

Gauze Weaving

BY ROBERT F. HEARTZ

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WE have read much in recent magazine articles about the use of the "lowly dish cloth" to beautify our homes. We, who have looms, may also weave it, as it is a plain gauze weave, and can be woven on a four-harness loom. To do this, one need not make any great outlay for additional changes and equipment, as only a bar, known as a slackener, and some doup heddles are needed. These can easily be made at home.

The gauze weave is a plain type of weave, and the hand-woven product has this advantage over the "dish cloth material" in that it can be much more firmly woven and has more body to it. It is the strongest and most durable weave known. Gauze weaving was known to the primitive races, and there are several of their crude looms in existence today that are threaded for this weave. It forms an important class of modern commercial fabrics, some of the most common ones being marquisette, cable net, Madras muslin, mosquito netting, grenadine, bolting cloth, etc., and, because of its durability, foundation fabric for automobile tires.

The first project in this weave should be simple. After the basic principles are understood, many other possibilities offer themselves.

The gauze can be woven on a four-harness loom using (2) treadles. It is so drawn in the heddles that, on one shed, every other end is raised, as in

plain weaving. On the next shed, those ends that were raised are again raised, but, on the other side of the ends in the down shed. This twisting

is controlled by the two front harnesses, called "the doup" and "standard" heddle frames, and in the movement of these heddle frames is the secret of gauze weaving. The type of loom equipped with rollers can be used, but one equipped with jacks or levers will prove so much more satisfactory that it would be worth while to make the change if one is planning to weave much of the material.

DOUPS AND STANDARD

A doup heddle is a string heddle, one half the length of the ordinary heddle, which should be of wire or flat steel. The doup heddle should be made long enough so that, when fastened to the lower bar of the first or doup harness frame, the loop will be long enough to go through the eye of the standard

heddle, on the second frame, when both frames are level (Figs. 2 and 3). The doup should be made of hard, twisted or braided fishing line, but must also be very flexible.

SETTING UP

For weaving coarse materials, regular carpet warp may be used; set (12) ends to the inch. The weft should be slightly heavier than the warp. The end of the warp should then be drawn

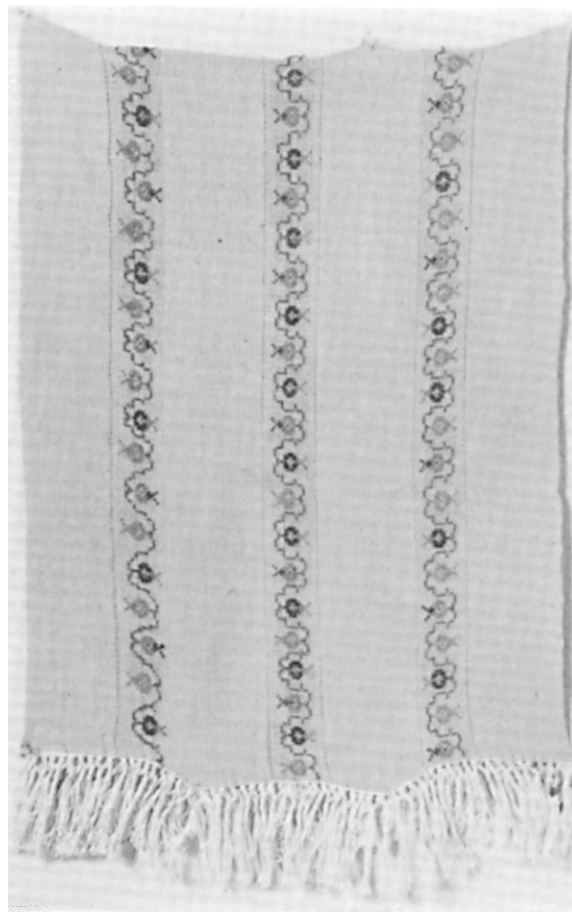


Fig. 1 — Table runner with cross-stitch embroidery.
Gauze weave

Robert F. HEARTZ

Fig. I.

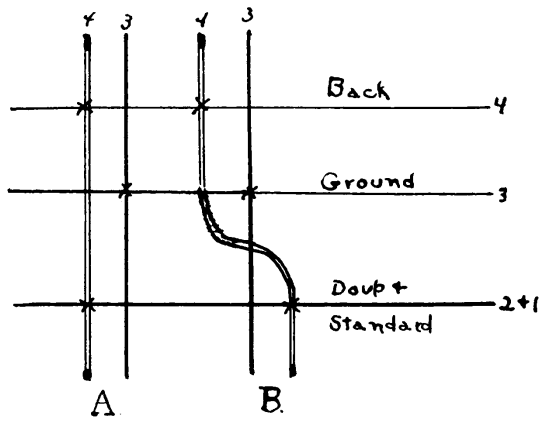


Fig. II.

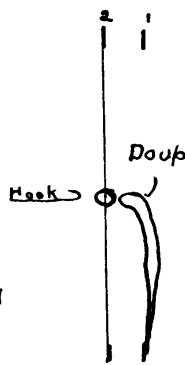


Fig. III.

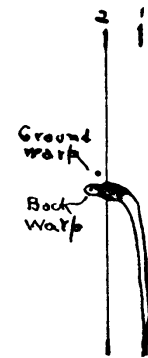


Fig. IV.

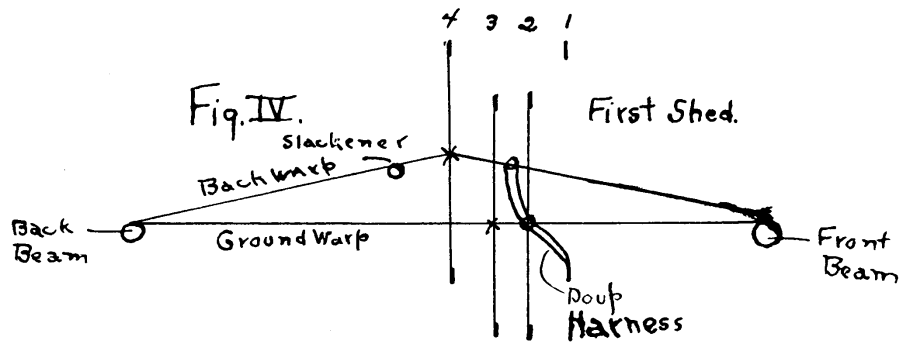
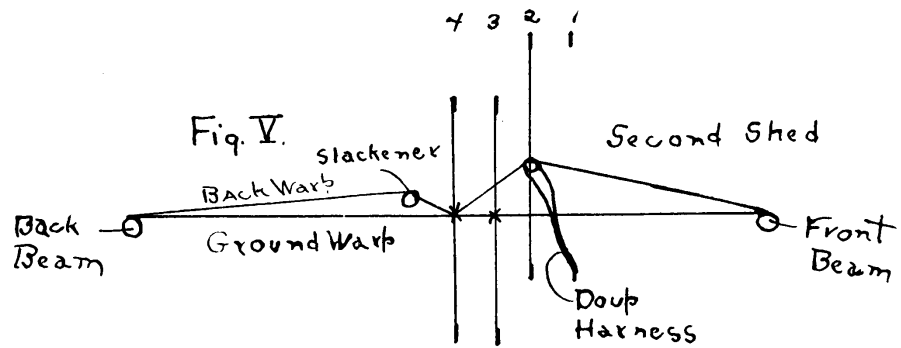


Fig. V.



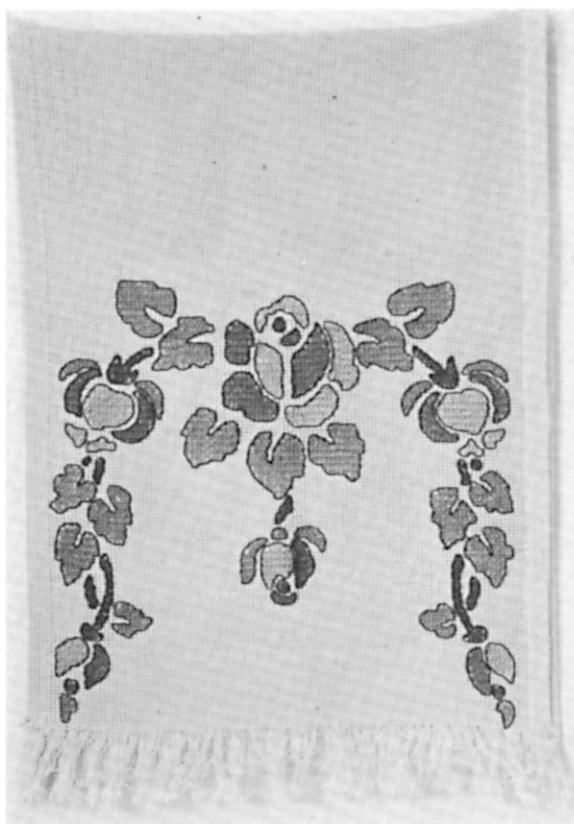


Fig. 2 — Table runner stencilled in color and outlines stitched. Gauze weave

through the two back harnesses in regular order for plain weaving, that is, 4; 3; 4; 3, etc. The harness frames are here called "back" (4); "ground" (s); "standard" (2); "doup" (1).

The second or standard frame should be equipped with the same number of heddles, as the back frame and the first or doup frame should have an equal number of doups.

After all of the ends have been drawn through the two back frames, beginning again at the left, we are ready to draw in on the standard and the doup heddles. A doup heddle is put on the doup frame and the loop is carried through the eye of the standard heddle, being drawn through to the left. The fourth or back end is drawn through the loop thus made, and the third or ground end is drawn to the left of the standard heddle and above the back and douping end (Figs. 2 and 3). The two ends are drawn together through the same dent in the reed. The next two ends (4 and 3) are drawn through in like manner and so on, for the remainder of the warp. Every other dent of the reed is skipped, otherwise all the warp should be crowded to one side of the loom. There should be a selvage of about six ends on either edge of fabric and these should be drawn 4-2; 4-2; 4-2.

TIE UP AND SLACKENER

Frames 1 and 4 should be tied to the left or No. 1 treadle and frames 1 and 2 should be tied to No. 2 treadle.

Before tying up the warp, an appliance called a slackener must be put in place. It consists of a round rod or lease stick. (A broomstick will do.) It is used to take up the slack caused by the irregular shed of this type of weaving. To insert, the fourth frame is raised and the rod passed through the shed thus made at the rear of the harnesses (selvage ends excepted). A cord is tied to the center of the rod and is passed through a pulley fastened in the center of the top beam of the loom. The loose end of the cord is dropped straight down and tied to No. 1 treadle. The adjustment of the slackener is governed by the individual loom, but, at the beginning, may be set about six inches above the center line of the warp.

The slackener should be balanced at the center, otherwise it will move unevenly and cause an uneven shed. A loose cord may be attached to either end of the slackener and tied to the back

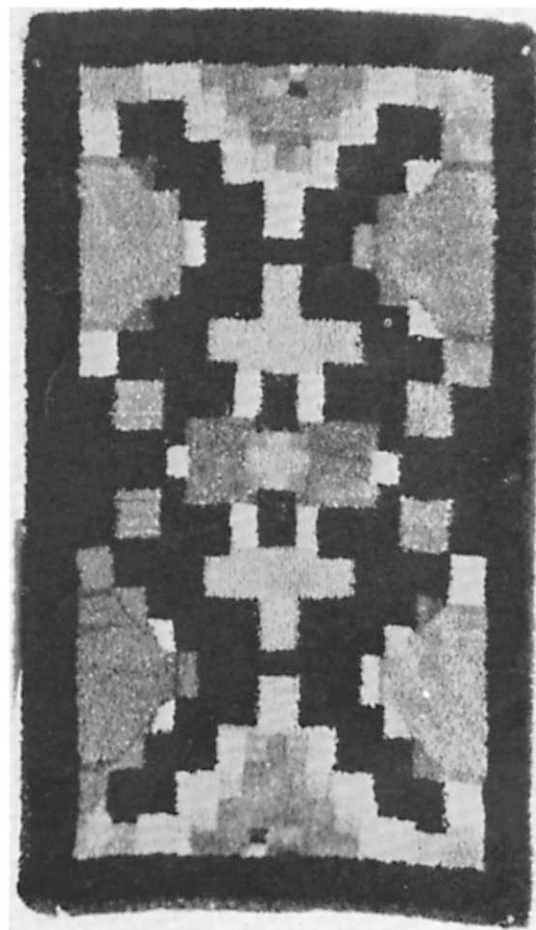


Fig. 3 — Rug, worked in yarns on gauze weave base

beam, drawing the slackener back about five inches. They should not, however, interfere with the raising and lowering of the rod itself.

After the warp is drawn, the harnesses tied up, and the slackener in place, the warp tieup should be made, but not before. Treadle No. 1 is held down and the warp tied to the front apron, completing the preparations for weaving.

THE WEAVING

In the harness tieup, it will be noticed that the third harness is not tied up at all, and it follows that the ground ends are always down. The fourth harness is tied to both treadles, and it follows that the back ends are always raised. Since this is so, some method must be devised of twisting the ends by raising the back ends first on the left and then on the right of the ground ends.

So we come to the principles of gauze weaving. On the first shed of the gauze weave, frames 1 and 4 are raised, causing the back ends to be raised on the left of the ground ends (Figs. 4 and 1A). On the second shed, frames 1 and 2 are raised, and the doup heddle pulls the back ends under the ground ends, and the two frames working together raise the back ends to the right of ground ends

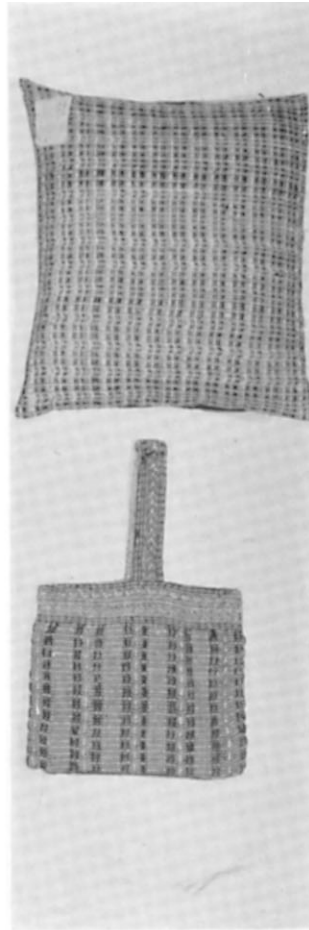


Fig. 6—Bag and Pillow Top—worked in yarns on gauze weave base

(Figs. 5 and 1B). This makes the twist that holds the filler in place.

It should also be noted that on the second shed the slackener is lowered and allows the extra play necessary for the back ends to be drawn under and up, without causing any undue strain on the warp.

Since the third frame is always down, it is well to fasten it so, making certain of an excellent shed.

Care must be exercised in weaving not to pull in on the tabby or filling thread, as there is considerable takeup of filling in beating, which will tend to pull in the selvage edges. After the shuttle has passed through the open shed, the filling should be loosened and laid at a diagonal position from the fell of the woven cloth to the reed. Then, in beating up, this slack works toward the tight edge, and does not cause it to pull in.

If the materials suggested are used, a fabric similar to dish cloth will result. The weave may be varied by weaving about two inches plain; 4-2; 4-2; then two inches of gauze, and so on. The striped fabric resulting is suitable for table runners with small figures or border designs. Another novelty effect may be had by drawing some of the doups through to the

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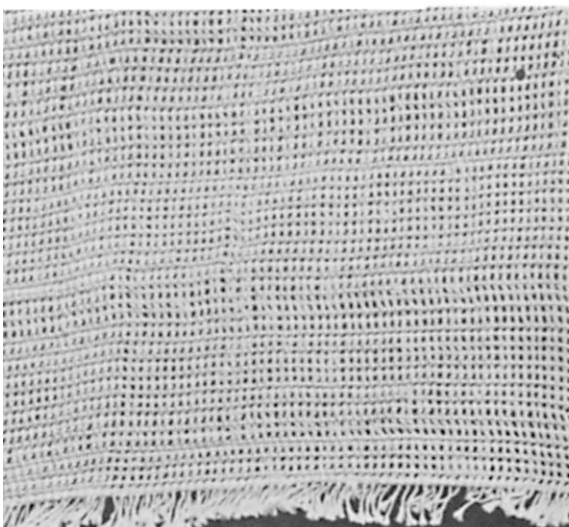


Fig. 4 — Specimen of plain gauze weave

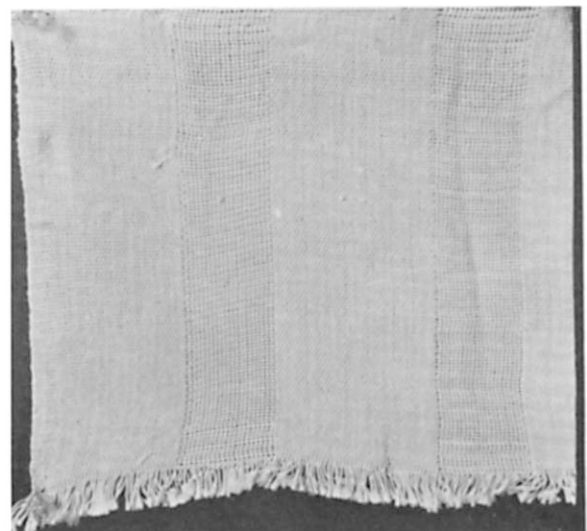


Fig. 5 — Specimen of figured gauze weave

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GAUZE WEAVING

(Continued from page 30)

left of the standard heddles and others through to the right, giving strips with a right and left twist. Another suggestion is: 20 ends drawn plain 2-4; 2-4; 20 ends of gauze; 20 ends 2-4; 2-4, combining a plain weave stripe with a gauze stripe. This drawing in, when woven, as suggested for horizontal stripes, results in a checked pattern. Thus one variation suggests another, giving numerous pleasing weaving effects, not to mention those that may be obtained by varying material and color combination.

There is one point the weaver must be careful about in planning the various projects, particularly in this weave, and that is the choice of materials to be used for warps. It is necessary to use a ply yarn with a good twist; cotton linen or silk may be used but the matting propensities of wool render it unsuitable for use as a warp. It can be used as a filler as can almost any kind of yarn when one has a good warp on the loom.

After the finished cloth is cut from the loom, it can be used for the foundation for rugs and chair seats in the Persian knot or French stitch, table scarfs, pillows, upholstery materials, etc., in cross or double cross stitch, in all-over designs, or, if the material has been dyed, or is woven in colors, small designs or border can be used for decorating the various articles as they are made up.

NOTE. — The tieup above is for a loom equipped with jacks.

The tieup for a loom equipped with rollers should be: Treadle No. 1, harnesses 2 and 3; treadle No. 2, harnesses 3 and 4. The slackener should still be tied to treadle No. 1.

All weavings and embroideries illustrated are products of the Occupational Therapy Department at Kings Park State Hospital.



BEAD TECHNIQUE

(Continued from page 26)

so that the top can be sewn, cut each chain of 20 in the center and ravel back to the bag, releasing sufficient length of silk to be woven back into the fabric of the bag to form a firm-finished edge, to which the hinge may be attached. Follow this process with all the chains on both sides of the bag. One side will ravel easily, and care must be taken not to ravel it too far. (See plate No. 7.)

FITTING THE BAG TOP TO THE BAG

Now the bag is ready to sew to the top selected. The top chosen should be from one-half inch to one inch smaller than the bag. A bag that is gathered to a top is always much better looking than when it is stretched to fit the top. If a bag is to be fitted to a top already chosen, be sure that the chain at the beginning is long enough to give this fullness. In sewing the bag to the top, use the