**Countryside II**

**Multiple-Harness Looms**

- Jack-type
- Four or Eight Harnesses, Convertible
- Three Sizes: 36, 42, and 48 Inches
- Quick Action—Fast Harness Return
- Wide, Accurate Shed—Balanced Beater
- Easy to Thread—Open-Eye Heddles
- Quick-Change Wire Tie-Ups
- Easy Treading
- Heavy Canvas Aprons
- Passes thru 30-inch Doorway
- Hard Maple
- Danish Oil Finish

**Our goal ... in building the Countryside II is to provide serious weavers with a loom that will be easy to warp, easy to use, and that will help weavers get the best results from their efforts in the least time. And it should stand up for years.**

The type of loom you select and the advantages it offers can be translated into enjoyment . . . time saving . . . easier operation . . . and if you weave as a business, in dollars of work produced. For these reasons, we hope you will consider the advantages which Countryside II offers you.

**Sizes Available**

Three weaving widths are presently available: 36, 42, and 48 inches. The loom is made with 4 and 8 harnesses; you can buy the loom with 4 harnesses and add four later; however, it is less costly to buy the loom with 8 harnesses at the outset.

**Smooth-Action Jack-Type Design**

The Countryside II is of jack-type design, the harnesses being raised by an all-aluminum lift system that assures their moving straight up and down, providing a clean, even shed. The lift system provides unusually easy treading and quick return. The harnesses are of high strength aluminum and travel in hardwood tracks. Harnesses cannot “hang up” or interfere with each other, thus assuring an accurate shed. There is no rusting and no paint to peel off.

**Hardwood Construction, Oil Finish**

The Countryside II is built of selected kiln dried northern hard maple . . . carefully sanded, and finished with durable, water resistant Danish oil, hand applied. Maple is extremely strong . . . dent and splinter resistant . . . and stable in its dimensions.

**Quick Tie-Up System**

The hardwood treadsles are attached to the aluminum lamms with steel wires which attach in a few seconds, need no adjusting, and cannot kink like chain, or wear thru like cord. There are no bolts in the tie-up system.

**Wide Spaced Treadles**

All Countryside II looms have ten treadles, spaced so two cannot be depressed at once by mistake.

**Leg and Knee Room**

For tall weavers, or weavers who like to stand while weaving, the high (35”) front beam gives plenty of leg and knee room.

---

**“No-stretch” Warping**

The breast beam can be easily removed for warping if desired. The rear beam folds in, or down to the floor, to permit working within inches of the heddles. It is not necessary to lean over the beams to warp the Countryside II, making for faster warping in greater comfort.

**Beams, Aprons, Ratchet, Brake**

The rotary beams are of redwood, used for its dimensional stability. The warp beam has a friction brake which can be released slowly to prevent warp tangles that can occur with a ratchet-type brake. The cloth beam has a ratchet with an easy-to-reach handle to advance the warp. Front and back aprons are of heavy canvas, put on at the factory. Apron rods are 3/8-inch round aluminum rod.

**Balanced Beater for Easy Operation**

The beater is heavy enough for hard beating and is balanced for easy operation. The angle between the reed and the warp is close to 90° in all positions. There is an ample shuttle race. Extra weight can be added to the beater by fastening a metal bar under the shuttle race.

**Wide, Clean, Accurate Shed**

In the Countryside II, the warp threads lie flat and rise evenly, all the way across, giving a wide, clean shed (approx. 2 1/4 inches), adequate for large boat and rug shuttles. Harnesses in the DOWN position rest on a sloping base, which keeps the threads in the same plane. This prevents picking up threads by mistake with the tip of the shuttle.

**Easy-to-Thread Heddles**

Flat steel heddles with large eyes are supplied—20 per inch of weaving width. They are easy to thread, and easy on the warp. Wire heddles are optional.

**Standard Equipment**

The basic loom as ordered (4 or 8 harnesses); plain warp beam; 20 flat steel heddles per inch of weaving width; two canvas aprons; 4 apron rods; lease sticks; sleying hook; friction brake on warp beam; ratchet on cloth beam; 12-dent plain steel reed.

**Dimensions**

Height: 47 inches. Depth: Open—45 inches; closed—29 inches. Length: 10 inches more than weaving width. The loom will fit in van-type automobiles (including VW).

**Optional Equipment at Extra Cost**

- **Loom Tray.** Fits on top of loom; 6 by 34 inches inside. Holds shuttles, bobbins, reed hook, crank, etc. Maple, with hardboard bottom.
- **Sectional Beam.** Consists of 4 removable sections which attach to warp beam with screws. Wood dowel separators on 2-inch centers.

**Delivery Time**

Delivery time depends on the orders on the books and the looms in production. We will be happy to give you an estimated delivery (or shipping) date if you will tell us the size loom you need. In general, delivery time is good.

**Terms of Sale**

Fifty percent with order; balance when loom is ready for shipment.

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163 N. Carter Lake Road  
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COVER: Detail of Shadowweave Rug woven by Maxine Wendler - see page 16
Letter From the Editor

After the first issue of a new journal is off the press and in the hands of weavers, there is no greater reward for the staff than to receive encouraging letters from the readers. The response has been overwhelming. Each letter was read and enjoyed by every member of the staff, and all of us want to express our sincere gratitude. For a while we were considering reprinting them in the Journal, but the vast number meant that only a few could have been selected. This would have been unfair, because to us, one was as valuable as the other. Thank you again.

In future issues of the Journal we would like to clarify some weaves that have become rather mysterious, such as "swivel" and "bound weave". The structure of these weaves is very simple but the definition is rather obscure. We would like to encourage our readers to correspond with us and tell us their definition of these two weaves, help to compile a bibliography of the subject and a store of examples and photographs of items woven in either technique. With your help we hope to publish authoritative articles on these weaves and eliminate quite a bit of confusion on the subject.

Please keep up with your encouraging letters, contributions, questions and comments.

Quarterly Journal For The Fiber Craftsman

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**Pick-up Leno, a two-harness Loom Technique**

*by Meg Wallace*

This article is the first in a series of two-harness, finger manipulated lace techniques. It is advisable to make samplers illustrating these different laces. Once the techniques have been mastered, the weaver can plan on incorporating them in various projects, such as borders of scarves, designs in placemats and tablecloths, gauzy areas in wall hangings, casement cloth, draperies, borders of garments, etc.

Wool, silk and cotton warps are most suitable. A linen warp is somewhat difficult to work with, but a linen weft combined with a cotton warp makes handsome table linens. If the weaving yarns are very textured, the effect of the lace weaves tends to get lost. A pick-up stick is necessary to weave these laces. Our favorite one is 18" long, 1" wide and slightly over 1/16" thick. One end is pointed. The stick should be very smooth.

In our example, the loom was set up for the placemats depicted in Plate 1.

Warp:  Abolin cotton-linen from Gustaf Werner (Sweden).  
Weft:  Same as warp.  
Sett:  15 e.p.i.  The sett should be suitable for a balanced tabby. The total number of warp ends should be a multiple of four.  
Threading:  As for plain weave.  
Treading and weaving:  Start at the right-hand side with the shed open and with which the first right-hand thread and all the odd-numbered threads in the top layer. All lace pick-up weaves are started in that same way. The heading should be woven in tabby weave. Weave the leno with a loose warp tension.

![Plate 1](image)

*Placemat with Norwegian Leno border*  
*Woven by Jeanne Richards*

Borders, if they are desired, and non-lace areas between leno designs should be built up in Spanish weave. These areas should have an even number
of warp ends. To make a Spanish weave border, start at the right, weave back and forth in tabby in the border area. Compensate for half the height of the leno with Spanish weave. End at point * of Fig. 1. For the leno area, use a pick-up stick. Insert the weft in the shed opened by the pick-up stick.

![Spanish Weave]

* Spanish Weave + 1/1 Leno Pick

Deployment

![Fig. 1]

Weave Spanish weave in all the non-lance areas and at the left border. When weaving from left to right, do Spanish weave in the non-lace areas to compensate for the other half of the height of the leno. In the lace areas, lay the weft in the shed opposite from the one that was opened for the pick-up.

![Antique Mexican Singles]

Antique Mexican Singles

Antique Mexican Doubles beaten in loosely

Mexican Singles

Variation of Mexican Doubles (the group of 4 lenos in Fig. 5 is repeated across the web)

Alternating Antique Mexican Doubles

Norwegian Lace

Milwaukee Lace

Reverse Twist Leno

Peruvian Gauze

Antique Mexican Doubles beaten in tightly
A. OPEN SHED LENO

1. Antique Mexican Singles (illustrated in Fig. 2).

![Diagram of Antique Mexican Singles]

Structure

Draft

1/1 1/1 1/1 1/1 1/1 1/1

Fig. 2 Antique Mexican Singles

Start at the right-hand side with the shed open and the first thread in the top layer. With the left hand, pull the threads of the top layer to the left. With the stick, pick up the first right-hand thread of the bottom layer and bring it upward. Then, from the top layer, drop the first thread so that it comes to lie under the pick-up stick. This pick-up is symbolized by 1/1 (one over one). Repeat 1/1 across the lace area, bringing all the threads of the bottom layer on top of the pick-up stick. Turn the stick on edge to create a shed and insert the weft. When the weft has been woven through from right to left, the stick is removed, the shed is changed and the weft is brought from left to right without pick-up but with Spanish weave where necessary. The leno may then be repeated or a band of plain weave may be woven.

2. Antique Mexican Doubles (illustrated in Fig. 3).

![Diagram of Antique Mexican Doubles]

Structure

Draft

2/2 2/2 2/2

Fig. 3 Antique Mexican Doubles

The number of warp ends in the leno designs should be a multiple of four. Start at the right-hand side with the shed open and the first warp end in the top layer. Pull the threads of the top layer to the left. With the stick, pick up the first two right-hand threads of the bottom layer and bring them upward. Then, from the top layer, drop the first two threads so that they come to lie under the pick-up stick. This pick-up is symbolized by 2/2 (two over two). Repeat 2/2 across the lace area. When weaving from left to right, change the shed and insert the weft.

3. Mexican Singles (illustrated in Fig. 4).

From the right-hand side, pull the threads of the top layer to the left. With the stick, pick up the first two right-hand threads of the bottom layer and bring them upward. Then, from the top layer, drop the first thread so that it comes to lie under the pick-up stick. This pick-up is symbolized by
2/1 (two over one). Pick up the next thread of the bottom layer and drop the next thread of the top layer. Repeat this 1/1 pick-up until there are three threads remaining. Pull the last two threads of the top layer to the left, pick up the last thread of the bottom layer, release the top threads so that they lie under the stick. This is symbolized by 1/2 (one over two). When weaving from left to right, change the shed and insert the weft.

4. **Mexican Doubles** (illustrated in Fig. 5).

![Fig. 5 Mexican Doubles](image)

The total number of warp ends in the leno design should be a multiple of four, plus two. Start from the right and make the following pick-ups: 3 over 2, 2 over 2 (repeat), 2 over 3. The weaver should try to figure out how to weave this leno by referring to the previous paragraphs.

5. **Alternating Antique Mexican Doubles**
   The total number of warp ends in the leno design should be a multiple of four. Weave a row of 2/2 leno Antique Mexican Doubles, change the shed and weave back with a tabby pick. Then, weave a pick-up row as follows: begin with a 1/1 leno, continue across with 2/2 leno, ending with a 1/1 leno.

6. **Norwegian Leno**
   The total number of warp ends should be a multiple of four. For the first row do 2/2 pick-up (Antique Mexican Doubles); change the shed and weave back with a tabby.

   For the second leno row make the following pick-ups: 1/2, twice, then re-
peat 1/1 until 6 threads remain. End with two 2/1 pick-ups. Change the shed and weave back with a tabby pick.

For the third leno row do 2/2 pick-ups. Finish with a tabby shot from left to right.

7. Milwaukee Leno
The total number of warp ends should be a multiple of four. With the shed open start on the right. Work only with the warps of the top layer. Push the first thread to the left and pick-up the second thread bringing it upward. Drop the first thread so it comes to lie under the pick-up stick. Continue twisting the threads of the top layer only. To weave from left to right, change the shed and weave tabby.

8. Reverse Twist Leno
The total number of warp ends should be a multiple of four. First row, 2/2 leno: do not come back from left to right with a tabby shot, but instead change the shed, pull the threads of the top layer to the right, pick up the first thread of the bottom layer, and bring it upward. Release a thread of the top layer so that it comes to lie under the pick-up stick. This pick-up is called a reverse 1/1 pick-up. In the same manner, continue with reverse 2/2 pick-ups all the way across this row ending with one reverse 1/1 leno.

B. CLOSED SHED LENO (2/2 closed shed leno)
Peruvian Gauze
Start at the right-hand side. Push the first two warps to the left with the left hand. Pick the third and fourth warps up with a stick, bringing them to the right and over the first two warps. Continue across the work. Weave back with a tabby pick in the shed with the first right-hand side warp down. One can weave 3/2, 3/3, 2/3, 4/4 and other closed shed lenos in the same way.

Interesting designs are created by combining areas of tabby and areas of leno. Different lenos, such as Antique Mexican Singles and Doubles, may be mixed in the same leno row.

Tarascan lace is a pattern lace combining Antique Mexican Singles and alternating Antique Mexican Doubles. It will be discussed in detail in a forthcoming issue of "The Weaver's Journal".

Reference:

WEAVING WORKSHOP

Clotilde Barrett, editor and publisher of "The Weaver's Journal", will travel and give workshops on the following weaving techniques:

- Double Weave
- Shadow Weave
- Ethnic Weaving
- Rug Weaving
- Pattern Drafts and Fabric Analysis
- Tapestry

Address all inquiries to: Clotilde Barrett
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Boulder, Colorado 80302
Huguenot Coverlets
by Carol Strickler

An unusual pattern is used in two of the coverlets (numbers D-28 and D-35) in the Duff Collection at the Colorado Springs Fine Arts Center. The weave is a ten-shaft extended point twill, both in warp and weft. These types of weaves are most effective when they are woven as drawn in. The straight twill from which these coverlet patterns are derived is given in Fig. 1. It is referred to as a $\frac{3}{3} \cdot \frac{3}{3} \cdot \frac{1}{1}$ twill, because the weft passes under 3 warp ends, over 3, under 3, over 1, and repeat. The drafts for the coverlets are given in Fig. 2 and Fig. 3. In each case the threading and the treadling have to be reversed at point R in order to have a full repeat of the pattern.

Although the pattern is similar to other extended point twills, it is distinguished by the fact that there are three different texture areas which appear as pattern blocks. These areas are controlled by twill sequences on shafts 1-2-3-4; 4-5-6-7; 7-8-9-10; respectively. Note that each sequence has at least one shaft in common with another one. In the similar drafts in Burnham, p.276 and 284, the twill sequences do not share shafts. The similar draft in Oelsner, p. 144, shows a two-texture weave, each controlled by five shafts of an eight-shaft draft, so that there is an overlap of two shafts.

I have not found the draft for this pattern (which I reached by a graph-paper analysis of photos of the Duff coverlets) in any weaving book. The only other example of the weave I have seen is the coverlet labeled "overshot" in Heirlooms..., p. 125. Sallie Duff called these coverlets "Huguenot", believing them to have been woven by Huguenot immigrants to the U.S.

Editor's note: Notice that Carol Strickler does not use the same quadrants for the threading, tie-up, treadling and cloth diagram as the ones described in the article "Drafts", The Weaver's Journal, Vol. I No. 1. Also, in the cloth diagram, she has shown the weft rather than the warp.

If any of the Journal's readers are fascinated with Shadowweave and have a ten harness loom, you should take on the following challenge: Use the extended point twill threading of these coverlets as a motif and derive a shadowweave by following the principles described in "Shadowweave", part I, The Weaver's Journal, Vol. I, No. 1.
Threading

Fig. 2

Tie-up

Duff Collection #D28
Fig. 3

Duff Collection #D35
Wallhanging woven by Clotilde Barrett based on the Huguenot draft given in Fig. 3. The warp is stripes of earthy colored rugwool, set 10 e.p.i. The weft is handspun Samoyed dog hair. Dimensions: 40" x 70".

BIBLIOGRAPHY (references, footnotes, etc.)


A Christmas Project
by Iris Richards

The Use of Cardweaving Pattern Drafts in 4-Harness Warp Face Twills:

Plate I shows a cardwoven band. It was woven in the conventional way using the pattern draft illustrated in Fig. I.

Plate I

![Pattern Draft]

Green ▼ Red ▼ Black ▼
White ▼ Pink ▼

Fig. I

The structure of cardwoven band is warp twining. Cardweaving patterns can be transferred to other fabric structures, for instance the 4-harness 3/1 twill, which we will describe here in more detail. The threading is a straight twill, and one full repeat of the color sequence is given in Fig. II to show how the color arrangements in cardweaving relates to the one of the twill.

Fig. II

Fairly wide cloth can be produced by repeating the complete sequence ad lib. Notice the direct tie-up and the reverse twill treadling. Yarns used for cardweaving are suitable for this loom project but the sett has to be very close.
The Pillow illustrated in Plate II was woven as follows:

Warp: Lily soft twist 10/3 red, pink, black, white, green

Weft: Lily soft twist 10/3 green

Threading, tie-up, treadling, see Fig. II

Sett: 60 e.p.i. in a 12-dent reed (five ends per dent)

Plate II
Pillow woven by Iris Richards

Photo at right shows detail

warp ends:

Reprinted with the permission of "Scientific American" from the article "YARN", by Stanley Backer, in the Dec. '72 "SCIENTIFIC AMERICAN".

The appearance of the first wholly synthetic fiber, nylon, in 1939 opened a new era in fiber and textile technology. Some 10 different basic types of nylon are now produced, and the worldwide consumption of these polyamide fibers exceeds four billion pounds per year...Polyester fibers, developed in 1941, now account for about a fourth of the world-wide production of synthetic fibers. Another important group of fibers is the acrylics, which were first produced about 25 years ago.
Shadowweave, Part II - Unbalanced Shadowweave
by Clotilde Barrett

I. WARP FACE SHADOWWEAVE

The principles for designing a shadowweave from a twill motif can be applied to a warp face weave. The cloth diagram or interlacement remains the same; only the warp sett and the choice of weft is altered. A warp face weave for which the structure is basically a plain weave is called "warp rep". This weave is most effective when a thick weft pick alternates with a fine one. The designs, usually consisting of color blocks, are produced by alternating colors in the warp (end on end). This type of weave is also referred to as "Ripsmatta", a Swedish translation of "Rep-rug". The threadings for ripsmattor, given in "The Handloom Weaves" p.37 and in "New Key to Weaving" p.445, are different from the ones derived in this article, as are the tie-ups and treadlings. However, the resulting interlacement and final effects are the same. In one of the forthcoming articles on Shadowweave, the conversion from one draft to the other will be explained. For the time being, let's say that the advantages of the drafts in this article is that they are easy to design and more convenient to weave because no adjacent warps are on adjacent harnesses within a pattern block. This facilitates opening the shed.

To design a shadowweave pattern, the reader should refer back to "Shadowweave" Part I. The step by step instruction given here, relate to the wall-hanging designed and woven by Willy Bottema.

These instructions can easily be reinterpreted by the reader to create his own pattern.

WARP
Two-ply wool (Cum Asbo Rya) in grey, red and purple.

WEFT
a. Neutral colored linen, size 10/2.
b. Red rugwool used eight-fold.

Plate 1  Rep Weave
Woven by
Willy Bottema
Fig. 1 shows how the rep weave threading is derived from a twill motif.

a. The motif is a four harness point twill.
b. The motif has been extended to make large pattern blocks.
c. The dark warps have been drafted. For the sides of the hanging they are purple, for the mid section they are red.
d. The light (grey) warps have been drafted.

SETT

The warp is set at 24 e.p.i. in an 8-dent reed. The width of the project is 20".

TREADLING

As for any other shadowweave, the cloth is woven on opposites. The fine linen weft is inserted in each shed; the thick weft is inserted together with the fine one in every other shed. Each sequence of 2 picks is repeated several times as indicated in the treadling diagram. For some design effects the treadling may require that two thick wefts be woven in two consecutive sheds.

Rather than inserting the thick eight-fold weft once from the right, then from left, it may be preferable to use two shuttles, each wound with four-fold rug wool. Both shuttles are inserted in the same shed, one from the right, one from the left.

It is advisable to start the weaving with a 1" heading using the fine weft only. If the project is a wallhanging, the heading can be turned under to make a casing for a hanging rod. If the project is a rug, this weft may have to be pulled back out of the heading and the warp tied into fringes.
In four harness shadowweave, two harnesses are always raised to make the
sheds. In order to facilitate the opening of the sheds, one harness of the
pair could be lifted first, then both at once. This, however, requires more
treadles or a table loom.

A rep weave wallhanging can be made more decorative by using the following
hints:

A. **The use of inlay techniques**
   Short manifold wefts may be laid in together with the thick background
   weft in certain areas dictated by a design. Both ends of the inlay weft hang
   in front of the cloth to make decorative fringes.

B. **The use of pulled loops**
   The thick weft may be pulled out from between warp ends to form loops.
   These loops can be very long and they may be cut to make fringes.

C. **The use of extra sheds**
   Besides the four sheds mentioned previously, treadle 5 and its opposite, treadle 6 (Fig. 2) open sheds
   which can be used effectively.

II. **WEFT FACE SHADOWWEAVE**
   The principles for designing a shadowweave from a twill motif will be
   applied here to a weft face weave. Again, the interlacement remains the
   same. Only now the warp is uniform in color. The choice of the warp and
   the set is the same as for a plain weave weft face cloth. For the weft, two
   contrasting colors are used which are woven pick and pick.

**Plate 2**
Weft Face Rug
Woven by Maxine Wendler
In order to follow the procedures designing a shadowweave weft face rug, the reader should again refer to "Shadowweave" Part I. The rug described in this article was designed and woven by Maxine Wendler. It is reproduced in Plate 2.

**Fig. 3**

**Warp**
Tightly spun wool warp (a linen or cotton rug warp may be substituted advantageously).

**Weft**
Medium size unplyed rugwool in two colors – grey and white.

**Draft**
- a. The motif which is a 8-harness twill.
- b. The odd warps have been drafted; they correspond to the dark warps in shadowweave.
- c. The even warps have been superimposed.

**Sett**
4 e.p.i. – total number of working warp ends 151 – total width of project 38".

**Selvedges**
4 ends (total number of warp ends 155). Double the first and last two warp ends and treat as one working end. If possible set the first two and the last two working ends closer than the other warp ends. There should be an odd number of warp ends.

Fig. 4 shows the slewing of the right selvedge for a 4 e.p.i. rug in an 8-dent reed.

**Fig. 4**

**Treading**
The treading given in Fig. 3 is for the dark wefts only. Each
dark pick should be followed immediately by a light pick woven on the opposite treadle. For example, weave treadle 8 with a dark pick followed by treadle 4 with a light pick. Repeat these two picks fourteen times before going on to the next set. (treadle 7 - D weft followed by treadle 3 - L weft).

How to Weave Good Edges

(Note that the word warp end refers to working end). Start with a dark (D) weft, on the right-hand side with the first warp end up. Weave the pick, turn the tail of the weft (about 1\(\frac{1}{2}\)")) around the second warp end and weave this end back into the same shed. Change the shed, weaving with the light (L) weft from left to right; wrap the end (about 1\(\frac{1}{2}\)") twice around the first warp to the left and weave back into the same shed. *As the light shuttle leaves the shed, lift the outside warp end, which is normally down, with the right hand so that the light weft passes under two warp ends on the right side. Change the shed and weave D from left to right. Change the shed, wrap the light shuttle around the first warp end once, or twice as necessary, by putting the shuttle down between the first two warp ends and up to the right side. Now weave L from right to left. Change the shed and weave with D. Change the shed, wrap the L weft around the first left-hand warp end by passing the shuttle down between first two warp ends and up to the left side; then weave from left to right.* Repeat between asterisks.

With some shed combinations, the role of the light and dark wefts will have to be changed at the selvedges.

One can experiment with some other treadling orders. In that case it is advised to use a floating selvedge.

References:

Scouring a Fleece
by Meg Wallace

You plan to spin some wool and you have just come home with a fleece, all tied up in a compact bundle. How do you go about preparing the wool for spinning? Lengthy books have been written on this subject and complete study of the process is recommended. If, however, you are very anxious to start spinning, the following guidelines and practical hints might come in handy.
1. **Sorting:** Spread the fleece on the floor as neatly as you can so that it looks like a sheepskin rug. Feel the shoulder hair. It is longer, coarser, and dryer because the grease gets washed away by rain. Feel the belly hair. It is finer, shorter and has more grease. Now sort the fleece into four sacks, looking for different fiber characteristics.
   a. Fleece that is too soiled or too short to spin.
      (This pile gets discarded).
   b. Fleece that is long, dry and coarse.
   c. Fleece that is fine and greasy.
   d. Everything that does not fit the descriptions in a., b., or c.
Label your bags.

2. **Picking:** Keep a supply of sorted fleece on your left. Take a handful, and, using both hands, separate the fiber and let the soil sift through. Work hard on the matted parts and the tips of the fleece. Accumulate the picked fiber on your right.

3. **Scouring:** Prepare four containers with capacity of four gallons each (use buckets, canning kettles, garbage cans). Dissolve the soap and soda in small amounts of hot water when preparing the solutions as given below.

<table>
<thead>
<tr>
<th></th>
<th>Bucket 1</th>
<th>Bucket 2</th>
<th>Bucket 3</th>
<th>Bucket 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>4 gals.</td>
<td>4 gals.</td>
<td>4 gals.</td>
<td>4 gals.</td>
</tr>
<tr>
<td>Washing soda</td>
<td>none</td>
<td>90.7g (5 tblsp.)</td>
<td>18.2g (1 tblsp.)</td>
<td>none</td>
</tr>
<tr>
<td>Ivory Flakes</td>
<td>none</td>
<td>12.1g (5 tblsp.)</td>
<td>13.1g (5 tblsp.)</td>
<td>none</td>
</tr>
<tr>
<td>Temperature</td>
<td>lukewarm</td>
<td>hot tap water*</td>
<td>hot tap water**</td>
<td>hot tap water***</td>
</tr>
<tr>
<td>Time</td>
<td>3 min.</td>
<td>2½ min.</td>
<td>1½ min.</td>
<td>1½ min.</td>
</tr>
</tbody>
</table>

* Too hot to put your hand in.
** Cool enough to keep your hand in for a short period.
*** Cool enough to keep your hand in.

Use rubber gloves.

Lay a huge handful of fleece in bucket 1 and slowly push it under. Let it sit the allotted time, then squeeze out the excess water. In the same manner, move it on to the other buckets. Agitate the wool very gently in the baths.

After the last bath, remove all excess water (the spin cycle of a washing machine may be used) and spread the fleece to dry in the shade.

4. **Picking and Blending the Clean Fibers:** Repeat the picking procedure described in No. 2 above. Blend the fiber of several scoured batches together so that the final yarn has the same consistency throughout. Different colors may also be blended to obtain yarns of different shades.


6. **Carding:** The blending is continued during the carding. It may be necessary to card first with coarse cards and follow it up with a fine carding.
A System for Recording and Drafting Certain Types of Braids
by Clotilde Barrett and Ronnine Bohannan

Craftsmen today are becoming more aware of the Folk art of different peoples around the world. Braiding is one of these Folk arts especially interesting to the fiber craftsman.

In this article several practical ways of getting braiding projects set up will be explained. A drafting technique, applicable to a great variety of braids and a useful tool for record keeping and design purposes will be presented. It is hoped that this technique will help the textile artist become comfortable handling the large numbers of strands needed in braiding.

Narrow trim for functional and ornamental purposes is the most common use for braids, but it is possible to create new effects and whole new textiles using braids alone or in combination with other textile techniques.

There are a great many types of braids but this article will limit itself to the flat and three dimensional braids that involve many strands bunched together at the top of the braid. A strand or strands will be taken alternately from the left and from the right, these strands will be called workers. The workers move from their original position to a new position in the bundle by going over or under a predetermined number of strands a predetermined number of times. We will work from the top to the bottom.

THE SET UP

Short narrow projects are best started by tying small groups of about four strands together and sliding these knots under the clip of a clip board. (See photograph 1)

Long narrow projects are best started by tying all the strands together in a knot and fastening it to a fixed point (a strong hook, doorknob, etc.).

Wide projects use the same method as short narrow projects but two pieces of wood clamped together are substituted for the clip board. These pieces are then clamped to a fixed board or table.

Diagram 1

In all these cases take a thin stick a few inches longer than the width of the finished project and wrap each strand around the stick to maintain the order of the strands. (See photograph 1)
THE DRAFT

Braids will be categorized for drafting as follows:

I. Flat Braids

1. Odd number of strands
   a) regular
   b) irregular

2. Even number of strands
   a) regular
   b) irregular

II. Non-flat Braids (square, round, spiraling)

1. Even number of strands
   a) even division
   b) uneven division
      b-1) symmetric
      b-2) asymmetric

2. Odd number of strands

III. Flat Braids with more than one worker weaving at once

IV. Double Braids

Categories I, II, III use two rows of squares in their drafts. The number of squares in each row should equal the number of strands in the braid. Double braids, category IV use four rows of squares.

Diagram 2

X designates that a strand on that side of the braid is picked as a worker to interlace according to the directions given by the row of squares immediately above or below it.

■ designates that the worker travels over a warp strand.

○ designates that the worker travels under a warp strand.

Diagram II shows that one outer strand on the left-hand side is moving to the right by going over two strands, then under three. Then one outer strand on the right-hand side is moving to the left by going over two strands and under three.
PROCEDURE FOR FLAT BRAIDS

The example given is for one eleven-strand braid but the procedure applies for all braids of category I. Hold the worker and strands corresponding to the number of marked squares of the upper row of the draft in your left hand (in this case six). Hold the remaining strands in your right hand (five).

With the left-hand worker, follow the top row of the draft in diagram II, over two, under three. The worker is then transferred to the right hand and held to the left or inside of the other strands. (See photograph 2) The right hand worker then moves from right to left in the manner outlined on the second row of the draft, over two, under three. (See photograph 3) These two steps are repeated, keeping in mind that a new worker is picked for each interlacement, all outer strands become workers.

Odd numbered flat braids are called regular if the interlacement from left to right (first row of the draft) and from right to left (second row of the draft) are the same.

Even numbered flat braids are called regular if the interlacement from left to right of the first row and the interlacement from right to left of the same number of strands on the second row are opposite. The second row has one more interlacement.

Practise flat braids according to the following drafts:

Odd Number - Regular

<table>
<thead>
<tr>
<th>English</th>
<th>Odd Number - Irregular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on Twill</td>
<td>Even Number - Regular</td>
</tr>
<tr>
<td>Running</td>
<td>Even number - Irregular</td>
</tr>
<tr>
<td>Mound</td>
<td></td>
</tr>
</tbody>
</table>

Diagram 3

Note that in the case of a flat braid with one worker there is one empty square in common to each row in the draft. This is an essential consideration for the drafting of braids in category I.
PROCEDURE FOR NON-FLAT BRAIDS

The example given is for a ten-strand braid. The procedure applies for all braids of category II.

Diagram 4

Hold the number of strands corresponding to the marked squares of the upper row of the draft in your right hand (in this case 5). Hold the remaining strands in your left hand. The outer left-hand strand is the worker, it passes to the right-hand side of the braid behind all other strands; then it moves back to the left according to the top row of the draft, under two, over three and becomes the inner left-hand side strand. (See photographs 4 and 5). The outer right-hand strand is then transferred to the left behind all other strands; it then moves back to the right according to the second row of the draft, under two, over three and becomes the inside strand on the right-hand side of the bundle.

These two steps are repeated.

The braid has an even division and appears square when the total number of strands is divisible by four, and the worker in each step goes under one fourth of the strands and then over one fourth of the strands.

The braid with an uneven division is symmetric and appears half round if the right to left interlacement of the first step is the same as the left to right interlacement of the second step.

The braid with an uneven division is asymmetric and appears as a spiral if the right to left interlacement of the first step is the opposite of the left to right interlacement of the second step.

Practise non-flat braids according to the following drafts:

Even Number

Even Division

Even Division

Uneven Division - symmetric

Uneven Division - asymmetric

Diagram 5a
Odd Number

Diagram 5b

Note that for the braids of category II there is no empty space common to each row. It is not necessary to leave a space as the worker comes from the side opposite of where the interlacement begins and the interlacement always begins with ☐, the worker under symbol.

PROCEDURE FOR BRAIDS WITH MORE THAN ONE WORKER WEAVING AT ONCE

The example given is a ten-strand braid, the procedure applies for all braids of category III.

Diagram 6

Hold the workers (two) and the number of strands corresponding to the marked squares of the first row of the draft in the left hand. Hold the remaining strands in the right hand. Interlace the workers together according to the draft and transfer them to the inside of the right-hand bunch. Work the other side in the same way. Repeat.

Practise these braids according to the following drafts:

Diagram 7

Mound Sennit
Interwoven Sennit
Eight-Strand Angular
Interlocking

Note that as a rule the two rows of the draft have as many empty squares in common as the number of workers moving together.
PROCEDURE FOR DOUBLE BRAIDS

The procedure applies to all braids in category IV.

![Diagram 8]

The making of this twenty-one strand double braid requires four steps:

1. Move the outer left-hand strand to the right over five, under five.
2. Move the outer right-hand strand to the left under five, over five.
3. Move the outer left-hand strand to the right under five, over five.
4. Move the outer right-hand strand to the left over five, under five.

Note that all four rows in the draft have an empty square in common and that step three is the opposite of step one. Step four is the opposite of step two.

EXPLANATION OF THE PHOTOGRAPHS

Photograph 1: A few strands are tied together in a knot and held in position under the clip of a clip board. Each strand is wrapped around a pencil to maintain the order of the strands.

Photograph 2: First step of an eleven-strand flat braid.

Photograph 3: Second step of an eleven-strand flat braid.

Photograph 4 and 5: First step of a ten-strand non-flat braid.

Photograph 6: Twenty-three-strand flat braid, odd, irregular.

Photograph 7: Fifteen-strand flat braid, odd, regular.

Photograph 8: Five-strand flat braid, odd, regular (running braid).

(note; strands are doubled)

Photograph 9: Fourteen-strand flat braid, even, regular (English). Macrame divides the fourteen-strand braid into two seven-strand braids.
Photograph 10: Four-strand braid, flat even, regular, uses multiple strands.

Photograph 11: Four-strand round braid, even division, uses multiple strands.

Photograph 12: Fourteen-strand flat braid with more than one worker.

Photograph 13: Twenty-one-strand double braid.

Photograph 14: Braided Wallhanging by Clotilde Barrett.

**dear heddle:**

Is it possible for me to make my own raddles at home?

Raddle Warper

Dear Warper: Certainly. Home-made raddles are easy to make with ordinary hand tools. The required materials are a length of wood of suitable size and shape and a supply of No. 4 finishing nails (1\(\frac{1}{4}\)" long). The wood may be any of a variety of moldings or strips of rectangular cross-section. I have successfully used 1 x 1" strips and "parting stop" (1/2 x 3/4").

First, cut a piece of lumber 4" longer than the nominal width of your loom, i.e., 28" for a 24" loom. Then draw a center line down one face (the wider if the wood is not square) of the cut piece, using a yardstick or an adjustable mechanic's square. Using a yardstick or tape measure, mark off points 1" apart all along this center line. With 1/16" (or No. 52 AWG) drill, make a pilot hole at each mark (going nearly through the wood). The purpose of the holes is to avoid splitting the wood by driving in many nails along the same line. Try to keep the drill as nearly perpendicular to the wood as possible.

The number of holes should be one more than the maximum fabric width; 25 holes for a 24" loom, for example. The last holes at either end should be the same distance, 2", from the end of the stick. Tap a nail into each hole, trying to avoid driving it all the way through the material. If you do, turn the stick over and drive the point back flush with the wood. After all nails are in place, sand the three sides of the wood not studded by the nails, and finish with varnish or stain and shellac if desired.

While warping your loom, when you have the warp ends laid in place between the nails, tie one end of a length of thin string to the first nail at one end, just under the head. Then loop the string about each nail, just under the head, until you reach the last. Tie the string to this last nail, again just under the head. In this way you have capped the raddle so that the warp ends cannot escape.
A Double Woven Bag
Inspired by a South American Bag
by Clotilde Barret

A 4-harness loom is required.
Warp: Worsted in 4 colors o, x, a, c. In the bag pictured in the photograph
the warp is 2/2½ tapestry worsted from J.H. Bathgate, Galashiels, Scotland.
Weft: Same.
Width: 14".
Sett: 24 e.p.i. in a 12 or 6 dent reed.
Threading and tie-up:

* Fig. 1

* Note: Leave off the 4th warp end of the last repeat, because the total
number of warp ends must be odd.

Treadling: tr 1, tr 2, tr 3, tr 4; repeat.
Weave a tube 10" long.
Weave top layer only, for 2", by treadling tr 1 and tr 3 only.
Do not weave the next 11" of warp. (Weave in a few picks of scrap yarn as
temporary filler).
Weave 2" of top layer.
Weave 10" tubular.
Remove from loom, tie small bunches of warp together at each end to close the
woven tubes at the bottom. Fig. II. (If no fringes are desired, tie these
knots on the inside).
Cut the top layer of unwoven warp in half. Fig. II.
Finish fringe on the 2" flap with a double Damascus edge working with pairs of
warp ends. (Follow the instructions for fringing given in "The Weaver's
Journal", Vol. I No. 1 p. 24. If no fringes are desired, they may be folded inside
and hemmed.
Plait the unwoven warp of the bottom layer.

* Tie warps together

* Cut top layer of warp

Fig. 2
DIRECTIONS FOR PLAITING

Spread the project on a table. Keep the warp taut by holding the pockets down with books or other weight.

Six thin dowels (¼" diameter) or sticks, about 16" long, are needed for the plaiting.

Insert stick 1, from right to left, over four warp ends, under four, over four, under four; repeat.

Insert stick 2, from right to left, under four warp ends, over four, under four over four; repeat. Fig. III.

The number of bunches of four warp ends should be even. The odd numbered are the top layer and the even numbered are the bottom layer.

Step One

To insert stick 3, start at right: With the left hand, pull the warps of the top layer to the left. With the stick, pick up the first right-hand bunch (2) of the bottom layer and bring it upward. Then, from the top layer, drop the first bunch (1), so that it comes to lie under the pick-up stick. Repeat this pick-up all across the warp. Fig. III.

Slide stick 4 along stick 3. Push stick 3 upward and stick 4 downward. Fig. IV.

Step Two

To insert stick 5, start at right: Slide the stick under the first bunch (2) of the top layer. With the hand, push the next bunch of the top layer (4) to the right, and release it so that it comes to lie under the pick-up stick. With the stick, pick up the first bunch of the bottom layer.* Repeat between asterisks with all the following bunches. Slide stick (5) over the very last bunch.

Slide stick 6 along stick 5. Push stick 5 upward and stick 6 downward.
Remove sticks 1 and 2. Beat sticks 3, 4, 5, 6 in to form a tighter plaiting.

Repeat step one with sticks 1 and 2, repeat step two, and so on.

When the middle of the warp is reached, the last stick should be replaced with yarn. Cut about 1 yard of warp yarn, lay one end along the last stick, turn it around the first bunch of warps, pass it back along the same stick, turn around the last warp bunch and pass it back along the same stick. Repeat until the middle is secure. Remove all sticks.

South American Bag

Woven by

Iris Richards

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Due to the readers' expressed interest in the coat featured on the cover of "The Weaver's Journal, July, 1976, Vol. I No.1, I shall present here a weaver's description of the Pine Tree Coat (Plate 1). The coat came into being as an attempt to find a current use for an isolated motif of an heirloom handwoven coverlet. Unusual yarns, materials and methods of assembly were employed to create an upbeat garment for current use. The pattern motif of the coat consists of an 8 harness, 6 block Summer and Winter weave, a detail of which appears in Plate 2. The warp consists of 6 yards of 2-ply off-white mohair sett at 24 e.p.i. with 900 ends completing the width. The profile draft, block threading and tie-up for the fabric appears in Fig. 1.

The weft consists of two strands of 3-ply black wool for the pattern picks and the same off-white mohair as used for warp for the tabby picks (a and b of the tie-up).

Plate 1
Pine Tree Coat
Woven by Barbara Knollenberg

Plate 2
Detail
The treadling sequence is given in Fig. 2. The fabric was begun with 6" of light cloth (the black pattern floats on the back). The Pine Tree pattern was treadled next. Note that in most cases two treadles are used at the same time (use two feet). Keep in mind, that every other shot is a tabby shot woven with the white mohair and every other shot is a pattern shot woven with black.

When the trees were completed, black cloth is woven to complete each panel. Three 60" panels were woven in this manner to provide the required long coat length.

No hand woven garment fabric is ready for cutting, assembly and wearing, in my opinion, until the fabric has been mechanically or chemically finished. (A future article will appear on this subject in "The Weaver's Journal"). The Pine Tree Coat fabric was cut from the loom, glued across the warp ends with Tehr-Greece to prevent
raveling and then machine washed in water only (no detergent or soap) using the warm and gentle cycles, and finally spread flat to air dry.

A coat pattern consisting of four major pieces was used to construct the coat from the panels of finished fabric. The layout was approximately as shown in Fig. 3. The black satin lining and polyester batting were cut from the same pattern and layered together like a quilt.

Each piece was then hand basted horizontally in rows 4” apart starting above the Pine Tree design. The tree patterned area was hand basted vertically between the trees in the 16 thread spaces of the pattern. The pieces were then machine stitched in two parallel rows \(\frac{1}{4}\)” apart with the hand basting between rows. A long stitch (6-8 stitches / inch) was used with a heavy-duty needle (Bernina #90).

After all the pieces of the coat were quilted, it was assembled and sewn using the self-bound seam exclusively,* with all the handwoven fabric cut to \(\frac{3}{4}\)” and one side of the lining forming the binding fabric. Essentially the coat is reversible with this seam finishing method and definitely has a polished look inside.

The outer edges of the assembled coat were then encased in smooth black leather binding after hem length adjustment. Steps in finishing this garment with leather bindings consisted of:
1. Cutting \(1\frac{1}{2}\)” strips of leather from a hide of cabretta leather.
2. Glueing together the strips to form a continuous strip (Fig. 4).
3. Sewing the face side of the strip to the face side of the garment with a \(\frac{3}{4}\)” seam (Fig. 5).
4. Turning the strip over the seam and pounding it in place with a leather hammer.
5. Turning the strip to the under side of the seam and glueing it flat to the lining with rubber cement.
6. Sewing in-the-ditch from the face side of the garment through all thicknesses.
7. Trimming any excess binding from the lining side.

Very simple, but time consuming, weaving and assembly techniques were used throughout this garment. I believe the end result of the applied techniques was worth the time and effort and fulfilled the creator's objective of creating a current heirloom from an antique weaving pattern.

**dear heddle:**

I have several looms, but somehow they each require a different size heddle. I am so frustrated when I run out of a certain size, because I have all those other heddles lying around. They don't do me any good. Any suggestions?

A Friend

Dear Friend:

Learn to make string heddles. They could be the solution to your problem. Take a piece of scrap wood; lay a metal heddle on top of it, and drive some 1 1/2" finishing nails in the appropriate places (see Fig. 1).

Take a piece of carpet warp, 2 feet long, fold in half over nail 1 and tie a square knot under nail 2, tie another square knot under nail 3, and another under nail 4. Slip the string heddles onto the harness and thread as if they were metal heddles.

Fig. 1
Bead Leno
by Paul DeRoy

Leno is a gauze technique in weaving whereby certain warp ends are twisted with others. The twists are held in place by the weft yarns. Several simple mechanisms have been used to automate the twisting: doupes, beads, etc.

Four and eight-harness bead leno will be described here. A 4-harness loom limits the weaver to a one block leno design, such as a crossways band (see Plate 1). With eight harnesses a two block leno design is possible (see Plate 2).

![Diagram 1](image1.png)

**Fig. 1**

![Diagram 2](image2.png)

**Fig. 2**

Four-Harness Bead Leno:

**Beads:** Cut plastic drinking straws into 3/8" lengths. You will need 4 beads for each inch of width.

**Warp:** 2/22 cottolin (Cum). A wool warp, such as 2/20 worsted makes the opening of the shed somewhat easier. A cotton warp and a linen weft is suitable for draperies and table linens.

**Weft:** Same as warp.

**Reed:** 12-dent reed.

**Sley:** Ends 1, 2, 3, 4 in one dent, skip two dents: repeat (16 e.p.i.)

Threading and tie-up given in Fig. 1.

The warp ends on harnesses 1 and 4 go from the harnesses through the beads. Then all warp ends go through the reed. The warp ends on harnesses 2 and 3 must lie above the beads.

By treading tr. 1 and tr. 2 alternately, the structure of the cloth is a 2/2 leno pictured in Fig. 2. By treading tr. 1 and tr. 3 alternately, the structure of the cloth is a plain weave of the basket weave system.
Eight-Harness Bead Leno

Beads, warp, weft, reed and sley are the same as for 4-harness leno. Threading and tie-up is given in Fig. 3.

Fig. 3

The size of the blocks may vary according to the number of repeats per block.

Beads are threaded on warp ends on harnesses 1 and 4 and warp ends on harnesses 5 and 8. The warp ends on harnesses 2 and 3 and those on harnesses 6 and 7 lie above the beads. The beads lie between the harnesses and the reed. Ends 1, 2, 3, 4 are sleyed in one dent followed by two skipped dents. Ends 5, 6, 7, 8 are sleyed in one dent followed by two skipped dents. Repeat.

Treadle as indicated in Fig. 3.

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