

Questions and Answers

by MARY M. ATWATER

Question: Is it possible to add four harnesses to an ordinary four-harness loom? And if so, how can this best be done?

Answer: Depends a good deal on the type of loom to be altered. If it is the usual counterbalanced loom and has a substantial frame with ample space from breast-beam to back-beam or "slab-stock" the thing can usually be done without much trouble or expense.

The simplest method is to extend the uprights or "capes" of the loom about a foot; then hang two rollers from the large roller at the top of the loom, from these hang four smaller rollers, and from the four small rollers hang the harnesses, as shown below in the diagram at (a). This method, however, is not entirely satisfactory. It works well for all balanced weaves—that is for all weaves in which half the harnesses sink on each shed—but it does not work well for weaves requiring unbalanced sheds—a shed, for instance, in which one harness is sunk and the other seven are expected to rise.

It is far better to construct a top-mounting with "jacks" or levers, as shown below at (b) and (c). The system shown at (b) is satisfactory for narrow looms, but for a wide loom the method shown at (c) is better. Looms with the jack mounting may be built with two sets of lamms,—a raising set and a sinking set—or to simplify the tie-up they may be built with the raising lamms only. The harnesses being sufficiently weighted to hold them down in position. Most modern looms are built in the latter manner.

It should be noted that the balance of a jack loom differs from that of a counterbalanced loom. On a counterbalanced loom the warp passes in a straight line from the back-beam, through the heddles, through the center of the reed, to the breast-beam, when the loom is at rest. In a jack loom the warp is deflected downward at an angle where it passes through the heddles, and lies flat on the shuttle-race when the loom is at rest. This is an important point, sometimes overlooked. The diagram at (d) will make the matter clear.

Of course additional lamms and treadles are required for eight-harness weaving. For the single tie-up, eight lamms are necessary, and for the double tie-up, sixteen lamms. There should be at least twelve treadles, and more if the width of the loom permits.

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