

# Posselt's Textile Journal

Vol. VIII.

January, 1911.

No. 1.

## DESIGNING AND FABRIC STRUCTURE.

### CHECKERBOARD TWILLS

in which the direction of the twill  
in both effects, runs in the same direction.

(Continued from page 150.)

#### Checkerboard twills with only two clear cut-offs.

In connection with this sub-division of checkerboard twills, we start the beginning of each effect (warp and filling effect) in every instance, in the same position, with the result that a clear cut-off is produced only on two sides of each square (or rectangle if so designed) the other two sides having the effects (warp and filling effect) run into each other.

In the same way, as with all checkerboard twills, our most simple foundation twills are the ones most suitable to be used in the construction of these checkerboard twills, the  $\frac{1}{2}$  3-harness, the  $\frac{1}{3}$  4-harness, uneven-sided twills, being those selected by us in preparing this lesson. In the same way, the reader can select the  $\frac{1}{1}\frac{1}{2}$  5-harness, the  $\frac{1}{1}\frac{1}{3}$ , the  $\frac{1}{2}\frac{2}{1}$  6-harness twills, etc.; those used by us in explaining the subject of designing this sub-division of checkerboard twills are the ones most frequently met with.

In the same way as with former checkerboard twills, when drafting only a few threads, warp and filling ways, of each of the effects, the resultant weave will come closely within the range of a granite effect, whereas, if drafting each effect several times over, before drafting its mate effect, and the more often we do this repeating of either effect, the more pronounced the resultant checkerboard effect will be in the woven fabric.

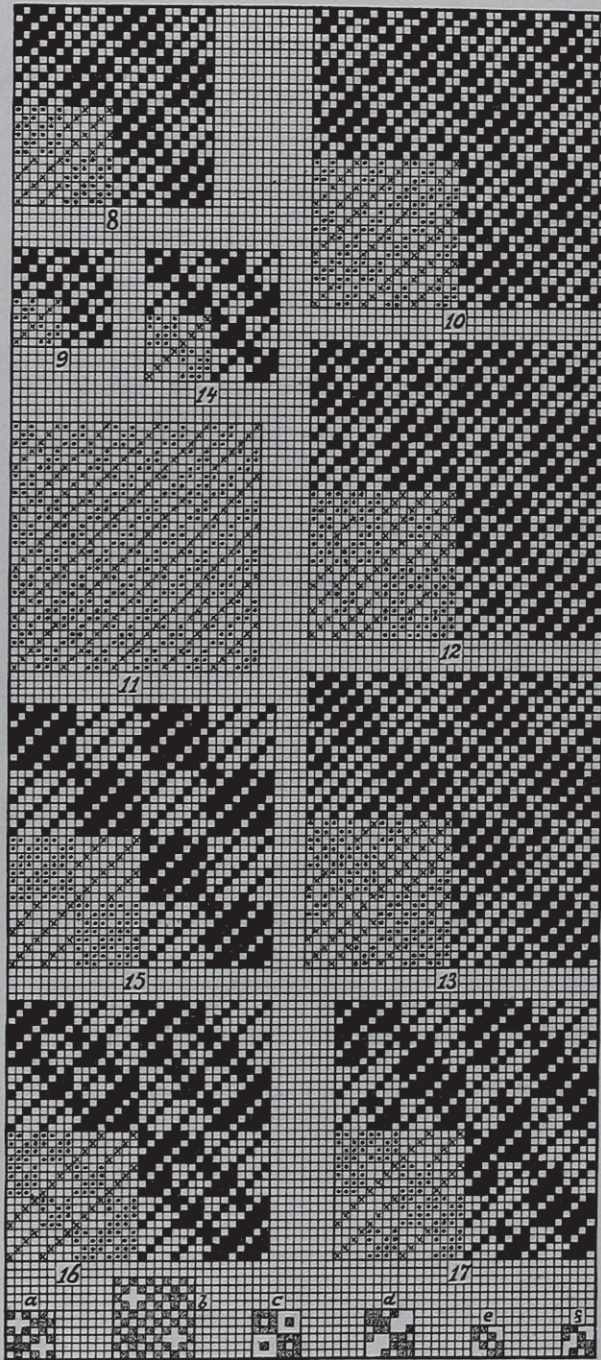
These checkerboard twills are well adapted for the manufacture of cotton, worsted, and silk dress goods, producing most excellent designs for these kinds of fabrics.

#### RULE FOR CONSTRUCTING THESE WEAVES.

After selecting the foundation weaves, as well as the motive for their exchange, and the number of repeats of each foundation weave for each effect of the motive, insert each foundation weave in its respective space, planning according to motive, starting each effect, in every instance, in the same position. The accompanying ten examples will readily explain the subject. The same show, in every instance, with the exception of weave Fig. 11, four repeats of the complete weave. One repeat of the weave is shown in two kinds of type, *cross* type for illustrating the filling effect twill, and *dot* type, the warp effect twill. The other three repeats are all shown in *full* type, in order to illustrate the general effect of the weave in the woven fabric. Weave Fig. 11 only shows the construction of the checkerboard twill, the three repeats being omitted to bring the weave within compass of the plate.

Weave Fig. 8: The foundation weaves used, are the two 3-harness uneven sided twills. The motive

selected is the *plain* setting, using for every effect of the motive, six warp threads and six picks of either



one of our foundation twills. The complete weave repeats on 12 warp threads and 12 picks, which can

be woven on 10-harness straight draw, or if so desired, can be reduced to 6-harness fancy draw, drafting each foundation twill twice over for the same number of harnesses before doing the same with the other foundation twill.

Weave Fig. 9: Foundation weaves used, the two effects of the 3-harness uneven sided twill. The motive used is again *plain* setting, using one draft for each effect of the motive, resulting in a repeat of 6 warp threads and 6 picks, for the new weave, calling for 6, (or any multiple of it) harness for its execution on the loom.

Weave Fig. 10 has for its motive sketch *a*, given on bottom of our plate of weaves. The foundation twills used, in the construction of our new checkerboard twill, are again the two effects of our 3-harness twill, using three warp threads and three picks, or one repeat of our foundation twills, respectively selected, for each (square) effect of the motive. The latter calls for six squares both ways; using three warp threads and three picks for each square, gives us 18 warp threads and 18 picks for each repeat of the checkerboard twill, which, if so desired, can be woven either on 18-harness straight draw, or 12-harness, fancy draw.

Weave Fig. 11: The motive for this weave is shown in diagram *b*, calling for ten squares each way. The foundation twills used, are again our two 3-harness twill effects. Using three warp threads and three picks, of each foundation twill, for each square of the motive, results in a complete weave, repeating on 30 warp threads and 30 picks, and which can be woven on 12-harness, fancy draw. In this instance, only one repeat of the weave (its construction—in two types) is given, whereas in the other examples we have given four repeats of each complete weave, *i. e.*, two repeats of the weave, each way.

Weave Fig. 12: The motive for this weave is given in diagram *c*. Using again three warp threads and three picks of our two 3-harness twill effects, for each square of the motive, results in a checkerboard twill, repeating on 18 warp threads and 18 picks, which, if so desired, can be woven on 12-harness, fancy draw.

Weave Fig. 13: The same shows us our two 3-harness twill effects arranged after motive *d*. The latter repeats on six squares, each way; using three warp threads and three picks of our foundation twill effects, respectively, for each square of the motive, results in a repeat of 18 warp threads and 18 picks, for the checkerboard twill. No reduction in the number of harnesses to use is possible, *i. e.*, 18-harness straight draw must be used on the loom.

Weave Fig. 14: The foundation weaves used are the two 4-harness uneven sided twills. The motive used is *plain* setting. Using four warp threads and four picks, *i. e.*, one repeat of each foundation twill, for each change in the motive, gives us the resultant checkerboard twill, repeating on 8 warp threads and 8 picks.

Weave Fig. 15 shows us the same foundation twill as before, as well as the same motive, used, the difference being, that in the present instance, we use two

drafts of each foundation twill for each change in the motive, with the result of producing a checkerboard twill, repeating on 16 warp threads and 16 picks, and which, if so desired, can be woven on 8-harness fancy draw.

Weave Fig. 16 has for its foundation weaves, again, the two 4-harness uneven sided twills. The motive for distributing them, is shown in diagram *e*, and which calls for four squares each way, for its repeat. Using one repeat of each foundation twill for each square of the motive, results in a checkerboard twill, repeating on 16 warp threads (straight draw) and 16 picks.

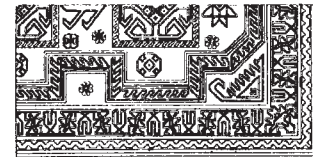
Weave Fig. 17 has again for its foundation, our two uneven sided 4-harness twills. The motive in this instance is shown in diagram *f*, and which repeats on four squares each way. Using four warp threads and four picks of either effect of our foundation twills, respectively, for each square of the motive, results in a repeat of 16 warp threads and 16 picks for the checkerboard twill, the same calling for 16-harness straight draw on the loom.

#### New Designs for Rugs.

- 1 and 6 are two new designs for *Rugs*, just patented by John Merry, New York City.  
2 shows a new design for a *Rug*, just patented by John H. Witzel, New York City.



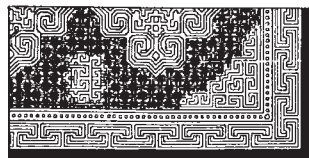
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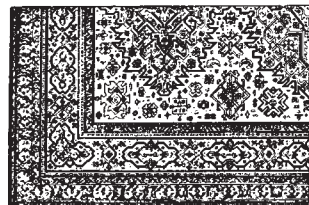
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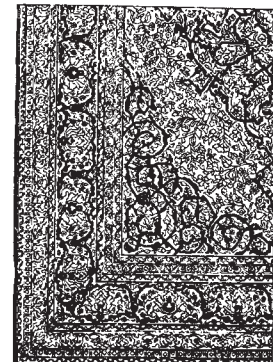
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4



5



6

- 3 shows a new design for a *Rug*, just patented by William G. Reith, New York City.  
4 shows a new design for a *Rug*, just patented by William A. Spring, New York City.  
5 shows a new design for a *Rug*, just patented by Emil G. Sauer, Richmond Hill, N. Y.