

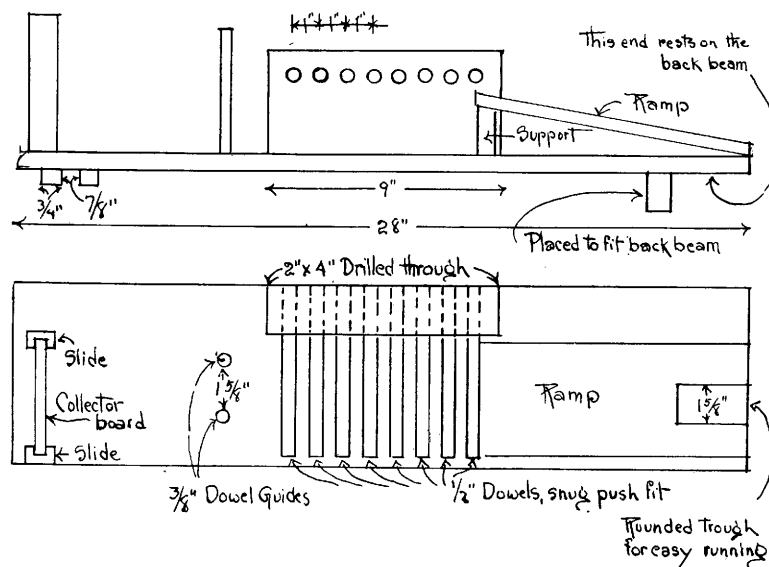
Questions and Answers

ADDRESS YOUR QUESTIONS TO MRS. MARY M. ATWATER, BASIN, MONTANA

Question. "Sometimes when nearing the end of a warp I find that one or two sections have given out while other sections still have one turn around the beam. Before warping the beam I make what I call "key spools," one for each section, wound with exactly measured lengths of warp. When the key-spool gives out I cut the whole bout. By this method I am certain all sections are warped with the same length of warp. Hence I cannot understand why when they are woven off some give out sooner than others."

Answer. If the key-spools contain exactly the same length of warp the only reason they come out unevenly must be a

variation in tension in warping the different sections. It is very important to put each bout on the beam at exactly the same tension, — not only to make the warp come out even but also to have a smooth warp. The same person should hold each bout during the warping process. A better method is to use a tensioning device to insure correct tension. Such a device has been designed by a member of the Shuttle-craft Guild, Mr. A. B. Gardner, who generously contributed working drawings to the *Shuttle-Craft Bulletin*, from which they are reproduced herewith. This device can be constructed by anyone familiar with wood-working and will be found a great convenience in sectional warping.



Mr. Gardner's notes are as follows: "Starting at the left, I made my warp tensioner with upright slides to take what I call the collector board, made of maple punched with 80 holes." (This corresponds to the ordinary guide, and might to advantage be a narrow piece of reed. M.M.A.) "Next come two upright dowels, $\frac{3}{8}$ ", which form guides to bring the warp to a width of $1\frac{5}{8}$ ", which is the width of the section on the beam between the dowels. Next comes a piece of 2 x 4 set on edge and with eight $\frac{1}{2}$ " holes drilled through at 1" intervals, and 1" from the top on centers. These are for the dowels, which are not fastened in, since if it is found there is too much tension one or more should be removed. Then comes a ramp of $\frac{1}{2}$ " maple which makes it easy to collect the warp-ends as they are threaded round the rods. At the end is a trough $1\frac{5}{8}$ " wide, rounded off to make the warp slide easily over the end without going over a sharp corner.

"Underneath at the left are two cleats to fit each side of the top piece of a light horse that supports that end. At the right is one cleat of such size and so placed that when this end is

resting on the back beam the warp will slide nicely over and down.

"My practice is to thread all the warp from the spool rack through the collecting board. Then, commencing at the far side, take the threads one by one over and under the dowels. I pass the threads from the upper part of the collecting board under the first dowel and over the next, and so on; those from the lower part of the board I pass over the first dowel and under the next. They should alternate.

"I did not sandpaper the dowels, since friction is what is required to produce the tension. All parts of the tensioner are put together with screws except the slides for the collecting board which I mortised and glued."

With these clear and detailed directions I am sure no one will have any difficulty in making this tensioner, and it will eliminate the chief difficulty in making a sectional warp. I am sure Guild members will be grateful to Mr. Gardner for his generosity in sharing his excellent bit of practice with our membership.