

QUESTIONS AND ANSWERS By MARY M. ATWATER

Question: "What is meant by 'tie-up'?"

Question: "How can I transpose written treading directions to fit the tie-up of my loom"

Answers: The above two questions come to me so frequently that I am led to believe many weavers find the matter of tie-up confusing. By "tie-up" we mean the manner in which the treadles are connected with the harnesses to open the sheds. In table-loom, which have no treadles, the connection is built into the loom, each lever raising a single harness. In four-harness treadle looms equipped with only four treadles each treadle sinks a single harness, and the tie-up is ordinarily made as shown on the diagram at No. 1 and No. 2. We call the treadle that sinks the front harness "treadle 1"—if we call the front harness "harness No. 1," as is the usual American custom. However, if we call the back harness "harness No. 1" the treadle that sinks this harness will be "treadle No. 1."

Four-harness looms, however, are often provided with six treadles—and in my opinion all should be, as the six-treadle tie-up makes weaving easier and quicker. The reason for the six treadles is that in four harnesses we have six balanced sheds—two harnesses up and two down—on which most four-harness weaving is done. By tying a treadle to sink two harnesses at a time we can open the shed with a single treadle. The sheds may be tied in any order, according to the fancy of the weaver. The six-treadle tie-up at No. 3 is the "standard" tie-up I use for all my own four-harness work, and it is in quite general use by American weavers. In this tie-up the four pattern sheds are on the left and the two tabby sheds on the right, lettered A and B, to distinguish them from the pattern sheds. Tie-up No. 4 on the diagram is an arrangement used by some weavers. The difference is merely one of personal choice.

It will be obvious from a study of the drafts that treadle 1 of tie-up No. 3 sinks the two front harnesses, and that to make this 1-2 shed on tie-up No. 1 or No. 2, treadles 1 and 2 must be used together. Similarly for the shed made by treadle 2, tie-up No. 3,—the 2-3 shed—treadles 2 and 3 must be used together on tie-ups No. 1 and No. 2.

Therefore, if you are using a loom with four treadles and wish to follow treading directions written for the six-treadle tie-up transpose as follows:

For "treadle 1" — use treadles 1 and 2				
" "treadle 2" " " 2 " 3	"	"	2	" 3
" "treadle 3" " " 3 " 4	"	"	3	" 4
" "treadle 4" " " 1 " 4	"	"	1	" 4
" "tabby A" " " 2 " 4	"	"	2	" 4
" "tabby B" " " 1 " 3	"	"	1	" 3

As a table loom operates by raising instead of sinking the harnesses the transposition must be made to opposites, or the weaving will be wrong side up on the loom. Therefore on a table loom transpose this way:

For "treadle 1" — use levers 3 and 4				
" "treadle 2" " " 1 " 4	"	"	1	" 4
" "treadle 3" " " 1 " 2	"	"	1	" 2
" "treadle 4" " " 2 " 3	"	"	2	" 3
" "tabby A" " " 1 " 3	"	"	1	" 3
" "tabby B" " " 2 " 4	"	"	2	" 4

On a treadle loom of the "jack" type, like the Bernat treadle loom, which operates by raising the harnesses make the tie-up to six treadles as shown on the diagram at No. 5. This produces exactly the same sheds as tie-up No. 3, and in weaving no transposing is necessary.

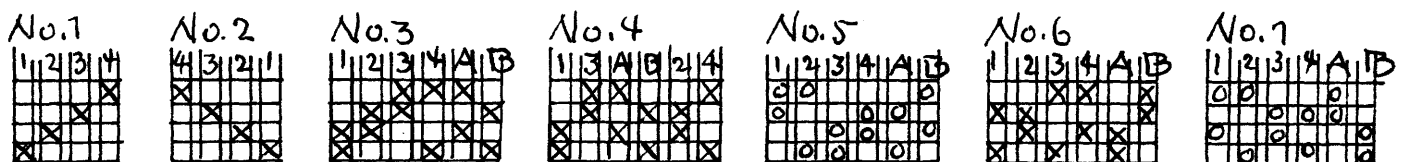
Tie-up No. 6 is the six-treadle tie-up for the summer and winter weave. It will be noted that the sheds are the same as in tie-up No. 3, but they are differently arranged to suit the weave and to keep the four pattern sheds on the left and the two tabby sheds on the right. Tie-up No. 7 is the same arrangement of sheds, tied as for a jack loom.

It will be noted that sinking ties are indicated on the drafts by "X" and raising ties by "O".

To transpose tie-up No. 6 to weave on a loom tied as at No. 1 or No. 2, proceed as follows:

<i>Four-treadle Loom</i>	<i>Table Loom</i>
For "1", treadles 1-3	For "1", levers 2-4
" "2" " 2-3	" "2" " 1-4
" "3" " 1-4	" "3" " 2-3
" "4" " 2-4	" "4" " 1-3
" "A" " 1-2	" "A" " 3-4
" "B" " 3-4	" "B" " 1-3

Of course if you number your harnesses from back to front in the Swedish manner, all this should be reversed, and the tie-up and any transpositions should be made accordingly.



Four-Harness Tie-Ups

(DIAGRAM)