DOUBLE WEAVES

Stitched Layers

There are different reasons for which we may want to have two layers of fabric stitched together. It may be that one layer is used as lining to protect one side of an otherwise weak cloth. Or to reinforce the fabric. Or to make it much heavier.

Since it is impossible to discuss here all the cases when the stitching is applied, we shall take one example from each of the above groups.

Lining. There are quite a number of pattern weaves which have long floats on the back of the fabric. If these are cut, there is a danger that the pattern weft (or warp) may be pulled out. If they are left they look unsightly, and they still may be pulled out. The best solution then is to cover them with another fabric stitched to the first one at long intervals.

A typical case is swivel weave in several colours. Let us take to start with the draft on fig.1. Here the treadling is always

1, 2, 3, 4 with always the same colour on treadle 4, and different colours on other treadles according to the pattern woven. On the back side we have a mass of long

floats (2/3 of the pattern weft is wasted here in floats). To cover them we need a tabby backing occasionally stitched to the front. If it has the same count of cloth as the front - the two drafts will alternate all the time, as in fig. 2.

The two lower heddle-frames carry the lining, the upper four - the pattern fabric. But in such a draft we cannot get any regular stitching since none of the frames has properly spaced heddles. Thus we have to introduce one additional frame just for stitching. This is frame 3 in fig. 3:

Here the treadles 1 and 2 weave the lining, and 3 to 6 - the pattern fabric. Treadle 7 is used occasionally instead of tr.6 to stitch both layers. The treadling may be: 1324152613241527.

Reinforcing. When we want a stronger fabric, the stitching must be closer, and since it probably will show on, or through the uppor layer, it must be planned more carefully than in the case of plain lining.

Let us suppose that we weave a very open basket fabric - so open that it would not hold together without a background. Let us make the basket - old gold, and the ground - black. Here the count of the lower layer will be much higher than of the basket weave. We shall need two stitching frames to alternate the stitching and to avoid thus making rows of stitches which would be visible. The upper layer requires two frames, and the lower - four. Six in all. The complete draft is shown on fig.4.

Treadles 1 and 2 weave the tabby ground or lower layer. Treadles 3 and 4 weave the basket. Finally treadle 5 is used instead of 3, and 6 instead of 4 for stitching. The treadling will be: 1 2 1 2 3 1 2 1 2 5 1 2 1 2 4 1 2 1 2 6. Black weft on 1 and 2, gold on 3, 4, 5, and 6.

This is not the only way of stitching. As we explained in the 7-th issue of MW (Drafts for double weaves), any change in the original tie-up for independent layers (fig. 5 in our case) made either in the "empty" corner or in the "full" corner will result in stitching. These two corners (lower left, and upper right on fig. 5) have ties which serve to separate the two layers.

For instance treadles marked S in the tie-up on fig.6 can be used for stitching, and we could add these two treadles to our tie-up on fig.4.

Quilting. To increase the thickness of a fabric, we may not only double it, but insert a padding between the two layers. This is the case of Quilt Weaves. The simplest weave of this kind can be made on 4 frames (fig.7).

padding (called wadding). Treadling goes as follows: 3 4 1 3 5 2 6. Fine weft on 3, 4, 5, heavy on 1 and 2, and very heavy on 6.

The stitching may form a pattern. With 6 heddle-frames diamond patterns are quite easy to make. In fig.8 we have a draft for such pattern.

Complete treadling, without wadding which may be used as often as required: 1 3 4 2 3 5 1 3 6 2 3 7 1 3 4 2 3 7 1 3 6 2 3 5. In the above examples the two layers have been of a different count. They can be of the same count, and even of the same yarn, provided that the draft is changed accordingly.

Another case of quilting is a fabric with two identical layers penetrating each other (but not stitched) so that the lower layer becomes the upper one and vice versa. For instance (fig.9):

The treadles 1 to 4 weave the fabric in one position, and 5 to 8 in the reversed position. Thus for instance we can weave on tr. 1-4 for a quarter of an inch, then open the shod 9 for wadding, continue weaving on tr. 5-8, then again insert heavy weft in shed 9, and start from the beginning.

A similar fabric can be made with layers staying always on the same side but with a row of stitching joining them in the horizontal direction from time to time:

Treadles 3 to 6 weave two separate fabrics. Treadle 1 serves to stitch them together, and treadle 2 - to fill them with wadding. An example of treadling: 3 4 5 6 3 4 5 6 3 4 5 6 2 1. In this case as well as in the last one the fabric will be heavily ribbed.

As a practical project in this line we may take a heavy couch cover. The lower layer will be of woven in 2/12 cotton, the upper 2/4 wool (about 1100 yards per 1b). The wadding may be the same wool doubled. The sett for cotton 24 ends per inch, for wool 12 ends per inch. If the size of the cover is about 2 by 3 yards we shall need a little more than one pound of cotton, and about $2\frac{1}{2}$ pounds of wool for the warp. The same amount of cotton for the weft, and up to 4 lbs of wool. In all the couch cover will weigh up to 9 pounds.

We shall use the draft on fig.7. The treadling may be the one given with the draft, or for lighter fabric: 3 4 1 3 4 2 3 4 1 3 4 2 6.

The problem in such cases is always the reed. No.12 should be the best - it will be slayed with 2 ends of cotton and 1 end of wool per dent. Should there be still too much friction in the reed (and this depends to a large extent from the wool used) we may try No.8 - 3 cottons and alternately 1 or 2 wool ends in one dent. As a rule very open reeds should be used with all double we aves.
