FOUR SHAFT PATTERNS

IN DORNICK

Dornick Twill, not to be confused with Dornick Weave, is normally a 2:2 herringbone twill which does not produce floats longer than two. The right-hand and left-hand diagonals do not meet each other at the turning point in threading, but are staggered. Incidentally this draft does not give tally.

Dornick Twill is used exclusively as yardage whether for tweeds or upholstery, with or without texture effects. The traditional draft is more or less as in fig.1.

But there is no reason why we could not use this weave for small patterns in the same way as Diamond Twill or the Double-Diagonal Twill. As a matter of fact the Dornick Twill considered as a pattern weave lies half way between the two. Let us take as an example a cross woven in Dornick (fig.2). The difference between the Dornick and the Diamond Twill is that no matter what we do the diagonals in the pattern will be always broken in the first, and therefore there is no reason to use a binder.
Larger patterns can be easily designed on the same principle as in Diamond Twill. The only difference is that at each turning point we skip one heddle. Fig.3 shows an example:

Fig.3

The pattern is not symmetrical, but the blocks on the left hand side of the pattern are symmetrical with the whites on the right hand side. If a complete symmetry is required, then we must have one longer float in the centre of each repeat, as in fig.4.

Fig.4  Fig.5

In fig.4 the pattern is woven approximately as-drawn-in, and in fig.5 we have a Rose variation of the same draft.
How do we find the treadling for pattern weaving? The principle is the same as for diamond twill, with one exception. To find the basic treadling, which produces a diagonal, we simply follow the threading, taking overlapping pairs of heddles. For instance in fig. 3 the threading read from the left goes: 12341234214321... etc; then the treadling should be: 12, 23, 34, 41, 12, etc. But when we come to a pair: 13 or 24 (not in the tie-up) we may either skip it as in fig. 4 and 5, or add two more shots as in fig. 2 and 3. In either case the symmetry of the pattern will be distorted. In the first case the repeat of pattern will be too short in treadling, and in the second case too long.

To compensate, i.e. to get square patterns we must either select the right kind of weft (lighter or heavier), adjust the beating, or the sett of warp, or all three together. But it is rather important to have the diamonds as square as possible. Elongated or squashed diamonds are not satisfactory although it would be difficult to prove why this is so.

Drafting of new patterns is very easy, particularly because they do not need to be symmetrical. If we are really ambitious we can make quite long repeats as in fig. 6. We shall avoid floats of 3, that is we shall always skip a heddle when changing the direction of treadling.

From the purely technical point of view there is nothing particularly difficult in weaving the Dornick Twill. The sett of warp is the same as for 2:2 twill. The warp should be of good quality, and so must be the weft. The weft may be softer than the warp, but of about the same weight.

**PRACTICAL PROJECT.**

**Upholstery in mercerized cotton.**

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1x1 20x1
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Fig. 6

Warp: 10/2 merc. cotton, black; no. of ends 896; sett 30 ends per inch; reed No. 10; 3 ends per dent; width in reed - 31 inches.

Weft: 10/2 merc. cotton, old gold.

Treading: 43214321432143214321432143214321.