

CRAZY TWILLS

"Crazing" is an expression taken from pottery. It means more or less accidental lines (cracks) in the glaze, when "crackling" is not accidental, but planned. Rather an astonishing parallel to the weaving terms, where "crackle" is also a planned effect.

To craze (from ME "crasen") meant originally to break into pieces; nowadays it suggests a disorder even of a mental origin.

Thus by "crazy" twills we mean twills where the bias (the diagonal) is broken in unexpected places, and creates an effect of irregularity of both texture and pattern, but still preserving the essential characteristics of a twill.

Probably Dornick Twill is a prototype of this class of weaves; the Crepe - its incidental sideline; and the Accidental Drafts - its ultimate in anarchy. But neither Crepe, or Accidentals can be called twills.

What all Crazy Twills have in common is their rather complicated appearance suggesting a high number of shafts, much higher than the number actually used. For that matter we do not see any necessity to go beyond four shafts.

Another peculiarity of this class is that if a Crazy twill is based on a tie-up for 2:2 twill, then all floats in warp and weft will be of two, which makes the fabrics very strong and eminently suitable for yardage.

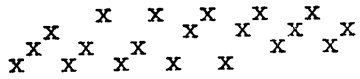
Finally Crazy twills besides normal diagonals, very irregular as a rule, show faint wide diagonals which can be used for pattern weaving.

The general principle of Crazy twills is that the diagonal in each repeat of threading and treadling is broken into a number of short diagonals divided by gaps, where the threading jumps from 1 to 3, 2 to 4, 3 to 1, and 4 to 2.

The short diagonals may go all in the same direction, or change the direction after every gap, or only every other gap etc. To design a twill of this class we must first of all establish a sequence of these short diagonals. We shall call the mounting diagonals (1234 from the left) by a "+", and the descending ones by "-". Thus a sequence: +3+2 (fig.1) means that we thread 123, jump back to

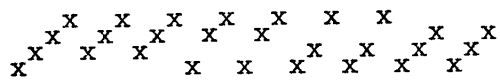
one, then go in the same direction, that is 12, jump to 4; keep on: 412, jump to 4, etc. It is obvious that the sequence is not the same as the repeat. As a rule a repeat should be longer, even much longer than a sequence.

A. Sequence +3+2; repeat 20.

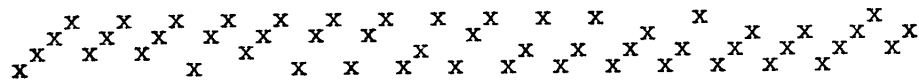


B. Sequence +4+3; repeat 28.

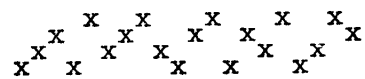
Fig.1



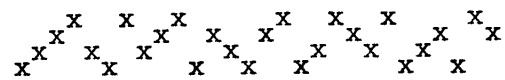
C. Sequence +4+3+4+2; repeat 52.



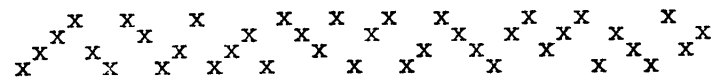
D. Sequence +3-2; repeat 20.



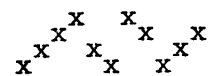
E. Sequence +4-3; repeat 28.



F. Sequence +4-4+2; repeat 40.



G. Sequence +4-4+3



From the first six drafts one could get an idea that the repeat is always 4 times longer than the sequence. Draft "G" proves that this is not always the case, but it is true that short repeats do not produce interesting drafts.

The treading always follows the threading that is it has the same sequence and the same repeat. Plain twill treading would produce fabrics very similar to Dornick, and fancy treadlings would not answer at all, because as likely as not they would produce long floats in warp.

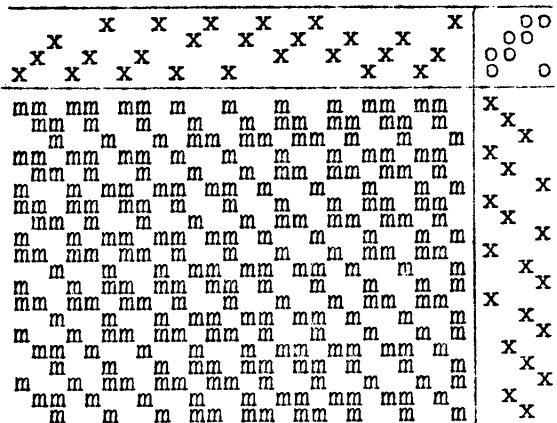


Fig.2

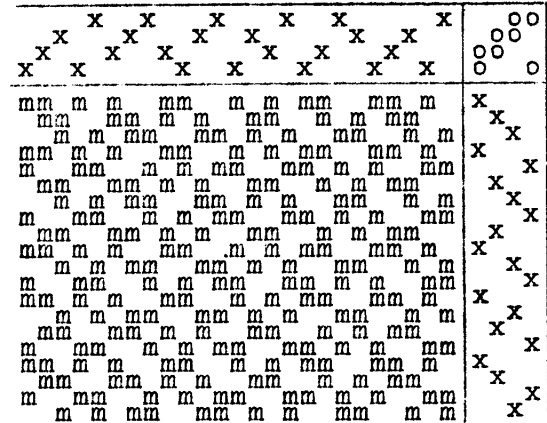


Fig.3

The sequence in fig.2 is the same as in Fig.1-A, that is +3+2, and the sequence in fig.3 the same as in 1-D, that is +3-2.

The draw-downs show that generally speaking the first twill is a biased one, even if it has 7 diagonals in each repeat, and none of them is quite straight. By reversing both: the threading and the treading it will produce large, faint diamonds. Why should there be 7 diagonals, when neither the sequence or the repeat have number 7 in them it is hard to explain. But then it is a crazy twill.

The twill in fig.3 is rather puzzling. At first it looks like a broken twill, but it has a definite pattern of arrows pointing NE and SW. It has also a sort of a wide diagonal running at right angle to the arrow heads. Fig.4 with a sequence +4-3 has a similar pattern.

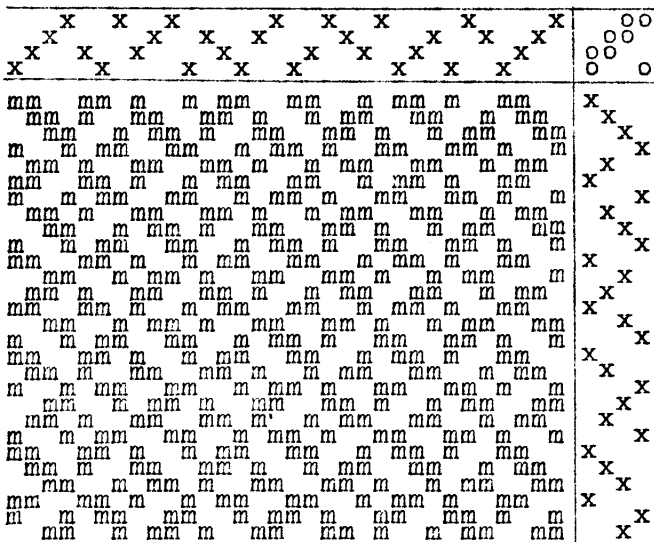


Fig.4

But here the difference between the NE-SW and NW-SE directions is much less noticeable until we tilt the page and look at the draw-down from different angles.

The same of course will happen when we look at the fabric: it will show either wavy diagonals, arrow-heads, or small distorted diamonds, depending on the angle.

