

Tapestry Weaving

BY EMILY N. GOODWIN

ALIKE to the experienced weaver and to the beginner, tapestry weaving offers a tempting new field for hand-weaving. I know of no single branch of weaving that offers so much to the lover of beautiful textiles. If one can design even a little, the field is, of course, immensely widened; but even if one cannot design, opportunity is still open. There are, these days, so many charming color arrangements, and so many adaptable illustrations, that we need only to keep our eyes open to find designs aplenty. Then, too, the necessary equipment is simple, and need not be expensive; a frame or simple loom, good wool, and a love of form and color are the major requirements.

Among weavers in this country the types of tapestry most used fall easily into two classes: the knot type and the flat type. To the former belong the Summak, a very old Greek weave, and the so-called "Swedish" weave. This latter makes a handsome ribbed fabric (see Figure 1), suitable for wall hangings, upholstery, and large bags. The Swedish weavers I have consulted say that they have never seen this weave used in Sweden; possibly it may have received its name from the similarity of its knot to that used in making the Swedish Rya rugs. I use the name enclosed in quotation marks, to indicate that, though this is its name, nothing is implied as to its source. It is to this weave that I wish to devote the greater part of this article.

For a first piece of "Swedish" weaving the following materials are needed:

A frame or simple loom.

Cotton twine No. 10 for warp, set 8 to the inch. This is cord such as butchers and grocers use to tie their packages. Design on tracing linen, colored as it is to be woven.

Weft, Germantown or French tapestry wool of good quality and fast color.

PREPARATION FOR WARPING

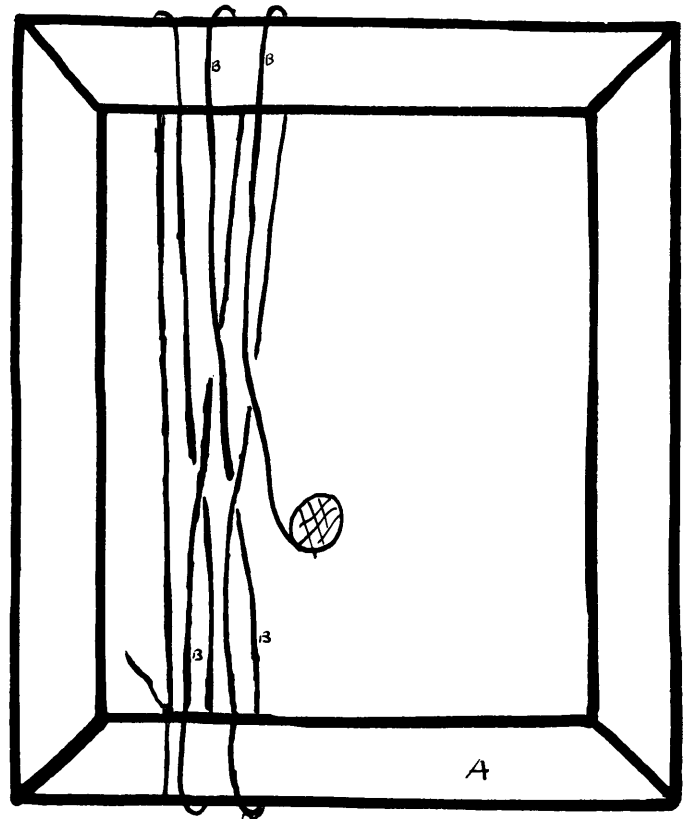
For teaching purposes, and for making small articles, I use a frame; either one made by a carpenter, or a stretcher such as artists use on which to stretch their canvas. If this latter is used, it should not be larger than 23 inches by 26 inches, outside measurement, and should be strengthened at all four corners with flat angle-irons.

Having decided on your frame, mark 1 inch spaces across the bottom strip the full width of the frame. Mark off the opposite end (top) in exactly the same way. These marks must be accurate and very distinct; they are the guides for the number and spacing of the warp threads.

WARPING

Make a hard ball of the twine, large enough to complete the warp. If a knot must be made, it must come on the wood

of the frame and not in the opening. Tie the end of the twine securely around the bottom of the frame just where the first warp thread to the left should come; and pass the ball to your helper who puts it *under* the frame, around and over it, draws the twine taut, puts her finger tightly on the twine as it lies on the frame, to prevent slipping, and hands the ball back to you. Repeat this process and hand the ball back to the helper as before. (See Diagram I.) Continue this for the full width of the warp, spacing so that there are 4 threads to the inch on *each* side of the frame — a total of 8 threads to the inch. When the warp is the desired width, tie the end securely to the bottom of the frame. This last thread must be as tight as the rest of the warp. The threads should cross at about the middle of the frame, and should be tight enough to give a humming sound when the fingernail is drawn quickly across them. If any of the threads do not cross, or if the warp is loose, undo your work and do it over. A poor warp is fatal to satisfactory weaving.



A - Wooden Frame
B-B-B - Warp Threads
Diagram I.

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PREPARING TO WEAVE

Take a piece of twine like the warp; tie it securely to the right side of the frame, close to the bottom. Carry the free end of the twine across to the other side of the frame between the two sets of warp threads above the cross in the frame opening; with an ordinary *dinner fork* (with rather blunt tines) held lightly between the thumb and first finger, at the extreme tip of the handle, and with the twine held at a tension, beat down the twine till it is close to the bottom of the frame, pull the twine very tight and tie to the left side of the frame close to the bottom. With a somewhat finer twine, make a "spool" (see Diagram II or III) by winding the twine several times around two or three fingers, then, removing the fingers, wind tightly around these threads from top to bottom several times. All "spools" for weft of whatever kind are wound in exactly the same way. They should be firm and stiff, but not bulky. Beginning at the left, put in several shots of tabby weaving, about an inch, picking up every other thread with the tip of the fork or with the fingers. This tabby weaving does not go around the frame as

the first shot did, and should be put in rather loosely. Now take a piece of warp twine and put it in close to the *top* of the frame. The back threads will have to be picked up with the fork or finger. When this thread is tied on both sides of the frame and beaten close to the top (turn the frame to do this), the warp will lie perfectly flat without any shed at all, the threads lying side by side in regular order. We are now ready for our practice rows of knots.

MAKING THE KNOTS

Make several "spools" of wool weft. Tie a free end of wool, with a single tie, around the first warp thread at the right-hand side; you are working on the wrong side of the fabric, so this end is left on this side. This tie, which is always used whenever joining a new thread or beginning a new color, is considered as a knot, so the first real knot is made on the second warp thread as follows: With the palm up, put the hand under 8 or 10 warp threads, holding the thread on which you are to make the knot a little apart with the middle finger; keep this hand as far down on the frame as possible. Hold the "spool" in the right hand, resting it vertically on the first and middle fingers and held there with the thumb. With the wool from the "spool" behind the fingers, carry the "spool" over the warp thread from right to left, and under the same thread from left to right (see Diagram II) draw the knot down close to the tabby weaving,

pulling the spool down vertically. Let the warp thread slide off the middle finger, raise the next warp thread and make a knot on it in exactly the same way; continue till only one or two threads remain on the left hand; pick up 8 or 10 more, and continue to the end of the row. Keep the wool as short as possible in making the knots.

The second row of knots is from left to right. The knot is the same as in the first row but the direction is reversed. With the spool in the right hand as before, and with the middle finger of the left hand (hand flat, palm up) holding the first warp thread apart from the others, throw the wool slightly to the left, holding it in place with the thumb of the left hand, bring the wool over the warp thread from left to right, then below and under from right to left; bring spool down vertically and draw tight. (See Diagram III.) With the middle finger of the left hand, pick up the next warp thread and make the knot exactly like the preceding knot, and so on to the end of the row. When you have so many warp threads on the left hand that working is difficult, drop the threads and start again as at the beginning. All rows

from right to left are knotted as was the first row; all rows from left to right are just like the second row.

When you are absolutely certain of the knot technique in both directions, and when the work locks even and smooth on both sides, you are ready to begin the design. For a first piece, use an enlargement of the sampler pattern (Diagram IV), about 5 inches by 10 inches.

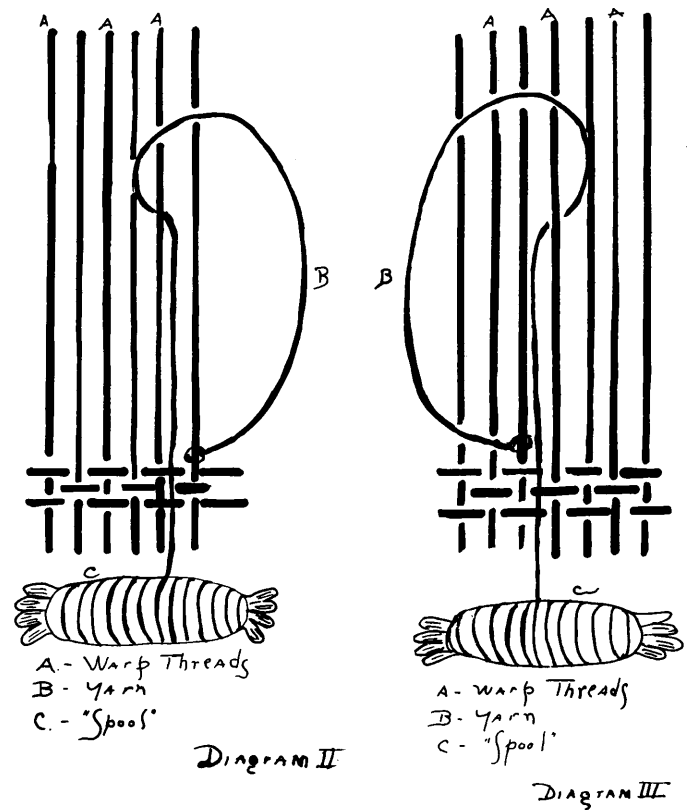
TO PUT THE DESIGN ON THE WARP

Place the design behind the warp threads, the side boundary lines of the design exactly under the outside warp threads, and the bottom of the design at the top of the last row of practice knots. Pin it carefully to position. With a fairly fine, stiff pen and *waterproof* ink, trace the outline of the design on the warp threads, not in a continuous line, but with a dot on the warp thread wherever this crosses the outline. Make the dots small and only just heavy enough to see. If the design is small, it is safe to put all of it on at one time. After the design has been dotted on the warp, turn the design back out of your way. (Do not remove it yet, as it may be necessary to turn it back again in cases of doubt.) Pick up the first warp thread (either side) between the thumb and first finger of the left hand and, with the pen held vertically against the warp thread and exactly on the first dot, twist the warp thread till the ink entirely encircles it. The encircling mark must be fine, free from blots, and should really be the path of the dot if this could be moved around the warp thread. This twisting process must be done for each and every dot on the warp. If a mistake should occur, leave it and, when the ink is thoroughly dry, correct it with ink of another color (*waterproof*). When finished, the outline on the warp should be exactly like the outline on the design. Put the frame aside till perfectly dry; remove the design, and keep it before you as a color guide.

WEAVING THE DESIGN

Look over your design and select a mass that forms a foundation for other masses. This method is not worked in horizontal rows all the way across the warp, but is one of building, and under masses must be worked before the upper ones. Referring to Diagram IV, it is obvious that one cannot begin with the yellow mass at the right since it curves over the gray; nor with the yellow mass at the left which slants over the red; the brown leans over the blue, so does the gray. Therefore, begin with the blue. Tie the free end of a blue spool at the right end of the form on the warp that is to be blue; this tie should cover the lowest right-hand dot of the blue mass; work in rows, back and forth, over the blue mass *only*, following the exact form outlined on the warp. In order to keep the slant on the right and the curve on the left, it will be necessary to make succeeding rows shorter than the beginning rows, sometimes leaving off one knot, sometimes more; the outline marked on the warp is your *only* guide. Continue with the blue till you reach the point marked x on the diagram. Leave the blue spool hanging (do not break off the thread) and start the next mass — the brown. Tie the free end of the brown spool at the point where the brown and blue masses join at the bottom of the design; also tie in the red where the red and brown come together. The line

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separating the red and brown is nearly straight here and, in order to keep the outline, several rows of red and of brown will end on the same warp thread.

When more than three rows end on the same warp thread, a slit will show in the finished fabric. To avoid this, we cross the weft threads as follows: Work one row of the brown from right to left and leave the spool hanging when you reach the red tie; work one row of red from right to left and back again to where the brown was left; lay the red wool horizontally across the warp toward the right; the brown spool will hang from beneath the horizontal red; pick up the brown spool and make the knot just as you made all the others: you will find that the red wool is automatically tied in this knot, and that there is no slit in the fabric. Continue the brown row up to the blue and return. When you reach the red, lay the brown weft horizontally across the warp toward the left, and with the red make the knot tying in the brown.

This is technically called "interlocking" or "crossing,"

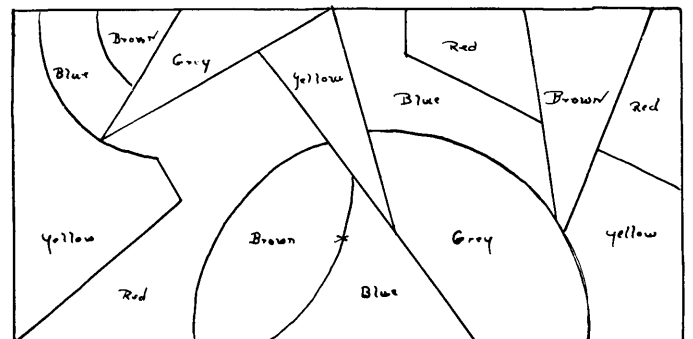


Diagram IV.

and must be done whenever more than three rows end on the same warp thread. The only exception is that when a new thread is tied there is no interlocking. Continue working the red and brown till the outline curves sufficiently to make interlocking unnecessary. Then continue with brown alone till x is reached; then interlock the brown and blue till the blue is finished; cut off the blue and proceed with the brown alone till completed; go back to the red, and work to the point where the left-hand yellow mass turns sharply; leave the spool hanging, work the left hand yellow to the point where interlocking becomes necessary; finish the red, and work the middle yellow till interlocking with the grey or blue is necessary. Then work the grey, and so on, keeping on with each color till forced to drop it because of changes of line direction or some other need of the design, interlocking where necessary, but always following the design. When mistakes occur, or when a form is not good, rip and correct. When the sampler is finished, put in a few rows of plain color knots, and several rows of tabby weaving in twine; cut from the loom, leaving the warp ends long enough for a fringe. Knot the warp threads, or finish with a row of machine stitching through the tabby weaving.

THE "FINISHING" PROCESS

Usually beginners' pieces are not entirely even, so have to be stretched with more than usual care. Use a smooth board larger than the finished piece. With *copper* tacks, to avoid all chance of rust, put in an inch or less apart, tack your piece,

right side up, to the board, being certain that all edges are perfectly straight, and that all corners form right angles; otherwise your piece will not be usable. When the piece is just as you want it, wet it thoroughly with cold or tepid water. Right here you have the reason why all tapestry should be made of wools that are absolutely fast color, and why all ink used must be waterproof. When the piece is *thoroughly* dry, remove it from the board. It is now ready for use.

As with needlepoint, a finished piece should be singed to give it the smooth, polished look that is so attractive. However, singeing, except in the hands of an expert, is a difficult matter and, unless you can have an expert do it for you, it is safer to omit the singeing.

SUMMAK

The Summak (Fig. 2) makes use of the same knot as does the "Swedish," but in a different way. It is done in rows all the way across the warp, with the right side of the fabric toward the weaver, and there are other differences. It is an excellent method to use in occupational therapy, and I am sorry that lack of space makes detailed explanation here impossible.

The flat tapestry methods will be discussed in a second article.

In closing, I wish to express my sincere thanks to Mr. Otto Hess of Brooklyn, N. Y., for the detailed photographs he has made for me; they show the texture so well that they add much to the value and interest of the article.



Figure 2. Summak Tapestry