

TWO WARP

DOUBLE WEAVES

This whole subject could be condensed in a very short statement: use any double-weave pattern for 8, 12, 16, or even more shafts; decide which of the two layers is going to be the ground, and which the raised pattern, and then keep the ground warp at a slightly higher tension than the pattern warp.

There is absolutely nothing new in drafting here, and we shall not even discuss the theory of drafts referring the reader to our previous articles about Double Weaves (MW 6/5, 7/1, 8/5, 9/3, 10/11, 11/7, 29/1, 49/4, 52/12, 56/9).

Perhaps before we go into details we shall visualize the final goal. This is a fabric with fine, hard, and sunk ground preferably in tabby, and with heavier, softer, and raised pattern in tabby if we have only 8 shafts, but better in twill or even satin.

On 10 shafts we may have two-block patterns: ground in tabby, and pattern in 1:2 or 2:1 twill, as in fig.1.

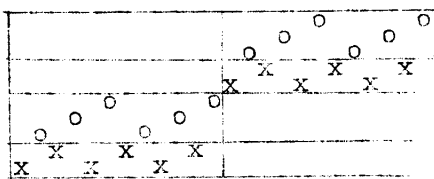


Fig.1

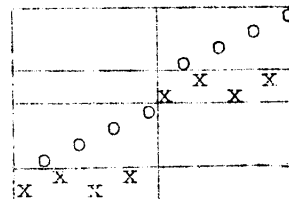


Fig.2

The sett of both warps: x - ground, and o - pattern, is here the same, but since twill requires a higher sett, we may take advantage of this by using heavier and softer yarn for pattern warp.

On 12 shafts we may have 3 blocks of pattern in tabby, or two blocks in tabby and 2:2 twill. In this latter case the twill will be used for pattern, and it may be not only 2:2, but 1:3 or 3:1 as in in fig.2. It may be biased or broken, diamond, or even dornick. Broken 3:1 twill will be the nearest approximation to satin.

On 14 shafts we may have tabby in the ground plus real satin in the pattern, but still only two blocks as in fig.3. Instead of satin we can use for pattern: 1:4, 2:3, 3:2, or 4:1 biased twills. The only difference will be in the tie-up

On 15 shafts we have three blocks of pattern with ground in tabby and pattern in 1:2 or 2:1 twill. Draft as in fig.4.

Sixteen shafts have little advantage over 15. It is true that we can have four blocks of pattern, but both the ground and the pattern must be woven in tabby.

We must go beyond 16 shafts to get three blocks in satin or satinet. Eighteen shafts will give all variations of 4-shaft twill,

satinet included; but it takes 21 shafts for real satin.

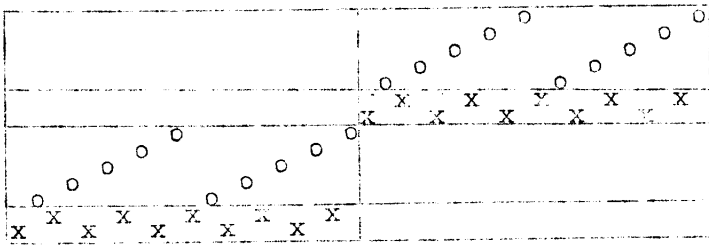


Fig.3

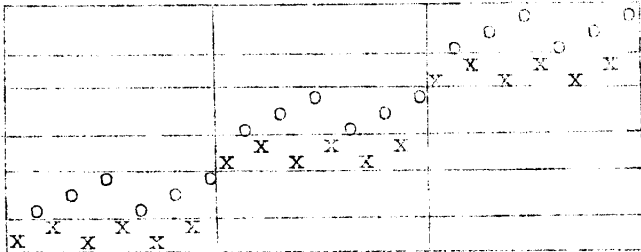


Fig.4

The reader may ask why we do not give tie-ups as well as threading in the above drafts. This is because the tie-up for a particular project depends on the pattern woven. There is here no such thing as standard tie-up, because of the limited number of treadles. We shall deal with this problem in the next article.

In the meantime we shall say a few words about purely technical problems. These are quite independent of drafting. For instance when weaving the ground we are supposed to have not only the warp, but also the weft under a comparatively high tension. And when weaving the pattern, the weft as well as the warp must be slack. Thus the shuttle with the ground weft is thrown as usual, but the pattern weft requires a change in rhythm: the shed is changed before beating, and the pattern shuttle should be thrown at an angle to get more weft in the shed. Since the two wefts alternate singly or in pairs, this is not easy at all.

But what happens to the edges of the fabric under these conditions is anybody's guess until he tries it. They will have a tendency to roll up and down with the changing blocks of pattern. Threading the edges in straight twill may help the weaving, but not necessarily the appearance of the finished fabric.

Another problem which can be solved only by practice is how to maintain the right tensions of both warps. The pattern warp is obviously longer than the ground warp, but how much longer? It is impossible to answer this question without trying - too many factors are involved.

Thus again before attempting any serious project we should first weave a sampler, trying different tensions of both warps, and different ways of handling the two wefts.
