SWATCH PAGE

PETER COLLINGWOOD'S SHAFT SWITCHING TECHNIQUE, PART 2

by Paul O'Connor

In the previous article, I outlined the principles of shaft or harness switching and described an inexpensive way to modify a jack type loom to achieve this method of gaining a great deal of freedom in design of rugs. In this article i want to analyze the very beautiful rug that is shown as the frontispiece in Collingwood's book *The Techniques of rug Weaving*. Check pages 324-328 in that book for information on weaving the rug.

Collingwood describes the draft used as a straight three shaft draft, with a "linking" thread to join blocks. This is most easily seen by looking at the draft diagram in the first figure. Notice there are four blocks and each block can be as long as desired. The linking threads that join the blocks are circled in the draft. A twill tieup and treadling order is used. If two colors are used in

the weft sequence in the order A,A,B,B, then four different weft faced drawdowns can result, depending on which treadle you start with. (Only one example will be discussed in this article. Consult Collingwood's book for all the variations).

BLOCK BLOCK BLOCK DLOCK

PACKED WEFT

In figure 1, there are two drawdowns. The first is an expanded view showing the weave structure. Below that is the appearance when the wefts are packed to cover the warp completely. Block 1 will be solid black, block 3 will be solid white, and blocks 2 and 4 will have verticle black and white strips. Now to the shaft switching.

If the threads on harness 1 in block 1 could be shifted to harness 4, then block 1 would weave the same as block 2. This can be achieved by using a floating warp between empty heddles on harnesses 1 and 4. Two doups through these heddles circle the floating warp and the weaver can choose whether to have the floating warp weave as though it were threaded on harness 1 or on harness 4. So the appearance of this section can be either solid black or vertical black and white stripes. The same sort of relationship exists for each pair of adjacent blocks.

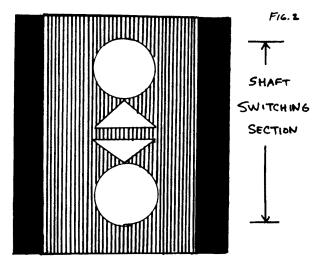
l o change	Switch warp threads
block 1 to block 2	harness 1 to harness 4
block 2 to block 1	harness 4 to harness 1
block 2 to block 3 block 3 to block 2	harness 2 to harness 1 harness 1 to harness 2
block 3 to block 4	harness 3 to harness 2
block 4 to block 3	harness 2 to harness 3
block 4 to block 1	harness 4 to harness 3
block 1 to block 4	harness 3 to harness 4

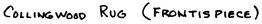
Obviously this takes a certain amount of planning but isn't that part of the fun of weaving?

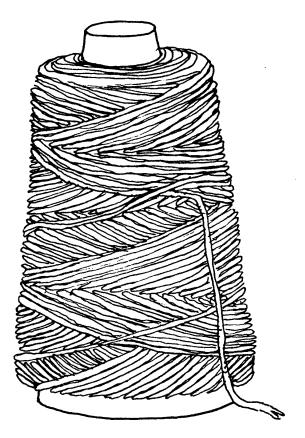
Now let's look at Collingwood's rug. Figure 2 is a black and white drawing of the rug. Notice that the design involves only threeblocks. The order of the blocks can be considered to be 1 - 2 - 3 - 2 - 1 which gives a sequence of black - stripes - white stripes - black. Shaft switching is required for only the middle section of the rug. Initially the rug has two black borders with the middle section as stripes. Gradually the stripes ate "switched" into a white area and then back again to stripes. Figure 3 is a threading draft *, tieup and drawdown. the white block 3 can be changed to the stripes of block 2 by switching the warp threads on harness 1 to harness 2. Notice that only a few warp threads are switched each time the design changes so that the operation is not very tedious.

I hope these two articles help you to understand what shaft switching is about.

*A slight complication should be explained. When going from block 1 to block 2 an extra linking thread is needed. But when going from block 2 to block 1, a thread is dropped in the draft.







NEW!

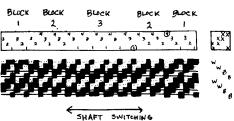
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