

Simple Draw-Loom Weaving

ON A FOUR-HARNESS LOOM

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THE STUDY of the method of weaving simple draw-loom patterns on a four-harness loom should be of interest to hand-weavers for several reasons. First, it is a method which has been used but very little in this country, and second, because of the very simple way in which a regular four-harness loom may be equipped to weave in this manner. Also it opens up an entirely new field for the creation of interesting original designs.

This form of weaving, with the use of shed sticks, is an ancient technique, and in Sweden it is termed "Upphamta," or double harness weaving.

The following quotation taken from the book, "Swedish Textiles," by Emelie von Walterstorff, gives the derivation and meaning of "Upphamta" as follows: "The name

'Upphamta' is derived from the lifting of the shafts, as is also 'lyfetäcke' (Västergötland); from the shed rods it is called 'skidtäcke' (Blekinge); 'fjöläkla' (Smaland), and 'skälblad' (shed rod); from the shafts or sticks 'pinaklä (de),' 'kåppaklä (de)'; and 'viratäcke' (Scania) from *Vigre*, meaning switch. From the design, the 'Upphamta' bed cover in Scania is sometimes called 'assatäcke,' or 'stenkaketäcke.' From the use for which it was intended, 'Bunkatäcke'; in Norrland and Dalecarlia, 'Prastruta,' 'förhörsduk'; in Dalecarlia also 'himmelsakla' when used as a canopy."

This quotation has been given because it is sometimes a help to be able to know to what kind of weaving these Scandinavian authors refer. Last summer in a small town in Wisconsin, the author was privileged to see some of this type of weaving in some very ancient bed covers from Norway. But, unfortunately, it was not possible to obtain photographs of these. As this form of weaving has no name in this country, but is done on the principle of draw-loom weaving, it seems that the easiest name to use for it would be simple draw-loom weaving on a four-harness loom, or, if you prefer it, the Swedish name of "Upphamta."

Because most looms are generally equipped with only short-eyed heddles, the procedure in this article will be described for this type of loom. The Swedish method of weaving in this technique requires a loom equipped with long-eyed heddles, at least $1\frac{1}{2}$ " eyes, and the shed sticks or dowel rods, as they are used in this case, are set at the back of the loom. Illustration No. 1 shows a loom equipped in this way, with the shed-stick dowel rods in place on the supporting frame to hold them up off of the warp threads. If your loom has short heddle eyes — and this is very important — this supporting frame for the shed-stick dowel rods must be attached to the side loom uprights so that it comes toward the front of the loom, and be sure that it does not interfere with the reed and batten. If you only use a pattern for the pick-up which needs four shed-stick dowel rods, you will not need to add any supporting frame to hold them up, as they will not be heavy enough to weigh down the warp threads. So for a short-eyed heddle, four-harness loom, all the extra equipment which you will need will be four flat pick-up sticks about an inch and a half wide, and as long in length, plus two or more inches, as the width of the fabric you are weaving; and also four $\frac{1}{2}$ " dowel rods the length of the width of the loom, and a ball of firm cotton or linen twine with which to tie up the groups of pick-up pattern threads to these dowel rods, or pattern shed sticks.

Because of the interest which has been expressed by nearly everyone who has seen it, in the table runner shown at

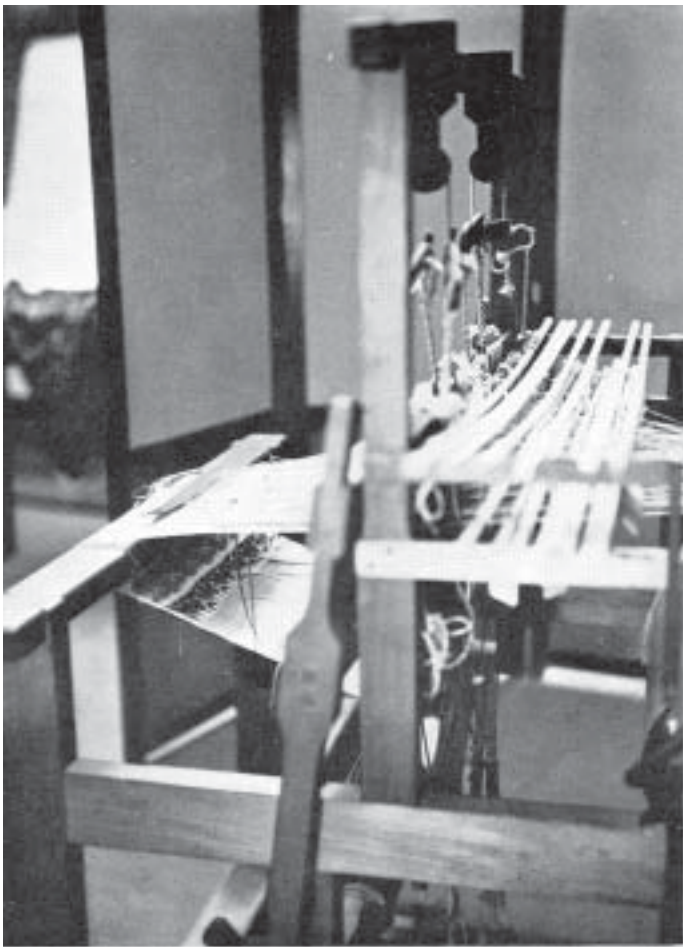


ILLUSTRATION NO. 1

Loom equipped with shed stick dowel rods showing frame supporting them

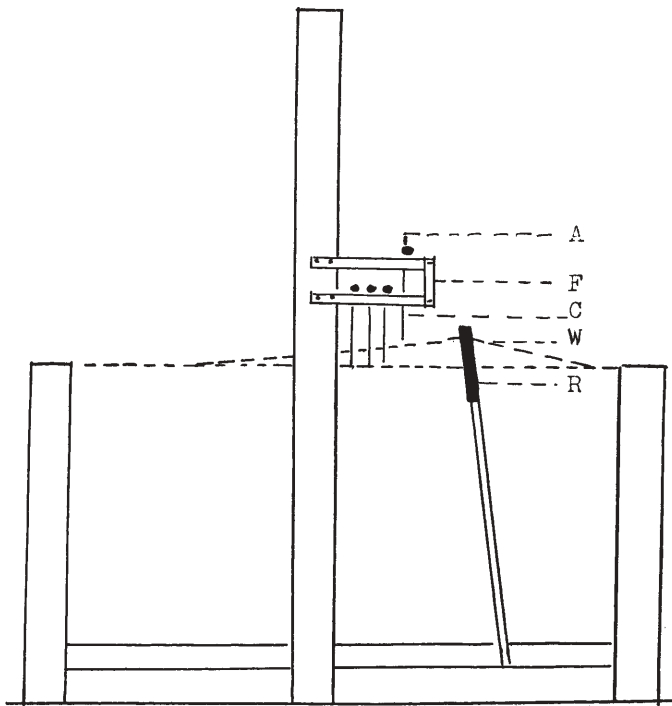


ILLUSTRATION No. 1-A

(a) Dowel rod shed stick No. 1 raised; (f) Frame holding dowel rods; (c) Cords attached to warp threads; (w) Warp threads raised by rod No. 1; (r) Reed and batten of loom

Illustration No. 2, this will be described in detail. The reason why this particular runner has been of interest is first because of its unusual color arrangement, and second to weavers, because its design and style is so different from the ordinary type of hand-weaving generally found in this country.

Description of weaving of table runner at No. 2:

Warp: Use Bernat's 40/2 natural linen, 24/3 cotton, or No. 20 mercerized cotton in natural or beige color. Plan to set this at 24 threads to the inch, or 2 threads through each dent of a 12-dent reed.

Weft: Double strands of Bernat's fabri yarn in brown, henna, orange, orange-yellow, and yellow.

Threading Draft: Any pattern draft may be used which is generally used on any four-harness loom, provided it has a plain tabby shed; or any of the simple threading drafts may be used as given at Illustration No. 3, if desired. The draft used in this case was the simple Herringbone threading at (A). Thread the warp on the four-harnesses in the usual way for the full width of the loom. Sley the reed, and tie up the warp to the front cloth beam as for regular four-harness weaving. Then weave two inches of plain tabby weaving with weft like the warp.

Now we are ready to pick up the pattern on the flat pick-up sticks. Illustration No. 4 shows several different patterns similar to those in some of the Swedish books, but they are original arrangements which have been worked out especially for this particular method of weaving this technique on a four-harness loom with short-eyed heddles. If you study these pick-up pattern drafts you will see how very easy it would be to work out many other variations from these simple arrangements for four shed sticks. And because of the

lack of this kind of pattern, even in the Swedish books, an entirely new field for the designing of this type of weaving is opened up. Pattern (A), (C), and (D) are planned for four shed sticks. Pattern (C) can be used as a repeat as given, or from A to B may be used as a border, and B to C used for a repeat for the center. Draft (D), as given, is just one half of the pattern repeat for the entire width, so that the center of the design is at C. This pattern draft particularly shows how a great deal of pattern interest may be obtained by writing the pattern without many small repeats.

Using pattern Draft (A) of Illustration No. 4, take a flat pick-up stick, and *in front of the reed, pick up* on this 2 warp threads for each *cross* on the draft, and *skip over* 2 warp thread for each *space*. So for stick No. 1, start and pick up the 22nd and 23rd threads from the right edge, for the first cross on the bottom row of the pattern. This makes a plain border on the edge of the pattern weaving.

To continue picking up, skip 4 threads, pick up 4, skip 2, pick up 10, skip 2, pick up 6, skip 2, pick up 10, skip 2, pick up 4, skip 4, pick up 2, skip 4 threads. This finishes the first row of the border, then continue from B to D which is repeated as many times as desired for the center of the runner: pick up 2, skip 6, pick up 6, skip 6 threads and repeat. Care must be taken to have the warp threads counted so that the center warp thread will come at the point C of the pattern. When the required number of border repeats are picked up, repeat from B to A for the border for the left edge. Then leave

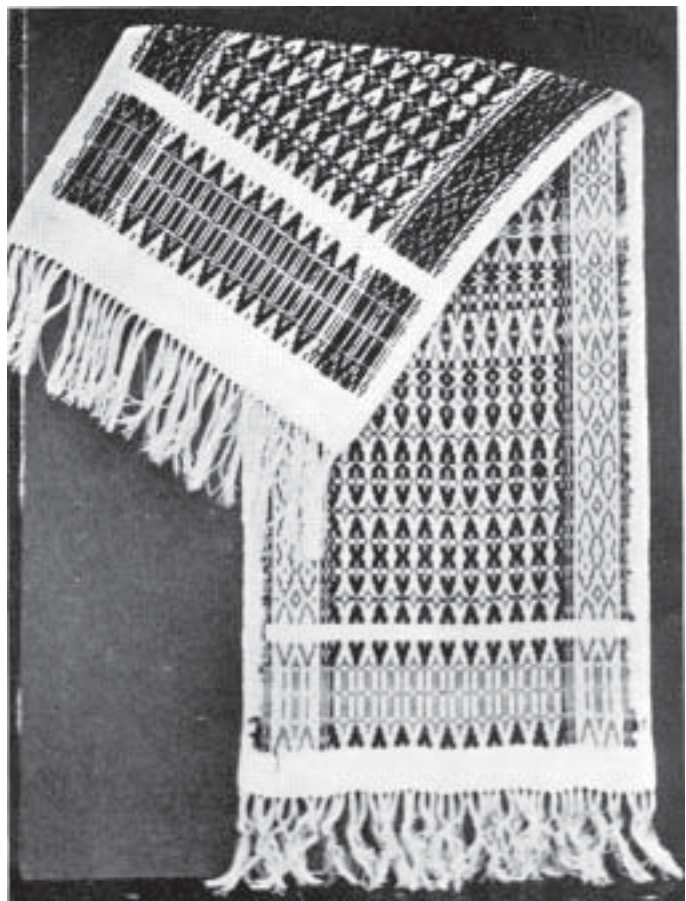


ILLUSTRATION No. 2

Table runner woven by the Simple Draw-Loom Method on a four-harness loom

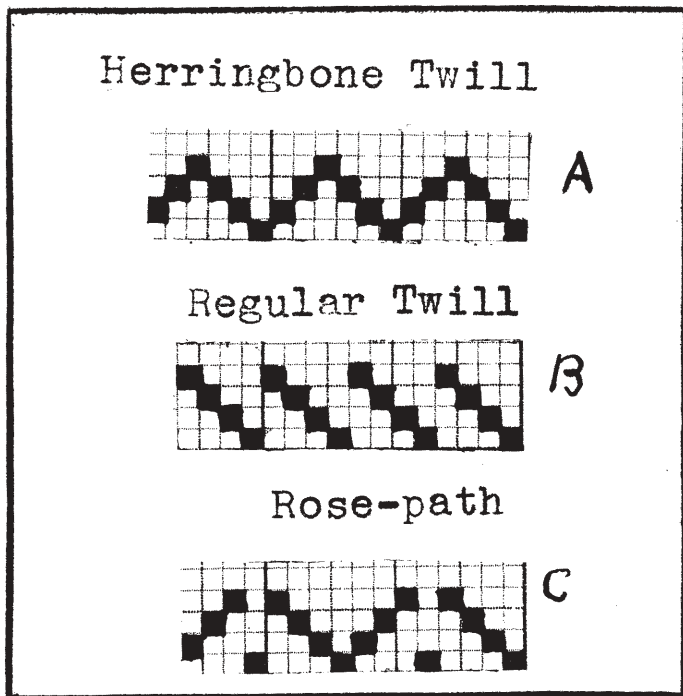


ILLUSTRATION No. 3
Regular 4-Harness threading drafts

pick-up stick No. 1 in as it is, and proceed to pick up the pattern for the second row in the same way, then do rows 3 and 4 in the same way. When row 4 is finished, turn the flat pick-up stick on edge, and in this shed, *back* of the reed, *in front* of the harnesses, place another shed stick. Then proceed to tie up all of the groups of two threads each which are resting on *top* of this last shed stick, to one of the 1/2" dowel rods. The easiest way to do this is to throw a shot of heavy twine from right to left in this same shed, fasten the end of it to the left end of the dowel rod, leaving the right end loose. Pull up a loop of the twine around the dowel rod, so that when it is pulled up it will draw up all the threads on top of the shed stick; hence the name draw-loom type of weaving. Then the right end of the twine may be fastened to the right end of the dowel rod, and a strip of adhesive tape put all across the

dowel rod to hold the loops in place. Then turn flat pick-up stick No. 3 on edge, and in the shed thus made, back of the reed, insert another shed stick, and proceed to tie up the groups of two threads each on top of this stick to dowel rod No. 2. Do the same thing for flat stick No. 2 and No. 1, then you have all your four dowel rods tied up, so that when you pull them up they will raise the pattern shed you desire. These rods may be pulled up in any order you wish, and a shot of plain tabby weaving should be thrown after each shot of pattern weft to hold the pattern together, as in regular over-shot weaving. The numbers 1, 2, 3, and 4 in the description of the weaving of the table runner in Illustration No. 2 refer to the order in which these dowel-rod pattern sheds are raised, and to the number of shots on each: for instance, 1-4x Br means dowel rod No. 1 raised 4 times for four shots of brown pattern weft with alternate shots of plain tabby like the warp between each pattern shot.

Actual order for the lifting of the shed-stick dowel rods for the weaving of Illustration No. 2:

Wide border on each end: Dowel-rod shed stick: 4-4x DBr, 3-4x, 2-4x, 1-2x, 4-2x Y, 1-2x DBr, 1-4x RO, 1-4x O, 1-4x OY, 4-2x Y; center, of wide border, repeat back to beginning in same order. Then weave one inch of plain tabby like the warp, and continue the pattern for the center as follows: 4-4x DBr, 3-4x, 2-2x, 1-2x; 4-2x RO; 1-2x DBr, 2-2x, 3-4x, 4-4x; 1-3x RO; 4-4x, 3-4x, 4-4x, 1-3x; 4-4x DBr, 3-4x, 1-2x; 4-2x RO; 1-2x DBr, 2-3x, 3-4x, 4-4x; 1-3x RO; 4-4x DBr; 4 once RO, 3 once, 2 once, 1 once; 4-4x DBr, 3-4x, 2-2x, 1-2x; 4-2x OY; 1-2x DBr, 2-2x, 3-4x, 4-4x; 4 once OY, 3 once, 2 once, 1 once, 2 once, 3 once, 4 once; 4-4x DBr, 1-2x RO, 2-2x, 3-2x, 4-2x, 3-2x, 2-2x, 1-2x; 4-4x DBr, 1-4x; 2-3x RO, 3-3x OY; 4-3x Y; 3-3x OY; 2-3x O; 1-4x DBr, 4-4x, 1-4x, 4-4x; 1 once RO, 2 once, 3 once, 4 once, 3 once, 2 once, 1 once; 4-4x DBr; 1-3x O, 2-3x O; 3-3x OY, 4-3x, 1-2x, 2-2x; 3-2x Y, 4-4x Y; center of runner, repeat back to the border in the same order, then repeat the wide border for the opposite end of the runner. In these directions DBr means dark brown fabri yarn, RO means red-orange or henna color, O means orange, OY orange-yellow, and Y for yellow.

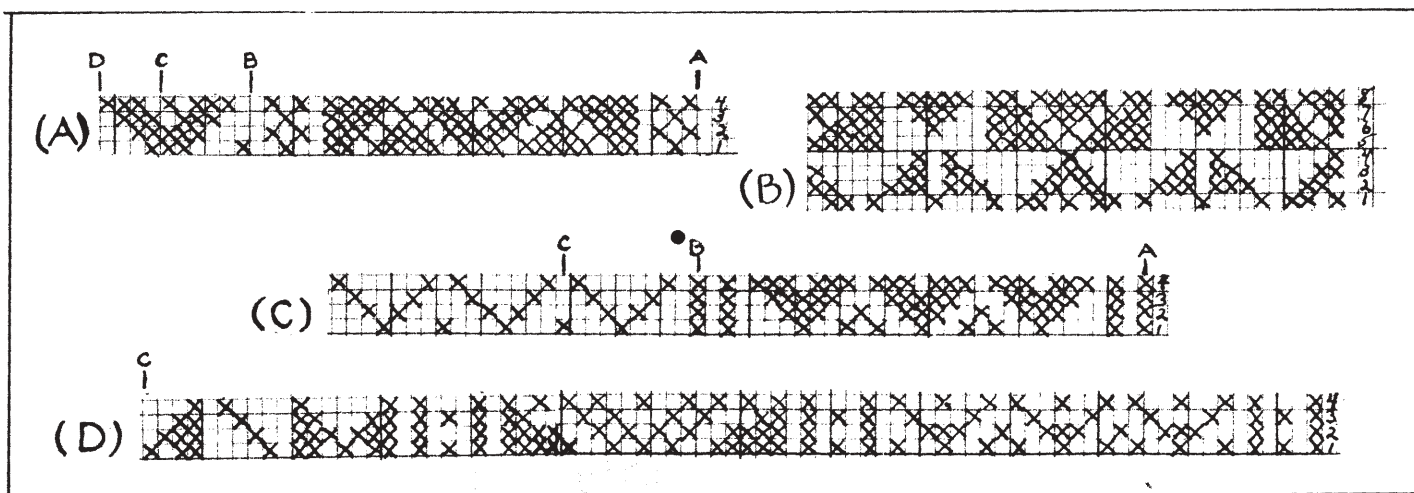


ILLUSTRATION No. 4
Drafts for the Pickup Pattern on shed sticks



ILLUSTRATION No. 5
Border of runner woven after the Italian manner

Another runner which is also very effective, and quite different in character from the one described above, may be woven of dark green heavy linen floss, and light green, for the pattern weft shots, and either light green or light blue weaving special for the tabby all the way through. This piece is not illustrated but is very similar in design to the one described above.

To weave this, proceed as follows: Border (A) — With dark green, one shot on each shed: 4, 3, 2, 1, 2, 3, 4, then five shots of plain tabby.

Border (B) — Continue: 4-4x DG, 4 once LG; 1-3x DG; 1 once LG; 2-3x DG; 2-2x LG; 3 once DG; 3-3x LG; 4-4x LG, 1-2x DG; 2-3x; 3-4x LG, one shot of dark green on each of the following sheds: 4, 1, 2, 3, 4, center of border, repeat in same order back to beginning of the pattern, then five shots of plain tabby, then repeat Border (A).

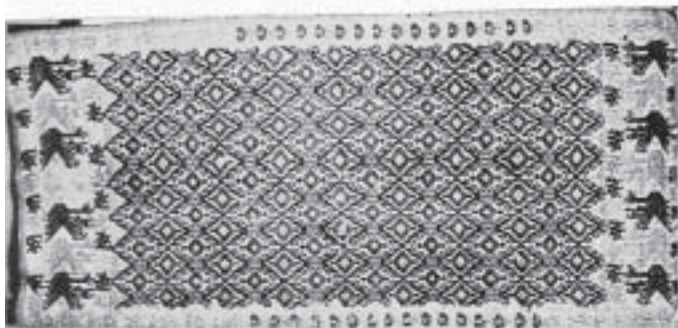


ILLUSTRATION No. 6
Antique Italian table runner

Now Border (C) — 4-6x DG; 1-6x; 2-4x LG; 2 once DG; 3-5x LG; 3-2x DG; 4-4x LG; 2 once DG; 1 once DG; 4 once DG; 3 once DG; 2-3x LG; center of Border (C). Repeat back to the beginning of Border (C), then Border (D) repeated for a length of 10'' for the center of the runner with the lifting of the shed sticks as follows: 3 once LG; 2 once LG; 1-2x LG; 2 once LG; 3 once LG; 4-4x DG. This completes the directions for one half of the runner. Repeat back in the same order for the other half.

At Illustration No. 5 is shown the end of another runner, woven by the author of this article. This is woven after the manner of the Italian design, on a four-harness loom in this same type of technique. Illustration No. 6 shows an antique Italian table runner from the textile collection of the Uni-

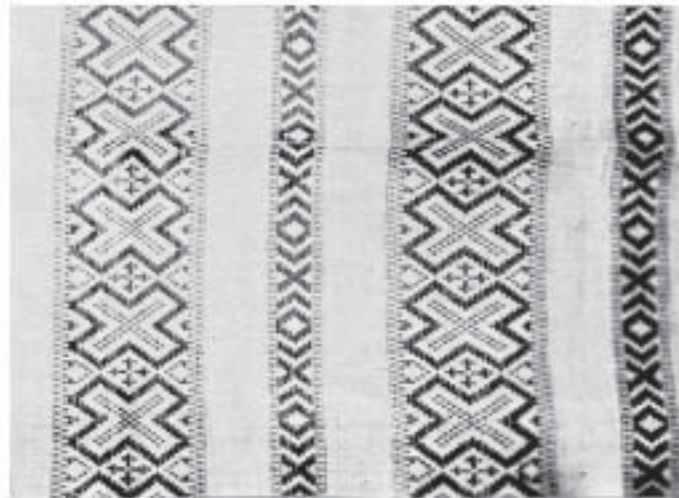


ILLUSTRATION No. 7
Blue and white Swedish linen runner

versity of Wisconsin, which inspired the weaving of the piece shown at No. 5. This antique piece was woven of a heavy homespun yarn in old gold, blue, and brown.

Two other fabrics from this collection are shown at Illustrations Nos. 7 and 8. The one at No. 7 is a Swedish runner in blue and white linen, and No. 8 is a cotton fabric from Guatemala, with the pattern in purple, red and orange silk.

From the illustrations of this type of technique, in the woven fabrics, you will see that this method of weaving simple draw-loom patterns on a four-harness loom offers an entirely new field for experiment and design. It has been a pleasure to offer it to you as a practical way of weaving unusual fabrics that are different. And the simple way in which a four-harness loom may be equipped in order to weave it, makes it of much interest to every weaver.



ILLUSTRATION No. 8
Guatemalan runner of cotton and silk