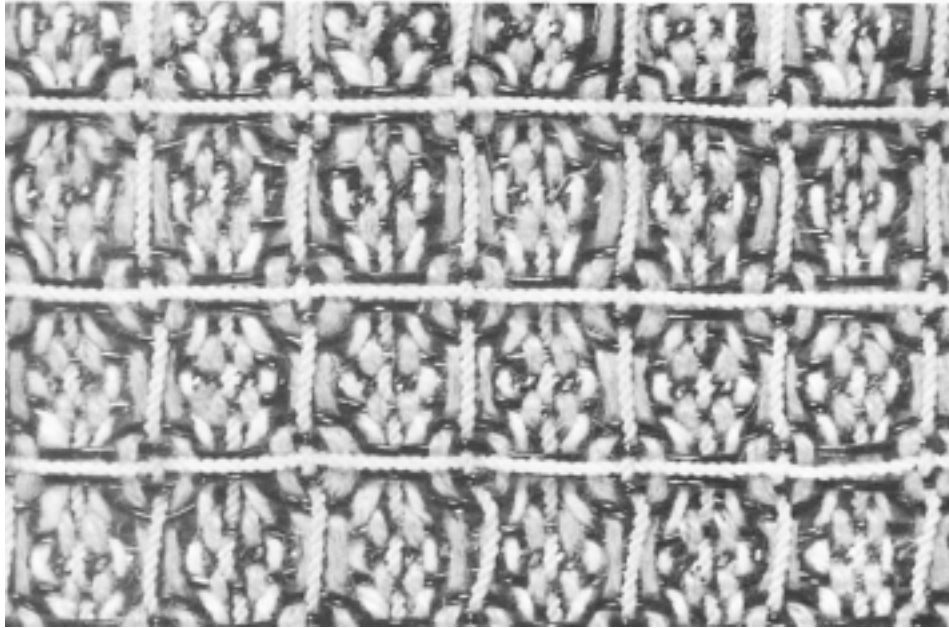


## WAFFLE LACE

*by Elmer Wallace Hickman*



Looking for something new? Here is a fabric that is unusual, fascinating, and quite practical for several purposes. It is an appealing fabric, which, when utilized in one of several projects, may be a prized possession or a lively source of income for many weavers. The textile was originally planned for handbags, but the finished material may be easily adapted, for modern usage, to the covering of lamp shades, single or divisional screens, under glass decoration for serving trays and table tops, etc. The fabric is a semi-open, medium heavy textured material and may be backed in any project by a colorful lining, the lining being one of cloth, parchment, wood, or any backing of choice. However, the lining, while unobtrusive, acts as an accent and gives vitality to the finished product.

This fabric, as one can readily see, is definitely a patterned one, and even though the draft is an ancient one the effect produced, with the assistance of some modern type yarns, is scintillating—not in a bewildering way but in a restful, pleasant pattern. The method of treadling causes the interlacement of warp and weft to produce a three-dimensional fabric, easily detected in this particular textile. The surface is in three levels. The top surface of white nylon twist is formed by long skips, in the warp and weft, on the four outer edges of the waffle design units; the second level of linen and plastic yarns slopes to the deepest level of the Beadette decoration.

The true *waffle weave* is done with five harnesses, but this four-harness variation, with its true tabby formation, may be the means of producing many varieties of fabrics, according to the yarns used and the closeness or openness of the reed sleying; such as, table linens, towelling, wool and cotton stoles, cushions, sportwear suitings, bed spreads, baby blankets, etc.

Since patterned fabrics are returning to the textile scene, this Waffle Weave draft could be the stimulus for rewarding experimentation. The variety of pattern is obviously limited, but the fabric texture in fine, medium, coarse, plain and novelty yarns is not. Color, in this weave, can be co-ordinated in proper order, as in a monochromatic color scheme, to give a greater illusion of depth, the order being to arrange a light color for the top surface yarn, with receding or darkening tones on the lower levels to the darkest tone at the very depth of the waffle squares. An example of this idea in the warp order would be: white, light yellow, yellow, brown. (See SHUTTLE CRAFT BULLETIN for August, 1955 for an enlightening discussion of this *Waffle Weave*.)

**THREADING DRAFT:** The draft is the 4-harness *WAFLE WEAVE*, 4-3-2-1-2-1-2-3. The treadle tie-up is outlined, with weft shots, under "Treadingling."

**WARP:** Contessa's 2-ply straw finish white Nylon blend. Butterworth's 10/2 natural color tow Linen. Contessa's natural Carpet Warp, or Butterworth's 8/4 natural Cotton. (Should colored Carpet Warp be used be sure it is color fast. See end of this article for yarn sources and addresses.) The warp is threaded one end in a heddle. The order of threading the heddles in the draft above is as follows: Har.4-Nylon yarn, Har.3-Linen yarn, Har.2-Carpet Warp, Har.1-Linen, Har.2-Carpet Warp, Har.3-Linen, and repeat. For selvages use 8 threads of Carpet Warp for each selvage, threaded 4, 3, 2, 1. All yarns are sleyed two ends through a dent of a No. 8 reed. When making the warp for beaming use one spool of Nylon, two spools of Linen yarn, and one spool of Carpet Warp. This will make 4 thread unit at the "Cross," and need only be repeated for the width of the warp chain. For sectional beaming it will be necessary for the weaver to decide how many times the unit of spools will have to be used for the width of each beam section on his particular loom.

**WEFT:** 2-ply white Nylon, same as warp. Blask Tensolite No. CKO-30. Black and silver Beadette, or suitable heavy metallic gimp.

**TREADLING and TIE-UP:**

Treadle 1.	Har. 4 alone.....	Nylon
Treadle 2.	Har. 3 alone.....	Tensolite
Treadle 3.	Har. 2&4 .....	Tensolite
Treadle 4.	Har. 1&3&4 .....	Tensolite
Treadle 5.	Har. 2&3&4 .....	Beadette
Treadle 6.	Har. 1&3 (Tabby)	

For sinking shed looms tie treadles as follows: Har. 1&2&3 to Treadle 1, Har. 1&2&4 to Treadle 2. Har. 1&3 to Treadle 3. Har. 2 to Treadle 4, Har. 1 to Treadle 5, and Har. 2&4 to Treadle 6. Treadle 6 is used only for tabby headings. Use the first 5 treadles, in order given, for the pattern, reversing with

Treadle 4, then 3, then 2 for the upper part of the waffle design, using the same yarns indicated opposite these treadles in the yarn column above. Use Treadle 3 with Treadle 6 for tabby headings.

The yarns used in this fabric are inexpensive with the exception of Tensolite, but because of the open weave the amount of Tensolite used is not too great. Tensolite is made of fiber glass encased in a plastic tube. The Tensolite selected for this project was the black opaque, but the yarn may be had in several colors. For use in a more elegant fabric, such as eveningwear bags, the Crystal Clear Tensolite CK-30 may be advantageously employed. This clear Tensolite will give an opalescent effect. For a substitute of the Beadette weft yarn (used on Treadle 5) a heavy metallic gimp No. C-650 from Tinsel Trading Company may be used, since the Beadette yarn is not always readily available. The 10/2 natural tow linen which was used in the original sample was a neutral color, of course, but if colored linens are selected in the construction of the warp one may choose from about 18 colors from Butterworth. The 2-ply straw finish nylon comes in white only, but this neutral will combine quite satisfactorily with most of the colors offered in both the linen yarn and the Tensolite.

The warp and weft composition of the textile is nicely balanced with dominance and contrast which any well designed fabric should have. A finer textured fabric, using this same warp and weft construction may be made by these yarn substitutions: 20/2 linen for the 10/2 linen, 2-ply metallic LAMNETTE substituted for the white 2-ply straw finish nylon yarn, Lily's 10/3, Art 714 substituted for the 8/4 cotton or carpet warp, CC-277 Tensolite for the CKO-30 Tensolite, and 3-ply LAMNETE substituted for the BEADETTE. This composition would be threaded one warp end in a heddle, and sleyed two ends in a dent of a No. 12 reed, using, of course, the same pattern draft and same treadling.

**SUGGESTIONS:** The weaving of *Waffle Lace* is rapid because of the yarns used and the weave construction. The weft yarns should be pressed sufficiently into place, but never beaten, on closed sheds, so that the waffle unit will be squared. By a "closed shed" is meant this: begin by throwing a shot of weft in the first shed designated under treadling directions, then before moving the weft yarn back into place, change the treadling to the next shed (this closes the shed) then move the beater, and the weft yarn, into place. Continue this process throughout the weaving. Since the Tensolite is springy, it might be necessary, at times, to hold the yarn in place with the beater.

When the finished material is taken from the loom, it need be only steam pressed, remembering to use a very low heat, since both nylon and plastic yarns are used in the construction of the fabric. Selvages are difficult to weave on this fabric, but will be possibly cut off anyway. If you use your finished material for handbags, sketch off the bag pattern on the fabric with crayon or chalk; and before cutting the material, paint an adhesive or cement around your pattern outline so the fabric will not ravel. In SHUTTLE CRAFT BULLETIN, May 1954, a satisfactory cement is recommended—it is made by "squeezing a tube of Duco cement into 3 ounces of acetone. Have a druggist put the acetone into a 5 ounce bottle. Shake until dissolved." It might also be practical to use

MYSTIC TAPE, a gummed cloth tape, for sale at most hardware and stationery stores. Unless sewn by hand, it will be advisable to learn what machine needle to use on this material. When using the fabric for other projects mentioned above, the difficulties are less than in making handbags. You may know about the new curtain rod handbag frames by The McCordi Corporation, which, it is claimed, help give the finished product a professional look (See supply sources).

For projects such as screens, table tops, etc., it would be advisable to first cement all edges before cutting the material, and bind edges with the previously mentioned MYSTIC TAPE, preferably with the 1-inch width. This same gummed cloth tape should prove satisfactory for a binder and edge for lamp shade making. I am offering the above suggestions only, since many weavers may know of preferable methods for the several projects.

**COLORS:** When colored yarns are used, make the color of your Tensolite yarn your dominant color. The other yarns can follow suite in a monochromatic color scheme, or an analogous color scheme. If an analogous color scheme is used be sure the Tensolite yarn is of a dominant color, with other yarns, except the white nylon, in subdued contrasting colors. If the white nylon is not available use Contessa's Natural 4-ply Spun Silk, or a 3/3 Rayon Twist, white and colors, from Butterworth. When necessary, it is advisable to have this fabric dry cleaned.

#### SUGGESTED COLOR COMPOSITIONS

**WARP:**

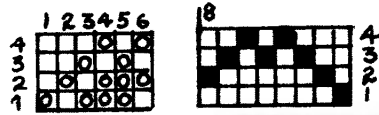
<i>Linen</i>	<i>Nylon</i>	<i>8/4 Cotton</i>
Lt. Yellow	White	Black
Orchid	White	Orchid
Chartreuse	White	Lt. Brown
Lt. Blue	White	Med. Blue
Orchid	White	Lt. Blue

**WEFT:**

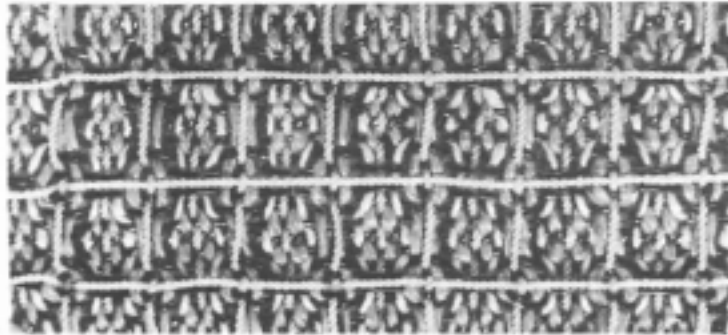
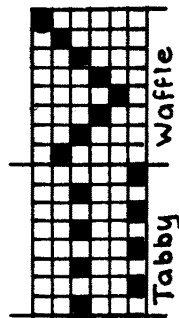
<i>Tensolite</i>	<i>Nylon</i>	<i>Beadette</i>
Rose	White	Silver
Yellow	White	Silver
Red	White	Gold
Blue	White	Aqua
Green	White	Silver

**SOURCES OF SUPPLY:** Nylon and Carpet Warp yarns from Contessa Yarns, Ridgefield, Conn. Tensolite from Cinderella Yarn & Novelty Company, Canaan, Conn. Linen Yarns, 10/2 and 20/2 from Charles Y. Butterworth, 2222 East Susquehanna Avenue, Phila. 25, Pa. Beadette from Yarn Arts Guild, Whitestone 57, L.I., New York, also from Wolkin Yarn Co., 192 McKibbin Street, Brooklyn, New York. Lamnettes (Laminettes) and heavy metallic gimps from Tinsel Trading Company, 7 East 36th Street, New York 18,

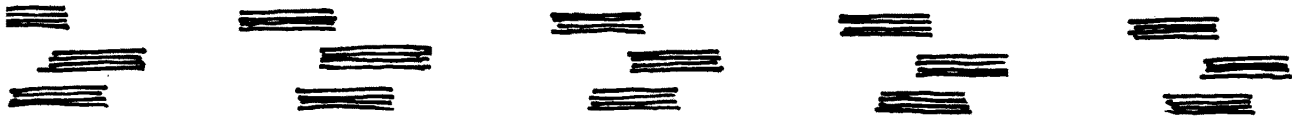
N.Y. Curtain rod bag frames and bag patterns from The McCordi Corporation, Dep't. E, 707 Fenimore Road, Mamaroneck, New York. Curtain rod bag frames also for sale from Lee Ward Mills, Elgin, Ill.



Waffle Lace, reproduced in actual size



The conventional Graphic Draft with tie-up and treadlings (converted) is shown here for those weavers who have been trained to use this draft form.



### Meet the Author



Elmer Hickman's vital modern designing and lucid articles have been familiar to handweavers since the days of the *WEAVER* magazine. First as a hobby, more recently as a retirement activity, handweaving has been a "natural" with Mr Hickman. If one wonders at the bold color combinations, the contemporary spirit and dramatic effects he achieves, one may find their source in his professional background, as Mr Hickman is a stage designer. He studied widely in both art and dramatic schools in this country and in Europe and was the staging designer for many Broadway plays. In later years his professional activity was as professor of stage design and dramatics at Stephens College and Carnegie Institute of Technology. This work lead to an interest in textiles, first to the large, dramatic, mural tapestries, and later to the Swedish Art Weaves, which were the subject of his *WEAVER* articles. Contemporary weavers have profited from his current interest of developing *New Weaves From Old*, which he has presented in a group of *FOLIOS*, the *MODERN DRAPERY AND UP-HOLSTERY* being the latest.