

Posselt's Textile Journal

Vol. XVII.

November, 1915.

No. 5

REVERSIBLES. (Harness and Jacquard Work.)

(Continued from September issue.)

Three-Ply Reversibles.

The same refer to reversible structures in which

being then made to form either the centre or the back of the 3-ply fabric. If either ply is of a different

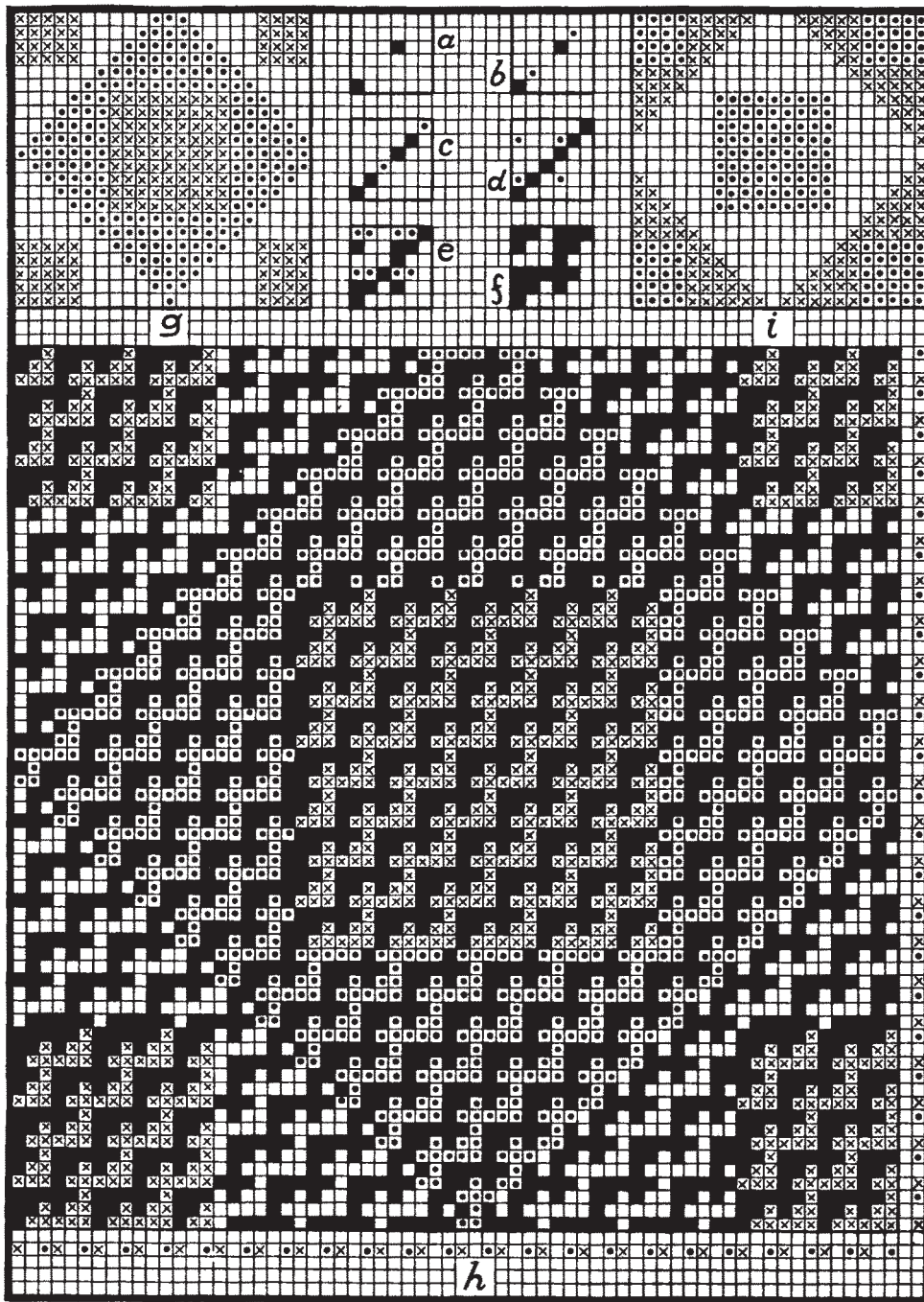


Fig. 38

three (3) distinct single cloth fabrics are placed one above the other. Any one of these three structures can be used to form the face, the other two structures

color in its warp and filling, clear effects in three colors can then be produced on the face and back of the fabric. The plain weave is the one most often

used for interlacing each single-ply structure.

Rule for constructing 3-ply structures:

(1) 3 warp-threads and 3 picks form a unit for each square in the design in its analysis on the point paper.

Leave thread one in this unit, both warp and filling ways, empty or white.

Paint, *i. e.*, strike off the second thread in both systems of each unit, all the way across the repeat of the weave (warp and filling ways) in yellow.

Paint the third thread of the unit warp and filling ways similarly in a light green color.

(2) Consider white rows of squares as belonging to the first ply, all the yellow squares to the second ply, and all the green squares to the third ply.

(3) Paint plain weave in *red* on the *first* ply (on white). This forms the top-ply structure. See diagram *a* in Fig. 38, and where *full* type indicates the *red* previously referred to.

(4) Paint plain weave in *blue* on the *second* ply, considering only squares where both yellow stripes meet. See diagram *b* in Fig. 38 and where *dot* type indicates the *blue* previously referred to.

(5) Paint plain weave in *black* on the *third* ply, considering in this instance only squares where both green stripes meet. See diagram *c* in Fig. 38 and where *dot* type stands for the *black* previously referred to. Rules 3 and 4 are both shown in diagram *c* in *full* type to contrast from rule 5 thus explained.

(6) Raise on all the picks of the second ply (and which are painted yellow) all the warp-threads of the first ply, *i. e.*, white. See diagram *d* in Fig. 38 and where *dot* type stands for "raise all warp-threads of first ply on every pick of the second ply"; rules 3, 4 and 5 are shown in diagram *d* in *full* type, to contrast from rule 6 now explained, *i. e.*, shows the latter distinct. This forms the centre-ply structure.

(7) Raise on all the picks of the third ply (and which are painted green) all the warp-threads of the first and second ply, *i. e.*, white and yellow. See diagram *e* in Fig. 38 and where *dot* type stands for "raise all the warp-threads of the first and second ply on every pick of the third ply"; rules 3, 4, 5 and 6 are shown in diagram *e* in *full* type, so as to bring up rule 7 more prominently. This forms the bottom or back-ply structure.

Diagram *f* in Fig. 38 shows diagram *e* in one color, *i. e.*, a plain 3-ply cloth.

It will be readily understood that this 3-ply plain (or any other weave used in place of the plain weave) can be transposed with reference to its unit of 3 warp-threads and 3 picks, in turn changing the position of warp and filling threads thus treated in the 3-ply structure.

Considering the arrangement of warp in connection with diagram *f* to be:

- 1 thread *Red* = Face
- 1 " *White* = Centre
- 1 " *Yellow* = Back.

Transposing weave one row to the right will then change

- White* to Face
- Yellow* to Centre and
- Red* to Back.

Transposing weave one more row to the right will then change

- Yellow* to Face

Red to Centre and

White to Back, indicating that every color can be used either for Face, Centre or Back of the 3-ply fabric structure.

The same procedure applies to the filling.

This will give us *six color combinations* for either ply, *viz*:

THREE PURE COLORS: Red, Blue, Green and

THREE MIXES: Red and Blue, Red and Green, Blue and Green.

Using one shuttle, weave *f* will result in three plain plain fabrics, one above the other, all three united at their selvages by the shuttle passing from one to the other ply.

Using three shuttles, one for each ply or color, will result in three distinct fabrics, one above the other, each having its own selvage.

Diagram *g* in Fig. 38 shows a sketch for a fabric executed in three colors, quoted for example thus:

Effect shown in *cross* type produced by color # 1.

Effect shown in *empty* type produced by color # 2.

Effect shown in *dot* type produced by color # 3.

To produce weave-plan *h*, enlarge motive *g* three times warp and filling ways, on account of every square in motive *g* calling for 3 warp-threads and 3 picks in weave *h*, giving us 66 warp-threads and 66 picks in the latter to produce effect shown in motive *g* in the fabric. The same type (color) as is used in the motive is used in weave, *viz*: *cross*, *empty* and *dot*.

Next insert the 3-ply plain weave given in diagram *f* (in red paint—we used *full* type for it) on top of the color used on the point paper for representing color # 1 and for which we used *cross* type.

Upon color # 2 and which means *empty* type for us, insert (in red paint—we used *full* type) the same 3-ply plain in a rearranged position, using the warp-threads that in the first effect wove face, now to weave back, such as wove centre in the first effect to weave now face, and the warp-threads which wove back in the motive to form the centre-ply structure. The same procedure as explained with the warp-threads is observed with the filling.

Upon color # 3 and which means *dot* type, insert (in red paint—we used *full* type) the same 3-ply plain in a rearranged position, using again the warp and filling ends that wove face in the second effect, now to weave back, those that wove centre, now to weave face, and finally such as wove back, to weave centre.

Full type in weave-plan *h* means warp up, *empty*, *cross* and *dot* type means sinkers or warp down, the two latter types (representing colors used by the designer) being used to simplify the building of the weave.

Diagram *i* of Fig. 38 shows the effect produced on the back of the fabric and of which *g* is the face effect. Below the weave the color scheme for the warp is given, *viz*:

Cross type = Color # 1

Empty type = Color # 2

Dot type = Color # 3.

The color scheme for the filling is given at the right hand side of the weave, arrangement and type used corresponding to that of the warp, hence no explanation necessary.

(To be continued.)