Bronson lace is a favorite of many weavers and with a multiple harness loom there is a wide variety of arrangements. Unfortunately, the four-harness weaver is limited to two-block designs and this can be frustrating to an imaginative weaver. However there is a simple and fairly quick method of weaving Bronson with pick-up sticks. The design possibilities are endless, being limited only by the number of lace units in the warp. Multiple harness weavers also will find this method of value. One sample warp, and one threading, gives an opportunity to check many arrangements, before putting the chosen ones on the loom for loom-controlled weaving.

Equipment: Three pick-up sticks; small round ones made of quarter-inch dowels, pointed and flattened at each end; or knitting needles may be used. (Size 3 Canadian, 10 American, is a good size.) They should be longer than the width of the warp; but by exercising a little extra care not to pick up unwanted threads with the ends of the sticks, shorter ones may be used, using two or more to replace one long one.

One block of Bronson (1,3,1,3,1,2) is used for the entire threading. However since this is not a practical threading for a counter-balanced loom, we will change the threading to a Bird's Eye, which will give the same thing. Draft, tie-up and treading are given below:

The pattern ends are on frame 3 and the tie-down thread on frame 1. Treadles 1 and 2 are used only for the pick-up. The weaving is done on the tabby treadles, (3 and 4).

The shed holding the pick-up stick will be narrower than the other; but it is wide enough to pass a boat shuttle. If necessary, to help clear this shed, let stick ride up against beater and change shed while beater is forward. Then push beater and stick back against the open shed. Keep the weaving fairly close to the breast beam, rolling forward frequently; and do not have the warp tension any tighter than is necessary for smooth weaving.

Bronson may be woven with either warp floats or weft floats for the right side of the material. The pick-up is easier to do with the warp floats on the top when weaving; so if the weft floats are to be the right side of the material, the piece can be woven upside down.

It is important to have an exact 50/50 weave; that is, the same number of weft shots per inch as there are warp ends per inch.

**To pick up design for warp floats:**

Depress treadle 2. This raises all the pattern threads in the warp. They are in pairs, with three threads separating the pairs. Each pair of raised threads is one pattern unit. Following the prepared cartoon, the lace weave units for one row of design are picked up on one stick and the beater moved forward against the stick so you can see behind it. The pattern threads on the pick-up stick will be raised above the others. The second stick is slipped under these raised threads behind the
beater, and the first stick removed from in front of the beater. The reason for this exchange is to get the stick out of the way of the beater in the weaving. An alternative would be to pick up the lace units behind the beater in the first place; but usually it is much easier to follow the pattern in front of the reed, and it is worth the extra motion to avoid errors in the pick-up.

**To pick up designs for weft floats:**
Depress treadle 1. This lowers all the pattern threads in the warp. Reaching **under** the warp with pick-up stick, slide stick over the units in the design area. When shed is closed the stick will hold **down** the pattern threads of the design. Using second stick behind the beater, under the warp, transfer the picked up threads to it, and remove first stick in front of beater.

**To pick up design for warp and weft floats in same row:**
Following the prepared cartoon, pick up all the weft float pattern threads, and transfer stick to behind beater, under the warp. Pick up all the warp float pattern threads, and transfer stick (using a third stick) to behind beater, on top of the warp. There will be two sticks behind beater, one under the warp holding down the pattern warp ends in the weft float areas; and one on top of the warp holding up the warp floats.

**To weave:** Follow the directions given in the treadling draft.

**The cartoon:**
In preparing the cartoon for your design, remember that each square of the graph paper represents six warp ends and six weft shots. It is well to mark the graph paper to show the whole width of warp (not just the design area), and then place the design in relation to the selvedges, keeping one or two (or more) units at each edge in plain weave. To produce lace there must be two or more units in warp and in weft. A single unit makes a spot; and a row of single units in either direction makes a line. The cartoon below illustrates the use of spots, lines, and lace in a design. If the weft floats are to be the right side, but you are weaving warp floats — in other words, when weaving the material upside down — remember to take this into consideration when making the cartoon. The design should be reversed on paper, then checked in a mirror to be sure it is correct.

This design was adapted from a cartoon for Indian bead weaving:

![Cartoon Image]

**MATERIALS:** Lily Art. 107, Linen Warp, size 10/2 and 40/2.
Lily Art. 21, Six Strand Floss

Bronson lace may be used in wool for scarves, shawls, etc.; and it is particularly beautiful in fine linen. The pieces shown here were all done in white linen, Art. 107, size 10/2 and size 40/2.
Samples 1, 2, 3, and 4 used Art. 107, size 10/2 for warp and weft. The warp was 12" wide, set at 20 ends per inch; 240 ends, which gave 40 units of lace. Full sized cartoons were made for each design, making sure they fit and balanced in the 40 squares of graph paper. Only a portion of each cartoon is shown here with the photograph of the woven piece.

**Cartoon 1**

Sample 1 has a border on four sides, and might be used for a tray cloth, place mats, or enlarged for a tea cloth.

**Cartoon 2**

Sample 2 has a large motif in one corner of a mat, which might be balanced with a narrow line of lace at the other end. Or the motif might be repeated at opposite corners of a tea cloth or runner.

**Cartoon 3**

Sample 3 shows the use of lace and lines in one design. This design is adapted from a flat stamp of the stepped-fret (Xicalcoliuhqui) pattern found in Mexico City.
Sample 4: It is traditional to use the same thread for warp and weft in Bronson lace, but sometimes it is more interesting to vary this a bit. This sample has alternating shots of 10/2 on treadle 4 and 40/2 on treadle 3, which gives a slight texture in the body of the mat. In the pattern area a double strand of Six-Strand Floss, Art. 121, No. 458 Ecru was substituted for the 10/2 linen.

This design was adapted from an Ojibway design for birch bark. (OJIBWAY CRAFTS. U. S. Department of the Interior.) If it is used for a place mat, it is best placed along the top of the mat. Weave the mat sideways instead of lengthways, with a narrow line of pattern at the bottom, and half-inch hems top and bottom.

Samples 5 and 6 have a warp of alternating ends of 10/2 and 40/2 linen (Art. 107), set at 24 ends per inch; 288 ends, which gave 48 units of lace. The 10/2 was threaded on frames 1 and 3, and the 40/2 on frames 2 and 4. This put the heavy thread on the pattern ends and the tie-down. They were woven with two wefts, also, heavy on treadle 4 and fine on treadle 3, which put the heavy weft on the pattern shots.

Sample 5: Monograms may be made in either lace or by using a single unit to produce lines. Those done in lace will be larger, since there must be two or more units to make the lace. This design might be used for a guest towel, or on the ends of a wool scarf.
Sample 6 is a sampler showing five borders which might be used for table linen, guest towels, tray cloths, etc. They show the use of spots, lines, and lace, used separately and together. The center border has the design in plain weave on a lace background. The one below it has warp floats and weft floats in alternating motifs. Note that in this border it was necessary to use the heavy pattern thread throughout instead of alternating heavy and fine. The pattern thread of the warp floats becomes the plain weave thread of the weft floats and vice versa.

Shown on Cover

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