

# Posselt's Textile Journal

Vol. XXIV.

April, 1919.

No. 4

## Dress and Mantle Fabrics.

### Their Design and Construction.

A considerable section of figured styles in single-make goods are obtained by various systems of combining two or more of the simple principles of figuring, *viz.*, by the warp, by the filling, and also by small fancy crossings to produce a decorative ground effect.

An illustration of one common method of accomplishing this is given at Fig. 1, where a series of filling-flushed figures are displayed on an ornamental background composed of a 12-harness fancy weave.

Where this and similar schemes of fabric production are practised the primary figuring details should always be of such a nature as will leave plenty of the ground pattern visible. Small warp or filling flush spottings and geometrical set figures are probably best adapted for the purpose.

Another point to be considered touches the relation which the ground weave should bear to the actual figure pattern. If the latter is full, and as a consequence very loose, then the foundation weave must be made correspondingly firm; while on the other hand, if the ornament is detached in character, with only a figure here and there, then a ground weave somewhat more open in structure may be employed.

A suitable set of weaving particulars for the production of Design Fig. 1, is as follows:

*Warp:* All 2/40's worsted (dark blue shade). 18's reed 4's.

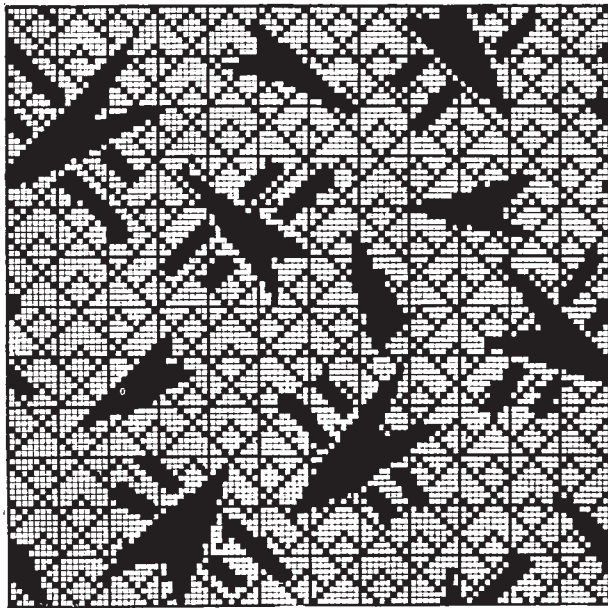


Fig. 1

*Filling:* 7 dram silk (medium lavender shade). 72 threads and 66 picks per inch.

Fig. 2, which is also complete on 96 ends and 8 picks, shows a development of this system of dress fabric figuring, and when suitably woven gives a very

satisfactory style of pattern. First, there is the ground weave of five-end sateen; next, there is superimposed the secondary figure, developed chiefly in two-and-two twill; while in suitable positions upon this the set fig-

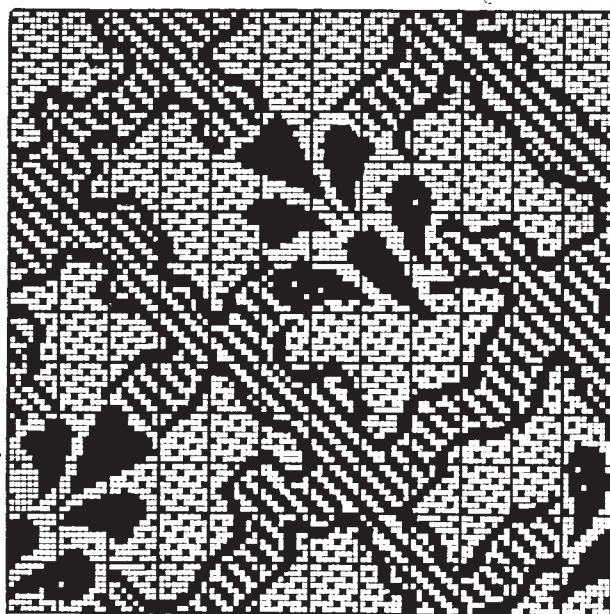


Fig. 2

ures are produced by flushes of ground filling. Round these latter figures the warp is all lifted to render the floating picks more clearly visible. If necessary, this particular portion of the design could be produced in adding an extra pick, of a different color. Such a procedure would, however, involve an extra cost in manufacturing, which, taking into account the ultimate purpose of the fabric, would probably be excessive in comparison with whatever degree of beauty was added to the texture by a second series of picks. The chief point to be remembered in planning designs similar to the example here shown, is to maintain a satisfactory balance amongst the various weaves which enter into the combination. If this is not carefully watched, and the weaves employed vary to any great extent, either in length or frequency of float, the effect in the woven fabric will be disastrous, and the production of a sound, level piece impossible.

Example Fig. 2 might be woven on the same principle as Fig. 1. It is also suitable for a silk style, and should be loomed as follows:

*Warp:* All 60's/2 silk (dark olive-green shade). 24's reed 4's.

*Filling:* All 60's/2 silk (pink shade). 96 ends and picks per inch.

A few of the typical styles of crossings which are used as ground patterns in these goods are appended here, in the possibility that they may furnish some idea as to the lines to proceed upon when designing others.

In Fig. 3 a bold twill is given, undue looseness of texture being obviated by the plain interlacings on either side of the twill itself. Many modifications of this are of course possible, and the production of useful ground makes based on this type requires merely the exercise of a little patience.

Weaving particulars:

*Warp:* All single 28's worsted, 24's reed 3's.

*Filling:* Same as warp. 72 ends and 60 picks per inch.

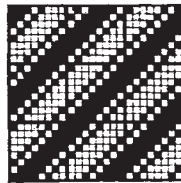


Fig. 3



Fig. 4

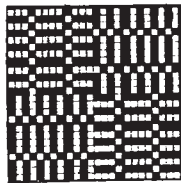


Fig. 5

Fig. 4, complete on 16 threads and 40 picks, makes a neat ground pattern in worsted yarns. It is composed of a three-and-two warp rib, worked in the form of a diagonal stripe, the positions of the three's and two's being reversed in adjacent sections, and it should readily lend itself to various schemes of modification.

One of these is illustrated at Fig. 5, the warp and filling ribs being manipulated to produce a check effect on twenty-four ends and picks.

Fabric structure in connection with weave Fig. 4 is thus:

*Warp:* 32's worsted.

*Reed:* 24 by 4

*Filling:* 32's worsted 70 picks per inch.

Fabric structure in connection with weave Fig. 5 is thus:

*Warp:* 2/36's mohair

*Reed:* 14 x 4

*Filling:* Same as warp. 56 Picks per inch.

#### Spot Silk Wanted.

The New York market is more active, quotations made having attracted considerable buying for March and April deliveries. Double extra, both white and yellow, especially in odd sizes, such as 16-18, 20-22, 24-26, are very difficult to obtain for any prompt deliveries.

There has been increased activity in thrown silks, and considerable business has been booked ahead in both organzine and crepe twists. Also there is some call for early deliveries of all grades of thrown silks, indicating that recent accumulations of supplies have been used up since the resumption of operations in local mills.

Silk manufacturers generally still complain of the poor demand for their products, but, nevertheless, stocks on hand are gradually being liquidated, we understand, and, while forward business is difficult to obtain on staple goods, certain specialties, such as shirtings and men's linings, pussy willow and like fabrics are sold ahead for several months.

## Clay Twills.

CLAY WORSTEDS are a type of cloth which admit of practically no ornamentation, so far as weave and coloring are concerned, and whose value depends upon qualities which are useful rather than ornamental.

Chief among these qualities are firmness in the hand and lustre on the finished cloth, but the firmness must not be of such a nature as to prevent the cloth from hanging properly when made up for wear, nor must the lustre depend entirely upon any finishing process, the result of which would at best be only transient and unsatisfactory. No amount of care exercised in the finishing process, or in the choice of dyeing materials will remedy mistakes in the build of the cloth, or give the best results, unless the fabric is properly constructed.

Manufacturers often wonder why their competitors' goods are more popular than their own. If one were to examine carefully the goods of his successful competitor, he would very likely find that the trouble should not be laid at the door of a finisher, but at his own, because the construction of his cloth is faulty, and consequently nothing possible in the finishing will make his fabric right.

In a typical 15 to 16 oz. clay worsted, one that is probably the best seller on the market, and one that is as near perfect in structure as possible, there are about 67 ends 2/30's worsted warp, and 64 picks 14's (worsted counts) union filling in 1 sq. in. of finished cloth. The warp is a good 60's quality, with the average number of turns per inch in the two-fold, the twist of which opposes the twill in the weave, which runs from left to right. It is hardly necessary to say that if the twill is to show distinctly in the finished cloth this latter condition is essential. The filling is a union containing about 60 per cent wool of the same grade as the warp, and 40 per cent cotton, both of which are free from any trace of vegetable matter, such as shives, burrs, etc., which would spoil the finished goods both to the touch and the eye. The weave is an ordinary 3-and-3 twill.

Now, let us see how nearly the cloth under consideration approximates a fabric of perfect construction, setting the warp 63 in. in the reed, to finish 56 in. full. In a 20/3 reed this would mean 3780 ends ( $60 \times 63$ ), which would be practically equal to 67 ends on 56 in. when finished ( $56 \times 67\frac{1}{2} = 3780$ ).

Is there any good reason why 67 ends per inch in the finished cloth gives satisfactory results? We think there is. The number of ends in any yarn of average twist which in the grease would lie side by side in the space of 1 in. is found by taking the square root of the yards per pound and deducting 10 per cent. Applying this rule to 2/30's worsted, which is equal to 15's single, the answer is 83, or the diameter of each thread is equal to  $\frac{1}{83}$  in.

We can now apply the rule, for in a plain weave there must be, for a cloth of perfect structure, a space between each end about equal to its diameter. In the six-end twill under notice, the weave contains six ends, and two intersections, or eight units in all, while in six ends in the plain weave there would be twelve units, six ends and six intersections, and the number of ends, therefore, in a six-end twill to be as perfect as a plain weave using the same yarn becomes simply a question of proportion.