

# The Textile Mercury:

A Representative Weekly Journal for

Spinners, Manufacturers, Machinists, Bleachers, Colourists, and Merchants,

In all Branches of the Textile Industries.

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## The Textile Mercury.

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## Current Topics.

### THE NEW FRENCH TARIFF.

This week we present the concluding instalment of the proposed French Tariff, both general and minimum, side by side, for the purposes of comparison with the present conventional tariff under which British manufacturers are at present admitted into France. Readers of *The Textile Mercury* are thus provided for the first time (the information having been specially obtained by us, and not having been previously in print) with a valuable set of figures, which they would do well to examine carefully. Hundreds of those into whose hands these issues fall are deeply interested in the French trade, and they will be able to see from the table we give how their position is affected by the contemplated changes. The increases on textile machinery amount, as far as spinning and weaving plant are concerned, to 80 per cent. How French manufacturers will like this we need not stay to enquire. Presumably they will still come to this district, the cradle of the factory system and the natural home of the manufacture of machinery, for the goods affected by the tariff. This will simply mean that they must in the future earn interest on an increased capital, with no corresponding advantage. Comparing the first column with the third, in the tables already presented, it will be seen that substantial increases have been made in the duties on cotton goods. It is unnecessary for us to point out any examples of this, seeing that the figures we give are complete and leave nothing to be added. No time should be lost in calling the attention of our Chambers of Commerce to the matter with a view to Government action. As we have frequently pointed out, this country has a powerful lever under its control, which if pulled would teach these fighting protectionists a lesson.

### COTTON INTERESTS IN RUSSIA: A RETROSPECT.

So many people are accustomed to look upon cotton cultivation in Asiatic Russia as rather a dashing and venturesome experiment, that it will cause some surprise to find it treated as a matter of history. But Mr. Wertheim points out that Alexander of Macedon found the plant growing there when he invaded Persia, which is surely antiquity enough to satisfy anybody, and says that it was noticed by the Greeks at Bactria. It is also asserted that somewhere about the ninth or tenth century the *Gossypium Herbaceum* was introduced into China, and from there passed to Japan, but it is such an invariable practice to find precedents of manufactures, discoveries, and inventions in Chinese literature of a few thousands of years ago, that this statement must be accepted with reserve. It is more to the purpose that cotton of an

indigenous variety is freely cultivated in Bokhara, Khiva, Persia, and the Caucasus, and from imported American seed in Tashkend and Irwain, close upon 39,000 tons being derived by Russia from these sources in the twelve months ending with August, 1889. Considerable attention is being paid to the crop by local authorities, pamphlets of instruction for its cultivation are industriously circulated, and meetings of planters, little Cotton Congresses, in fact, are periodically called together for consultation. The production of Bokhara, the chief cotton-growing territory of Central Asia, has doubled within the past three years, and although the industry everywhere is hampered by the want of presses and lack of transport facilities, there appears to be plenty of hope of development, especially as a great improvement in its treatment and condition is reported. The Khiva supplies are rapidly increasing, in spite of the fact that they have to be taken a distance of 600 miles, in small bales of from 252 to 270 lb. weight, on the backs of camels, the journey always occupying two months, sometimes three if the drivers deviate from the right way in search of good pasturage. It seems very probable that Russia will rely more and more on these resources for the raw material to feed her growing cotton manufacture. This requires now something over 120,000 tons of fibre per annum, the larger part, of course, being imported from outside the Empire, chiefly from the United States, but very largely through England. Between 1824 and 1838 it is reckoned that the average quantity annually imported amounted to no more than 1,500 tons, the industry being all this time crippled because no efficient machinery could be had, consequent upon the penalties and prohibition put upon the taking of machinery or men out of this country. We had, it seems, “during the fifties or sixties of the seventeenth century,” sent out a number of British spinners to Russia, through the efforts of the Emperor Alexis (Michailovitch), who wanted our artisans to teach his people spinning and weaving—and plucky fellows they must have been who ventured on such an errand in those days. Before then, “in 1555, Ivan the Terrible granted a charter to a British trading company, conveying to it the exclusive right of trading with Russia, and soon afterwards hand-loom were introduced into the country, but all the yarn used for weaving was brought from England.” For other interesting points of departure, it appears that calico printing was first practised in the eighteenth century; the first spinning mill was built in Moscow in 1808, the first cotton company established in 1835. Except for disturbances caused by the emancipation of the serfs, and by the interruption of supplies during the American Civil War, the industry has made steady if not rapid progress, and the most remarkable movement connected

with it from its birth until now, is this spread of cotton cultivation within the Empire. An advance from 4,760 tons obtained from Central Asia in 1887 to 38,800 tons in 1889, is by no means to be despised, and if the increase, without being so rapid, is still maintained, it may have considerable influence upon the market.

#### FURTHER NOTES ON THE FRENCH SILK INDUSTRY.

The elaborate discussion of the French silk industry in the *Revue des deux Mondes*, from which we have already extracted a number of interesting details, gives some noteworthy facts and figures about the various factories. The silk manufacturing industry of St. Etienne, which is next in importance to that of Lyons, is now passing through a season of depression, after several years of rare prosperity. In 1889 it produced goods to the value of 103 millions of francs, of which 77 millions went to foreign countries. It finds work for about 21,000 looms in the manufacture of ribbons, velvets, and galloons. The looms are scattered over St. Etienne, its suburbs, and two neighbouring cantons of the Haute-Loire. The number of workpeople, male and female, is estimated at more than 63,000. Of the looms, 17,000 belong to workmen ribbon-makers and velvet-makers, and represent a capital varying from 25 to 28 millions of francs. The silks employed for ribbons and velvets are mostly the cheap silks from China and Japan. The same remark applies to the lace factories of St. Chamond, which possesses about 1,200,000 spindles, and furnish occupation to more than 6,000 persons, of whom 5,000 are women. The production is valued at 25 millions of francs, of which only six or seven millions result from the home trade. Besides the tulle manufacture of Calais, on which we need not linger, mention is made of the use of silk elsewhere in many weaving sheds, etc., which make mixed stuffs. At Paris, for instance, silk is indispensable for the manufacture of gold and silver lace, gauzes, and light tissues, which employs 2,000 or 3,000 workers in the districts known as Menil-montant and Charonne quarters. Corset makers also use silk mixed with wool, goat's hair, and cotton. It is likewise consumed at Roubaix, where in 1889 the wool and silk-weaving establishments worked up more than 220,000 kilos. of silk, representing more than six millions of francs. It is required also at Bohain, Crepy-en-Valois, Breteuil, Troyes, and Amiens, where several thousand machines and looms produce hosiery and other articles mixed with silk; also at Nîmes, Avignon, Toulouse, Tours, Macon, Beauvais, Ganges, and in l'Herault, where another thousand looms manufacture taffety lace of silk and schappe, tricots, stockings, waistcoats, carpets, and furniture stuffs.

#### COTTON GROWING IN THE HOLY LAND.

Not the least noteworthy of the many remarkable changes that are taking place in the Holy Land is the introduction of cotton growing. Some parts of the country, indeed, are unfit for the cultivation of the plant, but the semi-tropical Jordan valley furnishes the requisite conditions, at any rate in its more southerly portion, and there are already very fine plantations in the neighbourhood of Jericho. As the railway now in course of construction between Jaffa and Jerusalem will undoubtedly be followed by other lines, including one to the Ghor (or Jordan valley) and Dead Sea district, it is quite within the limits of possibility that cotton may become an important article of commerce in those regions. Perhaps the city which

more than 3,000 years ago possessed and prized costly textiles, will be represented in these latter days by a centre of textile industry sending out its products to lands the very existence of which was unknown in those early ages.

#### MANCHESTER AND THE FINANCIAL CRISIS.

Our readers will be pleased to learn of the important service rendered by the banks of this city in contributing to the guarantee in connection with the affairs of Messrs. Baring Brothers and Co., which they did to the extent of upwards of £1,100,000. It is stated that this splendid response of our local banks is much appreciated in London, and has been specially acknowledged by the Governor of the Bank of England. The amount of the guarantee of the Liverpool banks is about £350,000. We should hardly have thought that in a case of this kind our sister city on the Mersey would have been content with such a far-back seat as this indicates. The seven leading Scotch banks, we understand, guaranteed £300,000 each, or a total of £2,100,000. We are not in possession of details concerning the contributions of the Midland, Yorkshire, Irish, and other banks, but fancy that if these were obtained and added to the £3,550,000 indicated by the above figures, it would be found that, by a long way, London houses have not had to bear the whole of the burden imposed by recent untoward events. We believe that a report has been current in the metropolis to the effect that some of the large Manchester shippers have been in an awkward position since the commencement of the crisis, owing to the curtailment of the financial accommodation for which (according to the report) they are entirely dependent upon London! Statements of this kind appear ridiculous enough to those on the spot who know the real state of affairs, but as outsiders may credit them it is necessary to expose their falsity. It is obvious that London is the creation of the manufacturing industries of the country, which form the chief assets of the nation. It is equally clear that the metropolis has had nothing to do with the establishment of these industries, and although, as a matter of commerce financial business is transacted there very largely, the powerful merchants of the provinces are not the creatures of the southern houses. To those who know of the existence of the Henrys, Tootal Broadhursts, Jones Brothers, Rylands's, and other honoured firms in the local trade, such statements carry their own condemnation.

#### ANILINE DYES IN CHINA.

An Austrian consular report gives some facts regarding the use of aniline dyes in China. The amount consumed in the Celestial Empire is greater than might be supposed, which is attributed to the fact that small consumers, who are the principal customers—large dye-works being very rare in the interior—are exceedingly extravagant in their use of these dyes. So far as colours in general are concerned, the Chinese have regard for purity of tints, and especially for an attractive surface colour. The colour most used is a handsome fiery scarlet red, the import of which is said to exceed in amount the total imports of all other colours. Next comes green, in almost all shades, from the nearly yellow olive to blue-green. The other colours imported are blue, magenta, and violet. The use of blue is restricted chiefly to silk-dyeing, cotton goods being dyed almost exclusively with the native indigo. Of yellow, the Chinese Imperial colour, very little is imported. A small quantity of picric acid is in the market, but it has to compete with the native yellow-wood. Black

aniline colours are not in use, extract of log-wood taking their place.

#### THE HAND-LOOM WEAVERS OF UPPER SILESIA AND SAXONY.

A recently published book by Dr. Karl von Rechenberg on "The Nutrition of the Hand-loom Weavers of Zittau," supplies some distressing information regarding the condition of the hand-loom weavers on the Continent. In Upper Silesia and in Saxony the weavers have to be content with exceedingly small wages. The children have to work as well as the parents in order to provide the necessaries of life. The chief articles of food in these families, says our author, are bread, potatoes, butter, milk, coffee, and meal. There is no food wasted, even the smallest remnants being used again. "Everything is eaten up amongst us, we are so poor," was the remark of a weaver's wife. Extraordinary economy in housekeeping may be learnt from the weaver families, who as a rule have to subsist upon an income of from £15 to £20 per annum. The case of one household is instanced. It consists of a childless couple, both getting on in years. "Their dwelling comprises a sitting-room, a bedroom, an attic, and a cellar. They live chiefly on potatoes, meal, and bread. They eat meat once a week. The total expenditure for provisions, soap, petroleum oil, tallow, etc., amounts to about 4s. 6d. per week. They spend about 10s. per annum on clothes, about 25s. on coals, and have to pay 10s. in taxes. The physical condition of these people is of course unsatisfactory. The men look pale, and are mostly thin, and their wives resemble them; but the women with children, especially those with a few small children are better nourished, perhaps because care for their children and for housekeeping leaves them less time for weaving. The children are, if possible, suckled by their mothers for the first four weeks. After weaning, improper food causes them to suffer from serious intestinal complaints. Even the children who are growing up are pale, and as a rule ill-nourished. Meat is rarely eaten. Nevertheless it cannot be denied that these people often attain to old age—a very singular circumstance, as they work on this miserable diet from five or six in the morning in the summer to eight or nine in the evening; and in winter from six or seven in the morning to eleven in the evening, with a pause of an hour or half an hour for dinner. And they are generally contented with their fare both as to quality and quantity."

#### THE DEPRESSION IN THE AMERICAN SILK INDUSTRY.

With reference to our recent remarks on this subject it would appear that the anticipated crisis has arrived, and an uneasy feeling prevails in the ranks of the trade across the Atlantic. The oldest firm of raw silk importers in the country has closed its doors. Long credit, it is stated, accounts for this regrettable disaster, a firm of manufacturers having, thanks to dating ahead, been able to sell goods at prices which left no legitimate margin, and which eventually brought about similar action on the part of other firms. The whole trade is in a feverish condition, which can only result in further troubles while the primary cause is allowed to continue in operation. One satisfactory feature of the situation is, however, visible in the case of the ribbon trade, which, owing to the failures of late of various manufacturers, has been relieved of a load which enables those left in the business to keep their heads above water with greater ease. It is anticipated that other failures in the silk trade will take

place before the end of the year, but not, it is hoped, without teaching a lesson to those remaining.

#### DAMP IN COTTON.

It is quite time that something effective was done in this question by those interested, and we trust the special committee just appointed to investigate the matter will devise some means of securing substantial justice to consumers. The trade in the raw material has, through neglect, grown to be such a gnarled trunk that it will take all the force that can be brought to bear to make it passably straight again. As its representatives, the United Cotton Spinners' Association has nominated the following four spinners to serve on the special committee in Liverpool, which has been appointed to deal with the question of excessive damp in American cotton, viz., Ralph Bagley (Oldham), C. T. Bradbury (Ashton-under-Lyne), H. Harrison (Blackburn), and A. Simpson (Preston). No objection can be taken to these gentlemen on the score of unfamiliarity with cotton and what it should be, and we trust their representations will have due effect.

## Articles.

### OUR INDUSTRIAL FUTURE.

Some of the remarks made at the annual distribution of prizes at the Bradford Technical College on Wednesday appear to us to furnish a fitting text for a discussion of certain questions which it can scarcely be doubted are of supreme and vital importance to the manufacturers of these islands at the present day. It is to be feared that full and candid discussions of the matters referred to have for some reason or other been few and far between, so that it is the more incumbent upon us to direct attention to the subject, for the benefit of the trades that look to *The Textile Mercury* for light on topics that do not always receive due attention at the hands of those whose minds are engrossed with the minutiae of modern business life. That there are faults existing in the systems pursued by many of those engaged in the textile trades of this country—faults, too, which if persisted in can only lead to ultimate disaster—appears to many practical judges to be incontrovertible. The explanation made by some of our manufacturers when they are questioned as to the causes of trade depression, are frequently mere excuses that do not explain the real condition of affairs. Our silk manufacturers complain loudly of the "ruin" created by the weighting of foreign silks, and the assertion is freely put forward that it is to this practice that the decline in our silk industry is due. But can such a statement be seriously maintained? Surely people who buy weighted silks know, if they have any judgment at all, that they cannot be getting the pure article for the price they pay. The foreign manufacturer who sells to the wholesale house in Manchester, Glasgow, or London, does not get paid for a pure silk when he puts in a weighted article, and it can scarcely be said, therefore, that he has an advantage over the English manufacturer by any deceiving of the buyer. And yet English firms, anxious to escape the consequences of impartial criticism, will say that their troubles are due to the fact that they, being honest, send a pound of silk to the dyer with no instructions as to weighting, and get back, say, 14oz., whereas the foreigner will send the same quantity and have 24oz., 2lb., 3lb., or

even more returned. The fact of the matter is simply this, that weighting enables the foreign producer to offer silk goods at prices which are sure to result in business. In other words, he forces sales where otherwise no sales would be made. The Englishman does not weight—perhaps because he cannot do it so skilfully. Our silk dyers (and dyers in some other trades too) are ignorant of the scientific aspect of their industry to a degree perfectly astonishing. We have previously pointed out the lack of chemists in the dyeing establishments of the chief centre of the silk industry in this country. Everything is done by rule of thumb, and nothing with scientific accuracy. A season's production of such articles as seals, made by some large firm, is often spoiled in the dyeing, just as luck happens, and buyers hear the remark passed that "So-and-so's seals have come out badly this year," just as though dyeing resembled farming in its liability to be disturbed by uncontrollable causes. A case (one of many of the kind) was mentioned to us recently by a gentleman whose authority is unquestionable, in which a certain Midland dyer had been unable to dye a particular quality of yarn a satisfactory white. After some correspondence and a lot of delay another attempt was made, and again failure resulted. In the end, the dyer vowed that the yarn was at fault, and that it was impossible for any one to obtain the desired shade. The answer of the firm that required the work done was to send the yarn to their Calais house, where it was promptly dyed to perfection and returned without remark as a matter of course. It is all very well to talk about cheap labour on the Continent, but cheap labour cannot be accountable for the deplorable backwardness of English firms in such matters as these. In the case referred to, the Calais firm's Manchester representative offered to sell the English dyer the process about which the latter was in such dense ignorance, but the proposal was refused with the remark that he would find out for himself. Typical John Bull! He is still in the dark concerning this method of dyeing, and will probably continue in that condition. And it is to such men as these that we are to look for the maintenance of our industrial position in certain branches of trade!

If we turn towards other departments we again see a need for reformed methods, and in this connection some pertinent observations of Mr. S. C. Lister, at the Bradford presentation on Wednesday, may be mentioned. Technical education, which means, amongst other things, a knowledge of those subjects concerning which many of our dyers are so lamentably ignorant, is what is required in order that producers may have at their command the service of assistants who have been taught to use their brains to originate ideas, and to study their trade as one would study an involved problem in Euclid or a complicated calculation in quadratics. Bradford has on several occasions offered examples of what can be done by enterprise towards remedying a state of affairs that to men of a certain mental calibre would appear hopeless. Mr. Lister said that he well remembered writing to the newspapers many years ago that the trade of Bradford was on a rotten foundation, and subsequent occurrences have proved that he was correct in making that statement. At that time Bradford manufacturers confined themselves largely to Orleans cloths, in which there was no artistic taste, and which presented no difficulties of manufacture. Almost immediately after Mr. Lister wrote those letters there came a season of depression. The class of

goods referred to went out of fashion, and for many years Bradford was in sore distress. But there has since taken place a very considerable change in the trade of the town, and artistic goods are taking the place of the cheap stuffs which were formerly turned out. It is probable, therefore, that even the McKinley Tariff will not be able to shut out the kind of goods which Bradford will eventually produce. Of these matters Mr. Lister spoke on Wednesday, and they are referred to here as a hint in connection with what followed from the lips of the famous founder of the spun silk industry. "There was," said Mr. Lister, "another great industry which was already feeling the effects of being founded simply on cheapness, and that was the cotton trade. Of course the operatives in the cotton trade were the cleverest in the world. If that had not been so the trade would have been shaken to its foundations long ago but he felt certain that the cotton industry, being founded upon cheapness alone, was gradually slipping away from England. What was required in all manufactures throughout the length and breadth of the land in the future was the application of good artistic taste to industry."

The cotton trade gradually slipping away from England! And what is to prevent its doing so as at present conducted? We cannot always hope to supply the world with goods which are merely the product of machinery, and which can be produced quite as easily elsewhere. The thing is not only improbable: it is impossible. Other nations are increasing their production of cotton goods at a greater rate than we are. This is clearly shewn by figures which we may be pardoned for introducing here. The Continent and the United States have gradually increased their producing power until now together they consume five-eighths of the total amount of cotton used in Europe and the States. In 1841-45 Great Britain consumed five-ninths of the whole; in 1861-5 one-half; in 1871-5 rather less than one-half; and in 1886-9 three-eighths of the whole. The progress of the industry on the Continent has been very marked. In 1888 the consumption there exceeded that of Great Britain, and in 1889 the lead was increased. At present the competition indicated by these evidences of substantial growth is chiefly confined to the lower and medium grades of cotton fabrics. In these the United States, the youngest of all countries in which it is becoming difficult for us to meet native competition, may be spoken of as self-providing, and the more far-seeing of her manufacturers, mindful of the internal competition they meet with in the South as far as low-class goods are concerned, are now striving to reach a higher plane of productive excellence.

We think it scarcely requires extended demonstration to convince intelligent men, that the British industries, founded upon cheapness alone are in danger of slipping from our grasp. We must mount upwards if the national turnover is to be increased, or even maintained, and leave to others the production of inferior materials. Many neutral markets, while supplying themselves with the commoner class of goods, are taking increased quantities of those of a higher quality. In these France has been able to transact an increased trade, while our exports have been declining. The ability of our neighbours to achieve such results, especially in all-wool goods may be attributed to their long experience, and to the very careful scientific training of their mill managers, overlookers, and other responsible men, whereby they are enabled to produce a

constant succession of novelties in almost endless variety, so that any important customer can have a distinct style of his own. Thus they lead the fashion, not only in their own country, but in England, the United States, and elsewhere. They take infinite pains in every department, from the preparing and combing of the wool to the dyeing and finishing of the goods, and they can beat us with our own machinery. No one can deny the truth of the fact, and few sensible men will for a moment gainsay that we must strive after the same standard of excellence or descend to the position of a third or fourth-rate commercial power. We have only briefly touched upon the subject of our industrial future in the above remarks. There are other striking facts in connection with the matter that may do good if brought prominently under the notice of those interested, and this we purpose doing as opportunity offers.

### THE CULTIVATION OF COTTON IN EGYPT.

The story of the development of cotton cultivation in the United States is tolerably well known. In India cotton has been cultivated for ages, but during the past thirty years its growth has been greatly stimulated owing to the increasing demand from Europe, and especially from this country. The introduction of the English system of cotton manufacturing into Bombay, whence it is spreading all over the Peninsula, has also much conduced to promote its cultivation. Egypt is the next greatest field of cotton production. The story of the introduction of its cultivation into the land of the Pharaohs is not so generally known as the others, though it is equally full of interest, and affords a strong and encouraging illustration of the advantages accruing therefrom, and which should be an instructive example to many of the chartered companies that are now engaged in the exploration of Africa.

The cultivation of cotton, on a large scale, commenced in 1821, under the rule of Mehemet Ali, one of the most enlightened governors that country ever possessed. At this time experiments were made at Cairo from seed of plants then growing wild. Very high prices were realised for the excellent quality of this cotton, and this stimulated its cultivation rapidly all over Lower Egypt. The growing demand in England was accountable for much of this. Naturally some cultivators were more successful than others, and one grower named Mako rose to some eminence as an extensive producer of a high-class quality. In 1838 a French merchant named Jumel introduced "Sea Island" seed from Florida and watched its development with great care. The quality of his product turned out most satisfactory, and vastly superior to any other long stapled cotton, Sea Islands excepted. So distinguished became the success of these two growers that Egyptian cotton in its leading varieties is amongst the people to the present time called either Mako or Jumel. Originally the cultivation of cotton was carried on under a government monopoly, until the fellahs obtained the privilege to plant, and henceforth its cultivation extended largely.

In Upper Egypt the method of irrigation is the same as in Lower Egypt—on the Mesgani system. In former times the erroneous opinion prevailed that irrigation and fertilising should be effected by the overflow of the Nile only. Excessive Nile floods often prevented cotton cultivation, and cereals had to be raised instead. But later on, under Mehemet Ali, extensive dams or weirs were erected to divert the high Nile into canals, and cotton cultivation could thus be carried on undisturbed. As a rule the cotton plant bears about 150 to 400 bolls. Fogs occur every season in September and October and damage the cotton more or less. During recent years great efforts, at enormous cost, are being made in Egypt by the British to develop Egypt's immense natural resources, to improve the Nile barrage, and to extend the irrigation system. These great engineering works are nearly completed, and will be a source of pride to England and a perpetual boon to the fellahs. But the immense area, amounting to nearly half of the Delta, cultivated in Pharaonic and Roman days, but neglected for the past 15 centuries, remains unaffected by the barrage for the simple reason that the summer supply of water for three months of low Nile barely suffices for existing areas. The barrage

system is capable of handling a very largely-increased supply, but the volume of water delivered must be increased by storage-reservoirs, impounding a part of the Nile flood, from 20,000,000 cubic metres per day (8,000 feet per second) to at least 50,000,000 cubic metres, before larger crops can be expected.

The principal cotton districts are:—  
*Lower Egypt (Delta)*—Charkieh, Dakahlie, Galioubieh, Garbieh, Behera, Menoufieh.

*Upper Egypt*—Fayoum, Assiout, Beni-Souef, Esna, Guerga, Gizeh, Kena, Minia.

**VARIETIES.—Brown:**

1. *Ashmouni* (Mako or Jumel), as the oldest cultivation.
2. *Bamia*, is cultivated in Dakahlie and Menoufieh, a cross between Bamieh (*Hibiscus exulentes*) and the Jumel.
3. *Mit-Ajfi*, only known since two years, and more than two-thirds of the entire cotton area is planted with this seed.
4. *Gallini*, has been abandoned, being unprofitable.

**White:** Comes chiefly from Zifta and Menoufieh. The varieties grade from low to fine extra.

Cultivation is carried on by two methods, one called "Mesgani," and the other one "Bali."

**Mesgani.**—The irrigation is worked by pumps and other machines, whereby the fields receive a continuous supply of water from the Nile and the canals.

**Bali.**—By this method the fields are set under water before planting takes place, the soil being thus thoroughly saturated. After that, the cotton is planted, but the plants remain without water until the Nile rises, when they receive the needful water by pumping works.

The cotton crop of 1889-90 in Egypt came as a welcome relief after the series of bad seasons with which cultivators have had to contend during the last few years. On account of the almost unprecedentedly low Nile flood and the unfavourable weather which prevailed during the growing season (1889-90) such a result was hardly anticipated, and may be regarded as a triumph for the Irrigation Department, whose unceasing watchfulness and careful and systematic distribution of the water supply have converted what promised to be a disastrous season into a fairly prosperous one, for although the crops of cereals, which are produced in districts where the irrigation system is less extensive, were more or less a failure, this was compensated for by the larger yield of cotton.

A comparison of the 1889-90 cotton crop with that of 1878-79, when similar critical conditions prevailed, strikingly illustrates the progress made in the system of irrigation, the total yield in 1878-79 only amounting to 1,677,749 cantars, as against 3,280,786 in 1889-90. It seems doubtful, however, that the cotton crops can increase much; the entire cultivated area of the Delta is estimated at about 3,000,000 feddans (acres), and of these 1,000,000 feddans are devoted to cotton. Under the most favourable circumstances future crops cannot exceed 500,000 cantars more than any previous crop, unless the works referred to above are executed.

Egyptian cotton is made up in large bales weighing about 750 lb. each. We give the production of the country for the past 17 seasons, which shows that the crops fluctuate very considerably—an indication that too much has hitherto been left to nature and that man has exerted himself too little. As will be seen from the comparison made above between the past season and that of 1878-9, when the conditions were very similar, it will be reasonable to expect that if the maximum crops cannot be greatly increased the minimum ones will take a much higher position than they have done in previous years. The following are the figures:—

Season.	Cantars.	Bales.
1873-74	2,575,648	413,611
1874-75	2,266,443	348,802
1875-76	2,382,287	466,894
1876-77	2,817,482	438,936
1877-78	2,605,453	403,270
1878-79	1,677,749	254,342
1879-80	3,202,051	471,726
1880-81	2,794,321	409,101
1881-82	2,930,362	425,315
1882-83	2,267,863	326,077
1883-84	2,665,531	380,801
1884-85	3,564,717	501,686
1885-86	2,910,607	407,970
1886-87	2,983,123	418,372
1887-88	2,942,688	413,891
1888-89	2,763,665	385,449
1889-90	3,280,786	437,438

The European States, of course, have taken the bulk of the crops. America for a few years past has taken an average of about 5,000 bales, a quantity which is increasing.

## Bleaching, Dyeing, Printing, etc.

### THE COLOURING MATTERS.

During the past month we have been favoured with samples of several new colouring matters, which we have tested as to their capabilities, and now have pleasure in presenting to the readers of *The Textile Mercury* the results of our investigations.

During the last year or two the well-known Huddersfield firm, Messrs. Read, Holliday, and Sons, have sent out many new specialities, numbers of which we have previously noticed. A few we are now about to describe, and some that have only come to hand very lately will receive notice in a few weeks. The Gambines R and Y of this firm have become favourably known among wool and jute dyers as giving a series of fast and useful shades. A new member of this series is

#### GAMBINE B.

This is somewhat different in composition from the others, and will be found to be an extremely useful dye-stuff. Gambine B is sent out in the form of a greenish black paste, the colouring matter of which is but slightly soluble in water, to an olive green solution; in acetic acid it dissolves with a yellow brown colour; and in strong sulphuric acid it is soluble to an olive green solution, which on diluting with water gives a brown precipitate. Caustic soda dissolves it and gives a yellow solution. Gambine B is an adjective colouring matter, that is, it requires a mordant, and gives different colours with different mordants: with bichromate of potash and sulphuric acid it yields olive brown; 1 per cent. of colour gives a useful shade of olive drab; 5 per cent., olive brown; 10 per cent., a dark brown; and 20 per cent. a passable black of a brownish tone. The shades are fast to acids; caustic soda darkens the colour slightly; and it stands boiling in soap very well, so that it may be used on cloths that have to be milled; there is no tendency to stain the whites. So far as we have been able to test, the shades are quite fast to light. With a mordant of copperas and oxalic acid Gambine B gives greens—5 per cent., a nice shade of leaf green; 15 per cent., a dark green; acids have no action on the shades; caustic soda turns them slightly browner, and they are not so fast to soaping as the chrome shades. On jute Gambine B gives very good results. Printed on calico with chrome mordant, excellent results are obtained, the shades being quite fast to soaping. Another new product of the firm is

#### TITAN YELLOW Y.

This a yellow shade of the Titan Yellow which has previously been noticed (*T.M.*, Vol. III., page 249). It has much the same properties, and dyes wool, silk, and cotton in the same way. It gives slightly greener shades of yellow, and these do not redden when boiled with soap—a useful property that distinguishes this yellow from most other direct-dyeing yellow colouring matters. The dye-stuff itself is in the form of a yellow brown powder, which is soluble in water to a brownish yellow solution; in alcohol it dissolves to a reddish orange; in acetic acid to a pale yellow; and in strong sulphuric acid to an orange scarlet solution. Acids throw down the colour acid as a reddish yellow precipitate, and caustic soda gives a red precipitate.

#### TITAN PINK B.

This new colouring matter dyes cotton from a salt bath shades from bluish pink to deep crimson; the dark shades are rather dull and not very serviceable, as they are not fast to soap; the pale shades will be found useful, although, not very brilliant. The best way is to use  $\frac{1}{2}$  to 1 per cent. of colouring matter and 20 per cent. of salt in the bath, working for one hour at the boil; then give a final soaping, which, while it causes a slight loss of colour, yet brightens the colour very much. The shades are fast to acids turn rather browner by caustic soda, but are only moderately fast to light. On wool it can be dyed in a salt bath and gives rather better and brighter shades than on cotton. The dye-stuff itself is sent out in the form of a brick-red

powder, soluble in water and alcohol to a dull red solution; in acetic acid to a bluish red; and in strong sulphuric acid to a crimson solution. From its aqueous solutions caustic soda throws down a crimson precipitate, while dilute acids slightly alter the colour of the solutions.

#### TITAN SCARLET B.

This new product is a development of Titan Scarlet, and gives rather bluer shades; on cotton it gives very poor results; on wool it gives from a salt bath bright scarlets, which are fast to dilute acids; strong acids turn them brown, as does also caustic soda. The colour bleeds on boiling in soap.

From the Farben Fabriken vormals Fr. Bayer and Co., we have received samples of several new colours: Indophenine B Extra, alizarine Bordeaux B and G, alizarine cyanine R, benzo brown, Bx and BNx, benzo black, benzo grey, Congo orange R.

#### INDOPHENINE B EXTRA.

This is practically a better quality of Indophenine B. For dyeing it does not give good results; in printing it is a very serviceable colour, yielding very bright shades of blue, which are quite fast to light, acids, and washing. It is applied with a tannic thickening as follows:—

Thickening.	
14 lb. starch,	
28 lb. tragacanth liquor, 6½ in 100,	
3 gals. acetic acid, 9° Tw.,	
3 „ water.	

#### Boil.

#### Printing colour for dark blue.

4 lb. thickening,	
3 lb. Indophenine Extra,	
½ oz. tartaric acid	Dissolved together
2 oz. water	
before adding,	
½ pint acetic acid, 9° Tw.,	
½ lb. tannic acid, dissolved in	
½ pint acetic acid, 9 Tw.,	
1 oz. methyl violet, dissolved in	
16 oz. water.	

Boil; print on cloth prepared with oleine; steam for one hour; fix in tartar emetic bath. This gives a deep blue; for paler shades reduce the colour by adding more thickening. The colour so obtained is quite fast to acids, soaping, and light, and will be found very useful.

#### ALIZARINE CYANINE R.

This is an alizarine derivative, and is sent out in the form of a brown paste, the colouring matter in which is insoluble in water. Strong sulphuric acid gives a violet solution; caustic soda a blue solution. With a chrome mordant it dyes wool blues: 5 per cent. gives a bright blue, 10 per cent. a navy blue, 15 per cent. a dark navy, and 20 per cent. a good blue black. The shades are fast to acids, alkalies, washing, and to light. With alumina mordants alizarine cyanine R gives a bright reddish violet, which is fast to dilute acids, is turned browner by strong acids, and blue by caustic alkalies; it is fast to soaping and light. It can be used in calico printing; printed with an acetate of chrome thickening it gives blues which are fast; acetate of alumina gives reddish violets, but these are not fast to soaping.

(To be continued.)

### DETERMINATION OF THE VALUE OF DYEWOOD EXTRACTS.

In estimating the value of dyewood extracts the following are the chief points to be observed:—1. The percentage of dye-stuff. 2. Addition of other dye-stuffs and tannin matters. 3. Addition of weighting substances. Like tannins, several dyes, such as hæmatoxylin and hæmatein of logwood, are entirely absorbed from their solution by powdered hide. This therefore forms a good means of separating the dye-stuff from other substances contained in the extract, such as sugar, molasses, salts, etc., that may either be naturally present or have been added thereto. There is one disadvantage in this method, which is that tannic acid and the dye-stuff cannot be separately determined. This is not of very great importance, as often the tannic acid of the extract is of as much value as the dye-stuff itself.

For an analysis 50 grms. of ground logwood are thoroughly extracted by repeated boilings in water, and then diluted to 1 litre and filtered; a known quantity is filtered through powdered hide, which must be pure and of a woolly nature. The filtrate should be perfectly colourless and remain so after adding ammonia; 100 c.c. of this filtrate and 100 c.c. of the original extract are evaporated down to dryness, and dried at 100° C. in the air bath, when the difference between the weights of the residue represents the amount of dye-stuff in the solution.

When dyewood extracts are being examined, a known weight containing approximately 10 grms. of dry substance is dissolved in 1 litre of water, filtered, and the clear filtrate treated with hide powder and dried as before. Then 1—2 grms. of the extract are dried in a platinum dish at 100° C. to determine the moisture it contains, and then ignited to ascertain the weight of the mineral constituents. The difference between the total weight of dry substance and the weight of matter in solution gives the amount of insoluble matter. From the total weight also the weight of inorganic matter can be deducted. The following tables show the analyses of several samples of logwood and of logwood extract:—

	FRESH LOGWOOD.				
	I.	II.	III.	IV.	V. after
				Fresh	fermen-
					ting.
Dye-stuff	12.06	10.56	8.14	9.70	9.26
Non-dye-stuff	2.22	1.73	1.04	2.05	1.10
Water	10.86	12.80	10.8	10.02	16.00
LOGWOOD EXTRACT 30° Be.					
	I.	II.	III.	IV.	V.
				Solid.	
Dye-stuff	52.52	41.39	33.52	79.77	54.36
Non-dye-stuff	6.06	11.91	14.39	9.08	18.14
Insoluble	0.45	2.87	6.99	1.05	9.20
Ash	0.14	1.81	3.47	0.22	6.04
Water	40.83	42.04	41.63	9.88	12.26

The advantage of an analysis is apparent when it is stated that samples I.—III. had been valued as equal. With regard to the above analyses of logwood extracts it may be remarked that Nos. I. and IV. are normal extracts of good logwood; No. 2 contains about 20 per cent.; No. III. about 10 per cent. of syrup containing lime; No. V. has had added to it molasses and sodium sulphate.

The quantity of non-dyes is of importance in wool dyeing chiefly, and this depends upon the degree of fermentation: the more thoroughly this is done the more perfectly is the dye extracted from the wood. The reaction of a logwood extract may be judged by the colour of its solution; if neutral, it is deep red; an alkaline solution is bluish-red, while an acid solution is more or less scarlet. Those extracts to which tannin matters have been added are always more or less acid; calcium carbonate or lime water does not turn these tannic extracts red as it does those logwood extracts, which are naturally acid. Another test for extracts is to make a solution of 5° Be. and mix it with a small quantity of stannic chloride; if the extract has been fermented a brown precipitate is formed, while if not fermented a violet precipitate forms. The presence of tannic acid causes the formation of a dirty yellow precipitate. Another plan of testing logwood extracts is to make a dilute solution—5 grms. in 1 litre—and add to a portion about one-third of its volume of ammonium sulphide; if pure a flocculent precipitate will form, while if tannic acid is present a heavy grey precipitate falls and the solution becomes decolourised.—*L. Schreiner in Chemiker Zeitung.*

EDGE'S BLUE FOR BLEACHING.—In the Court of Queen's Bench, London, on Tuesday, the hearing of the case of Edge v. Harrison and Edge was concluded before Mr. Baron Pollock and a special jury. Mr. William Edge, the plaintiff, blue manufacturer, of Bolton, sued Mr. Richard Walmsley Harrison, Samuel Harrison, and Ellen Edge, of Blackburn, to recover damages for conspiring to defraud the plaintiff by an infringement of his patents of 1884 and 1887 for improved methods of preparing blue for domestic and bleaching purposes. The plaintiff also claimed a declaration revoking the letters patent taken out in the name of Ellen Edge, which plaintiff alleged was an infringement of his patent. Judgment was given for the plaintiff, damages £500; also an injunction and a declaration of the revocation of the defendant's patent.

### NEW METHOD OF PRINTING IN COLOUR ON COLOURED GROUNDS.

MM. Henri and Jacques Geullaume have taken out a French patent for a new method of printing in colour on coloured grounds on wool, silk, or mixed wool and silk goods, which is designed to obtain a clear sharp impression on bright grounds. The method usually adopted is to print on a resist colour and then to dye in a bath for the ground colour, but this method is open to the defect that the ground often dyes up very irregularly, and the pattern is by no means clear and sharp. The new method reverses these operations, the ground being dyed in a plain bath, and there is used naphthol black B, ponceau 4 R, violet 6 B, acid green, and naphthol yellow; with these, grounds can be obtained of various colours—black, navy blue, bronze, grenat, ponceau, maroon, etc. The pattern is then printed on, using any of the colours ordinarily used for wool or silk, mixed with 100 grammes per litre of colour mixture of tin crystals, or bichloride of tin or zinc chloride or metallic zinc. After printing, the goods are steamed.

### BLEACHING BY ELECTRICITY.

That bleaching agents could be obtained by electrolysis of chlorides has been known for a long time. Becquerel, in his *Electro Chimie*, calls attention to the fact that chlorine and sodium are products of the decomposition of sodium chloride by the current from a battery of 30 cells. Brand, in his *Manual of Chemistry*, published in 1848, asserts that in 1820 he suggested the idea of bleaching by the electrolysis of a solution of sea salt, and he describes a curious experiment to show that it could be done. He saturated a piece of dyed calico with a solution of sodium chloride, and placed it between two discs of platinum connected with the poles of a battery, when white patches resulted at the parts electrolysed. He further adds that this application had been patented by Bagg. In 1849 Bouis, taking up the experiments of Kolbe, who had obtained chlorate from chloride of potassium by electrolysis, discovered that with the same number of cells the reactions were different according to the temperature at which he worked, and that if the temperature were not raised, hypochlorite and not chlorate of potassium was obtained. This result is due to the action of the chlorine liberated at the anode on the potash formed at the cathode, the potash being formed by the action of the potassium liberated at the cathode upon the water in which the chloride was dissolved. Since then Chas. Watt in 1851, Hunter in 1857, and De Gemini in 1858, have described and patented processes for obtaining alkaline hypochlorites by electrolysis. In 1859 Lardenois patented a product which he called "electrochlorogen," obtained by electrolysis of salt in a lead vat, which formed the negative pole of the electric circuit, a sheet of platinum forming the positive pole. Dickson in 1862 worked at the electrolysis of the chlorides. At the time when these various processes were patented electrolytic methods were not practically applicable, and it is doubtful whether they were ever industrially applied.

In 1862 Fitzgerald and Molloy patented a process of obtaining hypochlorites from chlorides, and also pointed out a method of regenerating by electrolysis the hypochlorite exhausted in a bleaching process. In 1882 Osterstetter investigated the electrolysis of a solution of sodium chloride, and showed that when dilute it only gave hydrogen and oxygen, while after a certain degree of concentration had been reached sodium hypochlorite was obtained. Dobbies and Hutchinson based upon this work a method for bleaching by electricity. In 1883 MM. Naudin and Bidet took up the question of electro-chemical bleaching, and endeavoured, with the aid of M. Schneider, to apply it commercially. These gentlemen shewed that in the electrolysis of sodium chloride, taking into consideration the losses inherent to any commercial process, one ought to be able to make the same quantity of chlorine serve indefinitely,

"the chlorine on coming into contact with the organic matter being transformed into a compound substance capable of containing an exactly equivalent amount of chlorine and capable of yielding it up." In short they showed that the chlorine could be regenerated after having acted upon the coloured substance. The laboratory experiments of MM. Naudin and Bidet were very successful, but the inventors, badly-informed perhaps as to the efficiency of the modern dynamo-electric machine, did not devote themselves to the solution of the many difficulties which crop up when a process is made use of commercially and on a large scale, and they soon gave up the research. In 1883, when M. Naudin published his results, electric bleaching was, it is asserted, well known in Russia, where Lidoff and Tikhomirow, seeking to find the liquid possessing the maximum bleaching power, electrolysed various chlorides. These investigators gave the preference to chloride of potassium. Representing the bleaching power of an electrolysed solution of chloride of potassium by 100, that of sodium chloride was found to be 73, that of calcium chloride 24. Lidoff and Tikhomirow also carried out electric bleaching at the Vienna Electrical Exhibition. According to M. Gime the production of hypochlorites by electrolysis has for some time past been carried out in America, and a concentrated solution of sea salt is there generally employed. In France, however, we think we are not wrong in stating that with the exception of Hermite, who generates bleaching agents for a special purpose, all the users of hypochlorites still employ chemical processes. In fact, at the Paris Centenary Exhibition, the electro chemical industry was only represented by the Hermite process, and that of Gall and de Montlaur for manufacturing potassium chlorate.—A. RIGAUT in *La Lumiere Electrique*.

(To be continued.)

**SATIN FINISH ON BLACK ITALIAN CLOTHS.**—Make a mixing of 1,200 grms. farina, 1,000 grms. flour paste, 400 grms. Irish moss, 150 grms. spermaceti, 100 grms. stearine, 100 grms. French chalk, and 280 grms. logwood extract boiled with 25 litres of water. Sieve, and run through mangle and calender hot.

**MAGENTA, methyl violet, and crystal violet.** when acted on by a mixture of sulphuric and nitric acids, give new colouring matters. The methyl violet gives a violet blue, and magenta a grenat. These new colouring matters dye animal fibres in a neutral or feebly acid bath; when used in printing they do not soil the whites of the tissues, and they are fast.

A red colouring matter is obtained by heating hydrochlorite of nitrosodimethylaniline, nitrosodimethylaniline and aniline together to 100° for 12 hours. The colouring matter is obtained in the form of a brown powder, which gives shades very resistant to soap, soda, acids, air, and light.

**BLACK ON COTTON.**—M. Charles Waddington produces a black on cotton by first dyeing it with primuline in the usual way, boiling 100 lb. of cotton for one hour with 1 lb. primuline and 10 lb. salt. After rinsing it is treated in a cold bath for dyeing aniline black, made of aniline oil 6 lb., hydrochloric acid 12 lb., sulphuric acid 1½ lb.; after the cotton has been immersed about a quarter of an hour it is lifted; 5 lb. of bichromate of potash are added; the cotton is reentered, and the bath is heated to the boil in about one hour; the cloth is then taken out and washed.

Most, if not all of the direct cotton violets, such as azo violet and Hessian violet, are somewhat sensitive to acids—a property that is rather disadvantageous. A recent patent describes two new violets, one of a reddish, the other of a blue shade, which are fast to acids. They are obtained from a base azoxyaniline not hitherto used for preparing these direct colours. This new base is obtained by taking para-nitroacetanilide, and reducing it with zinc. The new base is a yellow body insoluble in water, but soluble in alcohol, on azotising and combing with naphthol sodium monosulphonate it gives a violet red dye-stuff; with the disulphonate of naphthol it gives a blue violet colouring matter, and both dye unmordanted cotton from alkaline soap baths in the same way as benzopurpurine.

BASIC RED colouring matters are produced by the action of dimethylaniline on fluoresceine heated to from 140—220° C. When these two bodies are heated in an alcoholic solution at 140—160° C., the fluoresceine is found to be the mostly changed into a body possessing the properties of a phenol, and of a feeble base. The inventors give the name 'methylrhodaminol' to this body. The hydrochlorate is soluble in water, and dyes animal fibres from an acid bath, and tannin-antimony-mordanted cotton a very bright red. If the temperature be further elevated the fluoresceine is transformed into a body entirely basic, to which the name 'tetramethyl rhodamine' is given; a further elevation of temperature results in the production of a third body of feebly basic nature. These bodies are strong colouring matters.

## Designing.

### NEW DESIGNS.

#### CUT PILE PLAIDS OR CHECKS.

**No. 1.**—This cut pile design is for plaids or checks in fancy colours: cotton, linen, silk, mohair, or woollen, in fact any textile material may be used, especially for the back, the brightest and most costly for the face, the colours for winter being black, green, dark red, brown, tan, blue, and grey. The design would be most effective in heavy plush stripes, and by using good combinations of printed or twisted yarns, with wefts of various shades, the skins of animals, such as tiger, leopard, beaver fur, etc., may be very closely imitated in a novel and striking manner. For instance, a golden brown weft with a very large but irregular block of black and white print picked two and two would give a beautiful imitation of the feathers of owls, and with another weft of a very light stone, checked 2 print, 2 golden brown, 4 of light stone, a strong resemblance would be obtained to other skins. With a little ingenuity the changes are almost unlimited. It will be seen from pegging plan and draft that 32 to the round on 12 shafts, with 40 ends in the draft, gives a great amount of scope for diversity of colour changes; 80 ends per inch, or a 16 reed, 5 in a dent, of 50's two-fold yarn for warp would form a good foundation; it would require four ends of ground warp of cotton or other materials, and one double end of plush warp wool, or other fibre to form one dent; we merely suggest this idea. Then 3 picks of ground cotton and one double pick of spun silk, mohair, or angola for pile. The stars in the draft shew the wove plush warp (on a second beam), and the spaces the stars are in are the healds that the plush warp threads are drawn through. The crosses give the weft plush, and the dots on the other 6 shafts are for the ground, which may be made as small or as large as may be considered necessary for a pattern. The colours can at any time be changed to different colours for the pile warp, and also any variety of shades for pile wefts, according to the nature of the plaid or check required. The flushings of the pile warp and weft would be most conveniently cut diagonally, as by so doing the flushings both of pile warp and weft would be cut at the same time. We would further point out, in conclusion, that the ground fabric may be produced by one colour of warp. The pile warp and weft may be the same colour as each other, but different from the ground; or the pile warps in different colours in each stripe, and at intervals ground twilled or figured. We thus indicate what we believe would form a very elegant and useful addition to our winter novelties in dress materials and vestings.

**No. 2** design is in every respect (except figure) a counterpart of **No. 1**. We have given a different method of drafting so that the warp ends will be better separated in the course of weaving, and no doubt **No. 1** draft ought to be on the same principle. The same reeds and counts of warp and weft as in **No. 1** design; the warp may be linen, worsted, or two-fold cotton, the weft silk, 32-end draft on 10 shafts, 10 to the round, weft and warp self colours, as in

**No. 1**, and by way of contrast warp dark dahlia; weft, a twisted yarn of equal parts of white and maize, white and red fawn combined, light pink and coral very loosely twisted; warp, scarlet; weft, grenat, light and dark; warp, claret brown; weft, light, mid and dark cuir; warp, dark prune; weft, dark buff, all the light shades of blue and drabs, creams, light, mid and dark lavender; warp, light myrtle green; weft, every tint and shade of lilac and drabs; warp, very dark blues, deep purples; weft, dark orange, dove, and white.

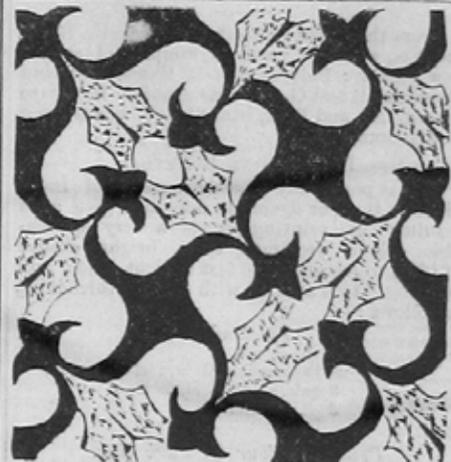
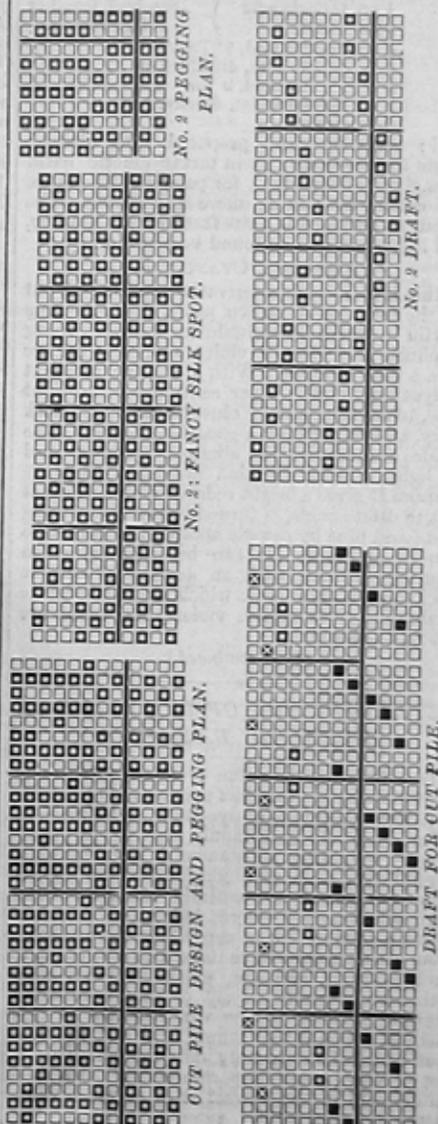


FIGURE 29.



FIGURED DRESS OR MANTLE CLOTH.

Figure 29 is a suggestion for application to textiles in either light or heavy silk, cotton, worsted, or woollen goods. A portion of the design is shown developed on point paper in Design 205, the full figure worked out on this scale occupying 192 threads and 192 picks. Our idea here has been to develop the figure as a light texture; therefore plain ground is used, a weft flush of seven for the weft figure, and a simple crape weave for the conventional leaf being introduced. The following is a suitable sett for a light silk cloth:—

Warp.	Weft.
2/60's silk.	60's silk.
40's reed 2's.	80 picks per inch.

The crape effect in this sett will probably not be quite so clearly developed as is requisite to give the characteristic effect, in which case either a thicker weft than warp should be introduced, or a more pronounced weave be inserted.

As a cotton fabric about the same balance of structure should be maintained, but the remarks made above are equally applicable here.

Probably the most suitable type of cloth for this design is the cotton warp and lustre weft,

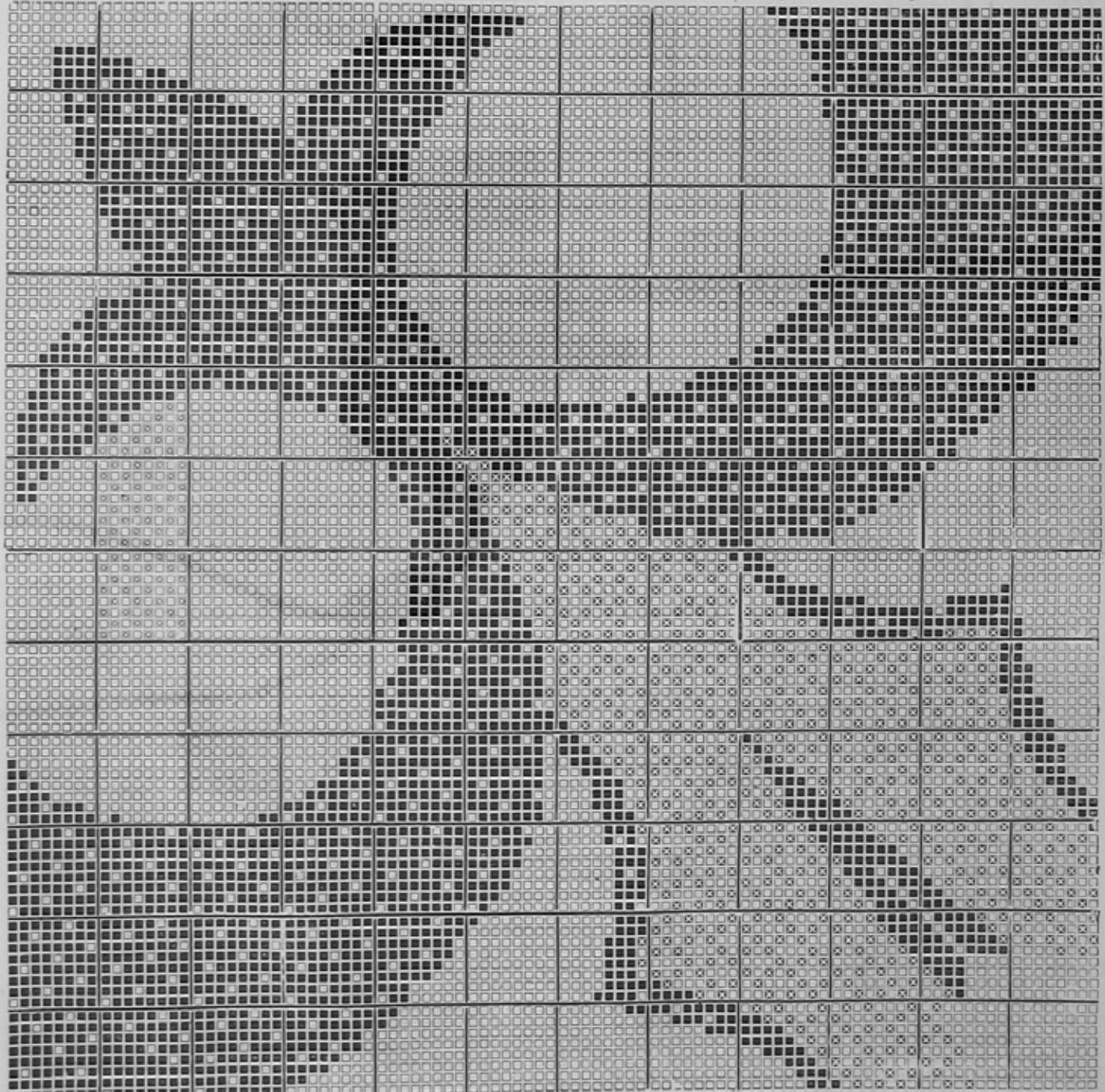
either single or backed. The setts previously furnished in this journal for cloths of this type are suitable for this figure. As a single cloth the plain ground and weft flush figure should be retained, but the conventional leaf might be most effectively developed as an extra weft, and we would suggest the trial of marble non-lustrous yarns, dark tones. Properly manipulated some effective results could, in our opinion, be obtained thus.

Again, if the figure be developed for a mantle cloth, cotton warp with lustres and woollen weft, we would suggest that an attempt be made to utilise the woollen weft for surface figuring. Of course the ground and main figure should be developed for the most part in distinct weft flush weaves, but properly used the non-lustrous woollen should prove of some service. A better class of yarn than that usually used for backing should be inserted; in fact we recommend the trial of this class of goods in finer setts than usual, say 2/60's cotton in the place of 2/40's, slayed about 30's reed 2's, replacing the 12 sk. woollen and 10's lustre worsted or mohair, with say 20—28 sk. woollen, and about 20's mohair.

FOUR-END TWILL FANCY CHECK.

All large checks and tartans are now worn biased or cut so that the checks meet most accurately in the centre of the skirt, forming vandykes. There are some patterns woven diagonally; they are, of course, extremely expensive, but they answer the requirements of fashion without incurring the risk of having the checks all askew and the folds drooping irregularly. Any really good and experienced dress-maker, however, will give a satisfactory joining with the ordinary check or tartan if a good ground is given in the pattern between the smaller crossings.

We suggest a check in 80 reed, 2 in a dent, 30's twist for warp, 80 picks per inch of 30's weft, 54 inches wide, or, if reed space in loom will not permit, 27 inches to 30 inches broad, warp pattern 60 ends of very light fawn, 6 of opal blue, 60 light fawn, 4 light or opal blue, 4 light fawn, 4 opal, 8 light fawn, 6 opal, 8 light fawn, 4 opal, 4 light fawn, 4 opal; total ends in pattern 172 and repeat; weft pattern, 120 picks of light fawn, 4 opal, 6 light fawn, 4 opal, 24 light fawn, 4 opal, 6 light fawn, 4 opal; total weft pattern 172 and repeat.



DESIGN 205.

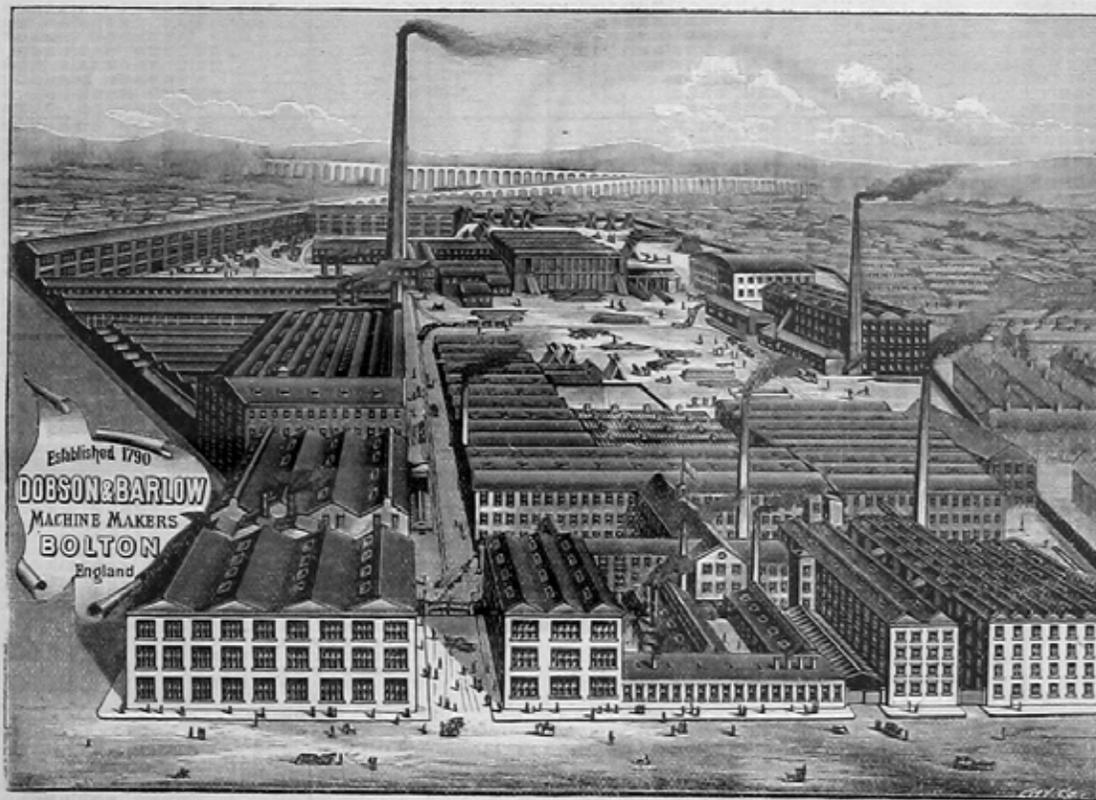
TEXTILE MACHINE-MAKING  
ESTABLISHMENTS.

MESSRS. DOBSON AND BARLOW'S, BOLTON.

In the preceding introductory article it has been shewn how the material forces of nature have co-operated with one another in rendering Lancashire preëminently suitable for its future destiny, and a field in which inventive skill could be exercised with the greatest assurance of success. Its lofty hills and sheltered valleys, its streams and rivers, its deposits of coal and iron, and last, but not least, its humid atmosphere, are Nature's contributions to its industrial and commercial eminence. The ancestry of its people, and their agricultural, pastoral, and domestic pursuits, have for centuries combined to develop a race of men possessing great energy, persistence, and force of character, peculiarly

Bolton may properly be awarded the first position in honour, having a well-grounded claim on account both of Arkwright and Crompton. Though the former was born in Preston, he very early removed to Bolton, taking up his residence there in 1750, long before he turned his thoughts to the cotton trade, and was dwelling there when he conceived and worked out his water frame. Though that machine was first secretly exhibited at the Old Grammar School, Preston, this was probably done in order to avoid attracting such inconvenient attention as might, in the then disturbed state of the popular mind regarding matters mechanical, have resulted in its destruction. It was within the preceding two or three years that angry mobs of workpeople had destroyed Hargreaves's jennies wherever they could be found, and had driven the ingenious

lands on which pastured the sheep that produced their raw material. We see to-day movements analogous to this in the plantation of the English system of manufacturing near the cotton fields of India and in the cotton-growing States of the American Union. When the industrial revolution was fairly inaugurated Bolton was quite prepared and was not slow to adapt itself to the altered circumstances. It not only adopted the new system of working, but speedily began to make the new machines, not merely for its own use, but for sale beyond its boundaries. We believe no town in Lancashire possesses an older machine and engineering trade than Bolton. These twin industries have grown side by side, and along with their parent, the cotton trade, have found a congenial home and achieved great prosperity in this town on the moors.



MESSRS. DOBSON AND BARLOW'S KAY STREET MACHINE WORKS, BOLTON.

qualifying them to undertake the leading part in the industrial revolution that began to unfold itself in the early part of the last century, and the evolution of which has continued to the present time. Of the quartet of men whose names we have put forward as possessing the greatest claims to be regarded as the fathers of invention, Kay, Hargreaves, Arkwright, and Crompton, all were Lancashire men, having been born respectively in Bury, Blackburn, Preston, and Bolton. If to the names of these be added those of Watt and Cartwright, the former the inventor of the steam-engine, and the latter of the power-loom, there will have been added all that can justly be included in the list. The latter two men Lancashire does not claim as her children, though the mechanical achievements of Cartwright were entirely due to the stimulus imparted to his inventive genius by the successes of Arkwright.

Of the towns named as the birth-places and the scenes of the labours of the first inventors,

inventor to seek refuge in Nottingham. Another reason probably was that Arkwright might the more easily secure the financial support of John Smalley of that town, upon whom he was greatly depending for the means of maturing his invention, and introducing it to public notice. It was apprehensions of mob violence that induced Arkwright and Smalley to follow Hargreaves to Nottingham. The industrial and commercial pursuits of Bolton may have had much to do with directing the attention of Arkwright to the improvement of the then simple appliances used in spinning and weaving, for in the days of Henry VIII, and probably for long before, the town had a great reputation as a market "for cottons and coarse yarns," and "as a place of great trade for fustians." There is little doubt that the woollen manufacture was introduced by one of the several colonies of Flemings who settled in the county during the fourteenth century, and who naturally brought their industry into the neighbourhood of the moor-

Our review has now brought us to the time when we come into close contact with the subject of our present article, the foundation and development of the machine-making firm of Messrs. Dobson and Barlow, which in the summer months of the present year celebrated the completion of the first century of its existence, exhibiting at the same time such vigorous health and prosperity as to augur well for holding more such festivals in the distant future. It would be quite a superfluous labour on our part to tell the readers of *The Textile Mercury* that the name of Messrs. Dobson and Barlow is known the wide world over, wherever the cotton manufacture has obtained the slightest root-hold as an industry, as makers of every description of machine used in the spinning division of the trade, and each of the highest quality that experience, skill, and science can produce. It is remarkable, when the fact comes to be considered, how circumstances mould the form or give character to persons and industrial in-

stitutions such as our leading firms constitute. It has been so in this case. In Bolton, manufacturing under the old régime was more advanced than in most centres, finer and better fabrics being produced, the limit in this direction being simply the capacity of the spinner to supply finer materials. This demand would undoubtedly be a stimulus to Crompton to produce his invention, which was at first known as "the muslin wheel." The influence of this improvement would be exerted in the

lowest qualities of yarns, and in the most perfect manner that human ingenuity has hitherto succeeded in accomplishing. This has given a sort of special character to its productions, but it would be a mistake to conclude that its machines for other departments of the trade are not in every respect stamped with its characteristic excellence. The enormous and ever-increasing development of the cotton industry at home and abroad is bringing upon our machine makers demands of the most varied

portant establishment affords an appropriate opportunity of reviewing its history. In 1767, the year in which Arkwright was laboriously thinking and working out the problem of his spinning machine, in which Hargreaves was about leaving his native county for Nottingham, and in which Crompton was spinning on the latter's jenny, and probably even at that early day beginning to cogitate upon the means of its improvement, a boy was born at Patterdale in the midst of the Westmoreland mountains. This



ISAAC DOBSON, b. 1767, d. 1833.

(Founder of the firm of Messrs. Dobson and Barlow, Bolton.)

greatest degree in the district in which it originated, and hence to this may doubtless be traced the origin of Bolton's muslin and fine goods trade, the highest and most artistic section of the cotton industry. The demand that has naturally arisen from the development of this trade has correspondingly affected the firm which is the subject of this notice, having led it to devote its energies to the production of machinery that should spin the highest and the finest as well as the

character, and those that would hold their own in the race of competition must be prepared to meet its requirements. In this respect Messrs. Dobson and Barlow have never been found wanting. Had this been the case we should not have been called upon to-day to chronicle the fact that it still exists, at the end of a century after its foundation, in a state of vigorous health and prosperity.

The recent celebration of the centenary of the foundation of Messrs. Dobson and Barlow's im-

was Isaac Dobson, who, after spending the days of his childhood in that locality, came to Bolton, and was engaged as bookkeeper by a Mr. Badger, a cabinet maker. As matters then existed this was a favourable training for the future machinist, for in the cutting, turning, planing, and fitting of the work of cabinet-making, he would gain such experience as would be exceedingly valuable when it was turned in the new direction of machine making. It is undoubtedly in facts like this that we find

an explanation of how the early machines came to be composed to such a great extent of wood. Young Dobson appears to have been a keenly observant boy, and having mastered the rudiments of the business of cabinet-making, he soon started in business for himself, setting up a few wood lathes, with horse power for a motor. This will sound strange in people's ears to-day, but it is not a great many years since gin horses were supplying the motive power for cotton machines in some of the central countries of Europe. In 1790, when he had attained his 23rd year, the young cabinet maker and a Mr. Peter Rothwell put their wits and their small capital together, and laid the foundation stone of the existing firm by commencing business as "engineers" in Blackhorse-street, Bolton. It is rather difficult to conceive of what an engineering business would consist in those early days, for the steam-engine had only been applied for the first time to a cotton mill five years previously. In 1796 the partners made their first spinning jenny, for Mr. Heaton, a local spinner. The principal parts of this machine, such as the frame and roller beams, were of wood, as continued to be the case with spinning jennies for thirty years afterwards, when iron superseded wood. In 1797, the firm had in their employment eleven men. This was emphatically a day of small things, but they were slowly becoming greater. In 1800 another scion of the house of Dobson appears on the scene in the person of Benjamin Dobson, a nephew of Isaac, who in that year became an apprentice. The Puritan strain of the family is visible in the Scripture names conferred upon them. Mr. Rothwell died in 1816, and the young man Benjamin was admitted to a partnership with his uncle, the firm trading under the title of Isaac and Benjamin Dobson. In the meantime the business was slowly and steadily growing, so much so that the firm felt justified in launching out on a new departure, which was begun at Chorley and soon grew to be of some importance. The spinning machinery made at this time was mainly on the lines of Crompton's mule and the oldest types of preparatory machinery, which space will not allow us to describe. Mr. Isaac Dobson failed in health, and died at his residence, Gilnow House, in 1833, in the 66th year of his age. The business by this time had become of considerable magnitude, and was in a prosperous condition, being the leading machine-making firm in the district. Benjamin Dobson was now left sole proprietor, but was destined to a comparatively early death, which occurred at Mere Hall, in 1839, in the fifty-second year of his age. The business was found to be in a sound and flourishing condition, and was taken charge of by his executors: his son, Mr. Benjamin Dobson, and a brother-in-law, Mr. Metcalf, who had been in charge of the cotton-spinning branch of the business at Chorley. The firm was now conducted under the name of the "The Executors of the late Benjamin Dobson," and so continued for a dozen years. The premises in Blackhorse-street were now becoming quite inadequate for the rapidly expanding business, which, with the adoption of a policy of Free Trade by the country, had still greater prospects before it. Its conductors at this time were men of prescience and enterprise, and they determined to be prepared for the good time coming. They accordingly secured the site of their present establishment and commenced the erection of the works, which were opened in 1846. Here, with the increased facilities at their command, they were able to meet the grow-

ing demand for their productions. The first four mules supplied from the new premises were to the order of Messrs. Joshua Crook and Sons, and lively efforts were put forth by the respective sets of workmen engaged upon this order each to complete their task, and, if possible, to secure the honour of having turned out the first machine. The excellence of the machines in principle and workmanship ensured a steady influx of orders, and the firm was constantly busy with the execution of the most important contracts, which steadily increased and enhanced its reputation. Another change was approaching: in September, 1850, Mr. Metcalf, the co-executor of Mr. Dobson, died, and in January of the year following, 1851, Mr. Edward Barlow became a partner, and the firm then assumed its present designation of "Dobson and Barlow." The firm continued its operations with increasing yearly success all through the decade of 1850-60, which was marked by such a great development of the Lancashire cotton trade, owing, as observed above, to the adoption of Free Trade, and so far as machine making went, owing also to the great Exhibition of 1851, which almost created the British export trade in machinery. Then followed the next decade, 1860-70, perhaps the most eventful in the history of the cotton industry.

The American Civil War and the Lancashire Cotton Famine which followed paralysed the cotton trade, and for several years greatly arrested the mechanical trades as well. Before its close the firm lost its last-admitted partner, Mr. Barlow, who died in November, 1868, at Sunning Hill, at the early age of 47. Mr. Dobson was then left alone with the business, which he conducted successfully until 1871, when failing health compelled him to make such a disposition of matters as would permit him to lay down the burden he had honourably and successfully borne for over thirty years.

A new partnership was then arranged, consisting of Mr. T. H. Rushton, son of Mr. T. L. Rushton, banker, and Mr. E. A. Dobson, son of Mr. Arthur Dobson, of Belfast, and nephew of Mr. Benjamin Dobson. To this partnership Mr. Dobson transferred the business. These gentlemen are thoroughly practical men, the former having been trained as an engineer, but subsequently devoting a number of years, together with Mr. Rushton, to the technical part of the business of the firm of which they are now the principals. Both gentlemen are in the prime of life and vigour, and the practical knowledge, mature experience, and the accumulated skill which an old-established firm like this always possesses, may be trusted to keep it in the front rank of textile machine-making firms, to which the enterprise, care, skill, and assiduous attention of their predecessors and their own personal contributions in that direction during the past eighteen years have carried it.

Our readers, we are sure, will regard with interest the accompanying portrait, which has been engraved for this sketch from an oil painting, and faithfully portrays the pleasant features of Mr. Isaac Dobson, the founder of the firm. Our other illustration is a view of Messrs. Dobson and Barlow's present extensive premises in Kay-street—the tree that has grown from the seed planted in 1790, in the partnership of Dobson and Rothwell. Mr. Isaac Dobson, the subject of the portrait, was one of the organisers of the subscription which was raised to purchase an annuity for Samuel Crompton when, by unsuccessful business adventures and other causes, he had lost the £5,000 awarded him by Parliament

for his services to the country. Time and space would both fail us to record the interesting incidents that have occurred in the history of this important firm, or even to enumerate them. A volume would be required to do justice to them, and we do not see why such should not be written. The history of our leading industrial establishments would be much more entertaining than a novel, and would certainly surpass in interest many biographies placed before the public. All we can do, therefore, is to give as briefly as may be done a succinct view of the present establishment and its productions.

As previously indicated, the firm removed from Blackhorse-street, where it was first established, to their present location in 1846, having previously erected a portion of their present premises and acquired other buildings standing thereon. The area occupied is over 30,000 square yards, mostly covered with buildings of several storeys, by which the floor space is largely increased beyond that mentioned, to the extent of a goodly number of acres. The great chimney, which towers so conspicuously over all surrounding ones, was built in 1842 for the chemical works, whose buildings were subsequently acquired and incorporated with Messrs. Dobson and Barlow's; it is 367½ feet high, 127½ feet in circumference at the base, and 24 feet round the top. It contains about 120 tons of stone in the basement, and the stack itself required 900,000 bricks for its construction.

The internal equipment of this establishment is everything that can be desired, nothing being wanting that skill or science can suggest to conduce to its efficiency or economy of production. The mill plant produced therein includes every machine used in the manipulation of cotton, from the ginning of the raw material to the finished thread and its subsequent doubling, winding, reeling, gassing, and polishing. The firm also makes all descriptions of machinery for the preparation, spinning, and doubling of cotton waste, wool, worsted, silk, and vagona yarns. A full complement of operatives comprises 3,000. The production consists of about 800,000 to 900,000 spindles and the necessary preparation per annum. Substantially this means the complete equipment every month of a mill containing about 70,000 spindles, which it will be admitted is no mean achievement when it is considered that everything is of the highest attainable finish and workmanship.

As might naturally be expected, since its foundation this important concern has been the means of introducing many notable improvements both of principle and detail, which have done much to render the cotton trade the most perfectly automatic industry in the world. These improvements relate to all the departments, but especially to carding, combing, and spinning; and, as before observed, the firm's reputation is unrivalled in machinery for fine and coarse spinning. Along with other concerns they have of late years devoted a great deal of attention to the improvement of the carding engine. As a result their patent revolving flat card termed the "Simplex" is a marvel of mechanical ingenuity and simplicity, and has won the extensive approval of the trade. It would be tedious to particularise, so we must let it suffice to state that in every department there is a constant steady endeavour to keep to the front in every improvement both of principle and detail.

As might naturally be expected, the firm has been an almost regular exhibitor at the leading exhibitions all over the world during the past 35 years and has, in every instance, obtained highest

honours and awards. It holds gold medals and first-class certificates in abundance, and the Grand Cross of the Legion of Honour of France.

In July last the firm celebrated its centenary, an event that was the cause of great rejoicings, not only amongst their own immediate staff of hands, but also throughout the town and neighbourhood. Decorations, addresses, presentations, and congratulatory speeches were the order of the time. Album addresses were presented to Mr. Rushton and Mr. Dobson, and in responding both gentlemen mentioned important facts connected with the firm. Mr. Rushton said that during the past twenty years the business of the firm had been nearly doubled, and also its number of hands. Mr. Dobson, in the course of an interesting speech, stated that between 15,000 and 20,000 of the population of Bolton depended either directly or indirectly for their maintenance upon the prosperity of the firm of Dobson and Barlow. Upon this subject, however, we need not dwell, as a lengthy report of the event was given in *The Textile Mercury* of August 2nd last.

We must now conclude what we fear is only a brief and very inadequate notice of this important establishment. To do it justice, as observed above, would require a large volume. When the important position this establishment has attained, and the vast interests dependent upon it are regarded, the wish spontaneously rises in the mind that its prosperity may not only be maintained, but that it may steadily increase as the years move on, and that in due time it may celebrate a bicentenary that will shew as great an advance from now till then as the present has done from 1790 until to-day.

**SMOKE ABATEMENT: A NOVEL SUGGESTION.**—Mr. Robert Ascroft, solicitor, of Oldham, has made some rather novel suggestions in respect to remedying the smoke nuisance. In a letter he says:—"All kinds of appliances have been recommended, but, so far, neither county nor borough justices, corporations, nor local authorities, have felt justified in taking upon themselves the responsibility of saying what means shall be adopted. With the law in its present unsatisfactory state, things seem to be at a deadlock, and if any means can be suggested, by which (without unduly interfering with the staple industries of the district) emissions of dense black smoke can be reduced to a minimum, it will be well worth while that the same should have due consideration." In order to get over the "deadlock" he makes the following proposals:—1. Let all owners and occupiers of premises, having furnaces which emit black smoke, form an association, and pay an annual subscription of say £1 1s. and £2 2s. a year. 2. Divide the mills into the requisite number of classes, on the basis of a fixed number of boilers to each chimney. 3. Let there be special classes for such as have mechanical stokers or other appliances. 4. Let the association appoint a competent man to devote the whole of his time in taking observations of the various chimneys. After providing for his salary, the surplus funds can be divided into prizes, and distributed every three months amongst the successful competitors. He then goes on to observe that "it is needless to say that the observations would be a valuable guide to the millowner, and, to a great extent, a check on those taken by the representative of any local authority or individual. I would suggest that the stokers in the district should be made members on paying a nominal sum of 1s. per year. If the above is practicable, there is no difficulty in putting it into shape and commencing at once. The amount of fuel saved by careful and judicious firing would be enormous, and the smoke nuisance would become a thing of the past. The annoyance of constant smoke prosecutions, with the accompanying lawyers' bills and court costs, would be avoided. Every stoker would be doing his best, and this means that he would accomplish his object. For twelve months the above can be done for every mill in Oldham at a less cost than putting in machine stokers to a single mill with half-a-dozen boilers." Mr. Ascroft, as a lawyer, certainly exhibits disinterestedness, inasmuch as he has been called upon in the course of his professional duties to defend a large number of millowners in smoke prosecutions.

## Foreign Correspondence.

### TEXTILE MATTERS IN THE UNITED STATES.

NEW YORK, NOV. 15TH.

Sufficient time has now elapsed since the elections of November 4th to enable one to form an idea as to the feeling of the manufacturing section of the community concerning the political tidal wave which has almost obliterated the old party landmarks. One of the more representative trade journals, discussing the situation, says that "the commission merchant may not like the change, but certainly it does not necessarily indicate the existence in the bosom of the manufacturer of a feeling of ferocious hostility to the commission merchant. What we Americans have to do, and positively must do, is to look out for ourselves first of all; and that is what our European friends invariably do for themselves. We are now importing about three hundred million dollars' worth of goods that we can produce at home. The new tariff proposes to give us a fair chance to produce it; and, meantime, what we cannot produce, we shall continue to buy abroad wherever we can supply our needs at lowest prices. This is not philanthropy, nor is it malignant wickedness; it is simply sound business policy."

As for the threat of European retaliation, the idea embodies a practical impossibility according to those who entertain the above views. The United States is the best foreign market for the Old World, no matter what the customs duties may be. The erection of a "Chinese Wall" round the commerce of the Republic would not cause any inconvenience to be suffered at the end, say, of ten years. "But such an obstruction of commerce would simply paralyse Europe." And so the weary flood runs on. The pity of it is that owing to the dense ignorance of a large section of the American people concerning matters outside their own district talk of this kind is frequently swallowed as gospel.

The new process of printing tapestry carpet, patented by Mr. Dunlap, of Philadelphia, and referred to in *The Textile Mercury* some time ago, is just beginning to attract the attention of trade journals here. No facts have, however, been made public beyond those contained in *The Textile Mercury* article.

The Spring gingham trade promises to be a good one. Travellers bring extremely encouraging reports as to the results of their journeys.

It is said that there is a scarcity of popular native makes of cotton goods just now, and that shippers have unfilled orders on their books sixty days old. All the New England corporations have been doing a thriving business, yet they have found it no easy task to supply the wants of the foreign trade in brown drills and sheetings, denims, stripes, Canton flannels, and printed calicoes. Camel jeans had once a very popular call, but a lower grade of British-made goods in imitation thereof have taken their place to a great extent in Mexico. In prints, 64 x 64's for Mexico have been in limited demand. The cloth is one of the principal grades shipped to the Republic on our southern border, but owing to the recent rise in silver the trade for a time languished, remittances coming forward very slowly. Now, however, matters have improved considerably. It is claimed that American prints at 5 and 6 cents a yard are the best that enter Mexico.

Nearly all the spinning and cordage works here use leatheroid mill-can made from material similar to celluloid. They are preferred to tin, are lighter and more durable, and keep shape under hard service. Boxes on castors and wheels are made of same material, and used in place of wicker baskets. They are largely used in various trades. They would be found very serviceable in your spinning mills and factories. Johnson and Basset, of Worcester, Mass., have patented a new woollen mule. Their new medium weight woollen mule is adapted for from 240 to 360 spindles. The distance from extreme front to outside of mule is 11 feet 5

inches. A pair of these mules, working face to face, can be operated in a width of space of 23 feet. A pair working back to back can be operated in a width of space of 22 feet. These machines are made of the best material, every part being perfectly fitted, thus making them a very easy-running mule.

The business of the old firm of F. A. Leigh and Co., Boston, is to be continued by F. A. Leigh and Co. The new concern is formed of Evan A. Leigh, younger brother of Mr. F. A. Leigh, who has previously been the purchasing agent at Manchester, England, and Mr. Walter A. Lane who, as clerk and partner, has been connected with the business for the past sixteen years. Mr. E. A. Leigh is well known to a number of American manufacturers, and his office was largely used as a headquarters for buyers when abroad. He will attend to the outside affairs of the firm, and Mr. Lane will manage the office business as before the late Mr. Leigh's death. They report a good enquiry for revolving flat cards and self-acting mules, which they run as specialties.

Carpet prices were officially advanced two days ago, and spring business has already begun at the highest figures quoted below. The advance is not only due to the higher duty on carpet wool, but also to the fact that manufacturers have practically made no profit of late years. Lowell, Bigelow and Hartford Body Brussels have advanced 10 cents per yard, Lowell Three Plys and Extra Supers have gone up 5 cents. Moquettes have advanced 10 cents; nine and ten wire Tapestries 5 cents, and Tapestries under nine wire 2½ cents. Best Velvets are up 5 cents. Wiltons have advanced 10 to 15 cents. The price of standard grades of Brussels, such as Horner's, Schofield's, Mason and Co.'s, Whittall's, Worcester Carpet Company's and Ivins, Dietz and Magee's has been fixed at 1 dol. 5 cents, which makes a varying advance according to what the goods sold for last season. Standard grades of Philadelphia Extras are 57½ cents. The new prices for Lowell Extras and Three Plys take effect to-day, while the new prices on Brussels will go into effect on December 1. For some few seasons past the price lists of the Lowell, Bigelow and Hartford companies on Brussels have been considerably in excess of the actual selling prices, but the new lists give the actual selling prices for the spring of 1891. Where Lowell and Bigelow Brussels were sold by jobbers during the fall season for 1 dol. 7½ cents, they will be sold the coming season at 1 dol. 17½ cents, as the lists state.

FROM Yokohama is reported a great increase in the stock of raw silk, of which there are 30,000 bales on hand. The native papers are discussing the treaty revision question. They hotly denounce foreigners who object to ratify the new treaty.

An important spinning factory at Valdajol, on the Vosges, was destroyed by fire yesterday week, damage being done to the amount of £30,000. Two hundred workmen will be out of employment, whilst a large velvet factory at Lyons has been completely destroyed by fire, the damage being estimated at £20,000.

The large wool firm, Oostendorp and Co., of Buenos Ayres and Antwerp, have been compelled to suspend payment as a consequence of the Argentine crash. It is stated in some quarters that they hold 1½ million of bills from Baring Bros., but as the report has not been confirmed it is considered highly improbable. Antwerp itself will suffer little by this failure. The liabilities are seven million francs (£280,000).

AMERICAN FAILURES.—Thomas H. Allen and Co., cotton factors at Memphis, have made an assignment of their property. Their liabilities are 750,000 dollars, and their assets 1,500,000 dollars, to a great extent in real estate, cotton plantations along the Mississippi south of Memphis. With time, they expect to be able fully to pay all their creditors. Richard H. Allen and Co., their New York Branch, have also made an assignment.

An extensive silk mill belonging to Messrs. Bamford Bros., Patterson, New Jersey, was destroyed by fire on Sunday night, the loss being estimated at 400,000 dollars. When the alarm of fire was raised, many of the girls and women at work became panic stricken. They made a rush to get out, and several were trampled upon, while others jumped to the ground from windows on the second storey, but sustained no material injury. The fire is believed to have been due to a defective electric wire.

## News in Brief,

FROM LOCAL CORRESPONDENTS AND  
CONTEMPORARIES.

### ENGLAND.

#### Ashton-under-Lyne.

Mr. James Clare, who has for many years been employed in the carding department at Oxford Mills (Messrs. Thos. Mason and Sons), has been appointed carder to the Harper Twist Co.

At the Walk Mill, owned by Messrs. Jno. and Wm. Hamer, a number of ring frames of the newest type, erected by Messrs. Platt Bros. and Co., have been working for some time in the attic to fill up spare room behind some pairs of mules. The inadvisability is pointed out of adopting such a plan generally, as the travellers are constantly wearing, and descend to the floor as refuse. Unfortunately they cannot be swept up like mule fly, and are apt to be trodden upon. We are sorry to have to chronicle the death of a minder, who got a broken traveller in his foot a few weeks ago; all attempts to dislodge it were unsuccessful, the result being that mortification set in and death ensued.

#### Blackburn.

On Saturday last the employés of the firm of Messrs. W. Walsley and Sons, Carlisle-street Mill, at a social meeting in the Orange Hall, presented Mr. John Walsley with a marble timepiece, on the occasion of his marriage. The presentation was formally made by Mr. T. Holden, and Mr. Walsley responded in suitable terms.

On Friday evening of last week, a meeting of the members of the Technical School Council took place at the Town Hall, for the purpose of considering the proposal to hold an exhibition in aid of the school. Mr. Eli Heyworth, J.P., occupied the chair, and in opening said whilst an exhibition would be of educational benefit that he feared there would be difficulties in carrying out the project. Mr. E. Cooper, on the other hand, thought the proposal feasible, but Mr. E. Hamer thought there was no time to get the exhibition up. Alderman Whiteley questioned the advisability of having an exhibition. Some months ago an application was made by the Technical Council to the Corporation for a loan of £12,000, being a portion of the 1d. rate capitalised. He strongly opposed that, but since then he had considered that, whilst he was right as to the amount, he was wrong in principle. He thought now that the Technical School Council should make application to the Town Council for the loan of £5,000 on the security of a portion of the 1d. rate. That would be an easier method of raising the money than by an exhibition. Mr. Cooper said the statement of Alderman Whiteley put a different aspect on the question, and he should therefore withdraw his proposal. It was decided to apply to the Corporation for a loan of £5,000 on the security of a portion of the 1d. rate.

A meeting of the Blackburn Chamber of Commerce was held on Wednesday afternoon, Mr. H. Harrison presiding. A letter from the Marquis of Salisbury was read, calling attention to a statement of a British minister to Servia that the present time is singularly favourable for the extension of British trade in the Balkan countries. That was so more especially with regard to Servia, whose facilities of access to foreign markets are now beginning to be developed, and whose purchasing power, if calculated by the amount of its yearly exportation of raw products, is already £1,500,000 in value. The British agent and Consul-General at Sofia has, in like manner, called attention to the openings for British trade in Bulgaria. The letter also referred to a suggestion for the establishment of an Exchange and Sample Museum at Belgrade, in the interests of British merchants. It was resolved that the secretary write to each of the borough and county members requesting them to introduce a bill for the exemption of machinery from rating similar to that read a second time in the recent session by a majority of 152. The secretary was also instructed to communicate with the borough members to secure the abolition of certifying surgeons. It was decided that a resolution be submitted to the Association of Chambers of Commerce at the next annual meeting in favour of Indian factory legislation.

#### Bolton.

A meeting of the members of the Bolton Master Cotton Spinners' Association was held on Tuesday at the Victoria Hotel, Manchester, to consider the demand of the Operatives' Association for an advance in wages equivalent to 5 per cent., and of the

cardroom hands for an advance of 10 per cent. and 5 per cent. respectively for the male and female hands. A committee was appointed to confer with the operatives' secretary on the question of the application.

On Saturday evening, the overlookers and employés in the carding, ring spinning, and winding departments of Messrs. Tootal Broadhurst, Lee and Co., Limited, No. 2 Mill, Daubhill, met in the Sunnyside Institute, the occasion being the presentation to their retiring manager, Mr. James Moore, of a very handsome electro-plated tea service, a silver-mounted ebony walking stick from the settees, and a nicely bound book, "Fox's Book of Martyrs," etc., from the doffers. The presentations were made by representatives of the different departments, who gave expression to the respect and regard felt for Mr. Moore, who has been in the service of the firm nearly 21 years. The hands and friends to the number of over 200 sat down to tea.

#### Bradford.

Mr. William Clarke, the chairman of the board of directors of the Idle Worsted Mill Co., Limited, died last week.

A New York (Dalziel) telegram of Tuesday's date says:—"A sensation has been caused in the American dry goods trade in consequence of the Supreme Court granting an injunction in favour of Messrs. B. Priestley and Co., of Bradford, England, manufacturers of black dress goods, against Messrs. Adams and Co., a large Sixth-Avenue dry goods house here, restraining them from advertising and offering for sale goods bearing the name of Priestley and Co., Bradford, which the plaintiffs claim are not of their manufacture. Messrs. Hitchcock and Co., the American agents for Messrs. Priestley and Co., have for a long time past been troubled by the competition of American dealers, who seem likely to improve upon the goods sold under Messrs. Priestley's name. Six years ago the name 'Priestley's' was adopted to designate Henrietta's and other cloths which the firm produced. American retailers, however, have not hesitated to sell other goods as Priestley's and have frequently counterfeited their trade mark. In this particular case it is claimed that the defendants had offered for sale a fabric called 'Priestley's warp Henrietta,' containing no silk, but composed of wool alone. The plaintiffs claim 1,000 dol. damages, and a perpetual injunction. They have also brought a suit against Messrs. Ryan and Co. and Messrs. Furber and Co., large Chicago retail firms, and similar proceedings will shortly be instituted against certain houses in San Francisco and Denver. The upshot of these legal contests is awaited with much interest."

#### Burnley.

Messrs. Robert Emmott and Sons are about to commence operations in building a new shed to hold 1,500 looms, off Briercroft-road. The firm have about 1,500 looms in Bishop House Mill, but their lease will expire in about 14 months, by which time it is contemplated having the new shed ready.

On Monday morning there was a breakdown of the flywheel at Bankfield Mill, affecting some 600 work-people and stopping 1,800 looms. There are four different firms at this mill, viz., Messrs. John Williams and Co., Messrs. Foulds, Thorner, and Co., Messrs. Holgate Bros., and Mr. William Pollard. The repairs were completed in time to commence work on Wednesday morning.

#### Church.

Mr. Lord Tattersall, of Church-street, sailed from Tilbury Docks, last week, in the P. and O. Co.'s s.s. "Ganges," for Bombay, to take up a position of carding master there.

#### Darwen.

At breakfast time on Friday morning of last week, the weavers employed at Messrs. Green and Needham's, Erwood Mill, Lower Darwen (600 looms), struck work, alleging that they were insufficiently paid.

The extensive alterations which have been taking place at the India Spinning Mill for the last three weeks were expected to be completed this week-end, but it does not appear that the mill will be in full working order before Christmas. The old engine and the upright driving shaft are being pulled down. The mill is to be worked by a new engine with rope gearing.

#### Derby.

The large lace factory belonging to Messrs. Henry Parker and Co., Melbourne, near Derby, was totally destroyed by fire on Monday night. The loss is estimated at £15,000.

#### Haslingden.

Mr. W. J. Parrit, manufacturer of Helmsboro, has been elected candidate in the Liberal interest for the representation of Haslingden, a vacancy having been caused by the death of the late representative,

Mr. Lambert. The Conservatives have decided not to oppose Mr. Parrit's election.

#### Hollinwood.

On Tuesday evening a lecture on America was given in the Bourne-street School by the Rev. Joseph Prestwich. During the lecture he spoke of his visit to the cotton fields of South Carolina, and said that in some cases rings were formed through some of the plantations being mortgaged. He said he enquired from no less than nine planters at what price they could sell a thousand bales of cotton, and in each case the answer was that they could not sell one single bale, on account of the fields being mortgaged, and some of the crops were mortgaged for four or five years to come. Speaking of damp in cotton, some of the planters told him that six per cent. was a small figure. They had known cases where the damp had increased up to 25 per cent., caused in a great measure by the atmosphere (?)

#### Leigh.

Intelligence has just reached Leigh of the success of Mr. David Wilkinson, formerly a weaver at Messrs. Jones' mill, Leigh. Mr. Wilkinson left Leigh in 1881, and studied science so well that he gained a scholarship of £50, tenable for one year, at the Normal School of Science, at London. Whilst there he won another scholarship of the value of £50 per annum for three years. Recently he has accepted an appointment as science teacher in New Zealand, and is to leave England in December. The appointment is worth £500 a year.

#### Nelson.

On Monday night a largely attended meeting of coloured goods weavers was held at Nelson to consider what attitude should be adopted towards employers who decline to pay the uniform list recently come into operation for weaving coloured goods. It was stated that several strikes had already occurred in Colne, owing to the employers there refusing to adhere to the list. No single coloured goods manufacturer in Burnley had declined to pay the list, but a strike was now in progress at Todmorden through such refusal. A resolution was unanimously passed authorising the Committee of the Nelson Weavers' Association to take steps to enforce the payment of the list.

#### Oldham.

Operations have been commenced in connection with the erection of the mill for the Pearl Spinning Company.

The Oldham Boiler Works Company has received an order for a couple of boilers required by the Irk Mill Company, Middleton.

Mr. Wm. Buckley, a mechanic at Messrs. Clegg and Sons, Newton Mills, Shaw, has just completed 50 years' service for the firm.

A rumour is current that another company is to be formed at Shaw. No wonder it is said this district is a go-ahead place.

Mr. Levi Knowles, of Ashton, has received the appointment of assistant manager over the weaving department at the Glebe Mills, Hollinwood.

The name of Mr. George Mitton, manager of the Anchor Spinning Company, is amongst the seven names registered as promoters of the Ellenroad Spinning Company, Milnrow.

Mr. Robert Harrop, formerly manager of the Broadway Spinning Company, has been appointed manager of the Commercial Mills Company, of which he is a director, vice Mr. George Etchells, who has transferred his services to the Sun Mill Company.

Mr. Alfred Barlow, who has left the Middleton Junction Spinning Company, to manage the Irk Mill Company, has been presented by the work-people at the former with a writing desk, etc. Mr. Alfred Stott has been promoted to the vacant position.

The bad weather is interfering somewhat with the work of mill building in this district. The Beal mill, however, is nearing its completion, and is within measurable distance of being ready to receive the machinery, which Messrs. Hetherington, are supplying.

Several Oldham managers and sharebrokers are floating a company at Rochdale for the taking over of a new mill, situate in close proximity to the Crawford and Rochdale Spinning Company. The mill in question is said to belong to Messrs. King, the well-known spinners and manufacturers.

A limited company, with a capital of £40,000, is being formed at Royton, to take over the Union Mills, belonging to Mr. Nathan Meacock. The company will take over the buildings, chimney, reservoirs, weaving shed, cottages, receivable chiefs, and the whole estate for the low sum of £2,500.

The directors of the Holly Mill Company have placed the contract for the whole of the mill

gearing and shafting with Messrs. Pollitt and Wignell, of Sowerby Bridge, who have also been entrusted with the execution of the steam engines. An order for new boilers has also been placed with the Oldham Boiler Works Company.

The promoters of a new company at Middleton Junction are shaping themselves into action. Preliminary meetings have already been held on the subject, and considering the excellent reputation for profit-making which this locality bears, being known as "Divi borough," there should be no difficulty in getting a company off. At any rate, many persons think so.

The following contracts have been given out in connection with the mill being erected by the Royal Mills Company:—General contractors, Messrs. W. Storrs, Sons, and Co., Limited, Stalybridge; cast-iron work, Mr. George Keighley, of Burnley; rolled iron work, Mr. Edward Wood, of Manchester; engines, Messrs. E. and J. Wood, of Bolton; machinery, Messrs. Asa Lees and Company.

An Oldham contemporary says:—"Some of the companies which have purchased cotton to arrive freely, in anticipation of an advance in prices similar to that which has occurred in the two previous seasons, are just now suffering not only from the unexpected fall in values, but from the fact that they have to pay 7 per cent. interest on any overdraft they may have to obtain from their bankers to pay for this cotton. On the strength of this it will be pretty safe to predict a considerable irregularity in results during the next few quarters."

The cardroom hands in the eleven districts comprising the Oldham Card and Blowing-room Operatives' Association, including members and non-members, held meetings on Wednesday evening, to consider the wages question and a circular addressed to them by the council of the Association. It was stated that there are some 2,000 persons employed in the blowing rooms and cardrooms in the Oldham district, of whom the 10 per cent. advance asked for will affect, 1,600 of whom are said to be members of the Union. As some fear was felt that employers would refuse to grant the advance of 10 per cent., this "reasonable demand," as they put it, was confirmed, and resolutions passed, giving the Executive Council power to take whatever action they consider necessary to enforce the same, which practically means striking.

**Oswaldtwistle.**

On Thursday morning last week the operatives at Rhyddings and Stone Bridge Mills (Messrs. Watson and Co.), commenced to run short time, the hours being 8 to 12 and 1 to 3-45. The reason is stated to be the condition of the market.

**Ramsbottom.**

The Ramsbottom Spinning and Manufacturing Company, Limited, Stubbins, have decided upon a very important step, namely, the renewal of all their spinning machinery, the order for which has been placed with Messrs. John Hetherington and Sons, Limited, of Manchester.

**Rossendale.**

Mr. Robert Riding, of the Guben Printworks, Germany, has been appointed head colour-maker at Bridge End Printworks, Waterfoot, the vacancy being caused by the death of his father. Mr. J. Maden will take charge of the Guben Printworks.

**Stalybridge.**

Messrs. Cheetham, cotton spinners, of this town, after a satisfactory trial of Messrs. John Hetherington and Co.'s improved cards, have decided to substitute them for those they have in use.

**Stockport.**

There has been a good deal of town talk during the past week in regard to the formation of the new cotton spinning company and the erection of a mill. The general feeling is that there is ample room for such a venture, and looking at the position of the most recent ventures—the Palmer and the Vernon Mills—it is argued that another concern ought to succeed equally as well.

**Tyldesley.**

During the past week indicators have been put in at the Atherton Cotton Mill, which belongs to Messrs. F. Burton and Sons, Tyldesley.

**Wigan.**

On Saturday night a fire broke out at the Bleach and Dyeing Works, Standish, belonging to the Standish Bleaching and Dyeing Company. The watchman raised an alarm, and a number of the workpeople were soon on the spot and got the fire extinguishing apparatus to work, and by the aid of the manual engine from Haigh Hall they succeeded in extinguishing the flames. The damage is estimated at £1,000, covered by insurance.

**SCOTLAND.**

**Galashiels.**

Considerable slackness prevails at present in the local tweed trade, and some of the larger factories are dismissing numbers of their employes.

**Glasgow.**

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

India, China, Canada.	United W. Indies and South Anstra.				Africa and Egypt.	Continent.	Totals.	Previous week.
	£	£	£	£				
124,526	7,176	5,074	1,147	284	98	138,267	73,356	
25	6,896	320	312	148	64	7,674	8,534	

**IRELAND.**

**Belfast.**

The will of the late Sir John Preston, of Dunmore, Belfast, ex-Mayor of the City, senior partner in the firm of John Preston and Co., flax and yarn merchants, who died on the 3rd August last, has been proved. The gross value of the estate has been sworn at £94,086 9s. 8d. Several legacies have been left for local charities.

**Textile Markets.**

**COTTON.**

**MANCHESTER, FRIDAY.**

The course of prices in the cotton market continues to engage the attention of everybody interested in the trade. The steady and long-continued decline, which has brought down prices to a point not witnessed for many years past, is producing considerable disorganisation. Merchants and consumers of cloth and yarns are holding out of the market with very undesirable persistency. The result is that trade has once more become exceedingly bad, especially for the manufacturing branch. Spinners, however, occupied an exceptional position at the commencement of the decline, being very considerably engaged, and to a great extent on foreign account. This and the current demands of the trade have been sufficiently great to enable them to resist almost completely any attempts to break their prices. Hence they are, nominally at least, in possession of all the benefit accruing from the decline in cotton values. This, however, is not nearly so great as appears on the surface, because they are simply to a large extent working old contracts, whilst new sales on the basis of present quotations are not nearly equal to production. It would appear at the moment that they are approaching the end of their resisting power, and that they must soon give way, several signs of weakness during the week having become apparent. In the various spinning and manufacturing districts the wages question in one form or another continues to engage a great amount of attention. The spinning branch is pressing its demands for an advance. In the weaving districts a good deal of resistance to the new uniform list seems to be developing itself, and in some cases it appears as if the local unions were determined to throw over their most trusted and experienced leaders.

**COTTON.**—A quiet trade has been transacted in spot cottons throughout the week, excepting, however, a slight tendency to increase in amount. Prices have been tending downwards nearly all the time, but the changes in quotations have not been numerous, being confined to a reduction of 1/8d. in Brazilians and Egyptians and the same amount in Tinnivellys. These, however, do not adequately represent the decline, as several other varieties are practically and fully 1/2d. lower than the official rates state them. Futures have fluctuated considerably, owing to the enlargement of the estimates of the present crop, and also no doubt to the pressure of the financial market. The result of the weeks changes shew a reduction of 1 point for November and November-December, and 2 1/2 points for other positions. Texas cottons continue scarce and dear, though not so much so as of late. Spinners are discovering that all Upland is not damp, and that by careful investigation dry parcels may be found. An improved feeling has sprung up in

Egyptian, which is not quite so much depressed, this arising probably from the diminution in the receipts. Peruvians have been in moderate request, but not quite enough so to sustain prices, roughs being unsteady, and smooth 1/8d. lower. East Indian has not been in much demand, and prices are tending downwards, Dhollerah, in addition to Tinnivelly, mentioned above, having been reduced 1/8d. A very anxious time is approaching, and if spinners are to make the best of everything they will require to devote the most careful attention to the market, as with values so close to 5d. it may be expected that the influence of a 7 1/2 million crop will have been nearly discounted, though anything exceeding that will leave a corresponding margin for further decline.

The following particulars of the business of the week are from the official report issued by the Liverpool Cotton Association:—

	Import.	Forw'ded.	Sales.	Stock.	Export
American	127,180	66,049	47,600	475,770	7,421
Brazilian	6,010	4,138	2,680	19,770	—
Egyptian	16,305	8,323	3,640	66,420	437
W. Indian	3,600	1,122	1,480	17,300	379
E. Indian	3,270	3,634	3,790	180,770	2,439

Total .. 156,455 83,266 59,190 760,100 10,676  
The following are the official quotations from the same source:—

	G.O.	L.M.	Mid.	G.M.M.F.
American	4 1/2	.5	.5 1/2	.5 3/4 5 1/2
				M.P. Fair. G.F.
Pernam	5 1/2			5 1/2 6 1/2
Ceara	5 1/2			5 1/2 5 1/2
Paraiba	5 1/2			5 1/2 6 1/2
Maranhm	5 1/2			5 1/2 6 1/2
				Fair. G.F. F.G.F. Gd.
Egyptian	5 1/2	.6	.6 1/2	.6 1/2 6 1/2
Ditto, white	6	.6	.6	—
				Fr. F.F. G.F. F.G.F. Gd. P.G. Fine
M.G. Broach	—	—	—	4 1/2 4 1/2 5 1/2
Dhollerah	3 1/2	3 1/2	3 1/2	4 1/2 4 1/2 4 1/2
Oomra	3 1/2	3 1/2	3 1/2	4 1/2 4 1/2 4 1/2
Bengal	—	3 1/2	3 1/2	4 1/2 4 1/2
Tinnivelly	4 1/2	4 1/2	4 1/2	—

\* Nominal.

**YARNS.**—Yarns are here and there showing signs of weakness under the very abstemious demand that is current; whilst quotations can hardly be regarded as generally lower, weak spots are becoming more easy to find, and producers are shewing more disposition to entertain firm offers at points below current rates. Manufacturers continue their purchases on the smallest possible scale, and business in the home-trade section of the market has been reduced to very low dimensions. On export account not much more is going on. Taken all round, however, there are rather more offers in the market, but these are at rates which spinners as yet refuse to accept.

**CLOTH.**—Cloth is in a bad plight. Orders are being rapidly worked off, and manufacturers are at their wits' end to obtain renewals that will return them cost of production. Looms are being continually stopped, and in a very short time, unless a change occur, the number of these will be greatly increased. Notwithstanding this the prospects of the market can only be regarded as being highly satisfactory, because the present stoppage of business is merely temporary until prices shew something like having reached the bottom, when it may be assumed that a large demand will arise, based upon the low rates prevailing, a demand that will, as long as prices keep low, very fully engage all our capacity of production, and yield a profit of a magnitude that has long been unknown, at all events to the weaving branch. There is a fair amount of enquiry in the market, but it is nearly all at impracticable rates.

**WOOLLENS AND WORSTEDS.**

**BRADFORD.**

The wool market is practically unchanged. The tone, if anything, is slightly more cheerful than on Monday. The small decline at London sales did not come as a surprise here. Prices there, it may be noted, are scarcely as low as those current here. The business passing in this market is only small, and transactions are marked by a considerable amount of caution. Mohair and alpaca quotations are weak, and the demand is feeble. Botany tops are slow for all classes. Yarns are unchanged. Continental buyers are only operating to a meagre extent, and shippers here are not speculative. Prospects are dull, and it is anticipated that practically there will be no change for some time to come in the character of the business. Spinners of botany yarns are well engaged on contracts, booked some little time back, but new business is not coming forward in sufficient volume to enable them to replace the orders as they are worked off the

books. The piece trade remains in a dragging and unsatisfactory condition generally. As usual, the home trade at this time of the year is doing practically nothing but preparing for stock-taking; and the season's orders from our Continental customers have been placed some time now, so that manufacturers are finding it very difficult to pick up new business. Miscellaneous orders continue to reach us from America, but, naturally, they are not very large, and we still feel the reaction after the recent heavy shipments. Eastern business is slow generally, but the turn in the exchanges is hoped to bring some improvement in this branch.

**HUDDERSFIELD.**

The home trade houses at this period are cutting their stocks as much as possible, and there are not many repeats coming to hand. Buyers have therefore been scarce in the market, and manufacturers who have been running their machinery on full time of late on old contracts now find themselves in want of orders to replace them. There is a good deal of short time being run in consequence, although this state of things is not general, some firms being in a better position than their neighbours. Travellers are now on the road with samples of next winter's effects. The current demand is chiefly for Vicunas and serges, with a good sprinkling of tweeds.

**LONDON.**

Messrs. Schwartz and Co., in their report dated November 25th, say:—The fifth series of London sales of Colonial wool commenced to-day with catalogues comprising:—

	Bales.	Out of an available total of	Bales.
Sydney.....	3,975	41,000	
Queensland..	1,750	"	30,000
Port Phillip..	1,848	"	34,000
Adelaide....	1,979	"	8,000
Tasmania... 82	"	"	700
Swan River.. 237	"	"	2,000
New Zealand 863	"	"	18,300
Cape.....	1,246	"	21,000
		11,180	Out of an available total of 135,600

There was an average attendance of both home and foreign buyers, but the tone was rather reserved and prices showed a fall, ranging from 5 to 10 per cent. Australian grease were mainly represented by medium Sydney, Adelaide, and Queensland wools which ruled ½d. to 1d., in many cases 1d., lower than at the close of last series, the fall being proportionately heaviest on poor Queensland parcels. Secureds suffered comparatively less, especially the finer sorts, some of which sold nearly up to last sales' prices. On the average their fall hardly exceeds that on grease, and 1d. per lb. fully covers it. The few lots of crossbred that were sold appeared about ½d. lower, but too little was offered to serve as a guide. The decline on Capes was rather smaller than that on Australian; grease sold ½d. to ¾d., snow whites ½d. to 1d. under October closing rates.

The arrivals in time comprise 122,000 bales (93,000 bales Australasian and 29,000 bales Cape). Deducting what has been forwarded direct, but adding the wools held over from last series, the total available will amount to about 145,000 bales, against 154,000 bales last year.

As at present arranged the sales will last until the 13th December.—Bank rate 6 per cent.

**GLASGOW.**

Messrs. Ramsey and Co., in their report dated November 25th, say:—

**WOOL.**—There is no new feature in the wool market this week; trade continues quiet. The market has barely recovered from the financial scare of the past few weeks. Prices are fairly well maintained in most classes. Next series of public auctions are fixed to take place here on 4th December.

**SHEEP SKINS.**—The supply has been a fair average, and mostly of good sorts. Competition continues strong at firm prices.

**FLAX AND JUTE.**

**DUNDEE TRADE REPORT.**

WEDNESDAY, 26th Nov., 1890.

The market here, which has been more affected by the strained condition of the London financial affairs than most people supposed, is better to-day. The hope strengthens that the worst is past, although it is obvious that many important houses must have been forced to make heavy losses to save themselves from shipwreck. The London money market affects Dundee very directly by causing fluctuations in both Russian and Indian Exchange, altering values of flax and jute.

To-day jute is rather firmer, with a fair business passing for Cape shipment, showing more confidence therefore in the future. Rallis done Ric. £13. Block D £12 Cape.

Flax is also rather more enquired for, and superior parcels of Brown Petersburg fetch extreme rates. For Riga K the quotation is £18 10s. to £19 for new.

Jute yarns are rather more in request. For the inferior 8 lb. cop, which could have been had at 1s. 1½d. to 1s. 1¾d., sellers now ask 1s. 2½d. For fine yarns with colour as much as 1s. 7½d. is paid for 7 lbs., shewing still that superior yarn is relatively much dearer than it was wont to be.

For even Dundee common Hessian the market is also a shade better. The impression deepens that the lowest price has been touched, and sellers are firm.

Flax yarns are without important change, while some large sales of foreign yarn again tend to depress the market, especially for dry spun tow wets.

Linens are quiet, as the buyers are preparing for the close of the year. The looms, however, in Forfar, Brechin, and Fife are all well engaged, and sellers are quite firm to list prices. Arbroath is very busy. No doubt heavy linens and canvas are cheap, but tow wets, and indeed all heavy linen yarns are very cheap also, so that Arbroath is not only busy, but must be doing a profitable business.

Dundee fancy jute goods are, for the new and good designs, in excellent demand, and twines, cords, and ropes are all wanted, and the makers are foresold.

**HOSIERY AND LACE.**

**NOTTINGHAM.**

There is no improvement generally in the character of the demand, and a large amount of machinery remains idle. For the United States there is a small amount of business passing, but the tariff acts as a drawback. The Continental trade is not brisk, buyers holding back as much as possible. In the home centres there is not much doing. Plain cotton nets are slow and stiff Paris nets are only bought in small quantities. The same remark applies to Paisley nets. Fine tulle and bobbin quiltings may also be regarded as bad to hold. Lovers goods are quiet and the sales are insufficient to keep all the frames employed. Antique Valenciennes and some other descriptions of fancy millinery laces move off with more freedom than other varieties, but the Lovers department generally is in a very backward condition. There has been a steady enquiry for yarns; the orders placed, however, have not been large, spinners refusing to make such concessions as buyers require. Fine lace yarns in the higher counts and certain yarns in the coarser qualities are most in request, but orders for these as well as hosiery yarns are carefully placed. Buyers are looking for lower prices. Orders for merino and Cashmere yarns continue to fall below the average. There is only a dull enquiry for silks. Prices are not notably altered. Plain silk tulle are in limited request, and prices are favourable to buyers.

**LEICESTER.**

The depression in the wool market, although marked, is not so acute as was the case a short time ago. There is not much disposition to buy, owing to the dearness of money and the lower rates established at the Wool Exchange sales in London recently. Prices are undoubtedly weak, and there will be a withdrawal of large quantities of wool unless there is a change for the better. Stocks are well held, there being no effort to force sales, while the available supplies are very much under the average. Lustre wools sell very slowly, and only a moderate business is doing in skin wools, but the prices of the latter are better supported. Colonial wools sell very slowly, and the distrust and want of confidence have entirely suspended speculative buyings, a policy of caution being rigidly enforced. Deep-stapled fleeces of good quality make 23s. to 24s. per tod; superior descriptions, 25s. to 26s. per tod; choice qualities, including a large proportion of Shropshire fleeces, 26s. 6d. to 27s. 6d. per tod; and inferior descriptions, 21s. to 22s. per tod. The yarn market is flat, stocks are small, and new contracts, both for home and export, are very scarce. The hosiery trade has slightly revived, stocks are very small, and the prospects brighter. Elastic web fabrics are in good request for home and Continental markets.

**SILK.**

**LONDON.**

THURSDAY.—London Produce Clearing House quotations of 5½ Treadle: December 11s. 5d., January 11s. 6d., February 11s. 7d., March 11s. 8d., April 11s. 9d., May 11s. 10d. June 11s. 11d. per lb. Sales registered, nil.

**DRY GOODS.**

**MANCHESTER.**

The bitterly cold weather of the past few days has enabled the heavy departments to clear themselves of the stocks which had accumulated during the unseasonable mildness which has characterised business this year. It is to be feared, however, that the change has come too late to enable merchants to compensate themselves entirely for the losses incurred during the preceding portion of the winter. Flannels have moved off more freely of late, but knitted underwear has cut into this trade very deeply, and the business, therefore, is not what it was before this change in fashion had set in. The fact that one of the leading Lancashire concerns engaged in the hosiery trade has this week increased its capital to £260,000, and that 3,000 customers have been entered on the books of the firm during the few years it has been in existence, shows that in this district the industry is not standing still. The shipping trade is quiet, especially with South America. The wretched condition of affairs in the regions watered by the River Plate and its feeders naturally re-acts upon firms here exporting goods to that part of the world. Trade with the Argentine has been dull for a considerable period, owing originally to the revolution and to the high premium on gold. Now that the condition of the Republic is rendered still worse by the misfortunes of those in this country who have been bolstering up its finances, merchants are prepared for a long spell of depression in that quarter. It is unfortunate that this should happen at a period when, owing to the McKinley Bill, the Australian strikes, and the forthcoming revisions of European Commercial Treaties, the outlook for English trade elsewhere is calculated to cause such grave anxiety to those interested in its welfare. The linen departments are transacting a steady home trade. Sales are not extensive, but at this time the turnover is naturally small.

**Tariff News.**

**THE NEW FRENCH TARIFF.**

(Continued from page 365.)

[SPECIALLY COMPILED FOR THE Textile Mercury.]

**HOSIERY.**

	Present Conventional Tariff per 100 kilos.	Proposed.	
		Gen. Tariff per 100 kilos.	Min. Tariff per 100 kilos.
	f. c.	f. c.	f. c.
GLOVES - - - -	- 600 0	1040 0	800 0
Do., cut, not sewn	- 90 0	162 50	125 0
Do., sewn - - -	- - -	208 0	160 0
Do., fashioned -	- 225 0	390 0	300 0
PASSEMENTERIE -	- 190 0	299 0	230 0
TAPES OF PURE COTTON	- 100 0	161 0	124 0
TULLE, large bobbies, less than 7 meshes per sq. centimetre - - -	- 400 0	644 80	496 0
Do. fine bobbies (7 meshes and over -	- 502 0	884 0	680 0
Hand embroideries and gauzes, figured -	- 400 0	806 0	620 0
DENTELLES and BLONDS, whether manufactured by machinery, bobbinet, or by hand -	- 400 0	643 50	495 0
MUSLIN CURTAINS, not encadré, weighing per 100 sq. metres:			
Less than 10 kilos. -	- 140 0	325 0	250 0
10 kilos. and more -	- 280 0	650 0	500 0
MUSLIN CURTAINS, encadré, of whatever weight, separate or in piece - - - -	- 280 0	650 0	500 0
CURTAINS OF TULLE, appliqué, OF GRENADINE OR OF EMBROIDERED TULLE	650 0	1040 0	800
UNBLEACHED MUSLINS, worked or embroidered with crochet effect, for furnishing purposes or personal wear - -	- 150 0	416 0	320 0
BLEACHED Do. - - -	- 15 p.c. more than grey.	Do. plus 26 p.c.	Do. plus 20 p.c.
HAND OR MACHINE EMBROIDERY ON ALL FABRICS - - - -	- 450 0	1170 fr. per 100 kilos. duty on cloth forming on duty ground.	900 fr. per 100 kilos. more than duty on cloth.

† The present duty is simply "Hand machine embroidery 450 fr. per 100 kilos."

	Propose 1		
	Present Conventional Tariff per 100 kilos.	Gen. Tariff per 100 kilos.	Min. Tariff per 100 kilos.
LAMP AND CANDLE WICKS.			
LAMES OF DOUBLED YARN FOR WEAVING, VARNISHED OR NOT	60 0	96 20	74 0
DO., FOR FURNISHING AND OTHER PURPOSES	5 0	26 0	20 0
DO., MOLESKIN CHIR	15 0	104 0	80 0
MIXED GOODS, COTTON PREDOMINATING IN WEIGHT, AND SILK PLUSHES MIXED WITH COTTON FOR FURNISHING PURPOSES	25 0	117 0	90 0
DO., FOR HATS		650 0	500 0
DO., CLOTHS OF SILK, OR SPUN SILK AND COTTON		390 0	300 0
DO., OTHER THAN ABOVE	300 0	488 60	372 0
RIBBONS (Tapes) mixed with wool	100 0	161 20	124 0
Do. do. silk	120 0	182 0	140 0
PASSEMENTERIE mixed with silk	300 0	483 60	372 0
Do. other		Same duty as pure cotton passementerie.	
Other mixed goods		Same duty as on pure cotton goods.	
MATERIAL FOR FISHING NETS OF COTTON, FLAX, JUTE, AND OTHER VEGETABLE FIBRES		52 0	40 0
<b>MACHINERY.</b>			
For setting card sheets or fillets, per 100 kilos.	6 0	12 0	10 0
Carding engines, not clothed	9 0	10 0	9 0
PREPARATORY MACHINERY for cotton, wool, flax, and other textiles	6 0	10 0	9 0
SPINNING MACHINERY	5 0	10 0	9 0
WEAVING PLANT	5 0	10 0	9 0
LACE MACHINERY	10 0	12 0	10 0

**NEW CUSTOMS TARIFF OF CANADA**

The following is a statement of the rates of import duty on textiles now levied under the new Customs tariff of Canada.

ARTICLES.	DUTIES LEVIED.
Hair-cloth of all kinds	30 p.c. ad val.
Grey or unbleached and bleached cotton, sheetings, drills, ducks, cotton or Canton flannels, not stained, painted, or printed	Sq. yard 0.01 and 15 p.c. ad val.
Cotton denims, drillings, bed-tickings, ginghams, plaids, cotton or Canton flannels, flannellets, cotton tennis cloth or striped zephyrs, ducks and drills, dyed or coloured, checked and striped shirtings, cottonades, Kentucky jeans, pantaloons, and goods of like description	Sq. yard 0.02 and 15 p.c. ad val.
Jeans and coutils, when imported by corset and dress stay makers for use in their own factories	25 p.c. ad val.
Coloured fabrics, woven in whole or in part of dyed or coloured cotton yarn, or jute yarn, or part of jute and part cotton yarn, or other material, except silk, not elsewhere specified	25 p.c. ad val.
Printed or dyed cotton fabrics, not elsewhere specified	32½ p.c. ad val.
Uncoloured cotton fabrics, viz., scrim and window scrim, cambric cloths, muslin apron checks, brilliants, cords, piques, diapers, lenos, mosquito nettings; Swiss jaconet and cambric muslins, and plain, striped, or checked lawns	25 p.c. ad val.
Winceys of all kinds, not otherwise provided for	22½ p.c. ad val.
Winceys, checked, striped, or fancy cotton, over 25 inches wide	Sq. yard 0.02 and 15 p.c. ad val.
Cotton wadding, batting, bats, and warps, carpet warps, knitting yarn, hosiery yarn, and other cotton yarns, under No. 40, not bleached, dyed, or coloured	Lb. 0.02 and 15 p.c. ad val.
And if bleached, dyed or coloured	Lb. 0.03 and 15 p.c. ad val.
Cotton warp, No. 60 and finer	Yard 0.01 and 15 p.c. ad val.
Cotton warp, on beams	30 p.c. ad val.
Lamp wicks	12½ p.c. ad val.
Cotton sewing thread in hanks, black, bleached or unbleached, 3 and 6 cord	25 p.c. ad val.
Cotton sewing thread, on spools	25 p.c. ad val.

ARTICLES.	DUTIES.
Cotton twine	Lb. 0.01 and 25 p.c. ad val.
Twine for harvest binders, of jute, manilla, or sisal, and of manilla and sisal mixed	25 p.c. ad val.
Twine of all kinds, not elsewhere specified	30 p.c. ad val.
Cotton cordage and cotton braided cord	30 p.c. ad val.
Cordage of all kinds, not elsewhere specified	Lb. 0.01½ and 10 p.c. ad val.
Boot, shoe, and stay laces of any material	30 p.c. ad val.
Laces, braids, fringes, embroideries, cords, tassels, and bracelets; braids, chains, or cords of hair; lace collars and all similar goods, lace nets and nettings of cotton, silk, linen, or other materials	30 n.c. ad val.
Crapes of all kinds	20 p.c. ad val.
Curtains when made up, trimmed or untrimmed	30 p.c. ad val.
Cotton seamless bags	Lb. 0.02 and 15 p.c. ad val.
Velveteens and cotton velvets and cotton plush	20 p.c. ad val.
All manufactures of cotton, not elsewhere specified	20 p.c. ad val.
Elastic webbing	25 p.c. ad val.
Non-elastic webbing	20 p.c. ad val.
Damask of cotton, of linen, or of cotton and linen, bleached, unbleached, or coloured	25 p.c. ad val.
Towels of every description	25 p.c. ad val.
Canvas of hemp or flax, and sail twine, when to be used for boats' and ships' sails	5 p.c. ad val.
Sails for boats and ships, also tents and awnings	25 p.c. ad val.
Flax fibre, scutched	Lb. 0.01
Do., hackled	" 0.02
Do., tow of, scutched or green	" 0.00½
Jute manufactures of, not elsewhere specified	20 p.c. ad val.
Hammocks and lawn tennis nets, and other like articles manufactured of twine, not elsewhere specified	35 p.c. ad val.
Wool, Class 1, viz.:—Leicester, Cotswold, Lincolnshire, South Down combing wools, or wools known as lustre wools, and other like combing wools, such as are grown in Canada	Lb. 0.03
Manufactures composed wholly or in part of wool, worsted, the hair of the alpaca goat or other like animals, viz.:—Blankets and flannels of every description; cloths, doeskins, cassimeres, tweeds, coatings, overcoatings, felt cloth of every description, not elsewhere specified; horse collar cloth; yarn, knitting yarn, fingering yarn, worsted yarn; knitted goods, viz.:—shirts and drawers, and hosiery, not elsewhere specified	Lb. 0.10 and 20 p.c. ad val.
All fabrics composed wholly or in part of wool, worsted, the hair of the alpaca goat, or other like animals, not otherwise provided for, on all such goods costing 10 cents per yard and under	22½ p.c. ad val.
Costing over 10 and under 14 cents	25 p.c. ad val.
Costing 14 cents and over	27½ p.c. ad val.
As regards the three previous items the halfpenny sterling shall be computed as the equivalent of a cent, and larger sums in sterling money shall be computed at the same ratio.	
Felt, pressed of all kinds, not filled or covered by or with any woven fabric	17½ p.c. ad val.
Silk in the gum, or spun, not more advanced than singles, tram and thrown organzine, not coloured	15 p.c. ad val.
Sewing and embroidery silk and silk twist	25 p.c. ad val.
Silk plush netting used for the manufacture of gloves	15 p.c. ad val.
Silk velvets and all manufactures of silk, or of which silk is the component part of chief value, not elsewhere specified, except church vestments	30 p.c. ad val.
Ribbons of all kinds and materials	30 p.c. ad val.
Carpets, viz.:—Brussels tapestry, Dutch, Venetian, and damask; carpet mats and rugs of all kinds not elsewhere specified; and printed felts and druggets and all other carpets and squares not otherwise provided for	25 p.c. ad val.
Smyrna carpets, mats, and rugs	30 p.c. ad val.
Two-ply and three-ply ingrain carpets of which the warp is composed wholly of cotton or other material than wool, worsted, the hair of the alpaca goat, or other like animal	Sq. yard 0.06 and 20 p.c. ad val. additional.

ARTICLES.	DUTIES.
Treble ingrain, three-ply, and two-ply carpets composed wholly of wool	Sq. yard 0.10 and 20 p.c. ad val.
Cocoa mats and matting	30 p.c. ad val.
Carpeting, matting, and mats of hemp; carpet linings and stair pads	25 p.c. ad val.
Jute carpeting or matting and mats	25 p.c. ad val.
Oil cloth, floor	Sq. yard 0.05 and 20 p.c. ad val.
Oil cloth and oiled silk, in the piece, cut or shaped, oiled, enamelled, stamped, painted or printed, india-rubbered, flocked, or coated, not otherwise provided for	Sq. yard 0.05 and 15 p.c. ad val.
Gloves and mitts of all kinds	35 p.c. ad val.
Handkerchiefs, cotton or linen, plain or printed, in the piece or otherwise	25 p.c. ad val.
Woolen netting for the lining of boots, shoes and gloves	25 p.c. ad val.

(To be continued.)

THE Austrian cotton manufacturers have petitioned their Government in favour of the proposed Austro-German commercial treaty. It is urged that instead of the existing "most favoured nation" treaty a definite tariff treaty for at least ten years should be made. The disadvantages which the industry suffers under the existing autonomous tariff legislation, and the necessity for a return to the treaty system, are explained. The trade eastwards will, it is contended, again revive, and the improved export trade in Austria-Hungarian agricultural products, which, it is pointed out, may be expected as a result of treaty concessions, will also benefit the cotton manufacturers. The duties on all the materials, machinery, dye-stuffs, chemicals, and other requirements of the Austrian cotton industry should it is argued, be reduced. It is contended, however, that no reduction of the Austrian duties or imported cotton manufactures should be made, as Austrian woven fabrics are not sufficiently protected against foreign competition under the existing tariff, and any concession of this nature would injure the industry in the home markets.

THE Board of Trade has just issued a new volume showing the rates of import duty now levied in European countries and the United States upon the produce and manufactures of the United Kingdom. The last two issues of a similar kind were published in 1885 and in 1882. The volume contains 339 pages of tables, and is prefaced by a short introduction explaining the changes in the import duties in these countries since 1885. It is defective, however, in so far as it does not embrace the new duties levied in the United States under the McKinley Tariff Act. Nor are the latest changes in the Russian import tariff embraced in it. It should also be stated that the present return does not pretend to give a complete list of the import duties of the various countries, but only those which affect British productions. Several explanatory statements are made in the introduction upon the alterations which have been made in foreign tariffs within the last five years. It is significantly remarked that the tendency during that period has been towards an increase rather than a reduction in the duties chargeable in foreign countries upon import and British goods.

**Joint Stock and Financial News.**

**COTTON COMPANIES' REPORTS.**

**FERN (SHAW).—**Profit, six months, £4,287. Dividend for half-year, 12½ per cent. per annum and £1,500 carried forward to reserve fund. Share capital, £45,000. Loans, 46,133. Spindles, 87,344 (14,412 T and 72,832 W). Plant, six months ago, £75,582. Mill fireproof. Company formed 1884.

**LANSDOWNE (OLDHAM).—**Profit, three months, £717. The adverse balance, £423 is wiped off, 5 per cent. per annum dividend will be paid, and £94 carried forward. Share capital, £15,794. Loans, £41,852. Spindles, 51,360 (28,008 T and 23,352 W). Plant, three months ago, £44,514. Company formed 1875.

**SHILOH (ROYTON).—**Profit, three months, £59. Share capital, £17,793. Loans, £22,342. Spindles, 37,132 (14,496 T and 22,636 W). Plant, three months ago, £28,139. Company formed 1874.

**LIVINGSTONE (LEES).—**Loas, three months, £228. Share capital, £22,230. Loans, £27,587. Spindles, 41,126 (20,750 T and 20,376 W). Plant, three months ago, £44,377. Mill fireproof. Company formed 1874.

**ROACH MILLS COMPANY (HEYWOOD).—**Dividend, 12½ per cent. per annum for past six months, and £9.0 carried to reserve fund.

## NEW COMPANIES.

## MILL COMPANY, LIMITED.

Registered by R. Jordan, 130, Chancery-lane, W.C., with a capital of £10,000 in £10 shares. Object, to acquire the cotton-spinning mill and weaving shed known as the Victoria Mill, situate at Earby, near Skipton, Yorkshire. The regulations of Table A, with slight modifications, apply.

## ELLENROAD SPINNING COMPANY, LIMITED.

Registered by C. Double, 14, Sorjeants'-inn, Temple, E.C., with a capital of £90,000 in £5 shares. Object, to carry on business as spinners, doublers, and finishers of goods made wholly or partially of cotton or other fibrous substances, and of merchants and commission agents. The first subscribers are:—

	Shares.
E. Clegg, Milnrow .....	50
J. Whitehead, Milnrow .....	50
J. Parker, Newhey .....	50
T. Ashworth, Milnrow .....	50
J. Barnes, Milnrow .....	50
G. Mitton, Oldham .....	50
J. Franklin, Newhey .....	50

The first directors are the subscribers to the memorandum of association. Qualification, 50 shares. Remuneration to be determined in general meeting.

## EASTWOOD BROTHERS, LIMITED.

Registered by Ramedem, Radcliffe and Co., 80, Coleman-street, E.C., with a capital of £25,000 in £10 shares. Object, to acquire the business of Eastwood Brothers, worsted and woollen cloth manufacturers, carried on at Thirstin Mill, Honley, near Huddersfield, and St. George's-square, Huddersfield. The first subscribers are:—

	Shares.
B. Eastwood, junr., Huddersfield .....	1
G. S. Eastwood, Huddersfield .....	1
J. Eastwood, Huddersfield .....	1
Mrs. Eastwood, Huddersfield .....	1
Miss Eastwood, Huddersfield .....	1
J. F. Eastwood, Huddersfield .....	1
Mrs. Peerless, 2, Elms-road, Clapham .....	1

There shall not be less than two nor more than seven directors; the first are the first three subscribers to the memorandum of association. Qualification, 100 shares. Remuneration, £250 each.

## STEWART, MOIR AND MUIR.

Registered in Scotland by Maclay, Murray and Spens, writers, Glasgow. This company has a capital of £80,000, divided into 2,000 preference and 4,000 ordinary shares of £10 each. Object, to take over and carry on the business at present carried on by Stewart, Moir and Muir, at Glasgow and London, under the name of Stewart, Moir and Muir, and at Newmilns under the name of William Moir and Sons; to carry on in the United Kingdom and elsewhere the whole or any part of the business so to be taken over, with any variations or additions, and also the business of lace and muslin manufacturers, and that of bleachers, dyers, and finishers of muslins, laces, and other like goods, and that of manufacturers of starch and other like substances, and that of importers of and dealers in all kinds of goods; to acquire any land, etc., convenient for the purposes of the company; and to purchase, lease, erect, or alter, and maintain houses, works, factories, shops, offices and other buildings; to purchase or lease plant and machinery; to act as agents for the purchase and sale of goods; and to grant leases for the use of any portion of the company's property. First subscribers:—

	Shares.
A. Moir, muslin and lace manufacturer, 104, West George-street, Glasgow .....	1
J. Wilson, muslin and lace manufacturer, 104, West George-street .....	1
R. Boyd, merchant, Myrtle Park, Lenzie, Dumbartonshire .....	1
W. Meikleham, warehouseman, 11 and 13, Bow-lane, London .....	1
D. Mc'Nair, salesman, 104, West George-street .....	1
F. Baker, designer, Rowanbank, Glasgow ..	1
C. Murray, clerk, 9, Mansfield-place, Glasgow	1

The directors shall not be less than three nor more than seven in number. The first are to be Messrs. Alexander Moir, John Wilson, Robert Boyd, David Mc'Nair, and William Meikleham. Qualification, £10 holding. Remuneration to be fixed by annual meeting.

## Gazette News.

## ADJUDICATIONS.

Kershaw Jowett, Bentley Mill, Lograms-lane, Bradford, machine maker.  
Joseph M. Kirk and Henry J. P. Kirk, Old-lane, Halifax, dyers and finishers.

## RECEIVING ORDERS.

William Oxley, Chapel-lane, Heckmondwike, woollen manufacturer; Dewsbury.

## PARTNERSHIPS DISSOLVED.

Charles Falkner and Co., Cumberland-street, Manchester, and Renfield street, Glasgow, merchants.

Kershaw, Holt, and Hill, Hebden Bridge, engineers and machinists.

Jubb and Co., Shambles-street, Barnsley, down quilt manufacturers.

S. and A. Miers, Britannia Mills, Aire-street, Leeds, woollen manufacturers.

Thornton and Co., Albert Mills, Nelson, cotton manufacturers.

L. E. Johnson and Co., Westholme-street, and Tumbling Hill, Bradford, grease extractors.

Tordoff, Barraclough, and Co., Wibsey, worsted coating manufacturers.

Porritt Brothers, Farnworth, cotton manufacturers.

## WINDING-UP NOTICE.

Nab-lane Manufacturing Company, Limited, Blackburn.

## NOTICES OF DIVIDENDS.

A. C. Hewdall (lately trading as Botterill, Potter, and Co.), lately trading at 164, Garnett-street, Bradford, dyer; 5s., first.

T. Fairbrother, 13, Oxford-street, and J. Comery, 9, Gibb-street, Long Eaton, trading as Fairbrother and Comery, lately trading at Harrington Mills, Long Eaton, lace manufacturers; 1s. 3½d., first and final.

J. Clarke, 11, Priam-street, Queen's Park, Harpurhey, Manchester, lately trading at 56, Cannon-street, Manchester, late agent and warehouseman, now out of business; 9d., first and final.

## Patents.

## APPLICATIONS FOR PATENTS.

The names in italics within parentheses are those of Communicators of Inventions.

Where Complete Specification accompanies Application an asterisk is suffixed.

## 10TH TO 15TH NOVEMBER.

18,083. M. KOLB, 45, Southampton Buildings, London. Ring spindles.

18,087. H. W. GODFREY, C. F. LEAKE, and C. E. LUCAS, 24, Southampton Buildings, London. Manufacture of floor cloth and apparatus therefor.

18,091. J. HEARTH, W. HEARTH, and W. H. WILLIS, 323, High Holborn, London. Manufacture of stockings, socks, and other knitted articles, and machinery therefor.

18,119. C. BRODBECK, 37, Chancery-lane, London. Rendering silky textile fibres, by utilising every description of waste silk.\*

18,127. J. A. HOLDSWORTH and C. H. WOODS, 8, Quality Court, London. Carding engines.

18,243. J. HEARTH, W. HEARTH, and W. H. WILLIS, 323, High Holborn, London. Stockings and other knitted articles.

18,244. J. HEARTH, W. HEARTH, and W. H. WILLIS, 323, High Holborn, London. Circular knitting machines.

18,257. C. N. PICKWORTH, 84, Stanley-grove, Longsight, Manchester. Ring and cap frame spindles.

18,267. T. STUTTARD, J. HARTLEY, and J. WHITE-OAK, 8, Quality-court, London. Looms.

18,284. F. W. NICOLLE and J. SMITH, 27, Rye Hill Park, Peckham, London. Treatment of fibrous matters to obtain fibres.

18,287. T. COULTHARD, 46, Lincoln's-Inn-Fields, London. Brake apparatus for use with the spindles of doubling machines.

18,293. J. C. MEWBURN, 55, Chancery-lane, London. Pickers for looms.—(H. Campion, France.)

18,305. J. H. COOPER, J. A. CORAH, and A. CORAH, 323, High Holborn, London. Knitted jackets.

18,307. A. YATES and J. BAYER, 323, High Holborn, London. Manufacture of knitted fabrics and machinery therefor.

18,328. E. HORTON, 3, Blackburn-road, Little Bolton. Application to ordinary ring frames of "The expansion spring coil traveller."

18,347. A. STAPLES and J. L. KITSON, 3, Burgess-street, Leicester. Combing wool, etc.

18,352. A. CLEGG, 2, Denton-street, Walmersley-road, Bury. Cotton cords.

18,375. C. CAMPBELL and H. D. SHAW, 55, Chancery-lane, London. Scouring wool, etc.

18,378. J. STEIGER-MEYER, 6, Bream's Buildings, London. Ornamental lace fabrics.

18,379. J. STEIGER-MEYER, 6, Bream's Buildings, London. Compound fabrics suitable for dresses, table covers, curtains, etc.

18,380. A. C. FRAVELLE, 45, Southampton Buildings, London. Twist lace.

18,381. W. TATHAM, 45, Southampton Buildings, London. Preparing and spinning fibrous materials, having reference to the drawing of slivers or rovings.

18,441. E. H. WYNN, C. H. WYNN, and E. H. WYNN, 323, High Holborn, London. Stockings, socks, etc., knitted.

## 17TH TO 22ND NOVEMBER.

18,498. W. E. HEYS, Manchester. Beaters employed in opening and cleaning cotton, etc. A. Kirschner, France.)

18,503. W. H. GARTSIDE and W. E. HARNOP, 38, Cranbrook-street, Oldham. Shuttle guards.

18,504. J. FENTON, Commercial-street, Halifax. Harness jacquards for pattern weaving.

18,505. F. JUDSON, Commercial-street, Halifax. Strengthening bobbins.

18,511. E. SMITH, 47, Lincoln's Inn Fields, London. Tapestry carpets, rugs, etc.

18,526. J. IMRAY, 28, Southampton Buildings, London. Colouring matters obtained by the action of amines of the fatty series upon galloxy-anine. (La Societe L. D. Huguenin and Cie, Switzerland.)\*

18,527. O. IMRAY, 28, Southampton Buildings, London. Ultramarine. (J. Curtius, Germany.)

18,573. W. E. HEYS, 70, Market-street, Manchester. Apparatus for removing burrs, etc., from wool. (F. Merville, France.)

18,578. F. FOWKES, 64, Barton Arcade, Manchester. Bobbins or spools.\*

18,600. J. ROBINSHAW and G. SCHOFIELD, 4, St. Ann's-square, Manchester. Carding engines.

18,623. H. H. LAKE, 45, Southampton Buildings, London. Colouring matters. (Wirth and Co., Agents of A. Leonhardt and Co., Germany.)

18,626. J. W. CHENEY and F. A. BOWEN, 45, Southampton Buildings, London. Looms for weaving sinuous lines into cloth with yarn or thread supplied independently of both warp and weft.

18,634. F. O. GROVES, 45, Southampton Buildings, London. Straightening teeth of burr-cylinders. (DATE APPLIED FOR UNDER PATENTS ACT 1883, 19TH APRIL, 1890, BEING DATE OF APPLICATION IN UNITED STATES.)\*

18,637. B. WILLCOX, 47, Lincoln's Inn Fields, London. New anthraquinone dye-stuffs. (Farben-fabriken vorm. F. Bayer and Co., Germany.)

18,662. J. KEATS, 6, Bream's Buildings, London. Winding thread upon disc holders.

18,665. T. B. DOOLEY, 45, Southampton Buildings, London. Machines for making cords and ropes.\*

18,676. W. E. HEYS, 70, Market-street, Manchester. Needle-shuttle looms. (G. Bellamy, France.)

18,700. J. B. WHITELEY, E. WHITELEY, A. ARMITAGE, and W. CRELAND, Market Place, Huddersfield. Method of and apparatus for dyeing wool, cotton, and other fibre, and also "tops" and slivers of fibre.

\* 18,720. J. MATHIEU, 6, Bream's Buildings, London. Embroidery machines.

18,729. B. WILLCOX, 47, Lincoln's Inn Fields, London. New derivatives of anthraquinone. (Farben-fabriken vorm. F. Bayer and Co., Germany.)

18,738. W. TATHAM, 45, Southampton Buildings, London. Roving and slubbing and other machines for twisting and winding or preparing fibrous materials.

18,780. P. BRADSHAW, 58, Low-street, Keighley. Loom-shuttle operating mechanism.

18,782. H. J. GRISWOLD, 11, West-street, Leicester. Circular knitting machines. (G. H. Gilbert, U.S.)

18,849. B. COHNEN, 1, St. James's Square, Manchester. Producing sectional warps.

18,851. J. B. SHARP and S. METCALFE, Sun-bridge Chambers, Bradford. Machines for preparing wool, etc.

18,859. W. TATHAM, 200, Drake-street, Rochdale. Slubbing and roving frames for twisting and winding fibrous materials.

18,863. J. DAWSON, 20, Charles-street, Bradford. Carding-engines.

18,907. H. B. KENYON, of and on behalf of J. KENYON and SONS, 9, Mincing-lane, London. Making cloth, woollen, cotton, silk, linen, or jute impervious to water.

18,920. J. PICKARD and G. MOORE, 323, High Holborn, London. Manufacture of stockings, socks, and other knitted articles, and apparatus therefor.

18,938. A. ROBACHE, 52, Chancery-lane, London. Springs of shuttles.\*

18,946. W. I. JAMES, 8, Brunswick-terrace, Stafford. Circular knitting machines.  
 18,955. J. PALMER, 24, Green-lanes, Stoke Newington, London. Treatment of resinous or gummy fibres.

**SPECIFICATIONS PUBLISHED.**

1899.  
 15,363. SCHADLICH and LEONHARD. Looms. 11d.  
 16,806. GALLAND. Milling fabrics. 6d.  
 17,122. BOULT (Scribe). Carding machines. 8d.  
 17,541. WRIGHT. Looms. 6d.  
 17,583. BUSS and SAUER. Embroidering machines. 2s. 2d.  
 17,664. PRIESTLEY. Silk dressing machinery. 8d.  
 19,009. MORLEY and SCOTT. Forming borders on fabrics. 11d.  
 20,549. GARSTANG and BANCROFT. Warping. 6d.  
 20,817. SMITH and SUTCLIFFE. Loom Shuttles. 6d. 1890.  
 39. FRISWELL. Dye-stuffs. 4d.  
 6,057. STORY. Cutting textile fabrics, etc. 8d.  
 13,184. PECK. Dyeing yarn. 8d.  
 13,986. ROUGE. Spinning spindles. 6d.  
 16,517. LORD and WOODHEAD. Carding engines. 6d.  
 18,494. PECKHAM. Carding engines. 11d.  
 2,734. FAIRWEATHER. Producing ornamental stitches, etc. 6d.  
 7,627. CROSSLEY. Scutehers. 6d.  
 14,897. THOMPSON (Kornfeld). Dyeing yarn, etc. 6d.  
 15,042. LAKE (Chase). Cotton gins. 6d.  
 15,052. DAWES. Spinning, etc., machinery. 8d.

**AMENDED SPECIFICATION.**

1888.  
 15,259. JOHNSON (Badische Anilin and Soda Fabrik). Red basic dye-stuff. 6d.  
 REPRINT (with alterations).  
 16,157. HETHERINGTON. Carding engine flats. 11d.

**ABSTRACTS OF SPECIFICATIONS.**

10,054. June 19, 1889. **Printing on plush, etc.** F. W. KESSELER, Crefeld, Prussia.

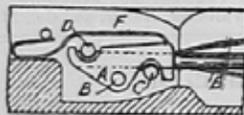
The nap of plush and plush-like materials is dyed, by the colour used, throughout its depth. The patterns are engraved upon metal plates or rollers to a depth equal to that of the nap. Oil colours, prepared in the usual manner, are heated and mixed with tallow or like fatty substance. The warm colours, thus mixed, are put in place upon the plate or roller, the latter being afterwards slightly heated to cause the colours to run closely together. The printing is effected by placing the plate or roller over the material, without pressure, the nap then soaking up the colour from the plate or roller. In the case of the rollers, the latter may travel over the material or vice versa. 4d.

10,073. June 20, 1889. **Mats.** D. GURTEEN, junr., The Duddery, W. B. GURTEEN, High-street, J. GURTEEN, The Couples, and F. D. UNWIN, Furnace Villa, Chantry-place, all in Haverhill, Suffolk.

To produce a thin door mat, linen, flax, jute, or other spun yarn is employed for the warp or ground-work, jute rove or coir yarn for the back or welt, and cocoa or other fibre slightly twisted or spun into a rope for the face welt, the latter being tightly fastened in by the warp. 4d.

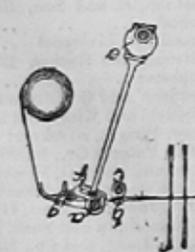
10,077. June 20, 1889. **Looms.** J. WASHINGTON, Holme Top Mills, Little Horton, Bradford.

**Shuttles.**—The tongue-head A, pivoted at B, is formed with recesses for the fixed rest-pins C, D. A spring F keeps the tongue E in its normal position, and, when the latter is raised, passes over the edge of the head, and holds it in position for replacing a bobbin, etc. Removable tongues are cut with recesses corresponding to the pins C, D. 8d.



10,213. June 27, 1889. **Looms.** O. HOFFMANN, Neugersdorf, Saxony, Germany.

**Warp beams, regulated.**—In linen weaving, e.g., an up-and-down motion is, at the moment of beat-up, given to one of the lease rods a, the other rod b being secured to a rod c beneath it or to the loom frame. In the figure the rod a is shown as carried by arms f operated, from a cam e, about g as a centre. In some cases the ralls a, b may rise and fall alternately. Special rods may be employed in place of the lease rods. By these means different tensions are given to the two parts of the warp at the beat-up, and uniform tension whilst the shed is open, and the formation of reed stripes is prevented. 6d.



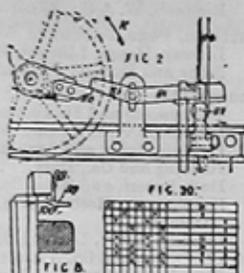
10,177. June 22, 1889. **Gig-mills.** C. E. MOER, Aix-la-Chapelle, Germany.

In addition to the stepped cones described in Specification No. 11,640, of 1885, for varying the speed of the raising rollers, plain cones are provided for varying gradually the speed of the drawing-through rollers. A heating cylinder is provided for drying and warming the cloth before it is acted

upon by the raising rollers, and after the cloth leaves them it passes between two rotary brushes for cleaning and laying the nap. 6d. Drawings.

10,242. June 24, 1889. **Looms; fabrics pile.** J. FARRAN, 17, Trafalgar Square, Brooks Bar, Manchester, and F. C. CRAWFORD, 70, New Lane, Barton-upon-Irwell.

**Picking motion.**—A spring or weighted lever 81 (Fig. 2) is operated by one or more rollers or tappets 80 upon the shaft of the loom, and acts upon a bowl or stud 82 on the stick 84 for propelling the shuttle. The stick is not operated when the loom is turned back. The lever may be put in and out of action by connection with the jacquard or box-swell.



**Let-off mechanism.**—To a lever, held in position by an adjustable catch, are attached, directly or by means of springs, the ends of a chain or band wound around a brake pulley, the axle of the latter being geared to that of the warp beam.

**Warp beams, mousing.**—The warp beam is held by its axle at one end in a removable socket, the other end of the beam being secured by a feather and groove arrangement in a fixed socket.

**Shuttle-guard.**—The guard consists of rods or plates 100 (Fig. 8) carried by arms 99, jointed to brackets 98 on the lay cap, and is raised out of the way when the loom stops by lever and link connection with the setting-on handle.

**Fabrics, pile.**—Terry fabrics are woven with a plain cloth, matting, or plush, or a three, four, five, or six shaft twill, or a four, five, or six shaft satin, back. The terry loops are brought up between each pick. In Fig. 30 is represented, in the upper part, a four shaft satin back, and, in the lower, a five pick pile woven on four healds. A fast pile may, however, be made on two healds, or three pick on four healds, seven pick on four healds, or five pick on six healds. By cutting the loops a velvet face is produced. 1s.

10,289. June 25, 1889. **Woolen yarn or Thread.** R. M. MACINTOSH, 298, Devonshire-street, Boston, Massachusetts, U.S.A.

A machine for twisting and untwisting yarn or thread in the hank in order to soften, strengthen, and otherwise improve the same, being specially applicable to thread which has been waxed to strengthen it. 8d. Drawings.

10,354. June 25, 1889. **Trimmings.** E. W. COOPER, Primrose Cottage, Red-lane, Coventry.

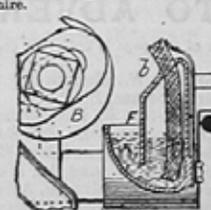
Machine for making fibrous balls or tufts used in upholstery as pendant trimmings. The drawing shows a side view of the machine. A length of yarn is laid in a channel, and compressed by a plunger. Holes and slits are made in the channel and plunger to facilitate the introduction of threads for tying up the compressed yarn at intervals. When tied a number of rotary cutting discs, mounted on a rocking shaft, are brought up, the discs entering slits in the channel, and then by a motion of a lever these discs cut through the yarn, thus forming the trimmings. 8d. Drawings.

10,360. June 25, 1889. **Bleaching, dyeing, etc.** E. MANNERS, Narragansett Hotel, corner of Dorrance and Weybossett-streets, Providence, Rhode Island, U.S.A.

Relates to apparatus for bleaching, dyeing, scouring, or drying yarn in the form of cops, spools, bobbins, skeins, hanks, combed tops, cardings, etc., raw materials, and some forms of cloth. The materials are fitted in the forms of balls, cops, etc., upon perforated spindles, or into perforated receptacles, of which numerous forms are described, mounted in a series of open or closed vessels, etc., constructed with partitions dividing them into two or more chambers. The spindles and receptacles are mounted on a vertically movable chamber for carrying out the "dip" dyeing process. By reversing certain cocks the direction of circulation of the liquid through materials in the vessels, etc., will be reversed. Tanks serve to maintain a vacuum on the exhaust side of the apparatus. Over the series of vessels, etc., is mounted a series of reservoirs for the dyeing liquids. The tanks contain dye liquor, mordanting liquid, and bleaching, scouring, and washing liquids. Other and simpler forms of apparatus are described. 1s. 6d. Drawings.

10,416. June 27, 1889. **Lubricating looms.** J. HOLINGWORTH, Dabcross, Yorkshire.

For lubricating loom picking-bowls and spindles, fixed oil cups F are provided, each containing a wick b for supplying the lubricant to the bowl B or spindle, as the latter comes against it. In some cases the wick may be made to approach the bowl or spindle; or a revolving bowl, or an endless travelling band may supply the lubricant. 8d.



10,417. June 27, 1889. **Wrapping piece goods.** A. WHOWELL, Raikes Bleach Works, Bolton.

The goods are wrapped in tough transparent paper, through which the trade marks are seen. 4d.

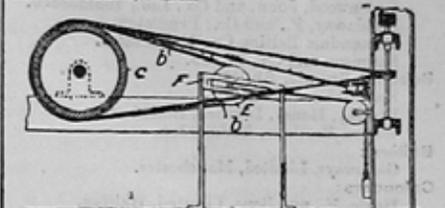
10,434. June 27, 1889. **Spinning.** J. M. GREYVER, Glenside, Strandtown, near Belfast, and T. LUCAS, 212, Grosvenor-road, Belfast.

**Heckling machines.**—When the fibres have been treated by the finishing beekles, they are drawn through a set of combs or pins, which are caused to separate when the material descends between them, and then to approach so as to penetrate the fibres when the latter is drawn upwards through them. The pins are carried by frames which are operated through a lever system from a suitable cam on the main driving shaft, and they are cleaned during their outward movement by means of brushes, which are rotated backwards and forwards about axes by means of rack and pinion arrangements, and are themselves cleaned by fixed pins. If desired, the comb may be in two parts, having different degrees of fineness, through which the fibres are drawn in succession. 8d. Patent opposed. Case not yet decided.

10,491. June 28, 1889. **Looms.** J. TAYLOR, 85, Davenport-street, Bolton.

**Picking and take-up motions.**—The horizontal picking shaft is operated through a lever and rod from a lever centred at one end. This lever is depressed by the action of the crank shaft tappet on a spring slide-piece; this piece yields when the loom is reversed and prevents motion being imparted to the lever. The picking shaft operates the stick through a lever, quadrant, strap, and shackle. A strap and buffer limit the motions of the stick, the latter being returned by a spring. The take-up is operated through spur gearing from a ratchet-wheel. By means of a hand-lever the detent and pawl may be lifted out of gear to admit of reversing the take-up roller. 8d. Drawings.

10,500. June 28, 1889. **Spinning, etc.** C. W. JONES, London; T. MILBURN and A. MACDOUGALL, both of Toronto, and all of Ontario, Canada.

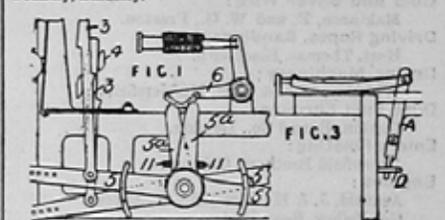


**Spindles, driving.**—The driving band is passed alternately round the driving drum C and one of the wharves, passing all the ends of the machine over guide pulleys, and in the middle thereof being formed into a loop b, which takes over a weighted pulley E, mounted so as to slide in a frame F. 6d.

10,501. June 28, 1889. **Spinning, etc.** C. W. JONES, London; T. MILBURN and A. MACDOUGALL, both of Toronto, and all of Ontario, Canada.

**Spindles, driving.**—The driving band is kept at a uniform tension by means of a pulley, the axle of which is connected by a strap with a spring drum, which is limited to one revolution by means of a stop, and the variable pull of which is balanced by a weighted cord passing over a scroll on the side of the drum. In a modification the scroll is formed on the rim of the pulley, so that the leverage of the band is proportional to the pull of the spring. 6d. Drawings.

10,564. June 29, 1889. **Looms.** W. LONGBOTTOM, Nelson Foundry, Barnsley.



Improvements on the inventions described in Specifications No. 8,709, A.D. 1878, and No. 3,858, A.D. 1888.

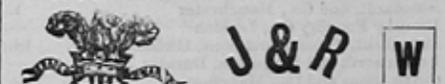
**Shedding mechanism.**—The jack levers 5 (Fig. 1), operated by the dobby books 8, are formed with spear-pointed pieces 64, which engage with a spring lever 6, as shown, to lock the parts in position. Bars 11 limit the motion of the jacks. The knives 4 are operated from a tappet on the crank shaft shaped to give a soft tread and a quick return.

**Checking shuttles and pickers.**—The bar A and cam bracket D (Fig. 5) are moved inside the loom framing or to other suitable positions, a strap connecting the bar to the picker or spindle. 6d.

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