

# Flat Tapestry

BY E. N. GOODWIN

IN A preceding article, I said that, among our weavers, the knot tapestry and the flat tapestry were the best known varieties; I then considered the knot type in detail. I want now to discuss the flat type, the best known of all tapestry methods. Included in this flat type is the old Gothic, the high-water mark in tapestry weaving; the Gobelin, Aubusson, and other French weaves; the adapted or modified French tapestry; Kelim; and the Norwegian picture weaving, to mention only a few.

The distinguishing marks of Gothic and French tapestry are: (1) the strongly marked horizontal ribs, made by the warp; (2) the slits; (3) the hatchings, the name given to the pyramid-shaped shading, always at right angles to the ribs and the slits. In the old tapestries, slits were always used to enhance the modeling of a form. In the later tapestries, this artistic use has been in a measure lost sight of, and the slits used simply as a matter of convenience to save the time of interlocking where two colors meet in a straight line parallel to the warp. The hatchings are made by the weft threads, and are vertical as the tapestry hangs on the wall.

The flat tapestry is really a tabby weave, using a shed just as in any loom weaving; that is, alternate threads are raised, the weft passed under the raised threads and beaten down close to the preceding row, then the other threads are raised to permit the weft to be passed under them. On a loom, this raising and lowering of alternate threads is done by means of treadles or hand levers. Tapestry weaving differs from harness weaving in that the weft is put in loosely enough to completely cover the warp, and is pushed down into place with a fork, grattoir, or comb (see Diagram I) instead of with a beater. A beater is not used because the weft seldom goes across the full width of the loom in any one shot, so the weaving is at varying heights. A tapestry

loom is essentially a 2-harness loom without a beater, and usually has string heddles. For flat tapestry weaving it is quite possible to use a frame, similar to that used in knot tapestry, as described in a preceding article, but it is necessary to make a mechanism for changing the shed, and on a

simple frame this must be made anew for each rewarping; this seems to me too great a waste of time. There are several good, simple tapestry looms on the market, including a folding loom, if space must be considered, so why use a substitute which, at best, is only partially satisfactory?

The adapted or modified French tapestry is similar to the Gobelin and Aubusson, but is made without hatchings, and is well adapted to modern design. It is this adapted French method that I want to discuss first. (See Figure I.)

For a first piece of this tapestry, warp the loom with tire cord, a rather fine, tightly-twisted cord sold in the 5 and 10 cent stores as parcel-post twine, but much cheaper when bought in cones at a twine store. Set this



Figure I. Modified French "Adopted"

warp, or a softer warp of the same size if you prefer it, at 8 or 10 to the inch. Warp exactly as you would warp any 2- or 4-harness loom, and put in about an inch of plain weaving in twine; space the warp carefully (you have no need to keep the spaces) with an awl or knitting needle. The weft may be wound in a "spool" as in knot tapestry, or better, on a flute. (See Diagram IIA.) The method of weaving is as follows: Starting from the right, with the flute held lightly in the right hand, the end of yarn hanging down between the second and third fingers, pass the flute, end first, under several warp threads; the left hand lies flat on the warp, palm down, the thumb and first finger in the shed ready to take the flute from the right hand. Having passed the flute to the left hand, use the grattoir to push the weft in place, being sure that the left hand holds the flute so

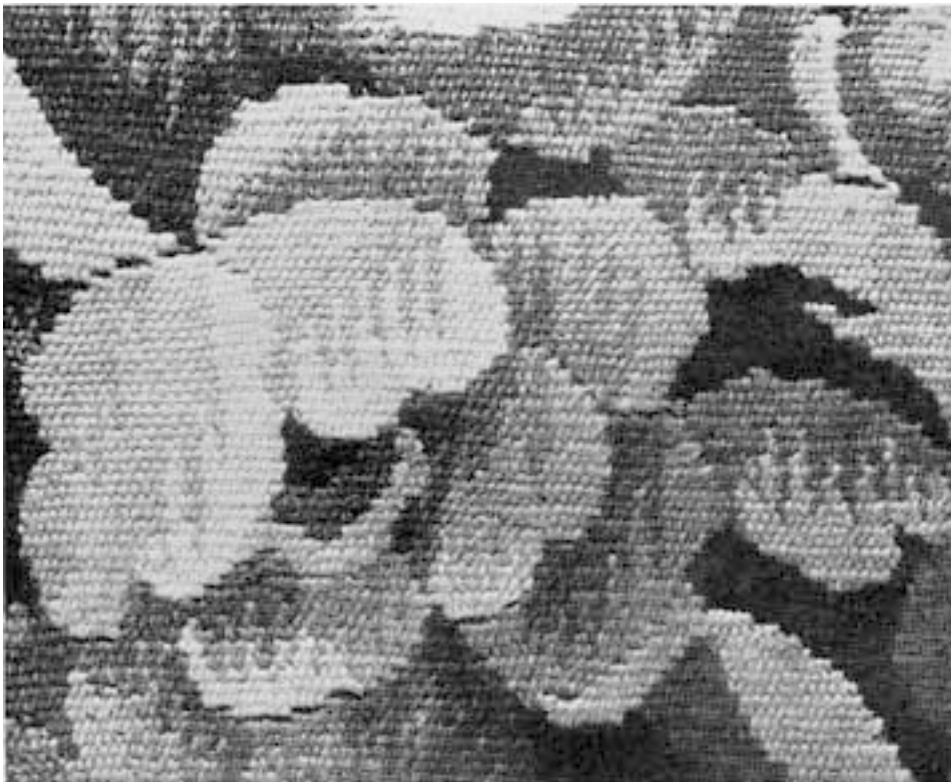
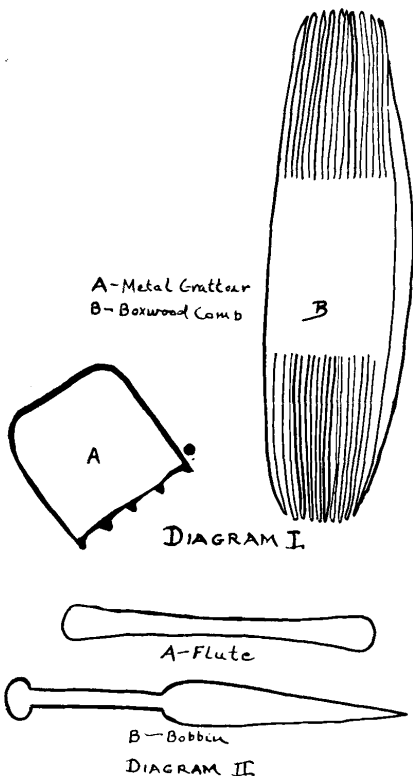


Figure II. French Tapestry — Detail

that the weft tension is just loose enough to let the weft cover the warp completely, but tight enough to make smooth work. The tension of the yarn from the flute must be controlled throughout, in all tapestry weaving. Return the flute to the right hand, and repeat the operation as many times as necessary to reach the left side of the warp. In doing plain tapestry, all in one color, it is entirely possible to pass the flute all the way across the warp before using the grattoir, but it is not advised for the beginner, for it invariably

results in a weft that is too tight, in which case the warp is not covered, and the edges are drawn in, — two very bad faults. The row from left to right is done in exactly the same way except that the left hand passes the flute, the right hand receives it, and the grattoir is used by the left hand. Do not let any possible awkwardness of the left hand deter you from using it as directed; persistent practice will cure the awkwardness. After five or six rows have been completed, look on the under side. (You are working on



the wrong side, so the under side is the right side.) A small loom can easily be turned to show the under side; if the loom is large, separate the warp threads a little and look at the right side of the work in a small mirror held under the warp. Do not attempt any design till your plain fabric is entirely satisfactory, — smooth, with warp well covered, and with edges keeping a straight line, neither drawn in, nor bulky with weft too loose over the outside threads. Unless for some special reason the weft is to be unusually close, the comb will not be needed for the plain weaving. This method is the basic one used for Kelim, French, and adapted French tapestry, and Norwegian tapestry, with variations to fit special requirements. It is the foundation technique of the old Gothic, of which all later flat tapestries are variations.

We are now ready for the design.

If the design has a decided right and left, reverse the design before weaving. Color it also; to reverse the design is much easier than weaving it with the wrong side next the warp. Place the design under the warp, with a *side* edge even with the last row of practice weaving (this is to have the warp threads horizontal in the finished piece), and with the top and bottom edges of the design parallel with the warp. The last warp thread on each side should coincide with the enclosing lines of the design. Pin carefully in place with several good-sized pins. The pattern should not require repinning throughout the weaving; when necessary to roll up the partly finished work, the pattern is rolled, too, and will be in correct position to continue weaving.

This is a “building” method as is the “Swedish,” so select for your starting point the part of the design which will serve as a foundation for overlapping forms; e.g. in Diagram III, 1 and 2 should be woven before 3 or 4. Follow the numbering; work 1 entire, then 2, then 3, and so on. Each form should be woven in a solid color, without shading, with a single strand of French tapestry or Germantown wool, and without interlocking. If the weaver prefers to interlock (exactly as in the “Swedish”) there is no objection, but it slows up the work and adds nothing to its beauty. My own practice is to interlock *only* on small pieces which have to be stretched in making up, as in the case of underarm bags that are heavily stiffened. The only time that interlocking is *required* is when a color is on one warp thread only. Then it must be interlocked on one side, as a single thread cannot be sewed satisfactorily. The finished piece is stretched and finished as directed in the article on knot tapestry, *after* the slits are sewed. The comb may be used in addition to the grattoir especially as an aid in shaping the forms.

### SEWING THE SLITS

With thumbtacks, fasten the completed piece, wrong side up, to an embroidery or other frame. With a strong thread — linen is good — of a neutral color, sew the slits together with buttonhole stitches about  $\frac{1}{4}$  inch apart; the stitch should catch the warp threads between the weft threads, and must be put in straight, not on a slant, so that the sewing threads will sink between the weft threads and will not show. Sew tightly and finish securely, but do not pucker. Do not use knots in the sewing thread.

### FRENCH TAPESTRY

In the true French tapestry, of which the Gobelin and Aubusson are the best-known types, the method of setting up the loom, putting in the weft, "building" the design, using the grattoir and comb, leaving the slits, and sewing are exactly the same as in the "adapted" French tapestry just described. The differences come in the wools used, and in the shading or hatchings. The shading is often very close, and for this a single coarse weft is not suitable. The weft should be fine — Bernat's English crewel is excellent — mixed in strands as follows: Suppose you are using a 5-strand of green, and you have but two shades only fairly close in coloring; wind flute No. 1 with 5 strands of the lighter green; flute No. 2 with 4 strands light and 1 dark; flute No. 3 with 3 strands light and 2 dark; No. 4 with 4 dark and 1 light; No. 5 with 5 dark. You thus have 5 closely-shaded flutes to work with instead of the original two.

### HATCHINGS — SAMPLER

Examine Figure II closely; it is a detail of a large piece, the flowers and leaves of which are full of hatchings, all shaped more or less like pyramids. Set your sample 10 to the inch; no design is needed. (See Diagram IV.) Starting from the right side, work part of the way across; change shed, and work back to the right-hand side; change shed and work toward the left again, but not so far as the first time, say 3 threads less; change shed, and return to the right; repeat this two or three times more, taking 3 threads less at the left each time; leave flute at the right. Now take another color; for practice work, it is best to use a strongly contrasting color instead of a shade as you would in a design. Starting the new color from the *left*, work up to the place where the first color turned, change the shed and return to the left side; this completes 2 rows; for the third row, weave as for the first row, and 3 threads more; this will bring the second color over 3 threads of the first color; return to the left; do not forget to change the shed every time you change the direction; continue in this way, each



Figure III. Norwegian Picture Weaving — Detail

row toward the right extending over 3 more threads of the first color till both colors have the same number of rows; then complete the pyramid in the second color by taking 3 threads fewer on each row toward the right. When the pyramid is complete, leave the flute at the left, pick up the flute at the right and make the pyramid with the first color in exactly the same way as the pyramid just finished. This method makes perfect symmetrical pyramids, decreasing toward the point, and increasing toward the base. Follow this with pyramids where 1 thread is added (or dropped according to direction), or where two or perhaps four or more are added, then try varying the number; add (or drop) 1; then 2; then 3; then 4, in the same pyramid; study the results to see what a different effect is obtained by changing the proportions of the pyramids.

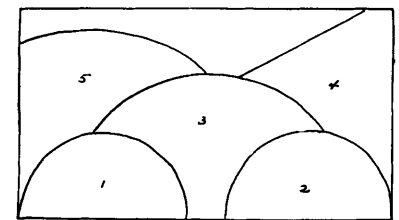
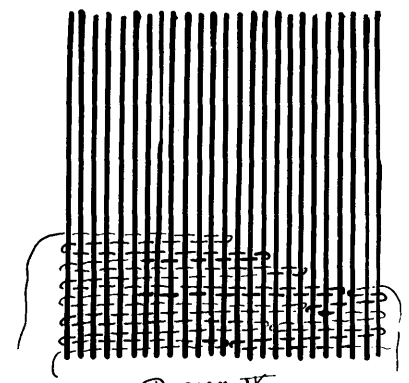


Diagram III

Follow this with double pyramids, bases together; then make the bases of the pyramids follow a curved line; continue the practice till the position of the pyramid makes no difference to you, one position being as easy as another. In actual practice, one sel-



dom if ever counts the threads, but that is something that is a matter of judgment, formed by practice and in no other way. The main thing to watch is the shed. The shed *must* be the same over both colors, not closed over one and open over the other. It was for this reason that I emphasized that the two colors used in the first practice bit should start from opposite sides. There are other methods of hatching used, but the beginner in French tapestry will find that this one will answer all the needs of simple designs, and later one can work out other ways from any good piece of old tapestry.

After the sampler is made, for a first practice piece, use a simple flower and leaf copied from an old tapestry. Almost any museum has tapestries which have flowers and leaves in the borders or in the immediate foreground. Copy the simplest one *exactly*, drawing the hatchings just as they are as to position, shape, and size. You can make this copy in crayon or colored pencil, and then work it out carefully at home the exact size you want, — not too small. Make the background of a strongly contrasting color so that no mistakes will escape you.

#### NORWEGIAN PICTURE WEAVING

See Figure III. Norwegian picture weaving is woven

almost exactly like the French, except that it is interlocked from left to right; it is not interlocked when weaving in the opposite direction. I hesitate to mention this lovely tapestry, because its beauty depends so largely on the materials used. It should be made of hand-spun yarn, which has been hand-carded so that various colors can be blended before spinning. The yarn thus made is used either single twist (like "homespun") or two strands are twisted together. In either case it is a heavy yarn used in a single thread, not stranded as in French tapestry. Mixing the wool in the cards gives the softest possible shading effects. However, unless one is a hand-spinner and a great lover of color, do not attempt Norwegian picture weaving. It will mean disappointment, and why risk disappointment when there is a lifetime of joy in any one of the other tapestry methods.

The photographs for this article were made by Otto Hess of Brooklyn, N. Y., as were those for the knot tapestry.

NOTE. — It may be difficult to obtain the flutes, grattoir and box-wood comb; nearly all of them are imported. It is quite possible to use "spools" as in the knot tapestries, and a fork: or one may use the pointed bobbin shown at B on Diagram II, the top of which holds the yarn, the point taking the place of the grattoir. Necessarily, this substitution slows down the speed.

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## MATTOR

(Continued from page 9)

Drafts Nos. 10 and 13. An arrangement for 6 harnesses. The addition of one more pair of harnesses allows more freedom in design and color. The tie-up is for a 4-block design, but by experimenting with different tie-ups it is quite possible to build up a set of designs for this drawing in draft.

Drafts No. 11 through to No. 16 are a set of drafts in this weave, all of them arranged for 8-harness looms. Complete tie-ups are given, and they are woven in exactly the same way as the simpler drafts on 4 harnesses. The use of more harness frames opens up a bigger field of possibilities in design, color and textures for the weaver who, after doing one or more of the simpler of things in this weave, finds a growing interest and feeling for this texture. To me, in just assembling this material and in studying it and comparing the various drafts, I see possibilities of design, of textures and combinations that suggest themselves, but which would

require time and attention to just this one weave alone to bring them out.

Draft No. 17 is a set-up for 10 harnesses. It is possible to work up a set of drafts in this texture for 10, 12 or more harnesses but, as there are so few weavers who can and are equipped to work with them, none of them will be included. But for the weaver who works over the material here offered and who has the interest and equipment to carry on, the possibilities are there.

Material in this weave because of the closeness of the warp is somewhat stiffer than in some other fabrics and would require some experimenting with soft materials to work out a fabric that will drape and fold well. If this is done this will make an excellent weave for coat, dress materials, as well as for the softer material for drapes. The stiffness of the greater amount of this fabric will not detract from its desirability for upholstery, runners, pillows and rugs.