

## WHAT TO DO WITH TOO MANY FRAMES?

By "too many frames" we mean more than the weaver really needs. There are many photographers who buy expensive cameras convinced, that they will make better pictures that way. There are many weavers, who buy multi-harness looms to become "advanced". Then they often discover that they are stuck, and that they cannot use more than four frames anyhow.

On the other hand there are very advanced weavers who had never worked with more than 4 frames, and some only with two.

Then what are the multiharness looms for? How many frames one should have and use? What can be done with a small number of frames?

The last question is the easiest to answer, and it partly covers the other two. Here is the list of weaves which can be produced on two frames: 1. Tabby, 2. Colour patterns in tabby (see MW 5), 3. Stripes and plaids, 4. Basket, 5. Corded fabrics (two-block patterns in rep weave), 6) Turned-rep (two-block patterns in weft), alone or in combination with 5, 7. Locked Weft (Clasped Wefts - MW 4), 8. Chenille rugs (twice woven), 9. Texture weaves, 10. Nearly all free weaves, tapestry, knotted rugs, etc., 11. Lappet Weave.

Two heddle-frames plus a pattern harness hung in front (MW.7) give such additional weaves as: 1. Paper Spots, 2. Plain Spot Weave, 3. All-Over Spot, 4. Lace, 5. Swivel, 6. Embroidery Weave (Dukagang).

We can skip the three frames, since there are practically no looms on the market so equipped. But the list of weaves which can be done on four frames is too long to be printed here. It may take a lifetime to explore all the possibilities of a four-frame loom. Just to mention a few techniques not usually associated with 4 frames: turned overshot (borders on all sides), dropped tabby (plain and turned), single block summer-and-winter, turned lace (both spot, and huck), three-colour swivel, patterns in velvet weave, crossed warp (pickets and riddles), two-block patterns in stitched double weave, cancellé (diagonal floats), quilt weaves.

Then what weaves require more than 4 frames?

The only basic weave which cannot be woven on 4 frames is satin (the nearest to it is satinet or brocken 1:3 twill). The simplest satin can be done on 5 frames, but 2 or 3 more frames will be required for selvages, which makes it an 8 frame weave.

Turned twills (dimity, dornick, damask) require at least 6 frames (turned 1:2 twill), 8 for dornick, 10 for damask. For more than two block patterns we shall have 9, 12, 15 and even more frames.

Double Weaves proper (i.e. with at least a two-block pattern) need 8 frames for plain tabby, and 12 for the simplest twill.

Quilt weaves with pattern in stitching can be woven on 6 or more heddle-frames.

Compound weaves, or rather compound drafts require quite a number of frames, sometimes astonishingly large number. Such a combination as tabby and satin woven in horizontal stripes asks for 10 frames, and if the stripes go in both directions - 12 frames.

Then all simple pattern weaves ask for more frames if the pattern becomes more involved. Thus diamond twill, overshot, summer-and-winter, swivel, spot-lace, huck-lace, plain spot, and paper-spot weaves can be woven on any number of frames.

Thus any of the above mentioned weaves is a solution of our problem. However if, as we supposed at the start, the weaver is not very experienced, and couldnot design fabrics in technically difficult weaves such as double cloth, satins, damasks, there is still the last described group of simple pattern weaves with a large number of blocks - which are comparatively easy to make.

When in the "higher" weaves the success depends not only on the proper drafting, but as well on the proper selection of yarn, sett of warp, number of reed etc, with simple pattern weaves the only difficulty is in drafting. Other factors remain the same whether we make a two-block or a ten-block pattern. Thus anybody who can weave and understand summer-and-winter woven on 4 frames, can do the same with 8 frames. The "difficulty" in drafting is usually limited to the tie-up, which only too often requires too many treadles. The direct tie-up is not always the answer, and the only solution is the combination of direct and compound tie-ups.

The pattern weaves which are the easiest to weave, even with a large number of frames are: crackle on S+W threadings, all kinds of spot weaves, swivel, huckaback and its derivates, overshot (plain and on opposites), and pattern twills.

We shall give one example of each of these weaves for an eight-frame loom with 10 treadles.

Summer-and-Winter woven as crackle requires only one treadle per block of pattern, or combination of blocks. Fig.1 shows an example of pattern which can be woven on 8 frames and 8 treadles.

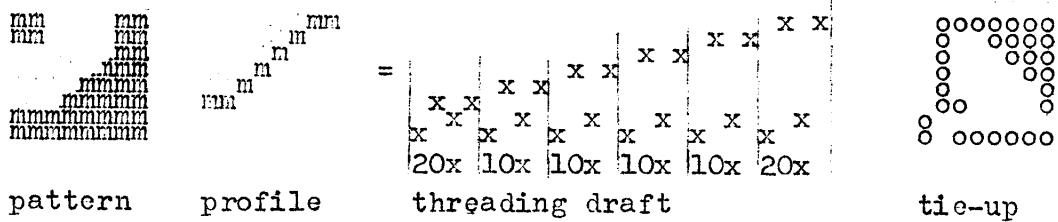


Fig.1

Plain Spot Weave will give a similar effect to multiblock crackle and may even have the same length of floats. The number of blocks will be one more than in the former case, but the blocks cannot be combined (fig.2) into larger ones except by skipping one block between each two to be woven simultaneously. For instance we can weave 1+3 or 4+6, or even 3+5+7.

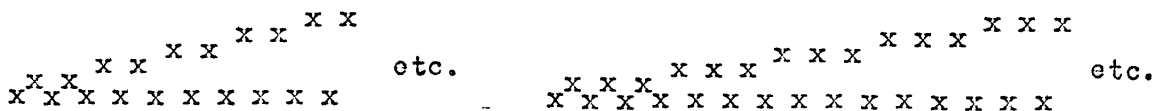
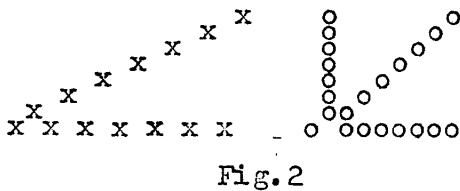


Fig.3

The same tie-up as in fig.2 can be used for floats of 5 or 7 (fig.3) Combinations of floats of different length may be used in the same piece of weaving (fig.4), and 2 or 3 blocks may be woven simultaneously on the condition that they do not overlap (fig.5).

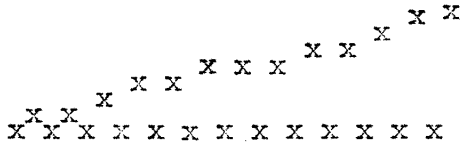


Fig.4

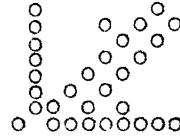


Fig.5

Spot weave with tabby in the borders or between blocks of pattern requires two frames for the ground, and consequently gives only 6 blocks of pattern on 8 frames. The blocks can be combined here without any restrictions. Again the floats can be of any reasonable length, and the pattern can be either in spots (fig.6), cover the whole fabric (all-over spots), or give the lace effect by repetition of blocks (fig.7).

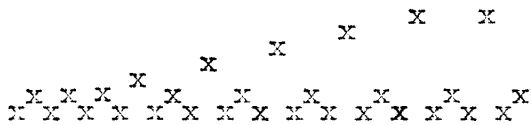


Fig.6

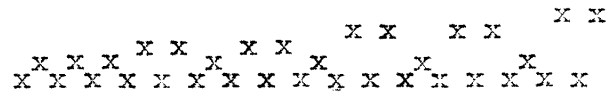


Fig.7

Paper Spots will give only 3 blocks of pattern on 8 frames (compare the article on Dropped Weaves in the 10th issue of MW). An example of this weave is shown in fig.8.

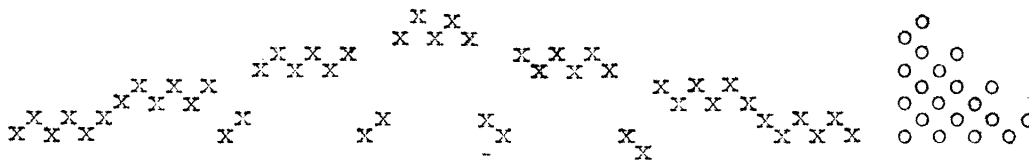


Fig.8

Swivel belongs to the same group of weaves (see MW No.1 "Spot Weaves"). It will give 6 blocks of pattern plus ground with 8 frames. The blocks can be combined (fig.9).

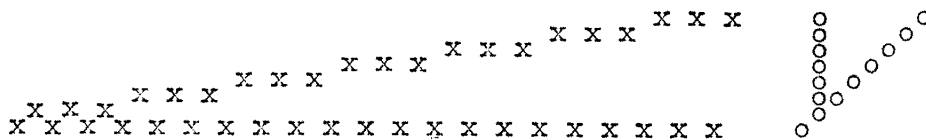


Fig.9

Huckaback takes two frames for the ground, and two for each block of pattern. The same draft with different tie-ups will give either plain huck, or huck-lace. For other derivatives of huck additional two frames will be required. The draft in fig.10 is for 10x10 huckaback, but the same tie-up may be used for 6x6 or 14x14 huckaback.

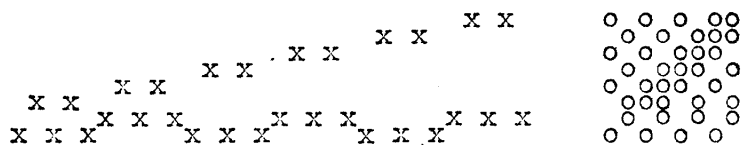


Fig.10

Overshot will give 8 blocks with 8 frames, or only 4 blocks if the draft is written on opposits. In both cases there is a problem how to avoid long floats on the back of the fabric. These must be stitched to the fabric by additional ties (see fig.11, and 12).

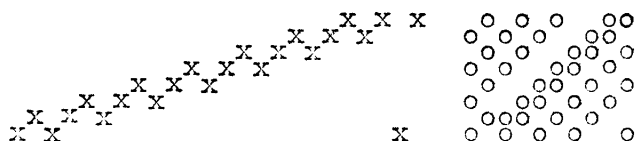


Fig.11.

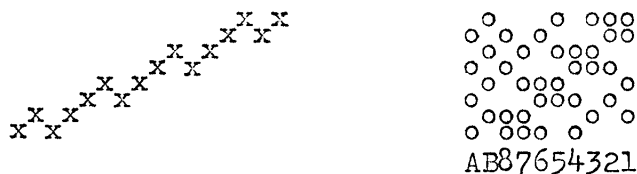


Fig.12

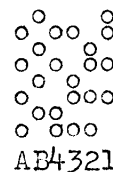


Fig.13

AB87654321

AB4321

In fig.12 treadles 1 and 2, 3 and 4, 5 and 6, 7 and 8 weave the same blocks, but they should be alternated to avoid diagonals in the half tones. So the treadling would be: 1212343456567878 with the binder on A and B between the shots of pattern. This principle cannot be applied to fig.11 without using as many treadles as 18. If the shadows in the background are not particularly objectionable a simpler tie-up shown in fig.13 can be used.

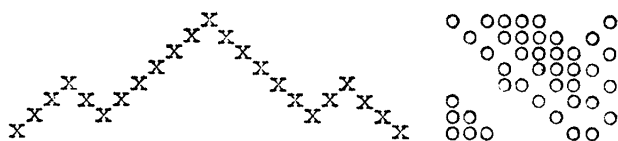


Fig.14

Diamond Twills, or fancy, or pattern twills are not difficult to weave and even to design, if they are woven with a binder. Otherwise the designing is not easy at all, since the properties of the fabric depend on the pattern used.

It is not enough to avoid long floats in the pattern. Even reasonably short floats of different length may produce uneven tension in warp, and thus wrinkles or crêpe effect. Binder helps to get a more uniform texture. Eight block twills can be woven on 8 frames, and 10 treadles (Fig.14).

If we limit our first experiments to the weaves described above, and thus get familiar with a multi-harness loom, we shall find it much easier later on to work with "higher" weaves, which could not be produced on a smaller number of frames.

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