

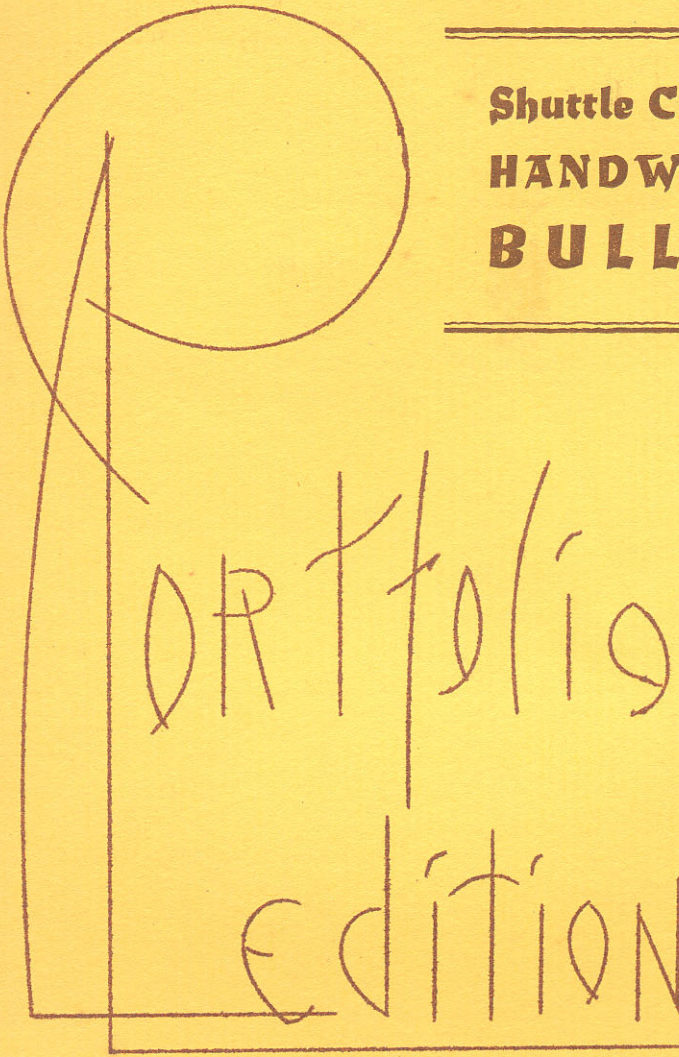
---

---

Shuttle Craft Guild  
HANDWEAVER'S  
BULLETIN

---

---



Portfolio  
Edition

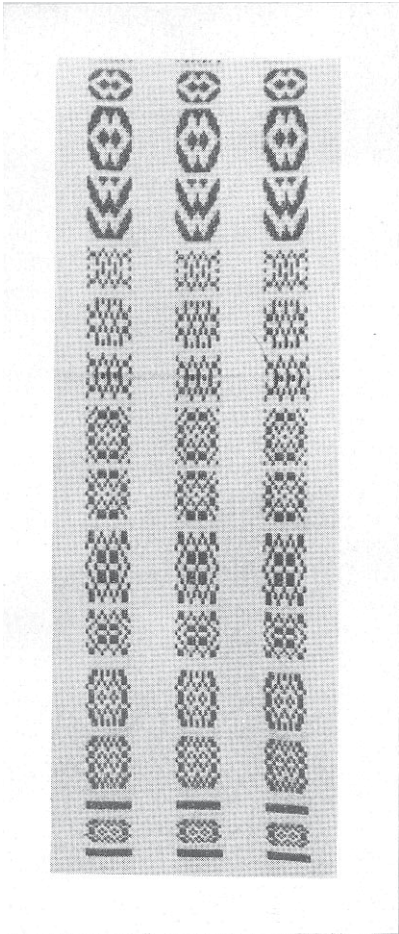
---

---

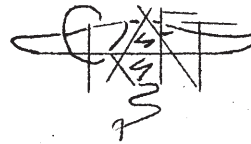
1954  
Vol. XXXI • No. 6  
JUNE

---

---



The Shuttle Craft Guild  
Handweaver's BULLETIN  
Volume XXXI, Number 6  
June 1954



### DESIGNING in WARP-PATTERN

Pattern figures which are to be entirely encircled by space or tabby background may be woven, often with greater ease, variety and speed, if the pattern threads are placed in the warp and a one-shuttle weave is used, than if the more common two-shuttle pattern threading is used. This technique, known as Warp-Pattern weaving, is facilitated if the loom has two warp beams, but the use of a single warp beam is quite plausible with a special type of handling. The weave has the fundamental threading limitation of other pattern weaves which avoid half-tones in the design, that only two pattern blocks may be threaded on four harnesses. However, it has an advantage on four harnesses of more control over the pattern areas, enabling the weaver to use a very simple and rapid pick-up method for producing patterns of any desired intricacy. Therefore the 4-harness weaver, even with a single warp beam, will find the Warp-Pattern method desirable for producing patterns entirely encircled in space, or vertical pattern stripes. The 6, 8 or 10-harness weaver will find that warp-pattern threadings give him one of the fastest weaves, and if his loom has

---

Published monthly in Kelseyville, California, by Harriet and Martin Tidball, The Shuttle Craft Guild, and sent to all Shuttle Craft Guild members along with other publications.

two warp beams, the Warp-Pattern is probably the fastest, most efficient pattern weave there is. The weave requires individual control over each harness, so it is for the jack-type rather than the counter-balanced loom.

Warp-Pattern weaving requires a base warp similar to the warp which would be used for a weft-pattern threading of the more common variety. This is beamed at the same number of ends per inch as it would be for the other weaves, but all of the warp is threaded to harnesses 1 and 2 alternately to weave a plain tabby fabric. The pattern threads are added as a superficial warp and are most commonly set at half the spacing of the base warp and are threaded according to the pattern draft, on the remaining harnesses.

The advance designing involves the determination of the width of the pattern figure or stripe desired, to arrive at the number of pattern threads required (one half the number of base-warp threads in that area). Next the distance between pattern stripes must be determined in order to establish the spacing of the pattern stripes. This spacing need not be uniform across the entire warp, nor do the stripes need to be of uniform widths, so the designer weaver will find that the Warp-Pattern weave provides one of the easiest methods there is for controlling designs and making original arrangements. The drafting requires merely that the base warp be threaded on harnesses 1, 2 alternately, and that in the areas where pattern stripes occur a pattern warp end is threaded to any one of the pattern harnesses (harnesses 3 and up) following each thread on harness 2, making the order of threading: 1, 2, pattern, repeated throughout the stripe. The base warp is best sleyed 2 per dent throughout, and the pattern threads are added over this, giving a sley of 3 per dent in the pattern areas.

The Point arrangement -- that most versatile of pattern threadings -- was adapted for the textile designed for this BULLETIN and the PORTFOLIO samples. Instead of a plain Point threaded 3,4,5,6,7,8,7,6,5,4,3, however, we varied the proportions somewhat to add interest to the design and to permit the weaving of a graceful, vine-like pattern stripe. The warp was Pearl #10 cotton (LILY Art 114) light olive (1451), set at 24 ends per inch. Pearl #5 was selected as pattern warp material (size 20 Floss is also excellent) and was threaded in the following draft:

21 ends	888		888	F
	77		77	E
	66		66	D
	5		5	C
	4		4	B
	333			A

A slight color gradation was used to give added interest. The 3 center threads on harness 3 were rust (1260), the threads placed on harnesses 4, 5, 6, 7 were lacquer (617), and those on harness 8 were 2 ends of dark orange (1261) and one of crab apple (1453). The above draft is a Profile draft and the actual threading is:

repeat in center  
reverse

									8	8	3
						6	6	7	7		
				5							
			4								
3	3	3									
2	2	2	2	2	2	2	2	2	2	2	2

with the light olive base warp on harnesses 1 and 2 and the orange colors of pattern warp on harnesses 3,4,5,6,7,8. These 21 pattern warps were set up on a creel and beamed sectionally on the lower beam of

a double-beam loom, in each alternate section only. The base warp was beamed at 24 ends per inch on the top warp beam. The sley in the plain areas was 2 per dent in a 12-dent reed, and in the pattern areas it was 3 per dent.

If a 4-harness loom had been used for this pattern, the Profile threading would have been made:

444 44 4 4 44 444 B This threading necessitates  
 33 3 333 3 33 A the use of a pick-up stick  
 in producing the more intricate patterns, but with each pattern block threaded on alternate harnesses, the pick-up is easy. Harnesses 3 and 4 are tied to a single treadle, but the tie for harness 4 is cinched up a little higher so that these threads will lie on a slightly higher level in the shed to show the block divisions without the necessity for counting threads.

If a single warp beam is used, the two warps may be wound together on pegs or reel for chain warping. In beaming, the beam should be well padded with stiff paper, corrugated cardboard or sticks to keep the tension uniform throughout. Sectional beaming is not satisfactory for single-beam Warp-Pattern unless the pattern warp is used across the entire width, as the stripe areas build up thickly on the beam causing a distortion of the tension of the base warp. As the fabric is woven off, there is a greater warp take-up in the base warp than in the pattern warp, necessitating a special method of handling, which will be discussed later.

The tie-up for Warp-Pattern weaving is very simple and easy to understand, regardless of the number of harnesses involved in the threading. The first step is to make a tie-up on two right-hand treadles which will weave tabby on the base warp. This is done by attaching harness 1 to the a treadle and harness 2 to the b treadle. The Skeleton

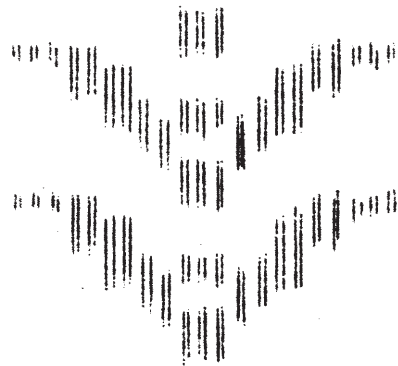
tie-up for the pattern harnesses is the most convenient, at least for experimental work. This is made by attaching harness 3 to treadle 1, harness 4 to treadle 2, harness 5 to treadle 3, and so on until each pattern harness has been attached to a single treadle.

All weaving is done in tabby, on treadles a and b alternately (that is, by raising harnesses 1 and 2 alternately). The pattern threads are brought to the surface as desired simply by raising the harness or harnesses which control the ones wished on the surface. To weave a pattern, depress the treadle (or treadles) with the left foot which bring the desired pattern threads to the surface. Then, with the harness or harnesses raised, treadle a then b, throwing a tabby shot in each shed and beating in the usual manner. In most cases a single design unit should be woven with 2 tabby shots, since the threading has 2 base-warp ends for each pattern end. For longer blocks, throw 4, 6 or 8 tabbys under the lefted pattern threads. Throughout the weaving of a pattern block the pattern harnesses are kept in the raised position by keeping the left foot on the pattern treadle (or treadles) while the right foot treads the alternate tabbys.

For weaving patterns in pick-up, the threading may be made on 3 harnesses, threading the base warp in the usual manner and placing all of the pattern-warp threads on harness 3. For making pick-up patterns on 3 or 4 harnesses, raise all the pattern threads; with a pointed pick-up stick, working from right to left, pick up the threads desired for the pattern. Then release the treadle and treadle a, b, throwing a weft shot in each shed. Remove the pick-up stick and beat both tabbys into place. The pick-up stick will hold the pattern-warp threads on top of the warp while the tabby shots are thrown. This same method may be used on a multiple-harness threading to increase the pattern complication.

Innumerable space-encircled and stripe designs may be woven on the draft given on page 3. A sampler of 4" of base warp and one pattern stripe will be rewarding. The designs below will serve as starting suggestions. The treading directions are read, "Raise harnesses \_\_\_\_\_ and treadle \_\_\_ tabbys."

See PORTFOLIO sampler.



Raise 3, treadle 2 tabbys  
 3-4, 2  
 4-5 2  
 3-4-5-6 2  
 3-5-6 2  
 6-7 4  
 7-8 2  
 repeat



Raise 3-4-5-6-7-8, treadle 4



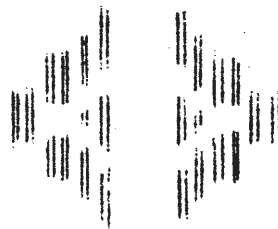
Raise 3, treadle 2 tabbys  
 3-4 2  
 3-4-5-6 2  
 6-7 2 CENTER  
 reverse



Raise 7-8, treadle 2 tabbys  
 6-7 2  
 7-8 2



Raise 3, treadle 2 tabbys  
 3-4 2  
 4-5 2 CENTER  
 reverse



Raise 4, treadle 2 tabbys  
 4-5 2  
 4-5-6 2  
 5-6 2  
 4-6-7 2  
 4-5-7 2 CENTER  
 reverse.



The sampler illustrated in the photograph was woven by Mrs Robert S Leather as part of the requirements for the Warp-Pattern lesson in the Advanced Home Study Course. The draft Mrs Leather devised for this study was;

	83	88		F	
	77	77	77	77	E
	66	66	66		D
	55		55		C
	44		44		B
33				33	A

Only a portion of Mrs Leather's sampler is shown. The borders, reading from bottom to top, are:

(1)

With harnesses 5-6-8 raised, treadle 4 tabby shots  
 4-7 4  
 3-6 4  
 4-5-8 4  
 4-5-7 4 CENTER  
 reverse.

(2)

With harnesses 5-6-8 raised, treadle 4 tabby shots  
 4-5-7 4  
 3-6 4  
 4-5-8 4  
 4-5-7 4  
 3-6 4 CENTER  
 reverse

(3)

With harnesses 5-6-8 raised, treadle 6 tabby shots  
 4-5-8 4  
 4-5-7 4  
 3-6 4  
 4-5-8 4  
 4-5-7 4 CENTER  
 reverse.

(4)

With harnesses 4-5-8 raised, treadle 4 tabby shots  
 4-5-7 4  
 3-6 4  
 5-7-8 4  
 3-7-8 4  
 3-6 4 CENTER  
 reverse.

(5)

Same as (4) but 6 shots on each shed.

(6)

With harnesses 4-7-8 raised, treadle 4 tabby shots  
 5-7-8 4  
 3-6 4  
 4-5-7 4  
 4-5-8 4  
 3-6 4 CENTER  
 reverse.

(7)

With harnesses 3-6 raised, treadle 4 tabby shots  
 5-7-8 4  
 4-7-8 4  
 3-6 4  
 4-5-7 4  
 4-5-8 4  
 3-6 4 CENTER  
 reverse.

(8)

With harnesses 3-8 raised, treadle 6 tabby shots  
 4-5-7 6  
 3-6 6  
 6-8 6 CENTER  
 reverse.

(9)

With harnesses 6-8 raised, treadle 6 tabby shots  
 3-6 6  
 4-5-7 6  
 3-8 6 CENTER  
 reverse.

(10)

With harnesses 3-8 raised, treadle 4 tabby shots  
 4-5-7 4  
 3-6 4  
 6-8 4  
 3-8 4 CENTER  
 reverse.

(11)

With harnesses 6-7-8 raised, treadle 4 tabby shots  
 5-6-7 6  
 4-5-6 8  
 3-4-5 4  
 3-4-8 4  
 3-7-8 4  
 repeat.

(12)

With harnesses 6-7-8 raised, treadle 4 tabby shots  
 5-6-7 6  
 4-5-6 8  
 3-4-5 4  
 3-4-8 4  
 3-7-8 4  
 6-7-8 4 CENTER  
 reverse.

(13)

Same combinations and order as (12), but with two tabby shots each time.

Four-harness weavers with jack-type looms will find that all of these patterns are easy to make by the pick-up method. For pattern (10), for instance, raise all 30 pattern ends. Pick-up on a stick the first 2 threads, skip 3, pick up 2, skip 6, pick up 2, skip 8, pick up the last 2. For the second line skip 2, pick up 4, skip 2 pick up 2, skip 2, pick up 2, skip 2 pick up 2, skip 2, pick up 2, skip 2, pick up 4, skip 2. For the third line, pick up 2, skip 4, skip 6, pick up 2, skip 6, pick up 2, skip 4, pick up 2. And so on. The pick-up will be facilitated if the pattern is threaded 2, 2 on harnesses 3 and 4 as suggested earlier, the tie-up made uneven.

USING A DOUBLE-BEAMED WARP

For a loom with a single plain beam, make a chain warp, following the exact threading order in winding the warp on pegs or a reel. Beam the warp by the raddle method or by sleying and threading before beaming, though the former method is to be preferred because of the closeness of the warp set in the pattern areas. After the weaving has proceeded a short distance it will be noticed that the tension on the pattern threads is loosening. To control this, raise the pattern harnesses and insert a lease stick behind the harnesses, under the pattern-warp threads. Carry the stick to the back beam and tie it in place, to add tension to the pattern warp. When further slack occurs, add another stick to build up the padding and continue this until there is sufficient slack to permit the insertion of a 1-inch hardwood dowel or a broom stick. Carry the dowel around the back beam to the under side of the <sup>warp</sup> beam. As the warp loosens more, attach two short loops of stout cord to the loom-frame stretcher at the base, under the warp beam, one at each side. Tie a long, double length of the same cord at each end of the dowel. Then make a snitch-knot with each loop and cord, tensioning the dowel strongly. Hereafter, each time the pattern warp tension loosens or the position of the warp is changed, snitch up the knots to keep an even tension on both warps. Be sure to loosen the tension on the snitch knots before cutting a length from the loom. The warp beam must be very heavily padded during the beaming of the tension on the base warp will not be even.



For a loom with a single sectional beam, the warp must be beamed from a chain exactly as if the beam were plain. To guide the warp between the pegs on the beam a guide-board may be made which has pegs each two inches, placed exactly as they are on the sectional beam and the same size or slightly larger. This guide-board is clamped to the back beam to guide the warp between the beam pegs. It actually does no harm to the back beam to drill the holes for the pegs directly in it, though the positions must be absolutely exact. The pegs may then be put in as needed and removed later. A sectional beam which has rounded steel pegs (as on the Macomber loom) needs no guide board as the warp ends slide down the pegs causing no trouble. After beaming, handle as with the plain warp beam.

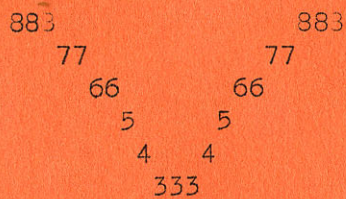
For a loom with two warp beams the double warp presents no problems. A double warp beam loom should also have a double back beam. Beam the base warp first, either sectionally or by the chained method. Carry this warp around the front one of the pair of back beams, between the two, that is. Beam the pattern warp on the lower warp beam and carry it around the outside back beam. Tension between the two warps is the problem for any double warp and the necessary perfect tensioning requires that at least one of the warp beams be controlled by a friction brake rather than a ratchet and prawl. The most efficient arrangement is to have brakes on both beams as a good brake always operates more efficiently than the ratchet control. In tensioning the warp, it is best to tension the base warp first and then adjust the tension of the pattern warp to this. However, if the beam holding the base warp has a brake and the pattern-warp beam a ratchet, this must be reversed. Should the loom have a sectional warp beam with ratchet at the bottom and a plain beam with brake at the top, beam the pattern warp first on the plain beam and carry it between the two back beams, and place the base warp on the sectional beam.

Threading the double-beamed warp may proceed in the usual manner, taking each thread in order but working from both beams simultaneously. However, it is usually more efficient to thread the entire base warp first (if it is beamed on the top beam of a two-beam loom). This necessitates following the pattern and pushing the heddles which are to hold pattern threads into position as the threading proceeds. Secure the warp in front of the heddles with loop knots. When the entire base warp is threaded, raise all of the pattern harnesses and secure them. In most cases this may be done by placing a dowel or a stick under the jacks, but with push-up harnesses place the dowels on top of the first two harnesses and under the top heddle bars of the pattern harness or harnesses. Then thread above, and between, the base warp. Make the tie-in with small groups of both warps together. If the pattern warp is placed on the top warp beam, thread this first. It will not be necessary to push the base-warp heddles into position as threading proceeds. Then thread the base warp, pushing the threaded pattern heddles into place.

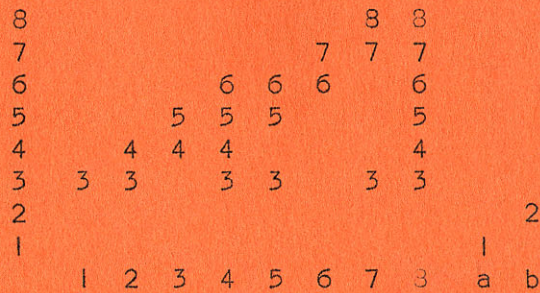
The Warp Pattern Weave has the limitation of producing a single-surface fabric, since the pattern threads float on the under surface where not involved in surface designs. If desired, it is possible to bring the long floats to the surface as half tones from place to place, but this system usually destroys the beauty of the designs. In most cases the fabrics are excellent for draperies -- much better in fact than space-encircled weft patterns, as the extra warp gives a fine draping quality. The technique can be delightful for skirt fabrics with vertical stripes, and it makes lovely wall hangings and also bag fabrics. For upholstery and sofa cushions it is desirable to avoid long surface floats. Elaborate wall hangings of great beauty may be made on a full-width pattern warp, using the pick-up method which progresses much more rapidly than the Finnweave.

We had planned to weave small samplers of the designs given on page 6 of the BULLETIN. But realizing that both the designs and the treadling directions are already shown, we were easily distracted by the charming tree which developed on our large sampler and decided to give you something just plain pretty.

PROFILE DRAFT



TIE-UP



TREADLING DIRECTIONS

Tabby heading,  
 With treadle 8 pressed, tabby 6 shots,  
 Tabby 4 shots,  
 Press each of the following treadles in the order given, and throw two tabby shots under each shed:  
 8, 1;  
 1, 2, 3, 4, 5, 6, 7;  
 1, 2, 3, 5, 6, 7;  
 1, 2, 3, 4, 6;  
 1, 2, 3, 4;  
 1, 2, 3;  
 1 - 6 shots;  
 Tabby to next figure.

