

PLY-SPLIT BRAIDING PART II:

BY PETER COLLINGWOOD

“It is most astonishing that only two changes to the working method used for producing the rigid geometric patterns in ‘plain oblique twining’ give the worker complete freedom to make any two-color design in an entirely different structure. One of the changes is in the making of the cords, and the other is in the ply-splitting itself. Before following the steps that are outlined here for two-layer oblique interlacing, review the process for ‘plain oblique twining,’ or ‘POT,’ shown in Weaver’s, Issue 29, pp. 46-51.

You’ll discover that this two-layered structure is even easier to accomplish.”



PHOTO COURTESY OF THE AUTHOR

a. A camel girth in two-layer oblique interlacing

For the sample braid in Photo c, p. 47, eight cords are needed, each with two dark (D), two light (L) plies. To achieve this, the single yarn running from the drill to the needle in the first stage of cord-making (see 3a, p. 47, Weaver’s 29) is half D, half L, joined by a central knot. The rest of the cord-making proceeds as shown in 3b-c. At the final stage, control the plies with stick or fingers (4, p. 47, W29) so that the 2L, 2D ply together.

GETTING STARTED

The first design is an inverted dark triangle on a light background shown in 2 and Photo c. When turned over this becomes a light triangle on a dark ground.

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Attach the cords to a rod.

The cords can be attached to the starting rod in a different way from that described for POT. Hang a cord at its midpoint over the rod, split the part in front and pull the part behind through this split. For this technique, the splitting is not haphazard but must be such that the 2L plies lie over, the 2D plies under, the splitting cord; see arrow in 1. Do this to all eight cords. Pulling onto both ends tightens these 16 free-hanging cords close to the rod. At the same time this method of starting constitutes the first row of the sample, a long row, showing as a horizontal light line in row 1 in 2b. (Review the steps for making long and short rows, W29, p 49.

Alternate short and long rows

Proceed as with POT, alternating short and long rows, turning over the braid to make all the splittings rightward. It is essential that the splitting is always between the 2D and 2L plies. So at each splitting, whichever color is uppermost and therefore visible on the front of the braid, the other color is visible at that exact spot on the back making the design perfectly reversible.

Correcting errors

When correcting a mistake spotted several rows back, only a triangular area needs to be undone with its apex at the mistake. When undoing, over-twist the splitting cord so it becomes stiff enough to push back through the split cord and does not disturb its plies.

TWO-LAYERED OBLIQUE INTERLACING

A BRAID IN TWO-LAYERED OBLIQUE INTERLACING

These directions are for Rows 1-7 of the braid in *Photo c*; see the design in *2a* and the diagram of the splittings in *2b*. Row 1 is made by attaching the cords to the rod.

♦ Row 2 (see *2b*) is a short row of leftward splittings, so turn the piece over and work this row splitting each L cord (as shown in 7, W29, p. 49) to bring the D plies uppermost.

♦ Row 3. Turn the piece back and split each cord in this long row so the L plies are uppermost. This means that no twist is left in each cord between this and its previous splitting in row 1. Of course, leaving a whole twist would also bring the L plies uppermost but would lead to a much looser texture. Three L rows are now seen on the top side below the starting rod.

♦ Row 4. Turn the piece over and three D rows are seen on the back side below the rod. Add a long D row to these, again leaving no twist between these and the previous splittings in Row 2.

Repeating Rows 3 and 4 produces two identical but completely separate layers, each an obliquely interlaced braid. A light braid is superimposed on, but unconnected to, a dark braid; this can be proved by sliding a stick between these two layers as at the top of *Photo c*. This is therefore the braiding analogue of plain-weave double cloth or pocket cloth.

♦ Row 5. D plies appear in this row to establish the base of the triangle. In the six central splittings of this long row leave a *one-half* twist in each cord between this and their previous splitting in Row 3 to bring about this color change. The first and last splittings in this row still show L plies.

♦ Row 6. When turned over, the start of the triangle appears as a light line on a dark background. Leave a $\frac{1}{2}$ twist in the five central cords to continue the tapering triangle.

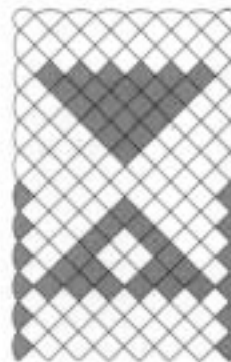
♦ Row 7. Turn the piece back. For the first six splittings leave no twist, for the last two a $\frac{1}{2}$ twist.

Complete the design following the same process as above (see the full design grid for the braid in 4, p. 49): at each splitting decide which of the two colors the design demands and then either leave no twist or a $\frac{1}{2}$ twist between this and the cord's previous splitting two rows back (no twist if the same color as two rows back; $\frac{1}{2}$ twist if different). Always remember that the colors reverse whenever the sample is turned over.

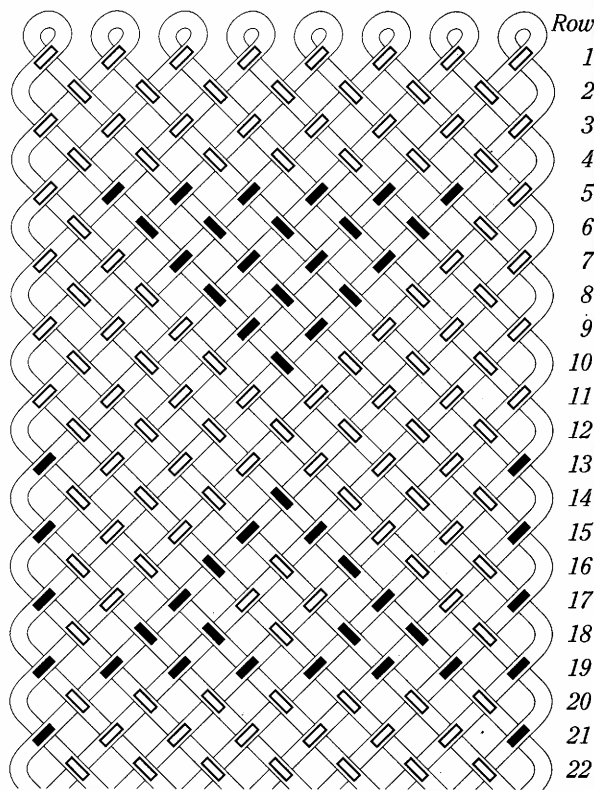
1. Attaching 2D, 2L to rod



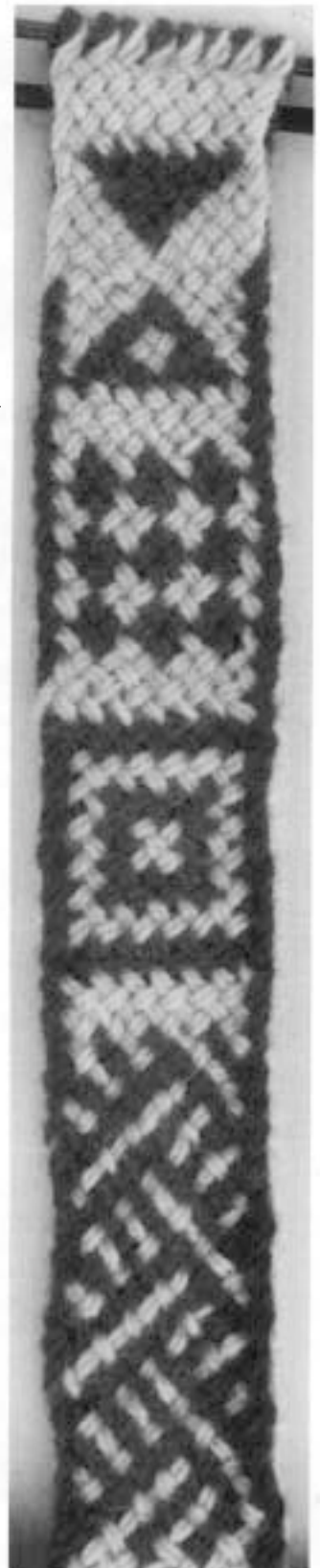
2a. Design for two-layer braid



2b. Splittings for design in 2a



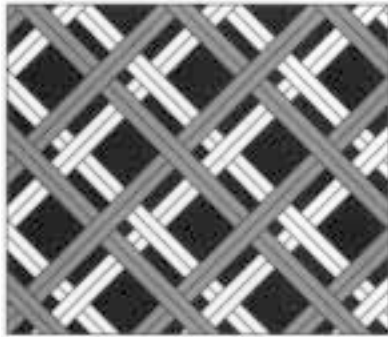
b. However complex a motif may be, it will always show identically on both sides.



c. Braid in 2-layer oblique interlacing

TWO-LAYERED OBLIQUE INTERLACING

3. The structure of two-layered oblique interlacing



The unplying of the 4-ply cord

With this method the carefully prepared 4-ply cords are almost completely unplied by the end of a braid. Plying the two colors into a 4-ply cord is just an ingenious way of temporarily keeping together as an easily handled unit those D and L plies which are to shadow each other throughout the structure. Due to this unplying effect of the technique, the initial plying of the cords does not need to be so extreme as for POT. It is important always to pull the splitting cords against the split cords at the end of every row to get a firm texture.

Connecting the layers

A greatly expanded view of the structure is shown in 3, emphasizing the separation between the two layers. Of course, in reality the D plies are closely interlaced and completely hide the similarly interlaced L plies. So each one-color area, like the triangle just made, has a pocket between its two layers which is only sealed at its boundaries by plies moving between the two surfaces of the braid.

The sample braid produced by rows 1-12 in 2b shows two superimposed layers unconnected at both selvages. There are several ways of joining the layers and so making a more solid edge. The simplest is to bring the plies of the opposite color uppermost at the very beginning and end of a long or of a short row or of both as in Row 13. Another approach is to start with several one-color cords attached to the rod on either side; these make a border worked in POT, its cords twine-linking with the two-color cords in every other row; see *Photo d*. (See steps for twined linking, p. 50, W29.) The first method is used for the rest of the sample braid in *Photo c*, which continues with a dark triangle with a light center; see 2a-b.

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Preparing designs

Once the process is understood, designs can be represented simply and realistically, using a 45° grid of small diamonds, as in 2a, p. 47, and 4, p. 49, for sample braid in *Photo c*. Remember that in a long and a short row there must be one less diamond (i.e., splitting) than the total number of cords. For this braid the grid has $8 + 7 = 15$ diamonds, suitable for the 16 cords being used. Any motif — symmetrical or not, abstract or representational — drawn by filling in the diamonds can be reproduced. The worker has only to read off the required colors, row by row, and split the cords accordingly.

So for ply-splitters, two-layered oblique interlacing offers the greatest freedom of design. Some Indian girth-makers even work in their name and address and occasionally the price in rupees! (See *Photo a*, p. 46, for a full camel girth in two-layer oblique interlacing.)

The sample's third design of alternating diamonds (4c) resolves into a simple sequence. Long rows are alternately all D or all L; every short row is the same showing L and D plies alternately all the way across. The concentric squares in 4d demonstrate that vertical and horizontal boundaries appear stepped compared with the smooth oblique boundaries in the triangles and in design 4e.

Because of the pocket formed between the two layers, a large area of one color tends to buckle untidily, so small-scale designs are more successful. Sealing only one selvedge of a braid gives access to a pocket. Indian camel drivers put gold coins in such a pocket on a girth in order to avoid detection when they were attacked by bandits; see *Photo d*.

Other possibilities

The chief attraction of this technique is the freedom of design in two colors, but the possibilities can be greatly extended by using more than two. For example, some cords in a braid can have 2A, 2B plies and some 2A, 2C plies.

The 4-ply, two-color cords prepared for two-layer oblique interlacing give unusual results when they are used in 'plain oblique twining' or in 'single course oblique twining,' the subject of the next article.

Peter Collingwood is presenting a seminar and a 3-day workshop in ply-split braiding at Convergence, July 14-20, in Portland, Oregon. See him there!

d. Two-layered braid with borders. A pocket is left open on one side.



face

back



Extra cords have been added to each edge of this braid to make a border which closes the edges. A small area on one edge is left open to make a pocket.

4. Design grid for complete braid in Photo c, p. 47.

