

SECURING NEW PATTERNS BY CHANGING THE TIE-UP

By Rupert Peters

The problem of securing original work from students faces every teacher of weaving. Few students have had any instruction in design and in a short summer session course there is no time in which to build a design foundation upon which to base work in producing new patterns. As a rule in elementary work the only way students learn to do this is by changing the threading. Changing the tie-up is rarely mentioned. This article reports the first steps in doing this as they were given in a summer session class.

The usual discussion and drill work on the *Spot Bronson* weave was just over so an 8-harness point twill threading in this (short draft) was placed upon the blackboard (Fig. 1) and the group was asked to write the tie-up for it when woven as drawn in. Being a review of previous work this was quickly done, Fig. 2. The draw-down, Fig. 3, came next and this was easy. The size of the pattern figure was discussed, based upon the four-thread *Bronson* unit and the number of these in a diamond. The set of thirty to the inch for 20/2 cotton is more or less a standard in such discussions. A girl spoke up, "As I try to picture these inch and a half diamonds coming to the selvages I do not like it. Could we not arrange for plain weave borders at the sides?" Several others nodded and the question was given, "How can we do this?"

They were stuck until reference was made to some 4-harness *Spot Bronson* pieces they had woven in which these plain weave borders were present. Note book pages were quickly ruffled and the answer came, "Thread them 1, 2, 1, 2." "Why not 1, 3, 1, 3, or 1, 4, 1, 4?" More review until one stated clearly that a spot unit not treadled for pattern, weaves plain weave, and that a unit on any harness could be used if that harness was not used for pattern. The result of this discussion was to choose harness eight and to thread eleven units on each side to be woven in plain weave. The resulting threading draft is shown in Fig. 4 and the changed tie-up in Fig. 5. To get the latter, the

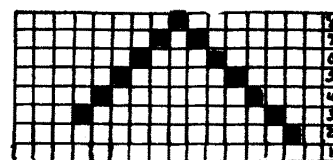


Fig. 1

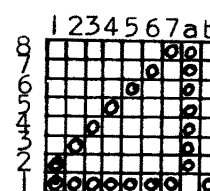


Fig. 2

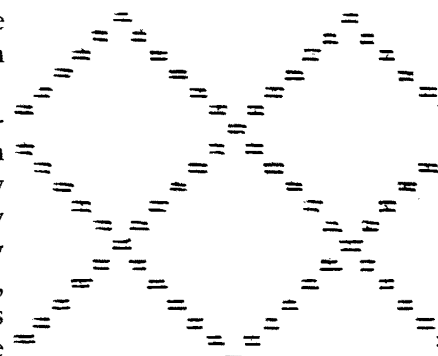


Fig. 3

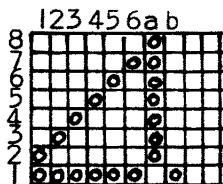


Fig. 5

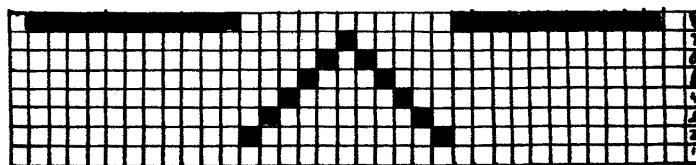


Fig. 4

Pattern repeat

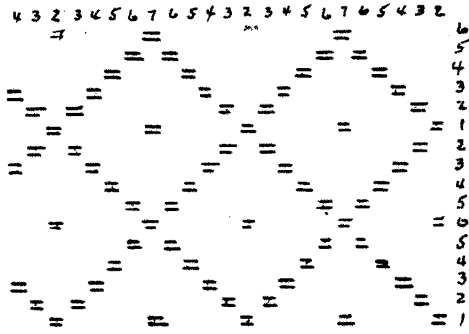


Fig. 6

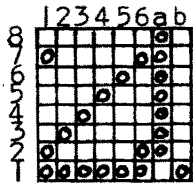


Fig. 7

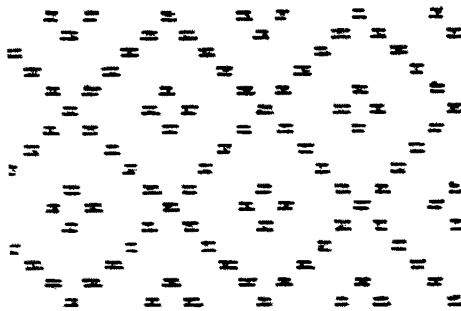


Fig. 8

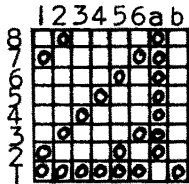


Fig. 9

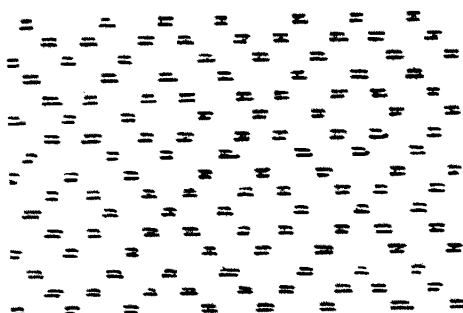


Fig. 10

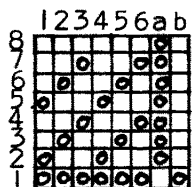


Fig. 11

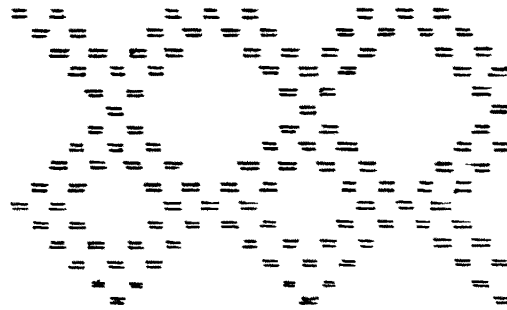


Fig. 12

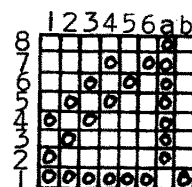


Fig. 13

discussion had brought out the fact that the size of a diamond had been reduced from a 7-unit size to a 6-unit one. An alert Miss asked, "Does it go by their squares? If so, the possibility of mixing things up is reduced from 49 to 36." Teacher could not say about the squares but he answered to the effect that the addition or the subtraction of a harness increased or decreased design possibilities decidedly.

The draw-down had been corrected and criticisms were called for. Fortunately this brought out the idea that the diamonds were rather large for a 15-inch runner, too much open space showed. Finally, a thoughtful woman said, "Why not put a spot in the center of each diamond?" The class thought this good so she came to the blackboard and marked out the square at the center of each diamond, Fig. 6. This posed the question, "How is this spot to be woven, with no change in the treadling order?" The class had had no work as yet in cloth analysis but it did not take much discussion to show that all blocks in the same vertical line had to be on the same harness and that all blocks in the same horizontal line were pulled down by the same treadle. This had been used in the simple draw-downs they had made and was now to be expanded. Checking on the draw-downs, Fig. 6, the spots in the right-hand diamonds are in the vertical row marked 7 and in the horizontal row marked 1. Hence, harness 7 is to be tied to treadle 1. Likewise, the spots in the second row of diamonds from the right are in the vertical row marked 2 and the horizontal row marked 6, hence, harness 2 is to be tied to treadle 6. Fig. 7. This was checked by erasing the board, putting the threading at the top, the treadling at the side, and making the draw-down. It tallied with the first.

A student commented, "That still looks skimpy." Motioned to the blackboard she erased the spots in the diamonds and then marked out four squares in each as shown in Fig. 8. The class had little difficulty making the draft for the tie-up, Fig. 9.

"Why not put a diamond inside each diamond?" was the next suggestion. She came and marked them in as seen in Fig. 10. The tie-up was worked out as Fig. 11.

The period was over so each was asked to work out four new arrangements for the next day. Most had the required number then; one had but one; but two girls had a dozen each. "This is fun!" The two days' work gave us over twenty usable variations; some of the new ones are shown in Figs. 12-21.

Many patterns while technically correct are not attractive. For example, in Fig. 7, two ties were added to Fig. 5. Omit either and alternate rows of diamonds have no spots inside. The opposite of this is found in Fig. 14. If both sides of the tie-up were alike all spaces would be filled and one would have no real pattern.

To simplify matters and stress changes in tie-up, the treadling for these lessons was fixed, all were to be treadled alike. Fig. 18 brought an unexpected snag. Treadles 3 and 4 are tied to harness 1 only. The girl who worked out the pattern came to the teacher to know what to do. "There's nothing there to treadle. What shall I do?" Given to the class, to the teacher's amazement, they were stuck. When the ties to these two treadles were compared with that of treadle *a*, comprehension dawned. Treadling *b*, 3, *b*, 3 or *b*, 4, *b*, 4, gives plain weave across the web just as A, B, A, B, does.

In tie-up Fig. 21, treadles 1 and 3, and 4 and 6 are tied the same in order to keep the treadling order. In the closing discussion the point was made that new patterns can be made from old ones in three ways: changed threading, changed treadling, or changed tie-up; and that combinations of these can give still other patterns. And this still leaves the great field in which the weaver does not base her work upon some existing pattern but produces something new and different.

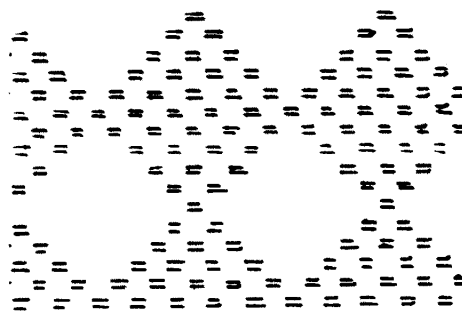


Fig. 14

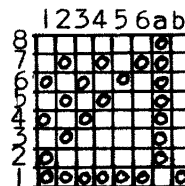


Fig. 15

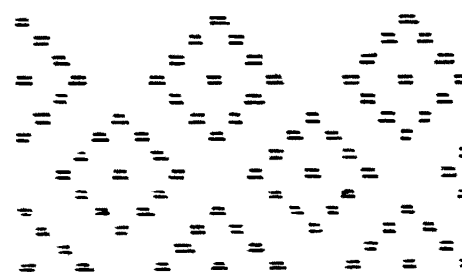


Fig. 16

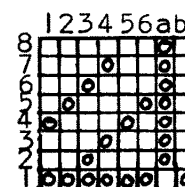


Fig. 17

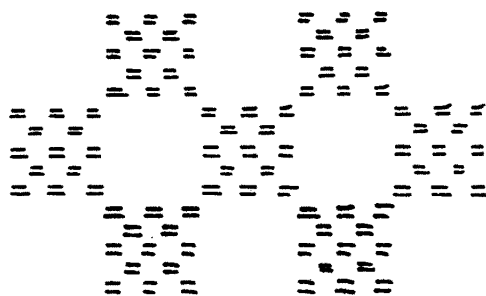


Fig. 20

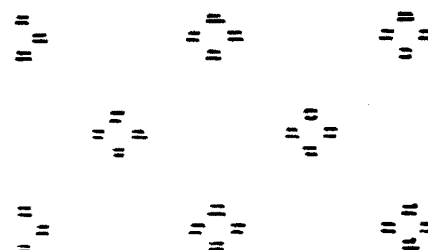


Fig. 18

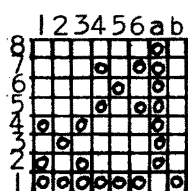


Fig. 21

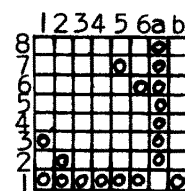


Fig. 19