

DOUBLING STAND.

The usual reason for throwing two or more different yarns in the same shed is that we intend to get colour or texture effects which otherwise would be impossible to produce. The simplest example is the hit-and-miss "pattern" of several colours wound together on the same bobbin. Or it may happen that we want to show just a trace of colour here and there on an otherwise uniform background. This is done quite often with metallics.

Whatever the reason we are often faced with a problem of winding two or more yarns on the same bobbin. These yarns are often of a very different nature, and the winding from two tubes anything but easy. But even if we succeed in making a comparatively good bobbin, two things will happen in weaving: 1-st - the two yarns will run parallel to each other most of the time, so that one of them may be completely covered by the other on one side of the fabric; 2-nd - we shall have nearly always loops at the edges because it is next to impossible to wind two yarns at exactly the same rate. If one of them is slightly longer than the other, then it must produce loops.

We could avoid making loops by using a shuttle with two bobbins, or still better - two shuttles. But in this case not only that the weaving will be slower, but the two wefts will be still more exactly parallel.

Fortunately there is a very simple accessory used by hand-weavers for centuries, called a Doubling Stand. It can be made at no cost in a very moderately equipped home workshop.

Fig.1 shows the stand and gives an idea as to the principle on which it operates. The base (A) is a 1" board about 8" by 10". To the center of the shorter side of this base we attach a narrow vertical board (C) with two 2" screws. The size of the vertical board is about 1" x 2" x 30". Half way up we fix to this post another smaller horizontal board (B) - 1" x 4" x 7". It has a 3/8" hole right in the center. Finally at the top of the post C we drill a small hole to fit a piece of heavy wire D (old coat hanger), about 7" long. We bend the wire so that it makes a loop at the end directly above the hole in B. Another similar hole (G) is made close to the base of the post C. A piece of the same wire 8" long and straight fits into this second hole, but it must be easy to remove when not in use.

Now we must find a piece of pipe or tube, metal or plastic about 3" long and which would fit into the hole in B. It is easier to start with the tube and then make the hole to fit. If nothing can be found at home we can find a piece of copper tube in any garage. Both ends must be smoothed out, and the tube pushed into the hole so that its lower end will slightly project. Finally we make a few more small holes (same size as G) in the base A. One hole under the hole in B, and 3 more around it at a distance of 2".

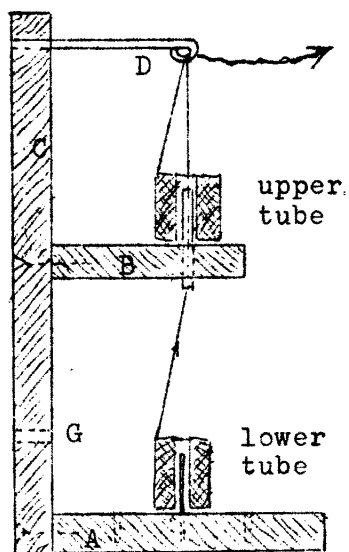


Fig.1

And again we cut a few pieces of the heavy wire, all about 3" long. They will be inserted when necessary into the holes in the base.

Regardless of how many yarns are going to be wound together we always place one tube of yarn above the hole in B. If there is only one more tube of yarn we place it in the center of the base after having first inserted a piece of wire in the central hole. Then we take the end of the yarn from the lower tube, and thread it through the hole in B (pipe and all) and through the upper tube of yarn. Then both yarns: from the lower and the upper tube go through the loop in D. When we start pulling (as indicated by the arrow), both yarns unwind, but the upper one winds itself slowly around the lower

yarn. In this way both yarns will be of the same length. The threading of the yarn through the hole and the upper tube can be done with the help of a wire heddle.

If one of the yarns is on a bobbin, then we place the 8" wire in the hole G and put the bobbin on the wire. The rest of the set-up is as before. If we have two lower tubes, they go on two 3" wires in the base (both off center). One bobbin can be on the horizontal wire and one or two tubes on the base off center. The cones of yarn do not need any support, but if they are of any size it is hard to put more than one on the base. A cone can be also used on top of the shelf B provided that a hole is made first in the top of the cone.

When using the doubling stand one must remember that the smaller the top tube - the tighter will be the twist of the combined weft. But in any case the twist is not too hard. Even with a very small tube we have only one turn for every 3 inches. However in the same piece of fabric this twist should be always about the same.

For perfect edges it is advisable not to wind the weft bobbins directly from the doubling stand, but first wind the combined yarns from the stand on a large warp bobbin trying to keep the layers of weft as level as possible, and then rewind the weft on shuttle bobbins.

IN THE NEXT ISSUE: - Design Made Easy - Projects in Satins ..
Rep Weave (Warp-face patterns for 4 frames) - Analysis of Large
Patterns. (This last article has been delayed for lack of space).
