

Knotted Pile Rugs

BY MARY M. ATWATER

PILE FABRICS of all kinds have a special depth and richness of effect that give them a peculiar charm. They are produced in three chief ways, some of which have been explained in a previous article in *THE HANDICRAFTER*.

Velvets and "terry" fabrics are made by using two warps, — a foundation warp for the backing and a pile warp, which must be at least four times as long as the foundation warp. The pile is produced by weaving gauge-rods, under the pile warp only, followed by a few foundation shots of plain tabby. When a few inches have been woven the pile is cut with a special knife that runs along a groove in the top of the gauge-rods, and the rods are then withdrawn. Uncut velvet and terry are made in the same way, smooth round wires or rods being used that may be taken out without cutting. The foundation for these fabrics must be very firmly beaten up to hold the pile which otherwise might catch and pull out, especially when uncut, as is occasionally demonstrated by a poor quality bath towel.

Much velvet is still woven by hand, especially in England, but usually as a trade. Not much work of the kind is done by the handicraftsmen.

The second system of making pile fabrics is to pick up the pile in the weft material. This method is used for tufted weaving, and the pile is usually left uncut. An imitation of this style of weaving is the tufted bedspread now so much made in the South. The tufting material in these is simply pulled through a woven fabric with a hook. Hooked rugs are similar in technique.

In all the above fabrics the pile is held in the backing simply by crowding the foundation weft close enough together to hold it. A far more durable fabric is that of the Oriental rugs. In these the tufting material is tied in a knot over the threads of the warp and cannot possibly pull out. We all know the beauty and value of Oriental rugs, but few among us have the courage to attempt this work. Perhaps, too, we feel that the rich and intricate Oriental patterns belong by nature to the country from which they come. To make a slavish copy is never very interesting to a craftsman, and to adapt or alter these patterns in any fundamental way spoils them. The technique itself, however, is simple enough and when used in patterns of a wholly different type gives very beautiful results. The simpler, bolder, decorative forms in vogue today lend themselves, too, to the use of coarser materials, so that the labor is not so great. There are few among us who would care to devote a whole year or several years to the production of a single rug.

In the Oriental technique the tufting material is

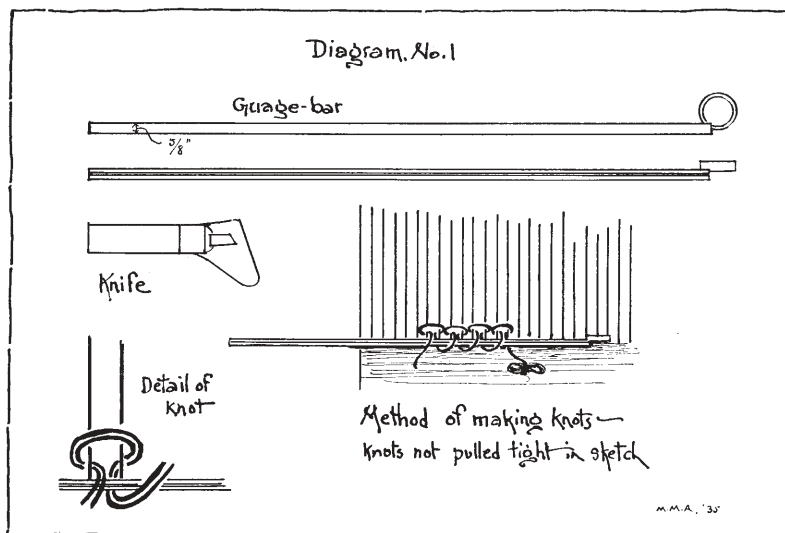
cut in short lengths and knotted, the pile being sheared off after it is woven in. In France many tufted rugs are being made in this manner.

There is, however, a quicker method for producing exactly the same result. This is a Swedish technique that offers the craftsman an interesting and not too laborious method for making knotted pile rugs of the highest quality. This technique is not generally familiar to American hand-weavers. It deserves to be better known, and to that end the following detailed directions have been prepared.

This type of weaving can be done on a simple two-harness loom, but the loom used should not be of flimsy construction. This weave requires heavy beating for good results. Two pieces of special equipment are required in addition to the loom — a gauge-bar with a slot, and a special knife to cut the pile. Details of these will be found on the accompanying diagram. The gauge-bar should be a few inches longer than the width of the proposed rug, and as a rule it is advisable to have two or more bars, for small and large rugs. The depth of the pile depends on the width of the bar. The width indicated on the diagram — five-sixteenths inches — is a good width for general use. A French rug seen at an exhibition some time ago was done in three different depths of pile, giving a raised pattern effect. This might be found an interesting effect for rugs done all in the same color.

The best warp for these pile rugs is a fairly coarse linen or tow warp, about the grist of a No. 3 Perle cotton. Ordinary carpet warp is not strong enough and should not be used. The warp should be set at 10 or 12 ends to the inch.

For weft material a coarse wool yarn of good quality should be used. Bernat's "Zephyr" or "Peasant" yarns are recommended. Finer yarns can also be used if doubled to sufficient



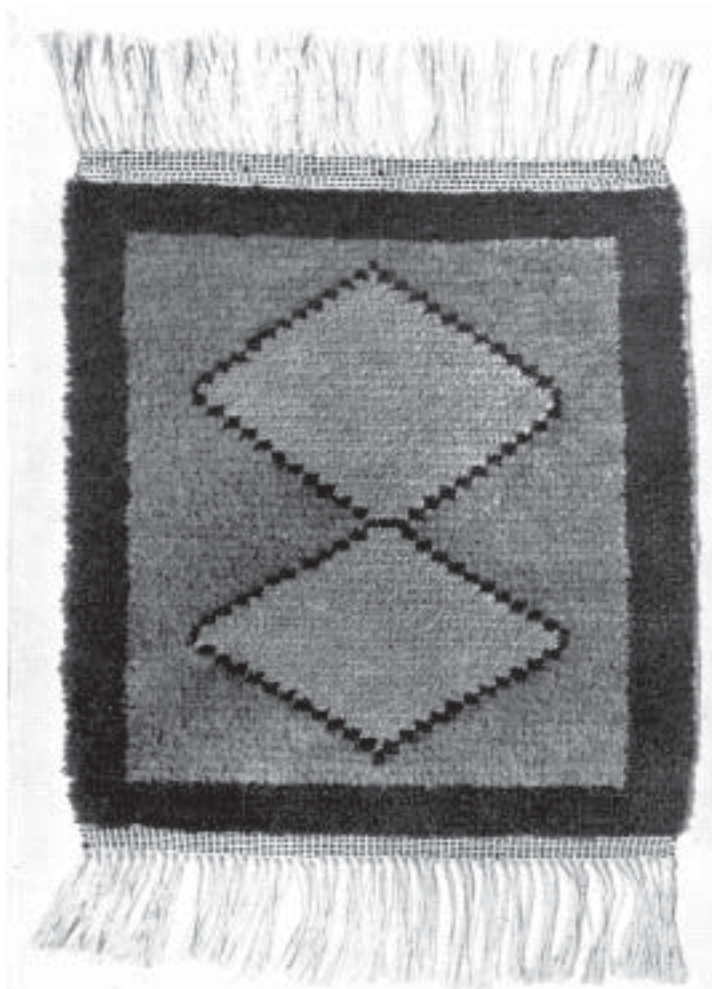


ILLUSTRATION No. 1
Knotted pile rug, woven by Mrs. W. P. Gregory

thickness. The Zephyr weight yarn should be used single for tabby shots and doubled for pile. The material for the tabby weaving should be carried on a shuttle as usual, but the pile weft is used in convenient lengths — say two to four yards — not wound on a shuttle but simply rolled together in a loose ball, as illustrated on the diagram.

In selecting a pattern for knotted weaving it is well to select a very simple design for the first piece. Plain geometric forms are very effective when worked out in a well-chosen color combination. The small rug illustrated — Illustration

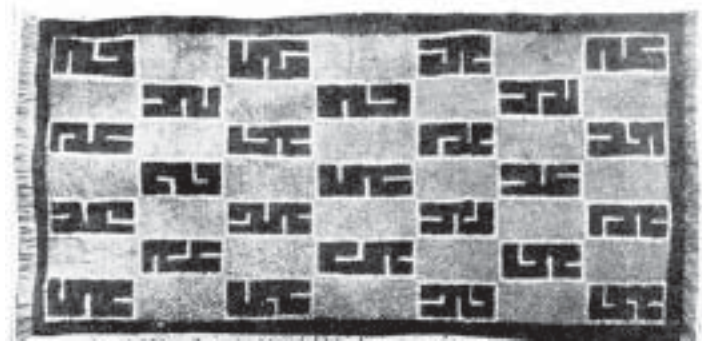


ILLUSTRATION No. 2
Knotted pile rug, designed by Paul Haeserts

No. 1 — was done in brown, tan and burnt orange. The illustration shows clearly enough the arrangement of the colors.

Quite elaborate designs can be done in this technique also. Straight lines, however, lend themselves better to the technique than curves or diagonal lines. For ease of execution it is well to lay out the design on cross-section paper and allow one, two or more knots to each space of the paper, according to the desired width of the piece. Each knot, as will be seen, is tied over two warp-threads. If the design, for instance, covers 80 squares of the paper in width and two knots are allowed to each space, 320 warp-ends will be required. To this number should be added twelve additional threads for edges. These threads, six on each side, are left unknotted to prevent the curling under of the edges that otherwise tends to result.

The process of weaving is as follows: First weave a plain tabby heading in foundation weft — single strand. Then set the gauge-bar on the warp, slotted edge up, allowing it to project some distance to the left side of the loom with the ring end to the right. Take a double strand of pile-weft, in the shade desired for the bottom border of the rug and tie the first knot over the seventh and eighth warp-threads, counting from the left-hand edge. To do this, carry the small ball of yarn under the seventh thread from right to left, over the seventh and eighth threads from left to right, and

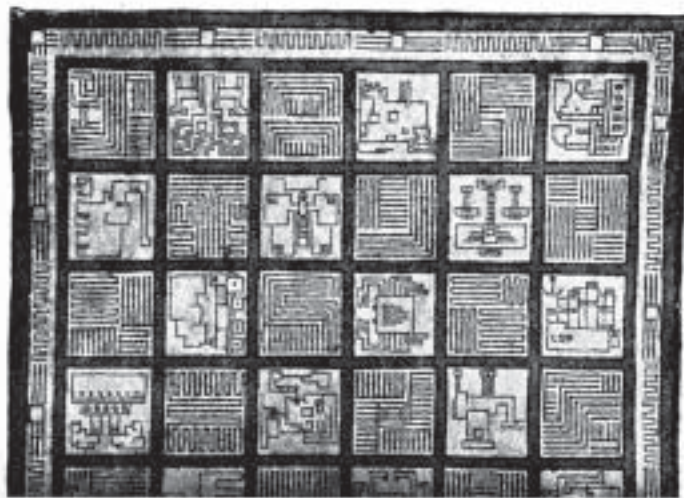


ILLUSTRATION No. 3
Knotted pile rug designed by Paul Haeserts

under the eighth thread from right to left. Draw the knot tight. Pass the yarn under the gauge-bar and over. Tie the second knot in exactly the same way, over the ninth and tenth threads of the warp. Proceed in this manner all across the web, omitting the last six threads of the warp. Draw the bar along toward the right as the work proceeds.

When all the knots in the row have been tied, beat very heavily with the batten to drive the knots down hard against the heading. Now weave three tabby shots in foundation yarn, beating very firmly. The quality of these rugs depends very much on the closeness of the work. It is impossible to beat too hard.

Now release the gauge-bar by cutting the pile with the special knife.

The next row of knots, and all succeeding rows, are made in exactly the same way, with changes of color as indicated on the pattern one is following.

No great skill in weaving is required for the making of these rugs, and a beginner need not hesitate to attempt the work. The essentials are a proper choice of materials, a good design and good combination of colors, exactness in following the design and in tying the knots, and a good hard pound with the batten.

By using a finer warp and a silk weft over a heavy wire instead of a gauge-bar, an effect like uncut velvet could be produced in this technique. Finer yarns than those suggested



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ILLUSTRATION No. 4
Knotted pile rug designed by Paul Haeserts

for rugs, over a narrower gauge-bar, and a fairly fine cotton or linen warp could be used for the making of table pieces, footstool tops, cushion covers and the like. Large bags would be interesting done in a combination of pile and ordinary pattern weaving. Inset figures in pile knots could be introduced with handsome effect in drapery fabrics. Many other uses for the technique will readily suggest themselves to the weaver. This is a weave that permits very free play to the imagination and will be enjoyed especially by those who like to make their own designs without the geometrical restraints of the more formal “four-harness overshot” and “summer and winter” styles of pattern weaving.

On Diagram No. 2 are given four simple designs for knotted pile weaving. All four are designed on a sixteen-space width. For a small rug, warp 236 ends, and allow seven knots to each space of the pattern. At ten threads to the inch this makes a rug $23\frac{1}{2}$ ” wide. (This number of warp-ends allows for six unknotted warp-threads on each side, as explained in the notes.)

For a wider rug, warp 332 ends and allow ten knots to each space of the pattern. This will make a rug 33” wide. In a similar manner other widths may be obtained.

The designs have been worked out as for three or four colors. The blank spaces indicate the lightest color, the black squares the darkest color, and the hatched squares the intermediate shades.

The amount of yarn required varies greatly with the depth of pile and the closeness of the weaving. The more firmly the fabric is beaten up the better the rug, of course. An allowance of from one pound and a half to two pounds of yarn to the square yard should ordinarily suffice.

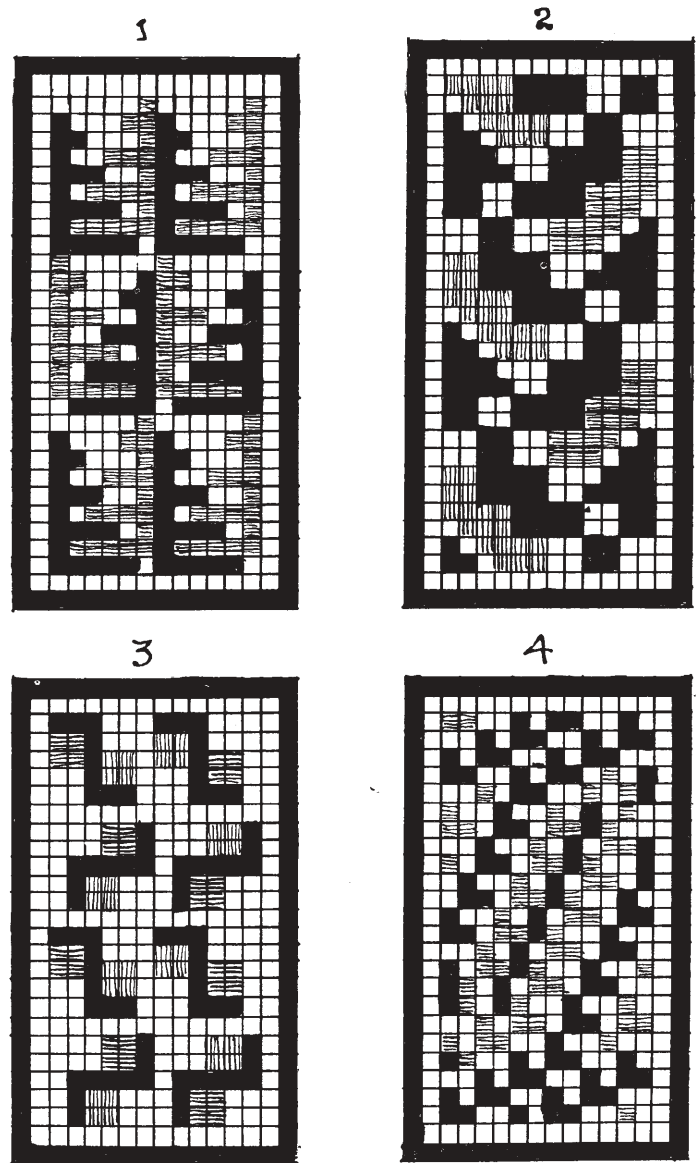


DIAGRAM No. 2