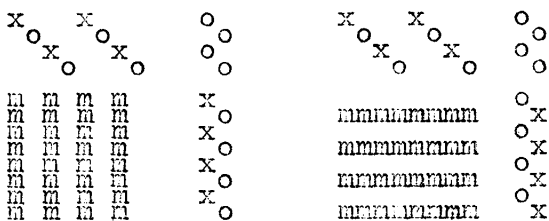


# COLOURS IN SIMPLE WEAVES

Introduction of colours both in weft and warp produces often quite unexpected results. It can give new possibilities to weaving techniques, because in many cases it increases the number of pattern blocks which can be woven with a given number of heddle-frames.

For instance plain tabby does not give any pattern, unless stripes both in warp and weft combine to form a plaid, or tartan. But by alternating two colours both in warp and weft we can get fine stripes which will run either horizontally or vertically (fig.1)

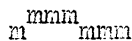


Thus we can weave two-block patterns where one block will have horizontal and the other vertical stripes.

Any summer-and-winter pattern for 4 frames may be transcribed into tabby in this way. All we have to do is to replace one unit of S+W

Fig.1  
x - one colour, o - another colour; if x = black, and o = white, then in the draw-down "m" is black.

with  $x_o$ , and the other with:  $o_x$ . For instance fig.2 is a transcription of a profile:



Whenever two units meet, they should be spaced with the same colour. In fig.2 at "a" it was white (o), consequently we had to correct one unit at "b" from xoxo into ooxo. Otherwise the two blocks of pattern would meet with two black heddles, and the pattern would be unbalanced.

To get good results, one should weave a 50-50 tabby, weft and warp of the same yarn and grist. But the contrast between the two colours does not need to be very great. Natural and bleached linen, or beige and white cotton will give quite a satisfactory effect.

When making draw-downs in colours we start by marking out (with pencil) the position of weft. Then we fill the colours in weft as indicated by the treadling draft, leaving the whites empty except for the pencil marks which indicate that the space belongs to the weft. Then we fill with colours all unfilled, and unmarked spaces, working now in the vertical direction along the warp ends. Their colours are marked in the threading draft.

If the draft does not contain any white, then the draw-down is even simpler. We start with weft filling it with proper colours without marking it out first. Then we fill the warp spaces. It is

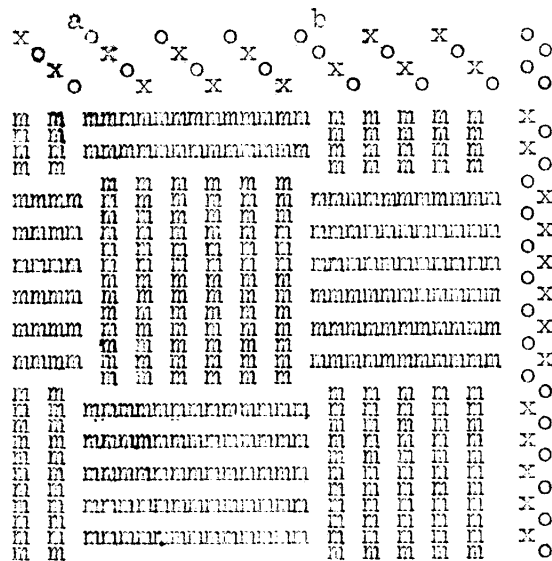


Fig.2.

advisable to keep in mind that such a draw-down does not show the texture of the fabric but only the colour effect. Should the texture be required as well, another draw-down in white and black must be made.

The same principle which worked with tabby will work with basket weaves as well. Let us take as an example a 3:3 basket (fig.3).

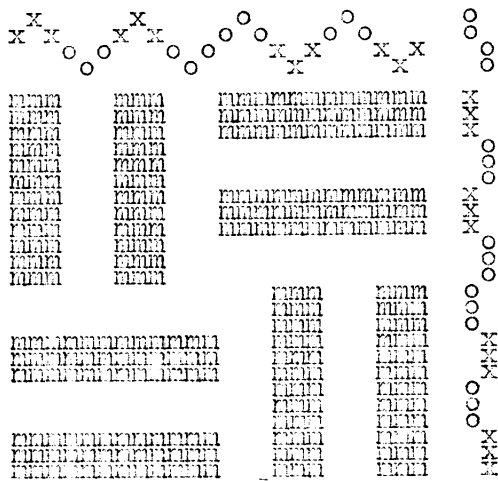


Fig. 3

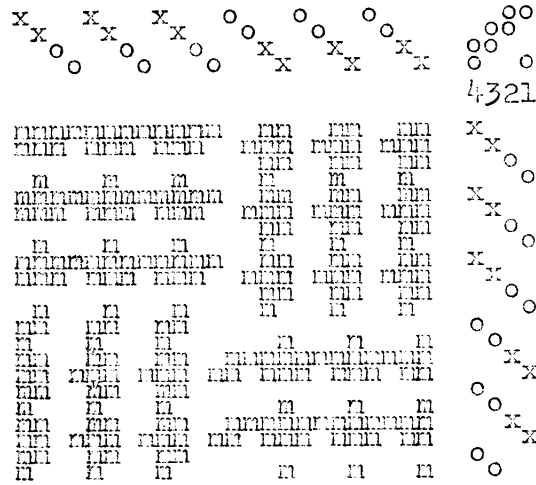


Fig. 4

As it was to be expected the lines in case of basket are much heavier. Twill (fig.4) gives similar effect but the lines are blurred. And again any two-block pattern can be transcribed into twill, by replacing one block with "xxxo" and the other with "ooxx".

If instead of plain twill, a broken one is required, the same threading draft may be used but the treadling will be: 4x, 2o, 3x, 1o, 4x, 2o, 3x, 1o, 4o, 2x, 3o, 1x, 4o, 2x, 3o, 1x. Number indicates the treadle (tie-up in fig.4) and the following letter - the colour.

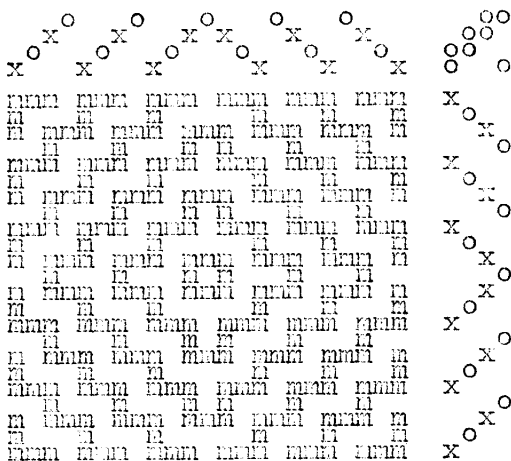


Fig. 5

Alternating colours instead of using them in pairs as in fig.4 produces a diagonal which runs in the opposite direction to the diagonal in the texture. Thus patterns can be woven in diamond twills, where the colour forms a diamond and the texture - a cross, one pattern underlying the other.

Combining both threading methods: ooxx or xxoo and xoxo or oxox, we can have part of the twill fabric woven in diamond patterns and the other in horizontal and vertical stripes. Such combinations however are rather risky, and should be first worked out on graphpaper.

The colour effects can be used not only in pattern weaving but in simple textures as well. They may give an impression of rough texture where none is present. Or they may suggest a texture weave, which would require many more heddle-frames if woven in one colour.

Fig.6 shows a small pattern in tabby suggesting wicker-work. There are twice as many ends and picks of white than of black. Fig.7 also in tabby looks like 1:3 and 3:1 twills combined. Finally the

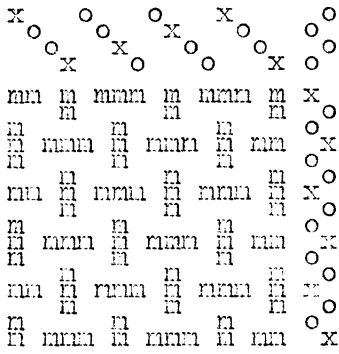


Fig. 6

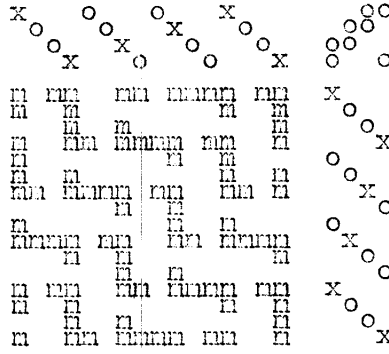


Fig. 8

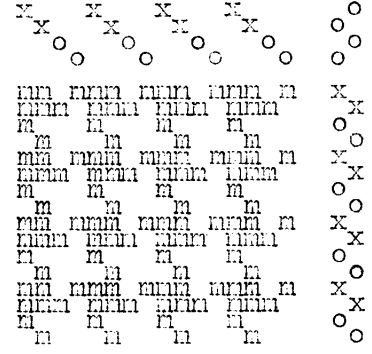


Fig. 7

twill on fig. 8 looks like an 8 frame twill. In all cases the weave suggested by the colour pattern is more complicated than the real one.

Three colours give still more possibilities. Let us mark black as "x"; grey as "v", and white as "o", both in threading and treading drafts. In the draw-down: black "m", grey "v", and white not marked.

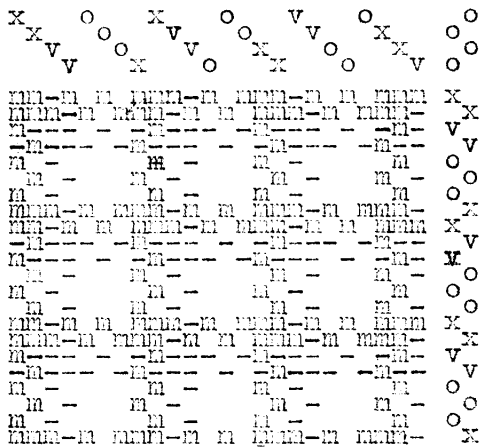


Fig. 9

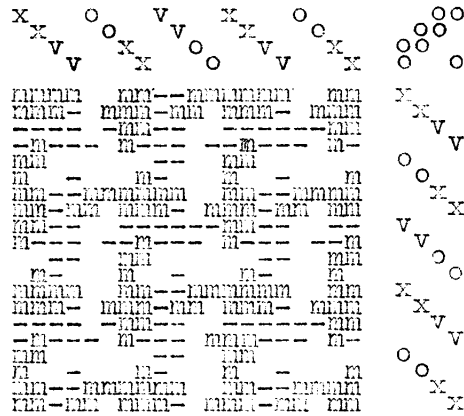


Fig. 10

The effect with tabby (fig. 9) corresponds to 8-frame weave, and with twill (fig. 10) to 12 frames.

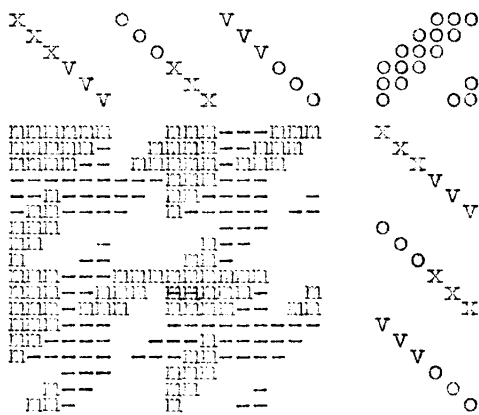


Fig. 11

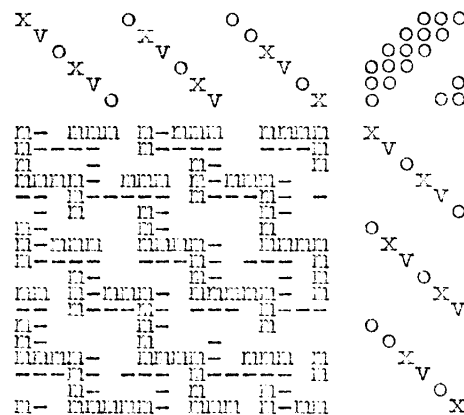


Fig. 12

On fig.11 we have a 3:3 twill with comparatively wide bands of colour both in weft and warp. In this case we could expect a checker effect, and this is roughly what we get, but the shape of checks is rather unusual, since they look like arrow-heads. In fig.12 the same twill but with finely distributed colours gives us broken zig-zag lines.

Comparing the draw-downs from 4 to 12 we can come to the conclusion that the number of colours and the way they are arranged are more important than the weave itself. That the wider<sup>er</sup> colour bands - the more like plaid the fabric looks, and that the most interesting are these combinations where the colours are used singly as in figs: 2, 5, 6, 8 and 12.

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FROM THE CLASSICS:

## STRIKING UP THE WEFT.

by Clinton G. Gilroy (1844)

That the cloth may be uniform in thickness it is necessary, that the lay (battch) should be brought forward with the same force every time. In the common operation of weaving, this regularity must be acquired by practice.

It is however, of consequence to the weaver, to mount his loom in such a manner, that the range of his lay may be in proportion to the thickness of his cloth. As the lay swings backward and forward, upon centres placed above, its motion is similar to that of a pendulum; and the greater the arc or range through which it passes, the greater will be its effect in pressing up the weft. For this reason, in weaving coarse and heavy goods, the headles (heddle-frames) should be hung at a greater distance from the point where the weft is struck up, than would be proper in light work. The point or rather line, where the last thread has been struck up, is called by weavers the fell.

The pivots upon which the lay vibrates ought, in general, to be exactly at equal distances from the fell, and the headles. But as the fell is constantly varying in its situation, (in hand loom weaving) during the operation, it will be proper to take the medium. This is the place where the fell will be when a bore (one pull of the warp) is half wrought up.

From this the following conclusion may be also drawn:

The bores ought always to be short in weaving light goods; for the less the extremes vary from the medium, the more regular will be the arc, or swing of the lay.-

The result of what has been stated above is, that in each of the three operations of weaving (i.e. treading, passing the shuttle, beating), the motions should be constant and uniform, and, that they should follow each other in regular succession. But some observations will be necessary to adapt these to different species of cloth.

The beauty or excellence of some cloths consists in the closeness of their texture, that of others in the openness and regularity of the intervals between the threads. When the latter is required, the weaver must vary his process from that which would be proper in the former.

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