

THE SHUTTLE-CRAFT GUILD

BULLETIN

Basin, Montana

for
January, 1934

Coverlets

January has always been "coverlet time" in the Guild. The making of a coverlet is still the great adventure in hand-weaving, and the shut-in days of January are a fine time for the adventure, -- whether a first coverlet or a tenth or hundredth.

A coverlet is not a difficult thing to make. In fact it actually takes less skill than many of the small things we make -- linen towels or hand-bags for instance. And a coverlet does not take a tremendous amount of time, either. Far less time, for instance, than the knitting of a sweater. And when made it will be good for many years of honorable service. What's more, it is great fun to make a coverlet and a real thrill to take it off the loom.

We have a great wealth of coverlet patterns, -- patterns to suit all tastes. The classic "four-harness overshot" is of course what one thinks of first when one hears the word "coverlet," and here are a few arrangements for coverlets in this weave, based on drafts in the Shuttle-Craft Book:

No. 1. Draft 108, page 190. The draft was written from a very handsome old piece seen in Cambridge, Massachusetts, -- woven in dull green and rose-tan. The tan was perhaps originally a stronger rose that had faded to a much more charming shade. A coverlet similar to this one is illustrated in Eliza Calvert Hall's "Book of hand-woven Coverlets." I am unable to give the page reference as this is one of the books borrowed from our library and not returned, but it will, I think, be easy to identify it. The effect is different from most coverlet patterns because the center of the coverlet is done in a small, simple figure and the chief excitement is in the border. It is a becoming coverlet for a bed with high sides.

Warp in Egyptian cotton 24/3 set at 30 ends to the inch. Use the same cotton for tabby, and for the pattern use homespun yarn or Shetland yarn in two colors.

Thread as follows: One complete repeat of draft No. 108	- - - - -	464	threads
From thread 421 to the end (44 threads)	18 times,	792	"
Threads 421 - 432 (seam)		12	"
		<u>1268</u>	"

Weave as-drawn-in, weaving all shots on treadles 1 and 4 in the darker of the two weft colors, and all shots on treadles 2 and 3 in the lighter shade.

This coverlet is equally handsome on both sides.

Coverlet No. 2. Draft No. 141, page 200, is another of the less common Colonial patterns that lends itself well to weaving in two colors. Two strongly contrasted colors may be used with good effect. Materials as for coverlet No. 1.

Thread as follows: Selvage, 1,2,3,4,1,2,3,4	- - - - -	8	threads
Border: last 12 threads of draft, ten times		120	"
Complete pattern, twice		844	"
Threads 1 - 310 (seam)		310	"
		<u>1282</u>	

Weave as-drawn-in, all shots on treadles 1 and 3 in the darker of the two weft colors and all shots on treadles 2 and 4 in the lighter shade.

This coverlet also is handsome on both sides.

I have been asked several times to suggest a coverlet arrangement for the Structo #600 loom. It is entirely practical to weave a coverlet on this little loom, but of course it must be made in four strips instead of two and takes more weaving time than a coverlet made on a large loom.

To make coverlet No.1 on the Structo loom thread as follows:
 One complete repeat of the draft - - - - - 464 threads
 Last 44 threads of the draft, three times 132 "
 596 "

To take care of the extra threads, thread 1,2,3,4, before beginning the pattern threading. Weave two strips, following the pattern as-drawn-in. Then rethread as follows:
 Thread 442 to end of draft - - - - - 23 threads
 Last 44 threads of the draft thirteen times 572 "
 595 "

Five threads will be left over, but this cannot be avoided. They should be rolled on a spool as the warp is unwound to prevent snarls. Weave the two middle strips of the coverlet on this threading, treadeling however exactly as the side strips were woven.

Coverlet 3. A special pattern designed for a Structo coverlet is shown at (a) of the diagram on page three. This is an arrangement in Summer and Winter weave, and when woven as indicated produces an effect that cannot be woven on a large loom on less than eight harnesses. The warp should be Egyptian cotton 24/3 set at 30 ends to the inch. The tabby may be like the warp or a finer cotton -- #20 perle cotton for instance. Pattern weft, "Fabri" or a similar yarn, all one color, and white.

Weave two strips as follows: Lever 2, once; lever 1, once. Repeat for 84 shots.
 Levers 2-3-4, once; levers 1-3-4, once. Repeat for 84 shots
 Lever 2, once; lever 1, once. Repeat for 8 shots

Levers 2-3-4, once; levers 1-3-4, once. Repeat for 8 shots.	}	Six times
*Levers 2-3 once; 1-3 once. Repeat for 8 shots		
" 2-4 " 1-4 " " 8 "	}	Six times
" 2-3 " 1-3 " Repeat for 84 shots		
" 2-4 " 1-4 " " 84 "	}	Twice
" 2-3 " 1-3 " Repeat for 8 shots		
" 2-4 " 1-4 " " 8 "	}	Six times

Lever 2, once; lever 1, once -- in white. Repeat for 336 shots.
 Repeat from *. Repeat pattern square. Repeat border in reverse.

Weave the middle strip in the same manner, but after the border and the first set of twelve small blocks weave the 336 shots in white and then the pattern square. Repeat the white shots, pattern square, white shots, twelve small blocks, and border, -- in reverse. Reference to the illustration will make this clear. Now divide the warp in the center, and using four shuttles weave the border strips, as follows:

Bottom border as for the other strips. Then: 2-3, once -- right hand strip
 2-4 " -- left " "
 1-3 " -- right " "
 1-4 " -- left " "

Repeat for the full length of the coverlet to the top border. Weave top border like the bottom border, but in reverse.

This pattern, though not "modernistic", follows the present day trend, which is toward large, plain figures. It will be found effective and out of the ordinary. If desired the white parts of the pattern may be woven in tabby in white wool instead of in the pattern skip as indicated. The tabby sheds in this weave are: 1-2 and 3-4.

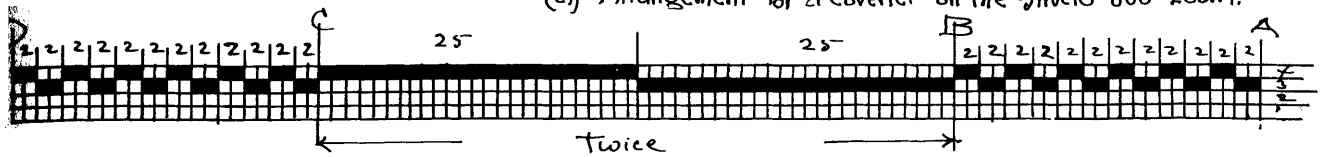
This pattern may be woven on a large loom in two strips on eight harnesses as indicated on the diagram.

The crackle weave is an excellent weave for coverlets. Several patterns of this type have appeared in the Bulletin and a number are contained in the Recipe Book. A particularly handsome arrangement of a Colonial coverlet pattern in this new weave is included in the eleventh set of Recipes which is nearing completion and will be issued some time in January, I hope.

For a coverlet in summer and winter weave on a large four-harness loom an excellent pattern is "Queen's Patch," -- draft No. 162, page 218 of the Shuttle-Craft Book. An illustration showing this pattern will be found at (1), page 141.

A "Patchwork" Pattern for a Coverlet in Summer and Winter Weave

(a) Arrangement for a Coverlet on the Structo #600 Loom.



Thread Pattern (a) as follows:

Selvaige, 1, 3, 2, 4

Complete pattern: A to B; B to C—twice; C to D. 148 units

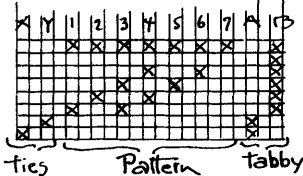
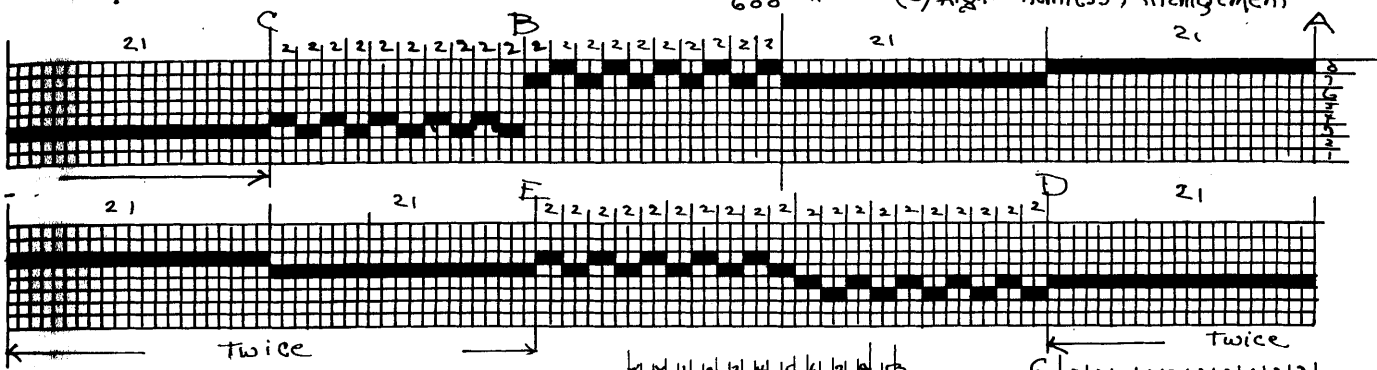
Selvaige, 1, 3, 2, 4

4 threads

592

600

(b) Eight Harness Arrangement



"X-Y" tie-up

ties Pattern Tabby

Thread Pattern (b) as follows:

Selvaige: 1, 3, 2, 4, 1, 5, 2, 6, 1, 7, 2, 8

Border: A to B—62 units

Pattern: B to C; C to D—twice; D to E

E to F—twice; F to G. 248 units

12 threads

248

992

1252

Weave Pattern (b) as follows: Borders

Treadles x and B once } 84 shots

Y " B " } 84 shots

Treadle x " 7 " } 84 shots

Y " 7 " } 84 shots

Treadles x and B once } 8 shots

Y " B " } 8 shots

Treadle x " 7 " } 8 shots

Y " 7 " } 8 shots

Repeat Five times

Pattern—First Figure—

Treadles x and 4 once } 8 shots

Y " 4 " } 8 shots

X " 3 " } 8 shots

Y " 3 " } 8 shots

X " 2 " } 84 shots

Y " 2 " } 84 shots

X " 1 " } 84 shots

Y " 1 " } 84 shots

Repeat Five times

Repeat twice

Pattern—Second Figure—

Treadles x and 4 once } 8 shots

Y " 4 " } 8 shots

X " 3 " } 8 shots

Y " 3 " } 8 shots

X " 4 " } 8 shots

Y " 4 " } 8 shots

X " 5 " } 84 shots

Y " 5 " } 84 shots

X " 6 " } 84 shots

Y " 6 " } 84 shots

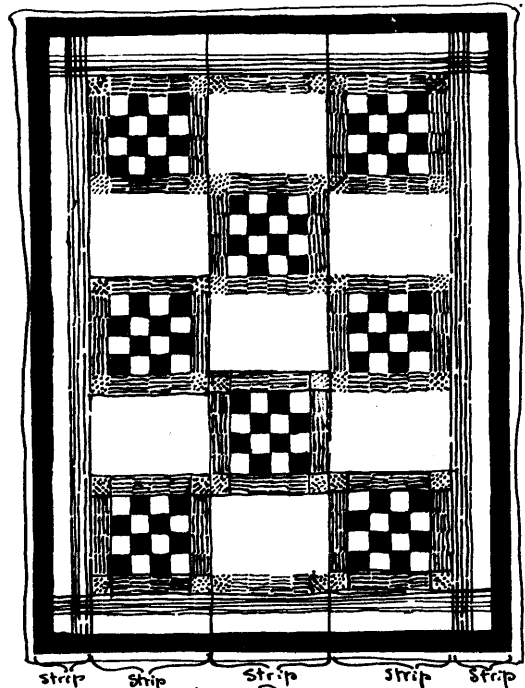
X " 3 " } 8 shots

Y " 3 " } 8 shots

Repeat twice

Repeat Pattern three times

Sketch of Coverlet



The sketch above shows Pattern (a)
 Pattern (b) is the same except that each breadth covers a full repeat—two complete figures.
 The finished coverlet is four figures wide in—
 stead of three figures wide as shown.

Coverlet No.4. Draft 162, page 218. Warp Egyptian cotton 24/3 set at 30 ends to the inch. Tabby like the warp or in a finer cotton. Pattern weft "Fabri" or similar yarn. Thread as follows: Three repeats of the complete draft - - - - 1068 threads
 First 220 threads of the draft (seam) 220 "
 1288 "

This pattern does not require a border, though if desired the small one-unit blocks with which the pattern begins may be repeated a greater number of times on the border edge.

If a larger figure is desired, double each block of the pattern. That is, make all the one-unit blocks of two units and all the four-unit blocks of eight units. This, of course, gives a repeat of 712 threads. Thread one repeat and then to the seam -- 440 threads more. To make the strip wider thread additional two-unit blocks at the border edge.

A coverlet in summer and winter weave is much closer in texture than a coverlet in overshot weaving and when made of the materials suggested is much lighter in weight. For a heavier coverlet in summer and winter weave, warp in 10/2 cotton set at 24 ends to the inch. Tabby, Egyptian cotton 24/3. Pattern weft, homespun or Shetland yarn.

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One of our Guild members, Mrs. Annette K. Easmon, who lives in Sierra Leone, West Africa, has recently sent me some interesting pieces of native weaving. These are done in tapestry weave and in "pick-up" or embroidery weaving. Some of these pieces are extremely effective and the technique is one we could use for our purposes. I intend to describe these in the next Bulletin.

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The travelling exhibit is making its deliberate way around the circle, and at this writing is in the south-east. The general opinion appears to be that it is more interesting than last year. In answer to questions: The large couch-cover that is part of my own exhibit was woven on the "Botanical Garden" pattern from the Recipe Book -- Series V, No. 11 -- each block of the pattern being threaded twice as large as shown on the draft. It was woven on my large ten-harness MacKay loom and the plain border was put on the two additional harnesses. The warp is black spun silk set at 30 ends to the inch; tabby black novelty rayon; pattern weft rayon "art silk" in old gold and Scotch handspun yarn in burnt orange. The structural lines of the design, stems and branches of the tree, etc., are done in rayon and the other parts of the design in wool. While the piece was on the loom it was hard to tell whether or not the effect would be good as the figures are so large. When taken off and hung on the wall, however, it appeared quite gorgeous, and certainly out of the ordinary.

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I am planning to spend January and February in Bozeman, Montana. Mail, of course, will reach me if addressed to Basin as usual, but will reach me more promptly if addressed to me at 121 North Willson Street, Bozeman, Montana. Please note that no mail or express should be sent to the Helena, Montana, address. Basin is the permanent address.

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Information has come to me that many of the leading department stores in our large cities are considering introducing looms and hand-weaving. This will be a fine thing for our craft if it is done properly. There is, however, the danger that in trying to popularize the craft a poor loom may be used -- on account of price. A loom that won't weave is a waste of money, no matter how cheap it is, and is a source of annoyance and disappointment instead of pleasure. In my opinion a really good hand-loom cannot be "cheap." It must be solidly constructed, and it is a fairly intricate bit of mechanism. The cost of a loom does no doubt deter some people from becoming weavers, but there is this advantage -- those who do buy a real loom really intend to weave, and are not triflers. I should like to suggest that Guild members watch for this department store development in their own communities. If the project goes through there will be an opportunity for many skilled weavers to "demonstrate" and give instruction.

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May M. Atwell

THE SHUTTLE-CRAFT GUILD

BULLETIN

Basin, Montana

February, 1934

As promised last month the February Bulletin is "going African." One of our Guild members, Mrs. Annette K. Easmon, who lives in Sierra Leone, West Africa, has sent me some very interesting pieces of native weaving that, I believe, hold suggestions we can use in our own work.

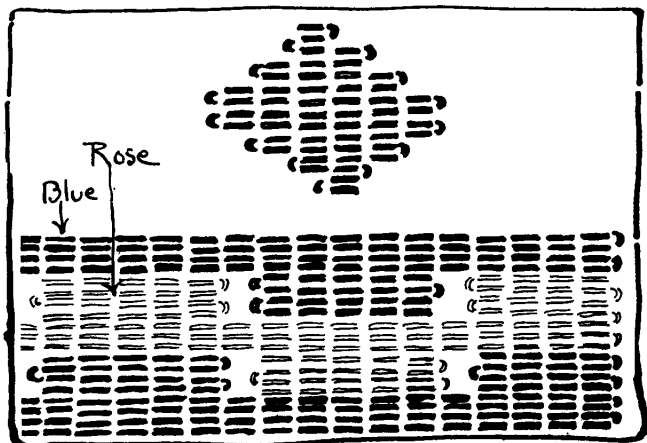
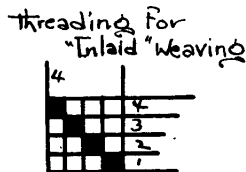
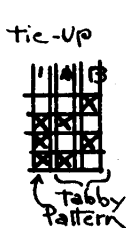
In the pieces sent me three different techniques are apparent: a simple form of tapestry weaving not unlike Mexican weaving; a form of pick-up weaving that has delightful possibilities; and a form I shall call "inlaid" weaving that is a little different from "embroidery" weaving though similar in some ways.

The tapestry pieces though attractive show nothing very unusual. They are done in the interlocked manner. That is to say, threads of adjoining figures are returned around the same warp-thread so that there are no slits along the perpendicular lines of the figures as in Kiz-Killam work. The figures are simple geometric forms that suggest Navajo work. For lack of space I do not propose to describe these pieces in detail.

The "inlaid" weaving is done in a fairly coarse strand of colored material over a foundation in plain tabby weaving. Only one pattern shed is used -- a shed that raises every fourth thread of the warp. The pattern figures are produced by weaving back and forth over the figures through this shed. The pattern weft therefore lies on the surface of the fabric tied in at four-thread intervals by a single warp-thread. The pattern weft shows only as small dots on the wrong side of the fabric.

The border illustrated below is done in a double strand of dull blue and madder rose in a soft hand-spun cotton a little coarser than the warp. The warp is a natural hand-spun cotton about the weight of a 10/2, set at 16 ends to the inch. The tabby parts of the piece are woven in a double strand of material like the warp. Two tabby shots are thrown between the shots of pattern weft, and the pattern weft is not carried to the edges, even on the shots that go all the way across the warp but are returned under the single "stitching" thread that holds the pattern weft in place.

This form of weaving may be done on an ordinary twill threading as shown below, and the technique, I believe, might be used effectively for many things. For a cotton couch-cover or coverlet, for instance. Warp suggested: 16/3 or 16/4 Egyptian cotton set at 15 ends to the inch; tabby, a double strand of the same material or an unmercerized strand cotton; pattern weft, colored strand cotton, double. Weave at intervals bands of pattern work like the border pattern illustrated or in some similar simple figure, and in the spaces between the bands weave detached figures in the same technique. Very simple geometric figures -- squares, diamonds, triangles, circles, diagonal bars -- are advisable. The technique is not, I think, adapted to elaborate figures or fine materials but should be used for bold, splashy effects.



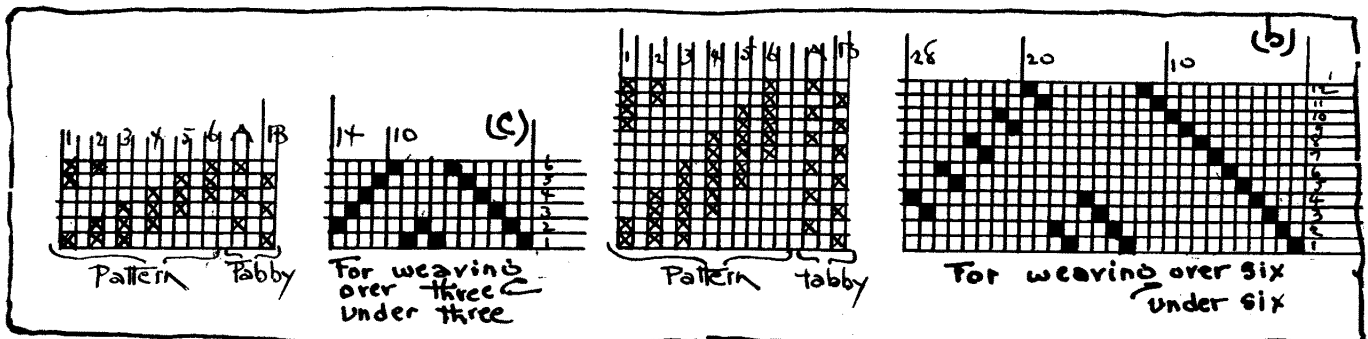
(On the Structo loom, for "treadle 1" use lever 1 or lever 4 alone. Tabby 1-3 and 2-4.)

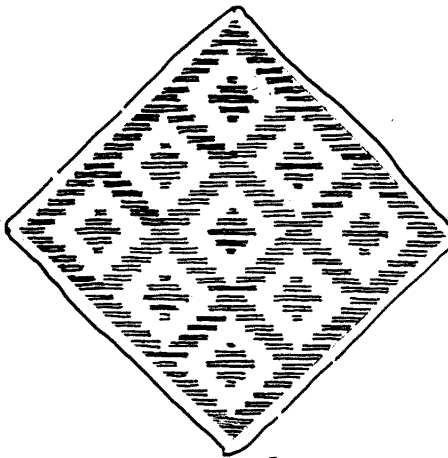
The technique that appears to me most interesting and best adapted to our purposes is the simple but effective form of "pick-up" weaving in which a number of the pieces are carried out. Five of these pieces are illustrated on the opposite page. In every case the work is done on a six-block "diamond" arrangement, the pattern threads skipping over six and under six threads. The weave is probably produced by a set of six shed-sticks, as primitive looms are not equipped with many harnesses. In each case the pieces are made up of narrow strips, 4" to 4½" wide, several strips being sewed together to make the desired width. The weaving of these strips is cleverly done so that when sewed together a large design is produced. On our looms we can, of course, weave full width instead of making these narrow strips. However, to produce an exact reproduction of the weave twelve harnesses are required. A twelve-harness draft is given below, and also an eight-harness arrangement that will give the same effect in over four, under four skips. The six-harness draft gives an over three, under three skip which gives the same effect as the twelve harness draft if a coarse warp is used. One of the African pieces is woven in this manner.

The warp of most of the pieces is a fine hand-spun natural cotton, set about 40 ends to the inch. The foundation of all the pieces is in tabby weave in weft like the warp. The picked up figures are done in a double strand of coarser cotton, in colors. For a similar effect we might use Egyptian cotton 24/3 set at 36 ends to the inch with unmercerized strand cotton for the pattern. Or the warp may be 20/2 cotton set at 40 ends to the inch. This, however, lacks the pleasant color of Egyptian cotton. For the six-harness draft Egyptian cotton 16/4 might be used for warp, set at 24 ends to the inch, with a fine Egyptian cotton for tabby and colored strand cotton for the pattern shots.

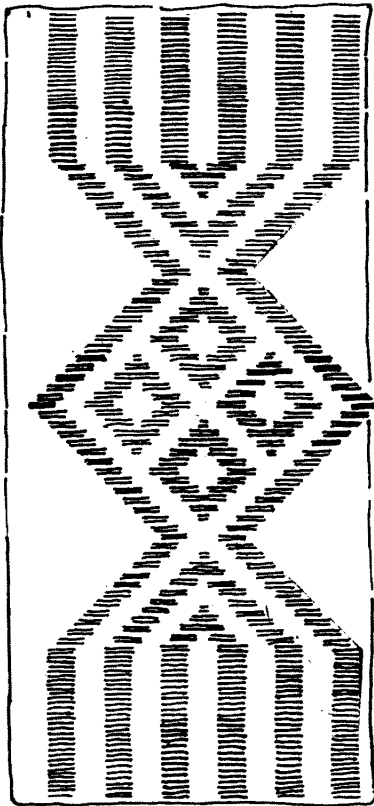
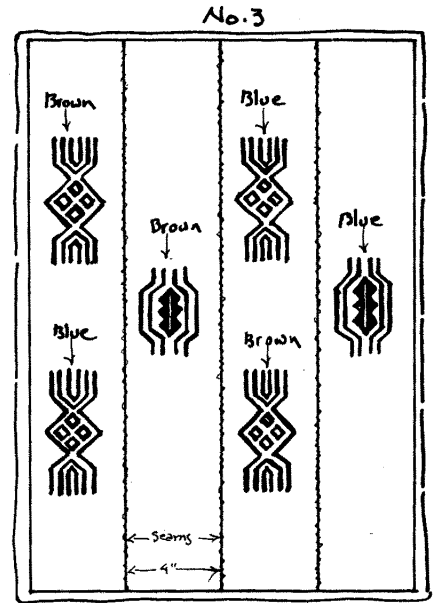
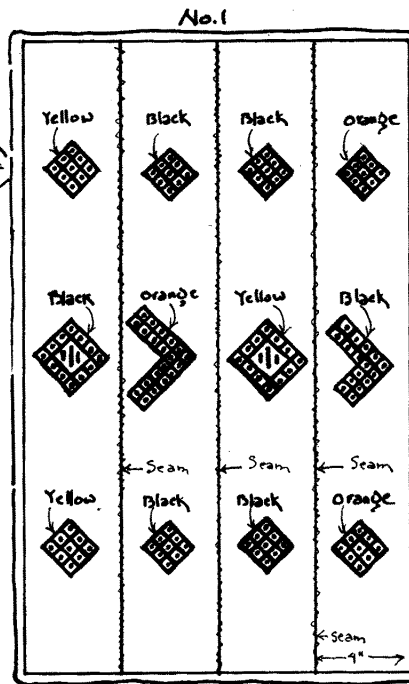
Most of the pieces are woven with detached figures in pick-up work, the figures so arranged that when the strips are sewed together the figures will correspond according to some system. This is cleverly and ingeniously done, but it would, of course, be simpler to weave full width on our looms. The figures probably all have symbolic meanings -- the faces in the corner figures in piece No. 5 are plain enough -- but I have no translation of the meanings so we may see what we wish in them. The unbalance of a figure like the center figure in piece No. 5 seems to me very interesting and quite in tune with modern design. The modern and the primitive decorative forms are, in fact, often very similar. I think this is due to attitude of mind rather than to a deliberate adoption of primitive designs by modern artists. Modern art makes the effort to return to simple and fundamental ways of looking at life and succeeds in a measure. Of course the childlike naiveté of the savage can never be recaptured -- if desired.-- The modern simplicity and directness is a very deliberate choice; the reverse of naiveté though sometimes giving the same effect. It is not a groping in the dark but a "getting down to brass tacks." Very interesting, I think, this meeting of the primitive and the ultra knowing. A meeting on almost the same ground, as though we were travelling in a spiral. Primitive "truth and beauty" are our truth and beauty -- with a difference.

But to return to Africa. The technique of "pick-up" weaving has been described before in the Bulletin, but for the benefit of new members of our circle: it consists in weaving a pattern weft across parts of the pattern only, the shuttle being brought up through the warp at the edges of the figure instead of being carried back and forth across the full width. A separate shuttle, of course, must be used for each figure. It is a simple manner of weaving detached figures, and when well done is often very effective. The work, however, must be carried out with nicety or the result will appear messy. The diamond figure as used for these African pieces seems to me the best foundation for pick-up weaving that I have seen, and is extremely easy to follow. It should be a simple matter to devise many interesting figures. I suggest that it would be wise to design these on cross-section paper before weaving.

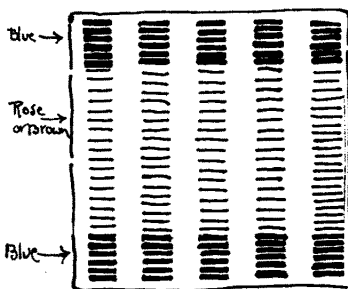
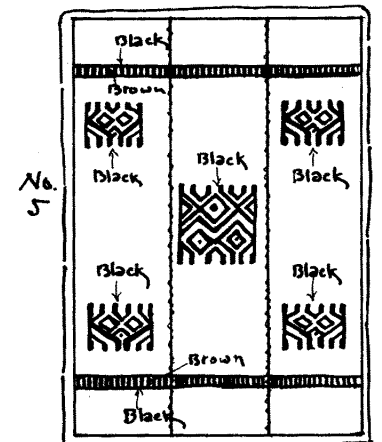
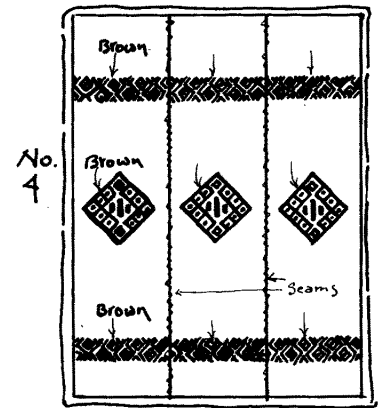
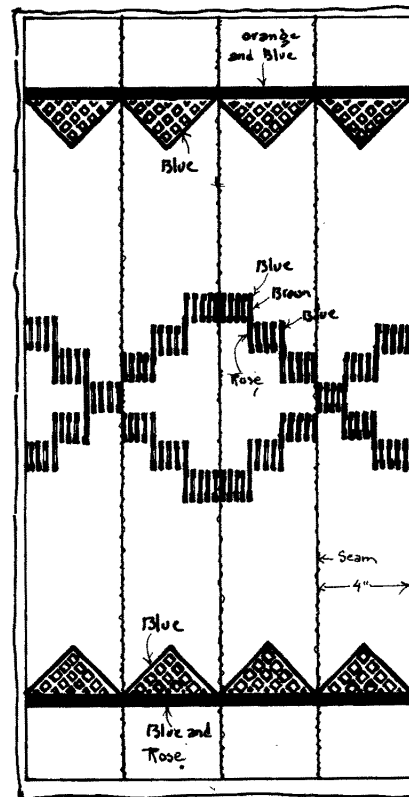




(a) Detail of one figure
Pattern No. 1



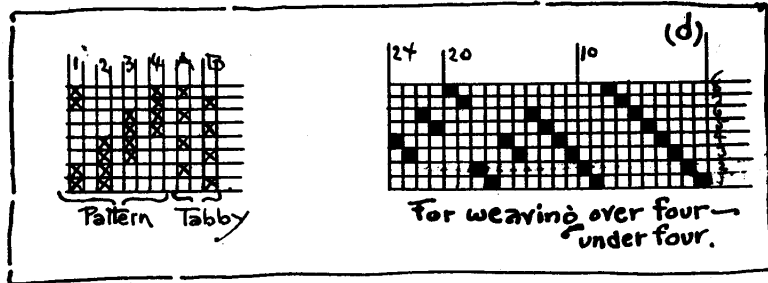
(b) Detail of one figure
Pattern No. 3



(c) Detail of one block—
center figure
Pattern No. 2

Five pieces of Native Weaving from
Sierra Leone, West Africa — done in
"Pick-Up" weaving

The illustrations given on the previous page, with the detail drawings of some of the figures will, I hope, prove clear enough to be followed without difficulty. Treadle for drafts (b) and (c) as follows: treadles 1,2,3,4,5,6,1,2, one shot on each treadle, using a double strand of coarse weft in color, picking up the figures as indicated. Then treadle: 1,6,5,4,3,2, in the same manner, and repeat. A shot of tabby should be woven between pattern shots. Draft (d) is woven in the same manner: Treadles 1,2,3,4,1,2,3,4,3,2,1,4,3,2, and repeat. All the diamond figures are picked up on this treadeling.

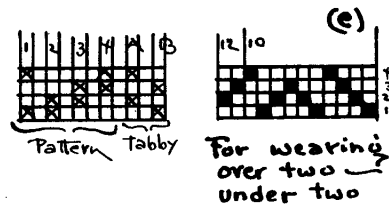


The top and bottom of the figure from piece No. 3, illustrated in detail at (b), page three, should be woven on treadle 5 for sixteen or more shots. The narrow border of piece No. 2 -- shown in black on the drawings -- is actually a small check in blue and rose, produced by weaving : treadle 1, blue; treadle 4, rose, for six shots, and then six shots on the same treadles with the colors reversed. No tabby is woven with this. The triangular figures in this piece, within this border, are picked up on the diamond treadeling as given above. The large central figure is done in a different manner, a single pattern shed being used throughout. Each of the narrow strips of which this piece is composed is woven with three blocks of the figure which are so arranged that when the pieces are sewed together the large figure results.

The narrow border of piece No. 5 is woven as follows: treadle 1,4,1,4 in black -- no tabby between. Treadle 1, all across, in brown, for half an inch -- tabby between pattern shots. Treadles 1,4,1,4, black -- no tabby.

The treadelings above are for drafts (b) and (c). If woven on draft (d) the borders without tabby should be woven on treadles 1 and 3 alternately.

These "pick-up" figures may be woven on four harnesses, on draft (e), though the effect will not be as striking as when woven on drafts (b), (c) or (d). A coarse warp should be used, or if a fine warp is preferred two threads should be threaded through each heddle. Treadle as for draft (d). Note that the special tie-up given is our standard tie-up except that the 1-4 shed is on treadle 1 instead of on treadle 4. On a loom already tied up in the ordinary manner it is not necessary to change the treadles, but simply to weave treadle 4 for treadle 1 and so on. On the Structo loom: for treadle 1 use levers 2-3; for treadle 2, levers 3-4; for treadle 3, levers 1-4; for treadle 4, levers 1-2. Tabby: 1-3 and 2-4.



I shall be glad to lend the pieces of African weaving -- those described and also those not included in this study, -- to any Guild member who wishes to see them. Please send 50¢ to cover postage and packing.

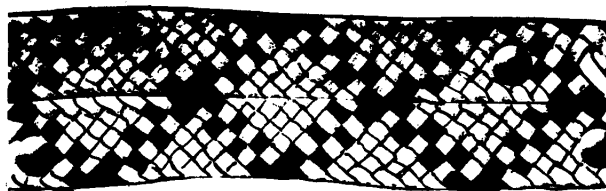
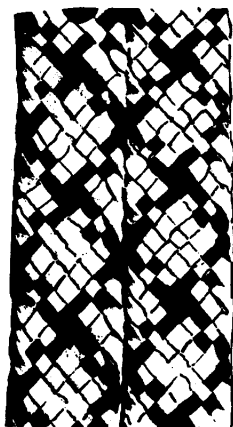
Several questions have been received as to the manner in which to use the silk "roving" material. This is a very soft yarn and is not, of course, suitable for warp, and will not be very durable in overshot weaving except in patterns with short skips only. It is very handsome in summer and winter weave and also in any of the crackle-weave patterns.

In writing of shuttles in the December Bulletin I omitted to mention a hand-made boat-shaped shuttle supplied by a member of the Guild, Mrs. Edna S. Burchard, 3222 Lakeshore Avenue, Oakland, California. This is a fairly large shuttle carrying a good sized bobbin. The price is \$2.50.

One of our members, Mr. Leigh Harriman, has written me about an electric winder for spools and bobbins which he says is very satisfactory. I have been unable to get complete information in time for this Bulletin but expect to have it soon. Will those interested please write me.

May M. Atwater

Cottons, 5 lbs. \$2.50

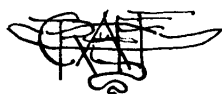


THE SHUTTLE-CRAFT GUILD - BULLETIN -

March, 1934

Braids and Braiding

Basin, Montana



For some time I have been planning a Bulletin dealing with braiding or "plaiting" -- sometimes known as "Swedish weaving", for no very good reason that I can discover. Braids are useful for many purposes -- for belts and hat-bands, handles for bags, bindings, etc., etc.. Several strips of plaiting sewed together make an interesting fabric for small bags and flat envelope purses.

The making of braids is a simple textile process that requires no equipment except the fingers. It is a pleasant little craft, containing a surprising variety of possibilities, and interesting, I believe, to anyone who weaves. It is impossible, of course, to cover the entire subject of braiding within the limits of the Bulletin, and the following notes make no claim to completeness. They are intended to describe some of the simpler forms of braiding and will, I hope, be found useful by Guild members.

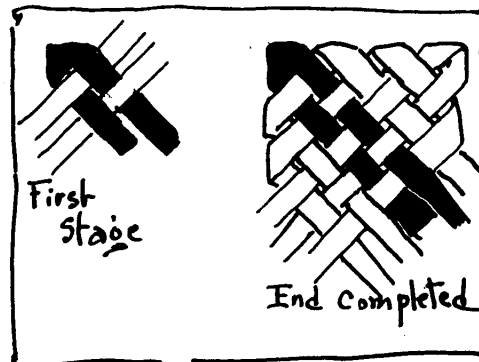
Everyone, I dare say, is familiar with the simple three-strand braid or plait in which we used to braid our hair in the days when we had hair to braid. All the simple plaits are made in exactly the same way, a larger number of strands being used. The interesting little patterns produced are the result of using different colored strands in various arrangements. The number of strands used is a matter of convenience. A strip five or six inches wide can be plaited with no great difficulty, though it is perhaps easier and quicker to braid several strips two inches wide and sew them together.

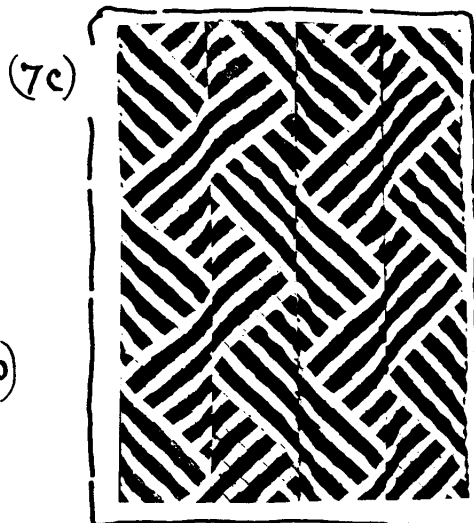
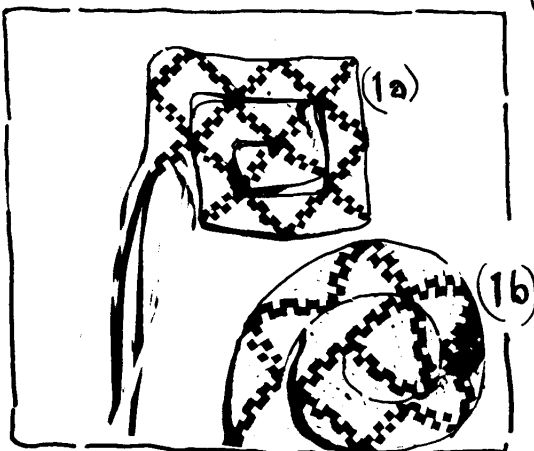
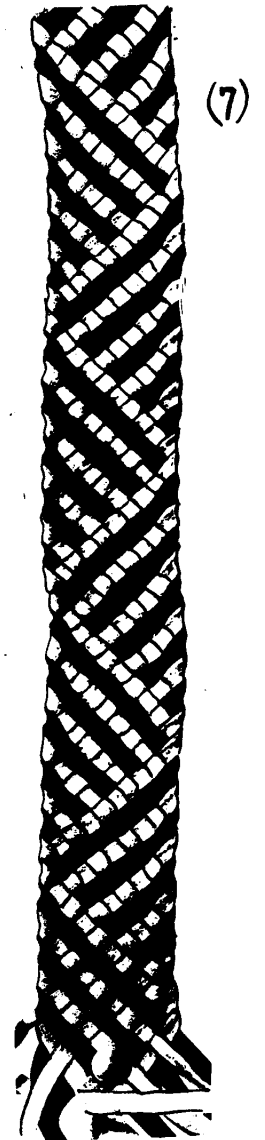
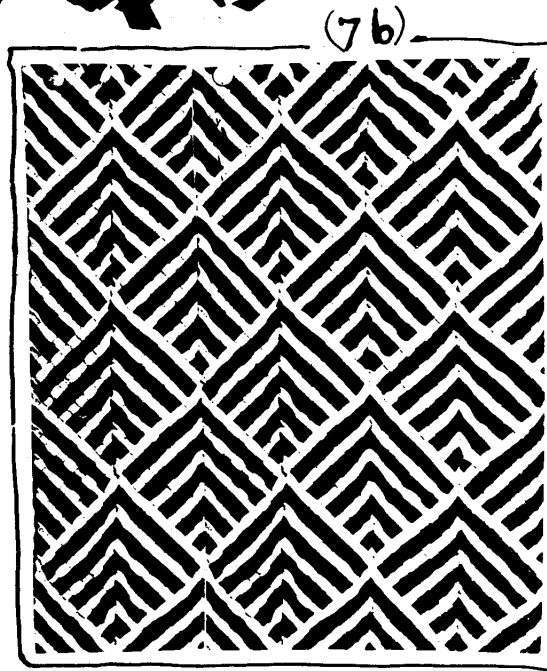
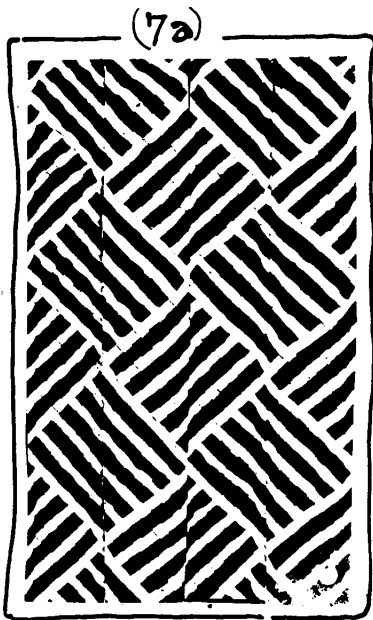
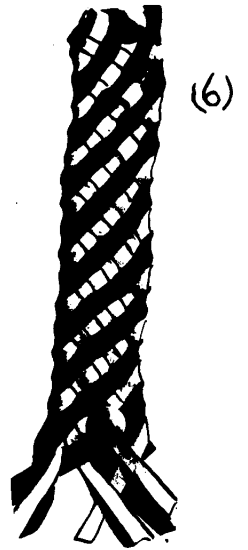
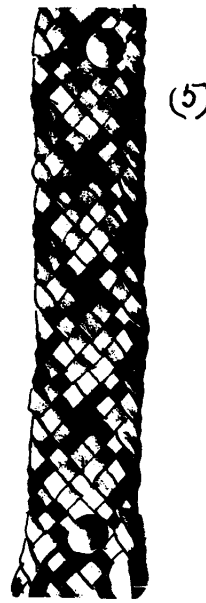
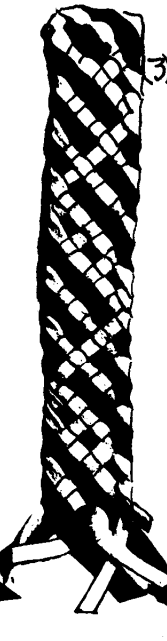
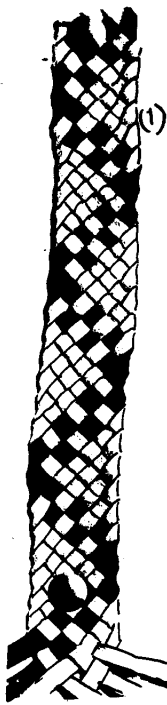
Many different materials may be used for plaiting; for instance, heavy wool yarns heavy linen floss, colored cords, raphia, jute, straw-twist, strand cotton, perle cotton #3, narrow silk barid, etc., etc.. The felt strip material of which samples are enclosed with this Bulletin is ideal for the purpose. The sample braids illustrated were all worked out in this material.

For a long strip of braiding it is advisable to begin the work in the middle -- chaining half the length of the strands first, to keep them in order. The ends may be finished off neatly by taking the end of each strand back into the web with a tape needle. For a shorter piece -- a belt for instance -- cut double-length strands; double one strand on itself and put in the additional strands as shown on the sketch. This makes a neat square end for the belt. This method, however, cannot be used for all color arrangements, but only for those made of an even number of strands in which at least two colors are paired -- that is to say, run side by side.

In making simple plaits it is best to braid from the edges to the center each time, bringing the work down in a point in the middle. If flat strips, such as the felt material, is used the strip should be turned over each time along the edges. With round cords or the narrow felt strips this is not necessary.

The plaits illustrated on the following page under "Group One" are all simple plaits made with a few strands.



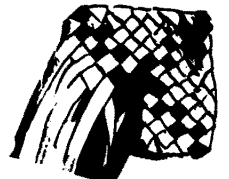


Plait No. 1 is an eight-strand braid made of six light and two dark strands, -- the dark strands paired. It was made of the wider felt strips and measures an inch across. The effect of putting two strips of No. 1 together is shown on page one, above the heading. This effect may be braided in one strip of twelve light and four dark strands, the dark strands paired and crossed.

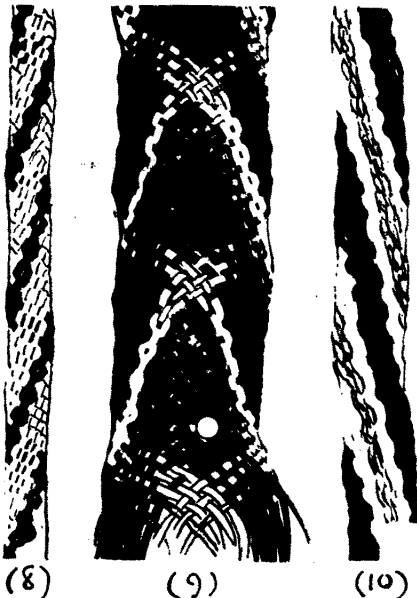
No. 2 is a six-strand braid of four light and two dark strands -- the dark strands crossed. No. 3 is an odd little pattern made with five light and three dark strands. The effect of putting two strips in this pattern together is shown on page one to the right of the heading. No. 4 is made of four light and four dark strands, the dark strands being paired and crossed. No. 5 is made of six light strands and four dark.

No. 6 shows the effect of braiding together four light and four dark strands, the colors alternating. Any even number of strands arranged in this manner will produce the same effect. No. 7 shows the effect of braiding six light strands with five dark strands, the colors alternating except in one place where two light strands are paired. This braid gives particularly interesting effects when several strips are put together and will be found useful for flat envelope bags. At (7a) and (7c) are shown two different effects made of four strips of braid No. 7. At (7b) is shown the effect of six strips in a still different arrangement. This pattern is particularly effective. The braid, when made of the broader strips of felt is $1\frac{3}{4}$ " wide; six strips therefore give a width of $10\frac{1}{2}$ " -- wide enough for a large purse of this kind. Each strip should be braided about 16" long. Cut the strands 48" long and double in the center to make two strands. Begin as illustrated on page one, starting with a light strand doubled on itself; then introduce a dark strand, a light strand, a dark strand, another light strand. To preserve the alternation of colors, now introduce a single length dark strand, leaving a short end that can be turned back into the weave afterwards with a tape-needle. Double the last light strand around this. Begin half the braided strips in this manner and begin the other half with the single dark strand, if pattern (7b) is the one used and you wish the ends to match evenly.

Attractive hats may be fashioned of braided strips. Two methods of doing the braiding are illustrated at (1a) and (1b). At (1a) is shown a strip braided with square turns, and the manner of making these square corners is shown more plainly in the larger scale illustration herewith. Directions hardly seem required. The corners, it will be noted, are made by taking a strand all across the braid, doubling it on itself and bringing it right back. Many uses for braids made in this manner will suggest themselves -- frames for pictures, binding for blotter pads, etc., etc. At (1b) is shown a similar plait simply braided tight on one side and loose on the other so that it curves and can be sewed into a flat spiral.



Square corners



(8)

(9)

(10)

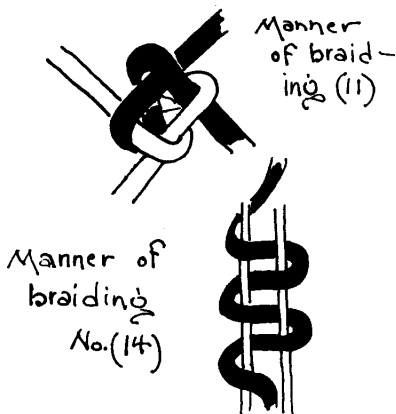
Group Two

The interesting braids shown in Group Two are ordinary over and under plaits like the preceding ones, and owe their special effect to the manner in which the strands are drawn together. For this type of plait the broader felt strips are not suitable. The narrow strips, or round cords or similar material should be used. No. 9 was copied from the braided handle of a bag -- done in twisted straw -- brought from New Guinea. Use a bold arrangement of colors and four or more double strands of each color. Braid from the sides to the center as usual, and draw the two halves of the braid sharply apart so that the strands will lie close together along the edges and cross each other rather loosely at the center. The effect of similar braiding is shown at (8), which is the same plait as (1) but drawn up differently. The effect of a broader plait with several stripes of color is shown at (10). This technique lends itself to brilliant effects and will be found useful for belts and hat-bands as well as for bag handles. It makes a thicker, heavier plait than simple plaiting as will be apparent from a comparison of (1) and (8).

The braids shown in Group Three are useful for bag handles or for any purpose requiring a gay cord. No. (11) and No. (12) are sailor braids, taught me by an old salt when I was a child of ten, and never forgotten. No. (11) my ancient mariner called the "walling braid." It is made of four strands. In the sample illustrated two dark and two light strands were used. The sketch shows the way in which the strands are interlaced. The result is a round cord, quite springy and elastic, with a spiral effect. No. 12 is the "square sennet" braid. It is made of eight strands -- in the sample four light and four dark, or two double strands of each color. Separate the strands, arranging two of each color on either side, in the same order. Take the outside strand of the left hand group, take it around behind the other strands, pass it through the middle of the right hand group -- under the two outer strands -- and bring it back to the left across the two inner strands of the right hand group. Now take the outside strand on the right, pass it behind, and through the left hand group, bringing it back to the right across the two inner strands of the left-hand group. Repeat this process for the entire length of the braid.

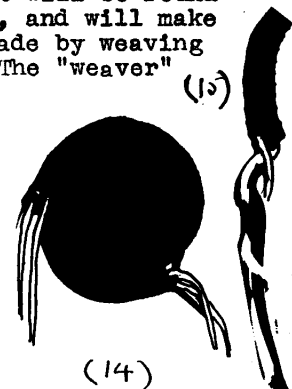


Group three



No. (13) is an interesting braid copied from a very ancient piece of Egyptian weaving -- the famous "Girdle of Rameses" now in the Liverpool Museum in England. This braid is also square. It can be made of any number of strands, arranged in fours. The braid illustrated was made of four black, four orange, and eight white strands. The photograph shows no difference between the orange and black, unfortunately. To make this braid separate the strands into two groups, the colors occurring in pairs on each side. Begin, say, with the black pair on the left: take one of these strands to the right in front of the other strands and the other to the right behind the other strands. Now take the black pair on the right and braid one in front and one behind. Next take a pair of white strands on the left and a white pair on the right, braiding in the same manner. Next the orange strands, and finally the last pair of white strands. This is a complete "repeat" of the pattern. In starting over with the black pair on the left be careful to take the strand from the back and bring it toward the front, and the strand from the front toward the back. If more colors are desired, or broader bands of color, simply add four more strands. No matter how many strands are used the process of braiding is the same. Eight strands may be braided in this manner, -- which is somewhat simpler than the square sennet braid described above. This is not illustrated.

The braid at (14) and (15) is the "figure of eight" braid, often used in rug-making. The samples illustrated were made in fine felt-strips braided over a cord, and the braid sewed in a spiral. Two colors -- black and orange -- were used, but unfortunately the photograph does not show this. This braid makes a very firm fabric that will be found useful for table mats and chair-seats when braided in the fine material, and will make very handsome rugs in the wider strips. This is a three-strand braid, made by weaving a single colored strand back and forth around two foundation strands. The "weaver" strand may be as long as desired, wound on a ball, with the foundation strands short enough to handle conveniently. They can be spliced under the weaver without showing. The advantage of the braid is that it can be shaped so easily.



There are, of course, many interesting forms of braiding that, for lack of space, have not been included. It is hoped, however, that these notes will indicate some of the possibilities of this useful form of the textile craft. The plaits illustrated, and many others made during the preparation of these notes will be sent Guild members for study if desired. Please inclose 25¢ to cover postage.

Felt-strip material, on spools, five pounds, assorted colors, \$5.00. Per pound, selected colors, \$1.10. The material may be used for weaving on the loom. The fine strips weave well over a fine warp at 30 ends to the inch, producing a pleasant, velvety texture -- excellent for pillow-tops, table runners and bags. The wider strips make very handsome rugs, woven over ordinary carpet warp or other coarse warp.

May M. Abner

THE SHUTTLE-CRAFT GUILD - BULLETIN -

April, 1934

Basin, Montana.

~~CRAFT~~
5

The subject discussed in this month's Bulletin will be the weaving of linens. Much has already been published in the Bulletin on this subject -- in the issues for March and April, 1932, for instance. Patterns for lace-weave, suitable for use in linen weaving, will be found in the Bulletins for June 1932, and March 1933. A description of the Spanish open-work weave, with several alphabets for weaving initials will be found in the Bulletin for July, 1932. A number of borders suitable for lunch-cloths and mats in linen will be found in the Bulletin for July 1933. As many Guild members have these Bulletins and as they are still available, the matter contained in these issues will not be repeated here.

The best four-harness weaves for towels are "Ms and Os" and the familiar "huck" threadings, which may be found in many attractive little patterns. "Ms and Os" is also excellent for luncheon sets, dresser scarves, and similar pieces. Some attractive little patterns in "Bronson weave" can also be woven on four harnesses, though the more interesting patterns require from five to eight harnesses. A number of drafts for these weaves will be found on pages 256, and 266 of the Shuttle-Craft Book. Heavy linens are handsome woven in "Herring-Bone" and "Bird-Eye," drafts for which will be found on page 270 of the same book.

The vogue for colored linens continues, and towels woven with hems in white tabby weaving and the body of the piece in one or another of the above pattern weaves, done in colored linen, are particularly attractive.

Linens may also be woven with very attractive results in our new "crackle weave." A number of suitable patterns are included in the Recipe Book. Series II No. 9; Series III No. 10 -- first 52 threads used as a repeat --; Series V, No. 4 No. 6, No. 18, No. 19; Series VI, No. 11, for instance. Threadings (d) and (f) in the Bulletin for June 1933 are also nice for linens.

I wish this month to discuss further the Spanish open-work weave. The travelling exhibit included several interesting pieces in this weave, some of which were the work of Mrs. Gertrude W. Howells, who first brought us this interesting old weave. Many questions about the weave have come to me from Guild members who saw the exhibit and who have been experimenting with the weave.

There are delightful possibilities in the Spanish weave as it can be used for figures of very free design, for delightful borders, for initials -- things very difficult to weave in other forms of weaving. The process -- explained in the Bulletin for July 1932 -- is rather slow when done in the ordinary way on two harnesses, but I find that by using a special form of threading, shown on the diagram on page three of this Bulletin, the work can be done faster and more easily.

Patterns in openwork weaving may be developed in two ways: the figures may be in openwork, as illustrated in the Recipe Book, pattern Series V, No. 15, or the background may be in open-work and the figures woven in solid tabby. The pattern in the Recipe Book might be woven in the second manner by reading the blank squares as the holes and the dots as groups of threads in tabby weave.

There are also two ways of weaving the holes, -- directly over each other in each row, or "staggared." That is: the second row of holes spaced half way between the holes in the first row. For weaving the background effect, and for patterns with large openwork areas, the second method is the better, but for the more open patterns the first method appears to be the more effective.

On the four-harness threadings given at (a) and (b) of the diagram on the opposite page only the first method is possible. On the eight-harness threadings at (e) and (f) either style may be woven.

To weave a row of holes on threading (a) proceed as follows: Beginning at the right, on treadle 1 carry the weft under the first group of raised threads and bring the shuttle out through the first space. On treadle A carry the shuttle back to the right hand edge. On treadle 2 take the shuttle under the raised threads to the first space. On treadle A carry the shuttle back to the first hole. Proceed in this manner using the pattern treadles in 1,2,3, order and repeat, carry the back thread each time on treadle A, as far as the last hole. When the left side of the warp is reached either repeat the process in the opposite direction or weave all across on treadle A and repeat the open-work weave always from right to left. If desired three tabby shots: A,B,A, may be woven between rows of holes.

The tie-ups given are : (c) for a counterbalanced loom with sinking shed and (d) for a "jack" type of loom. On the Structo four-harness loom weave levers 2-4 for treadle 1; levers 2-3 for treadle 2; levers 3-4 for treadle 3; lever 1 alone for tabby A, and levers 2-3-4 for tabby B.

If a plain margin is desired thread it for the required width on 1,2,1,2,1,2, etc..

Draft (a) weaves holes at eight-thread intervals and draft (b) holes at four-thread intervals.

Drafts (e) and (f) should be woven in the same manner. The tie-up given is written as for a "jack" type loom with a rising shed and indicates the harnesses tied to rise for each shed. Draft (e) is for holes at eight-thread intervals and draft (f) for four-thread intervals. Treadle 1 is used only for the plain borders or hems. The first row of holes should be woven on treadles 2,3,4, and repeat. The second row of holes on treadles 5,6,7 and repeat.

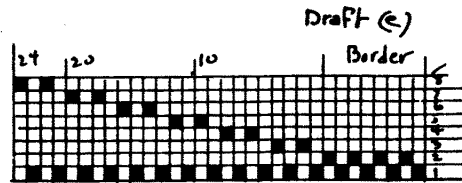
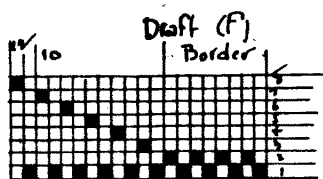
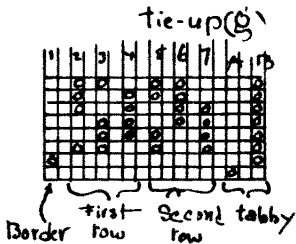
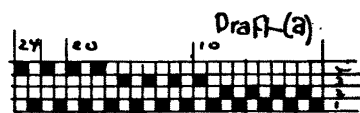
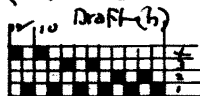
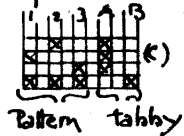
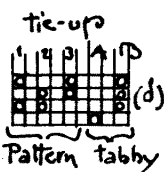
Patterns suitable for weaving in Spanish weave can be found in any collection of patterns for cross-stitch embroidery, filet, or filet crochet. The heavier, solid designs should be selected. These may be woven either in open-work for the figures or open-work for the background as noted above. The two patterns shown on the diagram are modern in style. I have chosen to design patterns of this order rather than more conventional arrangements because the latter are available elsewhere as noted above, but modern designs adapted to the purpose are more difficult to find. The designs are intended for use on two diagonally opposite corners of a lunch-cloth. The other two corners may be left plain, or the small motif designed for doilies may be used. These patterns may also be used in other ways: for instance for the ends of runners, -- the line A-B, or the line C-D being taken for the center of the pattern. The effect of doubling the design in this manner can be judged by setting a strip of mirror upright on the design along these lines. For a large lunch-cloth the design may be doubled each way and woven as an ornament in the center of the piece, the corners and edges left plain or with a simple border in open-work -- two or three rows of holes -- woven all around the edge. Pattern (a), (a'), as will be noted, is developed by outlining the figures in rows of holes while pattern (b), (b') is developed by weaving the figure in openwork.

Open-work effects of various kinds are fashionable at the moment so that this is a good time to make pieces in this weave. It is, of course, an ancient Spanish form of weaving, but I see no reason why the technique should be limited to ancient Spanish designs. Weaving is a living art -- not a dead thing -- and unless for the decoration of "period" rooms I see no reason for striving after "period" effects. I offer modern designs for this ancient weave with an entirely clear conscience.

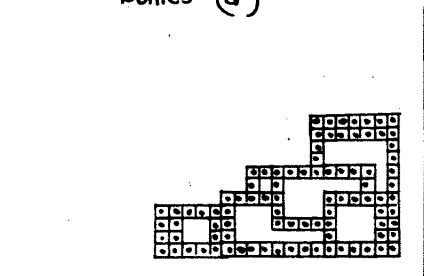
A word about materials for this weave seems in order. For best results a hard, round linen should be used, and the fabric should be very firmly beaten up. Keeping both warp and weft damp is an aid in getting a firm beat. Coarse linens are more effective for this weave than very fine threads.

Page Three

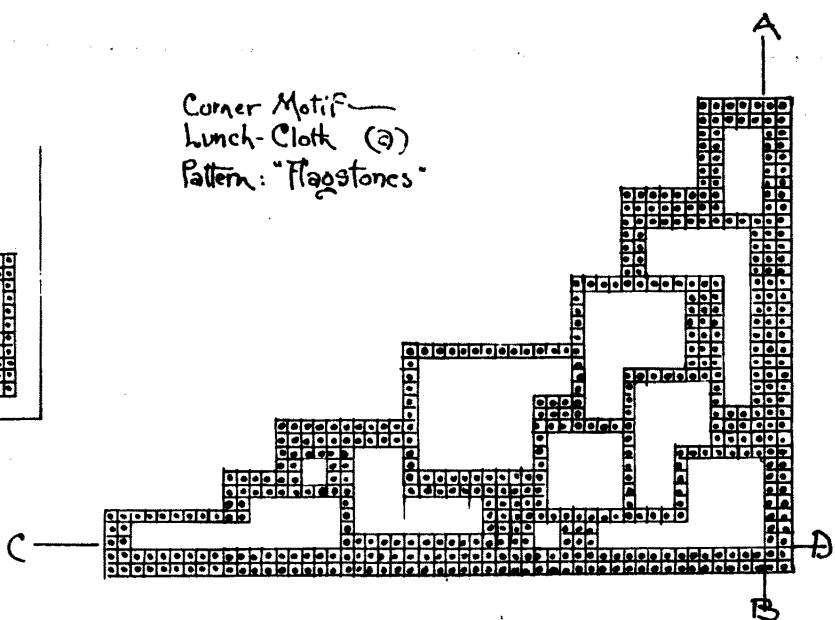
Spanish Open-Work Weave



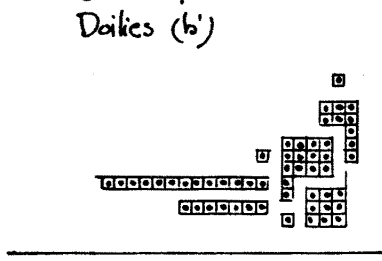
Corner Motif
 Doilies (a)



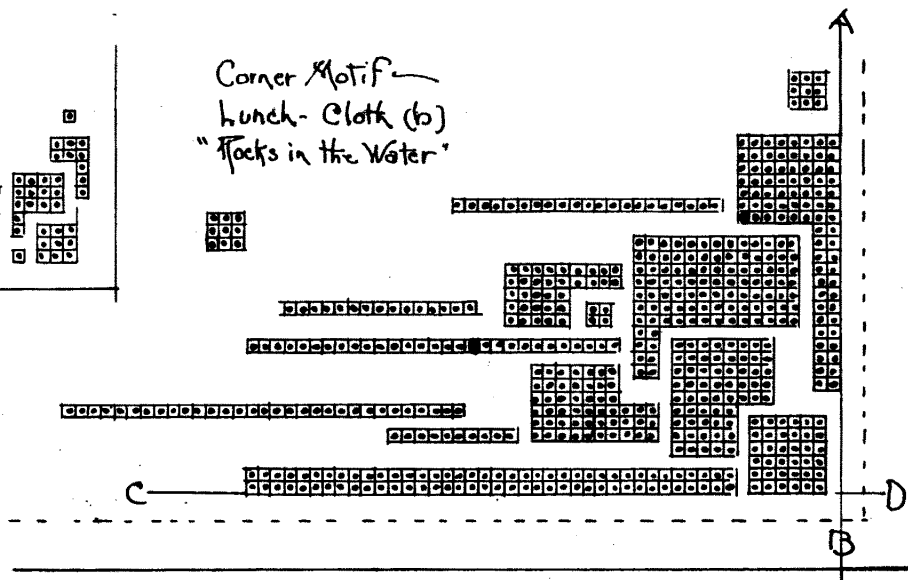
Corner Motif
 Lunch-Cloth (a)
 Pattern: "Flagstones"



Corner Motif
 Doilies (b)



Corner Motif
 Lunch-Cloth (b)
 "Flocks in the Water"



M.M. Atwater
 Basin, Montana

The matter selected for the Bulletin is chosen to meet as closely as possible the wishes of Guild members as expressed in letters received by me. It is sometimes difficult to keep the balance between requests for simple patterns, requests for elaborate patterns, for conventional Colonial patterns, and for patterns with a modern character. The limitations of the Bulletin do not permit including all kinds of patterns in each issue; the best I can do is to so arrange the material that each group will find something of special interest in the Bulletin during the course of a year.

I recently received in the same mail a letter requesting more elaborate patterns and one asking for more simple four-harness overshot patterns. I should like very much to accede to both requests, but this could only be done by enlarging the Bulletin. If we had twice as many Guild members as we have at present we could have a Bulletin twice as large, -- and I think perhaps most of our members have friends and acquaintances who might like to join the Guild if they knew about our work. I am going to suggest that we make April a "membership" month and will ask each member of the Guild to bring in one new member if possible. To make it interesting: I will send our pamphlet on card-weaving as a premium for each new membership.

The only other plan I can think of to meet the difficulty is to get out some special sheets of elaborate patterns for those who wish this material. The cost would depend on the number desiring the special service. I shall also be glad to make special designs for those who wish -- designs that will be their exclusive property and that will not be published. This service may appeal to those who are developing special lines of woven fabrics as a business. Will those who are interested in either of these suggestions please let me know.

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One of our Guild members recently sent me a shuttle, made for her by her husband, that seems to me such a delightful thing that I have asked if it cannot be made in quantity and offered for sale. The shuttle is of solid aluminum, just right -- to my thinking -- in weight and size. It carries a large bobbin that will hold a generous amount of yarn. Such a shuttle, of course, is practically indestructible. No more split noses! This shuttle, I am told, can be supplied at \$3.00, and additional large aluminum bobbins at 15¢ each. The address is Mrs. E. J. Blum, 335 Franklin Avenue, River Forest, Illinois.

Blue-prints have been received of the winding device mentioned in a recent Bulletin. This appears to be a highly desirable piece of equipment. The price is \$25.00. This will be supplied through the Guild.

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A number of inquiries have come to me concerning a Finnish form of double weaving done on four harnesses. This weave is explained in one of the Swedish weaving books contributed to our library by a member of the Guild, but alas! the diagrams are none too clear without the text and I have so far been unable to get an adequate translation. Those who can read Swedish are unfamiliar with the technical terms. I am, however, taking steps to get a proper translation made and shall then experiment a bit with the weave. A Bulletin of some month in the near future will give this information.

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Complete sets of Bulletins, in a binder, are still available for 1932 and 1933, at \$2.50 each. Single back-numbers can be supplied for 35¢ each.

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My stay in Bozeman is over, and all mail should be addressed to Basin, Montana. And may I again mention the fact that Montana banks exact a collection fee on all checks -- 5¢ on checks under five dollars and 10¢ on checks for five to twenty-five dollars. These fees should be added to checks made out to the Guild. There is, of course, no collection charge on post-office money orders.

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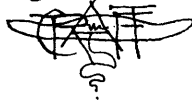
Mary M. Alvah

THE SHUTTLE-CRAFT GUILD

BULLETIN

May 1934

Basin, Montana



Several samples of Mexican native weaving have been sent me recently by travelling Guild members. They are in an interesting warp-face weave -- made, I imagine, on a simple slot-and-hole affair similar to the so-called "Swedish heddle," or "Colonial garter-loom," possibly with the addition of shed-sticks. At any rate I find the weave can be reproduced on this simplest of looms.

The piece I have been studying is a small bag sent me by Mrs. Lovell Johnston. The warp is of fine linen and a fairly coarse wool, and the ~~weft is linen, coarser~~ than the linen used in the warp. The pattern is a simple but effective diamond and pine-tree effect.

The process of picking up a pattern on the Swedish heddle is somewhat slow, but those of our Guild members who are addicted to this form of weaving will, I think, find the illustration on the diagram sufficiently clear to be followed. The heddle should be threaded with the linen threads through the holes and the wool threads through the slots of the heddle.

I find that the work can be done more conveniently on the loom and for four harness looms suggest the threading given at (a) of the diagram. This threading will not produce the pattern without the picking up of some threads and the suppression of others, but facilitates the process. A flat stick, pointed at the end, is useful in picking up the pattern and may be set on edge in the shed to permit the passage of the shuttle.

The best way to do the thing, however, is on the ten-harness threading given at (b) of the diagram. On this threading the pattern may be woven as illustrated, and of course many other patterns may also be woven. The weave is, I think, particularly well adapted to the Structo ten-harness loom, and will prove handsome for bags and runners. I have been asked to give a special pattern for this loom, and here it is. Of course the pattern may also be woven on a ten-harness treadle loom. As so many sheds are used it will be impossible, however, to make a complete tie-up. The only practicable method of tie-up is the one shown on the diagram, the various sheds being made by holding down the treadles in groups. This is a somewhat acrobatic method of weaving but not as difficult -- when one gets used to it -- as it appears at first. The "Os" of the tie-up draft indicate harnesses tied to rise. At (d) is given the weaving, and represents the series of sheds in one repeat. The "Xs" indicate the harnesses to be raised for each shed -- on the Structo loom the levers to be depressed.

It gives me particular pleasure to present this weave as it is unusual and attractive, and also because I have often thought that we should do more with the warp-face weaves. For many purposes they are especially good. This weave, for instance, would make very beautiful hangings and done in coarse linen and rug-yarn -- could be used for rugs. It makes a firm, close fabric, similar to summer and winter weave.

The chief difficulty with warp-face weaving is the close setting of the warp which makes the warp stick in the reed. I usually take the reed out of the loom altogether and regulate the width of the fabric with the tension of the weft. This is perfectly easy for a narrow piece. For a wide piece it might be advisable to use a template if the reed is omitted. However, this particular weave is not set so close that the use of the reed is impossible. In the piece I have been studying there are 34 ends to the inch -- 17 ends of linen about the weight of 40/2, and 17 ends of a rather coarse homespun yarn. Shetland yarn would be easier to manage. For a setting of 30 ends to the inch

I would suggest 40/3 linen and Germantown yarn. Bernat's linen "weaver" or any linen heavier than the warp, should be used for weft. Here, by the way, is one of the advantages of a warp-face weave -- the weaving is done with one shuttle.

For a long warp in this weave it would be advisable to use two warp-beams, one for the linen threads and one for the wool threads. For a short warp this is not necessary, however.

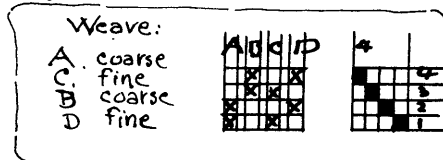
When woven the effect is much more solid than indicated on the sketch as the wool threads fill up the spaces. I have made the drawing as I have done in order to show the separate threads as clearly as possible for the benefit of those who are not equipped with ten-harness looms and who wish to experiment with this weave by the pick-up method.

- - - -

Another interesting new weave with which I have been experimenting is given at (e) on the diagram. I wished to make a pair of portieres using the felt-strip material as weft, but wished a bold effect over a rather firm tabby foundation. The weave is admirably adapted to this purpose and could, of course, be used for heavy wool yarns, cotton chenille, or other coarse material. For warp I used #3 perle cotton set at 18 ends to the inch and the same material for tabby. Pattern weft felt strips in several different colors.

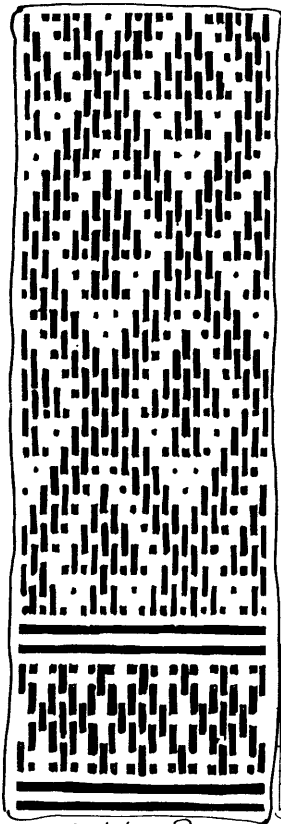
The weave is, of course, a variation of the summer and winter weave, the difference being that for each single thread of the weave as ordinarily threaded two threads, on a pair of harnesses, are used. The result is that one obtains a much bolder and more dashing effect without making the background correspondingly loose and coarse. This much I expected, but found in the weaving many interesting effects I had not foreseen.

For instance, the weave gives both the ordinary one-and-one tabby but also a two-and-two tabby. For the plain part of my piece I combined these two tabbys as follows: Treadle (A) felt; treadle (C) cotton; treadle (B) felt; treadle (D) cotton. This made a very interesting texture that would be excellent for a coat-fabric woven in a coarse and fine yarn. It could be woven on four harnesses threaded to the ordinary twill, and is just one more in the numberless ways this simplest of four-harness threadings may be used.



Any three-block summer and winter pattern may be woven in this weave on ten harnesses, or any two-block pattern on eight harnesses. The draft given on the diagram is a simple diamond arrangement of single units. An astonishing number of borders can be woven on it. It is hopeless to give weaving directions. This weave, like the three-harness weave, is one to be used for improvising at the loom. It weaves three different sets of little roses, or crosses as one prefers, an effect similar to "Monk's Belt", a pattern of square figures, and of course all manner of border arrangements and combinations. A fascinating weave for combining many colors.

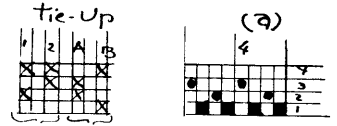
The weaving was done on a large MacKay loom equipped with two sets of lamms, but as I wished to make many more different sheds than the number of treadles permitted I made a special tie-up that worked very satisfactorily. This is shown on the diagram. I tied one treadle -- the one on the extreme right -- to sink all the harnesses. This treadle is not used in weaving but serves simply to weight the harnesses. If further weight had been required I should have made a double tie-up to the tabby treadles, but this was not necessary. All the other ties made were "rising" ties, permitting the use of two treadles together for some of the sheds. This of course is impossible when a complete double tie-up is made. On the tie-up draft these rising ties are, as usual, indicated by "Os" and the sinking ties by "Xs." This form of tie-up will be found convenient for all complicated weaving on a large "jack" loom where many sheds are desired, and of course it is also a much easier tie-up to make than the complete double tie-up as there are fewer knots to tie.



Sketch of Mexican Warp-face Weave

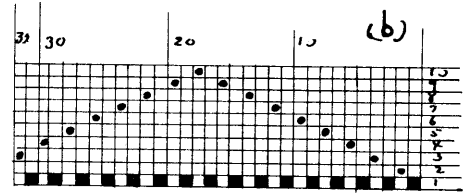
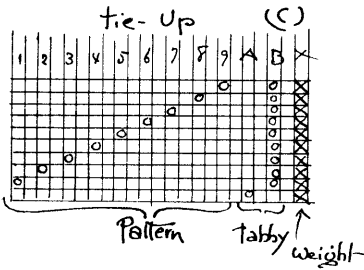
Tread on three harnesses as indicated, but leave the fourth harness in the loom for balance and make the tie-up as shown. Treadle as follows, making the figure by suppressing certain threads:

A, B, A, B, (for plain stripes) 1, B, 2, B, and repeat, for pattern work. For instance, first row of small border on Treadle B suppress every fourth thread.



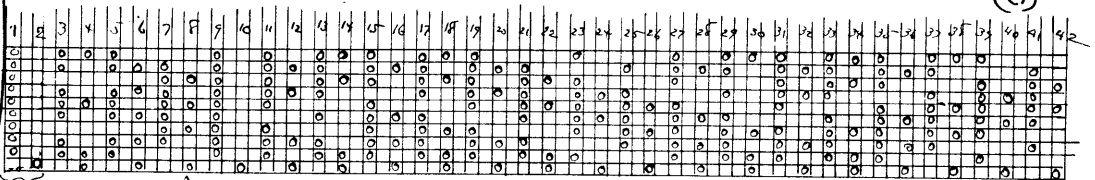
■ Fine linen, white
■ Coarse wool, Colored

On the Structo:
for "1" levers 1-3
"2" " 1-2
"A" " 1, alone
"B" " 2-3



■ Fine linen, white
■ Coarse wool, Colored

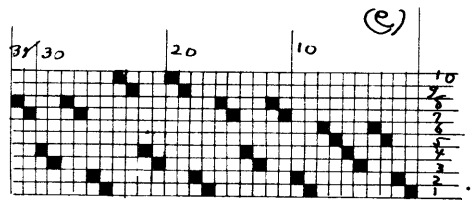
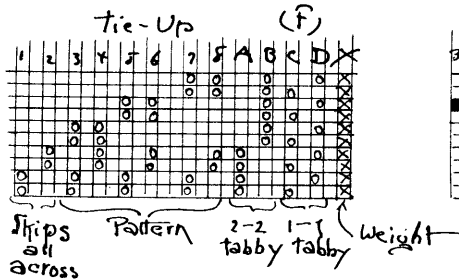
Treadling:



(c) is a graphic representation of the Treadling for the pattern as sketched. The "O's" indicate the harnesses to be raised for each shed - or the levers to be depressed on the Structo loom. 1, 2, 9 and 10 are the plain tabby sheds and wear the solid stripes

Center of small border repeat back to A

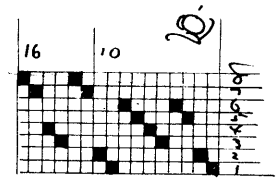
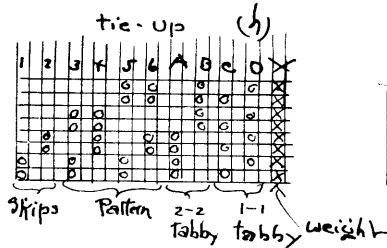
Note: Treadle "X" is not required on the Mackay "parlor" or Mackay "special" looms.



It is impossible to show this weave adequately in a sketch. The effect is extremely rich and handsome.

Draft (e) is for use on a ten-harness loom. A similar effect can be woven on eight harnesses as shown on draft (f).

The "O's" of the tie-up draft indicate the harnesses that rise on each shed, - rising ties on a treadle loom or the levers to be used on a Structo loom.



M. M. Stwater
Basin, Mont.

An interesting bit of ancient braiding has been sent me by one of our Guild members. It is done in a fine silk braid in two colors and the manner of braiding is the "walling" braid, as described in a recent Bulletin. But instead of being braided all in the same direction, which makes a spiral effect, it is braided first one way and then the other -- clock and counter-clock. This produces a square cord, very remarkable in appearance. It is a strong, springy cord and would be excellent for bag handles.

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A letter received from New York, from one of our eastern Guild members, Miss Cranmer, describes imported hand-woven table pieces seen at one of the large New York shops. Most of the pieces were in plain tabby weave with lines of color as borders all 'round. One set, sold at a very high price, was done in macrame cord -- not macrame work, however, but apparantly woven, in a weave Miss Cranmer describes as similar to the weave given in the Recipe Book, Series III, No. 1, but without the missed dents in the reed, making it a closer weave. This is a novelty and some of our members may wish to try it. The set consisted of a runner and place-mats. This might also prove attractive for large bags. With all the knitting going on, large knitting bags such as some of us remember as being carried about by everyone during the war period, should again be useful.

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Mr. Paul Bernat, of the Emil Bernat and Sons Co., Jamaica Plain, Massachusetts, has requested me to explain to the Guild that the delays and difficulties complained of recently by weavers is the result of a large increase in business, due to the knitting craze. He says adjustments are being made and he expects to be able to handle our orders more promptly in future. He is also getting out a special hand-weaving issue of the Handicrafter. There are, I understand, to be four such issues in the course of a year. I am not clear as to whether or not it will be possible to subscribe for these special issues only.

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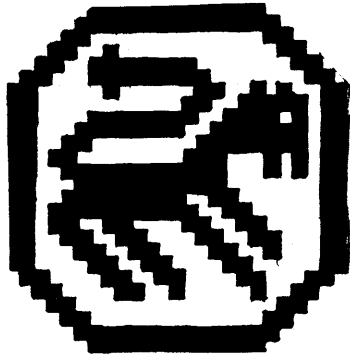
I expect to have the material on the four-harness double weave from Finland ready for the June Bulletin. This weave has many interesting possibilities. The illustrations in Scandinavian books show many ancient pieces in this weave, featuring strange birds and beasts, ships and people. It will be interesting to those among us who like now and then to get away from the pure geometry of our Colonial patterns -- beautiful as these are.

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When I lived in Cambridge I had the pleasure of meeting personally many of our members, and even out here a good many who are on vacation trips in the west stop by in the summer time. I hope this coming summer to see more of our members. Montana -- western Montana, that is -- is extremely beautiful in the summer; Montana has splendid highways and marvellous trout-fishing. If one does not mind rather primitive accomodations at times one can be very comfortable at low cost. Basin is an old mining camp, at present quite dead, and hardly more than a "wide place in the road." But it is easily reached as it is on the main highway between Butte and Helena, and even has a railroad. There are several automobile routes from the east to Montana. The most interesting one, we think, is the Custer highway, by way of Omaha and Deadwood and up into Montana by way of the Custer Battlefield. Or to Cody and into Montana through Yellowstone Park. The route from the west coast -- Portland and Seattle, Spokane, the Coeur Dalene and Mullan Pass -- is very beautiful, and many people come from the south-west by way of Salt Lake City. I have not been over this route myself, and have heard there is a good deal of desert and rough road, coming that way, however it is entirely practicable. This is by way of being an invitation to all Guild members to come to Montana this summer and stop to see me in Basin for a good talk about weaving.

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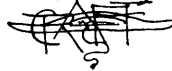
May M. Swales



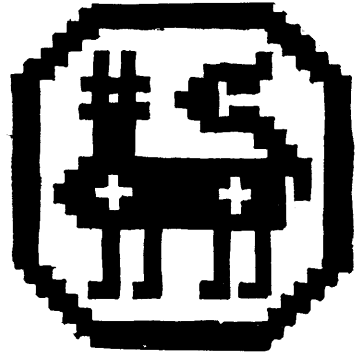
← 25 units →

THE SHUTTLE-CRAFT GUILD BULLETIN

June, 1934



Basin, Montana.



← 25 units →

THE FINNISH DOUBLE WEAVE

Nothing could be more ingenious and amusing than the ancient double weave of Finland. I should like to say "hats off" to the master-craftsman who devised it. His name is lost, but fellow-members of our "Mystery" will owe him a bit of gratitude, a little tribute of admiration, to the end of time.

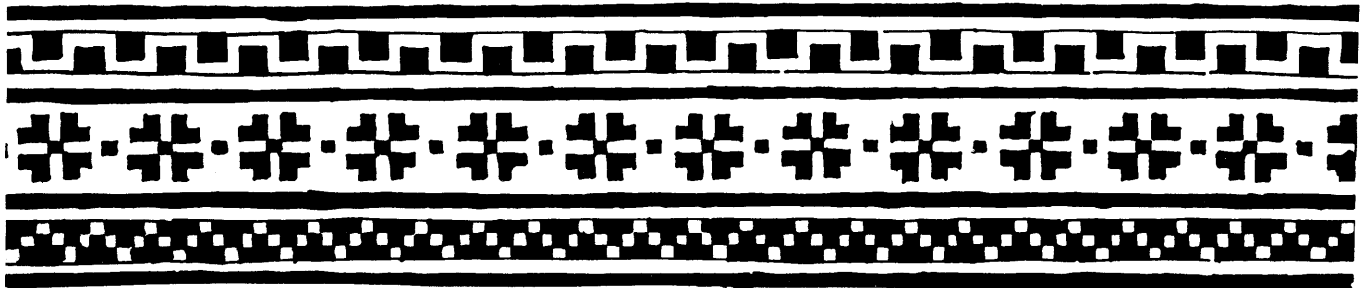
The thing is admirably simple, requires no complicated equipment, and lends itself to spirited patterns designed with much freedom.

For the following notes we are indebted in large part to one of our Guild members, Mrs. G. Cheney, who learned this form of weaving at a weaving school in Copenhagen. One of the Swedish weaving books in the lending library gives directions for this weave and some interesting illustrations of ancient pieces done in this style. Mrs. Cheney's practise and the book differ in a few minor details, but the result is the same. My own experimental work suggests a few remarks that may be helpful to a beginner.

(1) Equipment. The best loom for this weave is the ordinary four-harness counter-balanced loom. The thing can be done on a Jack-type loom, such as the Structo or MacKay loom, but the counterbalanced type is more convenient. The special equipment consists of three sticks -- a round stick, a narrow flat stick pointed at one end, and a broad flat shed-stick. Mrs. Cheney writes that she finds the best size for the pattern stick is half inch diameter. Two inches wide for the shed stick is convenient. The width of the pointed stick may be an inch or a little more. These sticks should be six inches or so longer than the width of the piece to be woven. Two shuttles are required for the weaving.

(2) Materials. The material used may be cotton, wool, linen, etc., as one pleases, but if wool and cotton or wool and linen are used together care must be taken to have the threads exactly the same in grist. And wool if used should be a firm, hard-twisted yarn. In a general way fairly coarse, very strong threads are best for this weave. The warp may be set close and woven with exactly the same number of weft shots to the inch as there are warp-ends to the inch in the threading, or the warp may be set further apart and weaving done with a double strand of material to give the desired body to the fabric. The latter method is, of course, the easier and quicker and is advised for first work in this style. My first experimental piece was made of #3 perle cotton set at 18 ends to the inch -- nine threads of each color -- woven with the same material doubled. The result was coarse but extremely effective. Mrs. Cheney writes that a setting of 36 to the inch is the finest that is practical.

(3) Patterns. Any design that can be drawn on squared paper can be carried out in this weave, -- there is no limit to the number of "blocks." The ancient



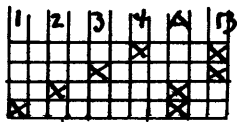
patterns are characterized by the introduction of many spirited animal and bird forms, with trees, flowers, men and women, boats, houses, -- all highly conventionalized, of course -- with more or less elaborate geometric figures..

The patterns illustrating this Bulletin are all ancient Scandinavian designs, drawn on squared paper for weaving. The patterns of our American Colonial double-woven coverlets could be reproduced very simply in this weave, and many of the designs used for simple draw-loom weaving might also be woven in the Finnish technique. Modernistic effects could be worked out very effectively in this weave.

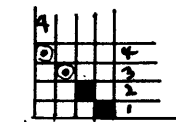
The weave is carried out in two colors, and produces a true double cloth with the figures light against a dark ground on one side of the piece and dark against a light ground on the reverse.

Many of the ancient pieces appear to be blankets or coverlets woven in two strips and seamed up the center. The drawing on page three shows the pattern of one of these ancient coverlets. Each breadth is the width of three repeats of the dragon figure, with a border. The six dragons are woven to march in the same direction. The second figure, composed of birds and bushes, is a running figure -- not separated by bands like the dragons -- and the birds are in pairs, face to face and back to back. There are four and a half repeats of this figure in the width of each breadth. In length the piece is woven with three complete repeats of both figures, with a border top and bottom. The drawing was made from an illustration in one of the Scandinavian weaving books in our lending library. A piece as large as this is quite an ambitious undertaking and Mrs. Cheney advises beginning with something much smaller. A piece for a bag, or for a foot-stool or chair-seat, for instance. The pattern of paired birds -- whether they are peacocks or turkeys it is hard to say -- could be used for these purposes, or for a runner as sketched. The small medallions shown on either side of the heading, on page one might be used in a variety of ways. The animal at the left is, I take it, a horse, -- and the one to the right appears to be a stag, in spite of the fact that he has two tails!

(4) Threading and tie-up are shown below.



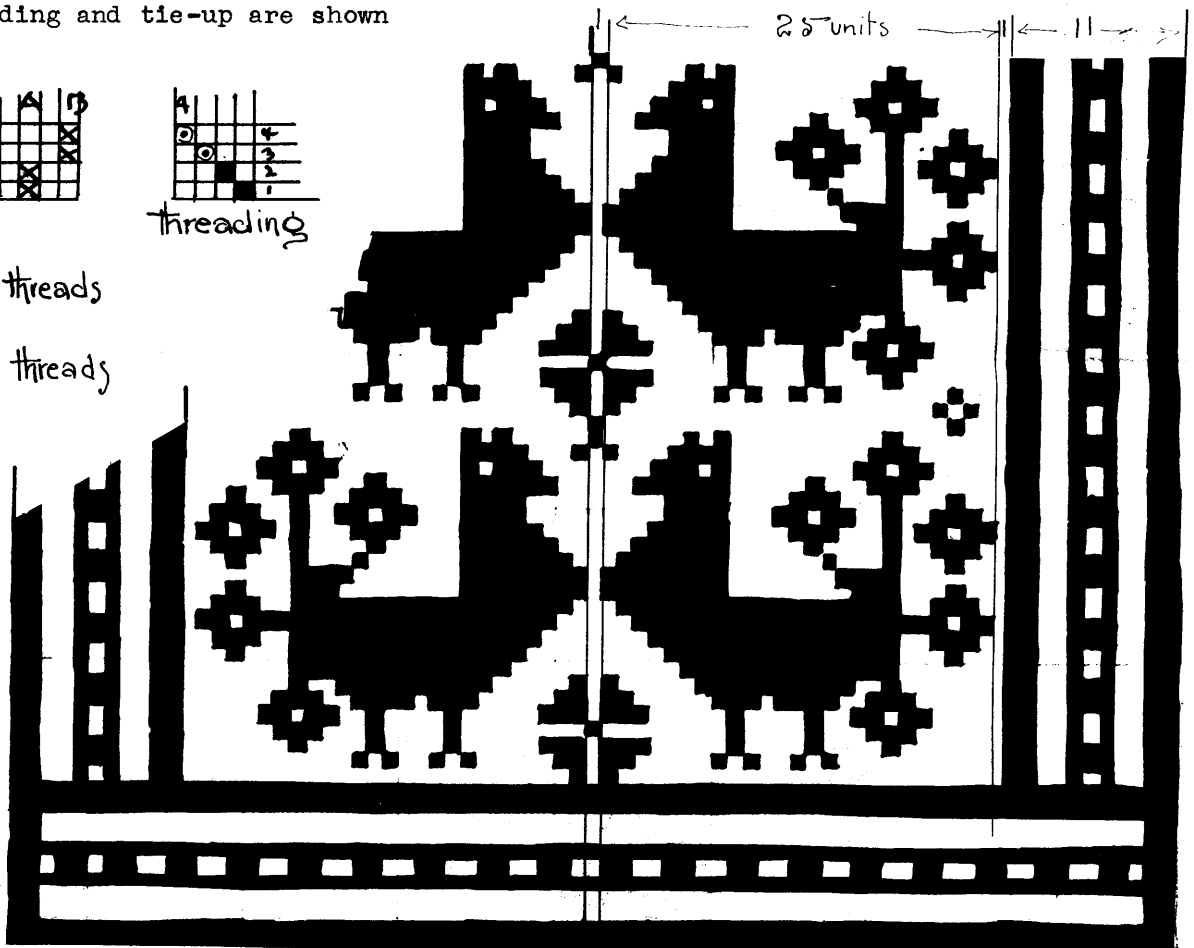
Tie-up



threading

■ Dark threads

□ Light threads



Border —
11 units

Bird —
25 units

Piece as shown
75 units

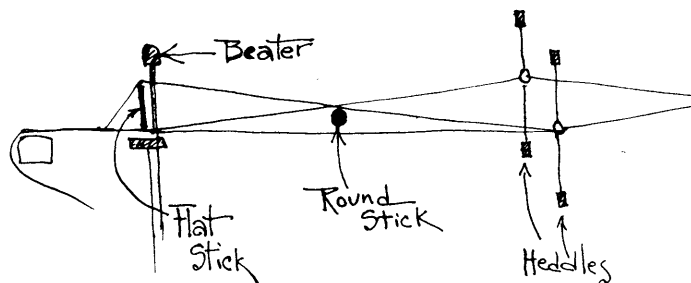
Warp:
300 threads
or 600 "

Border: 14 spaces or "units".
Repeat of Dragon figure,
68 spaces or units
For the piece in two widths
described: 213 units.
If to be woven with two
threads of each color to
one unit, warp 852 ends -
426 light and 426 dark.
Weave: Border, Birds,
narrow border, dragons,
narrow border. Repeat
three times.
In weaving second strip
match figures with care



(5) Method of Weaving. To weave plain stripes of color all across, proceed as follows: Treadle B (which brings down the light threads and raises the dark threads). Put the round stick through this shed, between the beater and the heddles. Treadle 1, (this sinks one set of dark threads and raises the other). Insert the flat shed-stick above the round stick and under the raised dark threads. Set the shed-stick on edge. Through the resulting shed throw the shuttle carrying the dark weft. Beat, and take out the shed-stick. Treadle 2 -- insert the shed-stick as before and weave a second dark weft shot. Treadle 3 -- insert the shed-stick under the round stick, and weave a shot of light weft. Treadle 4 -- insert the shed-stick under the round stick and weave a second shot of light weft. Repeat till the stripe -- dark on top and light on the bottom -- is as wide as desired. To weave a stripe light on top and dark on the bottom, take out the round stick and treadle A (bringing the light threads on top) and insert the round stick behind the beater as before. Weave as before, but weave dark weft in the lower sheds on treadles 1 and 2 and light weft in the upper sheds on treadles 3 and 4.

Weave the pattern as follows: If you wish to weave the figure in the light color on the dark ground, open shed A (light threads on top). With this shed open, pick up on the narrow flat stick the blocks of the pattern, allowing two threads to each squared space on the diagram, or four threads to each space if a larger pattern is desired. Pick up these threads in front of the reed, all the way across the warp. For instance for the bottom border on page one pick up two threads and pass over six (or pick up four and pass over twelve). Set the stick on edge and with the beater press it close to the woven edge. Now treadle B which brings up the dark threads. Between the beater and the heddles you will have a cross, and under the cross a shed. Through this shed insert the round stick, as shown below.



Now take out the flat stick and push the round stick close to the heddles. Treadle 1, and insert the shed-stick under the raised dark threads. Turn the shed-stick on edge, and weave a shot of dark weft. Take out the shed-stick, treadle 2, insert the shed-stick and weave a second shot of dark weft. Now take out the round stick. Open shed B, and with the pattern stick pick up all the dark threads between the white pattern blocks, omitting one dark thread on each side of each group of light threads. Turn the stick on edge as before, open the A shed and insert the round stick. Treadle 3, insert shed-stick, weave light weft; treadle 4, insert shed-stick, weave light weft. This completes the first space of the pattern. Of course if you pick up four threads for each unit of the pattern instead of two threads, weave four weft shots each time before changing, instead of two shots as described above.

The warp is subjected to a good deal of strain in this process of weaving as will be clear, and for this reason only a very strong warp should be used.

The process sounds quite complicated, but in practise it is simple enough and not as slow as one might imagine. Mrs. Cheney writes that with practise one can weave in this manner quite rapidly.

The figures appear on the under side of the fabric almost exactly the same, with the colors reversed. That is, if the figure is woven light on a dark ground it will be dark on a light ground on the under side of the fabric. The patterns have been drawn dark on a light ground as they are easier to follow shown in this way, but may be woven light on dark if preferred.

One of our Guild members, Mr. Roger Millen, contributes this useful formula for warp-dressing: $2\frac{1}{2}$ quarts of water, 4 ounces tapioca dextrine, 1.6 ounces glycerine. Stir the material into cold water and bring to a boil in a double boiler, stirring constantly. The dextrine may be ordered through a local druggist, -- cost 30¢ a pound.

THE SHUTTLE-CRAFT GUILD

BULLETIN

Basin, Montana

for

August 1934

Rug-weaving is a whole art in itself, reaching from the beautiful and elaborate Oriental knotted work to the humble "hit and miss" rag rug for the kitchen floor. We all enjoy making rugs now and then, even if most of our weaving time is devoted to fine fabrics. Each year we have had at least one Bulletin devoted to rug-making, and I am inspired to make this August issue a rug-Bulletin -- partly because I have been weaving rugs myself and am planning to make more, and partly because my correspondence has been bringing me a number of questions about rug-weaving the answers to which may prove of general interest to Guild members.

In planning a program of rug-weaving the first consideration is, of course, the material. For most of our rug-weaving ordinary cotton carpet-warp is entirely satisfactory. A white or "natural" warp is best for bed-room rugs, bath-mats and the like, to be woven in light colors, but for other types of rug I find a tan or écru warp more agreeable. For effects in very dark, rich colors a brown warp is good. If, however, the color of the warp is to play an important part in the effect a better warp than ordinary carpet-warp should be used. Carpet warp is a cheap material and is not dyed by the costly vat-dyeing process and the colors are not reliable. Perle cottons, #3 or #5, make handsome warp for rugs of this type. The most durable warp for rugs is a coarse linen or hemp. For wool rugs a wool warp may be used, but in my opinion a good cotton or linen warp is better as these give more firmness to the fabric.

The correct warp-setting for rugs depends a good deal on the weave to be used. Very handsome effects can be produced in two-harness weaving. When a warp-face effect is desired the warp should be set close enough to cover the weft completely, and when a weft-face effect is desired the warp should be set far enough apart so that the filling can be driven close enough together to cover the warp. For rugs in four-harness overshot weaving the best settings for ordinary carpet-warp or perle cotton #5 are 15, 16 or 18 ends to the inch. For rugs in either crackle weave or summer-and-winter weave a setting of 12 to the inch is better. Perle cotton #3 can be set at 8, 10, 12 or 15 to the inch depending on the weave and the effect desired.

The standard weft-materials for rugs are cotton roving, rags, cotton chenille, wool chenille and wool rug-yarn. Other materials sometimes used are jute and a coarse rayon material.

In my opinion, the poorest weave for rugs is the overshot weave, and the poorest weft-material cotton roving. We used to make a good many cotton roving rugs in the old coverlet patterns, and some are still being made. These rugs are attractive when fresh from the loom, they are heavy enough to lie well on the floor, and when done in a well-arranged pattern they look well with Colonial furniture, even though rugs of this sort were never made by the old-time weavers. But alas! after a short exposure to light and a few washings these rugs look rather forlorn. Cotton roving, like carpet-warp, is cheap material and not dyed by the vat-dyeing process and the colors depart. Hand-woven things are not made for a few weeks use -- we expect them to be slightly for many years. It is easy to understand why fewer and fewer cotton roving rugs are being made.

Rags, next to cotton roving, seems to me undesirable weft material for good rugs. Rugs made of new material cut in long strips make excellent rugs, but this material costs just as much, usually, as wool rug yarn and is not on the whole as satisfactory. Sort pieces of cloth sewed together make a very poor rug as a rule -- not worth the time and trouble of preparing the rags if ones time is worth anything at all. Rag rug making is an excellent occupation for institutions,

-- where time does not count -- but for craftsmen it seems a waste of effort.

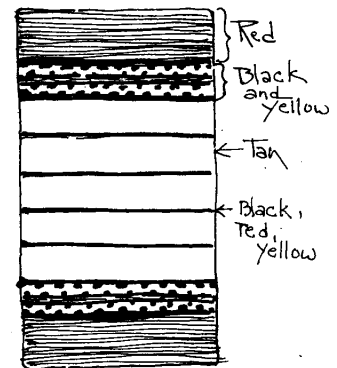
In the old day conditions were different. Clothing and household fabrics were durable, rather coarse hand-woven materials that gave good wear when stripped, sewed, and woven into floor-coverings. And time was of little value. The whole balance of life was different. The rag rugs made in the old day appear never to have been woven in patterns, but always in a plain tabby weave. However, they were not made "hit and miss" but were carefully planned in repeating stripes of different colors. Though not very beautiful they served a useful purpose. A rug of this type might still be woven in our day as the most appropriate form of rug for a "period" Colonial bed-room.

A fragment of ancient stair-carpet sent to me by a member of the Guild is interesting in construction and the plan might be used with good effect for a stair-carpet or hall runner in a Colonial type house. The fabric is a warp-face weave on two harnesses. The warp is of heavy linen in natural and colored wool in several colors, the colors being arranged in stripes. The wool warp is set close enough together to cover the weft completely; the linen warp serves as a firm backing. Weaving was done with a heavy strand of fine-cut rags and a thread like the linen warp, woven alternately -- the heavy weft through the shed that raises the wool threads of the warp and sinks the linen threads. All the wool threads being threaded on one harness with alternate threads of linen on the other harness. The result is a corded fabric with the wool on one side and the linen backing on the other. This fabric is shown at (a) of the diagram. The colors may, of course, be in any combination or arrangement desired. For a Colonial stair it would probably be best to use tones of tan, brown and old gold. The same thing done in "awning" strips of brilliant color would suit very well a modern sun-room or a hall-way that required toning up.

As I have had several questions about stair-carpet I am giving at (b) a new pattern in crackle weave that would prove attractive in a house more or less modern in decorative scheme, -- especially if worked out in a subdued color scheme of cream, taupe and tan. For a stair-carpet the overshot weave is particularly bad, and a close weave should always be used -- plain tabby, crackle weave, or summer-and-winter weave. We want no loops to catch a careless heel and perhaps cause a tragedy, and besides a bumpy fabric looks very unattractive drawn over the edge of a stair-tread. The best weft material for a stair-carpet is wool yarn, -- not too coarse. Cotton chenille may also be used though in my opinion wool is handsomer.

There are different grades of cotton chenille. Some is excellent and is dyed in reliable colors. Chenille rugs wear very well and stand many, many washings. I have some cotton chenille rugs that have been in constant, hard use for over ten years and that are still entirely good. How much longer they will last it is hard to say -- twenty years more, perhaps. For bath-mats cotton chenille is better than any other weft material, and this is also a very desirable material for bed-room rugs. But on the whole the best rug for durability and looks are those made of wool.

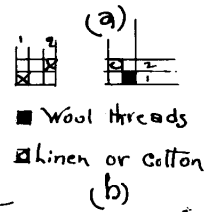
The rugs I have been weaving are of felt-strip material over a warp of perle cotton #3 in a special threading given in the Bulletin for May, 1934 -- at (g) on the diagram. The rug sketched was woven as follows: Ends, in brilliant red, on treadles 1 and 2 alternately, for four inches. Treadle 1, black; 2, black; (tabby on A and B between all these shots) treadles 3, black; 6, yellow -- twice; 3, yellow; 6 black; 3, yellow; 6, yellow; 3, black; 6, yellow; 3, black; 5, black; 4, red; 5, black; 4, red; 5, red; 4, black 5 red; 4, red; 5, black; 4, red; 5, black. Repeat black and yellow figure. Two shots in black on 1 and 2. This completes the border. (No tabby between border shots.)



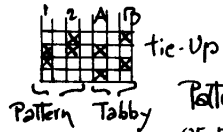
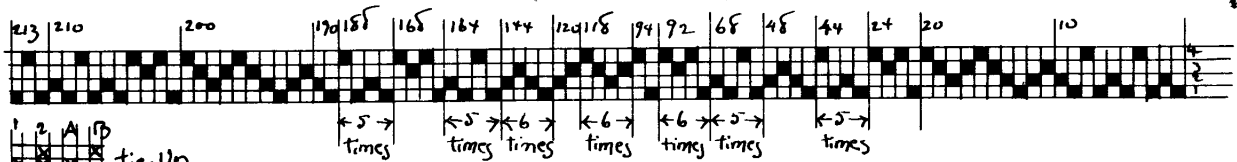
Body of the rug: three inches in tan, on treadles 1 and 2; three shots -- black, red, yellow -- on treadles 1 and 2. Repeat as required for length.

Warp-Face Stair-Carpet, Two-harness

Warp 180 ends coarse linen or perle cotton #3; 180 ends wool rug-yarn - not the heaviest. Sley ten threads of each material to the inch. Wool should be in several colors, arranged in stripes. Thread as indicated. Weave with alternate shots of coarse and fine material - fine on treadle 1, coarse on 2.

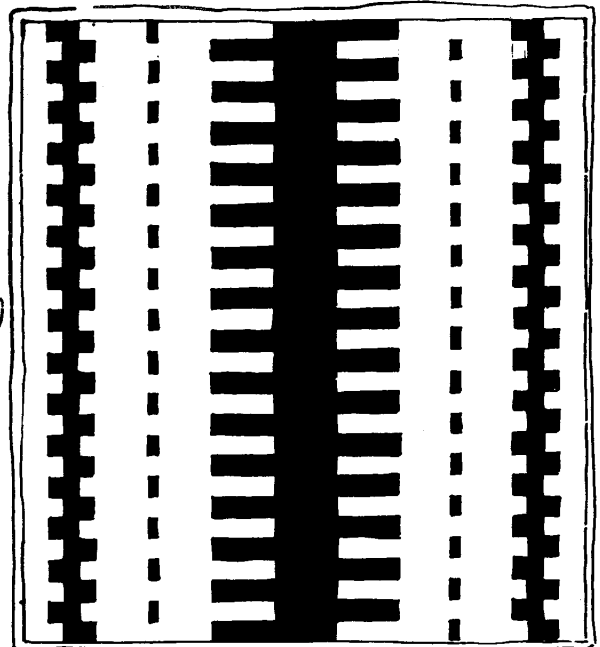


Stair-Carpet in Crackle-Weave

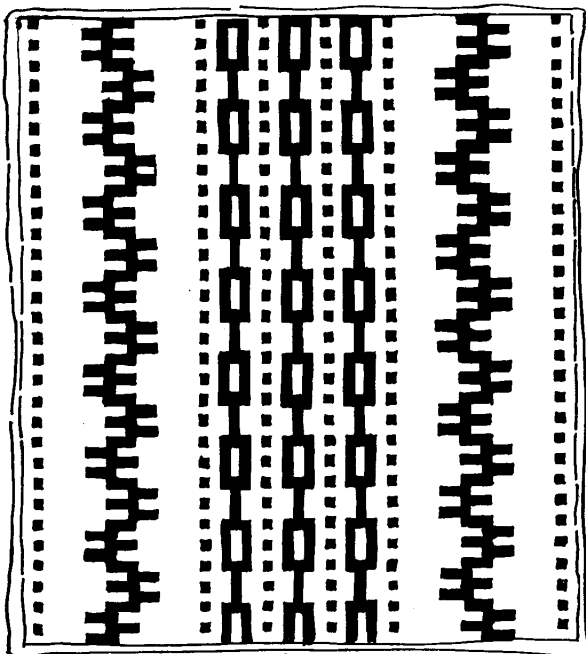


Pattern (b) Warp: ordinary carpet-warp or perle cotton #5 set at 12 ends to the inch. - 213 ends. Width 18" Weft: wool rug-yarn in two colors - as taupe and Tan - darker shade for pattern, lighter for tabby.

Weave: Treadle 1, 5 shots; Treadle 2, 5 shots. Repeat as required for length. (For other patterns in this weave see Recipe Book, Series II numbers 10 and 13)

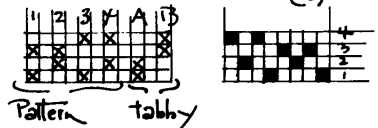


Stair-Carpet in Crackle-Weave



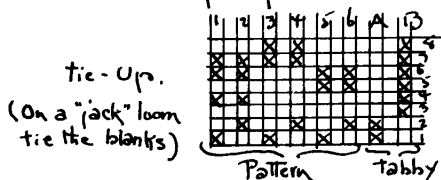
Stair-Carpet in Summer & Winter Weave

Rug in Four-harness Summer & Winter. (c)

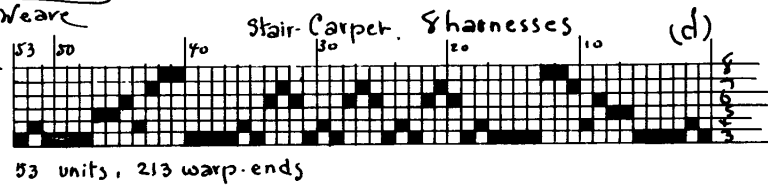


For the rug described in the text, warps #3 perle cotton at 15 ends to the inch and thread double. Weave plain treadles 1-3, and 2-4. Pattern borders "on opposites".

Stair-Carpet, 8-harnesses



tie-up. (On a "jack" loom tie the blanks)



Warp: Carpet warp or perle cotton #5 at 15 ends to the inch. Weft: wool rug-yarn both. For pattern tabby. Weave: 1, once; 2, twice; 3, once; 4, once; 5, once; 6, twice; 7, once; 8, once. Repeat from (*), Repeat from the beginning.

Another rug was woven with the ends in dark green; a border in light blue and jade with touches of gark green and yellow; the body of the rug in blue, jade and green as follows: treadle 4, twice, jade; 6, twice, jade; 4, twice, blue; 6, twice, jade; 4, twice, jade; 6, twice, green. Repeat as required. For these rugs I used the narrow felt strips, double. Tabby a double strand of perle cotton #3. The warp-setting for these rugs was 15 ends to the inch.

A similar effect may be woven on four harnesses on the threading given at (c) of the diagram, threading two threads alike for each square of the draft.

The rugs described were woven 28" X 40" and weigh $1\frac{1}{2}$ lbs. each -- including warp, tabby and pattern weft.

At (d) of the diagram is shown an eight-harness summer and winter weave pattern for a stair-carpet. This pattern would also prove attractive for table runners and drapery fabrics. It can, of course, be made wider in a number of ways. For instance, for a rug 36" wide at the same setting, double each block of the draft -- that is, thread the first block: 1,3,2,3,1,3,2,3-- the second block: 1,4,2,4,1,4,2,4, the third block: 1,3,2,3 repeated eight times, and so on. Doubled in this way the design would be 18" wide on, a finer warp set at 24 ends to the inch. For curtains, increase the width also by adding several more repeats of the linked chain figure through the center and add one repeat of this figure on either side as the outside border. Ends of a rug or curtain in this weave might be woven in solid color either by tying an additional pair of treadles : 1,3,4,5,6,7,8 and 2,3,4,5,6,7,8, or by using 1 and B together for one shot and 2 and B together for the other. On a jack loom these sheds would be woven on treadles tied one to raise harness 1 alone and the other to raise harness 2 alone.

Pattern (d) might also be used with good effect for bags and for towels, -- the latter woven with plain color for hems.

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I am sending the "Step" pattern to the printer and am having a few additional copies made over the number now on order, so that I shall be able to fill a few more orders. Will those who wish this special pattern please let me know at once, however, as the supply is limited.

- - - - -

The first lot of felt-strip material was exhausted some time ago but I have secured a large additional shipment at a slightly reduced price. This shipment includes all the colors in the first lot, of which samples were sent out some time ago. The new price will be: 5 lbs, assorted colors, \$4.00, otherwise, 85¢ per lb.. This price-allowance was made in consideration of the weight of the spools. Some of the material is on paper spools that weigh very little, but some is on wooden spools that weigh a good deal. Many of the spools are the high-grade polished spools on which silk is wound, and cost -- when one wishes to buy them -- 25¢ and 35¢ apiece. They are very desirable for use on the warping creel when empty.

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The new lot of heavy spun silk is all in natural -- to my disappointment. I may be able to secure some in colors before the Bulletin is mailed and if so samples will be inclosed. The silk roving in colors is still available, -- with the exception of white in this material. The white is sold out. One of our Guild members who has been weaving a crackle-weave pattern in silk roving over a fine spun silk warp writes that it makes the most beautiful fabric she has ever woven.

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May M. Atwater

THE SHUTTLE-CRAFT GUILD

BULLETIN

Basin, Montana

for

September 1934



The making of hand-woven fabrics for upholstery has always seemed to me one of the most interesting fields for the craftsman. Hand-woven fabrics are particularly well suited to use as furniture covering because of their durability and individual charm. A fabric specially planned for a particular piece of furniture, to harmonize with the style and furnishings of a special room is far more satisfactory than stuffs one can buy in a shop.

The weaver who wishes to build up a solid, year-'round business will find an excellent opportunity in the weaving of this class of goods. The public is to some extent educated to the paying of good prices for upholstery fabrics. The market for high grade and costly fabrics is, to be sure, a limited market but it does exist, even in these times, and it is this market, I believe, that the hand-weaver should aim at. It is useless for us to try to compete with machinery in the production of cheap fabrics.

To be sure, when we weave things for our own use and count our time at the loom as pleasure rather than labor, the fabrics we make cost us less than the inferior things to be bought in the shops. But if we weave for profit we are selling our time, or the time of a helper whom we are under obligation to pay. This is high-grade time and when charged for at a suitable rate the selling price of the fabric is necessarily high. I think the selling price of hand-woven fabrics should be kept high, and our problem is to make our product so beautiful that it is worth a high price. The two things that seem to me important in the problem of putting hand-weaving on a sound business basis are, first: the creation of unusual and beautiful fabrics; and second: the finding of a market and the organization of supply. It is with the first part of this problem that I have been working through the years. The second part of the problem is not "up my alley." It would be a full-time job, and my time is otherwise occupied. It is my hope that some day one of our members, gifted with the necessary business ability and artistic sense, and backed by ~~the~~ a reasonable capital -- it would not take much money to initiate the project, but it would take some money -- will undertake this work. I am convinced that it could be made pleasantly profitable. Anyone who desires to enter this field may be assured of all the assistance I can give and would have also, I am sure, the hearty co-operation of all Guild members.

But to go on to the main subject of this Bulletin -- the planning and weaving of fabrics for upholstery.

A fabric intended for chair-covering or similar use should be extremely firm and durable, able to resist friction, brushing, and the pulling action of vacuum cleaners. Such a fabric need not be elaborate, but the materials must be of the best and the weaving of special excellence. Texture and color are the considerations of first importance. Pattern is less important, but is also a matter for serious thought.

The two factors in texture are material and weave. For upholstery fabrics the yarns selected should be firm and hard-twisted. Soft and fuzzy materials are unsuited to the purpose. The weave used should be one that produces a closely combined fabric, and for this reason our beloved overshot weave is the least desirable of the weaves at our command. Some patterns in overshot weaving -- those in which all the skips are very short -- can sometimes be used, but patterns in which there are large blocks composed of long skips are undesirable and should be ruled out.

For warp in upholstery fabrics I prefer a fairly fine linen, but Egyptian cotton, a good grade of "perle" cotton and a hard-twisted worsted such as Bernat's "Fabri" are also suitable warp materials. A spun silk warp is charming for some types of upholstery, and a modern fashion is a warp of yellow "natural" tow with weft in rayon. In my opinion ordinary 20/2 cotton should not be used as warp for upholstery as it is usually too soft and not sufficiently durable.

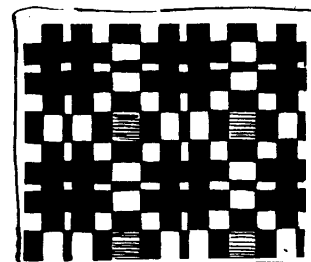
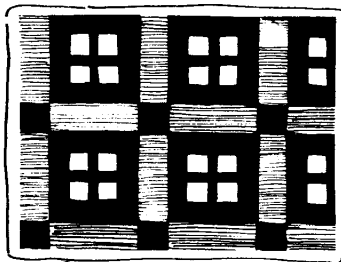
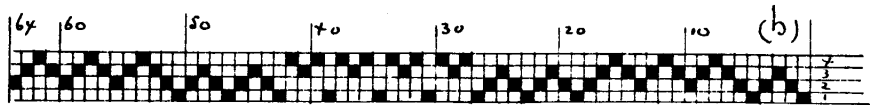
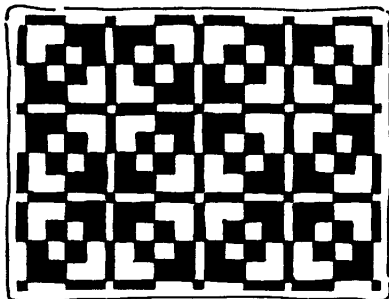
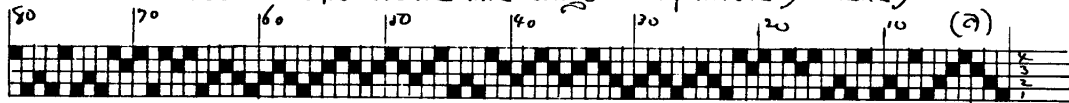
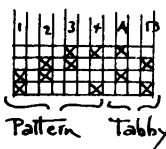
For weft, strand cotton and heavy mercerized cottons are sometimes used. Personally, I prefer the former. Mercerized cotton when exposed for a long time to air and friction loses its lustre and becomes fuzzy and unpleasant. Linen makes an excellent weft for some upholstery purposes -- dining-room chair-seats, for instance, or couch-covering for a bed-room, sun room or morning room. Rayon, as noted above, is used in many fabrics of the modernistic type. Straw-twist is nice for informal rooms. However for most upholstery either wool or silk are the preferred weft materials. The imported Scotch handspun yarn, woven over a linen or Egyptian cotton warp is excellent if a quite heavy fabric is desired. The Scotch yarn is so hard twisted that it is much firmer and more durable than ordinary "homespun." For a lighter fabric Bernat's Fabri yarn in summer and winter or crackle weave over a warp of either linen or Egyptian cotton is ideal. Softer 15/2 yarns, such as "weaving special" or "fabric-spun" are not so satisfactory. Saxony yarns, which are smooth and hard-twisted are excellent. The hard-twisted knitting yarns may also be used with good effect for the heavy fabrics.

As noted above, the weave selected for upholstery should be one of the close weaves -- summer and winter weave, double twill and crackle-weave are the best. The Bronson weave may also be used for the purpose, but should be woven with both tabby shots like overshot weaving. This weave, when woven with one tabby only has a structural weakness that causes it to wear into holes where the blocks of the pattern occur. The same objection applies to "Ms and Os", which is an excellent weave for drapery but not for furniture covering, and as there is no tabby in this weave it cannot be corrected by using two tabby shots as suggested for the Bronson weave. An extremely durable fabric for furniture covering is a simple "rep." This is perhaps the best weave where a plain color is desired, but it is somewhat lacking in interest and perhaps we can afford to permit the power machines to do this type of weaving for us. There is really no great advantage in weaving it by hand.

The color scheme for a piece of upholstery should, of course, be planned to give a particular effect in connection with the style of the furniture and the color-scheme of the room in which the fabric is to be used. In a general way, the colors should either be planned to harmonize with the room so that the furniture will melt into the general scheme, or it should be planned to give a desired accent. No specific rules can be laid down, of course. This, however, may be said: except for very light and brilliant color arrangements in which much contrast is desired, the colors used should be fairly close together in "value," so that the pattern will not have a "stary" effect. A white or natural warp is suitable for bright-colored upholstery in bed-rooms, sun-rooms and the like, but for living room furniture where a richer and deeper effect is usually preferred a dark warp is better. A black warp is excellent and brown and deep gold shades will also be found to harmonize with most color arrangements.

The color combinations to avoid for upholstery -- as, in fact, for any closely constructed fabric, -- are two "opposite" colors in fairly equal proportions. Weaving together either red and green of similar brilliance and value, or blue and yellow, produces not a contrast but an unpleasant dirty grey effect when seen from a distance. Of course when used in large masses clearly defined from each other "opposite" colors give the maximum contrast -- often quite shocking and almost always unpleasant.

Two Crackle-Weave Threadings For Upholstery Fabrics



Pattern (a)

Weave (a) as follows

- Treadle 2, 5 shots
- " 4, 9 "
- " 1, 9 "
- " 3, 9 "
- " 2, 9 "
- " 4, 5 "
- " 2, 9 "
- " 3, 9 "
- " 1, 9 "
- " 4, 9 "
- Repeat

Weave (b2) as follows:

- (In the Italian manner, in three colors, without tabby. Colors, dark(D); intermediate(I); light(L))
- Treadle, 3(D); 2(L); 3(D); 4(L)
- Repeat four times. 3(D)
- Treadle, 1(D); 2(L); 1(D); 4(I)
- Repeat 6 times. 1(D)
- Treadle 3(D); 2(L); 3(D); 4(L)
- Repeat four times. 3(D)
- Treadle, 2(D); 1(L); 2(D); 3(L)
- Repeat four times. 2(D)
- Treadle, 3(D); 4(L); 3(D); 2(L)
- Repeat twice. 3(D)
- Treadle, 2(D); 1(L); 2(D); 3(L)
- Repeat four times. 2(D)
- Treadle. Repeat

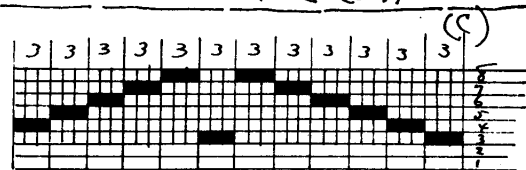
Weave (b1) as follows:
(Italian manner)

- Treadle, 4(D); 1(I); 4(D); 3(I) —
- Repeat 6 times. 4(D)
- Treadle 2(D); 1(I); 2(D); 3(I) —
- Repeat 4 times. 2(D)
- Treadle 1(D); 4(I); 1(D); 2(L) —
- Repeat 4 times. 1(D)
- Treadle 2(D); 3(I); 2(D); 1(I) —
- Repeat twice. 2(D)
- Treadle 1(D); 4(I); 1(D); 2(L) —
- Repeat 4 times. 1(D)
- Treadle 2(D); 3(I); 2(D); 1(I) —
- Repeat 4 times. 2(D)

Patterns (b1) and (b2) may also, of course, be woven in the ordinary way, with a tabby.

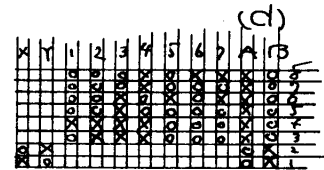
(b1) as follows.

- Treadle 1, 13 or 15 shots
 - " 2, 9 shots
 - " 1, 9 "
 - " 2, 5 "
 - " 1, 9 "
 - " 2, 9 "
 - Repeat.
- (For the Strucko loom transpose as usual)



"Point" threading, Summer & Winter
36 units, 144 ends

"X-Y" tie-up for weaving pattern 246, Shuttle-Craft Book, in three colors. The tie-up



for pattern 247 is the same with the exception of treadle 2, which should sink harness 3, only. On a loom with weighted harness tie only the (a) sinking ties. Twisting ties. Colors (r), (s), (t)

Weave pattern 246 as follows:

- (A) { Treadles X-1(r); X-7(s) } twice
- " { " Y-1(r); Y-7(s) } twice
- (B) { " X-2(r); X-7(s) } 6 times
- " { " Y-2(r); Y-7(s) } 6 times
- (C) " X-6(s); Y-6(s) — twice (tabby after each pair of pattern shots)
- (D) { " X-3(r); X-6(s) } 4 times
- " { " Y-3(r); Y-6(s) } 4 times
- Repeat C, D, C, D, C, A, B, A
- (E) treadles X-5(s); Y-5(s) — twice
- F { " X-4(r); Y-5(s) } 4 times
- " { " Y-4(r); Y-5(s) } 4 times
- Repeat E, F, E, F, E.

It is usually best to select colors that play into each other so that where they interweave they produce an agreeable intermediate tone. The only safe method is, before starting an important piece of upholstery fabric, to experiment with the weave, pattern and colors in order to find the ideal combination for the purpose in hand. The thing cannot be worked out mathematically, as so many factors enter into the problem. There is no law but the eye. The eye must be pleased.

Pattern, in the sense of figure, is -- as noted above -- the least important consideration in the making of upholstery. But this does not mean that it should not be considered carefully. No matter how handsome the pattern may be in itself if it does not conform to the architectural lines of the piece of furniture the effect will be poor. Small all-over figures are safest, but large figures are very handsome for some pieces. Here again no law can be laid down. In my opinion, however, the least pleasing patterns for upholstery are the classic Colonial coverlet patterns that are made up of large circular forms. They always give the effect of a chair or couch covered in an old bed-cover, and the big circles as a rule do not carry out the lines of the furniture. Note, for instance, the wing chair shown in the illustration on page 55 of the Shuttle-Craft Book: The chair is handsome and the piece of weaving a particularly beautiful piece of work, but the combination seems to me unfortunate.

Among the summer and winter weave patterns in the Shuttle-Craft book the two that seem to me handsomest for upholstery are #246 and #247 on page 246. These are similar in "movement" but quite different in effect. These patterns may, of course, be woven in the usual manner in one color and tabby, but they lend themselves well to weaving in two or three colors in the special technique that has been described several times in the Bulletin. For weaving in several colors a special tie-up is required, as shown on the diagram on page three at (d). The treadeling given is for pattern #246. Pattern #247 is treadeled in a similar manner but with a different number of weft shots. The illustration in the Shuttle-Craft Book will serve as a guide.

At (a) and (b) of the diagram are given two new crackle-weave patterns that will be found useful for upholstery and also for other purposes. Pattern (a) is best woven in the ordinary way, as shown, and pattern (b) may also be woven in the ordinary manner either in the form shown at (b1) or (b2). The treadeling given however, permits the use of two colors which is sometimes desirable. The Italian form of weaving, without a tabby, does not make as firm a fabric, however, as one with a tabby foundation, and if the weaving is done in the Italian manner it might be advisable to weave a tabby shot after each pair of pattern shots. The tabby would show very little and would give firmness and added wearing qualities to the fabric.

The eight-harness summer and winter threading at (c) -- a "point" or "diamond" threading in summer and winter weave -- is an extremely useful threading as it can be woven in hundreds of charming figures. For instance all the patterns illustrated ~~xxx~~ for pattern Series V, No. 9 of the recipe Book can be done in summer and winter weave on this threading. Pattern (c) would, in my opinion, be particularly attractive for chair-covering. No tie-up is given because, of course, the tie-up would have to be made according to the design, and would be different for weaving in one color and for weaving in several colors. The draft as given covers 144 warp-ends. The figure could be made smaller by threading two units for each block instead of three as shown on the draft and could, of course, be made as much larger as desired by increasing the number of units for each block. To reduce it to single units is not recommended as it would lose greatly in effectiveness.

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With this issue of the Bulletin the Guild rounds out its tenth year. The October Bulletin will, as usual, be our annual "Christmas weaving" issue with suggestions for gifts. Contributions and suggestions for this issue should reach me by September tenth to be included. Who has a successful small specialty to share with the Guild? I hope to hear from many of our members.

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May M. Atwater

THE SHUTTLE-CRAFT GUILD

BULLETIN

for

Basin, Montana

OCTOBER, 1934

Christmas Weaving



The October Bulletin has always been a "Christmas weaving number. No doubt many of our members have already begun to make Christmas plans, and it is high time for all of us to do so.

Christmas weaving is a little different from the weaving done at any other time of year. We are less interested in large projects or in the purely useful things. We want to give our friends things they will enjoy and use, but in order to express the holiday spirit our gifts should be gay and attractive. They need not be large or impressive, -- they can be very simple -- but they must have charm.

But to have charm a thing should serve some useful purpose. The depression has given everyone, I believe, a new sense of values. Though we don't want to give dreary utilitarian gifts we don't want to inflict useless dust-catchers on our friends -- no matter how much sentiment goes with the gift.

It is a great saving of time and effort if we make a very definite plan for our Christmas weaving before we begin. Of course it is not desirable to make up our gifts by the dozen and give everyone the same thing -- that is a bit too mechanical -- but to save unnecessary work and time we should, as far as possible, plan our gifts so that they can all be made on the same warp and threading. The warp to select, then, is a warp suitable for many different fabrics, and an adaptable pattern that can be woven in many different ways.

The warp that in my opinion lends itself best to a wide variety of purposes is a fairly fine linen. My favorite warp is #20 singles, at a setting of 36 ends to the inch. On a warp of this material recently on my loom I wove towels of several different kinds, using different weft linens; and also table runners, lunch-cloths and doilies, -- some fine and some quite heavy. On the same warp I made pillow-tops in silk and rayon, chair-seats done in homespun and other wool yarns, bags of several different kinds, and also pieces in straw-twist. The pattern I used was the eight-harness "Step" pattern, which can be woven in more different ways than any pattern I know, but there are a number of four-harness patterns that are almost equally "various."

People sometimes complain of difficulty in weaving a fine singles linen warp, but if a good grade of warp-linen is used, and a warp-dressing applied it should not give any trouble -- especially if kept damp during the weaving. A singles linen produces a texture that to my taste is more pleasing than the harder and more wiry texture of round linen. However, many people prefer round linen warp. It is easier to handle and does not require dressing if kept damp. A 40/2 round linen should be set at 36 ends to the inch. A 40/3 linen should, for most types of weave, be set at 24 or 26 ends to the inch. If set at 30 ends it gives a "warp" effect that is apt to be unattractive. Of course the correct setting depends not only on the grist of the warp but also on the weave. The settings suggested are for tabby effects with borders in pattern weaving, and for the ordinary weaves most in use. For openwork weaving of the Swedish type the setting should be further apart and for such weaves as "Ms and Os" and the "Bronson" weave it may to advantage be somewhat closer.

Another highly satisfactory warp for many different uses is Egyptian cotton. The best setting for 24/3 cotton is 30 ends to the inch. The finer 30/3 cotton we have been using can be set at thirty, thirty-two or even thirty-six ends to the inch. Of course cotton is not as good a warp for towelling, or other pieces woven with a linen weft as the linen warps, and it does not combine quite as well with rayon, silk or straw-twist as a linen warp, but it is excellent for many kinds of pattern weaving in wool and in strand cotton, mercerized cotton and the like.

Perle cotton #20 set at 30 or 32 ends to the inch makes an attractive warp also. The best setting for #10 perle cotton is, in my opinion, 24 ends to the inch.

For scarves, sweater fabric, and the neckties to be described later a fine wool warp is of course required. A silk warp is beautiful for scarves, and also for bags, pillow-tops and a number of other things. But both wool and silk warps limit one more than linen, or even a good cotton warp.

Some people, however, prefer to weave on a coarse warp. Many very pleasant gifts may be woven over a coarse mercerized cotton warp or ordinary carpet warp. Gay little bed-side rugs, rugs to lie before a chest of drawers, or in front of a fire-place, or in a door-way, -- bath-mats of cotton chenille, large shopping bags -- these are some of the gifts one can make on a coarse warp.

The pattern to choose for Christmas weaving should be, as suggested above, some pattern that can be woven in many different ways. I think, though, that "Honeysuckle" might be ruled out. Honeysuckle is a good tune that has been played too often. Almost anything else would be better. If some of the weaving is to be done in linen it is well to avoid a pattern in overshot weaving, or at any rate an overshot pattern with a long skip. Linen looks poor and stringy in a pattern of this type as the threads do not fill up and cling together like wool or silk threads. Bronson weave, crackle weave, summer and winter weaves and -- for the more elaborate looms -- damask and double twill are all excellent. "Ms and Os" is fine for linen, if only linens are to be woven, but is not a good weave for a variety of purposes.

Linen towels make very delightful gifts. The tiny little "guest towels" still appear to sell, but they are really rather useless bits and I believe most people would prefer one practical sized towel to a pair of the very small ones. There are, of course, innumerable ways to make towels. Plain tabby weave with a bit of colored pattern weaving across the ends is the simplest, and when the colors are well chosen, the weaving close and even and the proportions good this is really as satisfactory as any other weave. Towels done in white linen over a "natural" warp are handsome when done in some small weave -- Bronson weave, "Bird-Eye", "Goose-Eye", etc. For important towels, a border in Spanish open-work, with an initial are very "distinguished." Bold "awning stripes" of brilliant color set in the warp and woven in plain weave are gay and effective. As plaids are being used so much this year linens in a strong plaid arrangement of colors are suggested, too. Plain tabby weave is best for these things.

For a small gift, a pair of table mats, in straw twist, to put under hot dishes is suggested. These can be made in many ways, of course. The fabric should be much thicker than for other table mats, and to produce a thick fabric a coarse warp set much further apart than usual with the weft covering the warp completely is, perhaps, the simplest. A good threading is "Goose-Eye." Another good threading is the Swedish three harness: 1,2,3,2, and repeat, woven with a number of colors. In this weave one harness is sunk and two are raised for each shot and the three shots are woven in the same succession throughout, the pattern effects being produced by the use of color. A more familiar weave that gives good results for these pieces is a twill or diamond arrangement of blocks in crackle-weave, woven in the Italian manner without a tabby.

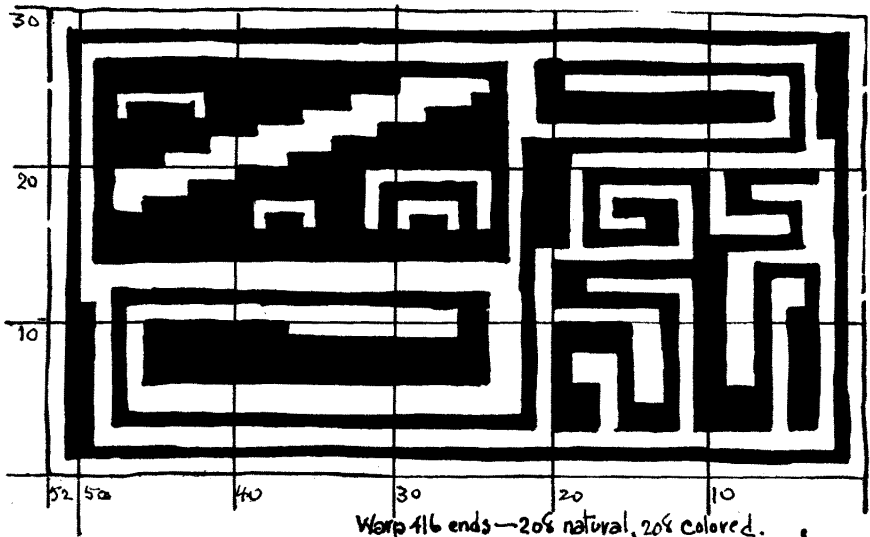
For an important gift nothing can be nicer than a handsome lunch set in linen. Many patterns for these sets have been given from time to time in the Bulletin, and others -- for Swedish openwork weave, summer and winter and other weaves -- will be found in the Recipe Book. As something special for this Christmas I have designed a set to be made as follows:
Lunch-cloth: heavy "natural" linen with deep hems all around in colored linen floss. Setting, 15 ends to the inch. Weave, plain tabby.

For a cloth 34" square, make the warp 42" wide, -- 8" in colored material on each side. Weave 8" in colored weft, 26" natural, 8" colored. Finish with a deep hem all around. Make six square or oblong place-mats in the same manner -- in plain weave, natural linen with colored hem. Then weave two oblong pieces in the Finnish four-harness double weave using the same materials, half natural and half colored, set at 30 ends to the inch. These may be made in one of the Scandinavian patterns previously given or in the novel design above. Instead of place-mats in plain weave square mats in the Finnweave may also be made, in the square designs illustrated to go with the pattern given above, or in one of the small Scandinavian figures. The two medallions on page one of the June Bulletin could be used.

This special design is modernistic in character and as it is made up of plain lines and simple masses will be found easy to execute. One of the figures of the design resembles a swastica gone mad. It is adapted from a Marquesan carving, in a fascinating book of Polynesian Decorative designs sent to me by Mrs. Caum, of Honolulu. The swastica has acquired sinister associations in our day, but it is a symbol of the greatest antiquity and common, apparently, to all peoples of the earth. A symbol of good fortune. The other element of our design may be taken to indicate houses on either side of a river or street.

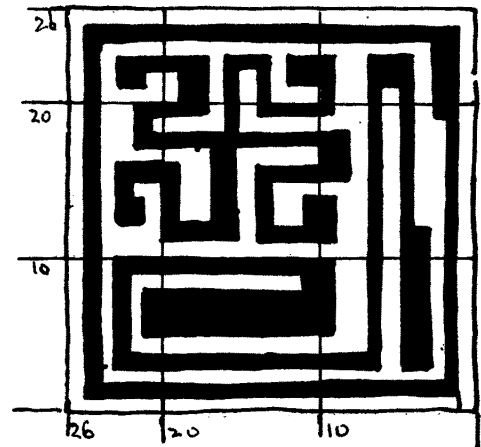
I see this set as worked out in natural linen and a rich brown, but of course other colors could be used. I feel that it is not a "blue" design, but it would look well in one of the bland modernistic color combinations -- natural with a light golden tan or beige or taupe. A brownish purple would be very handsome, and black extremely effective.

Woven of the material and at the setting indicated, (a) measures 8" x 14" and (b) and (c), 7" x 7".



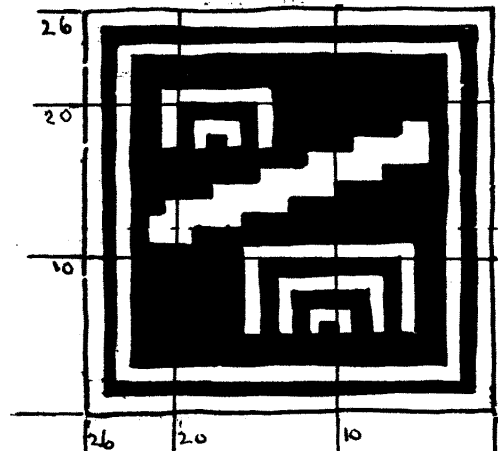
Warp 416 ends -- 20% natural, 20% colored.

(b)



(b) & (c), Warp 208 ends -- 10% natural, 10% colored.

(c)



Most of the gifts suggested so far are more appropriate, perhaps, to our women friends than to the masculine contingent. Perhaps hand-woven neckties would appeal. One of our Guild members, Mrs. J.K. Smith, has sent me a handsome neck-tie woven of fine wool that offers a useful suggestion. The weave is plain tabby, in fine lines of several colors, and the material is cut on the bias and shaped like the usual "four-in-hand" tie, but unlined. The fabric should be woven about half a yard deep and can be cut into several ties, depending on the width. Two pieces are cut and seamed together in the back. The best way to get a pattern for one of these ties is to take apart an old tie of exactly the size and shape most pleasing to the particular person for whom the tie is intended. The fabric should be washed and pressed, of course, before cutting. After finishing and shaping the tie it is a good idea to baste the folds in place before the final pressing, which should be done between damp cloths.

Silks, "novelty" and "frill" rayons, and other materials can also be used for these ties. If wool is used the material should not be coarser, in my opinion, than 15/2 or the tie will be clumsy.

Bags, of course, are still to the fore. Flat purse-shaped affairs with a zipper closing, large melon-shaped bags also with a zipper and provided with handles of the same fabric as the bag seem to be particularly favored. The pattern given for table mats could be used for a flat purse, the "house and river" motif left out and initials substituted. The large bag with wooden handles is still good. It has always seemed to me that this style of bag is particularly desirable for hand-woven fabrics, -- especially when hand-made wooden mountings are used. Two of our Guild members make these wooden bag-tops in various sizes and either plain or carved. Their names and addresses: Mrs. L.L. Robbins, Hastings, Iowa, and Miss Daisy Strong, 109 Adams Street, Greensboro, N.C.. Mrs. Robbins can also supply hand-made wooden buttons for hand-woven and knitted sweaters and dresses.

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Will Guild members who have overdue books from the lending library kindly return them. Quite a number of our books are out and are being called for by others. Sample books and sets of samples are also out overtime.

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Several Guild members have been inquiring about the next travelling exhibit. Last year the exhibit started on its rounds in the fall and got mixed up with the Christmas season, -- when none of us have time for extra activities. My plan is to start the next exhibit after the holidays -- the middle or end of January. Please everybody keep it in mind and plan some outstanding piece of weaving to send in for the exhibit.

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An interesting new service is offered Guild members in this Bulletin. Many of us who weave dress materials have found the problem of making up these fabrics a difficult one to solve. One of our members, Miss Lucille, of Oakland California, who is a professional dress designer and head of a school of dress design, will help us in this matter. Details of the service will be found in the enclosed folder. I am sure this opportunity to get correctly cut patterns to fit ones particular architecture, and the not always conventional widths of the fabrics we weave will be a tremendous help to many.

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I have received from the U.S. Department of Agriculture, Bureau of Home Economics, Washington, D.C., and extremely valuable set of directions for home dyeing on wool, cotton, and other materials with various leaves, roots, flowers and some common mineral substances. The directions are detailed and clear, and this brochure will prove very useful to all our members. It will be sent to any Guild member who writes the Bureau of Home Economics and asks for it. It is the best thing of the kind that I have come across, and it gives me much pleasure to pass the good word along.

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May M. Atwater



THE SHUTTLE-CRAFT GUILD

BULLETIN

Basin, Montana

for

December, 1934

This December Bulletin will be devoted to technical matters -- questions of method and equipment -- as has been our custom for the past years. It is sometimes a good idea to go back to first principals, and consider the tools of our craft and some of their vagaries.

The loom is in essence a frame for keeping the warp stretched, plus a contrivance for opening a shed for the shuttle, plus a beater for battening down the weft. It makes no particular difference how these contrivances are designed so long as they operate in a positive and satisfactory manner. A properly designed loom will do these things, and if it does not do them efficiently it is out of adjustment and should be corrected. If it cannot be adjusted to work properly it should be rebuilt or scrapped. It is impossible to do good weaving on a loom that is out of adjustment. Most of what I am going to say in the following notes is "old stuff," but I believe it will be helpful as a reminder.

When a loom works badly, nine times out of ten the trouble is in the hanging of the harnesses. I must have sketched a thousand times the diagrams given on page three -- here they are, once for all, for reference.

In a loom of the "counterbalanced" type the harnesses are hung in pairs over rollers, or to "horses," and drawing down half the harnesses raises the other half. The harnesses should be hung with the eyes of the heddles exactly on the line between the back beam or "slab-stock" and the breast-beam of the loom, so that the warp goes through the loom straight, passing through the center of the reed. This is illustrated at (a) of the diagram. If hung too low as at (c) or too high as at (d) it will be impossible to make any tie-up to the treadles that will produce a clear shed for the full width of the reed. The dotted lines illustrate the reason.

When a loom is out of adjustment it is usually a mistake to try to remedy the trouble by tightening a cord here and loosening a cord there. It saves time to start at the top of the loom and adjust each part of the mechanism in turn. On a counterbalanced loom, suspend the harnesses from the top castle by cords; level the rollers at the right height and tie them so that they will not slip. Then hang the harnesses, being careful to get them exactly level and in the position shown at (a). Tie them in this position. Then tie the lamms, giving them a slight upward slant. Fasten them together with a cord so that they will not get out of line, and finally make the tie-up to the treadles. It is a good idea to go through this process before beginning a large piece of work, and always before beginning to weave on a loom that has stood idle for any length of time.

The above remarks refer to counterbalanced looms only, however. The correct adjustment of a loom with the "Jack" mounting is very different, and this sometimes causes confusion. People entirely familiar with the workings of an ordinary four-harness counterbalanced loom sometimes fail to realize this and find themselves in difficulties when they change to a loom of the Jack type.

In a properly balanced Jack loom constructed with a double set of lamms the harnesses ordinarily hang in the position as at (a) when the loom is hung up on the pin. The tie-up to the treadles, made with the harnesses hung up, balances the loom and the harnesses remain in this position if the warp is stretched tight, though if a fine warp is on the loom and the harnesses are made heavy by carrying a large number of heddles the harnesses tend to

sink till they reach the position shown at (e) on the diagram. One set of ties -- the sinking ties -- will be found to be slack. This is quite as it should be and tightening these ties destroys the balance of the loom. Adjustments should always be made with the loom hung up on the pin.

rebuilt looms, -- converted from counterbalanced to Jack mounting -- do not always balance correctly when hung on the pin, with the warp coming through the center of the reed. They can be made to operate correctly by making the tie-up as follows: First warp and thread the loom, tie in the warp, all before making the tie-up. Take the loom off the pin, allowing the harnesses to hang on the warp, with the warp lying flat on the shuttle-race as at (e). Tie the sinking lamms and make all the sinking ties, bringing the treadles to the level they should have when depressed. Now tie the raising lamms, giving them an upward slant, and make the raising ties, bringing the treadles up to the "at rest" position -- an inch or so above the top of the heel-bar across the front of the loom. The first set of ties will, of course, be slack. As the warp is in the "sunk" position these ties serve simply to prevent the harnesses from rising when the shed is opened.

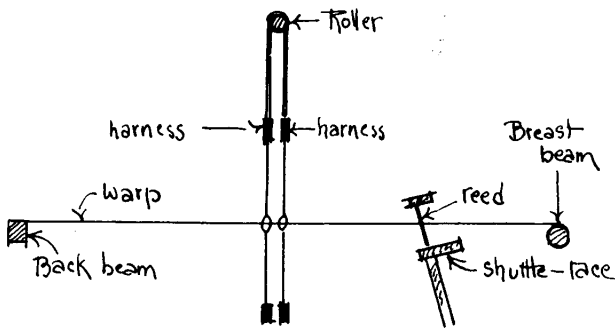
Small looms of the Jack type are often constructed with one set of lamms -- the raising lamms -- and are operated by a single tie-up. These looms are built with harnesses weighted sufficiently to keep them down without ties. The harnesses do not hang on the warp but rest on a bracket as shown at (e) and (f). The Structo loom is of this type, as are also the small MacKay looms. This method of construction simplifies the tie-up and operation of the loom, but is not practical for a large loom, as too much weight is required to keep the harnesses down and the loom is too heavy to operate. It is, however, practical to make a sort of hybrid tie-up as explained in a recent Bulletin -- the pattern treadles being tied only to the rising lamms, and the tabby treadles being tied to both sets.

In operating a Jack loom with the single tie-up, however, the warp must not be stretched tight enough to raise the harnesses from the position shown at (e). If, in this type of loom, the warp should take the position shown at (a) when the loom is at rest, the shed being made by raising part of the warp without sinking the other part, it will be seen that the raised part of the warp will be stretched much tighter than the rest. This puts an unequal strain on the warp and causes inequalities in the texture of the web. It would work after a fashion with a very elastic warp such as silk, wool, or cotton, but would not do for linen at all and even with an elastic warp would produce an uneven texture in the web. In a correct shed the lower part of the warp is sunk below the level just as far as the upper part is raised above the level. This keeps the tension equal. It will be noted that the shed shown at (f) of the diagram is exactly the same as the shed shown at (b), though produced by different mechanisms.

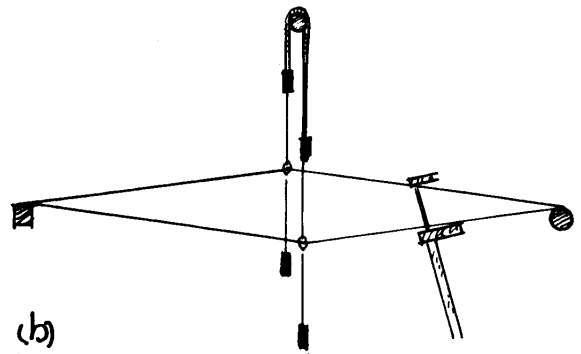
Let me repeat: unless your loom opens a clear shed for the full width of the reed, with the lower part of the warp lying flat on the shuttle-race, -- and does this for each shed and without undue effort -- the loom is either out of adjustment or wrongly constructed. In either case, -- do something about it! I would say this in stronger words if I could. Most of the trouble people have in weaving can be traced to this very simple and primary matter of correct adjustment. And much of the popularity of the Structo loom is due to the fact that the adjustment is built into the mechanism and does not get out of adjustment.

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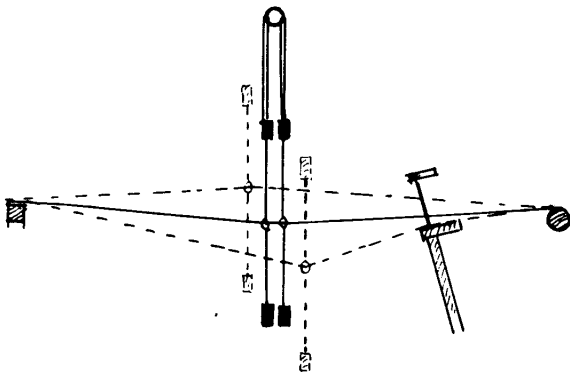
Here are a few suggestions for Structo weavers, inspired by letters that have come to me. In putting a set of the ready beamed warp-spools on the beam of the Structo loom, be careful that all are set the same, -- to take off at the same point. If a narrow piece is to be woven, using less than the full width of the reed, put on the beam only the number of warp-spools required. In sleying begin with the middle threads of the warp, at the center of the reed, so that the warp will come through the middle of the loom rather than to one side or the other. And do not use in the same warp



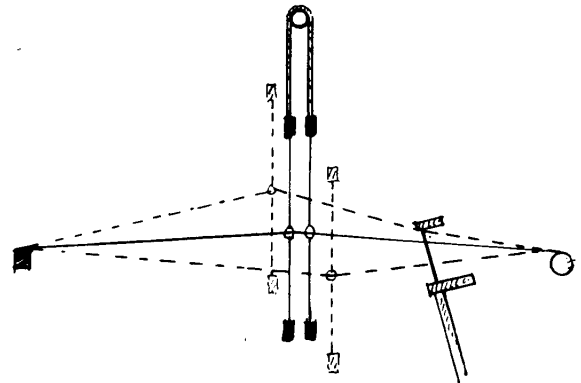
(a) Correct "at rest" position of harnesses in a counter-balanced loom — only two harnesses shown. Note that warp runs through the center of the reed.



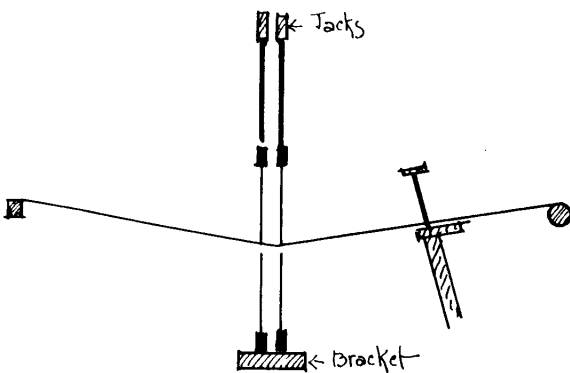
(b) Shed open — shed full width of the reed, lower warp threads lying on the shuttle-race



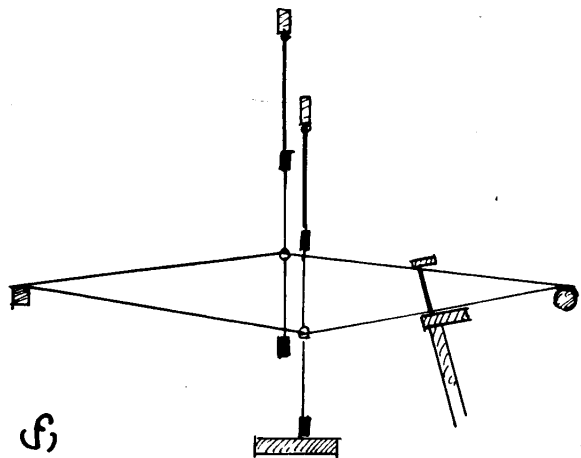
(c) Counter-balanced loom, harnesses hung too low. Plain line shows "at rest" position — dotted lines, the open shed. Note that the shed is not full width of the reed.



(d) Harnesses hung too high. Note that the lower threads do not lie on the shuttle-race and shed is not full width



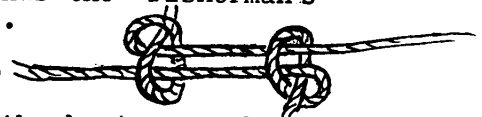
(e) Correct "at rest" position of harnesses in a "Jack" loom with weighted harnesses. Warp goes through at an angle and lies flat on the shuttle-race.



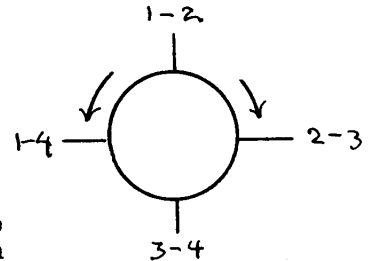
(f) Shed opened by raising harness. Shed full width of the reed.

spools containing different quantities of material. That is, do not use full spools and partly used spools together, or ten-yard spools in the same warp with twenty-yard spools.

Broken warp-threads often turn up in my correspondence and several interesting suggestions as to how to avoid and how to treat them have come in. Here is one I have not tried myself but it sounds good. I give it on the authority of its inventor, Mr. E. S. Shepherd. Mr. Shepherd writes that he splices instead of tying his broken warp-threads, ravelling the ends and twisting them together. He then applies a small dab of household cement and rubs this into the splice. When dry it holds. This, of course, works better for coarse warp than for fine. Mr. A. B. Gardner recommends the "fisherman's knot" for tying warp-ends instead of the weaver's knot. This is a good suggestion for pieces in which the warp-knots can be woven in and left, but it is impossible to untie the fisherman's knot when once pulled tight and therefore this is not recommended for a piece in which the knots must be taken out when the piece is "finished" after taking off the loom. The ordinary practice is to carry a knot back each time it reaches the edge of the web, but in a fine wool warp this is troublesome and toward the end of a long piece of weaving sometimes means carrying back a large number of knots. To overcome this it is my practice to take the broken warp-thread out of the heddle and substitute a new length of warp which I attach to the back of the loom, bring through the heddle and the reed, and wind around a pin in the web. When the weaving has progressed far enough I put the original thread back through the heddle and into the web; weave both threads together for an inch or so, and then cut out the short length. This is rather a nuisance, but saves time in the end and avoids all knots.



I have been asked to re-state the rule for weaving four-harness patterns in the Italian manner, without a tabby. This method of weaving can be used with any four-harness overshot pattern and gives interesting results with crackle-weave patterns. The diagram to the right is intended to represent the succession of the sheds in four-harness weaving. One weaves around the circle either clock-fashion or counter-clock. One does not leap across the circle except when weaving "on opposites." The trick in the Italian weave is to weave alternate shots of background weft on the two pattern sheds on either side of the pattern block in place of the tabby shots. These two shots can be in different colors if one likes. This is particularly good in crackle weave. Weave the shed ahead of the pattern block in one color and the shed behind the pattern block in the other. To illustrate: Weave the 1-2 block as follows: 1-2 pattern; 2-3 background (a); 1-2 pattern; 1-4 background (b). Weave the 2-3 block: 2-3 pattern; 3-4 (a); 2-3 pattern; 1-2 (b). The 3-4 block: 3-4 pattern; 1-4 (a); 3-4 pattern; 2-3 (b). The 1-4 block: 1-4 pattern; 1-2 (a); 1-4 pattern; 3-4 (b). It will be noted that there are four weft shots in each "unit" of the weave. These four shots should of course be repeated as required for each block. The weave makes a softer, thicker fabric than weaving with a tabby and is used a good deal in the Italian cotton towels, and also in bags and other pieces. Several patterns written with this treadeling will be found in the recipe Book -- Series III No. 16 for instance, and also Series VI, No. 4.



In an overshot pattern with long skips this technique is not, in my opinion, altogether satisfactory, as it produces too loosely combined a fabric. But it is excellent in crackle-weave. By using three colors in this weave as suggested a variety of intermediate shades are produced and the effect is very lively and amusing. As there are no long skips in this weave the fabric is firm.

Mary A. C. Watson