburn.

A meeting of the District Cotton Spinners' and Manufacturers' Association was held on
Monday night, when it was decided, on account of the
blizzard, to adjourn the meeting and to adjourn the
idea of running the mill short time.

This work the experiment of weaving by electricity has been tried with perfect success at the well-known
loom works of Messrs. Henry Levison, Limited, Green
field, Bolton. The loom is driven by a 14 hp. electric
motor of the electric-light type, the electricity being generated by a
large gas-engine, and the latest method of the electric lighting, a motor
has been fixed in one of the upper rooms by Mr.
R. E. W. Smith, and the electric motor, which is the
loom which secured to Mr. Levison the medal at the Paris Exposition
in 1878, on which there are hundreds of millions of miles run,
which is 244 ft. in speed, and with the electric power is being
employed, the speed of the mill has been raised to the
higher than this might be attained if desired. Of
course there would be no advantage in driving a large
number of looms by electricity, but where there is an
installation of electricity for lighting purposes, for instance in the Technical School, a few looms
may be worked to advantage by electricity. Again, anyone
will show that the methods involved would not be
possible if the mill was not run a couple of hours. On
Wednesday the committee of the Technical School visited
Messrs. Levison's, in order to see how the experimental
work before applying this motive power to the
looms at the school.

Bolton.

The following circular has been issued by the secretary of the Master's Association:—"In consequence
of the decision of the Master's Association to
hold the spring meeting at the earlier date, all
arrangements have been completed and the bill of
sales for the next two days will be ready in time to
find that they have been so well supported in the
line of action they recommend, items showing no less
than 3,000,460 spindles out of a possible 5,000, and a
half million having increased from short time."

Bury.

It has been stated that the notices at the mills in
Bury, as the adoption of short time, have been withdrawn,
but this is only partially correct. At several
of the mills they have not been withdrawn, and one
or two of the biggest will go on two or three days at a time.
At some of the other mills there is a great
schleuch of spars, and many spools are stopped.

Great progress is being made with the erection of
the new spinning engine at M. H. Mill, which are being put in by Messrs. Magevna and Sons, whose
machinery is for the most part being constantly arrived, and every effort is being made to get
the mill thoroughly equipped and ready for running at an early date.

The operatives of Bury are indignant because
they have been kept from the new machinery, in
which the new Bury engines are somewhat
alterations only, and they have passed a resolution
against running with the new machinery. They say that
Messrs. Dobson and Barlow have put off the
commission, in a really first-class manner At
Osaka, and in every respect. Messrs. Dobson and
Barlow's machinery is held in very high respect. Con
fiding that the climate is entirely suitable for the
machine to work there, Mr. Eastham states that their
spindles are perfect and he is quite satisfied.
The Textile Mercury

May 16, 18...

Farnworth.

Mr. Joseph Riley, manager of Rainfield Mill, Ringley, belonging to Messrs. Whitaker, died last week, and was interred at Rainfield.

Great Harwood.

The Union Mill Co. of this town, has placed their order for all winter, beating, and sizing machines with Messrs. Howson and Barlow, Ltd., whose well-known machine business is carried on at Harwood, near to the present location of the mill. The special merits of this new form for all winter, beating, and sizing machines, of works intended to be produced are well-known.

Heywood.

On Tuesday, Miss Clara Crossley, only daughter of Capt. Crossley, was married to Mr. Gigg, paper substance director of the Gigg Paper Mills, was married at Heap Bridge Chapel to Mr. John Howarth, of Whitefield, only son of Mr. Isaac Howarth, of Manchester. The mills in Heywood and district have resumed work in accordance with the agreement arrived at. Among the operatives of the firm of the agreement have been very adversely criticized. The spinners expressed a belief that the non-union question, and their opinions on it are represented very strongly. Amongst the最难 understand: the discontent is not so great amongst spinners. The lockout has caused considerable distress in the district.

At the Barony Court, Chester, C. E. Calvert and Co., cotton and waste merchants, of Heywood, stood Robert, Bruce, also a cotton and waste dealers, of Manchester, before Mr. Justice Edge of the county court, for the charge of forgery, etc. The charges were dismissed and the defendants acquitted. Their Honours gave a verdict for the plaintiffs for £1 13s. 6d. and costs, 15s. 6d. and the action ended.

Leicester.

A fire broke out on Saturday night on the premises of the Crompton Company, at the mill comprising the double-roller and mill gearing, was caught in a blaze only thirty minutes after the flames reached the building. The glove department was, however, destroyed.

Liverpool.

The death took place last week of Mr. Thomas Fairclough, a well-known manufacturer, who was in the cotton trade, was in a hospital. He had been a sufferer from typhoid, and after three days' illness died of blood-poisoning.

Manchester.

Messrs. Waterworth and Sons, 2, Pall Mall, Manchester, publish a catalogue giving the classification of all the exhibits at the forthcoming Chicago Exposition, which will be distributed as an official service to all interested exhibitors and visitors.

Mr. W. J. Galloway, son of Mr. John Galloway, of Manchester, has been elected the representative of the South Eastern (Rugby) Division of Warwickshire to contest the seat at the next general election on behalf of the Conservative party, and has accepted the invitation.

An accident of a serious character occurred on Saturday at the St. Paul's electric lighting works, owned by the Manchester Co., in the manufacture of incandescent lamps. Several injuries were sustained by one of their workmen, who fell from two stories, and injured a number of people who were at work in the room underneath. Today, Mr. Galloway is in the Manchester Infirmary, and the majority, most of whom, however, have since been discharged.

Middleton.

On Saturday a meeting of operatives was held at the Bricklayers' Arms, where there was a very large attendance. A very strong feeling was expressed against work being refused until the non-unionists employed at Stalybridge had been discharged. It was pointed out that, seeing the executive had decided that work should be resumed, those who did not return to work would receive no further pay from the association, and this seemed to have an effect upon the meeting. After a lengthy and animated discussion it was resolved to abide by the decision of the executive. The further resolution was passed severely curtailing the representatives' privileges for agreeing to a decision of the executive so long as union men were compelled to work with non-unionists; and a vote of sympathy was passed with the unionists of Stalybridge.

Oldham.

The Royal Mill is stopped owing to a number of men being employed in the work要害。The workmen have been employed in the work being carried on, and the machinery has been going well in connection with the work of the triping engines not being completed.

Haslingden.

It is expected that the large weaving sheds in Haslingden, containing over 12,000 looms, will commence weaving time immediately. The day-house Mill Co.'s shed, containing over 600 looms, is closed, and it is not known when the shed will recommence work. The local sheep industry is also very dull, and profits are cut down very fine.

Kiddermister.

Mr. Carl Phillips, who has been for many years a traveller for Messrs. J. and Sons, has joined the firm of Messrs. Oldall, Naylor, Lloyd, and Co., of Leeds.

The annual visit of members of the Clitheroe Factory Workers' Association, who are members of the Clitheroe Factory Workers' Association, visited the Art Departments of the Yorkshire College of Technology, all of which are supported by the Company, will take place on the 10th instant, when the visitors will be entertained over the branches of the institution included, and reports describing the work accomplished during the year will be presented.

London.

The sixth ordinary general meeting of the Imperial Russian Cotton and Jute Factory Company, took place on Tuesday evening at Broad Street House. Mr. N. Harris, who presided, said that the past year's trading had not been very successful, but that the company was in a prosperous condition, and that the improvement in the prices of cotton and the keen competition of the northern manufacturers would have an important bearing upon the future of the company's business. The company's shares were in great demand, and the dividends were of the year. The dividend was also payable on the same day, at the rate of 6%. The shareholders' meeting took place at the Imperial Russian Cotton and Jute Factory Company's premises, at Broad Street House, and was attended by a large number of shareholders. The meeting was opened by Mr. Harris, who stated that the company's business was improving, and that a good demand for manufactured goods held the balance. The outlook for the future was bright, and the company was in a prosperous position. The meeting adjourned.

The extensions to the premises of the Werneth Spinning Co. are nearing completion, and will shortly be ready for occupation. The building was originally intended to fill the addition with 40,000 looms, but the meeting of shareholders on Tuesday took place at a meeting at Werneth Spinning Co., to consider the matter of the new building. It is stated that the directors had had the matter under consideration, and had it was suggested, that they should make all new buildings, and another room with new buildings. It is stated that the directors had had the matter under consideration, and were opposed to the suggestion that they should follow a similar course.

Leominster.

The company's business was improving, and a good demand for manufactured goods held the balance. The outlook for the future was bright, and the company was in a prosperous position. The meeting adjourned.

Preston.

Penwortham Mill was opened for sale on Monday afternoon, but without success.

Ramsgate.

On Monday morning, after being stopped for a fortnight, the Creswell Mill was opened by Mr. Harrison, manager of the company. The weather being fine, the outing was much enjoyed.

Rochdale.

Mr. Fred Nelson, the manager of the Manchester Mill, is about to commence building a large mill in the town.

Yesterday the Muslin Mill Spinning Co., Rochdale, was closed by Mr. James Pearson, the manager. The company had been operating on the premises for some time, and had ceased to perform the operation. A sub-committee has been appointed to make the arrangements for the re-opening of the mill.

Yeovil.

A meeting of the directors of the new ring spinning company, which has been formed, was held at the Victoria Hotel on Tuesday, to consider the appointment of a committee to be appointed. The meeting was opened by Mr. H. Lockwood, secretary of the union, and was presided over by Mr. H. Lockwood, secretary of the union, and was adjourned without making any decision.

The following resolution was carried unanimously: — That,
The textile mercury.

358.

having regard to the heavy physical strain and loss of leisurely hours which the industry involved, for the long hours of labour which obtain in this district, this move- ment would not cease to be an advantage even if all other obstacles were put aside. It would still be a great advantage to the town, and no one can foresee the time when the town may not be able to support it. And to-day in the county of Hertfordshire there is a movement in favour of the introduction of machinery in the small silk-weaving concerns in that county. There is a great deal of machinery being worked in this district, and it is to be hoped that the movement will be successful.

Scotland.

Abderdeen.

Mr. Herbert Waldie, the manager of the firm of Mair, Richards and Co., has been engaged in the trade of silk and rayon spinners and manufacturers, for the last two years. Three or four months ago, Mr. Waldie was appointed to the position of manager of the firm of Mair, Richards and Co., and has been engaged in the manufacture of silk and rayon for the last two years. He is now in a better position for the work he has been engaged in, and is more familiar with the processes of the trade. He is now in a position to give us information about the progress of the trade in Scotland.

Dundee.

At a meeting of the Dundee board of trade on Thursday, it was decided to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district. The members of the deputation were then to inspect the works of the Dundee board of trade. The meeting was called to order by Mr. W. A. Ramsay, the chairman of the Dundee board of trade, and was attended by a large number of the members of the board.

The meeting was addressed by Mr. W. A. Ramsay, the chairman of the Dundee board of trade, who stated that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district. He said that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district.

The meeting was addressed by Mr. W. A. Ramsay, the chairman of the Dundee board of trade, who stated that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district. He said that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district.

The meeting was addressed by Mr. W. A. Ramsay, the chairman of the Dundee board of trade, who stated that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district. He said that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district.

The meeting was addressed by Mr. W. A. Ramsay, the chairman of the Dundee board of trade, who stated that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district. He said that the Dundee board of trade were now in a position to send a deputation to the Scottish agricultural show, to be held in June, to represent the Dundee trade and to exhibit the products of the district.
thoroughly and well, when we properly set about it. Examples of these silk fabrics were Exposed at the British Exhibition of 1851, were challenged by French manufacturers, who refused to believe that the English weavers could do anything practical in this line of work, which renders the designs of our art students so often of little use to the manufacturer, and helps him to educate him on the principles of the original Spitalfields looms, and looking back through old pattern books over 175 years old, I find that the English weavers have introduced those designs which have existed, only waiting for a business man like Mr. Locke to come and set them on the right path.

The Spitalfields handloom factory, at Braintree, combines the Spitalfields handloom system with a large steam factory, where power is ready to bear the demands for large quantities in the small limit of time that modern commerce is forced to demand. The damsels, or reproduction workers of old China, the brocades for upholstery work are scarcely surpassed by the French looms. An interesting exhibit from the factories at Budbrooke, a design of a manikin made by Mr. Albert for some hangings for Buckingham Palace, in 1850, is a well-proportioned manikin, with the sleeves of a modern silk suit, and the trousers of a modern suit, on which the English weaver has worked. The damask and damask covers for these purposes are made of damask, and the design is carefully thought out to suit the demands of fashion.

There has been a late good deal of writing and talking about doing something for the silk industries and it is often asked why we have not a government help for the silk industry. The answer is that the leading ladies in the land have taken up the matter earnestly, and the Ladies’ Committee of the Silk Association, the proprietors of the English cottons, have been active in the work.

I went up to the arbour, beside the river, and there I found Mr. James, the manager of the Spitalfields, and he was busy with his loom, and he said, "Ah, Mr. James, we must do something for the silk industry."

I asked him what the silk industry needed, and he said, "We need a government help for the silk industry."

"But Mr. James, we have a government already," I said.

"Yes," he said, "but we need a government help for the silk industry."

A step in the right direction has been the formation of the Silk Association of Great Britain, of which Mr. Thomas Wardle is the president, and the work of the board of the old system of trade guilds amongst manufacturers for mutual support. In the Middle Ages such a firm would have been granted certain rights and powers, and capable of restraining injudicious competition. But in this 20th century these powers have changed their form, and the Silk Association has broadened its basis by including in its members all those interested in silk, whether manufacturers or distillers, and the representatives of the most important class of all the buyers.

The Silk Exhibition in 1850 was a complete failure. It was not succeeded by a committee of the greatest interest to the trade, which is not the case in the two great opposing political parties, and their differences for a time, and harmoniously together achieved substantial results in this good feeling of harmony is a characteristic of the silk trade, and, whilst gathering information, I was very much impressed with the knowledge shown towards each other by rival manufacturers. Of this perhaps Mr. Wardle is better entitled to speak than myself, only I cannot refrain from giving testimony to the earnest devotion and self-sacrifice he has freely given to his work, and who before a few years, since the first time I had the pleasure to meet him, when, at the Paris Exhibition of 1858, he practically founded this great industry in the west of England. In this country he is a great man, and his name is principally established in British territory.

Although I have been speaking in defence of machinery, I must admit that my own feelings are against the use of machinery in the silk industry, and renders the problem of how to employ our population more and more difficult of solution, yet I cannot evade the necessities of the case, therefore, only wish to see such an increase of trade that the number of people lending the machinery shall be equal to the number who now produce the work by hand.

One of the causes which will hasten the decay of handloom work is the difficulty of finding the means to undertake it. The whole tendency of the age is against drudgery of any sort; and it is only by a long apprenticeship that the hand and eye can be sufficiently trained to produce the fine weaving in the handloom. The modern boy will not stick to this work, and we need almost any class of manual work in the Board Schools, he is disinclined to take up work where no think is to be earned. He is required, as a servant, which, in his opinion, brands him with the reproach of youth, and, in a measure, restricts his future.

Mr. Richards, I object to that, Mr. Richards, I object to that. Mr. Richards, I object to that. Mr. Richards objects to the bill, and it is necessary to see the bill passed, and the bill is not passed by the House of Commons.

Mr. Richards, I object to that. Mr. Richards, I object to that. Mr. Richards objects to the bill, and it is necessary to see the bill passed, and the bill is not passed by the House of Commons.

Mr. Richards, I object to that. Mr. Richards, I object to that. Mr. Richards objects to the bill, and it is necessary to see the bill passed, and the bill is not passed by the House of Commons.

Mr. Richards, I object to that. Mr. Richards, I object to that. Mr. Richards objects to the bill, and it is necessary to see the bill passed, and the bill is not passed by the House of Commons.

Mr. Richards, I object to that. Mr. Richards, I object to that. Mr. Richards objects to the bill, and it is necessary to see the bill passed, and the bill is not passed by the House of Commons.
THE TEXTILE MERCURY

excarried? The particulars supplied to me were the correct ones, with the exception of the figures. They were supplied with the blanks, and also tickets similar to the one given opposite the word "soft," but that did not alter the matter. The figures, however, were never given opposite the word "soft;" but that did not alter the matter.

Mr. Thompson's figures were 216 210 216 294 and 254, and mine were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct. The figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct.

Mr. Thompson's figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct. The figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct.

Mr. Thompson's figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct. The figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct.

Mr. Thompson's figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct. The figures were 216 210 216 254, and mine were 216 210 216 254. Mr. Thompson's were incorrect, and mine were correct.
Technical Education.

CITY AND GUILDS OF LONDON INSTITUTE EXAMINATION

The following papers were set at the recent examinations, and have been given to those who work on cotton spinning, and the text for each question will appear in these columns from week to week until completed.

COTTON SPINNING.

Instructions. The candidate must confine himself to one subject only, the Ordinary or Honours. The maximum obtainable is allowed to each question. Not more than two questions to be answered, unless otherwise stated. These lines allow for this purpose. (20 marks.)

1. Is it advisable to mix any other growth of cotton with (a) Bollons, for 12½, 2½, (b) Orieons for 4½, or (c) Texts for 3½, warp twist? If so, give the proportion in which the cottons should be mixed. State the reasons for your answer. (15 marks.)

2. What is the usual arrangement to prevent the lop of the last, or plan the card, from being strung on the lower end, or not taken up fast enough on the other? (15 marks.)

3. State the number of bobbins required in a 30's, state their use, and state the place at which the movement of the carriage is the greatest strain on each. (20 marks.)

4. Name a large number of fibres and other materials used in the manufacture of cotton, and give the sources. Refer to the appearance of each under a microscope. (25 marks.)

5. What is the difference between a short twist and a twist? (20 marks.)

6. What is the effect of milling the cotton? (20 marks.)

7. How is it possible to obtain a coarse cotton? (20 marks.)

8. What is the best material for the weft? (20 marks.)

9. What are the advantages and disadvantages of the new woollen yarn? (20 marks.)

10. Describe the materials of the cotton yarn, and how it is prepared for twisting. (20 marks.)

11. What is the difference between a short twist and a twist? (20 marks.)

12. State the number of bobbins required in a 30's, state their use, and state the place at which the movement of the carriage is the greatest strain on each. (20 marks.)

13. Name a large number of fibres and other materials used in the manufacture of cotton, and give the sources. Refer to the appearance of each under a microscope. (25 marks.)

14. What is the effect of milling the cotton? (20 marks.)

15. What is the best material for the weft? (20 marks.)

16. Describe the materials of the cotton yarn, and how it is prepared for twisting. (20 marks.)

The question requiring an answer to be given in a sketch is as follows:

17. What is the most satisfactory method of giving the twist to the cotton? (20 marks.)

Honours Grade.

1. Explain fully and sketch what means are adopted in a spinning frame to keep the trim of the wheels driving the bobbins in gear as the bobbins are moved. When the weft is introduced to the warp, the bobbins are raised in the machinery. And is this arrangement perfect for the purpose? (20 marks.)

2. When five hank rewinds are made with 22 pinions and 42 threads, what change is made in the number of pinions and 42, how many bobbins, what twist will the machine require? (20 marks.)

3. What is the position of a shaft and the work done by the twist wheel? (20 marks.)

4. State the advantages and disadvantages of what dealers handle American cotton and prove from the farm to the English spinning mill? make to such charges, insurance, freight, discount, etc., cotton, and their amount per cent. or per lb. (20 marks.)

5. Name and describe three ingredients, and the proportion of a cheap workable and suitable for weaving a common 20's grey bundle, or common 30's brown twist, with the approximate cost when made American is 20 1/2, Fair, 25; C. F. Egypt, 63 1/2; and O., 75. (25 marks.)

6. Describe minutely the motion on a heavily loaded doubling machine, and explain how the supply of water is maintained. (25 marks.)

7. Describe the yarn usually used in the high-speed drawing frame when the fulling card is used. (25 marks.)

8. Describe the remedies for the following defects:- (a) Uneven yarn. (b) Unevenness of twist. (c) Unevenness of twist. (d) Unevenness of twist. (25 marks.)

9. What is the effect of the introduction of new raw materials on the cotton industry? (25 marks.)

10. What is the effect of milling the cotton? (20 marks.)

11. Describe the materials of the cotton yarn, and how it is prepared for twisting. (20 marks.)

12. Name a large number of fibres and other materials used in the manufacture of cotton, and give the sources. Refer to the appearance of each under a microscope. (25 marks.)

13. What is the best material for the weft? (20 marks.)

14. Describe the materials of the cotton yarn, and how it is prepared for twisting. (20 marks.)

15. The question requiring an answer to be given in a sketch is as follows:

16. What is the most satisfactory method of giving the twist to the cotton? (20 marks.)

The following are the values of cotton at midday on each day of the week, American dollars per bale:

<table>
<thead>
<tr>
<th>Day</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>15.45</td>
</tr>
<tr>
<td>Tuesday</td>
<td>15.45</td>
</tr>
<tr>
<td>Wednesday</td>
<td>15.45</td>
</tr>
<tr>
<td>Thursday</td>
<td>15.45</td>
</tr>
<tr>
<td>Friday</td>
<td>15.45</td>
</tr>
<tr>
<td>Saturday</td>
<td>15.45</td>
</tr>
</tbody>
</table>

The above prices are the average of the closing quotations during the week.
LEEDS.—Some extensive orders have been placed for the lower grades for woolen and worsteds, and other fabrics suitable for ready-made suits. There is every probability of an activity in the business. Whitewits orders are completed, and from present indications they will be fully equal to those of last year. Buyers from the leading centres, notably of Millers, (Glasgow, and Edinburgh), are busy examining patterns of the latest designs in designs, which are produced in almost endless variety, and half-leathers of stocks are in expectation of buying large orders during the week. The general tendency in prices, lately reported, is fully maintained. Amongst them there is no special activity, except for certain cuirards adapted for Continental wear, and the American demand at again improving for specialties. In the woolen goods, generally speaking, there are plenty.

HICHERFIELD.—No large purchases from stock have been made. Trade continues rather to gradually improve, and orders are more general, and many manufacturers are well employed with orders, for though some who have produced patterns which have not caught the trade recently, still others, who have been more successful, are receiving a fair share of the trade. Orders are received from mills, and there is a very good demand for the goods in the market, with the United States, and the Continental trade is doing very well. Leathers ordered are not those restricted by the known trade to Scotch goods, especially in Germany.

ROCHEDALE.—Nearly all the merchants have placed their seasonal orders, and some are returning, and many are looking for new designs. There is a great demand for the goods. Wholesale trade is doing very well, and trade may be described as a healthy state.

GLASGOW.—Messrs. E. Rose and Co., wool merchants, who have been trading in the trade for about a month, say, "Some trade has come in, but it has not been too good, and we think it will be some time before we see anything like the old demand. The supply is rather high, and though we have had a good deal of business, we have not had the trade we expected."

INFLATION.—The rise in the price of wool has continued to drop, and it is clear that there are still a great many goods on hand that are not wanted by the trade. The supply has fallen off, and although most of the goods are of good quality, there is a wide difference in the prices of merino goods, and the supply is barely sufficient to meet the demand.

CLOTH.—The cloth market nearly all round continues to be in a very slack condition, and quite a exceedingly light demand on Indian account, which is not expected to revive until it is seen whether the coming season's goods are abundant or otherwise. Other sections are often affected when the Indian cloth slack, as importers are well aware with a weak demand from that source. Prices for printed goods have also fallen, and there is a great deal of competition for the goods. The demand for new designs is not very strong, and the trade is not expected to improve much in the near future.

DUNDEE, WEDNESDAY.—The Dundee price advance has not been maintained. Importers did not find the goods in the market, and the trade seems to be in a state of suspension. There is a slight demand for the goods, but they are not in great demand, and the trade is not expected to improve much in the near future.

JUTE.—The jute market is still in a state of suspension, and there is little activity in the trade. The demand for new designs is not very strong, and the trade is not expected to improve much in the near future.

THE TEXTILE MERCURY.

NEW COMPANIES.

VELOCENT COTTON SPINNING AND MANUFACTURING CO.

Capital, £10,000 in £2 shares. Object, to carry on business as cotton spinners and manufacturers, and to carry on the business of clothiers, and to carry on the business of clothiers, and to carry on the business of

JOINT STOCK AND FINANCIAL NEWS.

The following are the official quotations from the above-named firms:

<table>
<thead>
<tr>
<th>Name</th>
<th>Capital</th>
<th>Shares</th>
<th>Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Messrs. J. Cooper, J. Cooper, and J. Cooper</td>
<td>£10,000</td>
<td>2,000</td>
<td>Mr. B. Black, Mr. J. Cooper, Mr. J. Cooper</td>
</tr>
</tbody>
</table>

The shares are available for subscription at £5 each.

F. E. LEECH & CO., LTD., LIVERPOOL.

Capital, £20,000 in £5 shares. Offices at 5, West Regent-street, Liverpool. Object, to acquire and carry on the business of

MOTHER AND FLATT, LTD., SALFORD.

Capital, £50,000 in £5 shares. Office, to acquire and carry on the business of

HOSSEY AND LACE.

NOTTINGHAM—Threequire goods have now fallen flat, chiefly owing to the diminution in the American demand. Common cotton faces are dull, although some of the better qualities are in good demand. Chintz is holding up steady, and the pretty good orders have been placed for silk. Mohair and Cambric rates are also steady, and there is no new demand for these goods. In the cotton goods trade, the business is still dull, and the cotton goods trade is still dull.

Nelson and Shaw, Ltd., Huddersfield.

Nelson and Shaw, Ltd., Huddersfield, have met with a most successful season, and the business is doing very well. The trade is still dull, and the cotton goods trade is still dull.

WOLLERS AND WORSTERS.

BRADFORD.—Spinners are not disposed to speculate, and are inclined to lay in a small stock for the present season. For the present, the market is quiet, and there is little activity in the trade. Spinners expect a fall in the market, and are inclined to lay in a small stock for the present season.

For today's market, the quality of worsteds is not very strong, and the trade is not expected to improve much in the near future.
Patents.

NOTICE OF REMOVAL AND CHANGE OF FIRM.

E. K. DUTTON & CO.

CHARTERED PATENT AGENTS.

Address: 5, St. James's Square, London, S.W.

SPECIFICATIONS PUBLISHED.

Each of the following Specifications may be purchased at the Stationers, 36, Coram Street, London, for the payment of 4d., or may be ordered on the Postal Remittance, price 6d., which is now on sale at all the principal Post Offices in the United Kingdom.

1891.

SSS Weiss. Wearing.

520 Condor at.

7944 LIECHNAM. curved plugh, etc.

945 HILL. warp-lace machines.

9790 HASKELL. fig. clothing.

9417 DIXY (Faroevells inner. Muster, Lantar, and Smoo.) finn. Blue colouring matters.

10100 RAPPROL AND RICE. cotton lap machines.

18129 BARNES. treating vegetable textures.

1260 CUBER. Prob. 42, B.C. Lace-making.

19160 JOHNSON (Blandford Annuis and Sons Fabri.) black dye stuffs.

19742 SELWELL. nitricating cotton, collars, etc.

1556 CLEW (Sainte Jeanne). Ungumming, etc., calico materials.

19300 MAQUEN. combing cotton, etc.

2588 CROSGANN. cutting cloth, etc.

2715 FRY (L. C. DIEM and Company). Black dyes.

4532 DE PISI (Las). Combing machines.

4611 HARTLEY and others. Looms.

40534 STEPHENSON and others. Colouring matters.

775 FRY and SIBLEY. lace window curtains.

3085 LACE (Dielham). Cotton yarn.

1523 CLEW and T. A. and W. H. Lockhead's cloth.

ABSTRACT OF SPECIFICATIONS.

18775. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Commercial lace or open-work embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18776. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18777. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18778. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18779. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.


Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18781. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18782. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18783. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18784. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18785. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18786. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18787. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18788. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.

18789. November 19th. Lockwood, & Co. Massachusetts, U.S.A.

Cometial embroidery, in which the embroidery machine with a period of the same time, only, warp and weft are run in one thread at a time, and a set of needles being the ordinary and temporary ground of a difference, is by a great many of the afterwards destroyed by the ordinary process.