

MODERN UNSYMMETRIC DIAMOND TWILL.

Diamond Twill is the simplest pattern weave, yet it deserves much more attention than it gets. When teaching, we mention it right after the herringbone twill, we explain the "woven-as-drawn-in" principle, we give a few examples, and this is about all. Yet the small patterns are not only very charming but unbelievably intricate.

The weave is variously called: Goose Eye, Birds Eye, Russian Diaper (?), Rosepath (literal translation from Swedish). The fabrics woven in Diamond Twill are very firm (longest float of 3), and can be used for any purpose whatsoever: upholstery, place mats, towels, table cloths, skirts, coats, aprons, runners, and even rugs. It can be woven with or without binder, plain or on opposites, on 3, 4, or more shafts. It may produce very clear and contrasting patterns, or a faint damask effect. In all it is one of the most valuable weaves.

The most important fact about diamond twill is, that unlike overshot, crackle or summer-&-winter it can be woven with or without binder. The binder may be either tabby, or the opposite shed of twill.

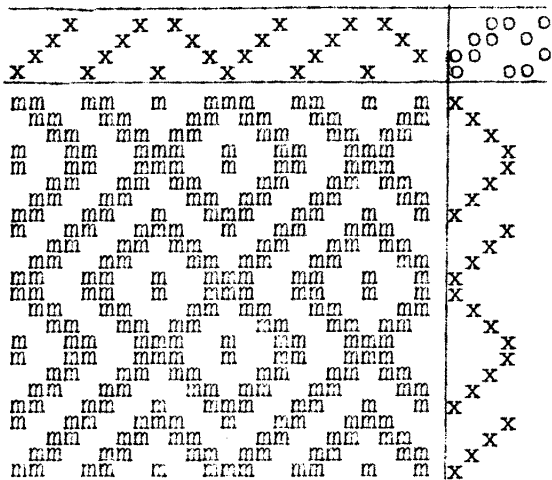


Fig.1

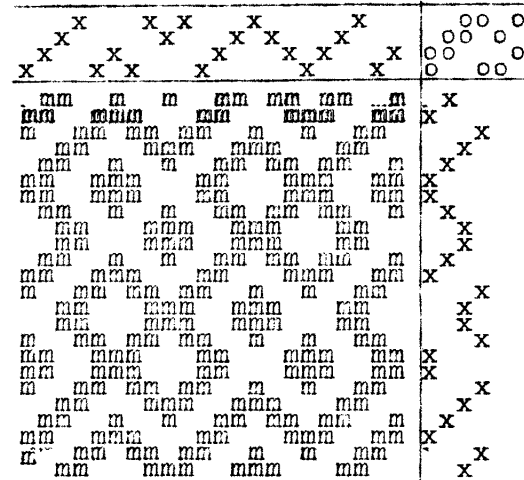


Fig.2

When woven without binder, it cannot produce completely symmetrical patterns: each diagonal will be broken at the turning point. The sett of warp must be as for twill. In diamond twill with a bind-

er, the following conditions must be strictly observed:

1. The sett of warp must be much more open than for twill, or even tabby: approximately one half of the sett for twill. That is, if the proper number of ends per inch for twill is 40, and for tabby 30, then the sett of warp for diamond twill with binder should be 20.

2. Regardless of the type of treadling, that is whether the pattern is woven-as-drawn-in, in rose-fashion, or fancy (independent of threading), we must use an odd number of shots on the same twill treadle, when the treadling proceeds in one direction, and an even number of shots at the turning point. In case of woven-as-drawn-in patterns, or rose patterns it simply means: one shot on diagonals, and 2 shots at turning points (fig.1 and 2). But in fancy treadlings we may have many more shots of weft on the same treadle.

3. The tabby sheds used for binder simply alternate all the time, regardless of what happens to the pattern. But if twill binder is used, it must follow the pattern weft when the treadling is going in one direction, and precede when the treadling changes direction. Here are a few examples of fancy treadlings (1234 twill, AB tabby).

1A2B3A4B1A2B3A4B1A2B2A1B4A3B2A1B1A2B3A4B4A3B2A1B etc.

1A2B3A3B3A4B4A4B4A3B2A1B1A3B4A4B4A4B3A3B3A2B1A4B etc.

132431421324314241342312413431421324314241342312 etc.

1324313131444213124242131313424242313131324 etc.

In the last two examples the lower row is the twill binder, finer and of a different colour than the pattern weft.

With the richness of detail of the diamond twill patterns, there is no particular reason why the patterns should be symmetrical, or for that matter why should there be any definite repeat. If the drafts in fig.1 and 2 are rather short, it is only because otherwise they would take too much space on paper. But any weaver can make his own drafts of any length, either with the pattern covering the whole fabric, or alternating with plain twill as in fig.3.

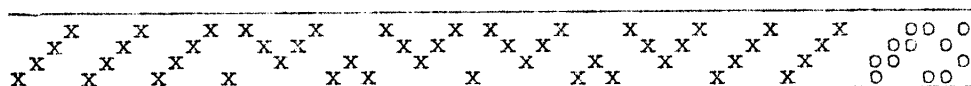


Fig.3

We have also a possibility of breaking the monotony of plain biased twill with tiny diamonds inserted at regular or irregular intervals as in fig.4. This type of fabrics can be used for clothing of any kind.

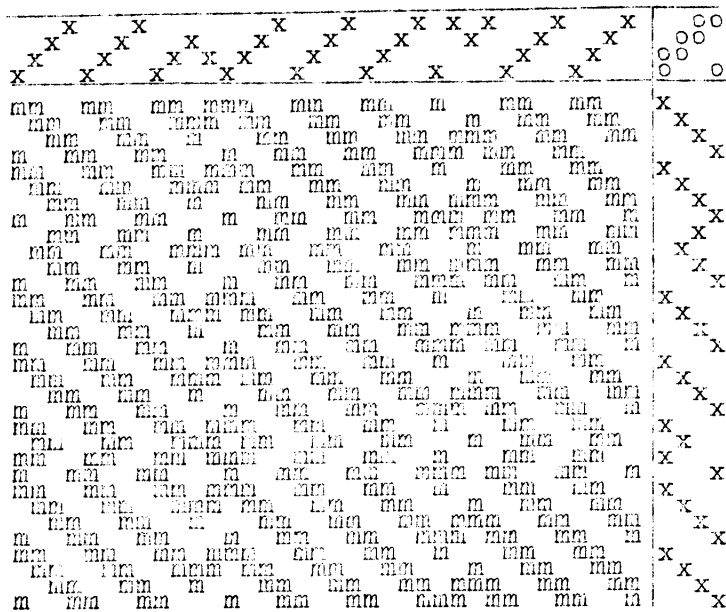
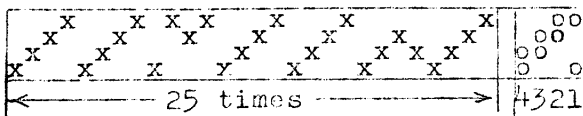


Fig.4

This subject is far from being exhausted, but any weaver who understands the principle can do a lot of research on graph paper, and on a sample loom. We shall return to the diamond twill in connection with multicolour patterns.

PRACTICAL PROJECT.

Woolen yardage for sports coats.



Treadling: 1234123412343234
123412341214;

Warp: 8/2 wool; No.of ends: 700; sett of warp: 20 ends per inch;
reed No.10; 2 ends per dent; width in reed: 35".
Weft: 8/2 wool of a slightly different colour than the warp.

In the next issue: HANDWOVEN IMITATION FURCOATS on eight shafts.

MULTICOLOUR DIAMOND TWILL in weft and warp.

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