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FULL SWIVEL

All variations of the Swivel Weave have one characteristic in common: the colour appears always in one shed of tabby, when the other shed must be considered as ground or binder. The only exception is Overshot woven-as-drawn-in in Swivel effect.

A much better contrast between pattern and ground could be achieved if both tabby sheds were used to carry the pattern weft. Fig.1 shows the difference: in A we have single-shed Swivel, and in B - the Full Swivel.

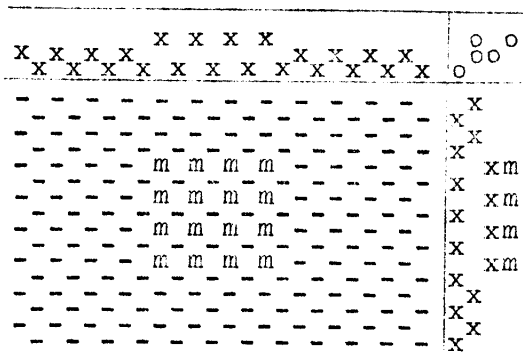


Fig.1 A

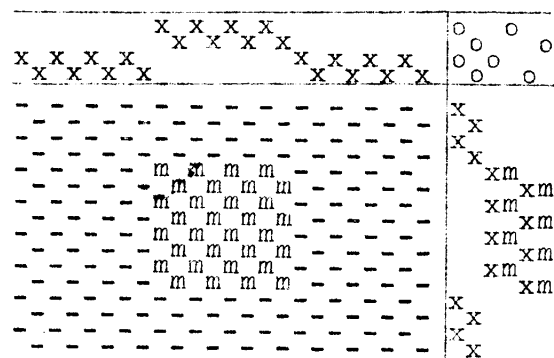


Fig.1 B

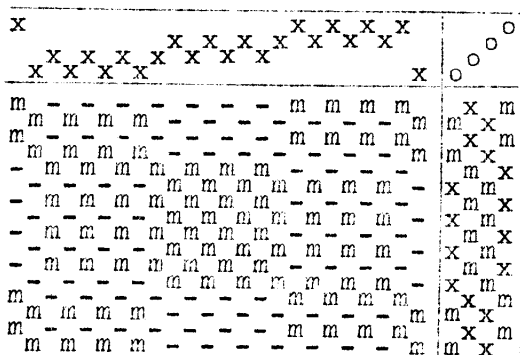


Fig.2

In the latter twice as many squares of colour ("m") cover the same area as in fig.1 A, which of course gives a bolder and clearer pattern. We have a similar situation in case of overshot woven as swivel (fig.2). The central block of pattern is in all respects identical with the block in fig. 1 B,

but we cannot have this block on plain background: there are half-tones, and other blocks of pattern.

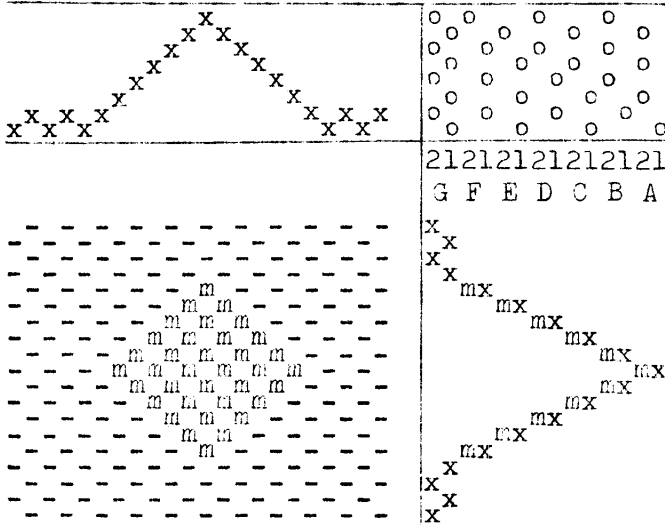


Fig.3

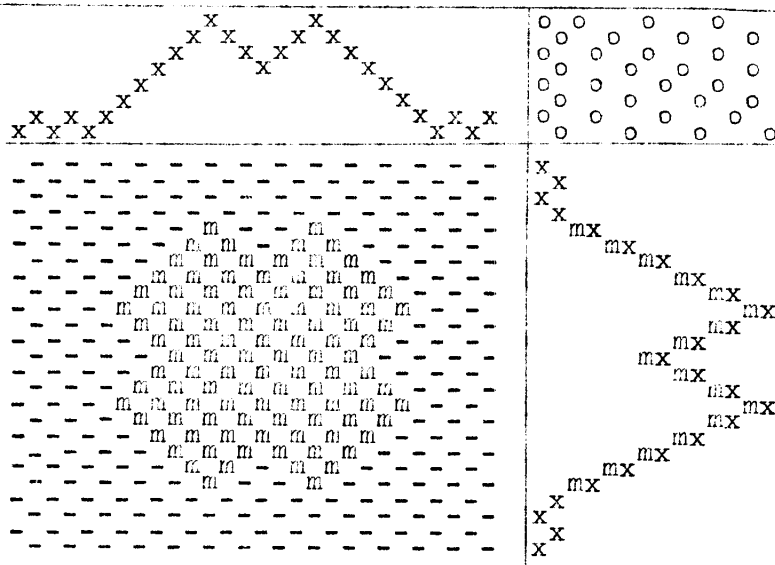


Fig.4

Actually there is very little we can do with this technique on four shafts. The blocks must be either square or rectangular, and very small. This is because with larger blocks we shall have slits along the vertical sides of each block. These slits will become holes if we cut the floats at the back. If we do not cut

the floats, and keep the fabric flat and stretched, the slits will not show.

The only practical application of Full Swivel on four shafts we can think of is described in the first Practical Project at the end of this article.

The situation is completely different

with a higher number of shafts. To avoid the slits we must use patterns of the diamond type, that is outlined by diagonals rather than by horizontal and vertical lines. Fig.3 shows a small diamond woven on 8 shafts. It is small indeed, but it shows how the Full Swivel is constructed on any number of shafts. The threading is simple, and corresponds closely to the shape of the pattern; compare figs.: 1B, 3, and 4. The tie-up is divided into pairs of treadles. The pair G

is plain ground without any pattern. The pair F gives just one single dot of colour, followed by the remaining tabby of the same shed. The pair E has two such dots plus ground, etc. Each pair gives just one shed of tabby. Thus if we press both treadles: F2 and F1, the effect is the same as if we pressed treadle G2; and treadles E2 plus E1 are the same as treadle G1. This goes for all remaining pairs.

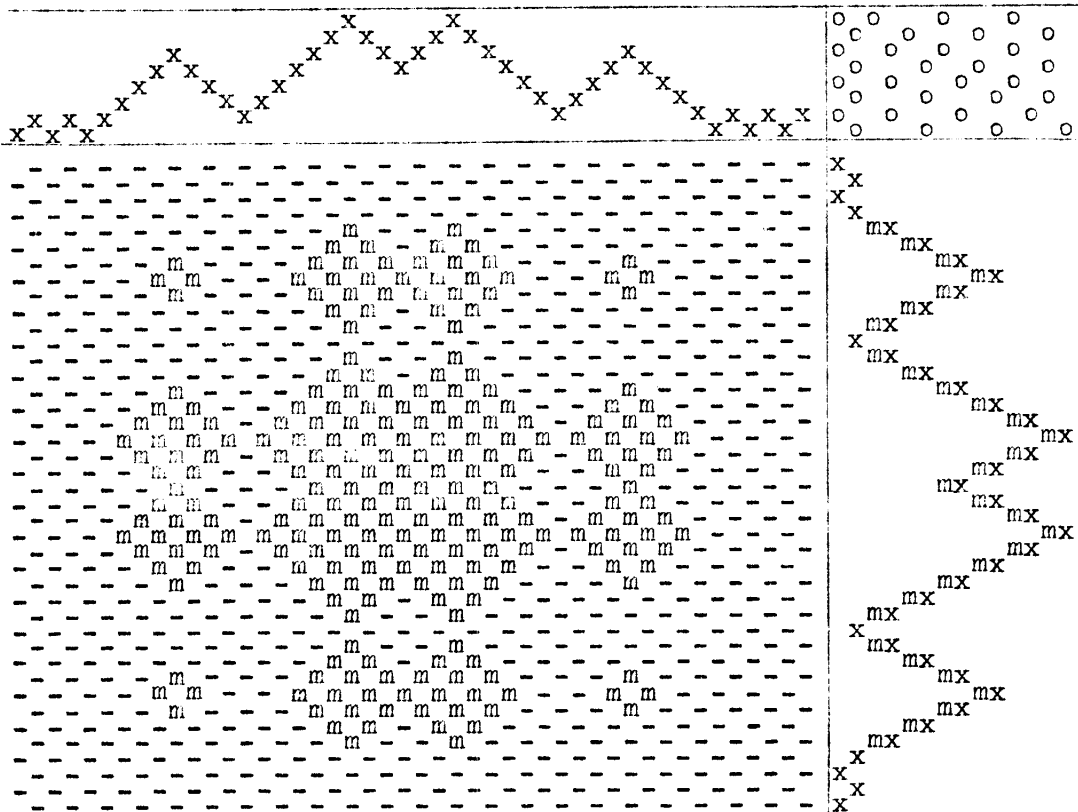


Fig.5

Larger patterns on the same number of shafts can be woven as in fig.4. There is no limit as to their size and shape (fig.5). The tie-up with 8 shafts remains always the same, and the treadling follows the threading if we consider each pair of pattern treadles (A to F) as one element of treadling.

But the tie-up is still a problem. Fourteen treadles are not common with an 8-shaft loom. If we have 12 treadles there is not much to worry about. We simply eliminate the tabby treadles (G), and when plain ground is required we press two treadles at a time: for instance F for one shed of the tabby, and E for the other. But if we have only 8 or 10 treadles the situation is serious.

Here we must use a skeleton tie-up, and compound treadling, that is pressing two, three or even four treadles at a time. This skeleton tie-up is shown in fig.6 A. It applies to a loom with only

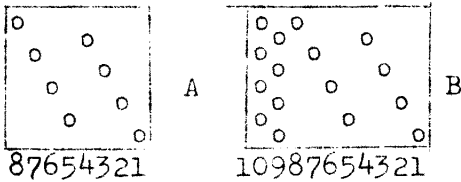


Fig.6

8 treadles. With 10 treadles we can have a better tie-up as in fig.5 B. Here, besides the skeleton tie-up we have two tabby treadles (9, 10), which make weaving much easier particularly when small patterns are woven on a predominant tabby ground.

The conversion table from the tie-up in fig.3, 4, and 5 to the skeleton tie-up in fig.6 is as follows:

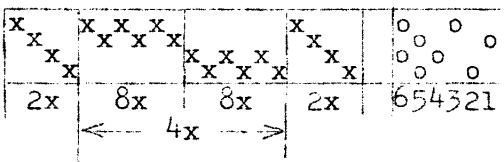
A 1 = 1	D 2 = 7+8
A 2 = 2+3+4	E 1 = 1+2+3
B 1 = 2	E 2 = 4
B 2 = 6+7+8	F 1 = 5+6+7
C 1 = 1+2	F 2 = 8
C 2 = 3+4	G 1 = 1+2+3+4
D 1 = 5+6	G 2 = 5+6+7+8

It is impossible to describe in a short article Full Swivel woven on 10, 12, or 16 shafts. There are too many different variations. But the principle remains the same: the same type of threading drafts and tie-ups.

PRACTICAL PROJECT for four shafts.

A Chess-board 12" x 12".

Warp: 14 single, or 30/2 linen, natural. Sett: 30 ends per inch.
No. of ends: 400. Reed No.15; 2 ends per dent.



Weft: No.14 or 30/2 linen
L - bleached,
D - any dark colour.

Treadling: (treadles 5, & 6 are used only for hems)

4D 3L 2D 1L 4L 3D 2L 1D - twice;
4D 3L 2D 1L - 24 times; 4L 3D 2L 1D - 24 times; this group 4 times;
4D 3L 2D 1L 4L 3D 2L 1D - twice.

