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# Questions and Answers

ADDRESS YOUR QUESTIONS TO MRS. MARY M. ATWATER, BASIN, MONTANA

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*Question No. 1.* How can I calculate the quantities of material required for a given piece of weaving?

*Answer:* To make this calculation it is necessary to know the yardage per pound of the yarn you intend to use. These yardages are indicated by the "count" of the yarn. Linen yarns are numbered differently from cotton and wool yarns, and the system in use in this country is the ancient English system which has little to recommend it except custom.

The base for calculating linen yarns is 300 — the number of yards in a "cut." A linen that runs, say, 20 cuts to the pound is called a No. 20 yarn and runs 20 times 300 yards — or 6,000 yards — to the pound. A 40/2 linen has the same yardage, as it is composed of 2 threads of No. 40 yarn. A 40/3 linen is composed of 3 ends of No. 40 yarn and runs 4,000 yards to the pound — 300 multiplied by 40 and divided by 3.

The counts for wool and cotton are based on 840, the number of yards in a hank. A 20/2 cotton would, therefore, run  $840 \times 20 \div 2$ , or 8,400 yards to the pound. A 24/3 yarn  $840 \times 24 \div 3$ , or 6,720 yards to the pound. Wool yarns follow the same system as cotton.

In the case of yarns listed by a trade-name instead of a count it is impossible to know the yardage unless it is stated on the price-list. If not stated the count can be determined by a special instrument made for the purpose, but this is as a rule not available to hand-weavers. An approximate yardage can be determined by weighing a skein and counting the yards in the skein.

The yardage to the pound of the warp-material being known, to calculate the quantity of material required for a warp: calculate the total yardage in the warp, which can be done by multiplying the width of the warp (in inches) by the number of warp-ends to the inch, and multiplying the product by the length of the desired warp (in yards). For instance, a warp 20 inches wide, at 30 ends to the inch and 10 yards long would have a total yardage of  $20 \times 30 \times 10$  or 6,000. Divide this result by the yardage to the pound of the yarn to be used and the result is the weight, in pounds, required for the warp.

It is a simple matter to calculate the warp quite exactly, and if the weft is to be of the same material as the warp, woven with the same number of shots to the inch as there are warp-ends in the setting, of course the quantity of weft required will be the same as the quantity of warp. When, however, it is a question of a piece of pattern weaving, the thing is more difficult, for the quantity of weft depends on the weight of the yarns used and also on the beat. A hard-beaten fabric, of course, takes more yarn than a loosely woven one. The only way to calculate exactly for such a fabric is from a sample woven in the materials and with the beat you intend to use. From this sample count the number of pattern shots and tabby shots to the inch and calculate the total yardage of each material. To do this multiply the length of the weaving (in inches) by the number of shots to the inch, and multiply this result by the width (in yards).

It is inadvisable to order from a very close calculation, and a generous allowance should be made for wastage. It is far less costly to have a little yarn left over than to run a little short, as this may mean a tedious wait and also involves the danger of being unable to match color shades exactly.

*Question No. 2.* How should warp-dressing be applied?

*Answer:* If the yarn is in the skein, soak the skeins in the dressing

and permit them to dry before making the warp. Or, if a chained warp is made, soak the chain before beaming. If the warp is on spools and sectional warping is done, the warp-dressing can be applied to the warp from time to time during the weaving, simply by dabbing it on with a sponge or cloth.

*Question No. 3.* Where can gauge-bars and knives for cutting the pile of knotted rugs be obtained?

*Answer:* This equipment is supplied by Mr. F. W. Hoose, 9190 Lane Street, Detroit, Michigan.

## A WALL HANGING IN A NEW TECHNIQUE

(Continued from page 18)

pictorial design. It differs from a true tapestry in that the warp was threaded according to a four-harness draft — rosepath (Diagram No. 1); and also in that a binder was used throughout. In addition to the usual 1-3, 2-4 tie-up of the treadles for the tabby, only two other treadles were used — harnesses 1, 3, and 4 were tied on one treadle and 1, 2, and 3 were tied on another. The treadling is a simple alternation of these two treadles with a binder between, and the resulting texture is illustrated in Diagram No. 2. The contrast between the figures woven in bright wools on the two pattern treadles silhouetted against the golden mercerized tabby almost suggests a relief. Variety was achieved in the background by laying in a rich orange-tan Shetland yarn along with the binder in stripes, to suggest the alternating layers of contrasting colored stone frequently found in the walls of Italian buildings.

The yarns chosen were: for the gold color warp — Bernat's mercerized Perle cotton No. 10 alternating with No. 20 and threaded 24 ends to the inch; the binder was No. 20 in the same gold color which was selected because of its warm neutral tone which would harmonize well with a wide variety of bright colors; the figures were woven of Bernat's Shetland wool in colors selected for their brilliance and intensity. The bright color scheme was deliberately chosen for several reasons: first, personal preference; second, sunlight and dust will tone the yarns in time; and third, it would afford a better opportunity to learn about the combination of colors, since it is my conviction that bright ones are usually more difficult to combine successfully than dull ones.

A full-size cartoon on detail paper with the design worked out in colored crayon served as a guide for the general effect, and tracings were made from time to time to serve as guides for the weaving. The binder, of course, was put in with the shuttle, but the colored wool yarns were woven in with bobbins and the right side of the finished cloth was on top.

In working out the design a flat effect was striven for, and all suggestion of perspective and depth was deliberately avoided. The chief aim was to achieve a decoration, and there was never any idea to create an illusion which can be done so much more effectively in paint. I tried, however, to give a feeling of movement to the procession.

To make it hang well and also to serve as a protection, it was lined with cotton material.