

# *The Weaver's Journal*

\$3.00

VOLUME V NUMBER 2 ISSUE 18

FALL 1980

WINTER PROJECTS TO  
KEEP YOU WARM

- MAN-MADE FIBERS

• Shopper's Guide

• Weaving You Can Use

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# The Weaver's Journal

Quarterly Journal for Textile Craftspople  
 Volume V, Number 2, Issue 18      Fall 1980      ISSN #0160-3817

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Editor and Publisher - Clotilde Barrett  
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*The Weaver's Journal* is published on the first of each January, April, July and October by the Colorado Fiber Center, Inc., P. O. Box 2049, Boulder, Colorado 80306. Telephone: (303) 449-1170; 444-2088. Subscription rates are \$12.00 U. S. Currency for 1 year (4 issues) or \$22.00 U. S. Currency for 2 years (8 issues). Colorado residents add 3½% sales tax. Outside U.S.A. - 1 year - \$14.00 U. S. Currency, 2 years - \$25.00 U. S. Currency. Copyright Colorado Fiber Center, Inc., 1980. Second-class postage paid at Boulder, Colorado and additional mailing offices, *The Weaver's Journal* USPS 384-210. The editorial committee takes no responsibility for the goods advertised in this journal.

Cover Photo: Wedge Weave Tapestry by Carol Rasmussen Noble. Photography by Donald C. Noble.

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## Letter from the Editor

Is there anything special about this issue that hints at changes we are making in the way we are bringing information to you? It may be hardly noticeable because the changes are gradual and subtle but yet every issue and particularly this one reflects our response to what surveys and correspondence prove is important to our readers.

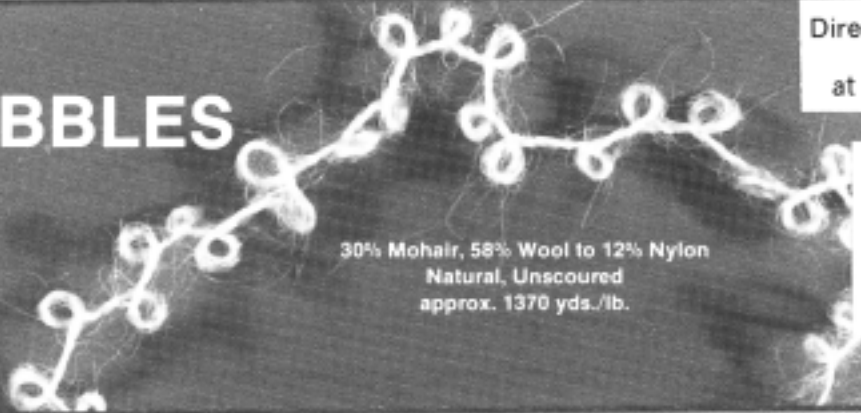
As usual, in our Fall issue, we feature some type of fiber. This year we discuss synthetics and man-made fibers. The purpose of these articles on fiber is to give some very valuable reference material as well as to give some useful hints and to encourage our readers to try to work with fibers which they previously have shunned. We hope that you discover wonderful new things.

In this issue we also feature special energy saving projects for the cold winter months. The weaver is privileged to work in a medium that lends itself well to today's ecology conscious living. The product of the handweaver will be appreciated this winter more than ever, and it is worthwhile to give it some special thoughts about function, beauty and craftsmanship. The projects featured will be useful around the home, have a good market value and make excellent gifts.

We feel it is important for our readers that we publish product reports and would like to have more feedback on which products you want us to research. Write us also about any of your weaving or equipment problems. We are pleased to answer every letter written to us and your problems and their solutions could be published in a very valuable "Helps and Hints" column. If we here at *The Weaver's Journal* cannot find a good solution to your weaving problem we will publish it under the heading "Help" and hope that some of our readers will come to the rescue. There is a solution for everything!



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No. 42 Deep Turquoise	No. 105 Light Blue
No. 53 Pale Green	No. 108 Light Rust
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# Keep Warm:

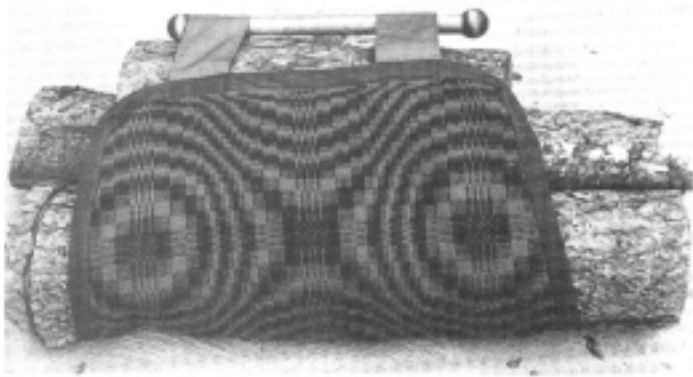
## Woven Projects which will Help Fight the Energy Crunch



keep warm

### Log Carriers by Ellen Champion

Alongside fireplaces or woodstoves these decorative log carriers will be handy and ready to bring in every day's wood supply.



MODEL A

#### Materials needed:

- 1 yard Dacron/cotton lining ("Trigger" cloth), 44" (112 cm) wide.
- 1 sturdy handwoven piece of material, 24" x 33".
- 3 yards (2.74m) 2" (50 mm) wide Dacron/cotton bias binding or vinyl strips.
- 2 oak or maple dowels, 1" diameter, 15" long (25 mm dia., 38 cm long).
- 4 round maple drawer pulls.
- 4 wood screws with two-threaded ends.

#### Making the log carriers:

Cut the handwoven fabric and the lining according to the pattern shown in Fig. 1. Stitch the two pieces together,  $\frac{1}{4}$ " (6.4 mm) from the edge and sew the bias binding all around the carrier unit.

Fig. 1

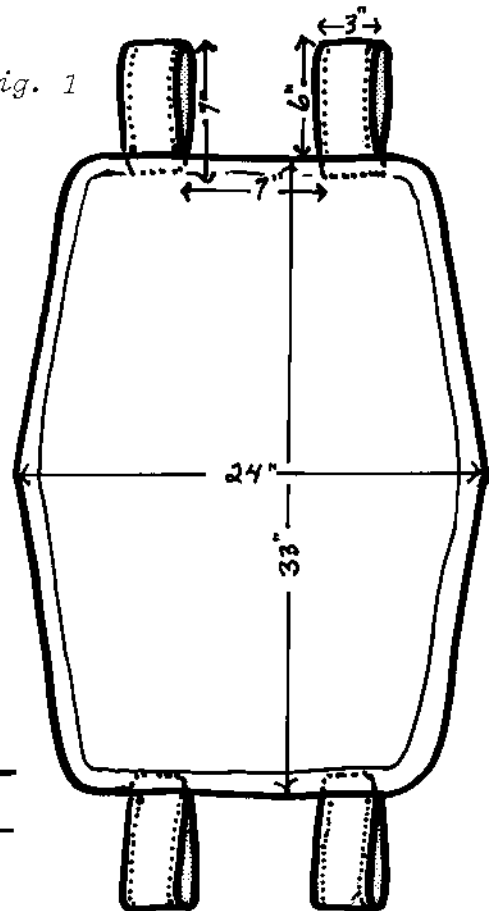


Fig. 2

Make the loops by folding four 15" x 7" (38 x 18 cm) pieces of lining fabric lengthwise, stitching them nearly around with a  $\frac{1}{2}$ " (12.5 mm) seam so they can be turned inside out. Trim. Topstitch the loops  $\frac{1}{4}$ " (6.4 mm) from all edges.

Attach the loops to the carrier unit with several rows of stitching. See Fig. 2.

Drill holes at each end of the dowels for the screws and attach the drawer pulls. See Fig. 3. Stain the wood and finish it with clear seal.

Note: The handwoven cloth is woven in overshot pattern with 3 ply wool (Oregon Worsted Co.) for the warp and the tabby weft and rug wool for the pattern weft.

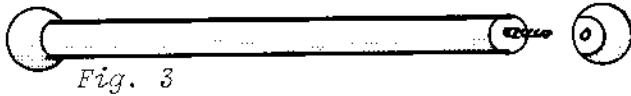
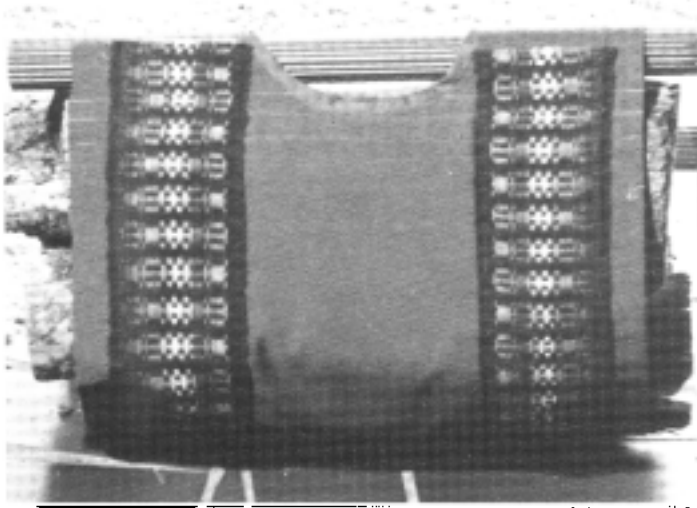


Fig. 3

#### MODEL B

#### Materials needed:

- 1 yard (91 cm) Dacron/cotton fabric 44" (112 cm) wide ("Trigger" cloth).
- 90" (230 cm) handwoven band, 4" (10 cm) wide.
- 7/8" (22 mm) wide bias tape.
- 2 dowels or wooden rods, 1" (25 mm) diameter, 18" (46 cm) long.



pattern #1

#### Making the log carrier:

Fold a 44" x 36" (112 x 91 cm) piece of cloth lengthwise. Stitch the long edges together with a 1/2" (12.5 mm) seam (Fig. 4a). Turn right side out. Lay the project flat so that the seam lies about 1 1/2" (38 mm) from one edge and the seam allowance is turned toward the center (Fig. 4b). Lay one edge of the band over the seam and fold 1/2" under at each end. Pin and stitch all around the band through all thicknesses. Attach the second band (Fig. 4b).



pattern #2

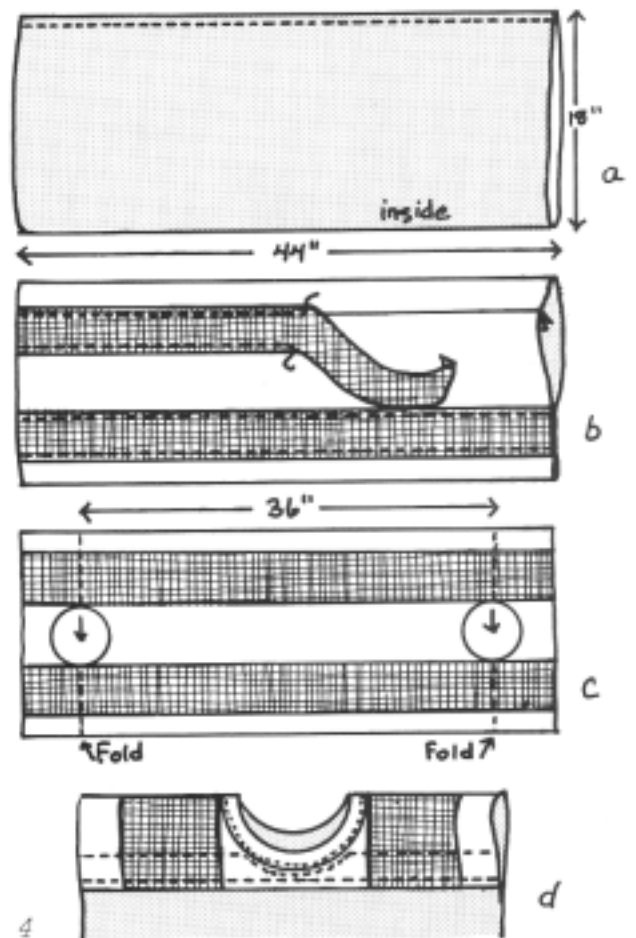
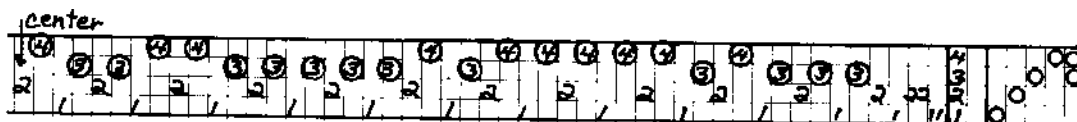


Fig. 4

Draw and cut a circle 6" (15 cm) in diameter near each end; centers 36" (91 cm) apart (Fig. 4c). Bind the double edge of the circles with bias tape. Fold each end over through the center of the circle. Stitch close to the selvedge through all thicknesses. Stitch again, 1" (25 mm) above the first stitching (Fig. 4d). Stain or paint the dowel and slip in place.

Fig. 5



Handwoven band:

The band is woven in 4 harness supplementary warp technique (*The Weaver's Journal*, January, 1980, p. 12). The yarn used is Weaver's Way Alternative 5/2 (70% Verel, 30% viscose) in various colors.

GROUND WARP (on Hs 1 and 2): Dark brown sett at 12 epi (50/10 cm) for a total of 55 ends. The outer two warp ends are twofold through the heddles and through the reed.

PATTERN WARP (on Hs 3 and 4): 11 different colors (4 ends of each) arranged as in a color wheel. Total of 44 ends. The pattern warp is sleyed in the same dent as the adjacent ground warp.

WEFT: Dark brown.

WIDTH IN THE REED: Slightly over 4" (11 cm).

THREADING AND TIE-UP: See Fig. 5.

TREADLING: Pattern #1.

1,2	2X	}	repeat
1-3,	2-3		
1-4,	2-4		
1-3-4,	2-3-4		
1-4,	2-4		
1-3,	2-3		

TREADLING: Pattern #2

2,1	}	repeat with several variations.
2-3-4,		
1-3-4,		
2-3-4,		



keep warm

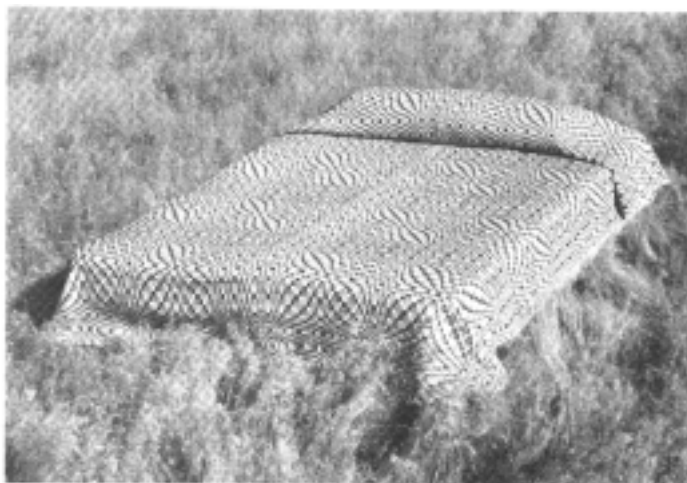
## Colonial Comfort

by Nancy Commings

This bed cover serves as a decorative bedspread and also as a warm comfortable blanket when the nights get chilly. It is woven with all wool fiber. The pattern is called "A Bow-Knot from Kentucky", draft #118 in "The Shuttle-Craft Book of American Hand-Weaving" by Mary Meigs Atwater (seventh printing 1966, MacMillan Co., New York).

In conventional overshot, each consecutive block overlaps the previous block by one thread. However, this pattern is "on opposites" and has special characteristics. On page 142 Atwater says, "If the pattern is on opposites the space to the left of the first block--under what will be the second block--is in tabby background instead of in half-tone. In that event, the second block should be woven on

*over*



the shed opposite to that used for the first block. If the first block was on 1-2, for instance, the second block will be on 3-4."

The coverlet has two panels seamed together in the center, as shown in Fig. 1.

This coverlet is woven with 3-ply "Nehalem" woolen worsted from Oregon Worsted Company. Warp and tabby weft are white, and pattern weft is copper, used two-fold.



SETT: 15 epi (60/10 cm).  
 WIDTH IN THE REED: 42.66" (106.8 cm).  
 TOTAL NUMBER OF ENDS: 640.  
 LENGTH OF WARP: 9 yards (8.23 m).

THREADING: See Fig. 2.

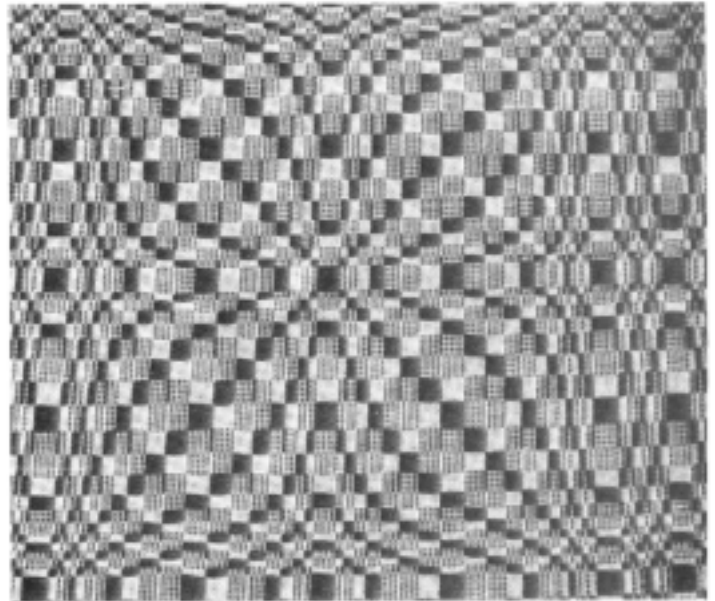
Selvedge Table Flower Flower Table  
 8 64 248 248 64

Seam Allowance  
 9

TREADLING:

1,10 X	1,10 X	1,10 X
3, 3 X	3, 3 X	2, 3 X
4, 3 X	4, 3 X	4, 4 X
2, 3 X	2, 3 X	3, 5 X
1, 3 X	1, 3 X	1, 6 X
3, 3 X	3, 3 X	2, 8 X
4, 3 X	4, 4 X	4, 8 X
2, 3 X	2, 5 X	3, 9 X
1,10 X	1, 6 X	1,10 X
2, 3 X	3, 8 X	2, 9 X
4, 3 X	4, 8 X	4, 8 X
3, 3 X	2, 9 X	3, 8 X
1, 3 X	1,10 X	1, 6 X
2, 3 X	3, 9 X	2, 5 X
4, 3 X	4, 8 X	4, 4 X
3, 3 X	2, 8 X	3, 3 X
	1, 6 X	1, 3 X
table	3, 5 X	2, 3 X
	4, 4 X	4, 3 X
	2, 3 X	3, 3 X

flower



Each coverlet panel is approximately 3.4 yards (3.11 m) long.

For each piece start with the "table" treadling, alternate the flower and the table, and end with the table treadling. One inch (25.4 mm) of tabby should be woven at the head and end of each coverlet piece to provide a hem.

Before removing from the loom, the ends are glued with a fabric glue, such as Slomon's Sobo Glue. After loom removal, the two pieces are joined by a center seam.

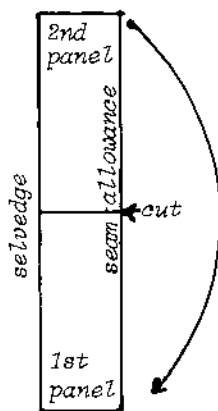


Fig. 1

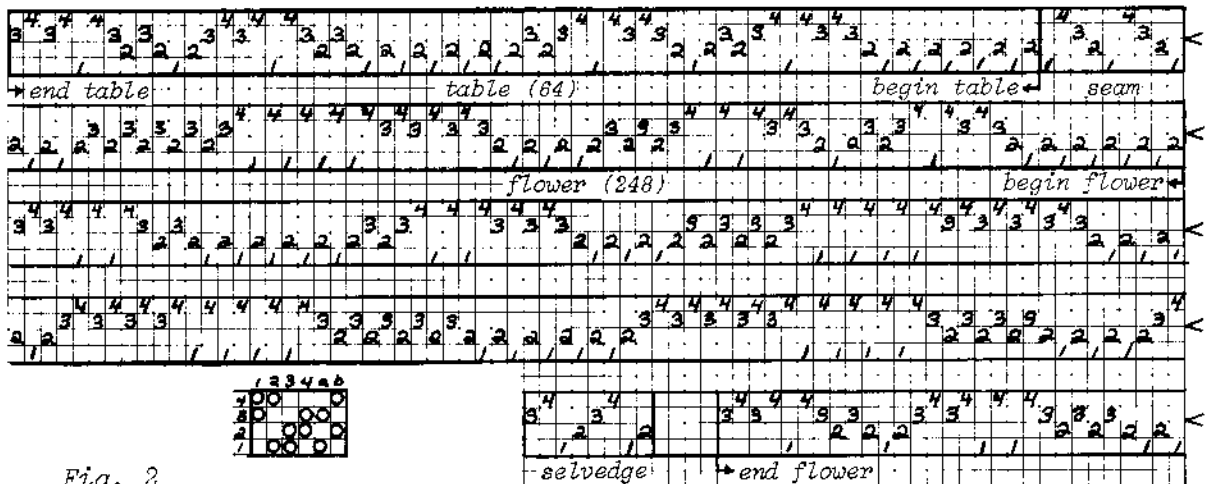


Fig. 2



keep warm

# Large Rectangular Shawl

by Katherine Sylvan



In preparation for the chilly winter and because I don't like skimpy wraps I planned my rectangular shawl with very generous dimensions (a finished 28" wide by 85" long). It certainly keeps me warm on special nights, and its extra length allows me to throw one end over my shoulder.

WARP: 2/12 New Zealand wool from Old Mill Yarns in natural color,  
Looped mohair blend from Old Mill Yarns in natural color.

WEFT: 2/12 wool and a brushed mohair blend in natural.

SETT: 12 epi (45/10 cm)

THREADING AND TIE-UP: Taken from Malin Selander's *Swedish Hand Weaving\**, p. 60 and reduced to:

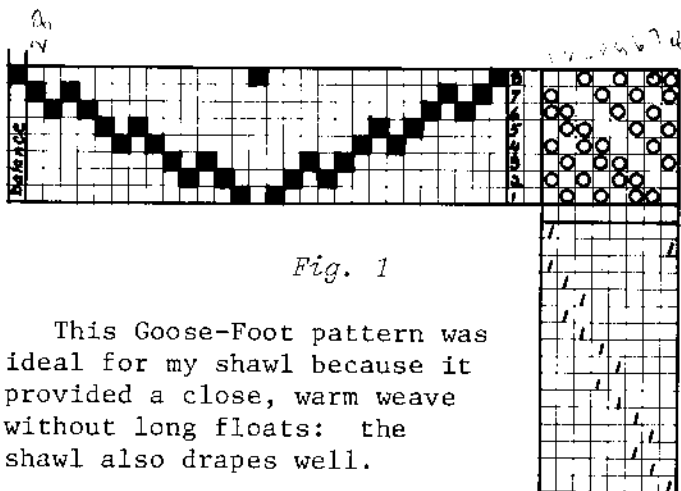


Fig. 1

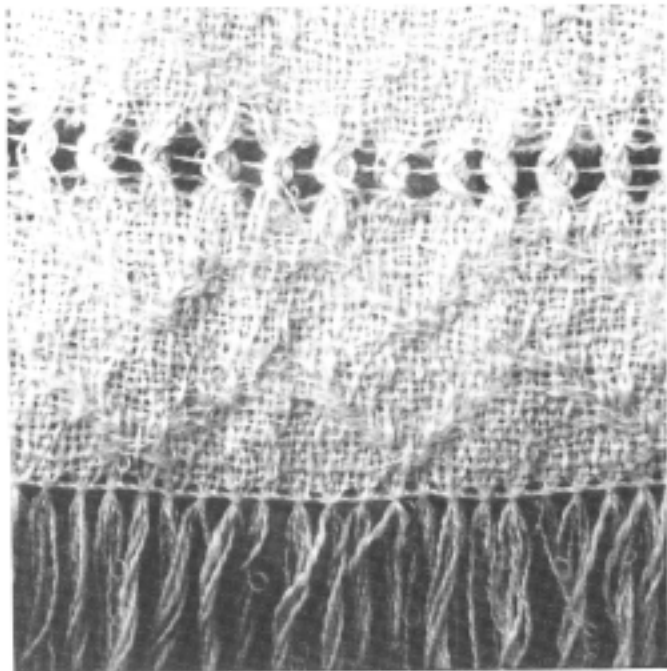
This Goose-Foot pattern was ideal for my shawl because it provided a close, warm weave without long floats: the shawl also drapes well.

LENGTH OF WARP: 110 in. (279 cm)

WIDTH IN REED: 30 in. (76 cm)

While reeling my warp, I drew the yarn from two cones of the New Zealand wool and one ball of the mohair blend. While threading my heddles, I threaded wool, wool, then mohair; wool, wool, mohair, etc.

\**Swedish Hand Weaving, Weaving Patterns* by Malin Selander, translated by Karin Haakonsen-Melander, Wezata Forlag, Goteborg, Sweden, 1961.



Each warp thread had its own heddle, and each weft pick had its own shed.

The fringes were hemstitched on the loom. A border of pickup leno was done at each end, and the Goose-Foot was treadled so that the chevron areas framed the leno.

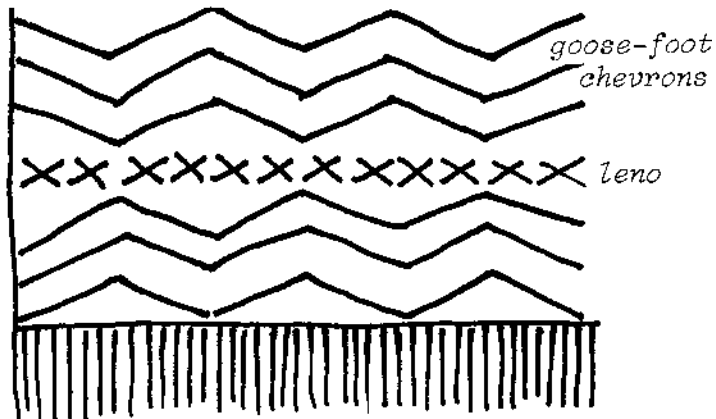


Fig. 2

In the weft, I threw two picks of the wool and then one of the brushed mohair blend; two picks of wool, one pick of mohair blend, etc. At the same time I followed the treadling given in Figure 1.

I washed the shawl in soapy, lukewarm water, rinsed it in warm water and dried it flat.



Young man braiding a heading sling — with pattern of spiralling diamonds.



Photo by Mary Moser in Bolivia.

W. J. Monograph IV

## SLING BRAIDING OF THE ANDES

by Adele Cahlander with Elayne Zorn

Far more than merely serving as a slingshot to help in the herding of sheep, the sling of the Andes also has had many ceremonial and ornamental uses. It was developed into a work of art, integrating various techniques, including a large variety of beautiful three-dimensional braids.

This monograph focuses on methods for doing these unique braids, based on techniques learned by Elayne Zorn from herders in the high Andes. It shows for the first time how these braids are produced, step-by-step, with the help of newly-designed pattern diagrams and braiding sequences. Assistance with terminology, classification, and structural description was provided by Ann Rowe with Irene Emery. Creative possibilities are suggested.

Many illustrations, with eighteen in color, including the covers, on this treasure of a paperback!

Price \$11.00 ppd.



keep warm

## Foot Cozy by Clotilde Barrett

During those long winter nights when I curl up with a good book, I like to pamper my feet and keep them snugly warm with hand-woven "footcosies". They are fun and comfortable and double up as sofa pillows when not in use and make excellent *personalized* gifts.

The footcozy shown here is done in 4 harness double weave pick-up and quilting. They are stuffed on the loom with "Hollofil"™\*, a Dupont polyester insulator often compared to goose down for its warmth and lightness.

WARP: 2/2 1/2's tapestry worsted in two contrasting colors L and D.

WEFT: Same as warp or of similar weight.

WIDTH IN THE REED: 20" (53 cm).

LENGTH OF THE WARP: 2½ yards (2.3 m).

SETT: 16 epi (60/10 cm), double sleyed in an 8 dent (30/10 cm) reed, (one L and one D per dent).

THREADING AND TIE-UP: See Fig. 1.

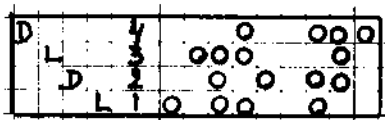


Fig. 1

For the weaving, follow the diagram of Fig. 2 which is drawn to scale on 8 sq./inch graphpaper. One square equals two top weft picks (+2 bottom ones) and two top warp ends (+ 2 bottom ones).

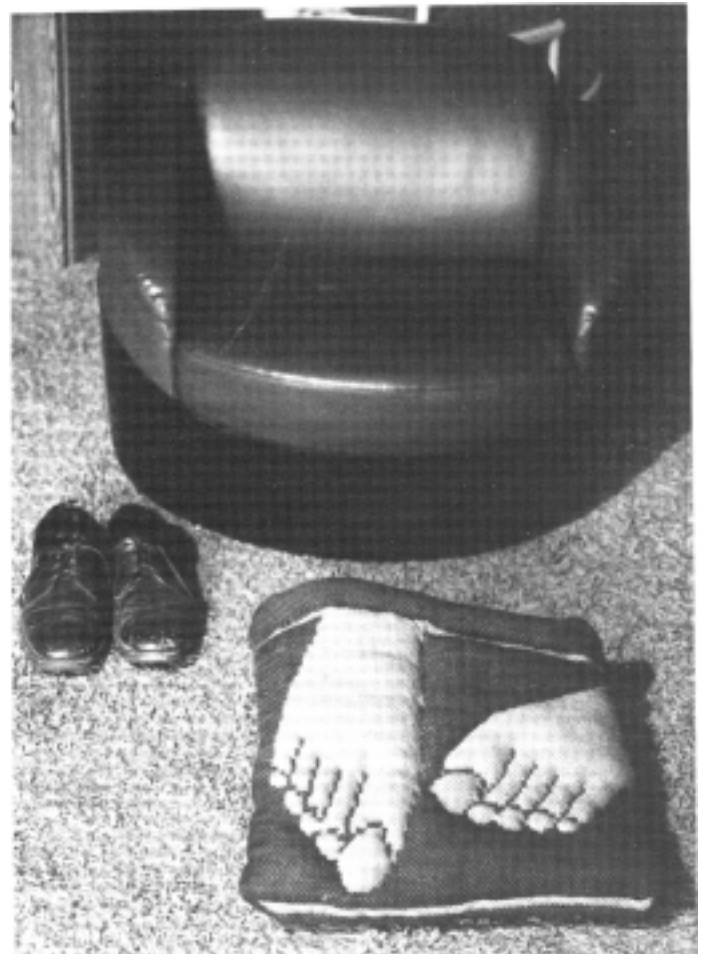
Areas a and b have D on top and L at bottom:

2 (D), 4 (D); 1-2-4 (L); 2-3-4 (L).  
Repeat. Stuff the b areas.

Area c has L on top and D at bottom:

1 (L); 3 (L); 1-2-3 (D); 1-3-4 (D).  
Repeat.

\*Available from Frostline, Inc.



Area e is quilted, with D on top and L at bottom:

Lift 1, pick up every fourth thread. Slide the pick-up stick close to reed. Close shed.

2 (D), remove the pick-up stick; 4 (D); 1-2-4 (L); 2-3-4 (L); then weave 8 more rows without pick-up. Stuff.

Lift 3, pick-up every fourth thread. Slide the pick-up stick close to reed. Close shed.

2 (D), remove the pick-up stick; 4 (D); 1-2-4 (L); 2-3-4 (L); then weave 8 more rows without pick-up. Stuff.

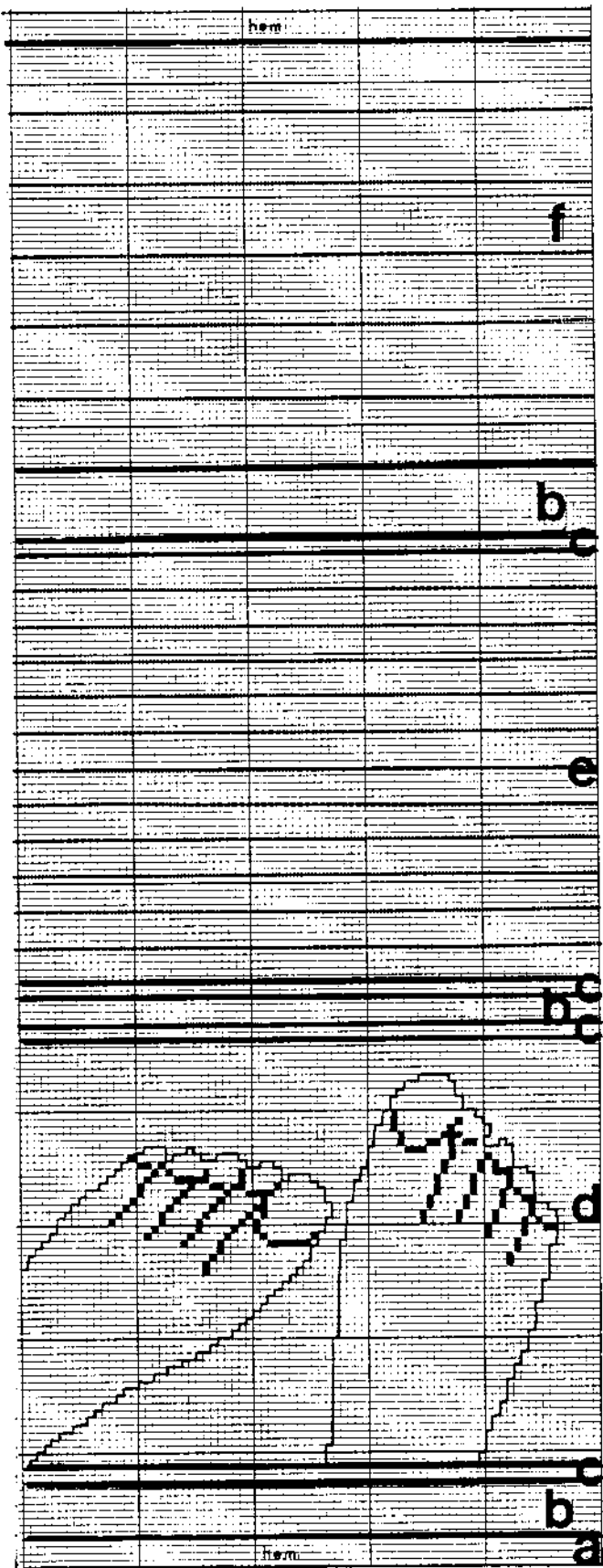


Fig. 2. Reduced diagram, originally drawn on 8 sq./inch graph paper which is 50% of the actual size.

Area f is quilted with L on top and D at bottom:

Lift Hs 2 OR 4 for the pick-up and weave as in area c, removing the pick-up stick after the first pick.

Area d is done in Mexican pick-up.

Draw your foot on 8 squares per inch graph paper and retrace the drawing by moving the pencil only along the lines of the paper. If each square represents two top warp threads and picks, the feet will be woven twice the actual size.

Lift Hs 1 and 3, pick up two L warp threads for each square of the *pattern* (feet). Push pick-up stick close to reed. Close shed. 2 (D); 4 (D); remove the pick-up stick.

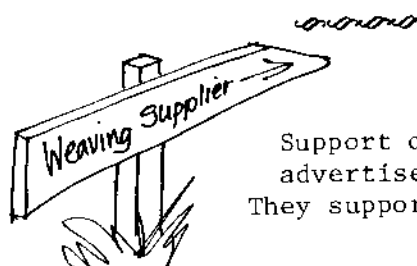
Lift Hs 2 and 4 and pick up two D warp threads for each square of the *background*. Push pick-up stick close to reed. Close shed. 1 (L); 3 (L); remove pick-up stick.

Continue for the next row of squares on the graph paper. Stuff after each four rows.

Assemble the footcosy by hand sewing the outer layers to each other and the inner layers to each other. Put additional stuffing between the two layers. Turn the hem toward the inside, between the two layers.



Fig. 3. Cross section of the double-woven panel showing the way it is folded to make the footcosy.



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## Woolen Throw by Clotilde Barrett

This winter, keep a few large wooly handwoven throws on your favorite sofa or easy-chair. Your family and friends will eagerly reach for them during those hours of the day when it is time to just sit around. These throws will be appreciated as Christmas gifts too and will be the most marketable handwoven item this season.

The throw shown here is done in an 8-harness combination weave with blocks of plain weave and blocks of basket weave.

WARP: X brown mohair  
● gold  
○ yellow } thick soft worsted wool  
• rust } (for example, 2 ply chunky wool from The J & H Clasgens Co.)

WEFT: \* gold mohair  
● gold  
○ yellow } wool, same as warp  
• rust }

SETT: 6 epi (24/10 cm)

WIDTH IN THE REED: 55" (138 cm)

LENGTH OF THE WARP: 3 yards (2.74 m)

THREADING, TIE-UP AND TREADLING: See Fig. 1.

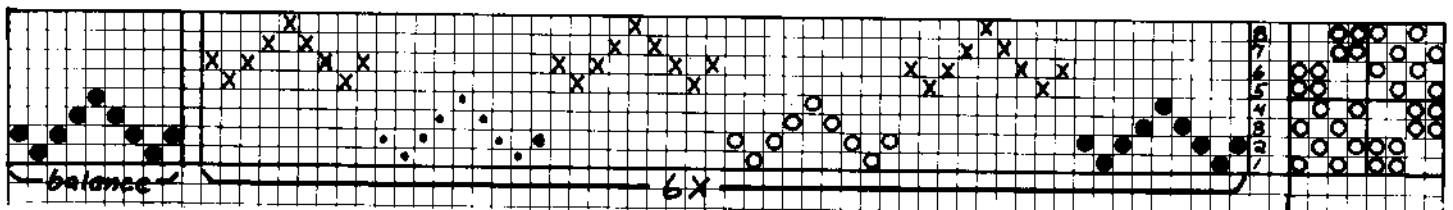
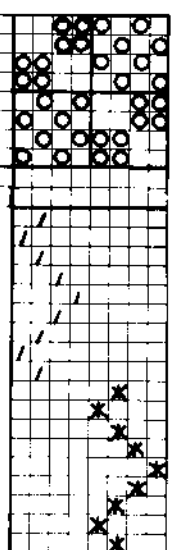


Fig. 1

The treadling repeat is done in gold wool and gold mohair, then in yellow wool and gold mohair, then in rust wool and gold mohair; repeat.

FINISHED SIZE: 50" x 72"  
(127 x 183 cm) + fringe.

The throw was washed and fringed with overhand knots.



# Techniques of Tapestry Weaves—Part IV: Developing Design for Tapestry

by Kate O'Callaghan



Charlene Hartenstein

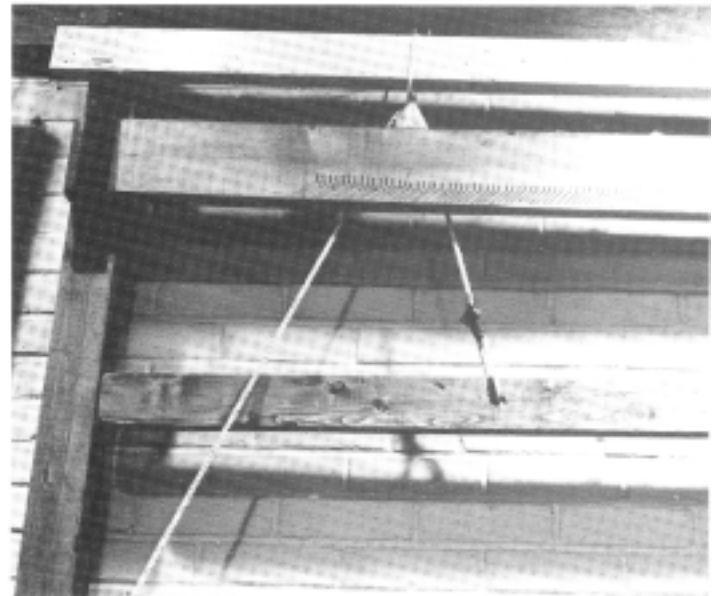
## CARTOONS

Let's begin with the mechanics of the thing: You will need to start with a two-dimensional drawing, photograph, rendering, slide or the like. Divide the drawing up into equal parts with a gridwork of lines. This will enable you to easily enlarge each area of the drawing to the actual size of the woven piece. Take a piece of heavy paper (brown wrapping paper, blueprint paper, or the like) or several sheets of lighter weight paper which have been layered together, and measure and cut it to the size you wish to weave your tapestry. Reinforce the edges to prevent tearing. Then make a grid on this cartoon paper of the same proportions as the grid on your original sketch. Now enlarge the sketch directly by redrawing it on the gridded cartoon paper. The "pattern" paper is called a "cartoon" because only the major outlines are drawn on it to act as a guide behind the warp while you weave. Alternatively, you may do what I do: photograph your original sketch with either slide film or black and white film. Tape your cartoon paper on a wall surface, and project the slide onto the paper in the dimensions in which you wish to work. Now draw the major lines and outlines from your sketch onto the paper with a heavy felt tip pen. Always use a dark heavy line for the cartooning, as the warp obscures the cartoon behind and makes it difficult to see.

When your cartoon is finished you may either hang it behind your warp or sew it to the back of your weaving as you weave. To hang it behind your warp, attach it with staples or tape to a wooden or metal rod, and hang that with string from the back of your loom, centering it exactly behind your warp, being sure to leave room for you to weave a heading at the be-

ginning of your weaving. Then weave a heading of several inches, and pin the lower part of the cartoon to the heading with large T pins. The second method, sewing it to the weaving, is simply this: begin by weaving a heading of several inches. Then with a very heavy thread in a large needle, "tack" the cartoon on the heading with a few large stitches across the width of the work, leaving the needle and thread to hang. Take a string and tie it midway up across the back of the loom to hold up the cartoon where it has not yet been stitched. Then, as you progress with your weaving, keep adding a row of stitches to keep the drawing flat up against the back of your weaving to act as your guide while you work.

Your original sketch is ordinarily kept next to you, while you are working, to refer to as you weave. Often you develop



Large scale frame loom showing the upper bracket holding the nail beam and the pulley system for hanging the cartoon.

it into a color sketch to use as a reference while you are weaving.

Remember, the working sketch and cartoon are simply guides. You may discover as you work that the drawing was ill-conceived in some way. For example, you may find that curves are too vertical for the relatively coarse warp you are working on, and need more rounding in order to weave nicely. Do not hesitate to make changes in order to make the weaving better. The major reason I use a cartoon is so that I can weave large shapes as perfectly as I originally conceived them. On small shapes you may do just as well by eye; that is, without the use of a cartoon. In pieces where the entire weaving consists of small shapes, I seldom use a cartoon, just a color sketch to lay out my general plan of attack.

#### PLANNING A WEAVING

Planning, in my work, is extremely important. I usually work large (the smallest of my recent pieces is 4' x 4'), and this means that I need quite a bit of materials. When using commercially dyed yarns, I need to estimate the amount I will be using of each color and order accordingly. As I live in a small town with no nearby wholesale suppliers, I order all my materials by mail. This is a lengthy process, so pieces are planned up to six months or a year in advance of being woven. This enables me to work as inexpensively as possible and with no delays while waiting for materials. So planning is worthwhile. How do I find suppliers and how do I know how much yarn to order? The suppliers are easy: look through the advertisements here in *The Weaver's Journal* and any other craft magazines you may have access to and write to them for samples and price lists. Wholesale prices and/or professional discounts are available to artists working professionally who have set themselves up as a business and have the appropriate sales tax licenses. Two big problems with mail order are that prices constantly change, inventory changes. Therefore you ought to order everything you will need, as reordering is not always possible. Three times in the past year, my suppliers have gone out of

business, phased out a yarn I was using, or run out of stock. It can be very frustrating.

My answer to the yarn problem is that I am now bulk ordering white and grey yarn for home dyeing with chemical dyes. The reason for this is that you can *always* get white wool yarn somewhere, somewhat inexpensively. Also with chemical dyes you can develop precise formulas for different colors and shades and if you run out of a dyed batch, you can repeat the formula and get more of the same. There are very few professional weavers around who don't sooner or later start doing their own dyeing. It also enables you to develop color ranges, shades of colors and the like, which would be very expensive to order for every piece. And you always have the opportunity to over-dye yarn which doesn't get used up!

As for how much yarn to order: that is very difficult. My general rule of thumb is 1 pound per square foot (5 kg/square meter). Rya would use up yarn at a much greater rate and might double your needs.

#### DEVELOPING DESIGN

I would recommend that you begin with a series of design problems. Explore every aspect of design separately and develop thereby the rudiments of a visual language. Once you have the language, you will find your heart will speak on its own!

1. You might want to start with texture. Do a series of texture experiments. Get some cardboard or insulating board, and cut it up into a square, then divide the square into sections. Then, using glue or staples, fix yarn onto it in each section to embody different visual textural ideas, such as rough, smooth, knobby, flowing, and the like. Try the same kind of thing with other types of materials -- wood shavings, beans, fabric, anything that is manipulatable in some way. Then develop a series of overall designs that are totally dependent on texture. Limit yourself to one or two colors. Make perhaps six or eight different textural design compositions. Weave the best of them, using only one or two colors at the most. Make the texture speak for you in this piece.



*"De la Mer Soi Meme". Tapestry by the author and the sketch for the cartoon. Note that the tapestry and the cartoon are mirror images from each other because during the weaving process the right side of the tapestry faces the cartoon.*

2. Now experiment with line. First explore design possibilities with dense and thin lines. Take a ruler and divide up a piece of paper into shapes or areas. Vary each area by penciling in lines, densely in some places, sparsely in others. Try varying the width of the lines. Now, make a contour drawing, such as a topographic map. Can you imagine that in colors? Again develop a series of design solutions using line as the major design element. Now weave the best one.

3. Explore shapes. Make a paper collage by ripping up different colored pages from magazines into very small pieces with your fingers. Then build up shapes with these in a mosaic, gluing them onto a sheet of paper. Then try cutting construction paper up into some random simple shapes and moving these around on a sheet of paper into a series of different compositions. First use organic shapes; that is, curved or rounded ones. Then try geometric, or angular, shapes in various compositions. Again develop about six finished compositions, then choose the best one and weave it.

4. For a shading experiment, begin with a simply-drawn portrait, even one as simple as a cartoon character. Think how you can develop the portrait by using the shading techniques you have learned; where you would hatch, where outline, where use hachures. Redraw the portrait several times making it simpler and clearer. Now draw it with more complexity, with more shade in the face. To help you develop this, you might look at the drawings of famous artists, such as a Leonardo, or a Rembrandt. Study the work of Klee, as he often was able to transmit an incredible amount of feeling with the fewest lines imaginable. When you have a portrait that you find sufficiently interesting, try weaving it, using only two colors (such as blue and white, or brown and white) and using shading techniques to achieve all your effects.

5. You might now wish to try color. There are many exciting ways to experiment with color. First get out your water-colors; an inexpensive set will do. Paint two different pieces of paper in highly contrasting colors. Now cut up the papers

into strips and interweave them. What happened? Try this again with soft muted colors, to see how these colors interact.

Then take a piece of cardboard and cut it into a shape, say a simple fish-like shape. Using this as a pattern, draw this shape in a repeated, though changing, pattern on a piece of paper. Now try painting the shapes, maybe in a changing series of warm colors, and the background behind it in a changing series of cool colors. What happens?

Try another set of shapes, such as thin blades of grass, some with bends in them, some straight. Have some of the blades overlap, intersect, or stand in front of others. Now imagine that the ones overlapped are perfectly visible through the others. Are they lighter or darker than the ones in front of them? Try painting each blade, varying the tone to capture the blade in front of or behind it.

Now imagine a simple, large shape, such as the sun. Imagine its intense hot colors. Think about what you know of the sun, that the interior is hotter than the exterior. That flares of heat erupt off its surface. That at different times of the day it has different appearances. At sunrise it may have bands of different colors in it, or around it in the sky. At full noon it may seem a blinding yellow disk. At sunset it may again have bands of varying colors. Draw one of those suns on your paper, making it so large it fills almost the entire paper. Think of its colors, its varied temperatures, and break up the huge rounded shape with small shapes or strips and paint them in varying hues and intensities, trying to

capture the personality of the sun. Now paint the atmosphere around the sun (the background), as that wouldn't be a single color either, but rather vibrating in different bands of color, with different amounts of light in them. Repeat this experiment several times using different themes, such as the moon, a mountain landscape, etc.

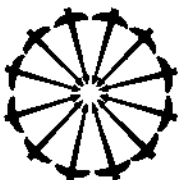
Have you developed a weavable design yet? Before you select one you might try this process on a favorite object or place. Sketch, re-sketch, sketch from different angles, paint it graphically, paint it with transparent depths, paint it broken up in small areas of colors. Develop at least six renderings of it, choose the best and weave it.

The key to all of this of course is your willingness to work at your designs until one seems really "right". Then commit yourself to exploring that rightness by weaving it.

You will find that once you begin simple design explorations, many thoughts and visual ideas will occur to you. You will develop many ideas for weaving. So much you may find you have years of work cut out for you. The key to it all is to begin with a good attitude. Do *not* tell yourself that you cannot draw, design, etc. Creativity is not just a random zap of lightning to the favored of the gods. It is the naturally occurring answer to simple problems you set out to solve. Apply yourself to one problem at a time, attack it in a simple, rational manner, and you will find ideas just bursting into your head.

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# Multiple Harness Weaving Course—Part IV: Twill Derivatives (continued)

by Nancy M. Searles

illustrated by Nancy G.B. Roberts

Probably no weave is as popular in this country as the overshot, nor as versatile. Considering the many variations possible with 4-harness overshot, it is exciting and overwhelming to think of the overshot concept in terms of multiple-harness weaving. By briefly analyzing the structure of the 4-harness overshot, it should be possible to approach the multiple-harness concept with considerable confidence.

Overshot is a twill derivative weave. What truly makes overshot unique, however, is its membership in the block family. Four-harness overshot has four threading units:

harnesses  $\boxed{1 \ \& \ 2}$ ,  $\boxed{2 \ \& \ 3}$ ,  $\boxed{3 \ \& \ 4}$ ,  $\boxed{4 \ \& \ 1}$ .

Any of these overshot units may be repeated two to four times in succession to make a block:

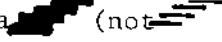
$\boxed{121212}$ ,  $\boxed{232323}$ ,  $\boxed{3434}$ ,  $\boxed{4141}$ .

For overshot, these blocks are then threaded so that one block is followed, in twill order, by a block adjacent to it. Two adjacent blocks share the harness that they have in common. For instance, if block A (1212), is followed in threading by Block B (2323), and then by block C (3434), the actual threading would be:

A B C  
12123123434 with harness ② common to  
threading blocks A & B, and harness ③  
common to blocks B & C.

The block concept is based not only on repeated threadings to make a given design wider, but also on repeated treadling of a block to make the design longer. Tabby (plain weave) is woven between pattern picks to allow pattern treadlings to be repeated without weakening the structure of the fabric.

For traditional overshot, a fairly fine warp is used and sett to produce a 50/50 plain weave ground. The tabby weft is the same weight and color as the warp, and the weft pattern is three times the weight of the warp yarn and contrasting in color. The desired effect is to have a 50/50 plain weave ground and, at the same time, to have the pattern wefts pack to form a solid

pattern area (not ). Some adjustment of yarn size, beat, or sett may be necessary to achieve the optimal effect.

Now let us consider the expansion of the 4-harness overshot concepts to multiple-harness, specifically 8-harness. An 8-harness overshot weave consists of 8 threading units: A B C D E F G H  
12,23,34,45,56,67,78,81.

As with four harnesses, units may be repeated to make a block. The blocks are threaded in twill order with two adjacent blocks sharing the harness they have in common.

A sequence appropriate for an 8-harness overshot threading is the following letter block draft: H<sub>G</sub>F<sub>E</sub>D<sub>C</sub>B<sub>A</sub>B<sub>C</sub>D<sub>E</sub>F<sub>G</sub>H. An expanded

$H_G F_E D_C B_A B_C D_E F_G H$

block draft showing the actual number of threading units per block is:

$H_G F_E D_C B_{AA} B_{CC} D_{DD} E_{EE} F_{FF} G_{GC} H_H$

Fig. 1

This can be mirrored to form a symmetrical threading pattern which may be repeated or combined with other threading patterns. The following is a symmetrical threading pattern:

H G F E D C B A A B B C C D D D E E E F F F G G G H H H C C G G F F F E E E D D D C C B B A A B C D E F G H

See Fig. 2 for the thread-by-thread draft of Fig. 1.

Multiple-harness offers the weaver of overshoot a much broader selection of tie-up possibilities than does the 4-harness concept. Overshoot tie-ups are the same as twill tie-ups. As with 8-harness twills, the 8-harness overshoot tie-ups are numerous. For purposes of this article, the following tie-up sequences have been used:  $\frac{3}{5}$ ,  $\frac{2}{3} \frac{1}{2}$ , and  $\frac{1}{2} \frac{1}{1} \frac{1}{1}$ . See Fig. 2 A,B,C for the complete tie-ups.

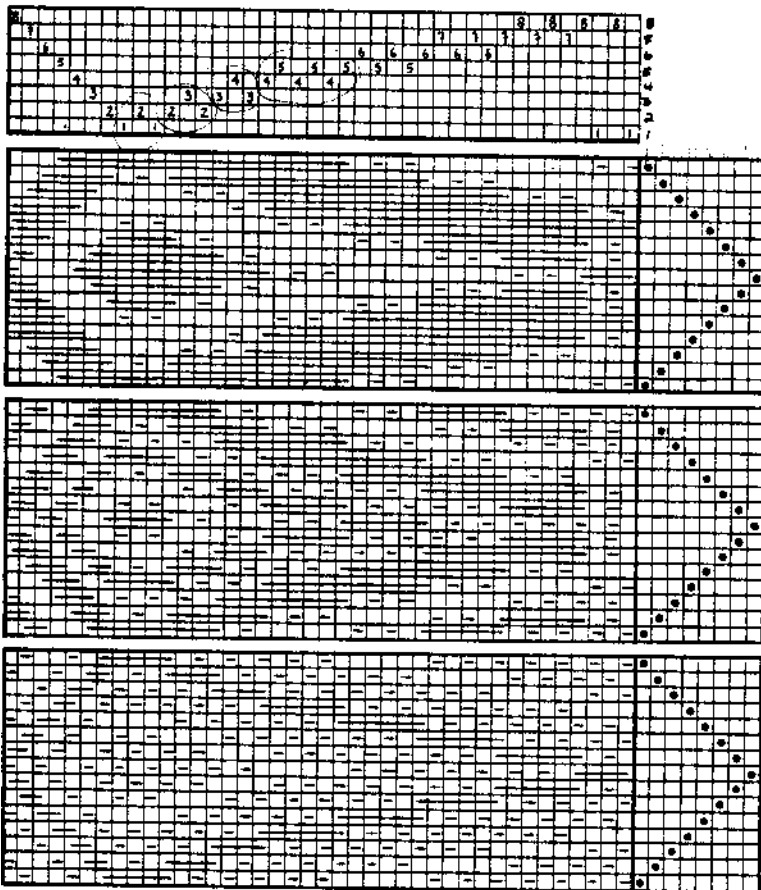


Fig. 2 - 8 harness overshoot 3 tie-up sequences, each with pointed treadling.

This threading draft, reversed and repeated is the threading used for all of the samplers for this article.

Once the tie-up is selected, one must consider the treadling possibilities. It should be mentioned that the treadlings discussed here are those of the pattern weft. As in 4-harness overshoot, each pattern pick alternates with a tabby pick that weaves the ground (tie-ups 1357 and 2468). Both 4- and 8-harness overshoot offer the weaver infinite treadling options. However, there are several basic treadling patterns which are reasonable starting points when initially weaving either a 4-harness or 8-harness overshoot. These are the straight or reverse treadlings (treadling 1 through 8 or 8 through 1), and the treadling as drawn in.

The straight and reverse treadlings are shown in Fig. 2 and in Plate 1.

The straight and reverse treadlings give the weaver the most concise information about the specific pattern which has been threaded, and provide a good sample on which to build more embellished treadlings.

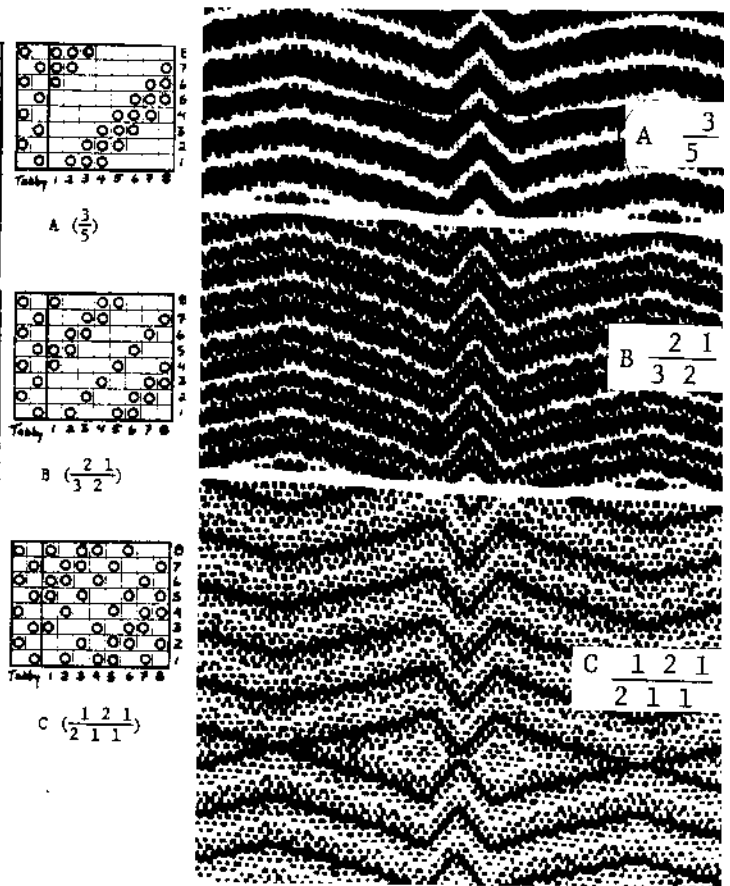


Plate 1.

8 Harness overshoot threading straight and reverse treadling

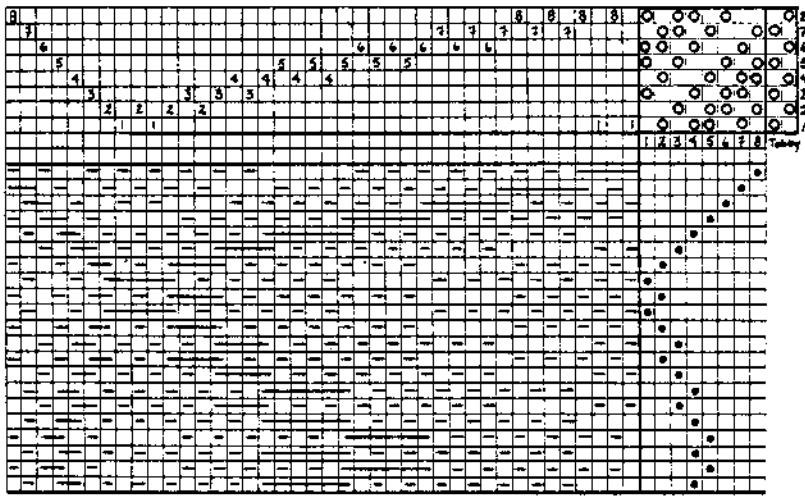


Fig. 3 - Treadling as the threads are drawn in - Partial draft.

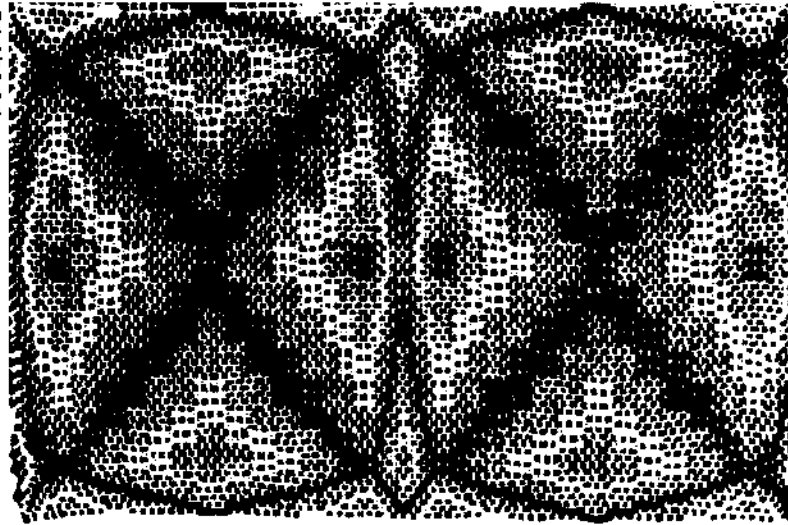


Plate 2 - Pattern treadles as the threads are drawn in.

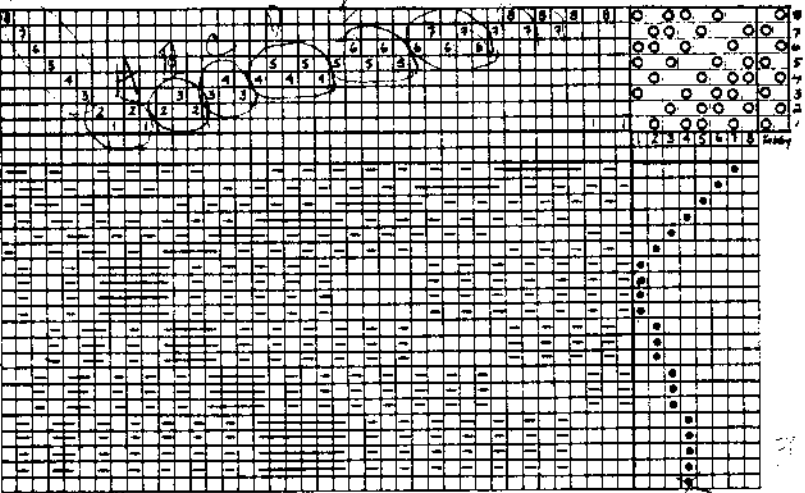


Fig. 4 - Treadling as the blocks are drawn in - Partial draft.

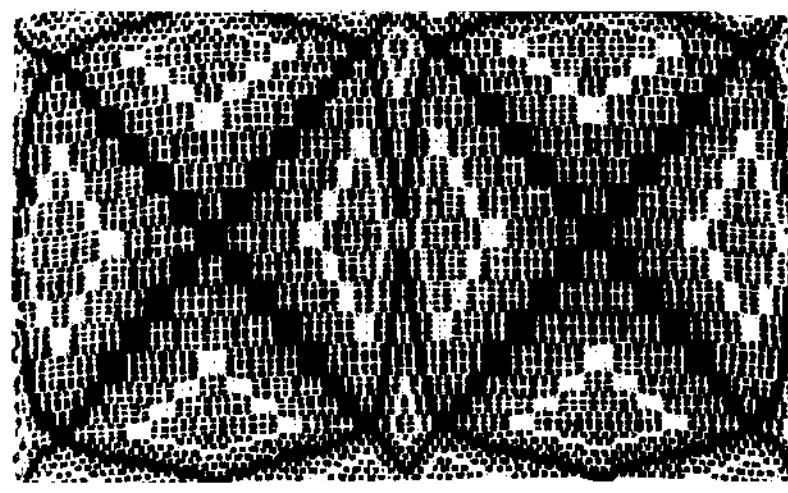


Plate 3 - Pattern treadles as the blocks are drawn in.

The next treadling to be explored is the treadling as drawn in. There are two distinct ways of "treadling as drawn in":

1. TREADLE AS THE THREADS ARE DRAWN IN. For a given tie-up, the treadling pattern is the same as the threading pattern. The number sequence in which the treadles are used for the throwing of the weft is the same as the number sequence in which the harnesses have been used for the warping. See Fig. 3 and Plate 2. The result of this method of treadling as drawn in is a delicate patterning, almost shadowy, in comparison with pattern treadling.

2. TREADLE AS THE BLOCKS ARE DRAWN IN. For a given tie-up, the treadling pattern is the same as the block draft (see Fig. 1). Block A corresponds to treadle 1, block B to treadle 2, etc. For each block the pattern treadle is repeated until the block is squared out. See Fig. 4 and Plate 3. In overshot, adjacent blocks share a warp thread which is threaded on the harness they have in common. Therefore, a 4-end block will be squared out by 3 pattern picks; a n-end block by n-1 pattern picks. For example, the AA block of Fig. 1, which is a 5-end block (see Fig. 4) is squared out by 4 pattern picks woven with treadle 1. The treadling as the blocks are drawn in is the traditional overshot treadling and gives a bolder pattern.

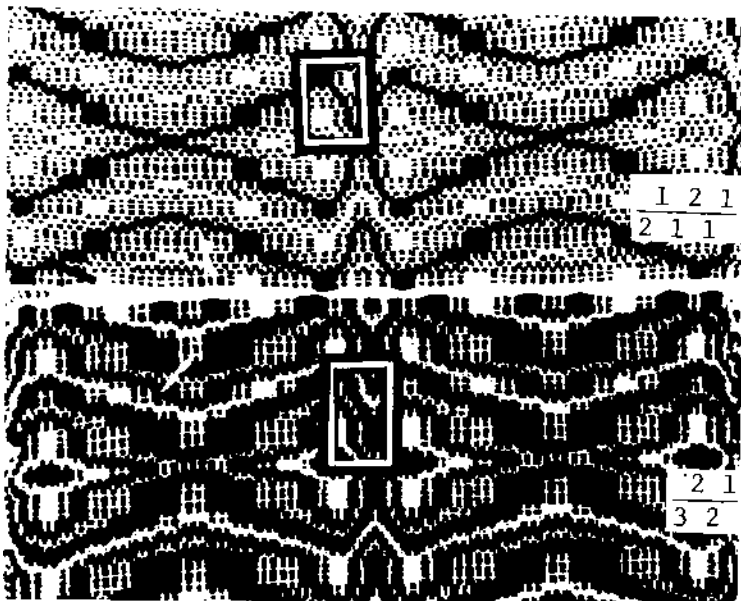


Plate 4 - "Treadling Picture" variation I, woven with two different tie-ups.

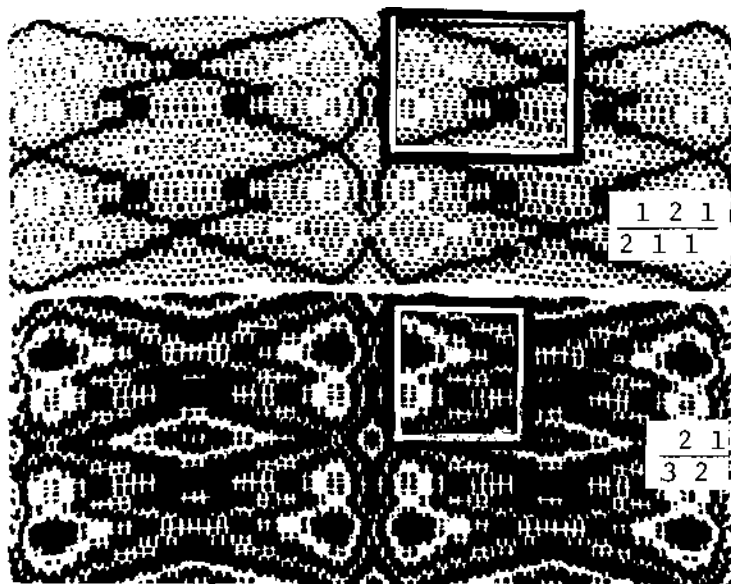


Plate 5 - "Treadling Picture" variation II, woven with two different tie-ups.

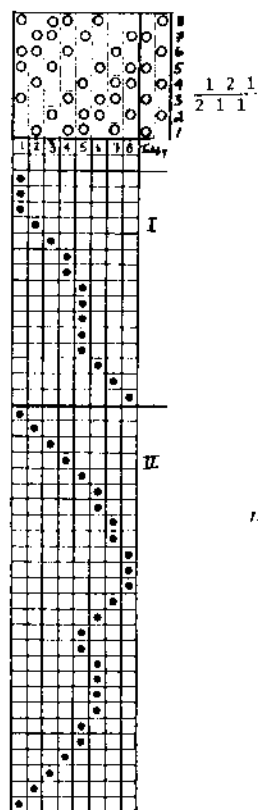


Fig. 5 - Two "Treadling Pictures"

and two treadling variations. Both variations have been developed in an almost random fashion, with the only criterion being that the progression of the treadling forms a smooth, twill-related, design line. These treadling patterns may be reversed, repeated, or combined.

Plates 4 and 5 show examples of the pattern woven with treadling variations as shown in Fig. 5 I and Fig. 5 II respectively. Each sample is woven with two different tie-ups.

The sampler in Plate 4 have been woven by repeating the treadling sequence 5I twice and reversing it twice. Both woven samples in the photo have been marked to show their relationship to the "treadling picture".

The sampler in Plate 5 has been woven as shown on the "treadling picture", reversed, and the entire sequence repeated once more. Again, the photo is marked to show the correlation between the "treadling picture" and the woven sample.

There is one final variation that lends itself extremely well to the overshot weave. This is a 2-shuttle "on opposites" weave. See Plate 6.

Fig. 5 shows the tie-up sequence  $\frac{1\ 2\ 1}{2\ 1\ 1}$

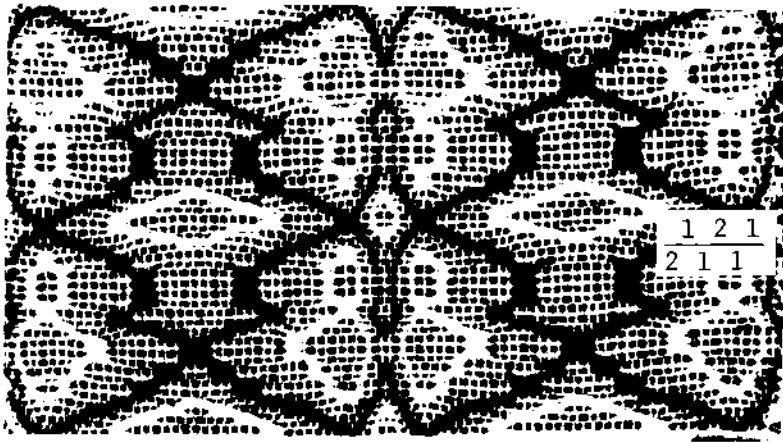


Plate 6 - 8-harness overshot woven on opposites.

For this weave, 2 pattern-weight yarns are used, one close to the warp color, the other in contrast to it. No tabby-weight yarn or tabby treadling is used. A pattern treadling is selected, such as the second variation, (Fig. 5 II), with the  $\frac{1\ 2\ 1}{2\ 1\ 1}$

tie-up. The first pattern pick of Fig. 5 II is on treadle 1 (3568). This is woven with a pattern-weight yarn in a color contrasting to the warp, as would be the case with conventional overshot. The next row will be woven with the warp-colored pattern yarn, on the opposite treadle that lifts all the harnesses *not* used for the previous pattern pick; thus (1247). This completes one row of weaving. The second treadle in the Fig. 5 II lifts (1467), which is treadled with the contrasting pattern yarn. This is followed by a pick of warp-colored weft on the opposite treadle (2358). This treadling sequence is continued, throwing

the contrasting color shuttle on the pattern treadles, according to the "treadling picture", and the warp-colored shuttle on the opposite treadles. No tabby shuttle is used with this variation.

The result of this variation is a striking double-pattern effect overshoot; 2 overshoot designs in different colors against a plain weave background. Compare the pattern "woven on opposites" of Plate 6 to the conventional overshoot in Plate 5 with the  $\frac{1\ 2\ 1}{2\ 1\ 1}$

based on the same Fig. 5 II pattern treadling, and have been woven with the same tie-up sequence. However, the two weaving techniques result in very different weave structures!

In this article, we have but touched on the possibilities afforded in multiple-harness overshot. The weaver who enjoys experimenting will want to explore asymmetrical overshot "treadling pictures" and special effects created by changing the tie-up sequence as the weaving progresses. One might also consider the use of unusual or mixed yarns which can completely alter the look of a finished piece.

Happy weaving!

Sampler weaving information:

WARP AND TABBY WEFT: 5/2 cc Verel, beige

PATTERN WEFT: Black mill ends

SETT: 15 epi (60/10 cm)

A Book of  
**Patterns for Hand-Weaving**

Designs from the

**JOHN LANDES**

Drawings in the Pennsylvania Museum

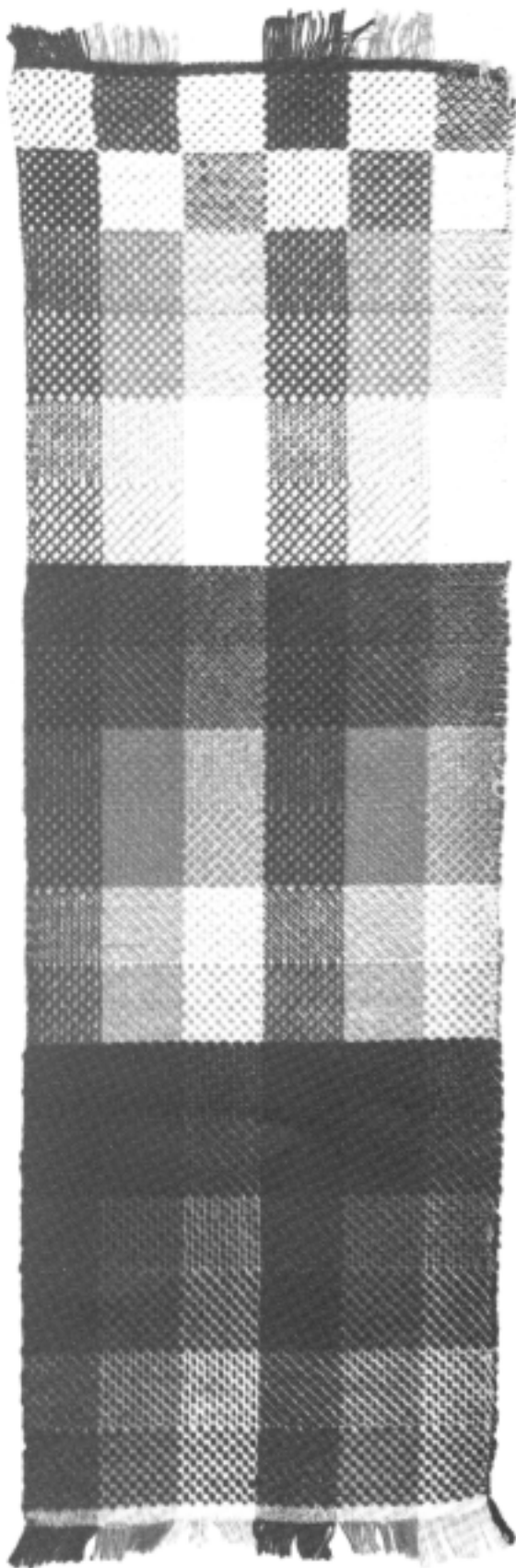
Drafts and notes by

Mary Meigs Atwater


Published by: \$6.00 post. paid  
Southern California Handweavers' Guild Inc.  
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# Color and with



Gamp #1

Four harness Summer and Winter has two threading blocks, A and B. Block A is threaded by repeating the A unit 


Block B is threaded by repeating the B unit 

Fig. 1a shows a typical four harness Summer and Winter threading in which all the blocks are equal in size and are six units wide.






Fig. 1

Fig. 1b shows the profile draft for the same threading.

There are many methods for weaving Summer and Winter. For this study, we will limit ourselves to two of the four methods of weaving Summer and Winter "in pairs." See Chart 1.

The difference between Method 1 and Method 2 is that the order of the tabby sheds have been reversed.

COLOR EFFECT #1: Solid warp stripes. The stripe arrangement matches the block arrangement.

Gamp #1 shown here is woven in white  gold  and black . The warp and tabby weft are Lily Frost-Tone. The warp is sett at 12 epi (50/10 cm). The pattern weft is Kentucky yarn.

The gamp has solid color stripes. 6 A units white, 6 B units gold, 6 A units black, 6 B units white, 6 A units gold and 6 B units black.

# Weave Effects

## Four Harness Summer and Winter

The gamp was woven with treading sequence d which gives no pattern floats on the surface (except for the top two sections which are woven with treading sequence a and b respectively).

Fig. 2 represents the third of the gamp which is woven with black pattern weft. Similar sections are woven with gold pattern weft and with white pattern weft. The colors of P and T are indicated to the left

Method 1			
a. Pattern in block A	b. Pattern in block B	c. Pattern in blocks A and B	d. No pattern on surface
Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T
Lift H2 + H4 weave P	Lift H2 + H3 weave P	Lift H2 weave P	Lift H2 + H3 + H4 weave P
Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T
Lift H1 + H4 weave P	Lift H1 + H3 weave P	Lift H1 weave P	Lift H1 + H3 + H4 weave P
Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T
Lift H1 + H4 weave P	Lift H1 + H3 weave P	Lift H1 weave P	Lift H1 + H3 + H4 weave P
Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T
Lift H2 + H4 weave P	Lift H2 + H3 weave T	Lift H2 weave P	Lift H2 + H3 + H4 weave P

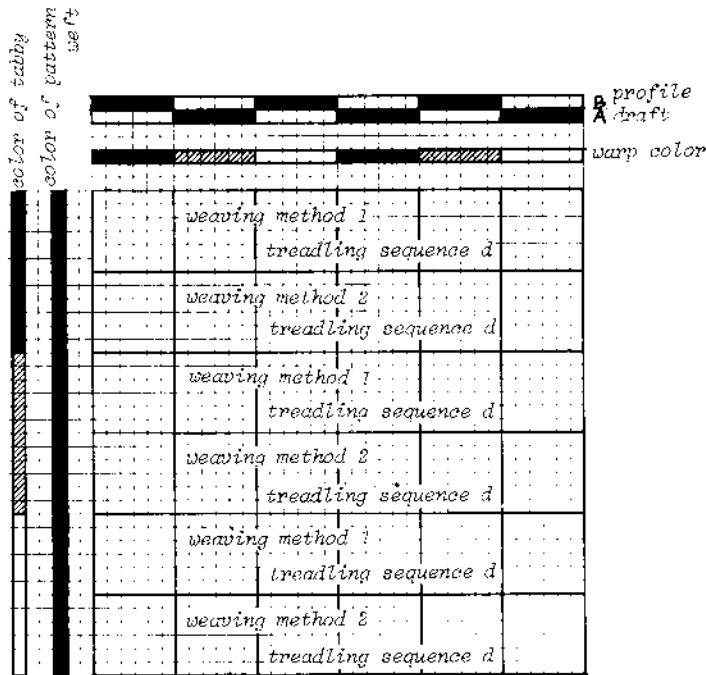
  

Method 2			
a. Pattern in block A	b. Pattern in block B	c. Pattern in blocks A and G	d. No pattern on surface
Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T
Lift H2 + H4 weave P	Lift H2 + H3 weave P	Lift H2 weave P	Lift H2 + H3 + H4 weave P
Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H2 + H4 weave T
Lift H1 + H4 weave P	Lift H1 + H3 weave P	Lift H1 weave P	Lift H1 + H3 + H4 weave P
Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T	Lift H1 + H2 weave T
Lift H1 + H4 weave P	Lift H1 + H3 weave P	Lift H1 weave P	Lift H1 + H3 + H4 weave P
Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T	Lift H3 + H4 weave T
Lift H2 + H4 weave P	Lift H2 + H3 weave P	Lift H2 weave P	Lift H2 + H3 + H4 weave P

Each 8-pick sequence is repeated ad lib. P = pattern warp T = tabby weft

CHART I

of the diagram. For each P/T color combination, 6 units (8 pick repeats) have been woven using Method 1 and 6 units have been woven using Method 2. Both weaving methods give a slightly different color effect.



Graphic representation of 1/3 of gamp #1  
Fig. 2

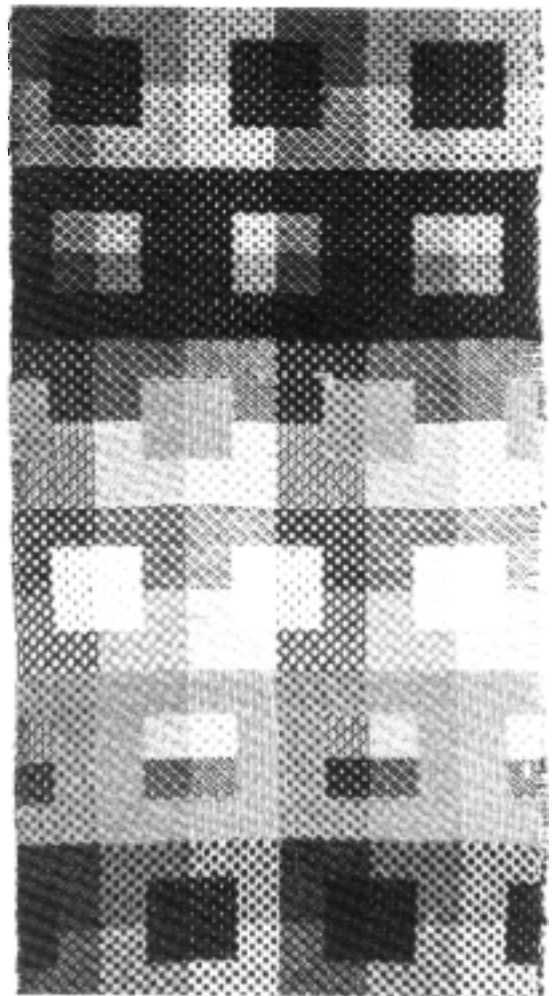
COLOR EFFECT #2: Solid warp stripes. The stripe arrangement is offset with the block arrangement.

Gamp #2 shown here is woven with the same yarns as gamp #1.

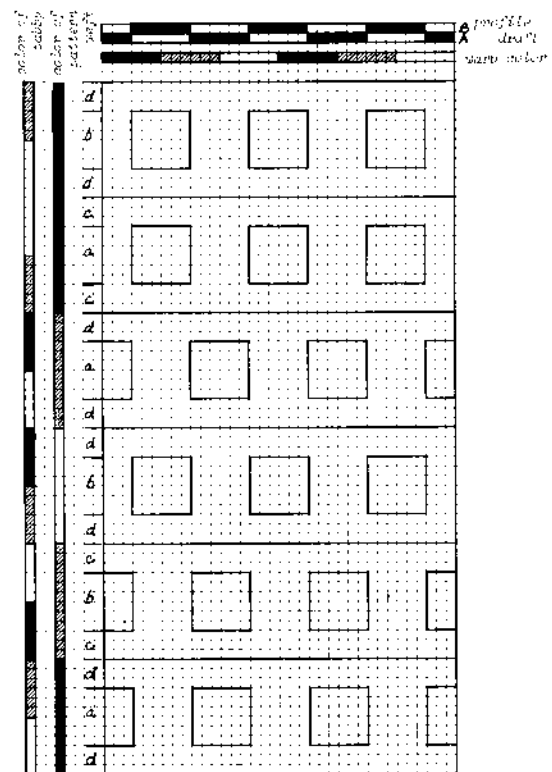
Fig. 3 shows the block arrangement and the arrangement of the warp stripes. This gamp can be woven either with Method 1 or Method 2 (Chart I). The letters a, b, c, d, in the graphic representation of the gamp refer to a, b, c, d of Chart I and show which 8-pick treadling repeats should be used. The colors of P and T are shown at the left of the diagram. Each square indicates an 8-pick treadling repeat.

- a pattern in block A
- b pattern in block B
- c pattern in block A and B
- d no pattern on the surface

Fig. 3 Graphic representation of gamp #2



Gamp #2



COLOR EFFECT #3: Warp stripes of 1/1 color alternation. The stripe arrangement matches the block arrangement.

Gamp #3 shown here is woven with white, gold and black. The gamp has stripes of 2 colors each. The two colors within a stripe alternate in a 1/1 order. Each stripe is 6 units wide. See Fig. 4. This gamp is woven in the same way as gamp #1.

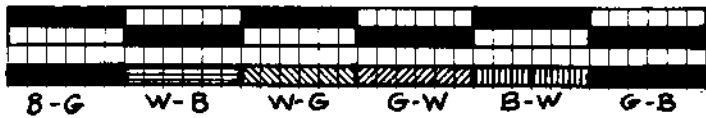


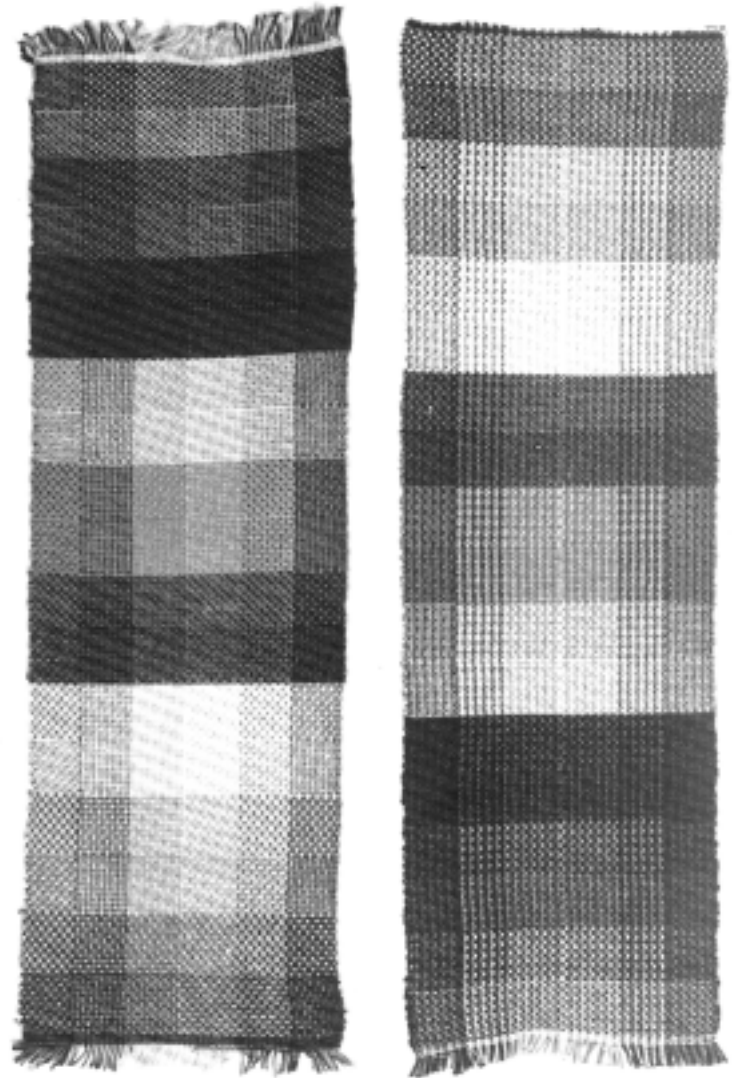
Fig. 4

COLOR EFFECT #4: Warp stripes of 2/2 color alternation. The stripe arrangement matches the block arrangement.

Gamp #4 shown here is woven with white, gold and black. The gamp has stripes of 2 colors each. The two colors within a stripe alternate in a 2/2 order. Each stripe is 6 units wide. It is woven in the same way as Gamp #1. See Fig. 5.




Fig. 5




Gamp #3

Gamp #4

The woven gamps and the instructions are contributed by Carol Strickler, who did an in-depth study of the color effects in *Summer and Winter weave* for her H.G.A. certificate of excellence.



## JACOB ANGSTADT DESIGNS



*Jacob Angstadt*  
His Weavers Pattern Book

*Jacob Angstadt Designs*  
Drawn from  
His Weavers Pattern Book

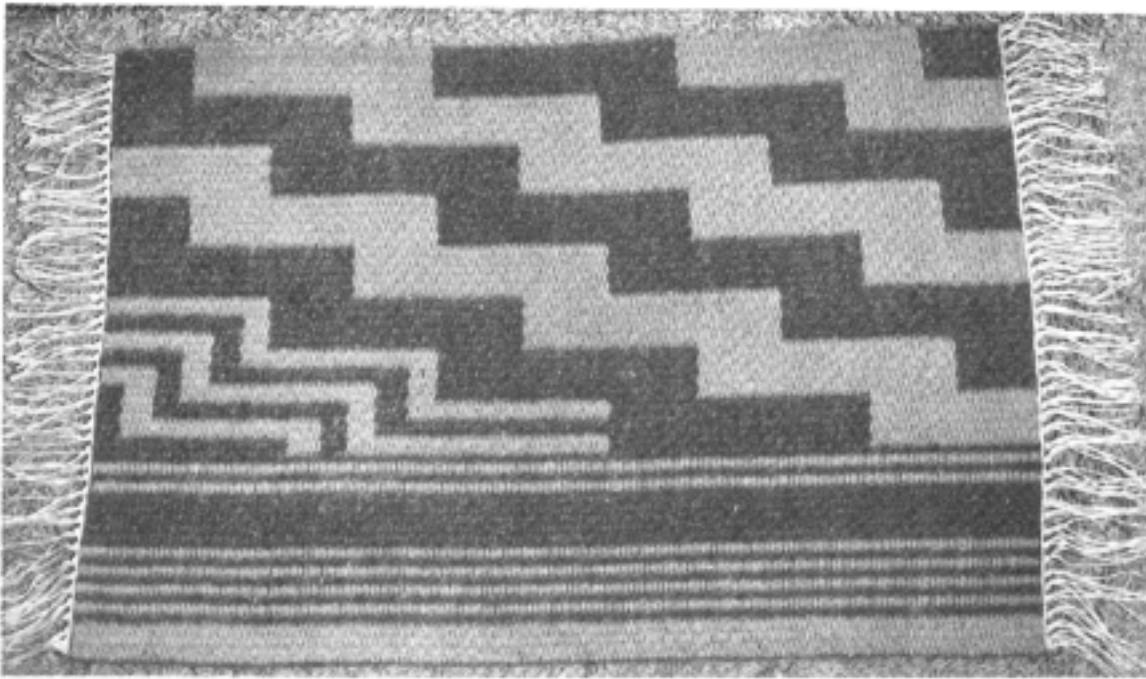
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# Shaft-Switch

Plate 1

In the shaft switch (S/S) article which was published in the July '80 issue of *The Weaver's Journal* (pp. 5-9) the patterning was done with solid dark (D) color on solid light (L) background. See Fig. 1. The treadling was always:

H1 + H3	weave D	Repeat
H1 + H4	weave L	
H2 + H3	weave D	
H2 + H4	weave L	

Fig. 2

The D,L color sequence was maintained throughout. Other color sequences such as DLLL, LDDD, LDLL, DLDD, give solid pattern on pin-striped (pick and pick) background or vice versa. See Fig. 3. Note that these color sequences require the use of a floating selvedge thread.

In this further study of the S/S technique, a threading draft will be studied

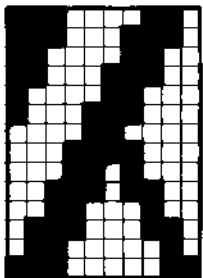


Fig. 1

D L D L

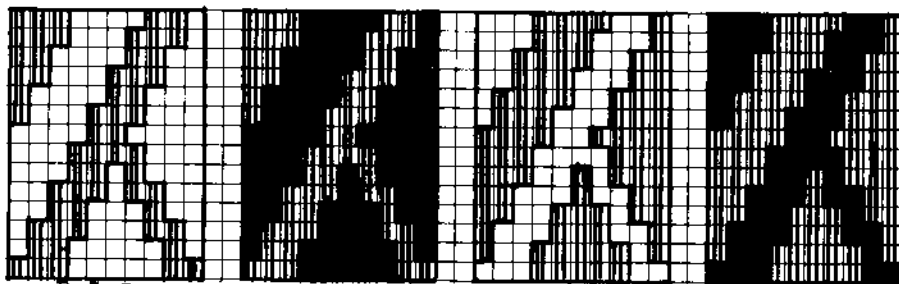


Fig. 3

D L L L

L D D D

L D L L

D L D D

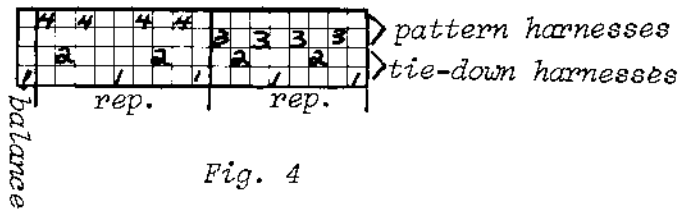


Fig. 4

which allows the combination of solid D areas, solid L areas and areas of vertical pin-stripes. The treadling sequence and the color sequence of Fig. 2 will be maintained throughout and no floating selvedge is required if the two pattern wefts are started from opposite sides.

## FOUR BLOCK DEVELOPMENT OF THE 4-END DRAFT (SUMMER AND WINTER)

The traditional 4-harness two block Summer and Winter threading of Fig. 4 can be extended to a four block threading. Blocks A and C are threaded as the traditional blocks; B and D are threaded as Summer and Winter blocks for which Hs 3

# Rugs with Pinstripe Pattern Areas

and 4 are the tie-down harnesses and Hs 1 and 2 are the pattern harnesses. The resulting threading draft is shown in Fig. 5.

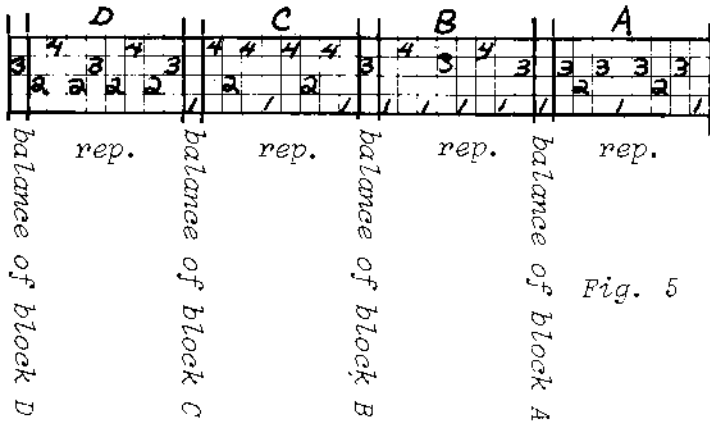


Fig. 5

Without S/S, these blocks when woven with the treading of Fig. 2 will appear as in Fig. 6.

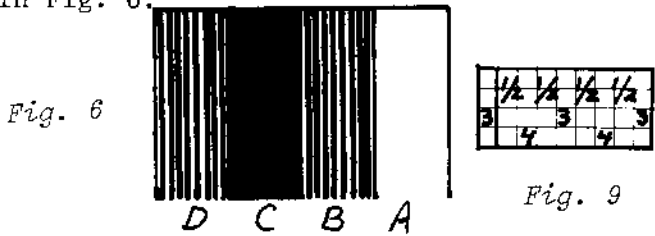


Fig. 6

Fig. 9

Shaft switching can be done between blocks A and C. If, within blocks A or C the pattern warp threads (on Hs 3 and 4) are left floating and allowed to switch from H3 to H4 by means of a S/S device, one can create solid D color pattern areas on solid L color background. Fig. 7 shows the S/S threading.



Fig. 7

Note that if blocks A or C are selvedge blocks, the balancing warp thread on H1 is the selvedge thread. If block D is the

selvedge block, in addition to the balancing warp thread on H3 one has to add a selvedge warp thread on H1. If block B is the selvedge block, a selvedge thread on H2 has to be added. See Fig. 8.

Shaft switching can be done between blocks B and D. If within blocks B or D the pattern warp threads (on HS 1 and 2) are left floating and allowed to switch from H1 to H2 by means of a S/S device one can create pin-stripe pattern areas which are offset with a pin-stripe background. The shaft switch threading is shown in Fig. 9.

Both of these design possibilities can be worked simultaneously but on this threading it is impossible to have a solid pattern on a pin-stripe ground. This design possibility will be explored in a future S/S article.

The rug shown in Plate 1 was woven as follows:

WARP: 8/5 linen

WEFT: Red 3-ply rug wool  
Brown heavy singles rug wool

WIDTH: 28" (71 cm)

SETT: 5 epi (20/10 cm)  
For selvedge sett, see *The Weaver's Journal*, July '80, p. 7.

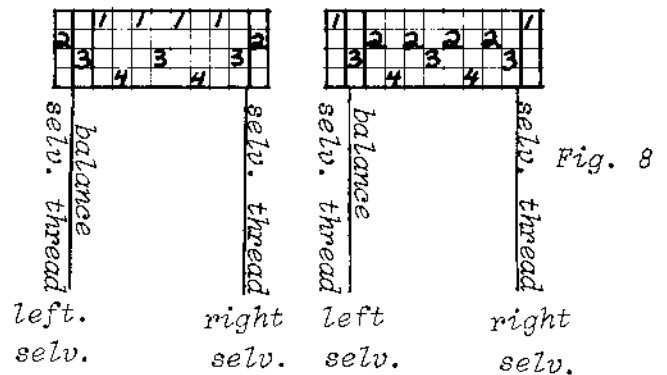
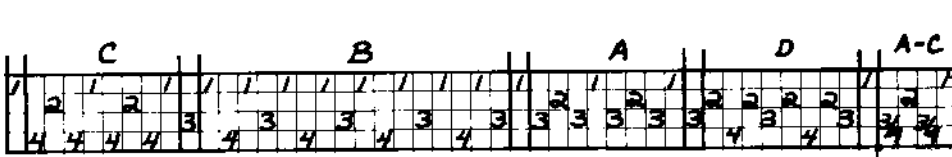


Fig. 8





THREADING: See Fig. 10.

Fig. 10

TREADLING: See Fig. 2

S/S DESIGN: See Fig. 11.

The dark areas are threaded on H4.

The light areas are threaded on H3.



## Product Reviews

### "OOLA" LOOM

Northfield announces a new small frame loom for tapestries up to 8" wide. It is called "Oola". This loom is easy and quick to dress and the warp remains automatically under tension by means of two springs. It is a good loom for beginners of all ages.

Any weaver may want to add an "Oola" to the looms they already have. This convenient tapestry loom is great for the study of techniques, color, texture and design. It can also be used for miniature tapestries.

Its small size and light weight make the "Oola" an ideal loom for travel and vacations.

The "Oola" loom is available by mail from Northfield Loom, Box 258 W.J., Northfield, MN 55057.

### ALTERNATIVE I

In recognizing some characteristics of synthetic yarns which might be of great value in the production of yarns for the handweaver, Weaver's Way has put on the market, since 1976, a synthetic blend called Alternative I.

Alternative I comes in sizes 5/2 and 2/2 and is a blend of 70% Verel and 30% viscose. It is available in a wide range of colors.

Verel (Eastman's trade name for their modacrylic) was chosen for its softness, resiliency, abrasion resistance and quick drying characteristics. Verel is also flame resistant.

The baby blankets, tablerunner, and the woven bands of the log carrier featured in this issue are woven with Alternative I, size 5/2 yarns.

The yarns are available at about 50 weaving shops throughout the country or mail order from Weaver's Way, 306 E. Golsboro St., Crown Point, IN 46307.

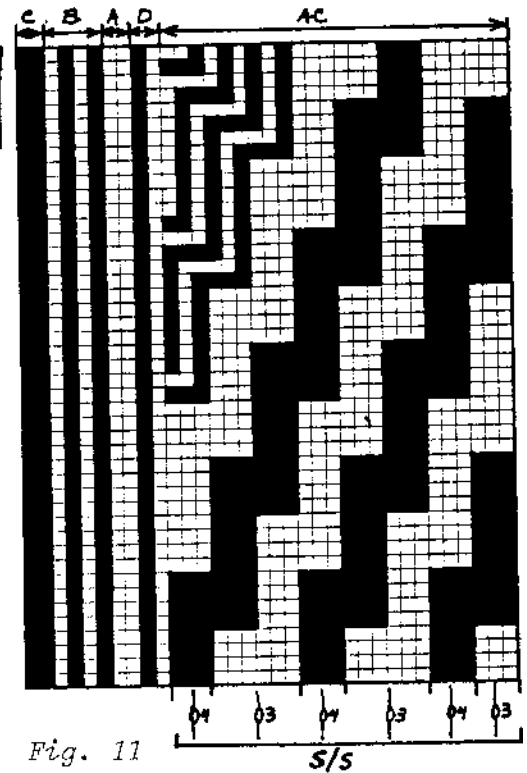


Fig. 11



# Book Reviews

*MUSHROOMS FOR COLOR*, Miriam Rice and Dorothy Beebee © 1980 Published by Mad River Press, Inc. Route 2, Box 151 B, Eureka, CA. 95501, 150 pp. \$6.95 ppd.

This book is an enlarged revision of Rice & Beebee's earlier *Let's Try Mushrooms For Color*.

The book contains four main parts. The first one is on vegetal dyeing with emphasis on one specific dyeplant: *the mushroom*. The second section is about the array of color that the mushroom yields and how the dyer can obtain these colors. The third is about the mushrooms themselves with information about identification and collecting. The fourth is a beautifully illustrated description of mushrooms that yield dye. There is also a dye mushroom index and a well researched bibliography.

The well organized text, the charts, the color plates and the skillful drawings make this book a very important manual on mushrooms and specifically on their use as dyeplants. The color range from mushrooms is astounding and, according to the authors, the colors have good fastness.

The book is thorough enough that someone without prior knowledge of mushrooms or vegetal dyeing will be able to follow the text and enjoy the colors from mushrooms.

*Clotilde Barrett*

*WEAVER'S WISDOM, 250 AIDS TO HAPPIER WEAVING*. © 1980, Boston Weaver's Guild Publications, 361 Norwood Street, Sharon, MA 02067, 24 pp. \$3.50.

"A mouse trap mounted on the castle can be used to hold drafts or treading directions." There are 250 such pieces of advice, information, and suggestions. Most are helpful, some are doubtful but all are fun and interesting to read. It is a very nice little publication compiled by a guild and we hope that they will keep up their good work.

*Clotilde Barrett*

*WARP AND WEFT, A TEXTILE TERMINOLOGY* by Dorothy K. Burnham © 1980 Royal Ontario Museum. Toronto, Ontario. Hard cover 216 pp. \$30.00.

The publication of this book derives from a need to standardize some of the textile vocabulary and thus facilitate communication on textile matters between people with different education and different language background. The content is somewhat similar to an illustrated encyclopedia but the layout of the book is airy and spacious and easy to read. In many ways I find this quality regrettable because I expected a larger and more complete terminology to be dealt with in a \$30.00 reference book. The textile terminology in this book is limited to terms related to *woven* fabric, but even for this narrow field of textile, many terms have not been included. Some of the vocabulary also needs more clarification.

The plan of the book is the following: each word in English is followed by the corresponding word in French, German, Italian, Portuguese, Spanish and Swedish. The term is then defined in English and is often accompanied by line drawings or black and white photography.

Example:

Figured weave	Technically the term
Fr. faconne	is used to designate
Ger. gemustert	weaves in which one
It. operato	or more warps are con-
Port. lavrado	trolled by a figure
Sp. labrado	harness.

An important appendix deals with French terms (mostly from the silk industry), which have no English equivalent.

*Clotilde Barrett*

TEXTILE COLLECTIONS OF THE WORLD, VOL. 2  
ENGLAND, edited by Cecil Lubell. 1976  
Van Nostrand Reinhold, New York. Hardbound  
240 pp. \$25.00.

This is the second volume of a well illustrated series of books which give resource information on textile collections as well as photographic illustrations of important work. The series is directed primarily to textile designers, producers of textiles, fiber artists, students of textile and collectors.

Great Britain is a small country yet its importance in the history of textiles is staggering. Scottish tartans, Harris tweeds, Paisley shawls, Tattersall checks, poplins, Oxford cloth, and Liberty silks attest to the impact of English textiles on the western world.

This volume contains the name and location of more than 40 textile collections in the British Isles. The Girdle of Ramses III from the 12th Century in the museum in Liverpool, Lubell says, "should be seen by all textile designers and craft weavers if only for the humility it will inspire".

The Bankfield Museum in Halifax has the second largest textile collection in England. It includes a collection of tools and equipment used in spinning, weaving, lacemaking and knitting. The exhibits give technical information, showing the fabric and how it was made. This intriguing collection is a unique resource for handweavers.

The most space (7 pages) is given to the collections at the Victoria and Albert Museum in London. Lubell says of it "...I became convinced that the V & A now holds the richest and the most accessible collection of historic textiles in the world". The collection spans almost 5,000 years and documents most known techniques used to construct or decorate a fabric. Thirteen galleries exhibit a permanent display of woven fabrics, printed fabrics, lace, embroidery and tapestry and carpets. There are subsidiary displays in over fifty other galleries throughout the museum. Over the main entrance of the V & A is an interesting inscription: *The excellence of*

*every art must consist in the complete accomplishment of its purpose.*

Included in the book is a short history of British textile design written by Natalie Rothstein, Deputy Keeper of the Department of Textiles at the Victoria and Albert Museum. She points out that the climate of Great Britain favored only wool and linen, which were used for fabric in very early times. Cotton was not imported until the 16th Century, but silks were brought in much earlier.

The 32 pages of color photos of textiles from English museums are truly beautiful. Beginning with 14th Century fabrics, there are choice examples of English fabrics through the 18th Century. These are followed by fabrics from other countries, including Africa and ancient Peru. The photos of Chinese tapestry and robes are dazzling.

The 140 pages of B/W photos present a sampling of textiles that are in museums in the United Kingdom and Ireland. They reveal the range and variety of design ideas preserved in these collections. Lubell chose the pieces primarily for pattern interest. He writes that his aim was "to suggest design themes for the fabrics of today through a photographic presentation of historical textiles preserved in the collections..." The short section of contemporary textiles on the last few pages is of special interest.

In many ways, this volume seems the best of the series and the editor's excitement and enthusiasm are very much in evidence.

Mary L. Derr

HANDSPINDLES by Bette Hochberg ©1977 & 1980 by Bette Hochberg, 333 Wickes Circle, Santa Cruz, CA 95006 66 pp.

This is a completely revised and enlarged edition of a book by the same name.

Clotilde Barrett

*TEXTILE COLLECTIONS OF THE WORLD, VOL. 3 FRANCE*, edited by Cecil Lubell. 1977 Van Nostrand Reinhold, New York. Hardbound 240 pp. \$30.00.

In this book, Cecil Lubell explores the textile sections of the museums of France. He gives an overview of French textiles, reminding the reader that it was a Frenchman who invented the Jacquard loom. He stresses the importance of the French as leaders in textile design and the pride with which they have preserved their woven silks, printed cottons, laces and tapestries in their museums.

Lubell has listed museums with textile collections in twelve French cities. Each listing includes the name and address of the museum, telephone number, and the name of the curator, followed by a brief description of the textile collection there. For the eleven Paris museums listed, Lubell has included the Metro stop nearest the museum,-- a thoughtful addition that tourists will appreciate when they are trying to find their way to some of the smaller, lesser known museums.

Consulting this book before a trip to France will ensure that you visit the collections you really want to see, whether your interest is in the woven silks of Lyon and Tours, textiles of the Middle Ages at the Cluny in Paris or the Art Deco and Art Nouveau textile designs at the Bibliotheque Forney.

But *Textile Collections of the World* is not a book only for the designer who travels. The holdings of each museum, the research facilities, their available audio-visual information and publications are fully described so that the designer can establish contact with the collection from his own studio. It is a source of

exciting design ideas as well. The 32 page section of color photos of textiles is outstanding, presenting examples ranging from 6th Century Coptic tapestry to French Art Deco designs of the 1930's.

The last section of the book contains black and white photos of French textiles as well as a few examples from other countries. All of the photos are of textiles found in French museums. Having them in your own book means that the designs are always available for you to study and to enjoy.

*Mary L. Derr*

*DRAFTING PRIMER* by Susan Guagliumi ©1978. Published by Unicorn, Box 645, Rockville, MD 20851, 64 pp. \$6.95.

This is a workbook which is best used in a class situation under the guidance of a teacher. However, some weavers may find it useful for self-teaching.

The author gives a basic, albeit simplified, overview of drafting. The weaves include twill and twill derivatives, Summer and Winter, some lace weaves and M's and O's. There is a section on block weaves and profile drafting. The drafting of "weave and color effects" is barely touched upon and is illustrated with log cabin and with shadow weave, which is such a complex system that this reviewer does not feel it belongs in a primer. The color effect in boundweave is illustrated through Krokbragd. The workbook has exercises and their answers, and the graph paper to figure things out.

*Clotilde Barrett*

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## Karelian Red-Picking

by Willie Jager Ruchti

Karelian red-picking comes from Karelia, once part of Finland but nowadays part of Russia. It is between the Finnish border and Leningrad.

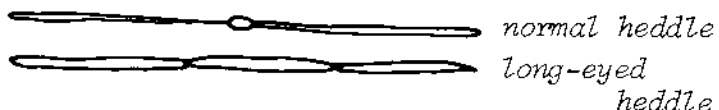
Red-picking, a weft brocading technique, is mostly used for Karelian towels. Some characteristics of these towels are their length of 350 cm (11.5 ft.) and their width of 35 cm (14 in.). Their borders are woven in decorative red-picking technique while the middle part is woven in plain weave.

The towels are hemmed with hemstitching and finished with decorative crochet work with a tipped design.

The traditional colors are white and red. The warp and tabby weft are the same white linen; the pattern weft is red cotton and is thicker than the ground yarn. People grew their own linen but the cotton had to be bought in Leningrad!

### HOW TO WEAVE RED-PICKING

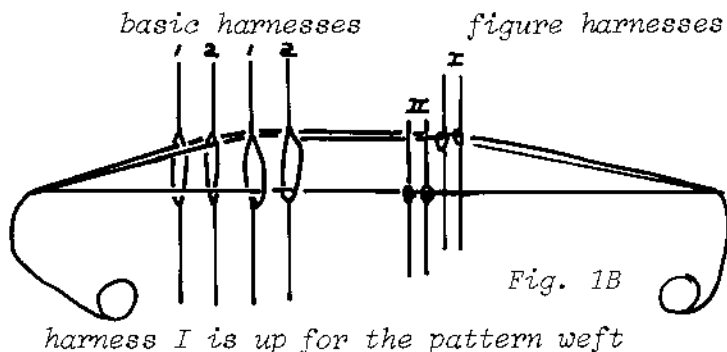
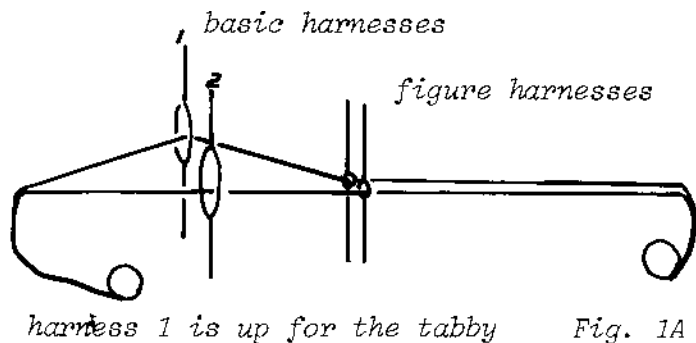
On a simple loom, red-picking can be done with a pick-up stick as it was done traditionally. Nowadays, when a more complex loom is available, red-picking can be done loom controlled by using two sets of harnesses and long-eyed heddles. The length of the eye is about 7 cm (2 3/4").



*Plate 1 - Willie Jager Ruchti admiring a very nice and well done Karelian towel in a school in Finland, where she has been teaching several summers.*

*Plate 2 - Karelian towel woven by the author.*





The first set are the ground harnesses with the long-eyed heddles. They weave tabby. The second set are the figure harnesses with normal heddles. They control the pattern. Every warp thread passes from back to front through a heddle of a figure harness and through a heddle of a ground harness, alternately on harness 1 and harness 2. See Figs. 1A and 1B.

Tabby is woven by treading the ground harnesses. See Fig. 1A. In red-picking, every other weft pick is a tabby pick.

The pattern weft is woven by treading the pattern harnesses. See Fig. 1B.

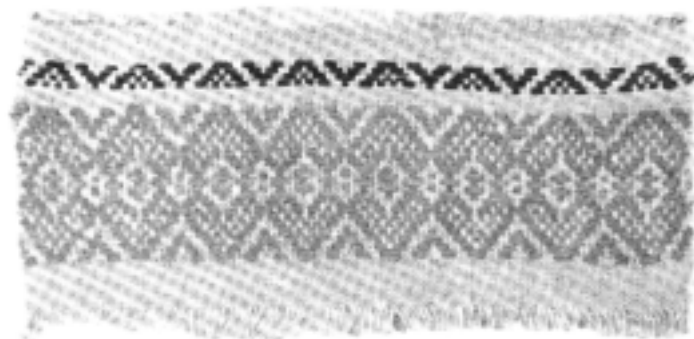
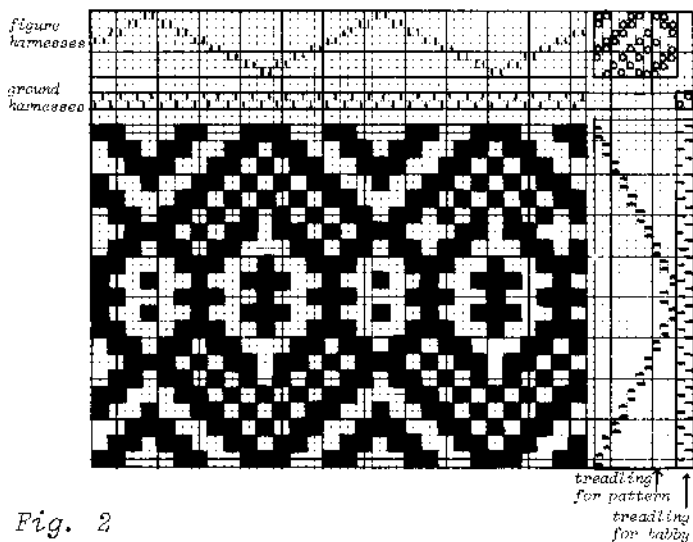


Plate 3 - Close-up of red-picking sample.

The pattern of Fig. 2 and Plate 1 requires 8 figure harnesses and 2 ground harnesses for a total of 10 harnesses. Without using the long-eyed heddle technique, the same pattern would require 16 harnesses (two per block).

Fig. 2 gives the threading, tie-up and treading for red-picking with long-eyed heddles.

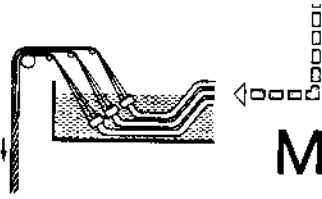


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## Man-Made Fibers

*This is an excerpt from the article, "The Range and Uses of Man-made Fibres" by J. F. Ford, Shirley Institute, England which we are printing with permission.*

*Man-made fibers are given many names. Each manufacturer has registered brand names for the fibers he makes.*

Generic names are used in the sub-headings of this article, followed in parenthesis by examples of trade names.

### 1. *Viscose\** (Fibro, Sarille, Darelle)

This fiber is made with viscose, a syrupy liquid derived chemically from wood pulp, which is spun (i.e. extruded) through spinnerets into an acid bath, forming the fiber. It is still (although marginally) the most important fiber in terms of tonnage. Continuous filament yarn, made in smaller quantity than staple fiber, is used for linings and furnishings, as well as for cheaper pile fabrics, and ribbons and braids. High-tenacity yarn is used for tire and other rubber reinforcement.

Viscose staple is used alone or in blends for a wide variety of spun yarn manufactures, including many forms of children's sports and dress goods fabrics, furnishings and carpets. Viscose staple is the principal fiber for lightweight nonwovens.

*\*Viscose is rayon. The word "viscose" is favored by today's manufacturers in Europe.*

Special types of viscose staple include crimped, used mainly in suiting blends, and high-wet-modulus, the latter being of higher wet strength and a blend fiber for use with polyester or cotton. High-wet-modulus viscose fiber is sufficiently special in properties to warrant a separate generic name, *Modal* (trade name example: Vincel).

Flame-retardant viscose staple is made, for use in pile fabrics for toys and other materials which may be exposed to fire risk.

### 2. *Acetate* (Dicel, Celafibre).

This is a chemical derivative of wood pulp called cellulose acetate; it is dissolved in a solvent to form a spinning solution which is extruded into air, from which the solvent is then evaporated, leaving the fiber.

A very small amount of acetate is made as cut staple fiber, and this is used in blends for improvement of handle and for dyeing effects.

Continuous filament acetate yarn is made into lining cloths, ties, dress fabrics, and brocades. A special type is used for cigarette filter tips.

### 3. *Triacetate* (Arnel, Tricel)

A modified form of acetate is cellulose triacetate, which is more heat-stable. It is specially suitable for washable linings, bedspreads and quilts, blouses and skirts, and ties, and for laminating with other fabrics. Both woven and knitted fabrics are produced from the fiber.

#### 4. *Acrylic* (Acrilan, Courtelle, Orlon)

This is a synthetic fiber, like the following fibers listed here, meaning that the fiber-forming material has been synthesized from simpler chemicals. Acrylic polymer material is dissolved in a solvent and spun into a bath which displaces the solvent and solidifies the fiber; alternatively, spinning may take place into air.

Virtually all the acrylic fiber manufactured is staple fiber, and because of its soft warm handle is found in many uses associated with wool, e.g. medium and coarse knitwear and hand-knitting yarns, furnishing and curtain fabrics, and carpets.

#### 5. *Elastofibers* (*elastane* and *elastodiene*) (Fulflex, Lycra, Spanzelle)

These are the continuous elastic threads that go into support garments, sock and underwear grip bands, and swimwear, and they are based on either natural rubber or the synthetic rubberlike materials, polyurethane (elastane fibers) or polyisoprene (elastodiene fibers). The more expensive synthetic threads are chiefly restricted to higher-priced lightweight support garments and swimwear.

#### 6. *Nylon* (Bri-Nylon, Enkalon)

Alternatively called "polyamide", nylon was the first major synthetic fiber based on coal chemicals or petrochemicals. Spinning takes place from melted polymer into air.

Nylon has very wide uses, via both weaving and knitting chiefly as continuous filament yarn, including women's tights, most forms of hosiery, lingerie, stretch fabrics, zip jackets and rainwear, shirts and blouses, dresses, sheets, furnishings and seat covers, and carpets. Industrial uses include tire reinforcement, ropes, and tarpaulins.

The smaller amount of nylon staple fiber is used in clothing blends for added abrasion resistance, in wool blends for carpets, and in nonwoven floorcoverings.

#### 7. *Polyester* (Diolen, Terylene, Trevira)

This fiber has gained on nylon after a later entry into textile markets, and is likewise melt-spun from petrochemical sources.

Polyester has several complementary, rather than competitive, uses to nylon. It is not found in tights and lightweight underwear and is chiefly a staple fiber in blends either with cotton where it has invaded many cotton-type structures and end-uses such as shirts, plain dresses and sheets, or in blends with wool on the worsted system for suitings.

However about one-third of all polyester is used as continuous filament yarn, for use in net curtains and in textured fabrics for outerwear, especially trousers and heavier dresswear. Industrial uses include hoses, drivebelts, sewing threads, seatbelts, sail cloths, tarpaulins, and tire re-inforcement.

#### 8. *Polypropylene* (Fibrite, Meraklon)

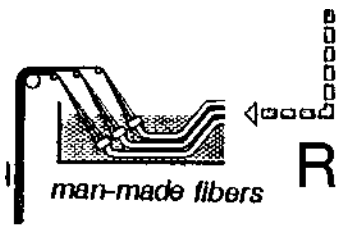
This synthetic fiber is also melt spun, or slit from melt-extruded film sheet, but is hardly ever found in clothing. Its uses are in carpet backing, sacks, industrial agricultural string twine and ropes, and some domestic uses are appearing such as furnishing fabrics and carpet pile.

#### 9. *Glass* (Fiberglass, Marglass)

Fibers are produced from molten glass by spinning through holes, or by a blowing technique forming a kind of floss useful for insulation. Glass fibers are strong and sufficiently fine to exhibit good flexibility, and can be woven into curtain and industrial fabrics. However, all glass materials are inherently brittle and their resistance to repeated flexing or rubbing is only moderate. The big merits of glass are inertness and non-flammability.

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## Rayon: Man-Made Cellulosic Fiber

*Our thanks to Rayon/Acetate Council, Inc., New York, N. Y. and to the Shirley Institute, Didsbury (Manchester) for providing us with valuable information on man-made fibers. This text is based on their research and on their publications.*

Among the fibers produced by the rayon industry, viscose and acetate are the best known. The history of rayon began a long time ago because the highly desired lustrous fabric woven with silk was too costly. The search began for a continuous filament yarn that looked like silk but that could be produced in large quantities and at low cost.

In the mid 1800's, a Frenchman, Count Hilaire Chardonnet reasoned that, since the silkworm ate mulberry leaves, there must be some substance in the leaf that was responsible for silk formation. For 30 years he labored, dissolving mulberry leaves in many materials until finally he was granted a patent for a fiber made of cellulose. The first commercial fabrics from his plant were displayed in 1889 at the Paris exhibition and created a sensation. An artificial silk had finally been made.

A lot of research needed yet to be done because of the hazards of the manufacture and the flammability of the fabric. The acetate and the viscose processes of transforming cellulose into fiber are, today, the most commonly used.

In the acetate process the cellulose pulp is treated with chemicals in order to make a product that is soluble in acetone. When the dope is spun into warm air, the acetone evaporates and a thread of cellulose acetate is produced.

The production sequence of standard viscose fiber is as follows:

1. Sheets of cellulose in the form of purified wood pulp are steeped in caustic soda solution and then pressed to remove the excess and ground into 'crumbs'. The crumbs are allowed to stand for a time during which 'aging' occurs; the very long cellulose molecules are thus reduced in length to allow a satisfactory spinning solution to be prepared later.

2. The product, 'alkali cellulose', is churned with the liquid carbon disulfide to form a soluble derivative of cellulose, cellulose xanthate. The crumbs turn orange in color and are then dissolved in a second caustic soda solution forming the syrupy liquid 'viscose'.

3. The viscose is allowed to stand for a controlled time to 'ripen': the chemical and physical character of the solution changes slowly with time until an optimum spinning condition is reached. Meanwhile it is subjected to vacuum to remove gas bubbles and filtered.

4. The viscose is extruded at a measured rate through the holes of spinnerets that are immersed in a bath containing water, sulphuric acid, and salts. The emerging filaments are coagulated and chemically changed (or 'regenerated') back to cellulose. They are drawn from the bath at a controlled rate that involves some stretch, and collected.

4. Either continuously or in batches, the fibers are washed free of coagulating bath chemicals, are treated with further chemicals, and are finally washed, lightly oiled, and dried.

Up to 1924 the product of all cellulosic fiber processes was simply called artificial silk. At that time, its new name 'rayon' was given by Kenneth Lord. "It conveyed the meaning of the radiance of bright sunshine tempered with the soft glimmer of rippling water in the moonlight".

In its final form rayon may be either continuous filament yarn or cut staple. The filament yarn simulates silk while yarn from staple fiber replaces natural fibers such as cotton and wool. Staple fiber is used extensively in blends with natural or synthetic fibers.

Rayon had its most glamorous market after World War I when it was used for apparel, interior fabrics and in the industry (tire cords). However, after World War II both viscose and acetate were overshadowed by the surge of petroleum based fibers (synthetics).

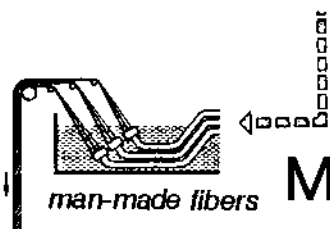
Lately the rayon industry has been researching and marketing high performance fiber that should dispel the prejudices stemming back from the days when rayon was thought of as a cheap imitation of other natural fibers. These new rayons (high wet modulus rayon) can be crimped and can be resinated for wash-and-wear properties with better shape retention than cotton.

Rayon, when combined with cotton, produces a fabric with improved strength and aesthetic quality. In blends with polyester, rayon improves the comfort of the fabric because rayon absorbs moisture well and softens the harsh polyester fibers. Rayon and polyester produces a wool-like fabric.

Regular rayon has special success in its uses as non-wovens: Sanitary and hospital uses, surgical gauze and as carrier for fabric softness like *Bounce* sheets.

Today rayon is regarded as a promising fiber for the future. The reasons for this include:

1. Rayon is the only man-made fiber with a high moisture uptake. Consumers find other man-made fibers uncomfortable and are reluctant to wear fabrics that do not absorb moisture.
2. Rayon is made of trees which are a renewable resource. Trees can be grown on marginal land not suited for growing food. New trees require only 10 to 20 years to be ready for harvest, while it takes millions of years to produce the fossil fuels needed to make other synthetic fibers.
3. Rayon is an ecologically desirable fiber because it is biodegradable. Because it is cellulose, the material of plant life, it is a natural fiber and easily handled by the environment when it decomposes.
4. The chemicals needed to make rayon, -- sulfur compounds, caustic soda and salts -- are in ample supply while petrochemicals needed for other man-made fibers are becoming scarce.

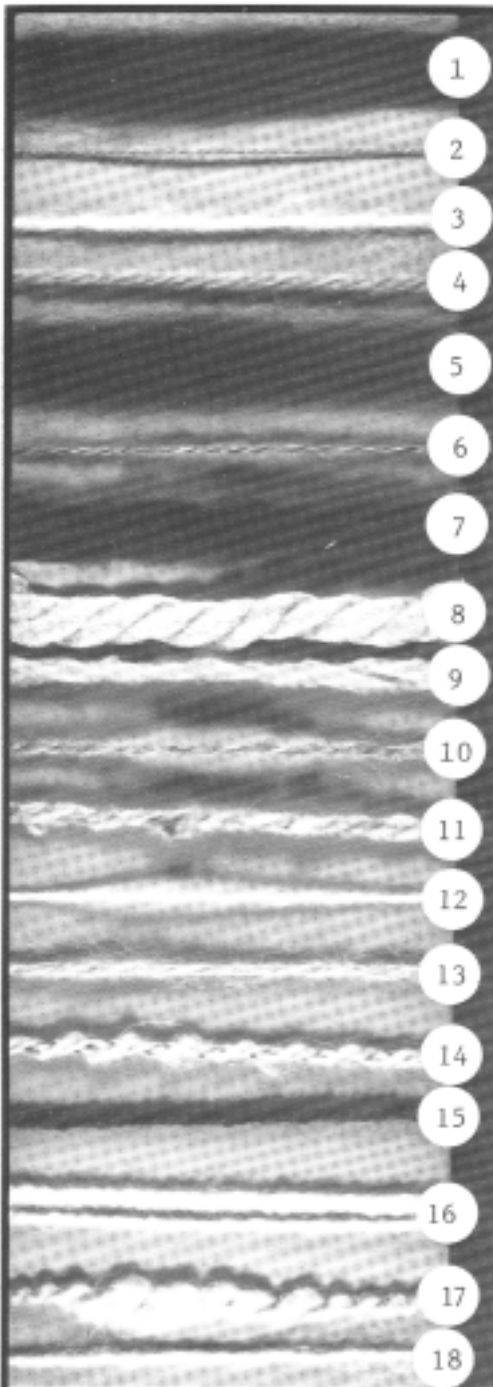


## Man-Made Fibers for the Handweaver

We have been planning to feature man-made fibers in this issue for over a year. During that time we have had quite a bit of correspondence with weavers raising questions about the use, the desirability and the availability of these yarns.

Some, very appealing synthetic fibers and blends are available to the handweaver. Acrylic-mohair and acrylic-wool blends are often very soft and are designed primarily for the hand knitter. Rayon (viscose and

acetate) is available in many textures and in an abundance of colors from most weaving suppliers. Filament rayon is very lustrous, smooth and silk-like; typical examples are the "Molino Floss" and Artisan from Folklorico. Modern spinning technique can produce interesting textured rayons from staple fiber. Through the process of plying the mills provide us with very exciting knobby yarns and luxurious "fancies" in which rayon is combined with wool and/or mohair. Staple rayon is also blended

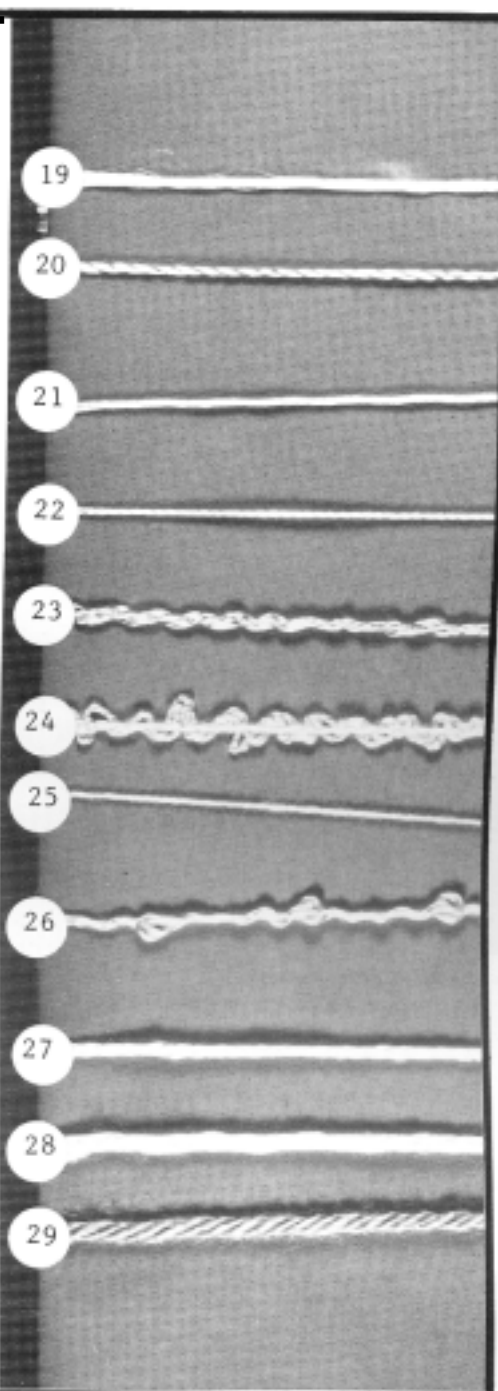


- 1 I.W. 100% Acrylic Top  
12 shades, 25 yards/lb., \$6.90/lb.
- 2 D.D.H. 10/2 Polyester  
17 shades, 4000 yards/lb. A good substitute for cotton, resists wrinkling and abrasion, excellent wash and wear characteristics, low shrinkage.
- 3 L.B. Molaine 100% Acrylic  
15 shades, 3-ply angora-look yarn, machine wash, dry.
- 4 L.B. 100% duPont Sayelle (Orlon Acrylic)  
4 ply knitting worsted weight machine washable, dryable. Solid colors, ombre, tweed look. Lyon Brand yarns makes available a large variety of acrylic yarns in several weights and textures, acrylic blends and other synthetic yarns, mostly for the handknitter.
- 5 R.E. Acrylic roving Broad spectrum of colors.
- 6 W.Store Brushed Acrylic  
13 shades, 2500 yards/lb. Combines well with natural fibers, has excellent wash and wear qualities. \$6.00/lb. Send SASE for samples.
- 7 W.M. Super Cord 20 shades \$5.50/100yard roll.
- 8 W.M. Superlon 'G' polypropelene  
23 shades \$7.50/100 yard skein.
- 9 W.M. Moonglow Polyester blend  
20 shades \$4.99/400 yard rool.
- 10 W.M. Luxair yarn 22%wool,48% acrylic, 30% polyester  
6 shades \$2.75/100 gram.
- 11 W.M. Earthspun Polyester blend  
16 shades \$1.20/100 yard roll.
- 12 W.M. Alternative I 70% Verel, 30% Viscose  
20 colors. 5/2 c.c. (2,100 yds./lb. \$6.25/1 lb. cone.
- 13 W.M. Alternative II 70% Verel, 30% Viscose  
18 colors, 2/2 c.c. (800 yds./lb.) \$6.25/1 lb. cone.
- 14 W.Shop 77% Acrylic, 10% Mohair, 13% Wool  
4 shades \$2.25/50 gram.
- 15 W. Shop 70% Acrylic, 30% Alpaca 4 shades \$2.99/50 gm.
- 16 W.Shop 85% Acrylic, 15% Wool  
Multi-color assortment \$1.60/50 gram, 8 straight colors \$1.95/50 gram.
- 17 W. Shop 74% Acrylic, 21% Wool, 5% Viscose \$2.25/50 gm.
- 18 W. Shop 80% Acrylic, 16% Mohair, 4% Wool  
11 shades \$2.25/40 gram.

Tell these suppliers  
that you saw it in  
*The Weaver's Journal.*



- 19 F. El Molino Floss, Rayon  
7-strand rayon yarn made in Spain, 39 colors, 115 yards per 25 gram tube, \$1.40 per tube. El Molino color card \$1.00.
- 20 F. Artisan 2-ply perle, Rayon  
Heavy rayon yarn in 66 colors. 118-yard skeins or 236-yard tubes, skein \$2.98. Artisan color card \$2.00.
- 21 F. Artisan "Globe" Floss, Acetate  
Silk-like 8 strand acetate embroidery floss, 66 colors. 26-foot skeins, 30¢. Artisan color card \$2.00.
- 22 F. Artisan 3-ply yarn, Acetate  
Acetate yarn for crochet, knitting machines, weaving, embroidery, 66 colors. 245-yard skeins or 490-yard tubes, skein \$2.98, tube \$6.75. Artisan color card \$2.00.
- 23 S.W.M. Camelot II, Rayon  
9 colors, 800 yards per pound, ½ or 1 lb. cones.
- 24 S.W.M. Milan Loop, Rayon  
12 colors, 760 yards per pound, ½ or 1 lb. cones.
- 25 S.W.M. Milan 16/2, Rayon  
12 colors, 3,040 yards per pound, ½ or 1 lb. cones.
- 26 S.G. Boucle, Rayon  
White, 2 pound cone, \$14.40 (\$7.20/lb.) sample, SASE.
- 27 S.G. Fine Cord, Rayon  
White, 4 pound cone, \$20.48 (\$5.12/lb.) sample, SASE.
- 28 S.G. Heavy Cord, Rayon  
White, 2 pound cone, \$11.20 (\$5.60/lb.) sample, SASE.
- 29 W. Shop 4-ply, Rayon  
22 colors, 100 yards per 2 ounces, 85¢.



**SUPPLIERS:**

D.D.H. Daft Dames Handicraft, 13384 Main Rd.,  
Rt. 5, Akron, NY 14001.

F. Folklorico, P.O. Box 625, Palo Alto, CA 94302.

I.W. Ironstone Warehouse, 2 South Main St.,  
Uxbridge, MA 01569.

L.B. Lion Brand Yarns, 1270 Broadway, New York,  
NY 1001. No retail orders.

M. The Mannings, Creative Crafts, Rd. 2 East  
Berlin, PA 17316.

R.E. Raye's Eclectic Craft Yarns, Inc., 8157  
Commercial St., LaMesa, CA 92041. No retail orders.

S.W.M. Scott's Woolen Mill, Hecla St. and Elmdale  
Rd., Uxbridge, MA 01569.

S.G. Straw Into Gold, 5533 College Ave., Oakland,  
CA 94618.

W. Shop The Weaver's Shop, 39 Courtland St., P.O.  
Box 457, Rockford, MI 49341.

W. Store The Weaver's Store, 110 North 110th St.,  
Columbia, MO 65201.

W.W. Weaver's Way, 306 E. Goldsboro St., Crown  
Point, IN 46307.

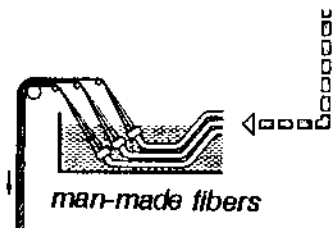
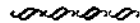
W.M. Woolzee Mills, P.O. Box 1350 Sanford, NC  
27330, also Creative Matter, P.O. Box 1467, Sanford,  
NC 27330.



with natural fibers before the spinning process, as in "Linnay" from Scotts Woolen Mills. Rayon is often used by the handweaver for its sparkle and for its color. Once woven into a fabric it adds to its handle and its drapability. Also, the handweaver can obtain very good blends that were designed for the industry from millend suppliers and knitting-machine outlets. Be careful though, because many mill ends come from the rug industry and those are harsh yarns with poor colors

and inferior tactile qualities.

The Weaver's Journal has contacted many suppliers and mills to find out which man-made yarns they carry "in stock". The charts that have been compiled with the sample yarns that were sent to us should be a helpful guide for the handweaver. In this issue there are descriptions of some very successful projects using man-made fibers.



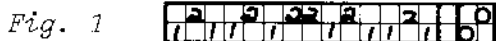
## Fringe Using a Gold Knubby Rayon

by Marion Everett

- WARP: Gold Lily Weaving Wool (Lily Mills), 14 strands, 2 strands of heavy cord such as 6 ply twine.
- WEFT: Gold rayon knubby yarn. One shuttle wound single, one shuttle wound triple.
- SETT: 24 epi (100/10 cm) in a 12 dent (50/10 cm) reed.

The two heavy cords are spaced 1" (25 mm) from the warp threads of the tape.

THREADING AND TIE-UP: Basketweave, see Fig. 1.



The two heavy cords are floating; they go through the reed only.

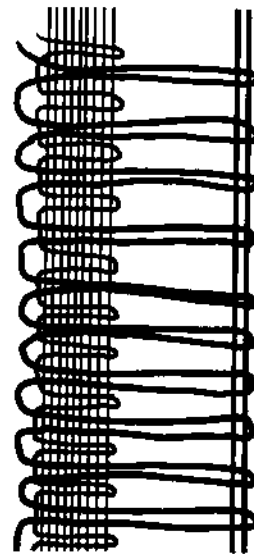
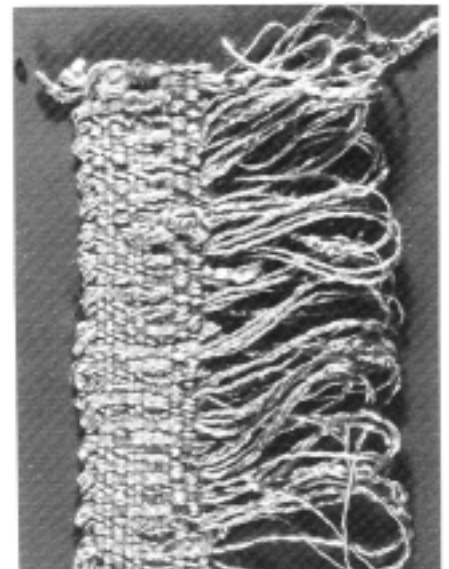
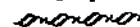


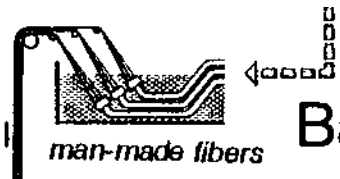
Fig. 2



TREADLING: Treadle tabby throughout; 2 picks with single rayon, two picks with triple. The single shuttle weaves the tape only, the triple shuttle goes around the heavy cords. These cords will be removed later.

Note: The heavy cords wind somewhat unevenly on the back beam and will not have enough tension to retain the loops of the fringe. Therefore, they are hung over the breast beam and weighted with 4 oz. (113 g.) fishing weights on a large paper clip. As the fringe is made, these cords are cut and drawn out of the loops, re-knotted, and weights put back on. The fringe rolls on the cloth beam with paper in between.





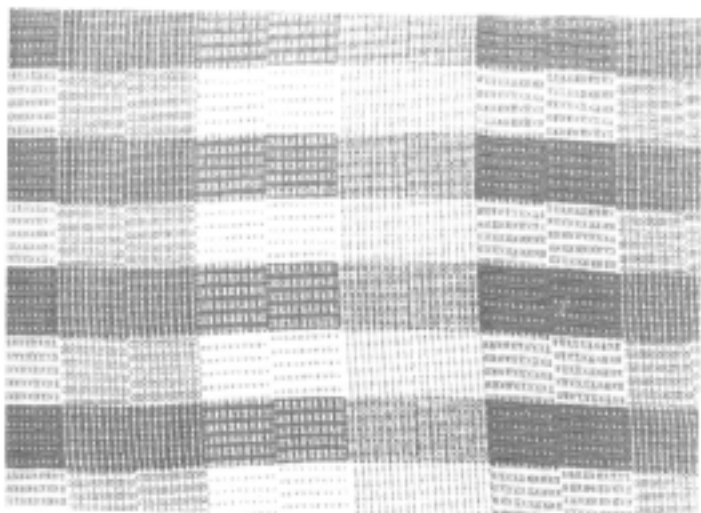
# Baby Blankets

Alternative I (5/2), (see product review p. 30) was tested at *The Weaver's Journal* studio by weaving three baby blankets. We were pleased with the result. The blankets are pleasing in color, are soft (after two washings), are machine washable and dryable and above all are not flammable.

Allow about 1½ lbs. of yarn for each blanket.



## BLANKET ON SUMMER AND WINTER THREADING



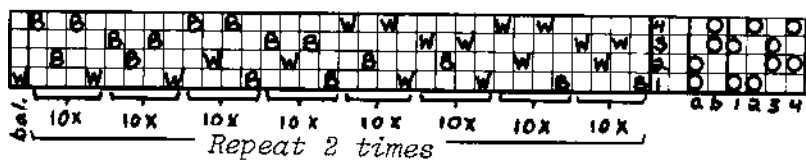
WARP: Alternative I, white (W) and azure blue (B).

WEFT: Same as warp.

SETT: 16 epi (64/10 cm).

WIDTH IN THE REED: 40" (100 cm).

THREADING, TIE-UP AND WARP ORDER:



TREADLING AND WEFT ORDER: P: stands for pattern weft which is Alternative I used twofold, PB is azure blue, PW is white.

T: Stands for tabby weft which is Alternative I used single, TB is azure blue, TW is white.

1+3	weave PB	Repeat 5 times	2+3	weave PW	Repeat 5 times
1+2	weave TB		1+2	weave TW	
1+4	weave PB		2+4	weave PW	
3+4	weave TB		3+4	weave TW	
1+4	weave PB		2+4	weave PW	
1+2	weave TB		1+2	weave TW	
1+3	weave PB		2+3	weave PW	
3+4	weave TB		3+4	weave TW	

SIZE OFF THE LOOM: 38 3/4" x 40 1/2"  
(99 x 103 cm).

SIZE AFTER MACHINE WASHING AND DRYING:  
37 1/2" x 39 1/4" (95 x 100 cm).

Finish with two rows of machine stitching and a single crochet edge (#3 hook).

A second blanket was woven with an all white mohair/orlon blend weft. This yarn gives the fabric a softer hand.



#### PLAID BABY BLANKET WOVEN IN A 2/2 TWILL

WARP: White (W) and azure blue (B)  
Alternative I (Weaver's Way) warp  
order:

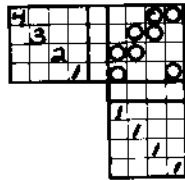
15B; \*6W-6B-6W-6B-6W; 8B; (W-B)  
X 15; W; 8B; (W-B) X 15; 8B\*  
repeat between \*'s 5 times;  
6W-6B-6W-6B-6W; 15B, for a  
total of 640 ends.

WEFT: Same as warp and woven in the same  
order, repeating the main sequence  
as often as is needed.

SETT: 16 epi (64/10 cm).

WIDTH IN THE REED: 40" (100 cm).

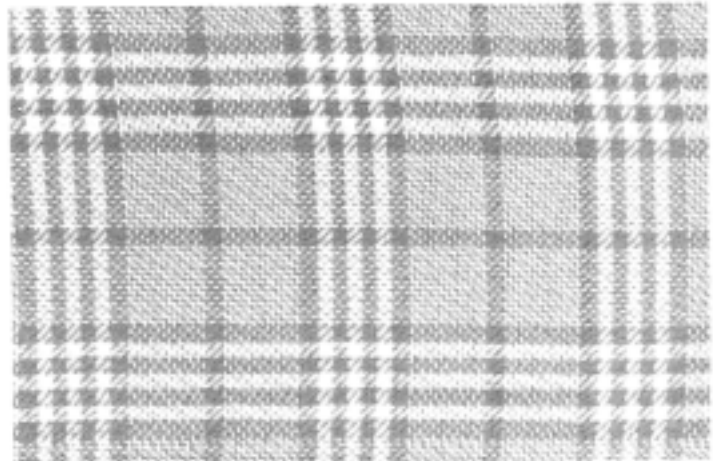
THREADING, TIE-UP AND TREADLING:



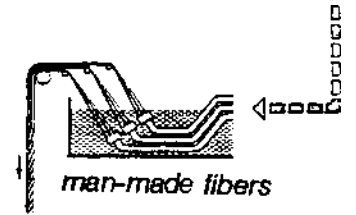
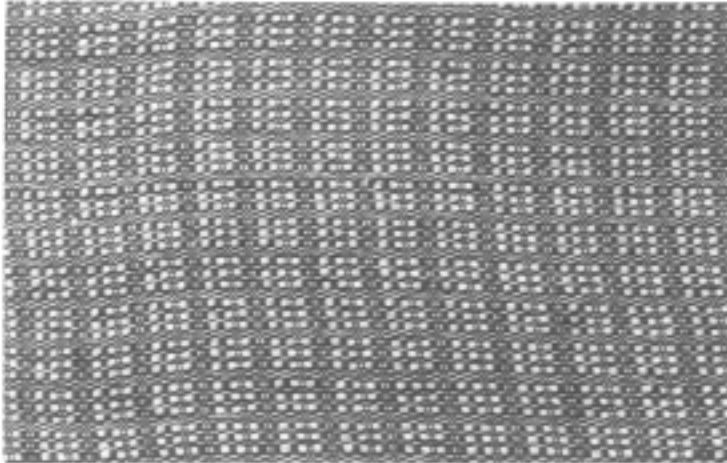
SIZE OF THE BLANKET OFF THE LOOM: 38" x  
45 1/2" (97 x 115 cm).

SIZE AFTER MACHINE WASHING AND DRYING:  
37" x 44" (94 x 112 cm).

Finish with two rows of *machine stitching*  
and a single crochet edge (#3 hook).



BLANKET WOVEN IN BASKET WEAVE



## Table Runner

This successful project, using Alternative I and a natural fiber was designed and woven by Rhoda Whitney.

WARP: Alternative I, azure blue.

WEFT: Alternative I, white.

SETT: 18 epi ( 70/10 cm), sleyed 1-2 in a 12 dent reed, for a total of 709 ends.

WIDTH IN THE REED: 39 3/4" (100 cm).

THREADING AND TIE-UP:



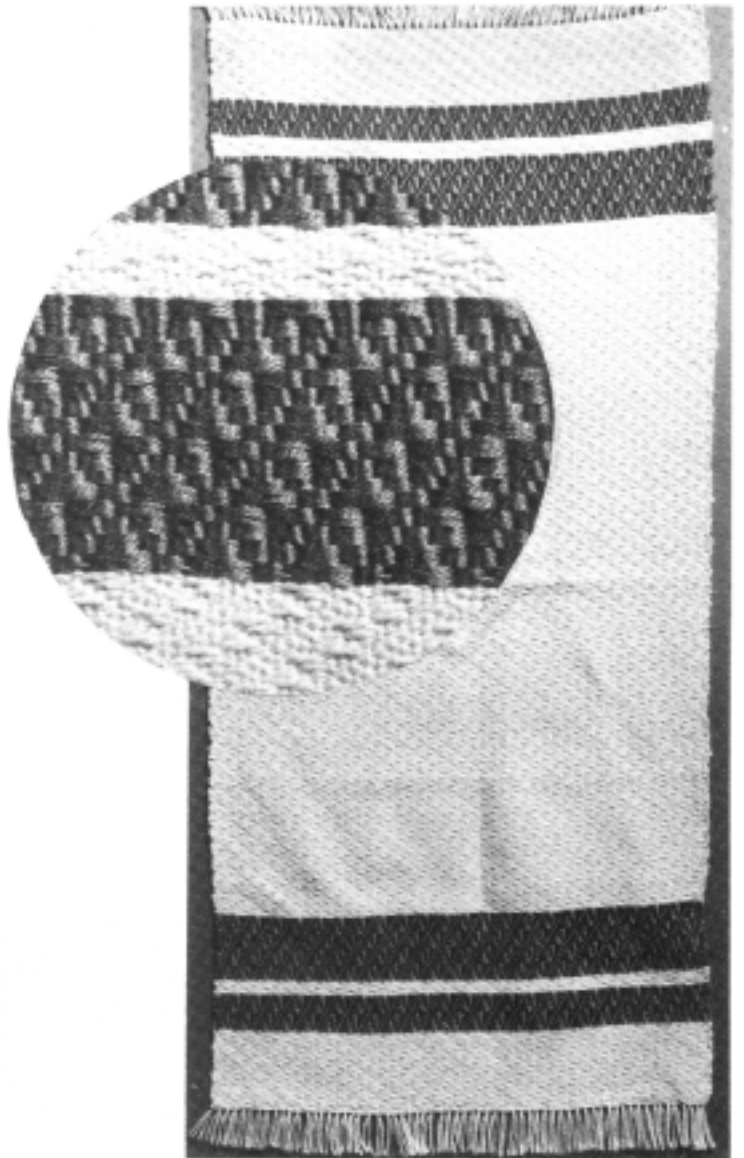
TREADLING: 1 (4X); 2; 1 (4X); 2; 1 (4X); 2; 1; 2, repeat.

SIZE OFF THE LOOM:

38" (96 cm) X 48" (122 cm).

SIZE AFTER MACHINE WASHING:

35" (89 cm) X 44" (112 cm) + fringe.



*Whitney*

WARP: Alternative I, white.

WEFT (Section 1):

Pattern weft: Alternative I, white

Tabby weft: 20/2 cotton, white

WEFT (Section 2):

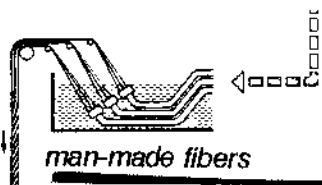
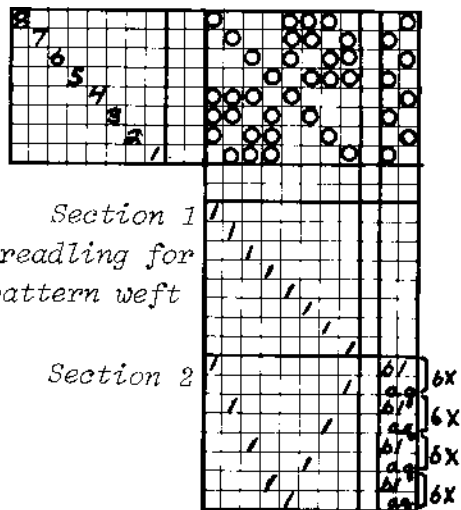
Pattern weft: 20/2 cotton, blue and aqua.

SETT: 12 epi (50/10 cm).

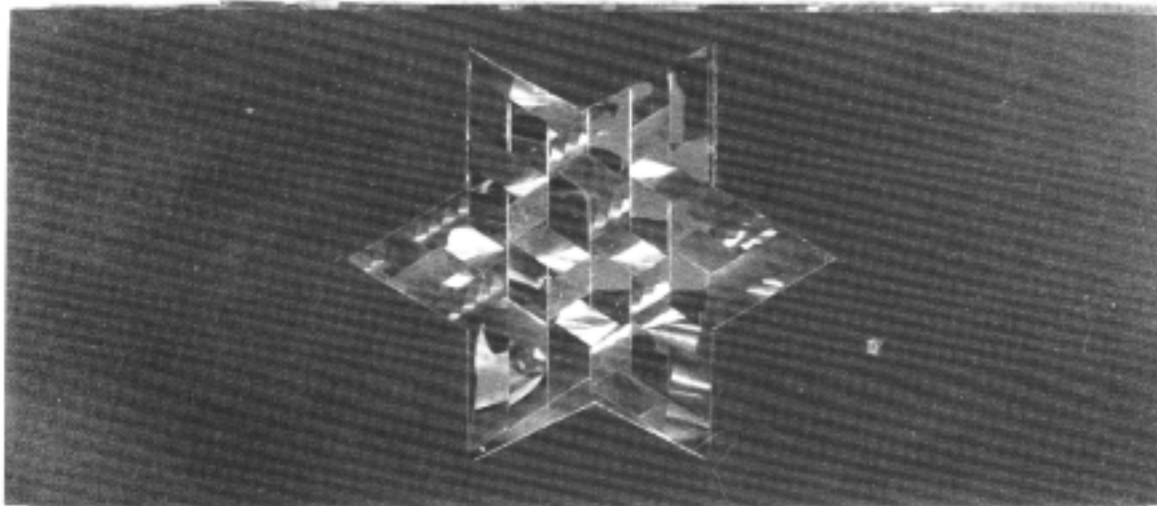
THREADING, TIE-UP AND TREADLING:

Section 1 - Alternate a tabby and a pattern pick.

Section 2 is treadled on opposites.



# Season's Greetings



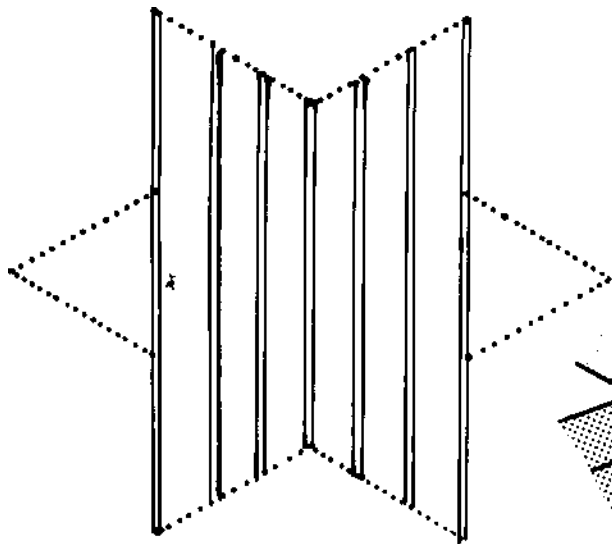


Fig. 1

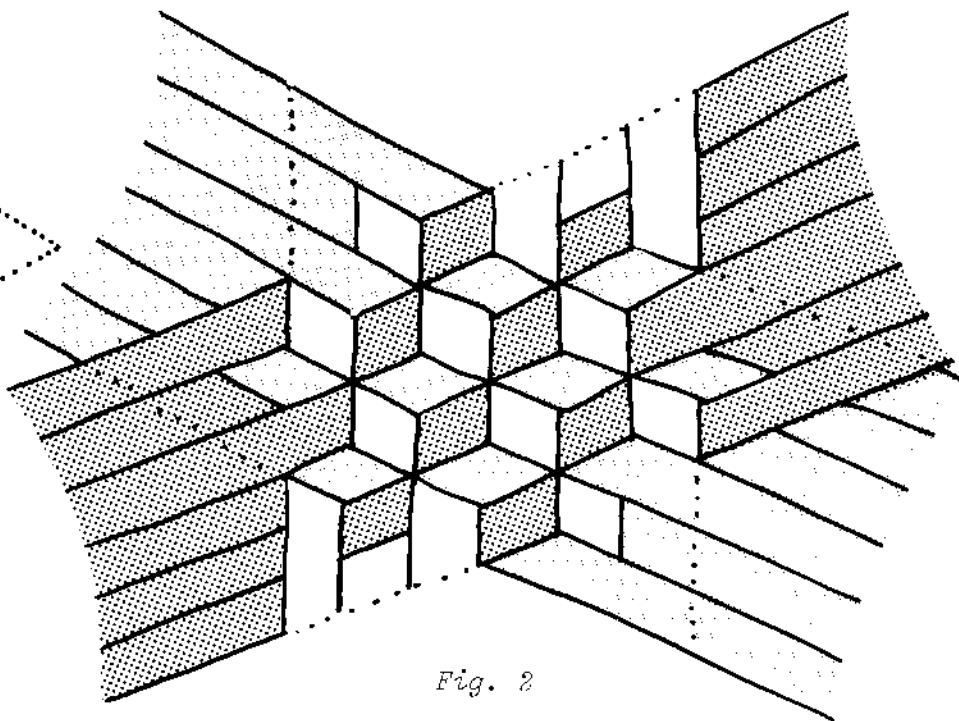


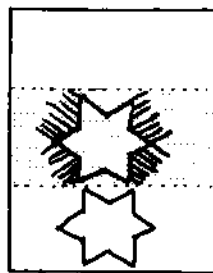
Fig. 2

By doing some research on innovative use of synthetics we came upon the idea of a special plaiting project with Mylar. Mylar comes in sheets which are available at art supply stores and in the form of tape.\* For plaiting we chose the "mad weave" which is frequently used by the Philippines to make baskets and which forms interesting *star* patterns. This is the way that the idea for our 1980 Christmas card came about.

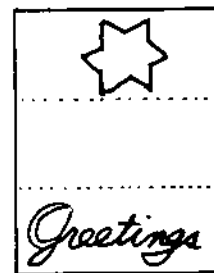
Weave the 6 lengths of gold tape through the slits following the diagram of Fig. 2 carefully. Next weave the 6 lengths of silver tape. Secure the ribbons with glue or tape. Trim them evenly.

Materials needed for each card:

- 1 sheet 60 lb. (30 kg) paper, white, 8½" x 11" (21 x 28 cm).
- 1 piece silver Mylar, 8½" x 3½" (21 x 9 cm).
- 12' (360 cm) Mylar tape (six 1' (30 cm) of gold, six 1' lengths of silver). One can purchase tape which is gold on one side and silver on the other.



a inside



b outside

Fig. 3

Equipment needed:

Exacto knife, metal edged ruler, glue or adhesive tape, tracing paper.

Procedure:

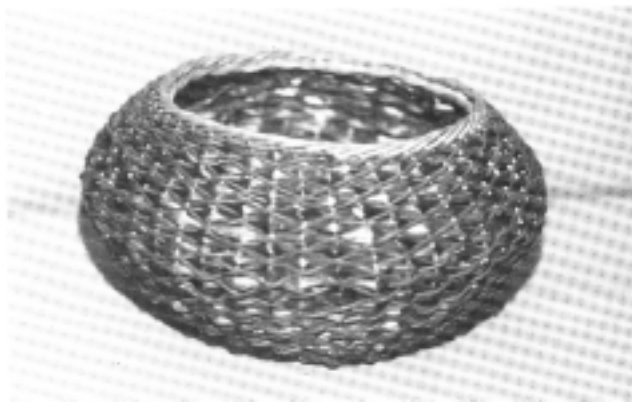
Transfer the slit pattern of Fig. 1 to the tracing paper. Center the design on the Mylar and cut through the tracing paper and the mylar along slit-lines.

Adhere the Mylar to the middle third section of the paper sheet. Fold the sheet in thirds and cut out a star stencil which matches the star produced by the mad-weave. See Fig. 3a. Print a greeting message on the outside of the card. Greetings!

\*Our tape was purchased from Technology Fiber, Box 447, Newton, MA 03158.







# Project Shared by Guild Members: *Day Lily Basket*

Sheila Benedis of the Westchester Handweaver's Guild in New York, makes baskets with *day lily stems* and reed. Here are her instructions on how to make the basket shown here which is 9.5" (24 cm) in diameter and 5" (12.7 cm) high.

### Materials needed:

- Spokes - #3 round reed
  - 12 spokes 28" (71 cm) long
  - 1 spoke 14" (35.5 cm) long
  - 12 spokes 13" (33 cm) long
- Weavers - #2 round reed dyed with red maple bark
- Day lily stems, dried

### Procedure:

Soak reed and day lily stems in water

Cross the 12 28" long spokes in four groups of three. See Fig. 1.

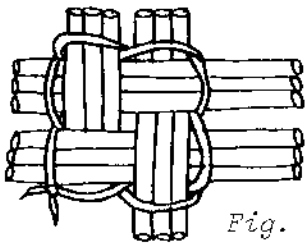


Fig. 1

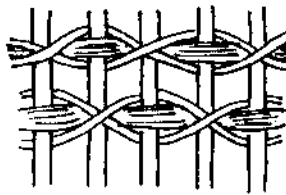


Fig. 2

Lash the base by twining around the groups of 3 reeds two times. At this point, insert one end of the 14" long #3 reed between 2 of the spokes. There are now 25 spokes.

Spread the spoke reeds slightly apart and rand (weave with one weaver) the base with #2 reed, until base is 4" (10.2 cm) in diameter.

Insert 12 spokes (#3 reed, 13" long), evenly spaced around the base. There are now 37 spokes.

Twine around single spokes for 2 rows to spread out the 37 spokes evenly.

Turn the spokes up to start the sides of the basket. Shape the basket while working the "diamond" pattern.

The "diamond" pattern is worked with two #2 reeds and one day lily stem. Start with spoke 1 and bring the day lily stem in front of the spoke and the reeds behind it. Next, go to spoke 2 and bring the day lily stem behind the spoke and the reeds in front of it, crossing the reeds. See Fig. 2.

Continue around the basket, making sure that the day lily stem stays between the reed weavers.

Shape the basket carefully, adding new weavers by overlapping 1" to 2" (2.5 to 5 cm) each time.

The rim of the basket is a double rolled border achieved by twining 3 strands, each one going in front of 2 and behind 1 spoke. See Fig. 3. This row is repeated twice.

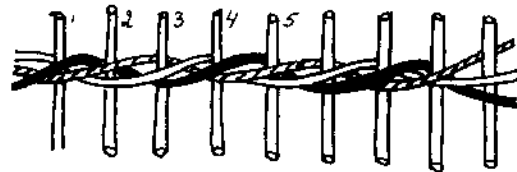


Fig. 3

To finish the ends, weave spoke 1 back along spoke 4; spoke 2 along spoke 5, etc. See Fig. 4.

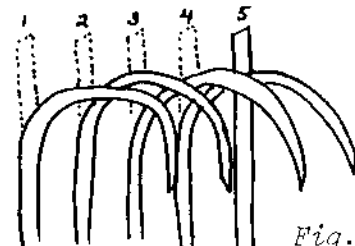


Fig. 4



# Wedge Weave: A New Approach

by Carol Rasmussen Noble    Photos by Donald C. Noble

My interest in wedge weave grew out of my work in weft-faced techniques. I was especially attracted by "the sense of agitation inherent in wedge-weave style,"<sup>1</sup> and by "the very close connection between the method of weaving and the design produced."<sup>2</sup>

I began to seek ways to introduce more movement into the patterns, in the sense of flow as a complement to vibration, while not deviating from the basic principle of technique-controlled design. After some experimenting, I have developed a method based on mathematical computation for curving the linear zig-zags that result from the oblique-weft technique.

Wedge weave appeared in Navajo weaving in the 1880's and 1890's, but has been little used since. To weave traditional wedge weave, begin at the right selvedge. After some picks of plain weave, weave only the two warp threads on the right edge. The next row across pick up another warp thread to the left of the first two.

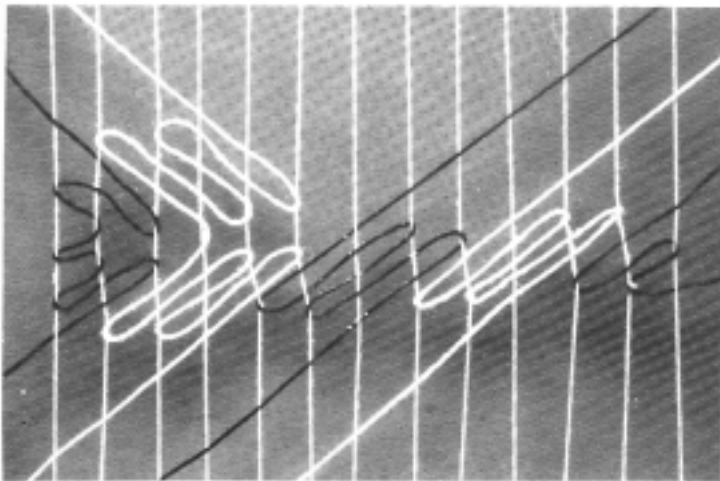


Plate 1

Progress by increasing one warp thread to the left with each weft row. Keep the selvedge as the right-hand edge of the weaving. When a triangle of the desired size is built up, leave the weft hanging free at the top corner and beat the fell of the weaving, which lies diagonal to the warp, with a tapestry beater. The angle will vary depending on the warp and weft used. I set my rugs at 6 ends per inch (25/10 cm) and use a 2-ply tapestry or singles Hargarn wool as weft. With a firm beat, I get an angle of 15 degrees.

For the adjacent diagonal stripes in the design, weave from the lower to the upper corner and down again, until the same number of warp threads have been woven as were woven in the initial triangle, always leaving the weft hanging free at the upper corner to use in the next row of wedges. The row of wedges is finished off with a triangle woven just as the initial one, but coming to a point at the upper left instead of the lower right corner (Fig. 1). The next row of wedges is woven in the same way, except that the fell of the weaving is angled in the opposite direction. Plate 1 illustrates the basic technique. You can see a hint of the warp distortion caused by the oblique weft that gives wedge weave both its characteristic scalloped selvedges and its other name: pulled-warp weave.

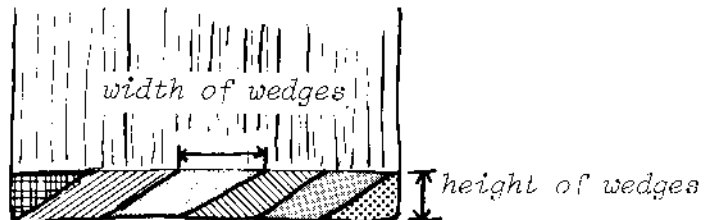


Fig. 1 First row of wedges

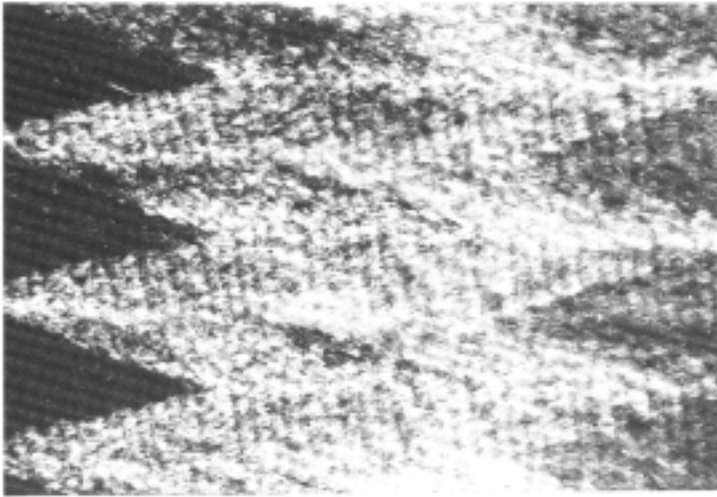


Plate 2

Plate 2 shows a close-up of traditional wedge weave. Plates 3 and 4 show, respectively, a full view and close-up of a rug I wove in adaptation of the standard

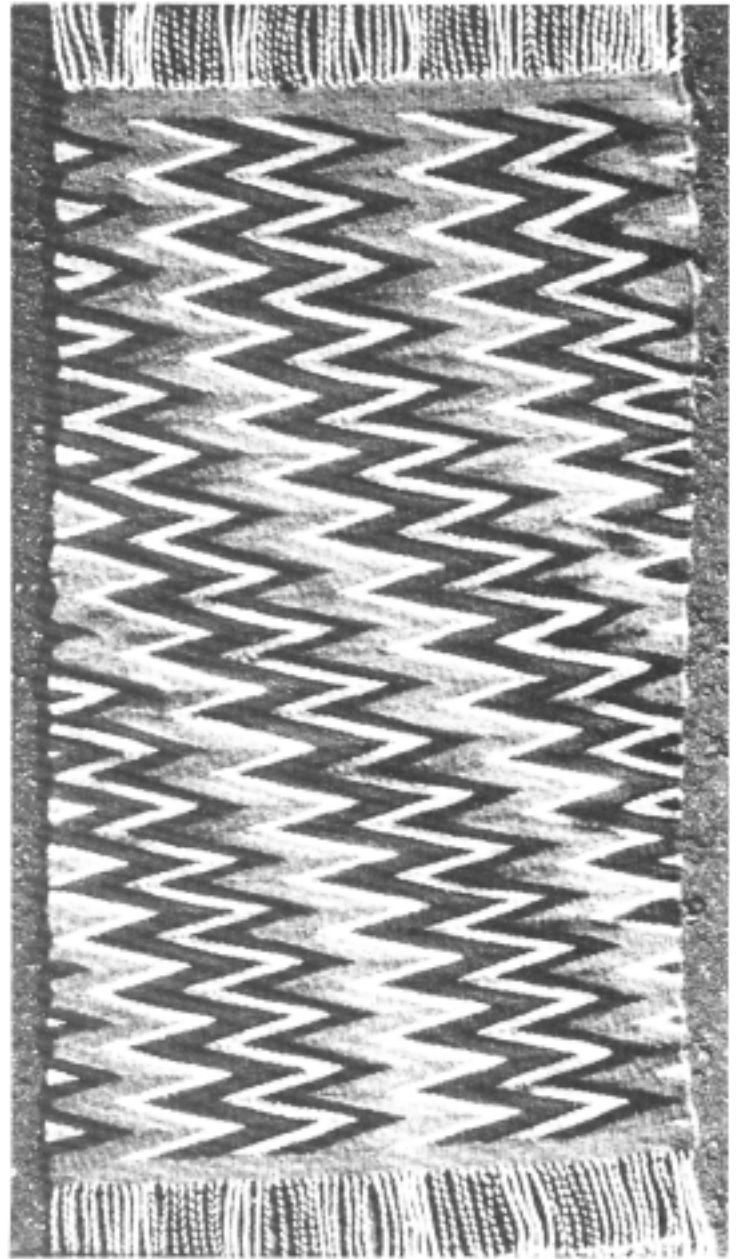


Plate 3 - Wedge weaving rug by Carol Rasmussen Noble



Plate 4 - Detail of plate 3

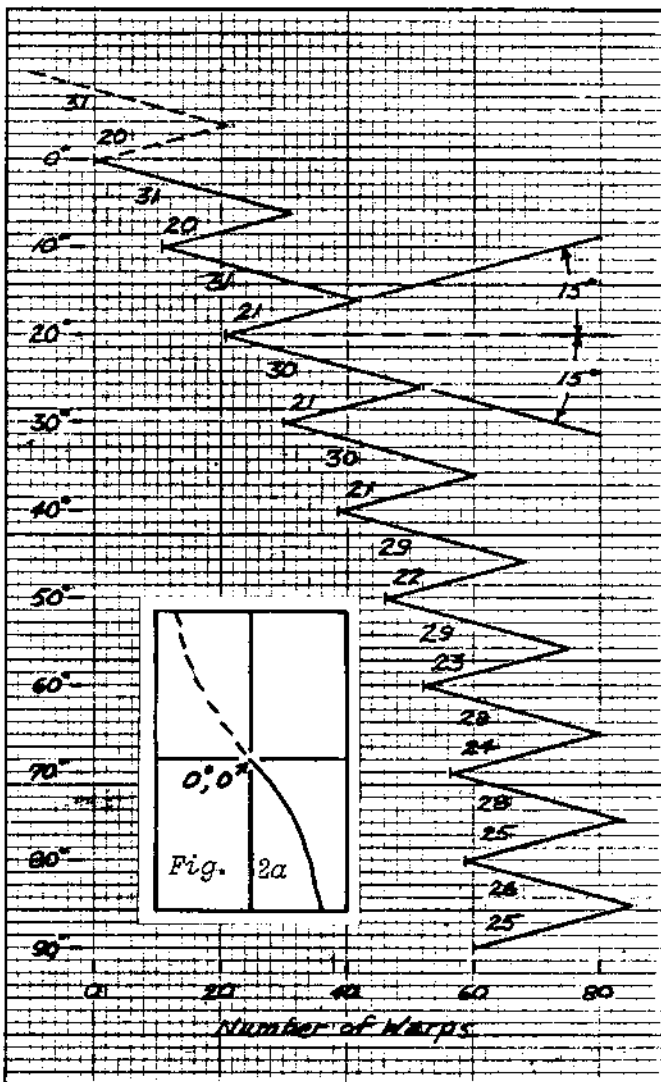


Fig. 2

wedge-weave structure in which the points of the zig-zag follow a mathematical curve. I used 10 square/inch graph paper, and, with the help of my husband and his pocket calculator, plotted a sine curve at 5 degree intervals from 0° to 90°, spanning half the width of the rug, each sine value being multiplied by 60 (one-half the total warp ends) to get this particular curve. See lower right quadrant of Fig. 2. Next, I drew horizontal lines intersecting the curve at 10 degree intervals as shown in Fig. 2. Then to one side of the curve, I used a protractor to draw lines at 15 degree angles from each straight line, both above and below the intersection point of each horizontal with the curve. These sets of diagonal lines intersect to form a diagram of the wedges. Then, reading along the horizontal side of the graph, I simply counted the number of warp ends covered by each diagonal line. This graph, shown in Fig. 2, represents the lower right quadrant of the finished rug surface. The 0,0 point indicated by the arrow on Fig. 2a is the rug's exact center point, through which the graphed curve connecting the two opposite corners passes. To complete this central curve in the opposite quadrant (see Fig. 2a), the graph is read in reverse, wedge by wedge. For example, the wedge directly above the 20,31 wedge of the graphed curve is another 20,31 wedge, the wedge directly above the second 20,31 wedge is a 21,31 wedge, and so on. Weaving begins at the lower right of the rug as indicated in Fig. 2a.

Lateral movement is thus introduced into wedge weave by varying the width of the diagonal stripes from one row of wedges to the next. The numbers shown on the diagonal lines in the graph indicate the number of warp threads covered by one weft shot in each full stripe in that particular row of wedges. In this way, the number of warp threads covered by the weft becomes a measurement of wedge height, whereas the number of weft shots in the stripe is equivalent to wedge width. Obviously, compensation is necessary at the edges of the rows where not enough warp threads may be left for a full-size triangle of a single color. To compensate, weave polygons such as shown in Fig. 3 a,b,c, which are sections of the diagonal stripe in Fig. 3d. Weave as many as required on the warp width count, until

a full length weft shot covering the number of warps indicated for wedge height is woven; then progress normally across the row. The net effect of movement is produced by the succession of wedge rows of different heights.

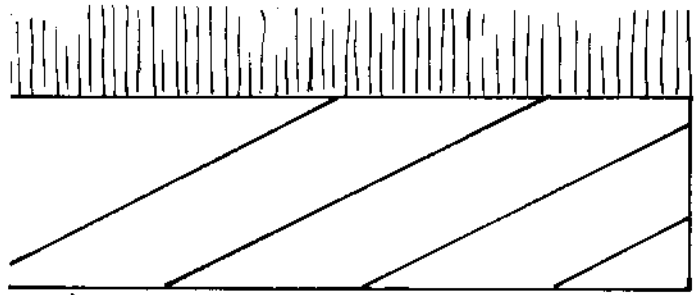


Fig. 3

This particular sine curve is just one of the innumerable mathematical and free-hand designs that could be translated into wedge weave using the basic graphing technique outlined here; or one could experiment row by row at the loom. In either case, the weaving will not only zig-zag, but flow.

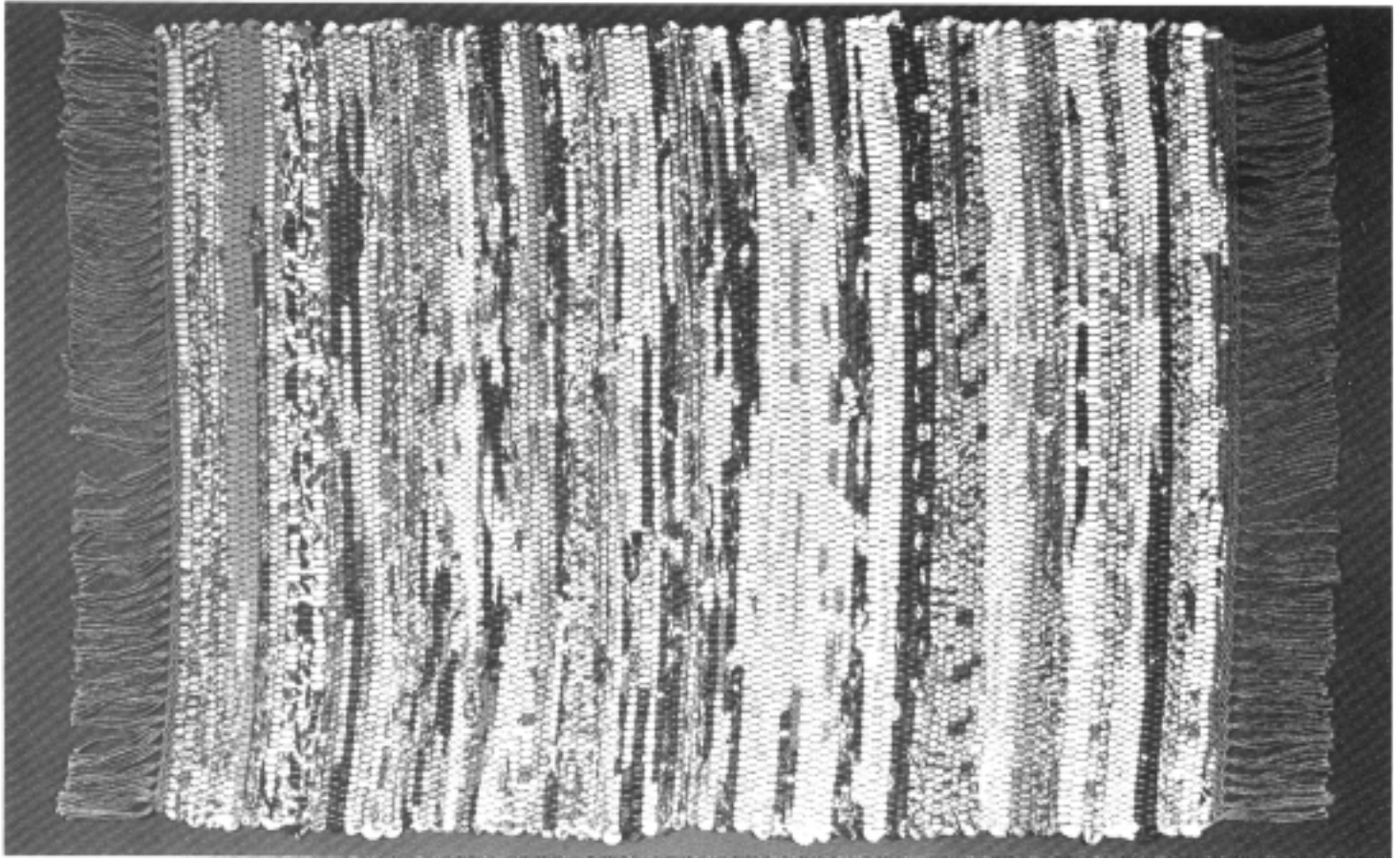
#### Footnotes

- 1 Kahlenberg, Mary Hunt, and Berlant, Anthony, *The Navajo Blanket*. Los Angeles, Praeger Publishers, Inc. 1972, p. 93.
- 2 Collingwood, Peter, *The Techniques of Rug Weaving*. New York, Watson-Guptill Publications, Inc. 1969, p. 165.

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- Amsden, Charles Avery, *Navajo Weaving*. The Fine Arts Press, Santa Ana, CA. 1934; reprinted by Peregrine Smith Santa Barbara, CA. 1975.
- Collingwood, Peter, *The Techniques of Rug Weaving*. New York, Watson-Guptill Publications, 1969.
- Kahlenberg, Mary Hunt, and Berlant, Anthony, *The Navajo Blanket*. Los Angeles, Praeger Publishers, Inc. 1972.
- Rodee, Mary E., *Southwestern Weaving*. Albuquerque, University of Mexico Press, 1977.

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## Four Place Mats

by Mary Unger Photos by Rob and David Unger

Every weaver seems to come up with ideas which can be developed by weaving place mats. These ideas tend to produce a variety of new possibilities. Mats often change from table decorations and become wall hangings, rugs, bags, and clothing.

This article presents four mats and their basic construction. The length and width of table mats depends upon the size of the table but an overall guide would be twelve to fourteen inches (30.5 to 35.5 cm) in width and eighteen to twenty-two inches (47 to 56 cm) in length.

Mats may be either hemmed or fringed. The fringed mats seem somewhat preferable today. Four rows of plain weave, a row of hemstitching sewed while the mat is still on the loom, and a one and one-half inch (38 mm) fringe makes for a well-finished mat. The color of the four rows of plain weave is about the same as the overall weft but of finer thread. Two and one-

half inches (63 mm) should be woven with fine thread on each end for a hemmed mat.

The first three mats are woven in plain weave and can be woven on a two harness loom. The fourth mat is woven in overshot and requires a four harness loom.

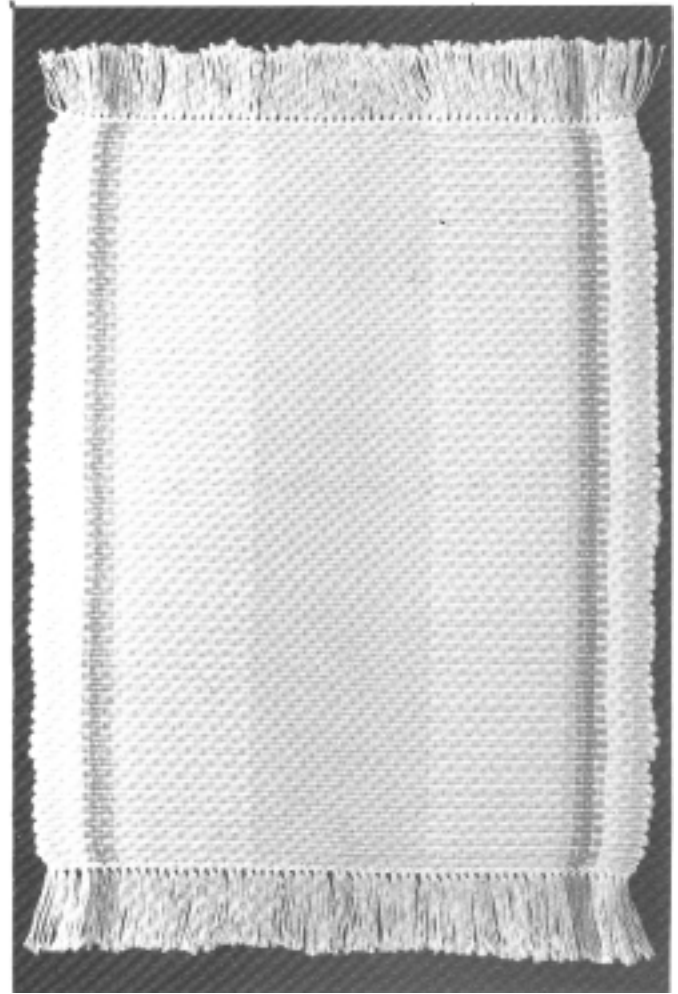
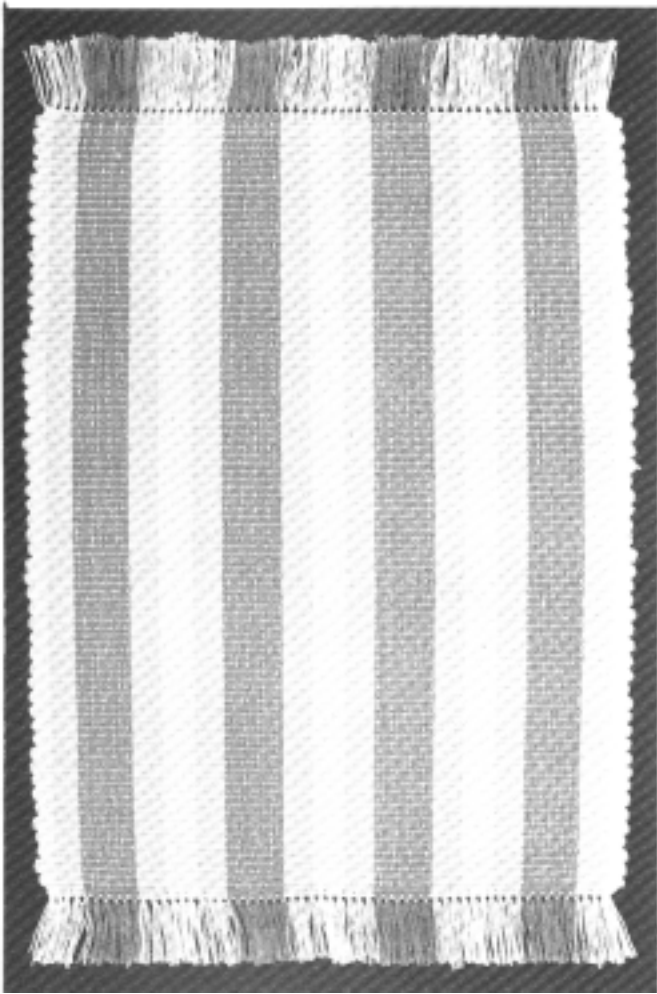
### *Rag Mats*

WARP: Lily cotton 10/3. Any color.

WEFT: Rags cut in one-quarter to one-half inch (6 to 12 mm) widths. The strips ranging in length from three inches (7.5 cm) to about a yard (91 cm) long. Single knit jersey is preferred but any material may be used.

SETT: 12 epi (50/10 cm).

THREADING AND TREADLING: Plain weave.



*Striped Mat*

WARP: Carpet warp or 10/3 cotton in three colors.

WEFT: A. heavy, soft spun cotton  
 B. carpet warp or 10/3 cotton, same color as the A weft.

SETT: 30 epi (120/10 cm), two in a dent, one in a heddle. 360 threads.

WARPING ORDER: 10 white  
 18 brown }  
 36 tan } 3x  
 18 brown }  
 20 white }  
 18 brown }  
 36 tan } The colors to be  
 18 brown } varied according  
 10 white } to table setting.

THREADING AND TREADLING: plain weave.  
 Alternate one pick of heavy weft  
 and one pick of thin weft.

*Reversible Striped Mat*

WARP: Carpet warp or 10/3 cotton

WEFT: Soft spun cotton

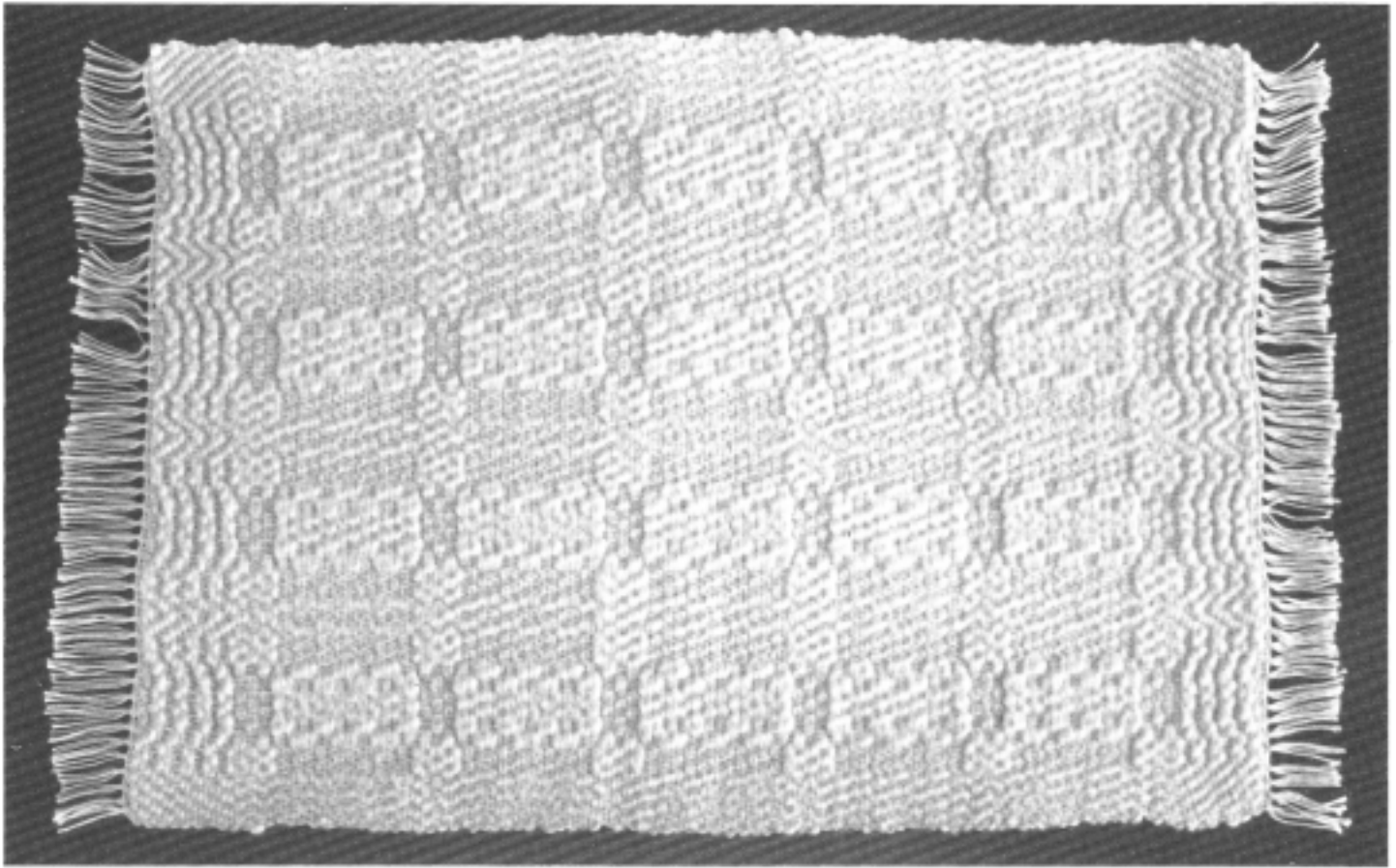
SETT: 30 (120/10 cm) epi, 2 in a dent, 1 in a heddle. 360 threads.

WARPING ORDER:

10 brown		1 white	} 40x
1 white	} 3x	1 brown	
1 brown			7 brown
10 white	} 3x	1 brown	
1 rust			1 rust
1 white	} 3x	6 rust	} 3x
6 rust			
1 rust	} 3x	1 rust	} 3x
1 brown			
6 brown	} 40x	1 brown	} 3x
1 brown			
1 white		10 brown	
100 brown			

THREADING AND TREADLING: Plain weave.





*Mat Woven in Overshot*

WARP: 10/3 cotton, off-white

WEFT: For tabby - same as warp or other thin yarn. Metallic is particularly effective.  
For pattern - soft spun cotton, off-white.

SETT: 15 epi (60/10 cm) 200 threads.

THREADING: See Fig. 1.

TREADLING: Alternate a tabby pick and a pattern pick.

Treadling sequence for the pattern picks.

14	}	4x	}	Repeat 5x	}	4x
34						
23						
12						
14	}	2x				
34						
14						
34	}	2x				
14						
34						
14	}	3x				
12						
23						
12	}	3x				
23						
12						
23	}	4x				
12						
23						
12	}	3x				
23						
12						
14	}	4x				
34						
23						
12						

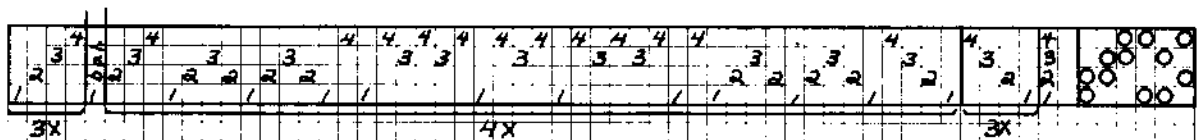


Fig. 1



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