

like that of other countries. Other cocoons of a good class contain thread four times longer than that of a Bengal cocoon; the thread, too, is the weakest of all, and very liable to break. The consequence is great unevenness, which is increased by the character of the chrysalid. Hence it is more expensive to handle Bengal silk; it breaks so continually that a girl can handle no more than six to 80 skeins while she can work 100 skeins of Japanese silk. Hence the introduction of Pasteur's system alone will not effect the necessary improvement. Mr. Mukerji thinks the first important step is to introduce the superior Bombay and Mori cocoons, which are employed in every other silk-producing country; this should be followed by improvements in reeling. He elaborates also a scheme for the establishment of a sericultural laboratory, of which the Government has already generally approved. Here experiments will be made, investigations conducted, and men trained who will distribute amongst the peasants a knowledge of the practical results of the laboratory work.

Obituary.

MR. JOSEPH CHESHIRE, ST. PETERSBURG.

It is with much regret that we have to record the death of Mr. Joseph Cheshire, cotton spinner and manufacturer, of St. Petersburg, which occurred at his residence in that city, on Friday, the 17th inst., at the age of 64 years. Only a few weeks ago Mr. Cheshire was over on a visit to England, and called at *The Textile Mercury* Office, when, although not in robust health, he appeared far from the end of his active and prosperous career.

When about 21 years of age Mr. Cheshire, who was then assistant overlooker at Mr. Samuel Barlow's mill, in Mill-street, Anecoats, resigned that post and proceeded to St. Petersburg, to take up the position of assistant manager in Mr. Thomas Wright's cotton mill there, of which concern his uncle, Mr. Robert Anderson, was managing partner. Three years later he returned to England, but after staying a short time he again went back to Russia, where he became managing partner in Count Lamsdorff's spinning and manufacturing establishment in the Great Octor, St. Petersburg. This position Mr. Cheshire held until about twenty years ago, when he started manufacturing solely on his own account in St. Petersburg. Soon after commencing, a misfortune that might have daunted less persevering men overtook him in the shape of a fire, which completely burnt out his premises. Undismayed, however, he immediately commenced afresh, and has ever since maintained a successful career as a cotton spinner and manufacturer. His products in the latter department range from plain calicoes to jacquard goods, and also include elastic webbing and knitted fabrics.

Mr. Cheshire contrived, amidst the many duties of an active business life, to devote an unusual amount of time to intellectual culture, and possessed perhaps one of the largest private libraries in St. Petersburg, which he was continually enlarging. In private life he was highly esteemed by a large circle of friends, both in England and Russia. He is survived by a family of one daughter and six sons. Four of the latter have been associated with him in the management of the business, and will, of course, carry it on.

Letters from Readers.

The Editor does not necessarily endorse the opinions of his correspondents.

FLAX AND LINEN FACTORIES IN THE UNITED STATES.

(To the Editor of *The Textile Mercury*.)

SIR,—I have previously called the attention of the canny Scots people to the fact that the people of America are about establishing the flax and linen industry, and that there is room here for all the idle flax and linen machinery and appliances of the old country. I again wish to suggest to you that the second-hand breaks and scutching machinery, cards and drawings, frames and spinning machinery, are now being inquired for here, and there is a market for it already in a small way, and it will steadily increase. The weaving machinery is more likely to be supplied from American makers. I may also add that there is employment here for

experts in flax preparation, and there will during the coming year be a good demand for operatives in linen manufacture. There is a law in this country against making contracts beforehand, but there is no law against an expert flax dealer or a spinner and weaver coming here to find employment.—I am, etc., S. S. BOYCE.

290, Broadway, New York.

Designing.

THE MCKINLEY TARIFF.

It is not our duty in these articles to deal with such a measure as the above further than to note its probable effects on design in textiles, and if possible to offer suggestions which may prove of service to manufacturers who have been more or less engaged in the American trade and who, consequently, at the present time are deprived of a greater or less proportion of their business. We would, therefore, call attention to certain classes of materials which in our opinion may prove very marketable and which, whether the McKinley tariff be repealed or not, manufacturers will do well to note.

In the first place then let us direct our attention to the more costly fabrics which English manufacturers of to-day should find no difficulty in making and in competing therewith successfully with our foreign rivals.

Of the better-class fabrics in which silk is largely used, such as all-silk goods, silk and cotton, silk and worsted, and many of the best worsted fabrics, a very large quantity is imported from France, while at the same time the yarn of which these cloths are composed is often spun in England and shipped to France.

A tremendous amount of copying from French designs is done, very often to be utilised in lower fabrics. There is not the slightest need for this if our art and technical schools are properly utilised, which they are not, though a considerable advance has been made of late years. Why not make a determined effort to get the artistic cloths we require made by the hands of our own countrymen? Here is undoubtedly a means of extending our trade, and that in a direction which always pays the best.

In the woollen trade there has of late been developed a remarkable amount of artistic ingenuity, particularly in the better-class mantle and dress fabrics; and of more recent growth still are the class of fabrics termed "figured worsted serges." The popularity so readily obtained by these cloths should induce manufacturers of other classes of goods to attempt the production of more artistic fabrics for the home-trade, and also for foreign markets still open to British produce.

In thinking over the difficulties of the Bradford manufacturers, who are feeling very severely the effects of the American tariff, it has occurred to us that in the fancy worsted dress and mantle trade there is great scope for extension both at

home and abroad. Great variety in figuring has been successful in creating a trade in the woollen districts, and even greater variety and novelties may be obtained in worsteds, which properly conducted cannot fail to obtain a market, and thus find employment for firms whose present machinery is in every way adapted for carrying on such work. It shall be our duty then to indicate, to the best of our ability, in future numbers suggestions both with regard to design and construction, which we hope will prove of service to manufacturers in the position indicated

NEW DESIGNS.

PLAIN AND CASSIMERE CHECK IN LINEN.

Reed 72, two in a dent, or 72 ends per inch, and 72 picks per inch. Weft and warp: 56's linen, or if made all cotton, 24's warp and weft; 8 shafts, pattern and draft: 216 dark sage, 20 dark cream, 4 dark sage, 18 dark cream, 6 dark sage, 16 dark cream, 8 dark sage, 14 dark cream, 10 dark sage, 12 dark cream, 12 dark sage, 10 dark cream, 14 dark sage, 8 dark cream, 16 dark sage, 6 dark cream, 18 dark sage, 4 dark cream, 20 dark sage—216 ends. The whole of the dark sage ends to be on 5, 6, 7, 8 shafts, and the dark cream on 1, 2, 3, 4 shafts. The checking pattern the same number of picks and colours as the warp. The whole of the dark sage weft to be on 5, 6, 7, 8 treads, and the dark cream weft on 1, 2, 3, 4 treads shown by the figures at the bottom of pegging plan, the draft figures being at the left-hand side. This will make a very fashionable and stylish dress cloth. These large checks well broken up in any material either wool, worsted, silk or cotton, are sure to become popular at this period of the year. Blue may take the place of dark sage, while drab, fawn, and lilac may also be used with decided advantage in conjunction with light cream. We consider these patterns would be very effective in plain weaves for fine gingham.

FIGURED MANTLE CLOTH.

Figure 27 is a suggestion for a figured mantle cloth or dress panelling. One method of development is indicated in *Design 192*, for which the following sett is suitable:—

Warp.

All 2/40's dark worsted.
12's reed 6's.

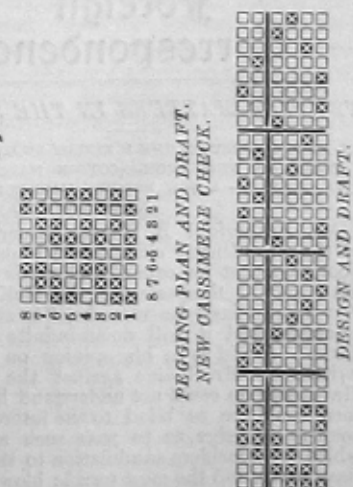
Weft.

1 pick 20's dark worsted,
1 " 36's mohair or silk.
72 ground picks per inch.

The ground of the pattern, it should be observed, is the 3 and 3 twill, the inside a crape effect, and the figure itself is developed as weft flush. As a cheaper cloth the extra weft may be dispensed with, when even then a very good effect may be obtained. The design as developed here is for production on 3 and 4 wires, i.e., four times 96. Other suggestions shall be given in our next.



FIGURE 27.



FANCY TARTAN CHECKS.

The newest colours for autumn and early winter wear are brown, tan, grey, a clear dark blue, deep rich red, a purple heliotrope, very deep in colour, and deep old rose. Black will also be a great favourite upon all occasions and in all fabrics. We give this week particulars for the make of a durable cloth, which will stand plenty of hard wear, and will look equally bright and pretty in dark red, navy blue, brown, olive green, and a deep tint of terra cotta. Floral and intricate designs are for the present in reserve for spring patterns.

No. 1 design and draft is for a checked tartan, which, as we have said, will stand a great amount of wear if made from 16's cotton twist for warp in a 60 reed, or really 60 ends per inch, the weft 16's cotton, 60 picks per inch, on six shafts, 24 end draft, three in a dent. Warp pattern: 24 dark brown, 120 very light olive green, 24 clear dark blue; weft pattern: 2 light brown, 2 cream, 2 light brown, 2 cream, 2 light

brown, 2 cream, 12 light brown, 120 cream, 2 deep old rose, 2 opal blue, 2 deep old rose, 2 opal blue, 2 deep old rose, 2 opal blue, 12 deep tint of terra cotta.

No. 2.—Straight over draft with same reed, counts of warp and weft as No. 1. Warp pattern: 18 of deep rich red, 18 of grey, 6 of deep rich red, 18 grey, 6 deep rich red, 2 grey, 2 red, 2 grey, 12 red, 90 of grey, 12 red, 2 grey, 2 red, 2 grey, 6 deep rich red, 18 grey, 6 deep rich red, 18 grey, 18 of very deep green. Weft pattern the same as the warp.

No. 3.—No. 1 draft, and the particulars of warp, weft, counts and reed as Nos. 1 and 2. Patterns—warp: "The Macduff or Fife Tartan," 24 red, 4 black, 24 red, 4 black, 24 red, 24 light or yellowish green, 12 black, 12 royal blue, 24 red, 12 royal blue, 12 black, 24 yellowish green, and repeat from the commencement. The weft pattern is the same in every respect.

No. 4.—On 6 shafts, straight over draft, in a 72 reed, three in a dent, 18's warp and weft, all cotton; 72 picks per inch. Warp pattern: 6 deep purple heliotrope, 6 dark buff, 24 deep

purple heliotrope, 6 dark buff, 6 deep purple heliotrope, 60 of mid coral, 6 deep purple heliotrope, 6 dark buff, 24 deep purple heliotrope, 6 dark buff, 6 deep purple heliotrope. Weft pattern the same.

No. 5, in Linen.—No. 1 draft, 6 shafts, 80 ends per inch, and 80 picks per inch of linen weft and warp; 40's count, or warp 40's two-fold cotton, and weft 50's linen. Warp pattern: 12 cardinal red, 12 white, 12 peacock blue, 12 white, 12 peacock blue, 12 white, 12 straw, 12 white, 12 straw, 12 white. Weft pattern same as warp. The white of warp and weft in this case might be linen and the colours cotton.

Patterns Nos. 1, 2, 4, and 5 are not reproductions, but original checks, specially designed for early winter, and no doubt would become deservedly popular if made in silk, woollen, or worsted materials with a plain or ordinary twill weave, and we give them with every confidence that they will be found of value to manufacturers who wish to be abreast of the times. The colours ought to be fast, as they are meant for a washing material.

