THE TEXTILE MERCURY.

Exhausting the funds of the unions? By the workers allowing themselves to be manipulated like troopers of conscription by a lot of ignorant and noisy charlatans, they are rapidly driving the various industrial interests of the country to the conclusion that some very drastic treatment will have to be inflicted, and thereupon they will render the senseless aggressions directed against them. The present condition of trade in many of these trades, and especially in the textile trades, would justify such a step, and it may be much sooner than at present any one would suspect it to be. A general closing down all round might do something towards reviving the demand for the productions of Lancashire, which badly need it, and which low prices have failed to stimulate. The non-effect of low prices to induce better trade is a fact that deserves serious consideration, as it may be that the present consuming markets to which we have admitted are comparatively incapable of taking more than they have done, even at low rates, and if this should prove to be the case there are only two courses that can be taken, namely, a considerable reduction of wages, or a general stoppage until the markets are cleared.

These considerations are increasingly engaging the attention of men's minds as necessary to the early future, and only the most discerning and considerate course of action on the part of working people will help to stave off, cannot, however, be afforded by the majority of those that they have in any section of industry manifested such consideration for a long time past.

Max Dolben, the son of a well-known Alston (waste) manufacturer, who located shortly before establishing his own woollen mill, ventured recently to remark, but found that a cautious government had considered his observations, and he has therefore been compelled to pursue his life in a foreign land.

Designing.

NEW DESIGNS.

DRESS GOODS AND CORDS.

Designs may be made in 24s. twist for warp, 22s. for weft; with 2½ shade cop, 50 picks per inch, 30s. for warp, 50 picks per inch of 30s. width. Warp pattern is 10 dark blue 2 in a dent, 2 thread of 2 white, 1 red, 2 black twist, making 4,000 picks to the 28. This compound thread in one dent, 2 white, needed as follows: one dent empty, one white in one dent empty, 3 white in one dent, 2 white in one dent, and needed in this order until the 28 ends of the pattern are completed, the repeat pattern commencing with the 20 of solid blue. There are many ways of diversifying this class of zephyr pattern by selecting the colours, the west in all cases white, or one-shoulder of some light tint, equal in colour to one of the warp stripes. This solid blue may be altered for shrimp or very light grey. We will endeavour to produce a few patterns of this fancy colour in a short time.

CLAY TAYLOR.

"Amount of Leinum on 6 shafts, 7 pick, 3 down, straight draft, 40 picks per inch, 2 in a dent, 30s. warp twist, 50 picks per inch of 30s. width. Pattern: 40 light blue for centre, 1 black, 4 blue, 4 black, 8 blue, 32 black, 40 dark green, 4 white, 40 dark blue, 4 black, 8 blue, 4 black, 8 blue, 3 black, and repeat from 40 light blue, west pattern the same.

VELVET CLOTHES.

Design B is for a new cotton cloth, velour or cord, producing small square knits of pila and 2, 4 threads on 5 shafts: if the squares are required to be larger with the same red let the number of warp threads and picks be increased. This design will be well dispensed with, so that the west will be dead.

Design C is another suggestion for a twilled velvet fabric, one stripe warp, the other weft. There is nothing original about the idea, but as a demand for this class of goods is made, no apology is required in giving the design, which may be useful to makers of this class of goods, or others desiring of commencing: If properly finished and dyed well in the piece or bleached, sales can be effected and good business done.

Care must be taken to make the warp stripes denser, as, if in a dent, the west stripe in a dent. To make a really good cloth it will be found an advantage to use two beams; where this is not convenient let the yarns in each stripe be a balance in counts, the warp one to have a finer twist of yarn in proportion.

FIGURE CLOTHES.

Design D is for dress goods, a thickest cord, on 5 shafts, straight draft, 9 to the round. This is a five-cord effect, every pick in plain, which can be made, and it is only within the past few months that it has been brought to the fore for dress goods, including veils, etc., as a light worsted coat. The back is similar to a velveteen. We might not be far from the mark in saying that a go-with sixty-one twist for warp single cord will be a good suit; of course the quantity of warp twist is easily determined, because no more is necessary than to give a clear well-defined vertical cord.

THE ANALYSIS OF PATTERN.—VI.

FIGURED FABRICS.

This class of figured textiles is very extensive, embracing fabrics designed for coatings, shawls, mantles, cloths, and dress fabrics. Design 15 is a good example, demonstrating the principle of constructing these figures, the usual method being as follows: Having decided on the type and form of the figure, the designer pencils the required form—in red or blue—(any transparent color will do)—on the design paper, as indicated in Diagram 11. He now proceeds to put the ground weave of the figure part of the design paper and the figure weave on the coloured part, having previously laid out the relative positions of the two weaves. This is very simple, and the only difficulties to be overcome in making such cloths are (1) the various weaves combined, and (2) the extent of figure. The first difficulty we have previously dealt with under the headings "Stripes, Cloths, Tails, etc." the principle of figuring the weave being exactly the same in each case. Having found that the extent of the weave, the extent of the figure required, and the capital to be provided is ascertained by placing the piece-glass on the face of the fabric and counting the number of repeats of the figuring weave in the figure. Thus, for example, in Design 16 there are four repeats of the figure, and also 4—5 threads, the extent of pattern in the thickest part. A sectional view, from which a similar demonstration may be made is given in Diagram 12. This is evident when the examination of the curvature of the threads and picks may be of aid in clearing up both the above-mentioned difficulties.

EXTRA WARP AND WEFT FIGURES.

Fabrics figured on either of these principles may be divided into two classes, viz. (1) those in which the extra material simply flashes on the surface as a spot figure, as shown in Diagram 13 and Design 17, and is laid on the back when not flashing on the face; (2) those in which the extra material flashes as a weave on the surface of the fabric and is laid on the back when not flashing on the face. As shown in Diagram 14 and Design 18; or if the fabric consists of very light goods it is allowed to flash on the back and is cut off in the finishing process.

The designs of the first class is evidently very simple, the only points requiring attention being, firstly, the extent of flash, which may readily be determined by counting the repeats of ground weave as previously explained; and, secondly, the tie binding the extra warp or weft to the back of the ground fabric, a
through comprehension of the principles of tying down, away with all difficulties as in this case as before.

The principles of the second class is of course much more difficult, for the extra weft or warp may interweave with the ground threads in any and every order. For example, it is no extraordinary thing to find leaves and flowers developed most beautifully by means of the extra weft interweaving with the ground warp, or vice-versa. Under these circumstances the method of development adopted should be carefully sketched on design paper as will be explained later, and developed as nearly as possible according to the original, irrespective of the examination by the piece or block of course this may be occasionally used to confirm the success of the analyst. The extent of the figure may often be decided, as previously indicated, by the number of repeats of the ground weave, while the ties, should any be required, must be inserted strictly according to principle.

List VI. indicates the capabilities for floral, etc., development furnished by the various principles of introducing extra warp or weft.

DOUBLE-CLOTH FIGURES

A means of figuring largely adopted in almost every branch of the weaving industry is that obtained by weaving two plain cloths together and allowing them to change places for the figuring. The simplest method of effecting this is shown in Design 19, a useful sett for a mantle cloth figured on this principle being:

**Warp:***
- 1 thread 30 sl. black
- 1 thread 30 sl. white
- 1/3 cord 4 sl.

**Weft:***
- 1 pick 30 sl. white
- 1 pick 30 sl. black
- 48 picks per inch

A fabric made to the above particulars with Design 19 would consist entirely of a black and white cloth, which simply changes positions from back to face and vice-versa for the figuring, thus obtaining the designation "figured reversible."

By means of Design 20 a double 2 and 2 twill cloth is produced, while Design 21 produces a small figured double plain cloth, one cloth being 2/4 coarse again as the other. Other systems there are, but our duty is not to demonstrate the construction, but rather to indicate the means by which the construction may be accomplished. It is evident then, that in their ordinary form these cloths may be analyzed, so far as weave is concerned, as ordinary double cloths, and the extent of the figure is rather a more difficult task. The curvature of the threads may often prove of service here, but perhaps the best method of obtaining this by means of the weaves used, these being first found; but must be remembered in analysing these are any cloths that a knowledge of the principles of cloth construction is half the battle.

**List VI.**

Order of Waving or Weaving:
1. pick ground (black) - Down Goods, etc.
2. pick figure (red) - Down Goods, etc.
3. thread figure (red) - Down Goods, etc.
4. thread ground - Down Goods, etc.
5. thread figure (green) - Down Goods, etc.
6. thread ground - Down Goods, etc.
7. thread figure (green) - Down Goods, etc.
8. thread ground - Down Goods, etc.
9. thread figure (blue) - Down Goods, etc.
10. pick ground (green) - Down Goods, etc.
11. pick figure (red) - Down Goods, etc.
12. pick figure (green) - Down Goods, etc.
13. pick ground - Down Goods, etc.
14. pick ground - Down Goods, etc.
15. pick ground - Down Goods, etc.
16. pick figure (green) - Down Goods, etc.

Note: A combination of 3 and 15 adopted for the protection of Pitcher Sheafs, etc.

**Figure Analysis.***

In the case of figured textiles, the finding of the weave is only part of the work to be done; the unit or repeat of the figure has still to be ascertained. Should a full repeat or more than a full repeat of the pattern be obtained, several methods may be adopted. A simple plan, largely resorted to by professional analysts, is to place the pattern on cardboard and print with a needle round the edge, thus obtaining a reproduction, in outline, of the figure. The repeat must then be enclosed in a square or circle and thus be divided into squares representing 8, 16, or 24 threads and picks as required, Diagram 15 illustrating this system.

Another system is to paste the cloth upon cardboard and divide it into spaces by wrapping the threads round it, equidistant from each other, as shown in Diagram 16. Other modifications of the same principles are in use according to the fancy of the particular analyst. Whatever system, however, be adopted, it should be remembered that what is required is simply the division of one repeat of the figure into squares or oblongs, each representing a certain number of threads and picks on the design paper.

When only a portion of a pattern is obtainable, the difficulties are greater, since no further advance can be made unless there is sufficient of the figure to decide the method of arrangement adopted, and even then the analysis can go no further unless it is thoroughly conversant with the various systems of arrangement in vogue.