# Posselt's Textile Journal

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## DESIGNING AND FABRIC STRUCTURE.

### Double Faced Satins.

The same are a most important system of weaves for the manufacturer of ribbons, and narrow as well as broad silk goods, for which reason a description of their construction will be of interest.

As the name indicates, the object aimed at is to construct weaves which will show a different color on either side of the fabric, either side of which may be considered as face.

To accomplish this, requires the use of two systems of warp, *i. e.* a separate warp for either side of the fabric. Only one system of filling is used, the same interlacing with both systems of warp, not visible on either side of the fabric.

The arrangement of the two systems of warp to each other is 1 : 1.

The weaves mostly used are our 4, 5, 6, 7 and 8-leaf satins.

To illustrate the construction of these fabrics, weaves Figs. 1 to 16 are given, the same comprising what we might call a complete collection of the most frequently met with double faced satins.

Fig. 1 is the 4-harness broken twill, also known as the little crow-foot twill, or the 4-leaf satin warp effect.

Fig. 2 is the same weave, filling effect.

Weave Fig. 1 is to form one side of the fabric (the face in this instance) and weave Fig. 2 the other side of the fabric (the back in this instance).

Fig. 3 shows the combination of weaves Figs. 1 and 2 into a double faced satin of the smallest repeat possible to be produced, viz: 8 warp threads and 4 picks. *Full* type (as taken from weave Fig. 1) indicates the interlacing of the face warp and *cross* type (as taken from weave Fig. 2) that of the back warp. Repeat of weave: 8 warp threads and 4 picks. Three repeats of the weave each way are given.

RULE for constructing these double faced satins:

(*a*) Indicate face and back warp threads on point paper.

(*b*) Ascertain, select or indicate the two satin weaves to be combined; designate one as face, the other as back weave.

(*c*) Place face weave on the warp threads reserved for this purpose on the point paper.

(*d*) Place back weave on the warp threads reserved for this purpose on the point paper, being careful to place the risers of this back weave so that in every instance they will have a riser of the face warp on either side, in order to hide this place of interlacing of the back warp. Be also sure that every sinker of the face weave has a sinker of the back weave on either side, in order to hide the interlacing of the face warp on the back of the fabric.

Observing these rules will result in a clear face on either side of the fabric.

Considering weaves Figs. 3, 6, 9, 12, 15 and 16, all uneven numbers of warp threads, have been designated as face, all even numbers as back. The face weave is shown in every example by *full* type, the back weave by *cross* type, except in weave Fig. 16, where the back weave is indicated by *dot* type.

Fig. 4 is the 5-leaf satin warp effect.

Fig. 5 is the 5-leaf satin filling effect.

Fig. 6 is the double faced satin obtained by combining weaves Figs. 4 and 5; repeat 10 warp threads and 5 picks.

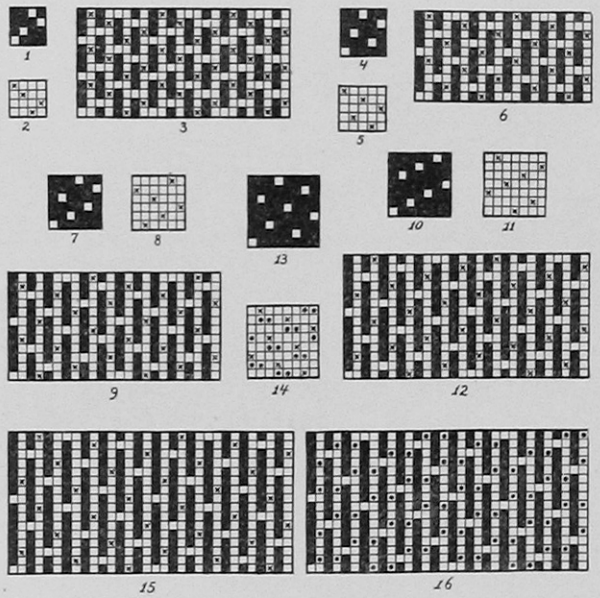



Fig. 7 is the 6-leaf satin, frequently called the crow foot twill warp effect.

Fig. 8 is its corresponding filling effect.

Fig. 9 is the double faced satin obtained by combining weaves Figs. 7 and 8; repeat 12 warp threads and 6 picks.

Fig. 10 is the 7-leaf satin warp effect.

Fig. 11 is the 7-leaf satin filling effect.

Fig. 12 is the double-faced satin obtained by combining weaves Figs. 10 and 11; repeat 14 warp threads and 7 picks.

Fig. 13 is the 8-leaf satin warp effect.

Fig. 14 shows two weaves; considering only *cross* type for risers = 8-leaf satin filling effect, considering only *dot* type for risers = 8-leaf double satin.

Fig. 15 is a double faced satin, obtained by combining weaves Figs. 13 and 14 (take *cross* type in Fig. 14); repeat 16 warp threads and 8 picks.

Fig. 16 is a modification of Fig. 15, being the

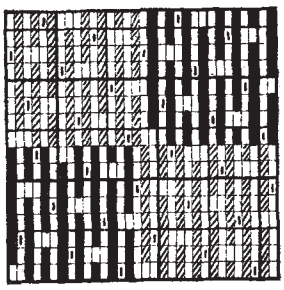
double faced satin, obtained by combining weaves Figs. 13 and 14 (take *dot* type in Fig. 14); repeat 16 warp threads and 8 picks.

**Figuring with Double Faced Satins.**

With proper color combinations, double faced satins may be used (by means of exchanging the effects) for producing figured effects. Figs. 17 to 20 explain how to proceed.

Fig. 17 illustrates figuring, after the plain motive (checkerboard effect) with the 5-leaf double faced satin as a basis.

Only one repeat of either effect is used, in order to keep diagram to its lowest possible dimensions on



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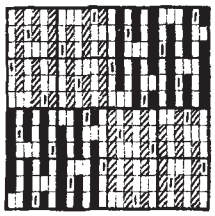

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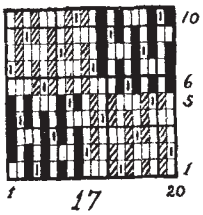


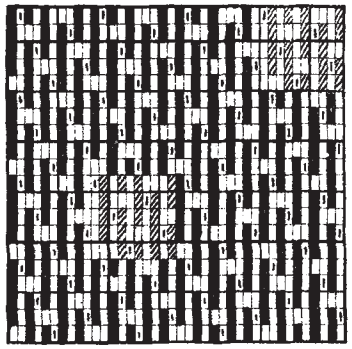

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the point paper; using more ends for either effect requires only a corresponding number of repeats, both warp and filling ways, of each effect.

To more readily explain subject, we have shown the two systems of warp in two colors, viz:

Color 1, *full* type.

Color 2, *shaded* type.

*Dot* type indicates where the respective back warp threads interlace into the face warp; indicated uniform for both colors.

Warp threads 1 to 10 in conjunction with picks 1 to 5 produce color 1 on face and color 2 on back of fabric.

Warp threads 11 to 20 in conjunction with picks 6 to 10 produce similarly color 1 on face and color 2 on back of fabric.

Warp threads 11 to 20 in conjunction with picks 1 to 5 produce color 2 on face and color 1 on back of fabric.

Warp threads 1 to 10 in conjunction with picks 6 to 10 produce color 2 on face and color 1 on back of fabric.

*Dressing* of warp to be:

1 end color 1
1 " " 2 } 5 times

1 end color 2
1 " " 1 } 5 times

Repeat of pattern 20 by 10, with 10 by 5 for each square of the checkerboard.

Fig. 18 illustrates a double faced satin, checkerboard effect, having the 6-leaf satin for its basis. Repeat 24 by 12.

Fig. 19 illustrates a double faced satin, checkerboard effect, having the 8-leaf satin for its basis. Repeat 32 by 16.

The same as was mentioned in connection with weave Fig. 17, only one repeat of each effect has been used with weaves Figs. 18 and 19, larger effects in the loom calling for a corresponding number of repeats to each effect, both warp and filling ways, previously to changing onto the other effect.

Fig. 20 illustrates figuring by plain setting (spotting) with the 5-leaf double faced satin as basis. Repeat 40 by 20.

The same as in previously given examples, only one repeat of each effect has been used before changing onto the other, in order to keep design to its lowest possible size; larger effects on the loom will call for a corresponding number of repeats of each effect, both warp and filling ways, previously to changing onto the other effect.

The dressing of the warp is uniform throughout the repeat of the weave; 1 end color 1 to alternate with 1 end color 2.

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## RIBBBONS, TRIMMINGS, EDGINGS, ETC.

### Producing Figures in Smooth Ribbons

(*Continued from page 90.*)

Fig. 167 shows us a sketch for a ribbon, calling for two systems of figure warp, and one system of ground warp, in connection with one system of filling. The effect of one system of figure warp is shown in *black* effect, that of the other in *gray* effect. Six repeats of the design are given; the lower portion of the sketch is shown ruled-off by means of dotted lines to correspond to the heavy ruled squares on the point paper design Fig. 168, which shows three repeats.

The same as with previously given example Fig. 165, the ground warp threads are not shown on the point paper design Fig. 168; the two figure warp threads are represented on the same row of squares in a vertical direction, one system in one color (see *full* squares) and the other system in another color (see *gray* squares). The point paper used is 6 : 6, which means that figure warp threads (considering the two systems where they appear on one line as one thread) equal in texture the picks.

Fig. 169 shows the weave formation for design Fig. 168. The ground warp threads are shown by means of *dot* type, the two figure warp threads by means of *full* and *gray* type, respectively.