

AGAIN THE TWILL WEAVE

By MARY M. ATWATER

IN a recent article in the *WEAVER* an attempt was made to give an idea of the important place in weaving held by the twill weave, and a number of twill patterns were given and illustrated. Of course in such an article it was impossible to do more than skim the surface of what is a very large subject, and it seemed desirable to give further twill patterns and directions.

For the information of those who may have missed the first article may I repeat that twill is undoubtedly the most important of all the many different weaves we use—the most important because of its many uses and because of its wide variety. It belongs in the class of weaves I have termed the “50-50” weaves—those weaves in which warp and weft are the same material or materials the same in grist, and woven with the same number of weft-shots to the inch as there are warpendes to the inch in the reed. The “50-50” weaves as a group are the weaves best adapted to the weaving of all-wool or all-linen fabrics.

We have seen that a “tweed” is a twill fabric woven of homespun or handspun wool (single-twist) yarns,—usually in the plain 2-2 twill or the 2-2 herringbone or “dornik” pattern. We have considered the 3-1 and 1-3 twills, broken twill, the three-harness “jeans” twill, and the double-faced twills. The twill patterns shown with this article are the less-well known “fancy” twills—a selection, of course, as there are many hundreds of these patterns.

In making the selection I have been guided only by my own taste, and by practical considerations. The weaves that seemed to me too open to make a satisfactory fabric I have not included. And I have limited my selections to the four-harness and the eight-harness twill. There are, of course, many beautiful and interesting six-harness, seven-harness, nine-harness and ten-harness twills. But it was impossible to include everything and the four-harness and eight-harness patterns appeared to me to be the most practical and interesting groups.

Of the four-harness patterns illustrated No. 2 is the most loosely woven, and if a very heavy, soft fabric is desired this weave will be the one to select, but from the point of view of durability and wearing qualities, any of the other patterns is more desirable.

Pattern No. 1 I like particularly. The wrong side of this weave is different from the right side, and by

some might be preferred. The effect is similar to that of No. 6. The fabric is very firm and smooth. It might be noted that any pattern that includes the two tabby sheds—Nos. 3, 4, 6, 7, 8, 9 and 13—will be particularly firm and close.

Any of these four-harness patterns are suitable for suitings, coat-fabrics, blankets, scarves and so on. No. 3 and No. 9 are similar. No. 11 and No. 12 are also similar, though quite different in effect. No. 7 and No. 10 are very unusual and would, I believe, make very attractive fabrics for top-coats.

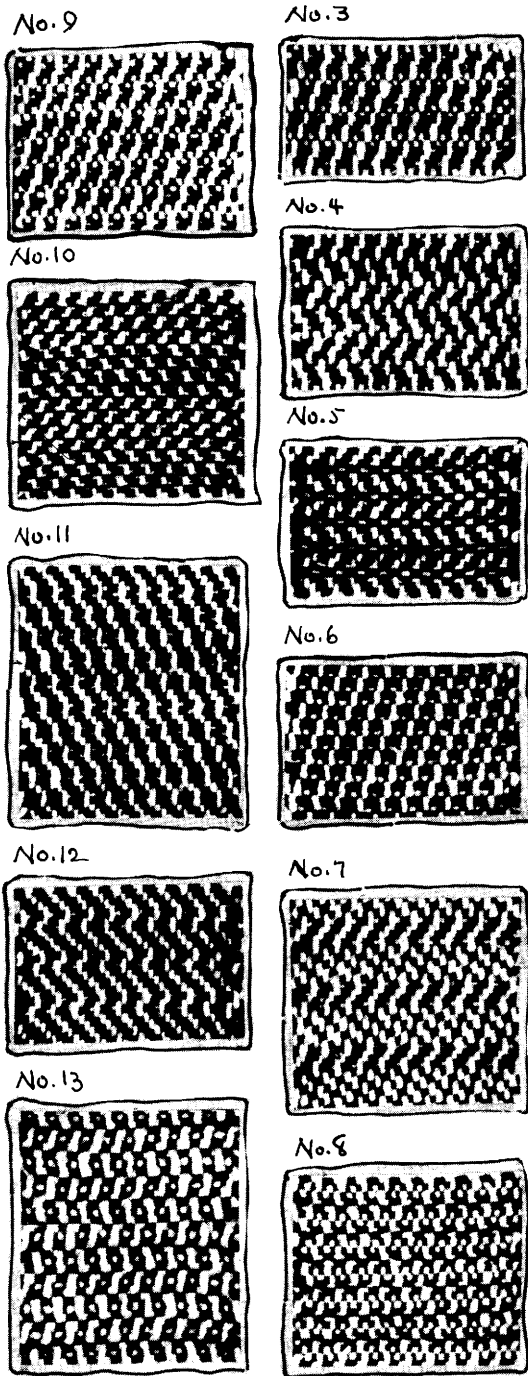
It should be noted that for the patterns with a diagonal movement, all one way, the slant of the twill may be reversed by reversing the order of treadling.

There are, of course, a great many four-harness twills that for lack of space could not be included here, but perhaps these samples will give an idea of the possibilities. There are many times as many eight-harness patterns as there are four-harness patterns, of course, and more open and more elaborate textures are possible on eight harnesses.

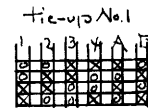
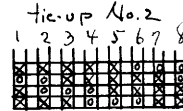
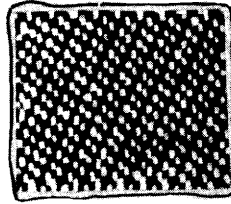
Some of the eight-harness twills I have included seem to me too open for dress-fabrics, but they will be found excellent for baby-blankets, afghans, and similar articles. Many of the weaves shown are close weaves, suitable for clothing. Choice of pattern is, of course, a matter of taste, but I know that if ever I have time to weave myself the fabric for a coat, the weave I shall select is the one shown at No. 2, Diagram II. This has, for me, a wholly delightful texture and effect. No. 4 is also an excellent weave for such a purpose, and No. 6, No. 8, No. 11 and No. 12 are excellent for sporty top-coats. No. 1, No. 5, No. 7, No. 9 and No. 14 are particularly nice for blankets as they are quite open weaves and make soft, heavy fabrics.

Some of these patterns are the same on both sides of the fabric; for instance No. 1, No. 3, No. 5, No. 7, No. 11, No. 14. Others are similar but not exactly the same, as for instance No. 2 in which the wrong side shows the main figure in the light color of the warp against a similar background texture. Others are equally interesting though different on the two sides, while in a few the wrong side is not interesting at all. But in the main I have avoided patterns that are poor on the wrong side as in my opinion this is a disadvantage.

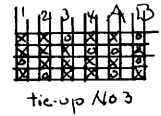
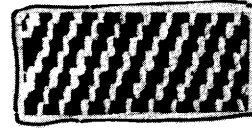
I. Four-Harness Twills



No. 1:



No. 2



In the above tie-up drafts the sinking ties are indicated by "X" and the raising ties by "O". On a counterbalanced loom tie the Xs and on a loom of the "Jack" type, like the Bernal loom - tie the Os.

Weave No. 1. Treadles 4, A, 3, B, 2, A, 1, B, Repeat. (tie-up No. 1)

Variation, (not illustrated) treadles: 1, A, 2, B, 3, 1, B, 4, A, 3 Repeat

(weave all patterns with one shot on each treadle)

Weave No. 2. (tie-up No. 2) Treadles 1, 2, 3, 4, 5, 6, 7, 8, Repeat

" No. 3. (tie-up No. 1) A, 3, 2, 1, B, A, 1, 4, 3, B, Repeat

" No. 4. (tie-up No. 1) B, 3, 2, 1, A, 3, 4, 1, Repeat

" No. 5. (tie-up No. 1) 3, 2, 1, 3, 1, 2, 3, 1, Repeat

" No. 6. (tie-up No. 3) 1, A, 2, B, 3, A, 4, B, Repeat

" No. 7. (tie-up No. 1) 4, A, 3, B, 2, A, 1, 4, 3, 2, A, 1, B, 4, A, 3, 2, 1, Repeat

" No. 8. (tie-up No. 1) 3, A, B, 3, 1, B, A, 1, Repeat

" No. 9. (tie-up No. 1) A, 3, 2, B, A, 1, 4, B

" No. 10. (tie-up No. 1) 1, 2, 4, 1, 3, 4, 2, 3, 1, 4, 2, 1, 3, 2, 4, 3, Repeat

" No. 11. (tie-up No. 1) 1, 2, 3, 4, 3, 4, 1, 2

" No. 12. (tie-up No. 1) 1, 2, 3, 4, 1, 4, 3, 4, 1, 2, 3, 2, Repeat

" No. 13. (tie-up No. 1) 2, B, 1, 3, B, 4, Repeat

No. 14. -not illustrated- (tie-up No. 1) 3, A, B, 1, Repeat

No. 15 " " (tie-up No. 1) 1, 3, B, 3, A, 3, 1, B, 1, A, Repeat

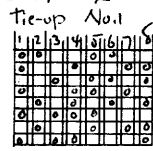
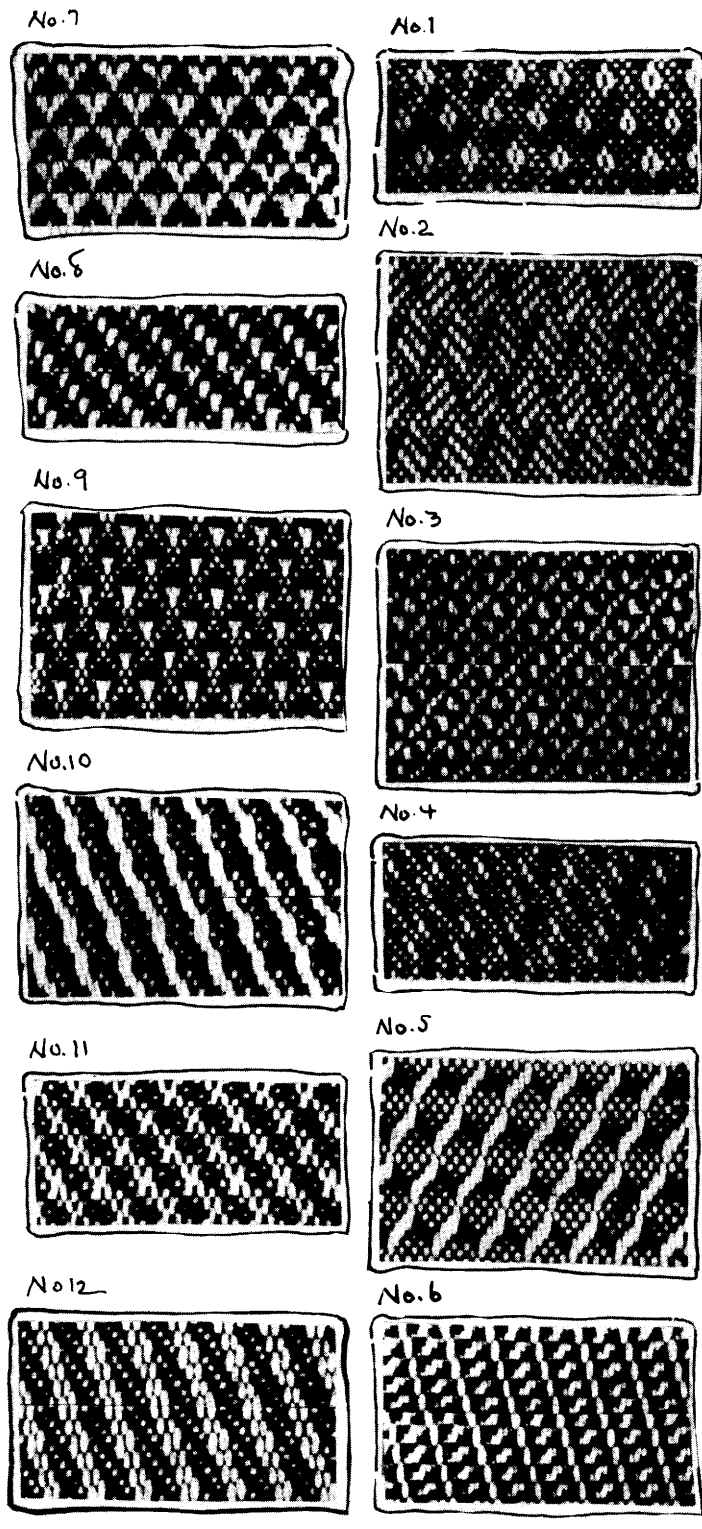
DIAGRAM I

About the tie-ups as given: For the four-harness weaves I have included three tie-ups. Of these No. 1 is the regular "standard" six-treadle tie-up used on most four-harness looms. Some of our looms are of the "counterbalanced" type, with the harnesses hung on over rollers or pulleys. In such looms the sheds are made by sinking certain harnesses for each shed, and the tie-up is made with the sinking ties, indicated on the drafts by "X". But in recent years the "Jack" type of loom has come more and more into use, not only for eight-harness looms but also

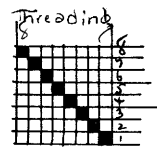
for four-harness weaving. In these looms—among which are the Bernal treadle looms—the shed is made by raising certain harnesses for each shed and the tie-up should be made with raising ties. These are indicated on the drafts by "O".

For the eight-harness patterns I have written all the tie-ups as for the rising shed, as very few counterbalanced eight-harness looms are in use. If, however, one has such a loom the blank spaces of the tie-up drafts should be tied to sink.

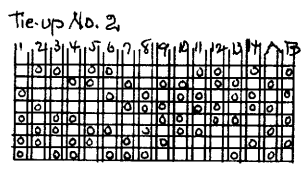
II, Eight-Harness Twills



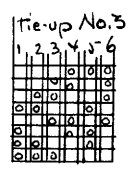
(these tie-ups are all written as for the rising shed.)



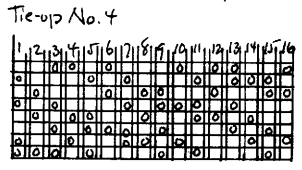
Weave: 1, 2, 3, 2, 4, 5, 4, 6
7, 6, 1, 8, Repeat



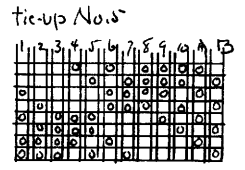
Weave: A, 1, 2, 3, 4, 5, 6, 7,
B, 8, 9, 10, 11, 12, 13, 14
Repeat



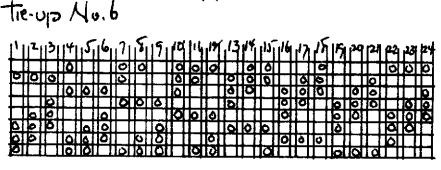
Weave: 1, 2, 3, 4, 5, 6
Repeat



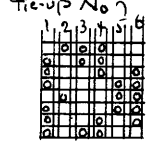
Weave: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
12, 13, 14, 15, 16
Repeat



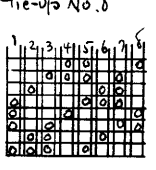
Weave: B, 1, 2, 3, 4, 5, A,
B, 6, 7, 8, 9, 10, A
Repeat



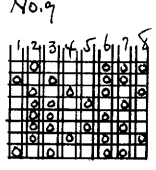
Weave: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,
16, 17, 18, 19, 20, 21, 22, 23, 24
Repeat



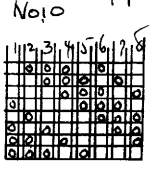
Weave: 1, 2,
3, 4, 1, 2, 5, 6
Repeat



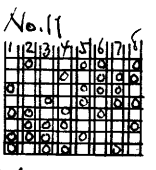
Weave: 1, 2, 3, 4, 5, 6, 7, 8
Repeat



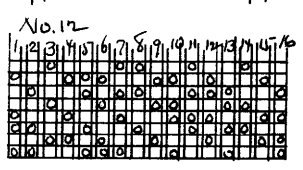
Weave: 1, 2, 3, 4, 5, 6, 7, 8
Repeat



Weave: 1, 2, 3, 4, 5, 6, 7, 8,
7, 8, 1, 2, Repeat



Weave: 1, 2, 3, 4, 5, 6, 7, 8
Repeat



Weave: 1, 2, 3, 4, 5, 6, 7, 8, 9,
10, 11, 12, 13, 14, 15, 16,
Repeat

DIAGRAM II

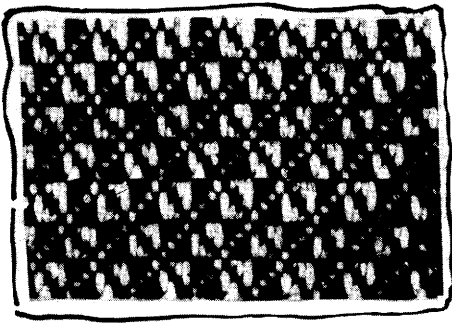
It will be noted that pattern No. 6 requires 24 changes of shed. As eight-harness looms are rarely if ever equipped with this number of treadles this pattern could be woven only on a loom built with a "dobby" or with a system of draw-cords, or on one of the looms with two treadles and a selector, which appear to be coming into rather general use.

The tabby sheds may, of course, be woven on any twill threading except on those with an uneven number of harnesses. I have not shown the tabby treadles on the tie-ups except for the patterns that include these two sheds as part of the weave.

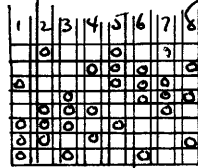
All the patterns shown are woven on the plain

III Additional Eight-Harness Twills.

No. 14

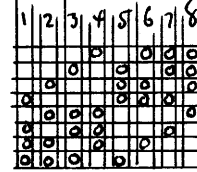


No. 13



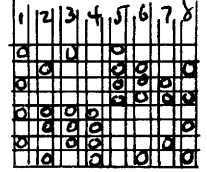
Weave
1.2.3.4.5.6.7.8
Repeat

No. 14



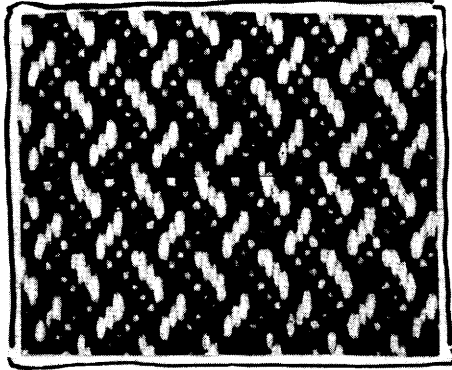
Weave
1.2.3.4.5.6.7.8
Repeat

No. 15

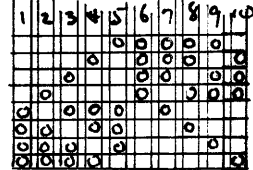


Weave:
1.2.3.4.5.6.7.8
Repeat

No. 13

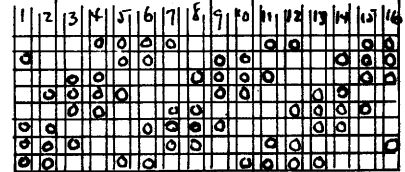


No. 16



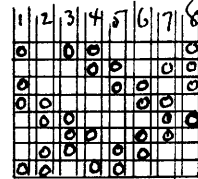
Weave: 1.2.3.4.5.1,
6.7.8.9.10.6.
Repeat

No. 17



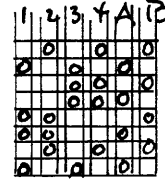
Weave: 1.2.3.4.5.6.7.8.9.10,
11.12.13.14.15.16.
Repeat

No. 18



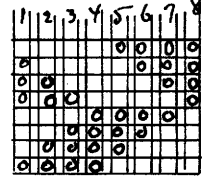
Weave:
1.2.3.4.5.6.7.8.
Repeat

No. 19



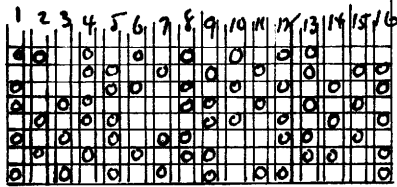
Weave:
1.2.3.4.A.B.A.B
Repeat

No. 20



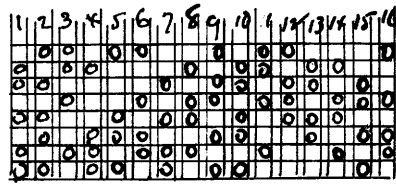
Weave:
1.2.3.4.5.6.7.8
Repeat

No. 21



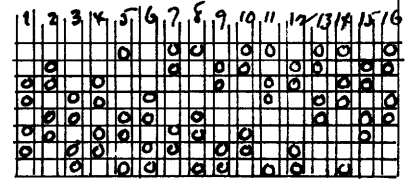
Weave: 1.2.3.4.5.6.7.8.9.10.11,
12.13.14.15.16.
Repeat

No. 22



Weave: 1.2.3.4.5.6.7.8.9.10
11.12.13.14.15.16.
Repeat

No. 23



Weave: 1.2.3.4.5.6.7.8.9.
10.11.12.13.14.15.16.
Repeat

Patterns No. 15 - No. 23 are not illustrated

DIAGRAM III

twill threading, on a warp all of one color, with weft in a similar material in a contrasting color. Of course the stronger the contrast in color the bolder the pattern effect. A simple effect of texture can be produced by using warp and weft of the same color.

In a later article in this series it is proposed to consider some variations in the twill threading—the

herringbone and "dornik" weaves, certain "fancy" twill threadings and arrangements that depend for their effect on using several colors in both warp and weft. A few of the latter were, as may be recalled, shown in the first article of this series. It is not the intention to produce an exhaustive study of the twill weave but merely to give weavers some practical suggestions on the use of this our most valuable weave.