

## DESIGNING AND FABRIC STRUCTURE.

### CREPÉ WEAVES.

By J. Vincenz.

The object aimed at in designing these weaves is to produce in the fabric well distributed small broken-up effects of a rather prominent character. To a certain extent crepé weaves resemble somewhat our granite weaves, the construction of which was explained in the November and December, 1908, issues of *Posselt's Textile Journal*.

They are produced by various methods of combinations, successively treated in detail in this article.

#### Satin Foundations.

In this instance, the various filling effect satin weaves form the basis for the new crepé weave, adding to the former, in proper position, additional risers, guided by the effect in the fabric desired. Weaves Figs. 1 to and inclusive 17 are given to assist in explaining the construction of this system of crepé weaves, giving at the same time the designer a collection of weaves of *practical* value in his work, besides guiding him how to proceed to obtain any number of other *good* weaves of this class.

*Rule:* Paint your filling effect satin, and add, in desired position, either warp or filling ways, or both ways, the same number of additional risers to every riser of the foundation weave.

The foundation, *i. e.*, one repeat of the filling effect satin, in crepé weaves Figs. 1 to 17 is shown by *dot* type, and indicates warp-up or the same value as the rest of the weave shown in *full* type.

Fig. 1: Foundation, 6-harness satin, to which two risers have been added, filling ways, one thread apart from the original satin spot, having each pick, beginning counting with its satin spot interlace  $\frac{-1}{1} \frac{2}{2}$ . Repeat of weave: 6 x 6.

Fig. 2: Foundation, 8-harness satin, to which two risers, 1 up 1 down 1 up, are added, filling ways, having each pick, beginning with its satin spot, interlace  $\frac{-2}{1} \frac{1}{1} \frac{1}{2}$ . Repeat of weave: 8 x 8.

Fig. 3: Foundation, 9-harness satin; the additional risers, in order to produce the crepé effect, interlace the filling  $\frac{-2}{1} \frac{1}{2} \frac{1}{2}$ . Repeat of weave: 9 x 9.

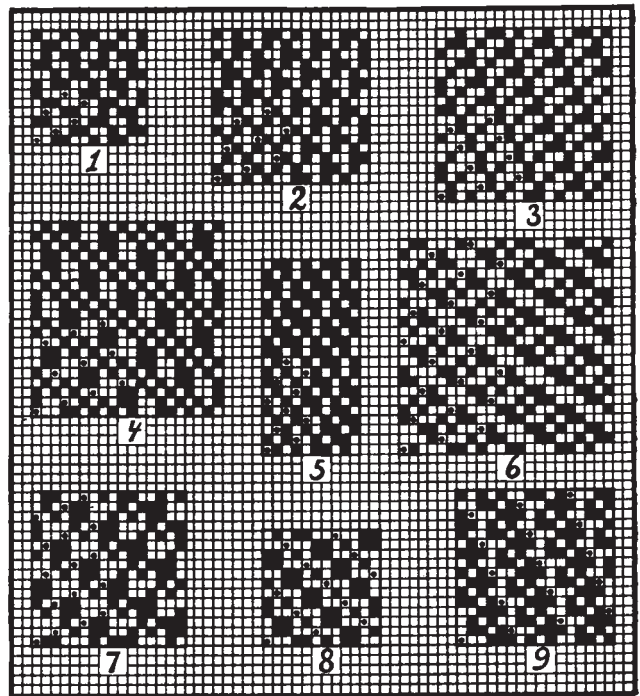
Fig. 4: Foundation, 10-harness satin. In the construction of the crepé weave from it, the interlacing of the filling, starting with the original satin spot is  $\frac{-1}{2} \frac{2}{1} \frac{1}{1} \frac{1}{1}$ ; counting for all uneven number of picks from left to right and for all even number of picks in the opposite direction. Repeat of weave: 10 x 10. The same arrangement was observed in the construction of weave.

Fig. 5, which has for its foundation the 5-harness satin. Since 5 is not evenly divisible by 2, the repeat of the foundation weave with reference to picks had to be doubled, interlacing all the picks  $\frac{-2}{1} \frac{1}{1}$ ; counting-off all the uneven picks from left to right and all

the even picks from right to left of the foundation spot—the 5-harness satin. Repeat of weave 5 x 10.

Fig. 6 has for its foundation the 11-harness satin, treated similar as the preceding example, interlacing  $\frac{-2}{3} \frac{2}{1} \frac{1}{2}$ . Repeat of weave 11 x 22.

Fig. 7 has for its foundation the 8 x 16 double satin, the crepé weave effect being produced by adding a figure effect, regularly distributed, between two satin points. When adding the latter, in order to produce pleasing effects, care must be taken that their warp and filling floats balance. 3, in our example is the



largest float for every warp-thread and pick. Repeat of weave 8 x 16.

Fig. 8 has for its foundation the 12-harness satin. The double twill effects in the satin, by means of adding one riser to every spot of the satin is changed into a solid twill, which, in turn is broken up by adding one spot of 2 x 2 basket to every spot of the foundation satin. Repeat of weave 12 x 12. In a similar way, weave

Fig. 9 is constructed from the 16-harness satin.

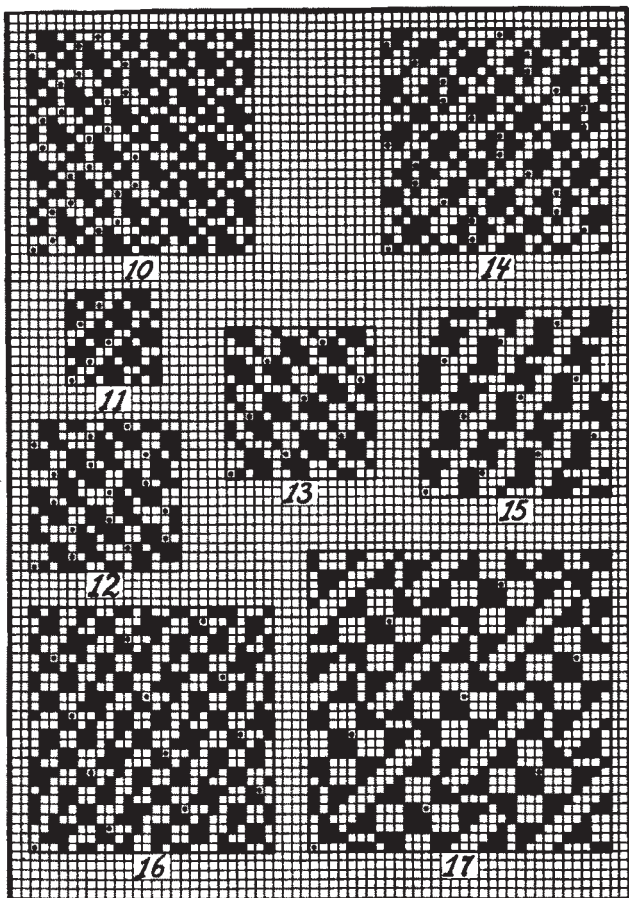
Weave Fig. 10 has for its foundation the 12 x 24 double satin, producing a crepé weave of corresponding repeat.

In connection with weave Fig. 11, the 5-harness satin is used for foundation, considering every other pick for the crepé weave plan only so as to get more space on the point paper for introducing a well balanced suitable small figure effect.

Weave Fig. 12 has for its foundation the 8 x 16 double satin, using the latter for every other vertical row of squares of the crepé weave plan only, producing in turn, by adding the proper small figure effect between the original satin spots, a crepé weave repeating on 16 x 16.

Weave Fig. 13 has for its foundation the 8-harness satin, using every other warp-thread and pick in the plan of the crepé weave only. Repeat 16 x 16

Fig. 14 shows us a crepé weave repeating on 24 x 24, having for its foundation the 8-harness double



satin, whose counter 3 first by adding one repeat (8) was raised to 11; this number was then divided into 3, 4 and 4, resulting in a double satin, repeating on 8 warp-threads and 24 picks. In order to balance the effect of the resulting crepé weave, *i. e.*, have repeat of warp and filling the same; we used only every third row of warp squares on the crepé weave plan for inserting the foundation satin.

Weave Fig. 15 has for its foundation the 10-harness satin. Using the latter for every other warp-thread and pick in the construction of the crepé weave, results in a repeat for the latter of 20 x 20.

Weave Fig. 16 shows the treatment of the 13-harness satin, resulting in a crepé weave repeating on 26 x 26.

Crepé weave Fig. 17, repeating on 32 x 32, has for its foundation the 8-harness satin, using every fourth warp-thread and pick only of the crepé weave plan for said foundation satin.

(To be continued.)

### PILE FABRICS PRODUCED BY AN EXTRA WARP.

Two kinds of warps are necessary to the production of these fabrics. One warp, the *ground-warp*, produces, with the filling, the ground or body of the fabric, while a second warp, known as the *pile-warp*, produces the face of the cloth.

In any warp-pile fabric, from the common velvet to the most complicated Astrakan cloth, Brussels, Wilton or tapestry carpet, the method of entwining the ground structure is of a very simple character (either common plain, basket, or a twill of short repeat), while the interlacing of the pile-warp into the ground cloth is of a more complicated nature.

In all warp-pile fabrics two methods of producing the pile are essential. Either the pile is left uncut, which is technically known as the *terry pile*, or the pile is cut, known technically as the *velvet pile*.

In addition to these two principles for producing the warp-pile, an endless variety of effects and combinations are produced by using various color combinations for each kind, again varying the height of the pile, combining cut and uncut (velvet and terry effects) pile for forming additional designs in one fabric, etc., etc.

Ground-warp and pile-warp are independent in their operation on the loom, therefore each must be wound on a separate beam, since a different tension and let-off is required for each.

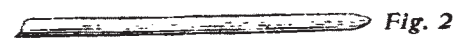
In fabrics of a fancy character one beam for the pile-warp will not be sufficient, and the number must be increased for some fabrics to a great extent, in fact in such fabrics as Brussels or Wilton carpets it must be increased to one miniature beam for each individual pile warp-thread.

#### Structure of Warp Pile Fabrics.

Warp-pile fabrics are constructed by raising the pile-warps from the ground cloth over a wire and then interlacing the same into the cloth again. The entire pile-warp may be raised over the wire on a pick, or part of it only. In every case we must be careful to arrange the binding so as to secure the pile proper to the ground cloth. In case we want to raise only a part of the pile-warp at one pick we must, in addition to the binding, arrange the distribution according to the effect required.

#### Terry and Velvet Pile.

In all warp-pile fabrics the same kind of warp yarn may be employed to produce the pile for either the terry or the velvet effect; but it will be necessary to



use different wires if the fabric is to be woven on a power loom. The terry pile is produced by using a plain wire, as illustrated in Fig. 1, which, when drawn out, leaves the loop intact.

If velvet pile is desired, we must use wires of a style similar to that illustrated in Fig. 2, being a wire which has a knife attached to its extreme end. This