

REVERSIBLES.

(Continued from November issue.)

Checker-board Effects.

In this instance the change of weave as done warp-ways in connection with stripe effects previously explained, is now extended also filling ways. In other words, in order to produce a checker-board effect (squares of one solid color to exchange with squares of another solid color, on face and back of the fabric) every warp-thread and every pick must act part of the time as face and part of the time as back thread.

To construct these checker-board effect reversibles, a thin wash of yellow paint is laid on such squares (including face and back in warp and filling) on your point paper which have to show in one of the two colors used in the construction of the fabric. This will then give you a checker-board effect in white and yellow on the point paper.

Next add your double plain, starting uniformly in every yellow square, and follow this up by adding your *mate* double plain weave, uniformly starting in every white square.

The same as with stripe effects we may change the color arrangement at the places where warp and filling change from one ply to the other, and keep the arrangement of face and back threads uniformly 1:1 throughout the repeat of the weave, or we may keep the color arrangement uniformly 1:1 throughout the repeat of the weave and use either 2 ends back or 2 ends face at the place where warp and filling changes from one ply to the other, to produce the reversible effect.

FACE AND BACK WARP-THREADS AND PICKS UNIFORM, COLOR ARRANGEMENT OF BOTH CHANGED.

Fig. 4 will explain the procedure. It shows the stripe effect previously given in Fig. 2, extended into a checker-board effect.

The latter calls for 4 ends and 4 picks face ply of one color to exchange with 4 ends and 4 picks face ply of the other color.

Four ends face in warp and filling call for the same number of ends for its mate back ply, hence 8 warp-

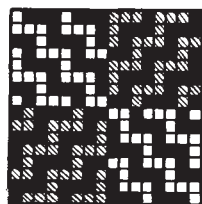


Fig. 4

threads and 8 picks are required for each effect of the double plain weave on the point paper.

Conforming to this, we paint on our point paper every 8 by 8 squares alternate yellow, leaving the others white, each square of 8 by 8, whether yellow or white, standing (being the foundation) for one of the two double plain effects.

Next insert by means of red paint (or any other way you prefer) double plain in one of the set of the 8 by 8 squares, say for example on top of the yellow square. The left hand lower square in Fig. 4 explains the subject and where for example, *shaded* type stands for yellow and *full* type for red; the latter being painted on top of the yellow.

Diagram *d* in Fig. 2 illustrates the construction of this double plain.

In the same way will diagram *e* Fig. 2 explain the placing of the *mate* double plain in the lower right

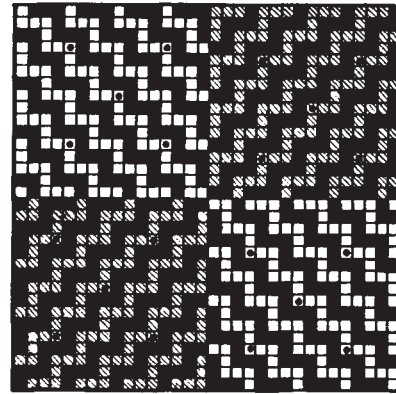


Fig. 5

hand square of 8 by 8, in Fig. 4; the same is painted on a white (empty squares) background.

Double plain effects explained thus far in connection with Figs. 2 and 4 will divert every pick (every 8 warp-threads) from face to back of fabric structure, and vice versa, hence the change of color in the latter.

Considering the warp-threads, the corresponding change of color (to harmonize with that of the filling) is accomplished by means of the dressing (see *a* Fig. 2), *i. e.*, two ends of one color are taken in rotation where change in position of the picks in the two plies occur.

Next insert the inverted double plain weave (turned over and painted risers for sinkers) in each square of 8 by 8 point paper above the two effects thus far constructed. This will keep up the arrangement of 1 end face: 1 end back in the fabric structure, the change of filling (2 picks of one color taken in rotation where the two plies exchange position in the fabric structure, the same as was done in the warp) producing the checker-board effect in the fabric.

Considering weave Fig. 4, repeating on 16 warp-threads and 16 picks, we see that every warp-thread and every pick interlaces alternately for 8 threads face and 8 threads back, hence shows alternately for 4 threads on the face ply and for 4 threads on the back ply of the fabric structure.

Fig. 5 shows a checker-board reversible, four times the size of the one previously explained, *i. e.*, repeating on 32 warp-threads and 32 picks, with 16 by 16 ends for each square of the checker-board. This in turn gives us 8 warp-threads and 8 picks for each ply in the fabric structure.

This weave also explains the stitching of reversibles, *i. e.*, stitching the two plies of fabric structure, as until now have been shown resting loosely above each other, between the changes from one ply to the other. This is done by the regular principle of stitching double cloth, *viz.*: either the back warp-threads are raised after a given weave, or motive, into the face ply (above face pick) or face warp-threads are lowered (below back pick) so as to interlace into the bottom ply.

Weave Fig. 5, by means of *dot* type for risers, shows the raising of the back warp-threads, using five spots distributed after the "plain" motive for the stitching of the two plies.

FACE AND BACK WARP-THREADS AND PICKS CHANGED, COLOR ARRANGEMENT OF BOTH UNIFORM.

Fig. 6 has been designed to illustrate subject. In this arrangement of a double plain checker-board, the

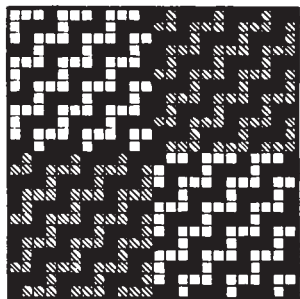


Fig. 6

coloring for warp and filling throughout the repeat of the weave of 24 warp-threads and 24 picks is 1 dark: 1 light.

The construction of this weave, *i. e.*, the arrangement of face and back warp ways has been explained before in connection with stripe effect Fig. 1.

The same exchange of the plies, as then explained for the warp-threads, is now also observed for the filling, *i. e.*, after interlacing 12 picks one face: one back, the arrangement for the next 12 picks is in every instance reversed, thus bringing every 12 picks two picks of one kind (either 2 face picks or 2 back picks) side by side in the fabric structure.

(To be continued.)

Novelty in Textile Design.



The above shows a plan view of a portion of a new design for Embossed Fabrics, for which a patent has been lately granted.

Spinning Mill Management.

The qualifications for success by the superintendent of a cotton spinning mill have been summarized by W. Greenwood of the Belgrave Mills, Oldham, Eng. thus:

Attention to business.

A quick grasp of detail.

A general knowledge of machinery and the theory of cotton spinning.

A good knowledge of mechanics and drawing.

Sound judgment in raw cotton.

A just manner in dealing with workpeople.

Ability in choosing officials.

Commonsense and tact.

Attention to business is very essential. Most accidents in a mill occur in the early morning, and no matter how trustworthy the assistant manager may be, the manager will usually get the mill restarted in the quickest time. As an hour's lost time represent a considerable amount of money lost by the mill, this remains a highly important matter. Furthermore, it is astonishing how time is wasted during the early hours; Mr. Greenwood quoting a case of a mill he visited about 7 o'clock one morning, found some of the overseers and other officials all sound asleep in their respective departments.

In order to acquire a wide knowledge of machinery and the theory of spinning, it is of great advantage for the superintendent to have a good understanding of weaving, since often such a knowledge will prove of great service to a spinning manager, and is a very useful asset upon many occasions.

A young manager ought to be extremely careful in the selection of his raw cotton. He should decide what quality suited his requirements, and stick to his decision no matter what others might tell him. The temptations may be often very great, but it never pays to change the quality for the worse: trouble will manifest itself in the mill, and in the end the customer will present his claim.

Workpeople should be very carefully considered. They should receive every consideration, and a manager who treated his workers in a kindly manner gets much better service than the man who never opens his mouth without speaking in a bullying manner. The worker's day is monotonous and uninteresting, and allowance has to be made for this, for the fact that through lack of opportunity they were very often unable to grasp what might be to the manager self-evident. Punishment is sometimes necessary, but it should only be given as a last extremity, and after careful consideration.

Nothing is so bad in a mill as differences between workers, and nothing is more detrimental to the smooth running of the mill. Everything possible should be done to prevent such disagreements, and preserve harmony among the various officials. Disputes between employer and employed often began in quite a small way; and, like fires, required prompt handling. A jug of consideration applied at once would prevent a large conflagration.

Waterproofing Fabrics.

Mottled or marbled waterproof fabrics, according to a late English patent, may be produced by applying rubber dough of two or more colors which are caused by a transverse movement to mix in the spreading.