

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



for

Basin, Mont.

January, 1945

"A coverlet a year" might be a good rule for hand weavers -- and no time could be better for the adventure than this month when, for those of us in the north at least, there are few temptations to go out of doors. A nice, big, serious piece of weaving; an "heirloom" piece, perhaps.

I saw several of a set of coverlets once, woven by an industrious grandmother for her numerous grandchildren. She had used a simple pattern consisting of a table and a star-figure. For the first grandchild there was a single star, for the second grandchild, two stars, and so on. Those of us who are fortunate enough to have grandchildren might like to start such a series.

The classic Colonial coverlet, of course, should be of wool over a foundation in cotton or linen, and the chief problem at this time in our history would be the little matter of obtaining the wool or worsted yarn. Some of us are fortunate enough to have pre-war stocks of material. Some of us can spin our own yarns. Now and then our pre-war dealers are able to supply a few yarns. It is a matter of "seek, and" -- perhaps -- "ye shall find."

Conscience will not permit me to suggest using cotton instead of wool for these pieces. It is sometimes done, and sometimes the effect is pleasing, but -- to me at least -- there is always something more or less painful about it. Like hearing the "Moonlight Sonata" done in jazz rhythm. If we must use cotton, it would be better, in my opinion, to make a white "counterpane" or a tufted piece, or to use one or another of the cotton weaves, rather than to translate the "four-harness overshot" into cotton. If, however, one does not share this prejudice the problem of material is simplified. The new soft cottons are fairly successful in the overshot weave, but the pattern selected should be one composed of rather small blocks with no very long skips. Cotton yarns do not felt together like wool and the effect is apt to be stringy if the skips are long. Summer-and-winter weave or crackle weave would make a better cotton coverlet than the overshot weave.

Two questions often asked are "what are the best colors for coverlets?" and "how may one use several colors in a coverlet pattern? Of course the answers depend on the weave, the style and the pattern of the proposed coverlet. For an overshot coverlet in the classic style one should, I think, keep to the traditional colors. The first choice would be warp and tabby in white or "natural" cotton with pattern weft in a very dark blue "navy" wool. Indigo blue suffused with a reddish glow produced by madder. Most of the old pieces were woven in this color, because the indigo dye-pot was an established item of household economy, and also because a dark cover was thought more seemly for day-time bed-covering in a day when the big four-poster often occupied a place in the family living room. And it is true that the precise old patterns show off to best advantage when woven in a dark color. There is something very satisfying about the effect. Oddly enough, the lighter shade of blue often labeled "Colonial blue" on color cards, was little used in the old day. The second choice for color was madder red. In many of the old pieces the red has been toned down by time to a warm rose that is a very agreeable shade -- probably much handsomer to modern eyes than the original color. Sometimes dark blue and red were used in combination -- not always with agreeable results, but entirely classic. The third choice of the old weavers was butternut brown -- used sometimes in two shades, a very dark shade and a lighter golden tan shade. The weavers of New England rarely used any colors but these. The southern weavers, who were more fanciful, sometimes introduced greens, which have not held up very well and in most of the ancient pieces have turned a somewhat bilious color. They also used some fairly unpleasant shades of greenish yellow, produced from peach-leaves, and a rusty black. Occasionally they combined all these colors in a single piece, with rather

painful results. We, with the marvellous range of modern colors, can do things the old-time weavers could not even dream of, but the fact remains that the old patterns are somehow suited to the old colors, and to dress them up in a modern color effect is usually a mistake.

There are several ways of combining two colors in a coverlet. The method most frequently used in the old time, which I shall call method (1), was to weave the colors alternately: block one dark; block two light; block three dark; block four light, and so on. The handsome old piece shown in the illustration on page 9 of our Shuttle-Craft Book was woven in this manner. The two shades were so close in "value" however, that the illustration does not show the effect. Draft 73, page 177 was written from another old piece woven in the same manner in brown and tan. It is a very simple pattern and the effect seems to me unusually satisfying. Method (2) was to weave the two figures, of which most of the old patterns are composed, in different colors. This method results in a cross-striped effect that is not always agreeable, and that -- in some patterns -- so destroys the lines of the pattern that the design is lost. Note the illustration on page 72 as an example. Some patterns, however, lend themselves better to this method of combining colors. Such patterns, for instance, as the one on page 119, or draft 61, page 174. In patterns of this type the "table" and the straight lines of the figure are woven in one color -- usually the darker of two colors -- and the stars and/or roses in the lighter shade. Patterns with circles should be avoided. The third method (3) is rare in the old weavings, but quite agreeable if the two colors used are not too violently contrasted. It consists in accentuating the cross-stripes by weaving complete repeats of the pattern in alternating colors, as illustrated by the coverlet shown on page 70. Any pattern may be woven in this manner, though the effect is better if the repeat is neither very short nor very long. There is a fourth method (4) which does not appear to have been used by the old-time weavers but might have been, and does not seem to violate tradition: it consists in using a colored tabby -- in the same two colors used for the pattern shots. When weaving a pattern block in color (a), tabby in color (b); when weaving a pattern block in color (b), tabby in color (a). This equalizes the color tone of the background and overcomes the stripy effect.

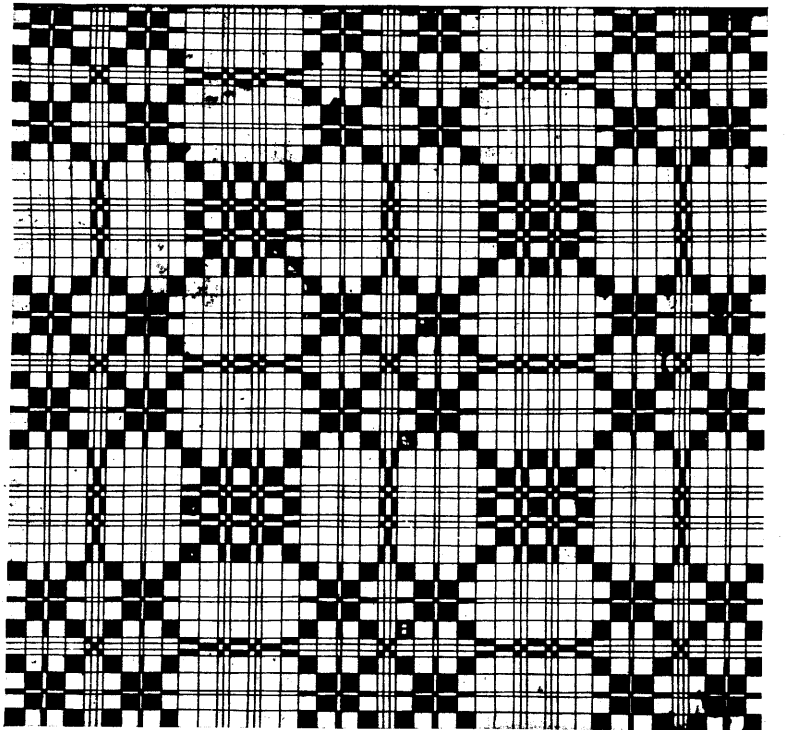
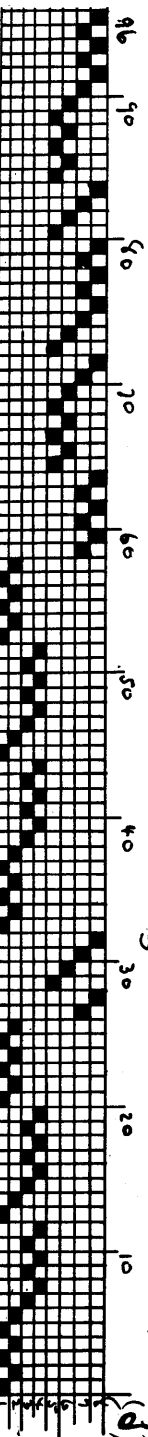
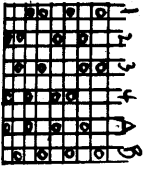
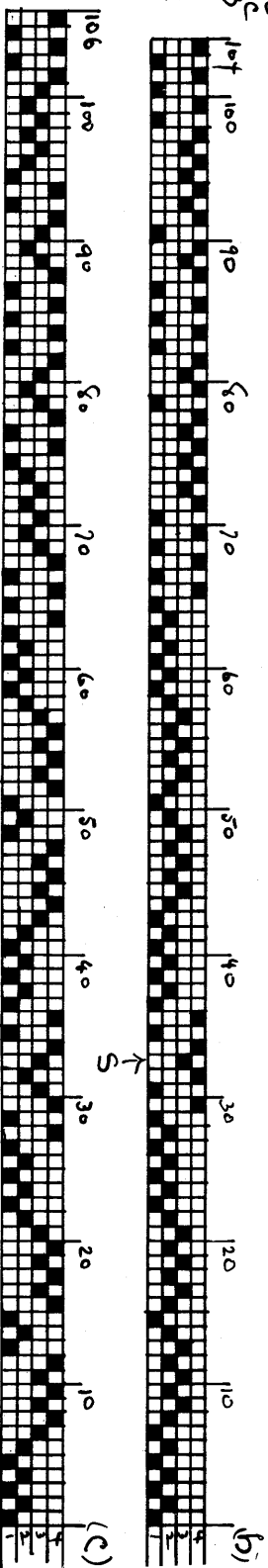
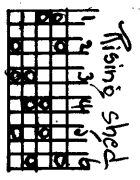
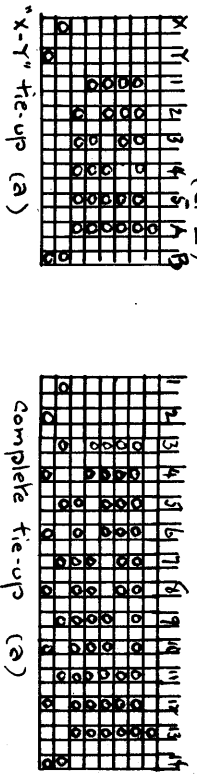
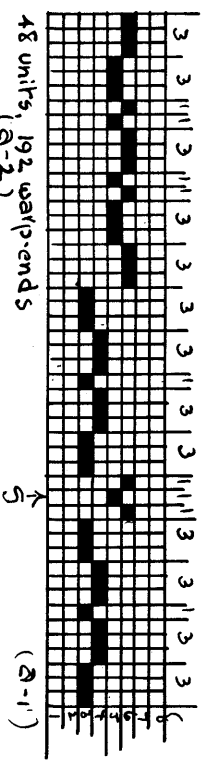
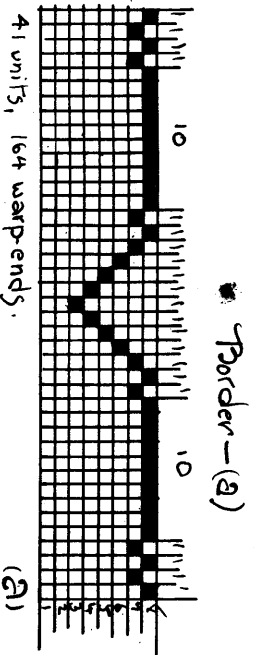
The overshot coverlet patterns are sometimes woven in white, but of course this is not traditional. Also, if woven in white wool over a white cotton foundation the effect is not good after time and a few washings have yellowed the wool. If an all-white cotton piece is desired it is better, in my opinion, to weave it in one of the "counterpane" patterns, or in tufted weaving.

If one wishes to produce something extremely bright and gay -- a "riot of color" -- it is best to avoid the classic patterns or to use them in an entirely unorthodox treadeling. For a room in the Spanish style a coverlet might be made in the manner of the Spanish rug, pattern Series II, No. 9 in the Recipe Book. Instead of carpet warp, of course, one should use a finer and smoother warp, say a 10/2 or a 16/4, at a setting of 20 or 22 to the inch, with pattern weft in a knitting weight worsted yarn, or in Lily's "thrifty-knit" cotton. The piece should be made in three strips -- a wide middle strip woven in red, yellow and green as shown, and narrower border strips woven all in black. This would be showy and handsome. The pattern is written in four-thread blocks: the blocks might be made either two threads or four threads larger if desired.

For the special pattern this month I am reproducing one of the patterns from the "John Landes" book of drawings, in the Pennsylvania Museum. We once printed all the drawings in this interesting collection, but the publication has been out of print for some time. The pattern is reproduced from a photostat of the original. There is nothing startlingly original about the John Landes designs, but they have a charm of proportion one does not always find in the work of the Colonial weavers. This little pattern has always seemed to me very agreeable. John Landes was a professional weaver of the pre-Revolutionary period -- in Pennsylvania. His patterns were probably intended for double weaving on a loom with sixteen or more harnesses. However the patterns may be woven in summer-and-winter weave on six to eight harnesses, and many of them are also suitable for overshot weaving. Draft (a) is for summer and winter weave, and on an eight-harness loom may be woven with a border in solid stripes as indicated. Draft (b) is for overshot weaving. Draft (c) is for overshot weaving "on opposites" which would be particularly handsome with this pattern. Draft (d) is for eight-harness overshot weaving on opposites.

Pattern No. 11, from the "John Landes"  
Book of Drawings.

Page three



This is a four-block pattern, requiring six harnesses in the summer-and-winter weave. I have added a border on harnesses 7 and 8, which gives an effect of solid stripes. To weave the bottom border:

One unit on treadles 1 and 2, tie-up (a-1), or treadles X and Y, tie-up (a-2)  
 " " " " 11 " 12, " " " " X-5 " Y-5, " "

Repeat these two blocks

10 units on treadles 1 and 2, tie-up (a-1, or treadles X and Y, tie-up (a-2)

One unit, like unit 2 above; one unit like unit 1 above; one unit like unit 2.

One unit, treadles 9 and 10, tie-up (a-1), or treadles X-4 and Y-4, tie-up (a-2)

" " " " 7 " 8, " " " " X-3 " Y-3, " "

" " " " 5 and 6, " " " " X-2 " Y-2, " "

" " " " 3 " 4, " " " " X-1 " Y-1, " "

This is the center of the border; repeat in reverse, omitting the last unit -- the first as written.

The pattern should be woven as drawn in, and for Guild members it is of course unnecessary to write out the treadeling.

As a border for draft (b) use the Diamond threading, draft No. 2 in the Shuttle-Craft Book but omit two threads from the 1-2 and the 1-4 blocks. Repeat for desired width. Weave as drawn in. As a border for draft (c) use the threading in the Shuttle-Craft Book, draft No.3, omitting two threads from each of the six-thread blocks, making a repeat of 16 warp-ends. Weave as drawn in, but do not treadle the two-thread "accidental" blocks between opposites. As a border for draft (d) thread: 1,2,3,4,5,6,7,8,7,6,5,4,3,2, and repeat as required.

In arranging these patterns on the loom make the seam run through the blocks marked "S" on the diagram.

As an aid to beginners, for a full-width coverlet, warp 24/3 cotton 42" wide at 30 ends to the inch -- 1260 warp-ends. Thread as follows:

Selvage, 3,4,1,2,3,4,1,2,3,4 - - - - -	10 warp-ends
Border, 16-thread repeat, 11 times	176 " "
Pattern as written, 10 times	1040 " "
First 34 threads of draft	34 " "
	<hr/>
	1260 " "

Weave a bottom border to the depth desired, treadeling the pattern as drawn in. Weave the pattern for the number of repeats required for length. Weave a top border to match the bottom border. This makes half the coverlet. Weave the second strip in exactly the same manner. It is wise to cut a paper pattern to serve as a guide so that each repeat of the pattern will be the same and the figures will match when the two strips are put together. Do not take the first strip off the loom and use it as a measure. The fabric draws together when taken off the loom and if the first strip is used as a guide the second strip will be several inches shorter than the first strip and the finished effect will be poor.

If "weaving as drawn in" is not clearly understood, study the notes on the subject in the Shuttle-Craft Book, pages 115-6-7-8. This is the correct way to weave these overshot patterns. It is impossible to write treadeling directions to fit all combinations of material, and written directions when followed to the letter usually produce a distorted figure -- either too tall for the width or too wide for the height. By squaring each block along a diagonal as explained, the figures will be correctly woven. It is not even necessary to have a threading draft or a picture of the pattern in order to treadle correctly. Simply try the four pattern sheds till you find the one that makes the first skip, at the right hand selvage. Weave this with the number of shots required to make a square block. Find the shed that makes the next block to the left, which will overlap the first block by one thread, and continue in this manner. When correctly woven a straight diagonal at a 45° angle, beginning at the right hand corner, will run through the work. If the diagonal turns upward, too many weft shots have been woven over the block; if it flattens out, too few shots have been used. If it beaks off the wrong block has been woven.

So many Guild members have expressed interest in the recent "twill" Bulletin that the second of the proposed series will appear next month.

*May M. Atwater*

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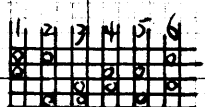
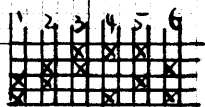
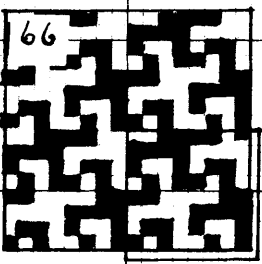
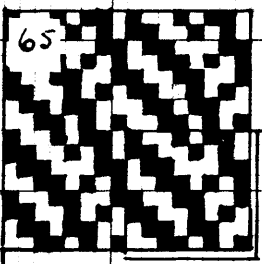
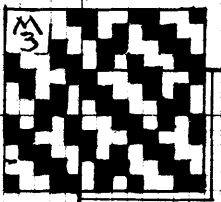
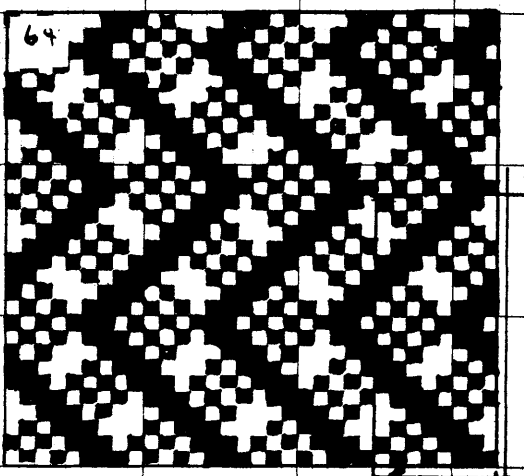
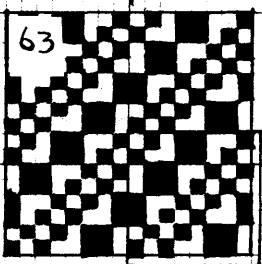
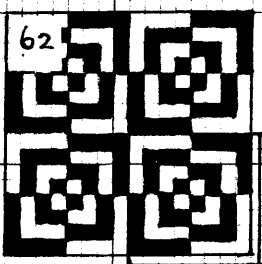
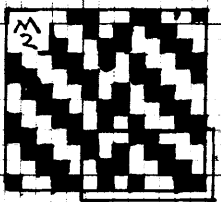
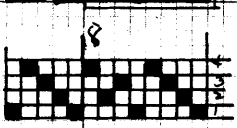
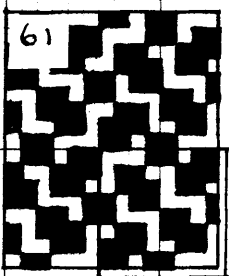
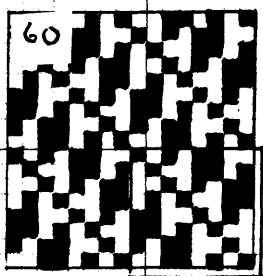
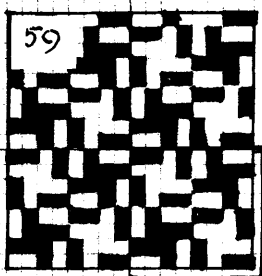
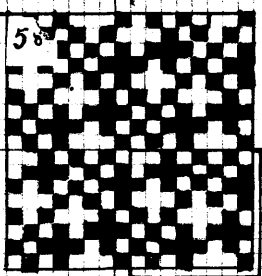
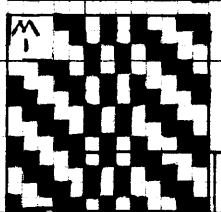
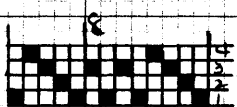
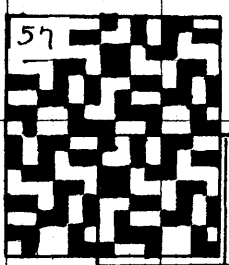
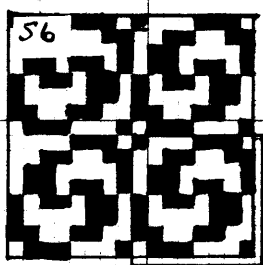
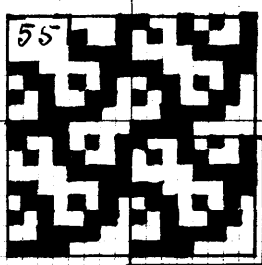
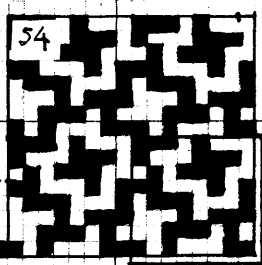
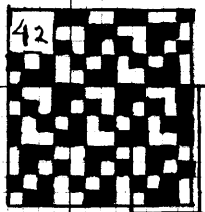
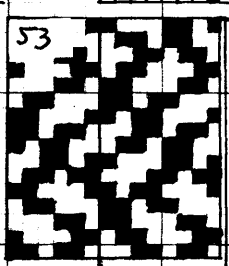
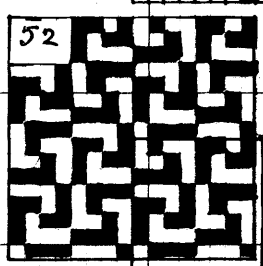
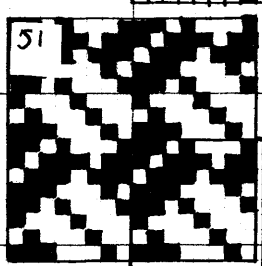
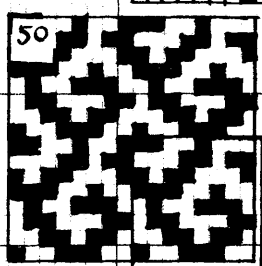
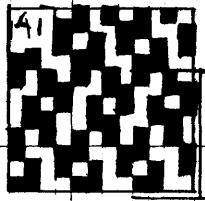
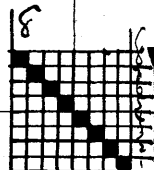
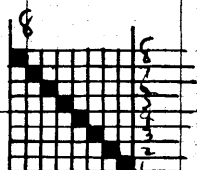
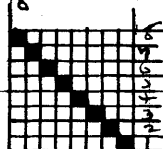
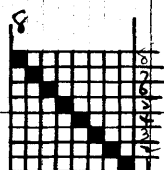
As many of our members have expressed an interest in the twills, and have asked for further material on the subject, here is a second installment, which is a continuation of the presentation of the four-harness and eight-harness twills begun with the Bulletin for November, 1944. As there is not, as far as I know, any publication that treats this subject in anything approaching a complete manner, I believe the proposed series of Bulletins will prove very useful as reference material. I do not plan to make the series complete in the sense of exhaustive, as this would take all our space for many months to come, and also because I have no hope of learning -- myself -- all there is to know on the subject. I shall not, for instance, give six-harness or ten-harness twills. Guild members who are so inclined will find it interesting to work these out for themselves. If space permits, some material will be given on the three-harness "jeans" twill and the five-harness and seven-harness twills, as the unbalance of these threadings have a certain interest. The three-harness twill, however, is now used chiefly for pattern weaving in double-faced twill on six and nine harnesses, while the five-harness and seven-harness threadings are used chiefly for the "corkscrew twill" weave -- given in the RECIPE BOOK, Series IV, No. 4, (a) and (b) -- and for damask and satin.

My plan for the series is to give in the next installment -- within the next three or four months -- some of the "Herringbone" and "point" threadings, and the "Dorniks." This will be followed by an article giving some of the pattern effects in twill produced by using two or more colors in the warp and in the weft.

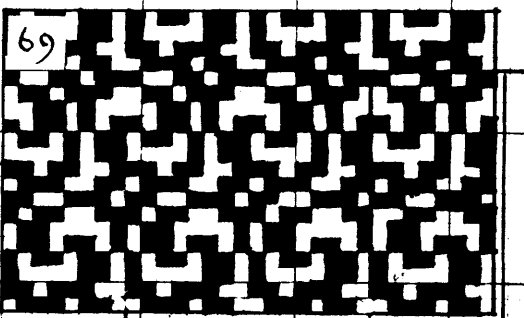
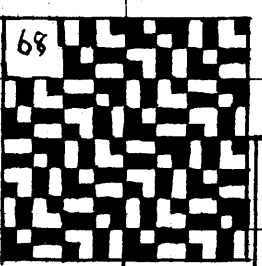
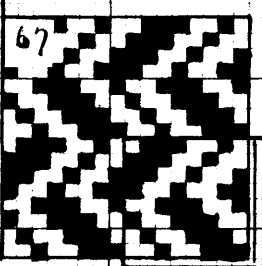
It is, of course, impossible to show all the four-harness and eight-harness variations of the plain twill threading. A mathematician might be able to give the exact number of possibilities, which must be in the hundreds or even the thousands. But this is academically interesting and of no practical importance. Many of the possible combinations are ugly and/or impractical. Unless the fabric is woven on a plan of interlacements that makes a useable piece of cloth it is of no value to us as weavers. And unless it produces an agreeable texture and effect it is unimportant to us as craftsmen. Of course fairly open weaves are desirable for many purposes, but a fabric so loosely combined that it will not "stand up" under the use for which it was intended can hardly be called a textile fabric at all and is merely a waste of time and material. I make a point of this because our craft has recently been invaded by a group of "arty" faddists who seem to forget that the purpose of weaving is to make a fabric suitable for some practical use. To me this seems altogether inane.

How shall we use the twill patterns for our various purposes? The more closely interwoven figures are useful for tweeds. At present, of course, suitable yarns for tweeds are unobtainable -- unless one has a spinning wheel and spins the yarns oneself. Some fortunate ones among us still have stocks of "homespun" yarns, but for most of us tweeds will have to wait till after the war. The close figures, however, may be used with interesting results for "texture" effects in linen and cotton.

The more open weaves are desirable for blankets, -- if one has the wool -- for baby-blankets, "afghans" for the couch and so on. But the use I should like to suggest as of particular interest at this time is for hangings, upholstery fabrics and other decorative textiles, done in very coarse material. The new OPA order prohibiting the commercial production of decorative textiles seems to me to

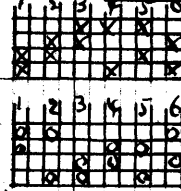
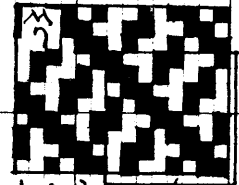
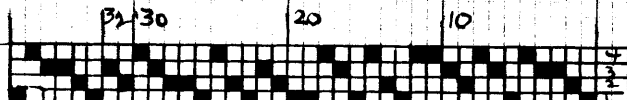
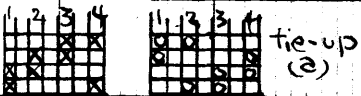
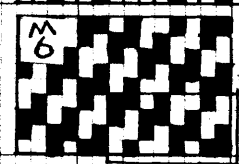
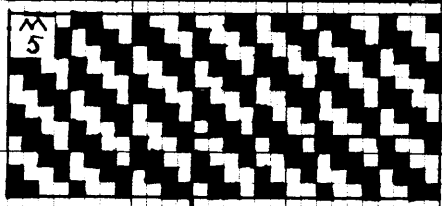
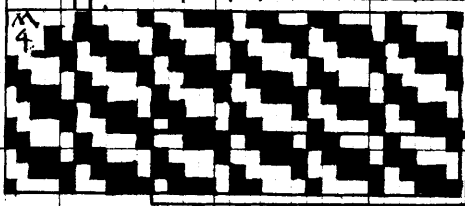
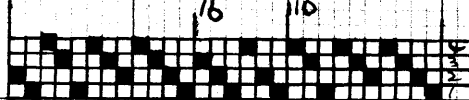


Weave M3.  
1, 2, 3, 4, 6, 2, 5  
Repeat.



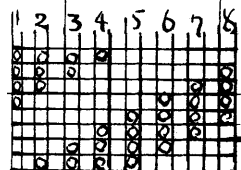
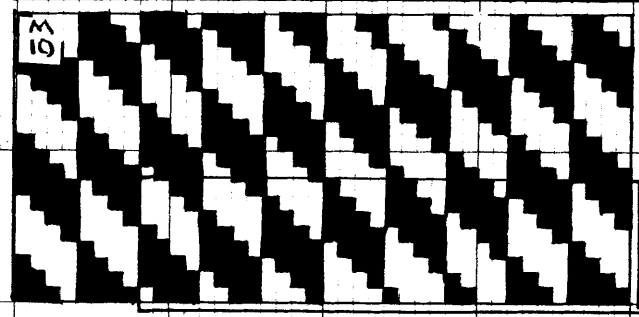
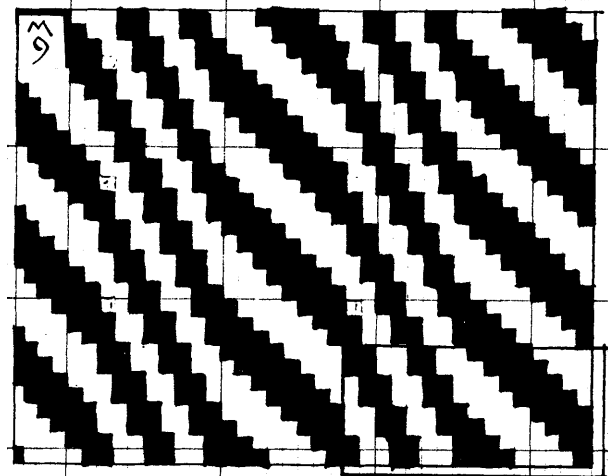
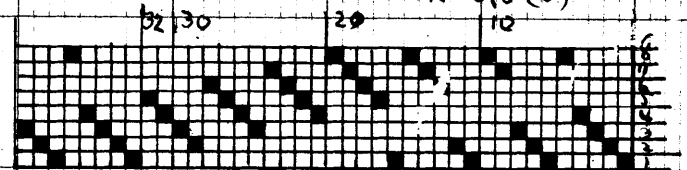
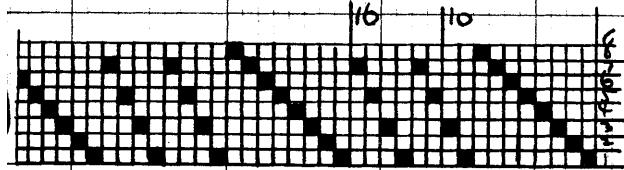
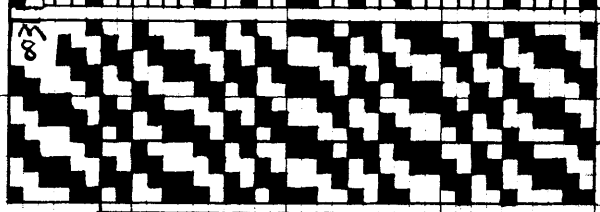
Modified Twills

Page three



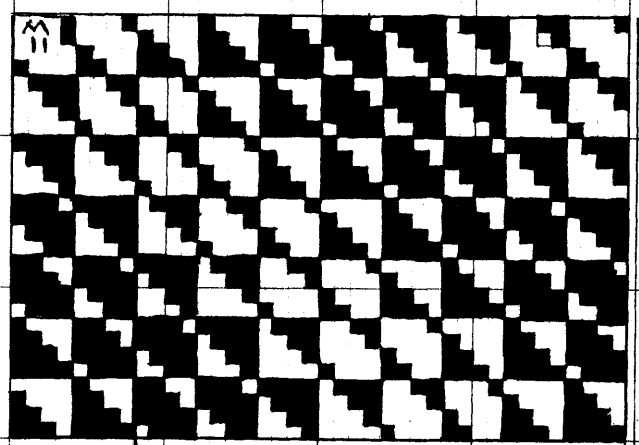
tie-up (b)

Weave M4, M5, M6, M8,  
on tie-up (a)  
1, 2, 3, 4. Repeat  
Weave M7 tie-up (b)  
1, 5, 4, 6, 3, 5, 2, 6,



Tie-up with rising shed  
M9, M10, M11

Weave M9 and M10: 1, 2, 3, 4, 5, 6, 7, 8  
Repeat



Weave M11, 1, 2, 3, 4, 8, 1, 2, 3, 7, 8, 1, 2, 6, 7, 8, 1, 5, 6, 7, 8, 4, 5, 6, 7, 3, 4, 5, 6, 2, 3, 4, 5.  
Repeat

give hand weavers a wonderful opportunity. We should plan to make the most of it. There will be no temptation to buy a commonplace machine woven fabric "off the shelf, and every incentive to plan and make ourselves the new curtains, portieres, chair-covering, our rooms need to keep them smart and bright and handsome in the face of war. We shall need ingenuity in the use of the material available.

Coarse, rough, tow yarns, woven in one or another of the bolder twill patterns -- all one color or in different colors for warp and weft -- make a striking and handsome effect. A rough tow warp woven in a heavy rayon of the "art silk" type is amazingly satisfactory. Coarse cottons may be combined in various ways.

For drapery fabrics the more loosely combined twill figures are excellent as they produce a soft fabric that hangs in pleasant folds. For upholstery, however, if one of the bold twill patterns is chosen, it is well to weave a tabby shot between pattern shots. The tabby should be fine enough to disappear under the pattern shots, but it serves to give firmness to the fabric.

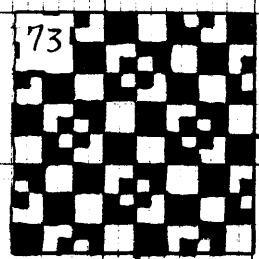
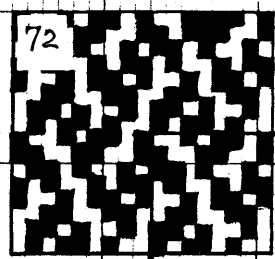
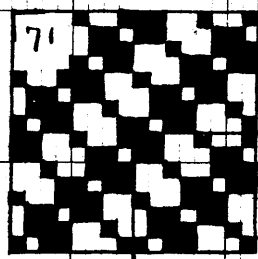
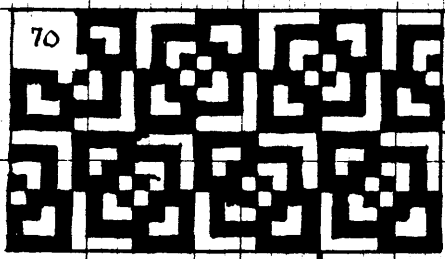
Another interesting way to use the twill patterns is to translate them into crackle weave, Bronson weave or summer-and-winter weave, which permits making the figures as large as one likes. The eight-harness twill patterns take ten harnesses in Bronson or summer-and-winter weave. The four-harness patterns can be done in crackle-weave.

A number of the twill patterns given on pages two and three of this Bulletin are from an ancient German weaving book that recently came into my possession. Some of them seem to me particularly interesting. The modified twills given on page three show how the plain twill threading may be altered to give twill effects that appear to require many more harnesses. The four-harness modified twill M-7, for instance, closely resembles the eight-harness pattern No. 60. M-10 and M-11, woven on a modified eight-harness twill, are quite elaborate in appearance and interesting in effect. This threading gives a variety of other effects when woven on a different tie-up. Space is lacking to give more of these, but the method of making these patterns is clear enough from these examples, and anyone who finds them interesting will enjoy working out additional figures.

The "John Landes" book of patterns has been out of print for some time, but I still receive a good many requests for it. I can have it reprinted if enough members of the Guild wish it. At this time it could not be printed on the same high-grade paper as before, but the patterns would be the same, of course,--- the price would probably be \$4.50 or \$5.00. Somewhat less if a good many people should want it. The patterns in this publication are from an ancient manuscript book in the Pennsylvania Museum of Art, and are reproduced from photostats taken from the old drawings. The drafts and notes were prepared by me. The patterns are classic Colonial in type.

I have had a number of requests for complete sets of the back-numbers of the Bulletin. These I am unable to supply as many numbers are out of print. It has been suggested that perhaps one of our Guild members may have a complete set he or she would be willing to sell. If so, please let me know.

*May M. Atwater*





# THE SHUTTLE-CRAFT GUILD

## BULLETIN



for

Basin, Mont.

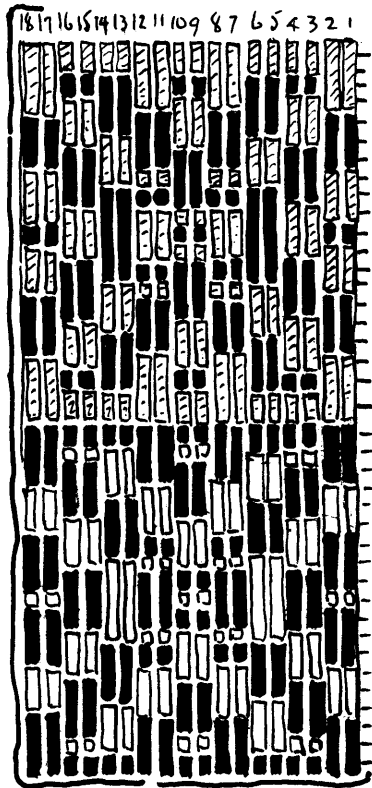
March, 1945

There are in the world so many fascinating ways to weave that a single life-time is not long enough to know and try them all -- but it is interesting to try as many of them as possible. The January Bulletin was for those of our members who prefer the American Colonial types of weaving, the February number was for those who prefer "yardage" and "texture" weaving. This month's issue is for those who enjoy the unusual and little known techniques.

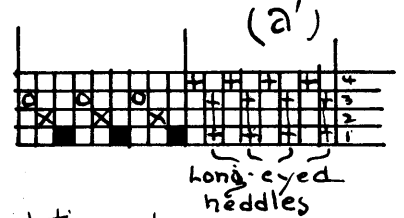
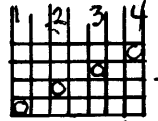
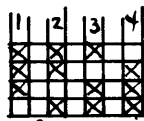
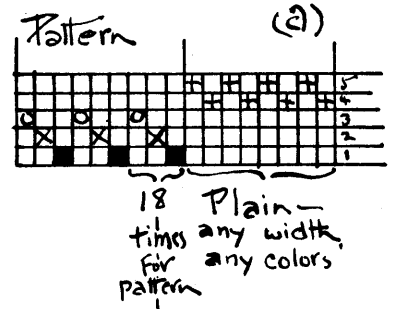
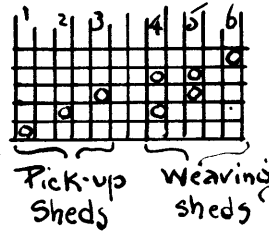
For a long time I have been interested in a group of "native" American weaves that are produced in three or more colors, and that -- though quite different in effect -- are similar in structure. Here are the results of many hours of experiment, in the hope that some at least of our members will enjoy playing with these clever and effective weaves. Two of them: (a) and (b), are from an interesting piece from Bolivia given me by a friend, Mrs. J.K. Smith; technique (c) is the Peruvian version of the weave, and the simple pattern shown on the diagram is from an ancient piece illustrated in one of the d'Harcourt books. The threadings suggested are the ones I found most convenient, after trying many others. As will be noted, none of these is for four harnesses except the modified version of threading (a). For that reason I am also including in this Bulletin the Guatemalan head-band at (d) which is a different weave altogether.

The three-color weaves do not appear to have been used for large all-over weaving, but are used as decorative bands separated by wider bands, usually in strips of several colors, in plain warp-face rep. The pieces shown in the many illustrations in the books on Peruvian weaving show these pieces as large bags. The effect is very striking and handsome. The fabric is quite heavy, however, and the techniques -- even in fine material -- would not be suitable for small pieces. Chair-seats for "occasional" chairs might be done in this fashion, or a table-runner for a living-room table. The narrow band at (a), when woven in worsted yarns of the "knitting" weight, makes a handsome ski-belt. In the Bolivian bag from which (a) and (b) were worked out, there is a broad band in (b) through the center, with narrow stripes in orange, green and red in rep on either side. Then a band in (a) on either side, then more narrow stripes in rep, a small pick-up band (not given here), more small rep stripes in black, orange, red and green, and a broad band of rep in green. The piece is finished with fringes and a woven draw-string. The material is a hard-twisted, hand-spun wool. This material we cannot, of course, get at present. For my experiments I used Lily's "thrifty-knit" cotton as I wished something coarse. A finer cotton could be used if preferred, but a very fine material is unsuitable. The setting of the warp depends on the material used. It should be close enough to cover the weft completely, and as noted previously in treating of the warp-face weaves, a very coarse reed -- 4 or 6 dents to the inch -- should be used as a fine reed wears the warp too much and makes the sheds stick. For a narrow piece such as a ski-belt in (a) as suggested, no reed need be used, the weft being pressed down with the knife-edge of a belt-shuttle.

For the pattern in technique (a) as sketched, warp 18 threads each of the three colors selected -- with borders in plain weave in any color or colors desired. Thread as indicated on the draft. One of the three colors appears in each design, in combination with one of the other colors. The figure when correctly woven is the same on both sides of the piece with colors reversed. In the sketch the darkest color has been used as the foundation color, and the tie-up is shown to correspond. To weave as shown on the sketch, beginning at the bottom, treadle 1&6 and weave. Treadle 1 and take up on a pick-up stick the first two threads on the right, over four, pick up two, over two, pick up two, over four and pick up two. Drop the black threads and treadle 2 to raise the red threads. Make a pick-up with a second stick in reverse of the first. That is: over the first two, pick up four and so on. Drop the red threads and treadle 5. Weave. Treadle 1, to raise the black



Bolivian



- Black, or darkest color
- ⊠ Red, or intermediate - foundation color
- ⊞ Tan, or lightest color.
- ⊞ Plain - any color or colors in stripes

threads for the second pick-up: take up four, over two, pick up six, over two, pick up 4. Drop black and treadle 3. Pick up the reverse in tan. Drop the tan. Treadle 6 and weave. This process weaves the figure in black and tan on top and in black and red on the reverse. End by weaving 1&6. For the second figure: 4&5 and weave. Treadle 1 and make the black

pick-up: skip two, pick up four, and so on. Drop black, and treadle 2. Make the reverse pick-up. Drop 2; treadle 6 and weave. Treadle 1 and make the second black pick-up. Treadle 3 and make the pick-up in reverse. Treadle 4 and weave. This process will weave the upper figure as shown on the sketch, with black and red on top and black and tan on the reverse.

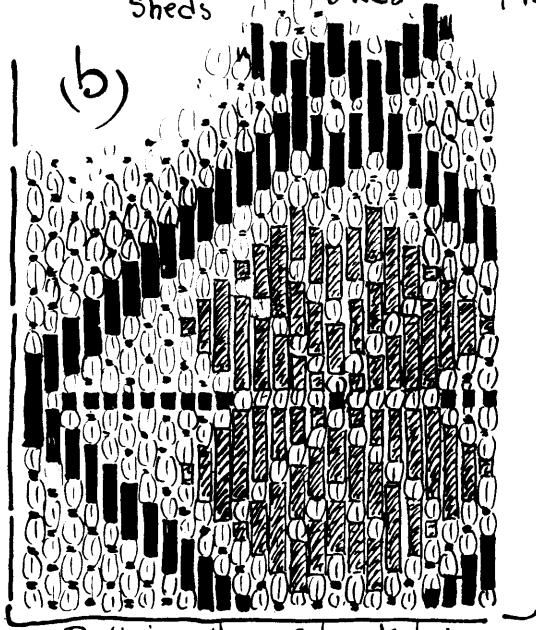
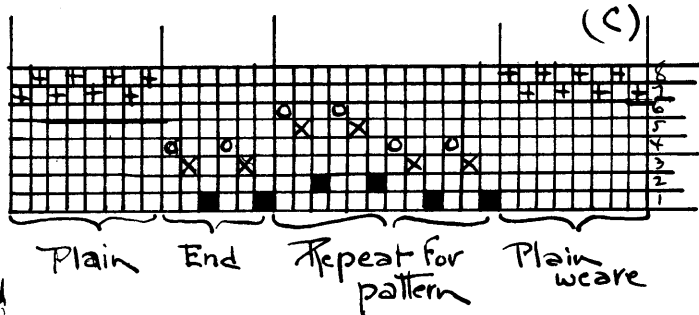
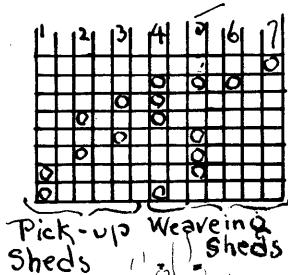
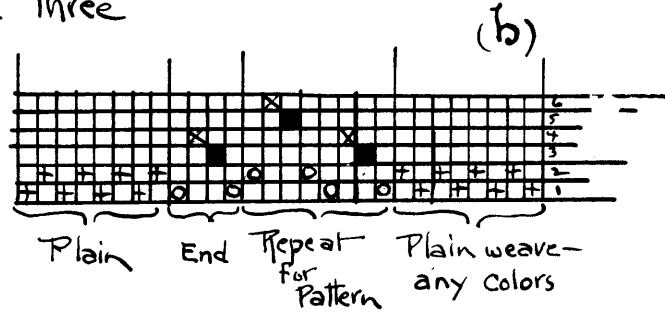
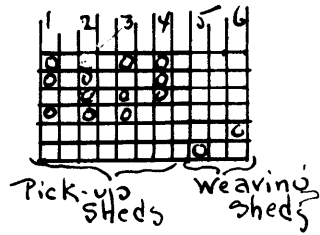
At (a') is shown an adaptation for four harnesses. The arrangement given is for red as the foundation color, making the figures red and black, or red and tan. For the plain weave it is necessary to use long-eyed heddles on harness 1, and the warp-thread must be taken through a heddle on 3 and a long-eyed heddle on 1. If it is desired to use black as the foundation color, put the long-eyed heddles on harness 2. The pick-ups should be made as explained above, avoiding the border threads which will also rise on two of the sheds. To weave the bottom line, treadle 1 and take up all the black pattern threads on a stick. Drop 1, treadle 4 and weave. For the second line make the two pick-ups as indicated. Treadle 3 and weave. And so on.

For technique (b), the white threads form a background and are not used in the pattern. By adding two more harnesses, another color may be used if desired. Use black for weft. To produce the figure sketched, omitting the bottom line of the drawing and starting with the bottom of the red figure: treadle on 3 and pick up two threads, one on either side of the three middle threads. Drop 3 and treadle 2; pick up three black threads on either side of the figure, leaving three threads between. (It will be noted that a red thread comes up with the middle black thread; take this up also on the pick-up stick) Drop 2. Treadle 5 and weave. Treadle 4 and pick up six red threads (and the two black threads that come up with them) omitting the middle thread. Drop 4 and treadle 1; pick up three black threads on each side as shown on the sketch (and also the red threads that come up behind them.) drop 1. Treadle 6 and weave.

The wrong side in this technique is not like the right side, and has some long skips, but both colors are caught into the fabric making a firm weave.

For technique (c), in the pattern sketched, treadle 1 and pick up nine pairs of black threads, skip one pair, take up one pair, skip one pair and take up three pairs. Treadle 2 and pick up one red pair as indicated; treadle 3 and pick up the tan pair. Treadle 6 and weave. Treadle 1 and pick up black as shown; treadle 2 and pick up red; treadle 3 and pick up tan. Treadle 7 and weave.

Page three



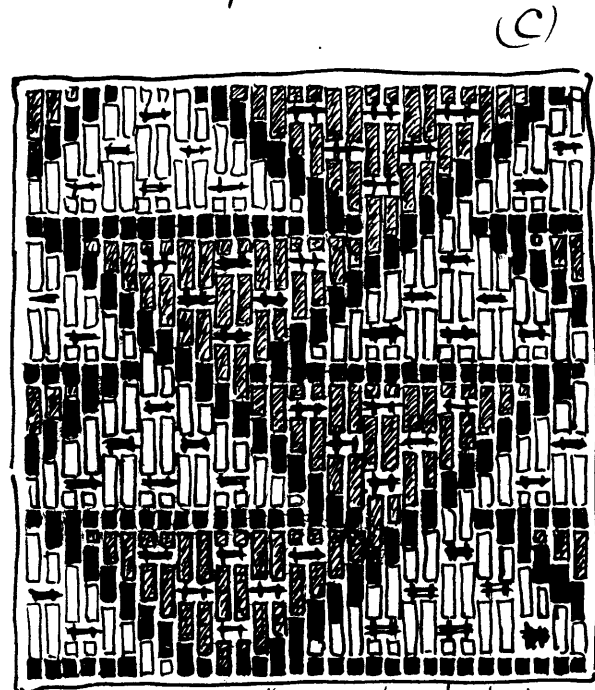
- Black, or darkest color
- ⊠ Red, or intermediate "
- White, or lightest "
- ▣ Plain weave, any color or colors

Bolivian three-color technique

Warp: 33 threads ■  
 33 " ⊠  
 66 " □

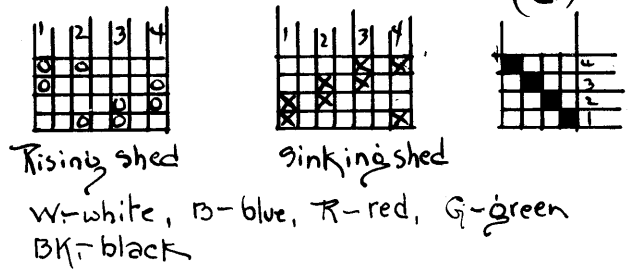
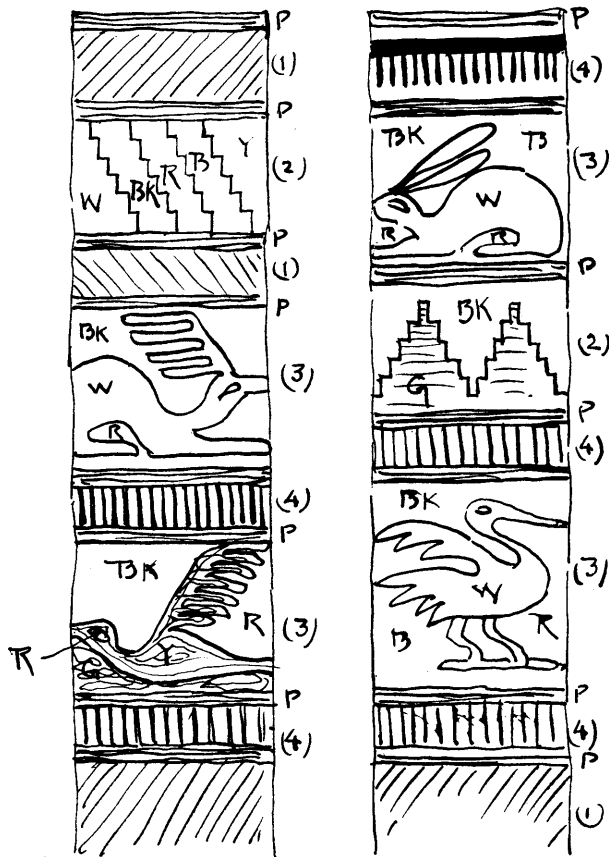
treadle 5 and weave. Pick up as before, each color, treadle 7 and weave. Treadle 4 and weave. Continue in this manner -- make pick-up on each color and weave on 7; weave 5. Make pick-up and weave on 7; weave on 4 and repeat.

The wrong side is not as handsome as the right side as it lacks the black outline, but is otherwise similar.



Peruvian three-color technique

Warp: 30 threads ■  
 30 " ⊠  
 30 " □



The head-band illustrated is traditional in certain parts of Guatemala. The piece I have is 2½ yards long and 1½ inches wide. The warp is a fine, stiff fibre -- unknown to me. A waxed linen thread would serve. The threading is twill, with a four-strand edge-thread. The weft goes under and over this strand each time and if five harnesses are available this edge cord should be threaded on the fifth harness. Or it might come through the loom without going through a heddle, being picked up each time on the shuttle. Doubling the two edge threads would give a somewhat similar edge, though not as clear-cut. In the piece I have there are 36 ends, exclusive of the two four-strand edges, or 44 threads in all. This means a setting of about 34 ends to the inch. A setting of 30 to the inch in 40/2 linen, I think, work well. The warp should, however, be stiffened in some fashion, and should be stretched tight. The weft is a fine, soft cotton in colors. An unmercerized 20/2 would serve.

At first glance the weave appears to be a simple tapestry weave, but on closer examination it is apparent that this is not the case. The sections marked (2) on the sketch are, to be sure, tapestry of the "Killim" type, woven on treadles 1 and 3 alternately. The sections that look like twill -- marked (1) on the drawing -- are woven in two colors in the Navajo manner: treadle, 1,2,3,4 and repeat, two shots red and the third shot white -- or in any other two contrasting colors. The sections marked (4) are done in two colors also and treadled the same way, but two shots red and two white. The plain bands, marked (p) are treadled 1,2,3,4 and repeat with all shots in the same color.

The little figures of birds and animals are also treadled 1,2,3,4, and are built up in a curious manner. The shots of weft do not lie straight across but follow the contours of the figure, and are beaten together with a small comb-like instrument. An ordinary kitchen fork may be used for the purpose. The weft must be permitted to lie very loose in the shed or the edges will draw in badly. Even for so narrow a piece it may be necessary to use a "template." A thin bit of wood with two thumb-tacks driven through it the right distance apart will serve the purpose. It would be inadvisable to attempt a wide piece of weaving in this technique, but Guild members who are addicted to belt-weaving may find it useful and amusing.

The figures and the manner of weaving are oddly similar to ancient Coptic weaving, and the similarity is so strong that it is easy to guess at some connection, unknown to history, between Egypt and Central America in very ancient times.

In the woven pieces I have seen the bird and animal figures occur as a rule some inches apart with a variety of plain stripes and bands in the other styles illustrated to separate the figures. The colors seem to be used in any order fancied by the weaver, without definite plan, except that the two ends are alike in figure and color arrangement up to a plain band at the center.

May M. Atrah

# THE SHUTTLE - CRAFT GUILD

## BULLETIN

for

Basin, Montana

April, 1945

Several Guild members have asked for a Bulletin on table mats and luncheon sets, so here are a few notes on the subject.

The designing of a luncheon set is a highly individualized project, and for best results one should know for what table -- size and shape -- in what room with what color-scheme, under what type of china or pottery, and for the use of what people the set is desired. A bright colored set that would be perfect in a sunny morning room under "Fiesta" pottery would look very silly at a formal luncheon -- if people still have such things. A set of classic inspiration would be unattractive in a dining room of the ultra-modern style, and a modern set would be very bad indeed in an "early American" setting.

A table set usually consists of a number of place-mats -- four, six, eight, twelve, -- And a runner or a square center-piece. Small square mats on which to set dishes of bon-bons and salted nuts may also be included. Place-mats are sometimes made as large as 11" X 17", but this seems to me a rather awkward size except for a very large table, and most people will find mats 10" X 14" large enough. Whether to have a runner or a square center-cloth depends on the size and shape of the table. Material, color or colors, weave and pattern may be what one chooses, and the possibilities are so varied that it is sometimes difficult to make a choice.

The most desirable material for a table set is undoubtedly linen. For most of us this is a matter of merely academic interest, as we have no linen, but a few fortunate ones have stocks of pre-war linen and may be planning to use it. In my opinion the handsomest weave for a linen set is the Spanish open-work weave, in white or natural. This weave does not lend itself to color effects, but patterns may be as simple or as elaborate as one chooses. Mats, for instance, with a narrow border all around, made of a single or double row of "holes," with an initial or a small decorative motif in one corner would give a very "distinguished" air to a table set-up. The center piece might be simple or elaborate as one wished. A narrow hemstitched hem all around makes a handsome finish for such a set, though narrow fringes might be used if preferred. This beautiful weave, however, is strictly "for linen only," and should not be attempted in other materials.

For colored linens there is a very effective Russian weave that was given in the Bulletin some time ago, and also a three-harness Finnish weave once given in the Bulletin.

Other suitable weaves for linen pieces are "Ms and Os", the Bronson or "spot" weave, damask and double-faced twill. The overshot weave is inadvisable.

People sometimes combine cotton and linen, but this seems to me a mistake as the resulting fabric has neither the beauty of linen or of cotton. Silk and rayon do not combine well with linen. In fact only linen should be used with linen. There has been a fashion, I know, to introduce fine celophane threads in linen pieces. They have the effect of metallic tinsel. This seems to me almost like sacrilege. The beauty of linen is in its satiny sheen and in its durability. Both are ruined by the introduction of this trashy, glittery stuff. It is to be hoped that the fashion will pass.

I also hope the fashion of weaving the ribbon type of celophane into mats will pass before long. The things look cheap, and are cheap, but people buy them. I for one am entirely willing to leave their manufacture to machinery and mass-production. It seems a pity to bother to make them by hand. But some of our members may have the urge. Some of the mats seen in the shops are done with a chain-stitch, like the chain-stitch<sup>y</sup> across the top of a flour-sack. Our looms will not make chain-stitch, but the same effect can be produced in leno. The three-thread leno is the best one to use, but if only four harnesses are available the two-thread leno will serve. For a two-thread leno set a 10/2 or 16/3 warp at ten ends to the inch. Sley through a 15-dent reed: two threads in the first dent, skip two dents, and so on. This setting would give an effect similar to the commercial mats, done in a fairly narrow celophane tape. The weave should be beaten up very firmly. What manner of centerpiece to make for a set of place-mats of this type I have no idea. Perhaps a longer and wider strip of the same. I do not know where the celophane materials may be obtained, and have no intention of finding out.

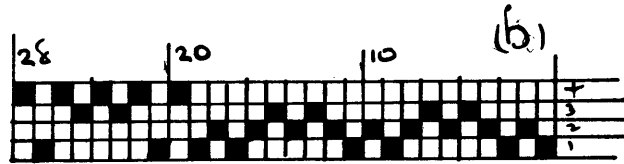
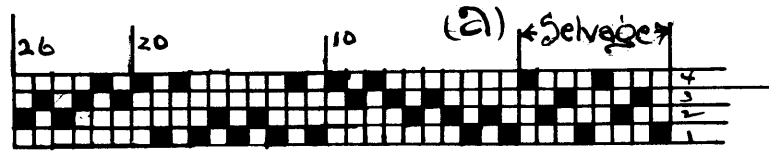
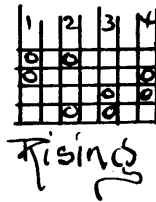
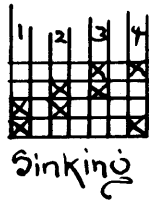
A fine raffia might be woven on a leno warp as above, and would, in my opinion, give a better effect than celophane. Decorations in the Maori manner might be introduced, -- as in the raffia basket-bag described in a Bulletin of some time ago.

But of course the material on which we shall have to rely for most of our weaving for "the duration" is cotton. Fortunately we can get many beautiful cottons and there are many handsome weaves for cotton, -- and weaves that are suitable for table sets. A plain tabby fabric in cotton has, it is true, no great charm, and unless done in quite coarse material is not heavy enough to lie properly in place as a table mat, but a plain fabric with stripes of twill or herringbone done in bright colors is extremely effective in a fairly coarse cotton, such as Lily's 20/6 "soft twist" (Art. 914) Summer and winter weave and crackle weave can be used for all-cotton fabrics with good results. The double weave -- not suitable for linen -- is handsome in cotton.

If I were making a luncheon set for my own use I am certain I should make it in one or another of the fascinating Guatemalan weaves, some of which have been given from time to time in the Bulletin. For a rather formal set, technique (a) in the Bulletin for May, 1942, and for a "riot of color", technique (b) in the same Bulletin. (I regret to say that this number is now out of print and cannot be supplied.) These two are my favorites among the Guatemalan weaves. Technique (b) in particular -- it is simple to do and is so wildly effective.

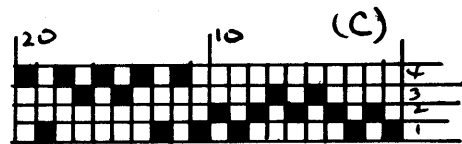
One of the best weaves for a cotton table set is the "no tabby" weave given in the Bulletin for February, 1940, and elsewhere. As this number of the Bulletin is also out of print, and as I have some additional remarks to make about this weave I am giving it again. Much Italian and some Scandinavian weaving is done in this manner. The three drafts given will produce somewhat different effects but all are woven in exactly the same manner. The warp should be set futher apart than for tabby weaving, and the weft should be a fine unmercerized cotton. The fabric is soft and quite thick, even when the finest materials are used, giving the mats a handsome texture and enough substance to lie flat and in place. For instance make a warp of 20/2 cotton, set at 24 or 26 ends to the inch. As the fabric draws together a great deal after weaving make the warp 11" wide for a 10" mat. For weft use a double strand of 20/2 cotton in white and colors. For a somewhat heavier fabric Lily's "soft-twist", single strand, may be used for weft. Weave the four treadles in succession for the entire piece, producing the interesting pattern effects entirely through changes of color. For instance here in detail is the border of a table mat in my collection. The colors used are white, black, and a blue-green. Treadle 1,2,3,4, twice (8 shots) in white; twice in black; twice in white; twice in green; twice in white. Then treadle: 1,black; 2, black; 3, white; 4, white, and repeat. Weave as before, 8 shots white; 8 shots green; 8 shots white; 4 shots black; 8 shots white. Then: 1,2,1,2, green; 1,2,1,2,black; 1,2,1,2, green. Then as before, 8 shots white; 4 shots black; 8 shots white. For the center stripe of the border use the black and green material in a heavy strand -- six ends of the 20/2 cotton or three strands of the soft-twist. Treadle 1, 2, heavy green; 3,4, fine white; 1,2, heavy green; 1,2, fine white; 3,4,heavy black; 1,2, fine white; 3,4,heavy black; 3,4, fine white; 1,2,heavy green; 3,4, fine white; 1,2,heavy green. The stripe in heavy black is the center of the border. Repeat the series of stripes in

# Page three

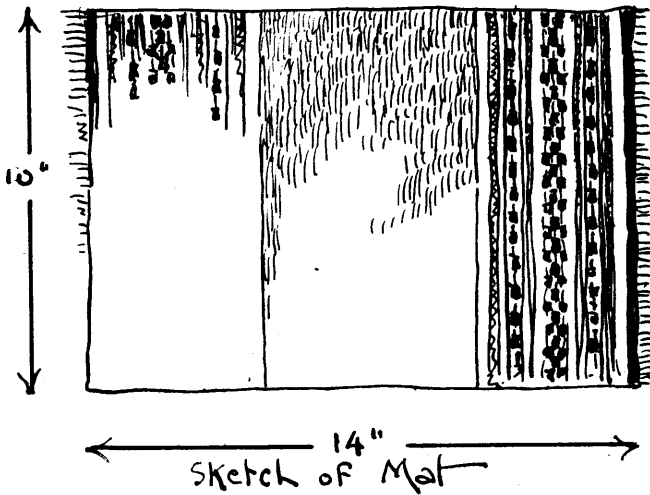
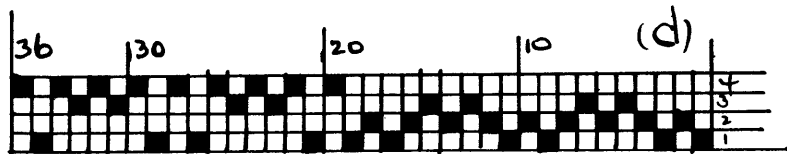


Threadings for the "no-tabby" weave.

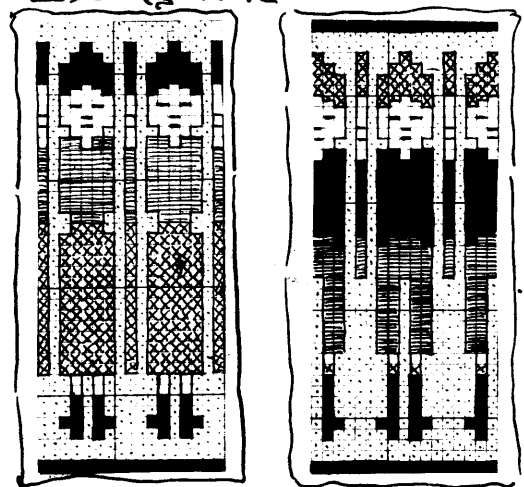
All are woven in the same way:  
Treadle: 1, 2, 3, 4, and repeat.



The "Boy and Girl" motif may be woven on threading (a).



- Black
- Blue
- ⊗ Red
- Background



"Boy and Girl" Motifs

"Boy and Girl" figure.

For heels and legs, treadle:

1. background; 2. black; 3, 4, background—repeat three times.

Feet: 1. background; 2, 3, black;

4. background—repeat three times.

Develop the rest of the figure in the same manner—by changes of color.

reverse order ending with eight shots in white. Do not, however, reverse the order of the treadles. Weave the center of the piece in green, treadeling always: 1,2,3,4. Repeat the border.

This is an extremely simple border. Very much more elaborate borders may be woven, and as many colors as desired may be introduced. The ingenuity and imagination of the weaver has full scope.

This weave tends to narrow in a great deal. The warp should be kept at a greater tension than for other types of weaving and the weft should be very slack indeed. The weft should be beaten up to cover the warp almost completely.

Here is a way of making a luncheon set that may appeal to users of small looms. Thread 20" wide in any desired weave or pattern. For a set I once made in this manner I used the "Three Twills" pattern in crackle weave, -- Series VII No. 2 in the Recipe Book, and liked the result very much, -- but any other suitable weave or pattern might be used instead. Weave 10" in pattern; 20" in plain weave; 10" in pattern. Now divide the warp at the center and using two sets of shuttles weave two strips 40" long, in pattern weaving all the way. These three strips when sewed together will make a 40" square lunch-cloth with a plain center and a ten inch border all around in pattern weaving. Weave the place-mats on the divided warp, making two at the same time. They may be woven 14" inches long with plain weave for the center and narrow borders of pattern weaving across each end. They may be made all alike or each pair different from the others, in detail of pattern borders.

Another practical way to make a table set is to put a pattern in warp-face weave in the warp. Set the warp 14" or 15" wide. Weave a runner at this width, in which the pattern will, of course, run in lengthwise effect. Weave place-mats at the same width and 10" deep. The pattern will run across the ends of the mats when they are in place. The simplest form of decoration would, as suggested above, be twills or herring-bone in bright colors and fairly coarse material. Or one or another of the warp-face pick-up weaves might be used.

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In view of the difficulty we are having in obtaining wool yarns the following address may prove useful: varying quantities of a fine wool yarn suitable for light-weight tweeds, may be obtained from the Pittsfield Hand Knitting Company, 8 Park Street, Pittsfield, Maine. The yarn is on bobbins and sells for \$2.00 a pound, f.o.b. Pittsfield. This is job lot material and a full line of colors is not available. We are indebted to one of our Guild members for this address.

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I have received many requests to list sources of supply for looms and equipment -- new or used -- but am unable to be very helpful in this regard. A satisfactory small table loom, with four or eight harnesses, is supplied by "Missouri Looms," L.C. Wilderman, Manager, 7731 Sappington Avenue, St. Louis 5, (Clayton), Mo. Mr. Wilderman writes that his stock of lumber will probably permit him to continue to build looms for a year. The only large treadle loom now being made -- the only one, that is, that I care to recommend -- is the Gilmore loom, built by E.E. Gilmore, 1200 West Harding Way, Stockton, California. Mr. Gilmore writes that he expects to be able to continue supplying looms for another six months. Perhaps by that time the OPA restrictions on lumber may be relaxed, though this seems unlikely at the moment. One may always hope. If anyone has "used" equipment to be sold, please write me and I shall be glad to put a note in the Bulletin. There is an acute shortage of equipment, and those having idle looms on hand will be conferring a favor on the craft by offering such unused equipment for sale, -- or by presenting or lending it to the nearest army hospital for the use of the occupational therapy department. Everything we have should be working in these days.

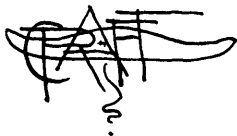
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May M. Atwell



# THE SHUTTLE - CRAFT GUILD

## BULLETIN



for

Basin, Mont.

May, 1945

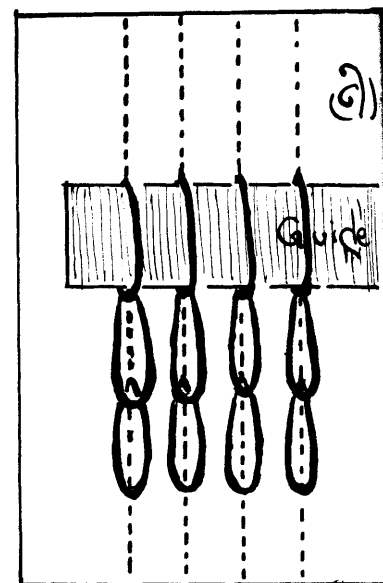
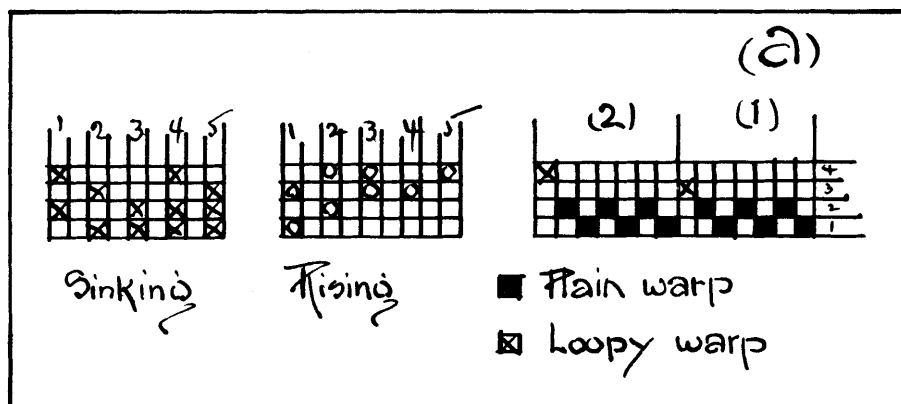
In weaving, as in many other arts, there are two quite violently opposed schools of thought -- the craftsmen and the faddists. Faddism in weaving is fairly recent, as the revival has been from the start a moderate and sober affair of quite slow development but steady growth, untroubled for the most part by the people who "take up" something with great violence only to drop it again after a bit for some other fancy. I have always felt that one reason for this desirable stability lay in the fact that a good loom costs enough to make it an investment rather than a toy, and that time and effort are required in learning to weave. The faddists are getting around these restrictions by using any old thing as a loom -- a cigar-box, a picture frame -- and by refraining from learning in favor of being "original." Each weaver invents weaving for himself.

For weavers of the craftsmen's group -- to which most of our Guild members very definitely belong -- the pleasures of weaving include the orderliness of the craft, the geometric precision of the weaves and patterns, the honest utility of the finished web, as well as its charms of color, texture and design. The faddists instead go in for the "unusual," and seem to feel that knowing how to weave would somehow impair their "originality." There are actually schools of this new weaving where the student is provided with a loom of sorts -- usually a very poor loom, but of course that hardly matters -- and urged to work in his own way with any materials he chooses, provided the material chosen is as unsuitable as possible. The rather distressing results of this endeavor are presented as something extremely "arty," and there are of course plenty of people who will admire anything they are told to think clever or "new."

Of course this kind of nonsense is somewhat irritating to an honest craftsman, but it really matters very little as things devoid of worth do not live very long. And weaving is a very ancient art. It cannot be seriously injured by "pose" and unreason. Every art must have its roots in common sense, reality and mathematics or it is rather less than nothing. A piece of weaving so poorly combined, or made of such improper materials that it will not hold together long enough to be of any conceivable use, can hardly be called a textile fabric. To make a pie using shoe-buttons instead of cherries might be thought highly original, but the result would hardly serve the customary purpose of a pie, and the producer would hardly rank as a chef. And to weave draperies of wisps of paper and tufts of shoddy, uncertainly combined, seems to me to serve no useful purpose whatever -- even if no such concoction was ever produced before.

There is, however, a sort of "frenetic fringe" between the sphere of the craftsman and that of the out-and-out faddist, -- a region in which the craftsman may indulge an occasional impulse to do something "queer" for a change, and the faddist may as an experiment wish to put some solid weaving under his flights of fancy. For instance one might make a fabric ornamented (or otherwise) by weaving in an occasional shoe-string or a tape-measure or what-not. This might make a serviceable fabric, and whether handsome or not is a matter of taste.

I have received a number of questions from time to time about certain weaves that seem to me to belong in this group and it seemed to me a good idea to devote an issue of the Bulletin to the subject. Not that I wish to recommend these ways of weaving! Far from it. But it is sometimes interesting to know how a thing may be done even if one has no desire to do it.



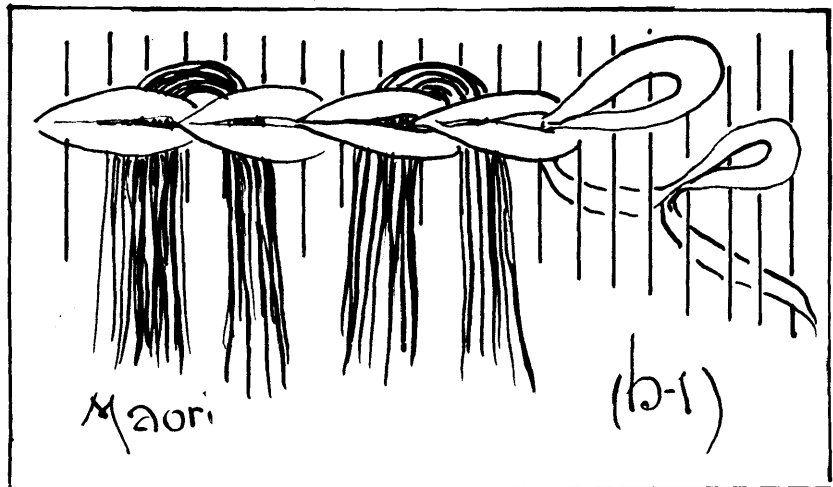
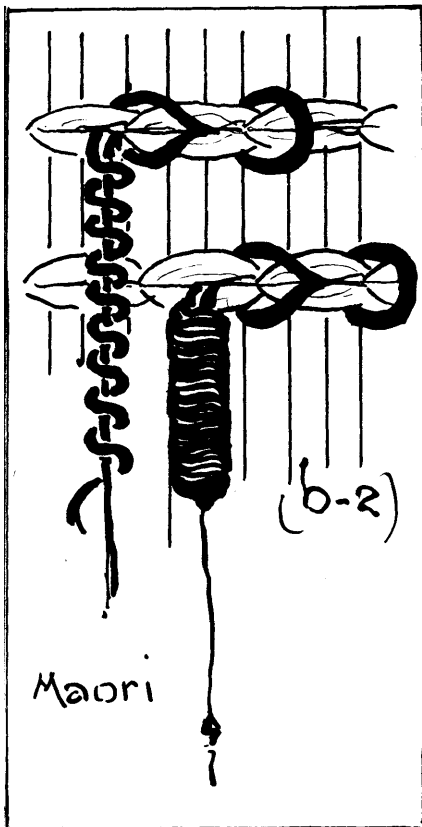
There was at one time an outbreak of loops that affected chiefly the West Coast. I have had many questions about this, but avoided answering them as I hoped the fad would die a natural death. To a large extent it has done so, but there may still be someone who wishes to weave loops. The process is simple enough. It is an exaggeration -- one might call it a "reductio ad absurdum" -- of the process used in weaving "terry" and also in making velvet. As a rule it is drapery fabric that has run to loops. These are long and hang down in rows. To make them it is necessary to have two warp-beams, one to carry the foundation warp and one to carry the loopy warp. The loopy warp is usually coarser than the foundation and must of course be much longer. How much longer depends on the length of the desired loops and on how close together the rows are to be. For instance if the loops are to be four inches long in rows set four inches apart, the loopy warp must be three times as long as the foundation warp. The weaving process is as follows: weave plain tabby for the space desired between rows. Then treadle to raise the loopy warp and release the tension. Introduce a gauge of the desired width and draw down the loops. Weave tabby again till the next row of loops is reached.

In the threading draft as given above the loopy warp is shown on the two back harnesses. It might all be put on one harness if preferred. Or if one wished, the loops might be woven in staggered rows, by making loops on harness 3 in one row and on harness 4 in the next. Or patches of loops might be made by repeating the first part of the draft as desired and then the second part of the draft. However if two sets of loops are to be woven in this manner it is necessary to have two warp-beams for the loopy warp, or else to attach weights to each section of the warp, as in the making of figured velvet, to take up the slack.

My objection to this type of fabric is that the loops weaken the fabric greatly. A drapery fabric is not ordinarily beaten close enough to hold the loops securely and a passing button or the fingers of a small child might cause a lot of damage. Also it would be almost impossible to wash such a fabric or even to have it dry-cleaned. Moreover -- I confess -- that the effect seems to me anything but handsome. Of course that is purely a matter of taste and may be ignored by anyone who fancies loops.

There are, however, some far better ways to make loopy effects than the above. The loops are, of course, a form of "tag" weaving. And by tag weaving is meant the attaching to a textile fabric of something extraneous, -- usually something to hang down like a fringe or tassel.

The chief exponents of tag weaving are the Maori weavers of the South Pacific. Their tag-cloaks are famous. In some of these the tags serve a purely practical purpose -- they are strips of bark or some such matter, set close together in the row and long enough to overlap like thatch. These are rain-capes, intended to shed water. In other Maori cloaks the tags are pure decoration. They



are of many kinds -- tufts of dog-hair, odd little bundles of twisted fibre, scraped bark, hard-twisted cords, and sometimes feathers. The feather cloaks are of course the "magnum opus" of tag-weaving.

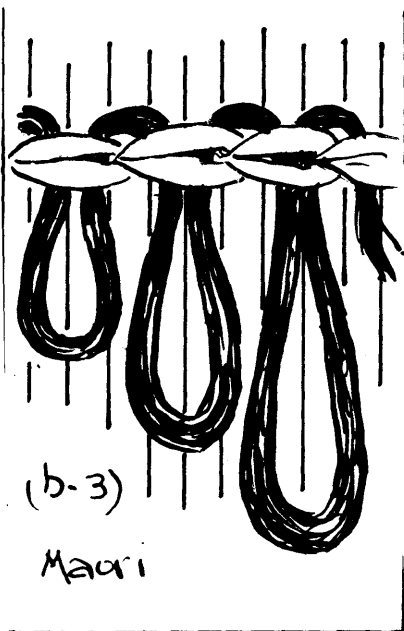
While it is hardly likely that any of our Guild members will wish to make a tag rain-cape or a feather cloak, the Maori methods of attaching the tags may be of interest. Maori weaving consists chiefly of double and single twining, done on a stiff warp attached only along the top. It is slow and difficult to do twining on a warp held in a loom. However a row of chain-stitch loops across the warp is easy to do -- with the fingers or with a crochet hook -- and this has much the effect of a row of double twining. The tag-attachments may be made to this in exactly the same manner as to a row of twining.

The illustrations above are greatly exaggerated for the sake of clearness, and show three types of Maori tag-attachments.

At (b-1) is shown an effect of fringes, set as close together or spaced far apart as desired. The ends may be permitted to hang down as shown or may be knotted or braided or twisted together or otherwise "jazzed up" according to taste and inclination.

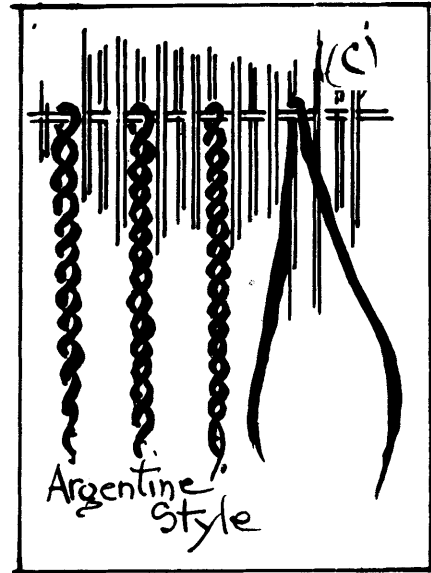
At (b-2) is shown what is to my mind the best of the tag attachments as it is the firmest. A tag attached in this manner can't possibly pull out. The illustration shows clearly enough the manner of making the attachment. Tags of this type are often long ends of hard-twisted cord, allowed to hang down plain, but the form of tag illustrated is somewhat more interesting, and may be introduced at intervals between plain tags. To make it, one of the strands is twisted around the other -- which is held straight. The twists are then pushed firmly together along the straight strand and are knotted.

The attachment shown at (b-3) seems to me the poorest of the lot, though the looped fringe -- usually arranged in scollops -- has a more decorative effect than the warp-loops at (a).



Unless the chain is very firmly made this type of fringe might tend to pull out. This may be cured by catching the loopy strand under a second set of chain-stitch above the first. This is not illustrated.

Guild members may recall an interesting saddle-blanket from the Argentine described in a Bulletin of some time ago. This piece had rows of tag-fringes, made as illustrated at (c). The fringe material should be a rather stiff, very hard-twisted yarn or cord. A double length of this material is taken around a shot of weft as it lies in the shed, and as illustrated on the diagram. After being woven in by shots of tabby the fringes are finished by untwisting the two strands and permitting them to twist together. This is a solid and practical tag-attachment, but should be used only on a very closely set warp.



In the sketches I have omitted the tabby part of the weaving in the interest of clearness.

I am not giving the various attachments used for feathers, as it seems unlikely these would be of any practical interest. However if any Guild member wishes to delve deeper in the art of tag-weaving I suggest consulting an unusual book: THE EVOLUTION OF MAORI CLOTHING, by P. H. Buck. This may possibly be found in local libraries.

I shall conduct a class in weaving at the University of Montana summer school again this year. The dates are June 10-30 inclusive. For further information about this class please write Mrs. Belle Bateman, 720 Evans Avenue, Missoula, Montana -- who is in charge of the arrangements. As the class is necessarily limited to the available equipment, anyone planning to attend would do well to make an early application. I shall also conduct a class in the small weaving crafts as used in occupational therapy.

I shall also be away from my office for the month of August as I have agreed to teach a class of adult blind persons at a summer school conducted by the State Department of Public Welfare. I shall therefore be unable to take special students here at Basin during June and August.

Mail addressed to Basin will of course be forwarded, but there will be some delay. While at the University my address will be the University of Montana, Missoula, Montana.

Here is an address for homespun yarns which I am sure will prove welcome: St. Stephen Woolen Mills, (J. A. SPEEDY ) King Street, St. Stephen, N. B., Canada. The yarn is in two types -- warp-weight and weft-weight. For most of our purposes the warp-weight yarn would be the better. The weft yarn is fluffier and softer and not as hard-twisted, and would be desirable for weft in blankets and such pieces. The price of the yarn is \$1.00 per pound, plus an 8% sales-tax, postage, and of course the heavy duty exacted by our wool-hoarding government. Perhaps after the end of the war in Europe some wool may be released, but even so we can hardly hope to beat the price of this Canadian yarn, duty and all.

May M. Atwal

# THE SHUTTLE - CRAFT GUILD

## BULLETIN

for

Basin, Mont.

June, 1945

For this month we have two interesting contributions from members of the Guild. Mrs. Nona Pfeiffer, of San Diego, California, is generously sharing with us the directions for the "fluff" or "shag" rugs that have proved so popular in her studio and that many of us, I am sure, will enjoy making. And Mr. Edward Crosby Doughty has made us a working drawing of a "template" he has devised.

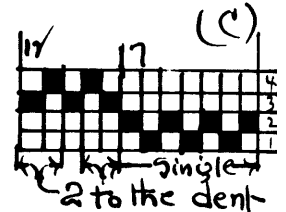
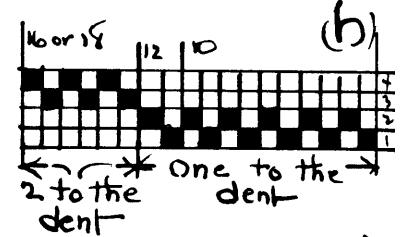
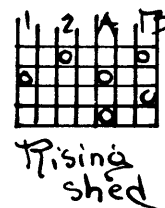
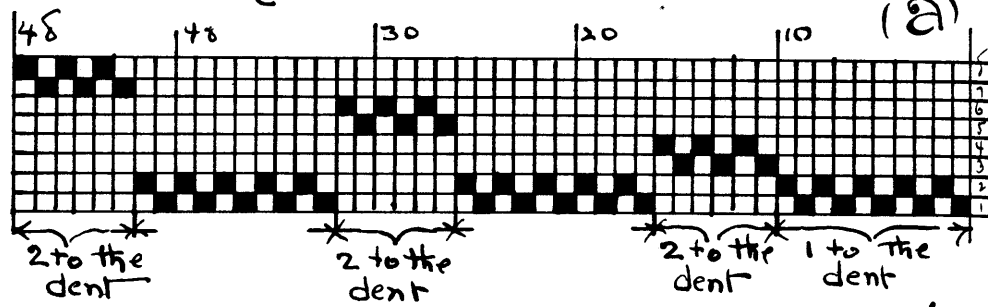
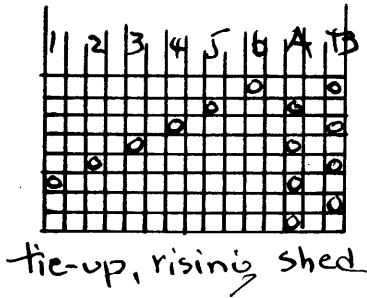
Mrs. Pfeiffer's rugs are of the "pile" type, but may be made much more rapidly than rugs in Swedish "Flossa" or similar techniques. These rugs may also be made of cotton materials -- an important point in these days when wool rug-yarns are practically non-existent. In these rugs the pile or "shag" is not knotted into the foundation, but is merely woven in. Of course it is not held as solidly to the foundation as in knotted pile, but if the fabric is firmly beaten up these rugs wear well and are washable. The entire surface of the rug is covered by the shag, which may be long or short as desired. The technique does not lend itself to pattern effects and most rugs of this type are made in a single color, but I fancy some simple border effects, stripes and perhaps diagonals, might be achieved by changes of color. I have not myself experimented with this way of making rugs, but I see interesting possibilities.

The material Mrs. Pfeiffer uses is ordinary cotton carpet warp with Lily's "Rug Weave Yarn" ( Art. 814) for weft. This weft material is used single for tabby shots and in a double strand for the shag.

The eight-harness threading, given at (a) on the diagram, is the most convenient, The sections threaded: 1,2,1,2 and so on, make the foundation and the other groups of threads catch the shag. It will be noted that the ground sections should be sleyed one end to the dent, while the groups of six threads should be sleyed two to the dent. Thirteen dents of the reed are therefore required for one "unit" of the weave, -- a unit of 16 warp-ends. If a 13-dent reed is used the warp-setting would be 16 ends to the inch. The same system of slewing might be used through a 12-dent reed -- or a 10-dent, or a 15-dent -- but a bit of arithmetic is required to arrive at the number of warpends for the width desired, and the number of warp-ends to the inch. In figuring the warp it should also be noted that the warp should consist of the required number of repeats of the 16-thread unit plus ten threads, so that there will be a section of plain ground on each side of the piece. Other methods of adjusting the setting to the reed suggest themselves. For instance, to fit a 15-dent reed the ground sections may be of twelve threads instead of ten and the warp should be set at 18 ends to the inch, -- as indicated on draft (b). For a 10-dent reed Mrs. Pfeiffer suggests the arrangement shown at (c) on the diagram -- with seven ground threads, sleyed single, and five threads in the pattern group, the first two in the same dent, the third single and the last two in the same dent. The warp-setting would then be 12 ends to the inch. The same method might be used for a 12-dent reed, the group of ground-threads being increased to nine and the warp-setting being 14 ends to the inch.

To weave on threading (a), first weave a tabby heading on treadles A and B, using the weft in a single strand and weaving ten or more shots. For the first shot of "shag" treadle on 1 and weave a double strand of weft. Treadle on 2 and weave a second double strand. Weave two tabby shots, single strand, on A and B. Treadle on 3 and weave double; treadle on 4 and weave double. Weave two tabby shots, single. Treadle 5 and weave double; treadle 6 and weave double. Weave two tabby shots, single. Repeat this treadeling as required. The long skips in double strands of weft form the shag, when cut at the center

## Page Two



of the skip. Mrs. Pfeiffer recommends doing the cutting on the loom as the work progresses, though it may of course be done after the piece is taken off the loom.

The same effect produced on the eight-harness threading may be woven on the four-harness threading given at (b), but a pick-up stick is required. Weave a tabby heading on A and B as described. For the first shot of shag treadle on 1, which raises harness 3. On the pick-up stick take up the raised threads in the first group, skip over two groups and pick up the raised threads of the fourth group; skip two groups and so on all across. On the shed made by the pick-up stick weave a double strand of weft. Treadle on 2, which raises harness 4. On the pick-up stick take up the raised threads of the same groups as on the first pick-up and weave a double strand. Weave two tabby shots, single. Treadle on 1 again and take up the raised threads of the second group; skip two groups and take up the fifth; skip two and so on to the end. Weave a double strand. Treadle on 2 and pick up the same groups and weave a double strand. Weave two tabby shots, single. Treadle on 1 and pick up the thirs group; skip two and pick up the sixth; skip two, and so across. Weave double. Treadle 2 and pick up the same groups; weave double. Weave two tabby shots, single. Repeat this process as required.

It is highly important to beat these rugs very firmly or the shag will not be held securely and the rug will soon start shedding. So this is not a technique for weavers who are inclined to fan lightly with the batten but for those who are willing to pound, and pound hard. Canadian weavers please note. (When in Canada my chief difficulty has been to persuade people to beat cotton fabrics firmly enough, while in this country it is often difficult to persuade people to weave wool fabrics lightly enough.)

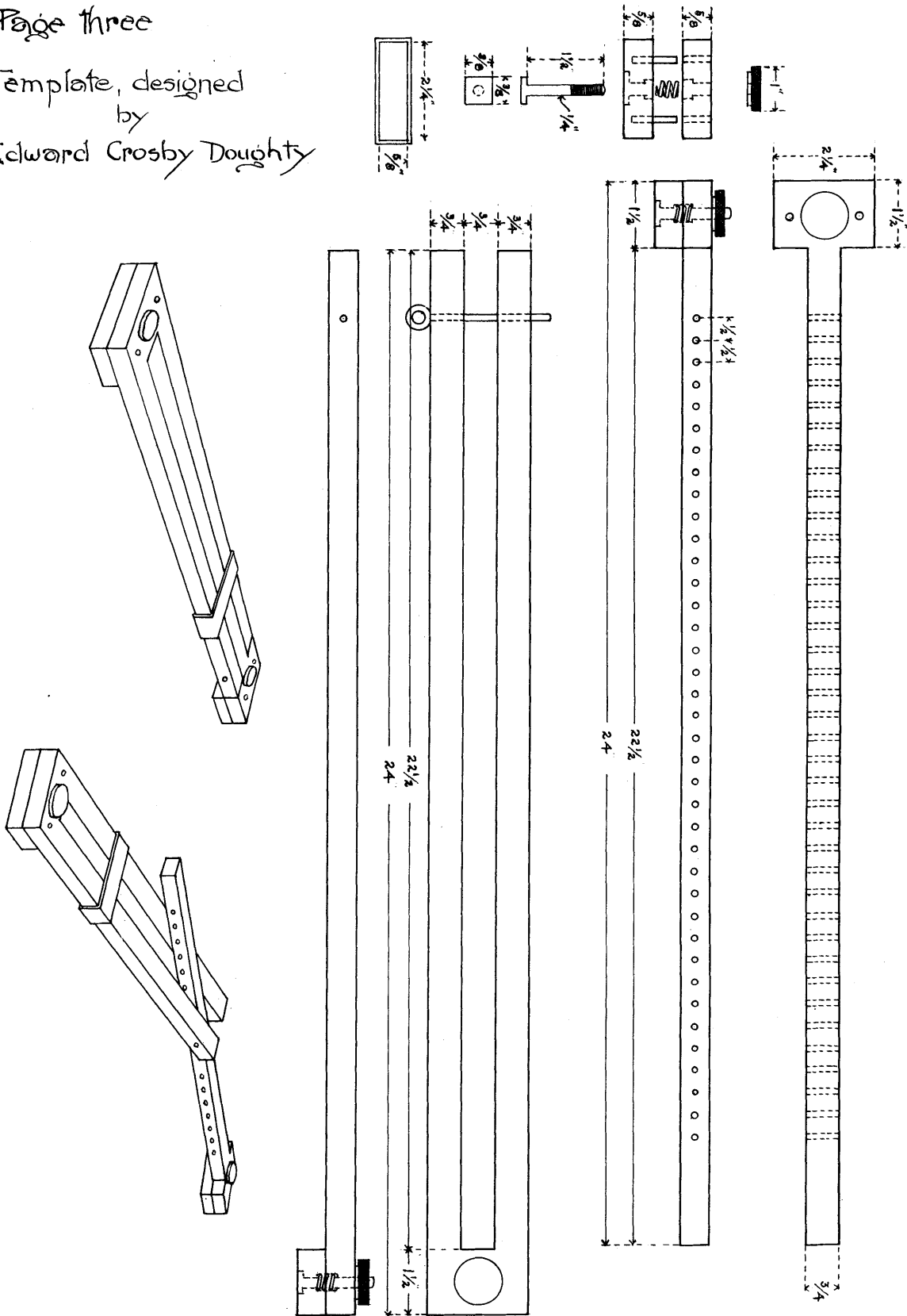
These rugs may be finished with knotted fringes if one likes, but in my opinion a better finish is a narrow hem,. For this a heading of 3/4" may be woven in carpet warp before beginning the rug, and at the end also, of course.

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Mr. Doughty's excellent drawing needs no explanation. The chief disadvantage of the ordinary template has always been that the pins tend to make holes along the selvages. This is overcome by Mr. Doughty's design by substituting a clamp and pressure to hold the edges in place of the pins.

Page three

Template, designed  
by  
Edward Crosby Doughty



I do not recommend the use of a template for most kinds of weaving, as it is somewhat awkward to work over, and of course must be re-set from time to time. However for some weaves in which the weft take-up is very great -- the "no-tabby" weave, for instance -- a template is a help. And there are some weft materials so extremely springy that it is almost impossible to lay the weft-shot lightly enough to allow for this and for the normal take-up and keep the edges out to proper width. We all know the disastrous effect of narrowing in at the edges, which results in stretched or broken selvage threads and makes it impossible to beat firmly against the center of the web. In special cases, therefore, a template is useful, though it would be unwise to get into the habit of using one for everything.

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Several Guild members have written to list looms they are not using and would be willing to sell. I have not myself seen any of these looms, but I know the weavers, who are all skilled craftsmen, and I have no doubt the equipment offered will be found in good and useable condition. As there is a very active demand for looms, new or "used", it is quite possible that those listed will be sold immediately, so I suggest that anyone interested in these looms should write immediately, -- not to me but to the addresses given.

Miss Elizabeth Roberts, 1417 North Church St., Rockford, Illinois, offers a large eight-harness loom of the counterbalanced type -- Swedish -- equipped with string heddles. The price she asks is \$130.00 plus cost of crating and shipping.

Mrs. Margaret M. Kissack, Montana Power Co., Ryan Dam, Great Falls, Montana, has a large four-harness counterbalanced loom equipped with six treadles and a sectional warp-beam, for which she asks \$75.00, plus crating and shipping.

Miss Helen Coombs, 504 North 8th Street, Keokuk, Iowa, offers three looms with other equipment and a stock of weaving materials. One of these looms is a large jack-type loom equipped with two sectional warp-beams -- eight harness, I assume though this is not stated. One is a four-harness counterbalanced loom and one a four-harness table loom mounted on a stand -- a 20" Structo, I believe. Miss Coombs does not state the selling prices and does not list the additional equipment and materials.

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Mrs. F. Cohn, 2235 Jefferson St., Berkeley 3, California, writes that she has received from abroad a large shipment of wool yarns for tweeds. These are mixed yarns of the "heather" type in a wide variety of colors. She has also received a small shipment of linens in white, natural and colored, and expects more soon. Unfortunately I have not seen samples and do not know the prices on this material, but any source of wool yarns and linens is of interest.

To test the Candian address for wool yarns given in the last Bulletin I sent in an order, and as I was uncertain about the exact cost, with Canadian sales-tax and postage, I sent a check for \$15.00. For this I received 12½ lbs of warp-yarn. The duty came to \$7.95, so the total cost was something under \$2.00 a pound. The yarn is finer than the usual "homespun" but seems to me to be of excellent quality.

- - - - -

*Mary M. Abrahams*



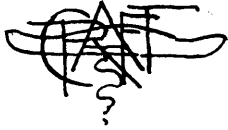
# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

July, 1945

Basin, Montana



There is a very fascinating weave from Guatemala that I have not before attempted to give in the Bulletin because of the difficulty of showing the patterns on paper. I am making the attempt now, though with some misgivings. The drawings appear clear enough as to method, but give no idea of the highly colorful effect, which will have to be taken on faith.

I first introduced the weave, experimentally, to a group of weavers at our Glacier Park ranch one summer. They were so delighted with it that it proved almost impossible to persuade them to do any other weaving. And among us we worked out the details of a practical technique. For many of the fine points in this I wish to acknowledge the help of Mr. E. E. Gilmore, of Stockton, California, Miss Virginia Shearer, of Lewiston, Idaho, and Mrs. J. K. Smith of Texarkana, Texas.

The weave appears to be used in Guatemala only for girdles a few inches wide, which are woven on a crude belt-loom similar to that used by the Navajos. On such a loom it would be impossible to weave a wide piece, but on our more convenient looms there are no restrictions as to width and the weave may be used, with interesting results for bags, table runners, chair-seats and so on, -- even for rugs.

The Guatemalan pieces are made three yards long, finished in a coarse braid. All have the little white edge and red border indicated on the draft, and though the figures vary from piece to piece many of them appear to be traditional. The figure shown at (15) on the diagram, for instance, represents a gauntleted hand and commemorates, I am told, the hand of the last native emperor who was killed by the Spanish Conquistadores. This figure, or some variation of the hand motif appears in practically all the pieces of this type of weaving. The antlered deer and the strutting bird also appear regularly, and the groups of dancing figures that undoubtedly represent a "baile" or dance -- whether some particular dance or just dances in general, I do not know.

In fundamental construction the weave is similar to other warp-face techniques as will no doubt be noted, but the effect is entirely different due to a highly colored weft-inlay that produces a truly gorgeous effect. The colors used vary somewhat from piece to piece, but are similar. In my two best pieces the colors are as follows: light yellow (a soft, not "eggy" shade), bright red, "hunter's" green, light yellow again, a purplish red, a blue-purple. These colors are used in this order throughout the piece. The number of shots of each color varies with the patterns used, but the color-repeat produces a very satisfying color-rhythm that is worth preserving, though different colors may of course be used if one chooses.

The warp in the Guatemalan pieces is fine white and red cotton and a coarser but still fine wool in black -- very hard twisted. As wool of this type is not to be had, we have been using a black mercerized cotton instead. Lily's Art. 714 is satisfactory, with a 24/3 white cotton and a #20 mercerized in red for the borders. The warp must be set very close. For a piece in the above materials I use a 20-dent reed, sleyed 8 to the dent for the borders and 4 to the dent for the pattern. Thread as indicated on the diagram. If a six-harness loom is available thread as at (b), but the four-harness threading is entirely practical. The only difference being that the border threads rise on two of the pattern sheds and must be avoided in making the pick-up.

Two small pick-up sticks are required, and a small flat shuttle to carry the colored material. Weaving is done with a knife-edged shuttle like the belt-shuttle used in card weaving and "inkle" weaving.

There are three variations of the weave which I have indicated on the diagram by the letters "A", "B" and "C". In the "A" patterns, which are all small geometric patterns, the pick-up is made of the black threads only, -- the colored weft showing in short skips as I have attempted to indicate on the drawings. In the type "B" patterns the figure is picked up in black as before, but the background is also picked up -- in white -- and there are no skips. The color shows simply as dots in the background, as I have attempted to show on the lower half of pattern (9) on the diagram. For the sake of clearness, this background effect has been omitted from the other drawings. In the "C" patterns the figure is picked up in black as before, but certain threads are omitted to make skips as in the "A" patterns, but the background is picked up in white as in the "B" patterns.

All the actual weaving is done on the two plain sheds, -- treadles A and B as shown. The A treadle raises all the black part of the warp and the B treadle raises all the white part of the warp. The weft used should be a white cotton about the weight of the black warp -- coarser than the white warp. The best material for the color-inlay is a "knitting" weight worsted, though other materials may be used. In some of the rather inferior Guatemalan pieces rayon is used for the inset, but the effect is rather "cheap."

The figures are used according to the taste of the weaver. Several shots of plain weave, making alternating ridges of black and white, are woven between figures, and one of the geometric patterns in several repeats is woven between the more "pictorial" figures. No figure is repeated in the same piece except that there are usually several rows of dancing figures, -- no doubt to provide sufficient personnel to make the baile a success.

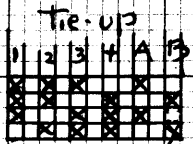
The weaving process is as follows: After weaving a plain shot on A -- making the black cross-bar -- treadle on 1, which raises half the black warp, and make the required pick-up. Weave treadle B, then treadle A. Beat against the shuttle, left in the shed. Now put in a shot of the colored material, on the shed made by the pick-up stick, taking the color across the pattern only, omitting the borders. Now treadle on 3 and make the second pick-up. Weave B and A as before, and weave another shot of color. This is the complete process for patterns of the "A" group. (Note that some patterns begin on the treadle 3 shed, which brings up the second black thread instead of the first. )

For patterns of the "B" group, pick up the black threads as before, but after making the black pick-up on treadle 1, treadle on 2 and with a second pick-up stick take up the back-ground threads, -- between the black pick-up sections, but going over the white threads under the black pick-up. If the second pick-up stick is taken under the black pickup as well as under the white threads of the back-ground, the first stick may be withdrawn. Weave B and A as before, and introduce the color inlay. Make the second black pick-up on 3 as before, and the white pick-up on treadle 4, and weave as indicated. This is the entire process for the patterns of the "B" group. The "C" group patterns are done in the same manner except that no white pick-up is made where the skips are desired.

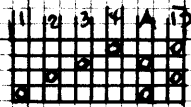
This fabric should be beaten as close as possible, and as the warp is set so close it is impossible to beat properly in the ordinary way. For that reason it is essential to beat against a knife-edged shuttle left in the shed. As in other weft-face weaves, the weft should be drawn tight enough to keep a good edge. For wide pieces, an ordinary shuttle may be used, but a knife-edged piece of wood must be inserted through the shed before beating.

I have made some small rugs in this weave that seemed to me unusually attractive. For warp I used ordinary carpet warp in white and red, with Lily's "thrifty-knit," (Art. 514) in black, setting the warp at 32 ends to the inch, or four threads to the dent of an 8-dent reed. For the color insets I used heavy rug-wool. Coarse cotton "roving" may also be used but is not as handsome in effect.

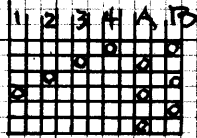
# Bulletin, July, 1945



Sinking shed



Tie-up, Rising shed

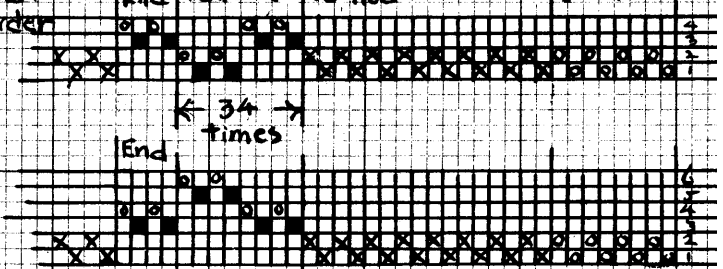


Repeat Border

End Pattern

← Border →

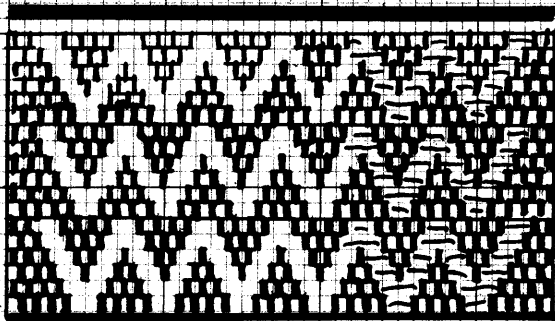
16 Red 18 White



← 34 →  
Times

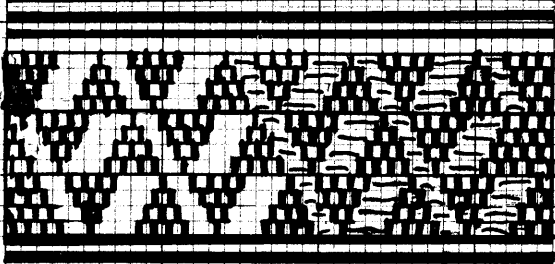
- Coarse, black, 138 ends
- Fine, white, 154 ends
- ⊠ Fine, red, 32 ends

(1)  
A



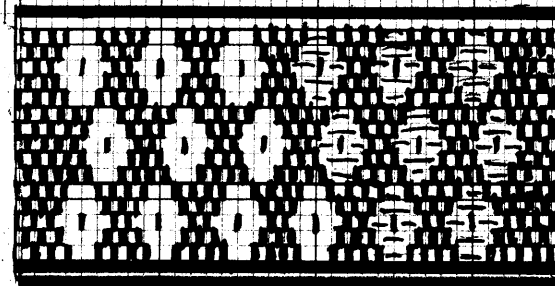
↑ Color (3)  
\* Color (2)  
\* Color (1)  
↓

(2)  
A



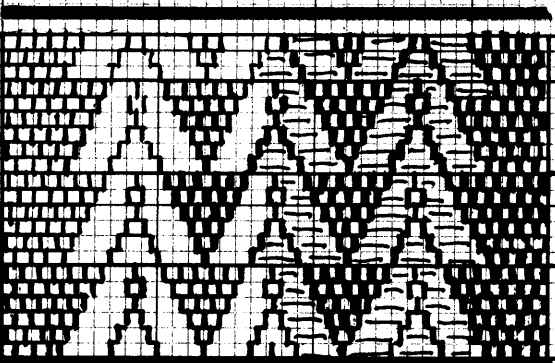
↑ (3)  
\* (2)  
\* (1)  
↓

(3)  
A



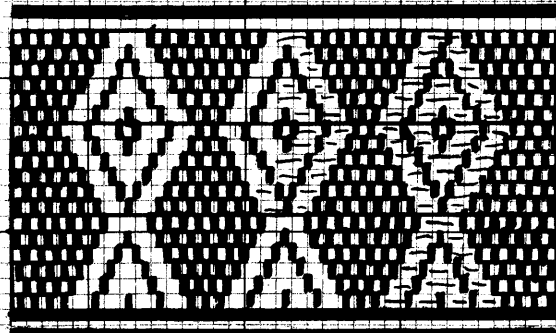
↑ (3)  
\* (2)  
\* (1)  
↓

(4)  
A



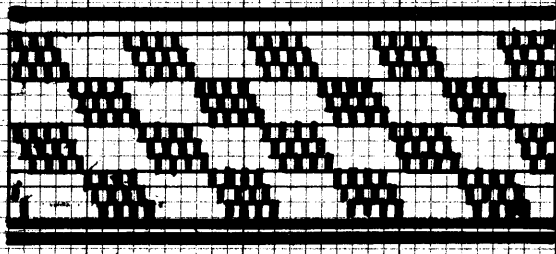
↑ (4)  
\* (3)  
\* (2)  
\* (1)  
↓

(5)  
A



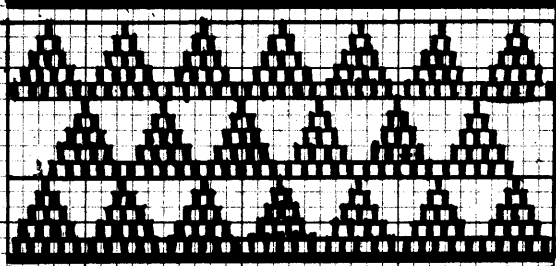
↑ (3)  
\* (2)  
\* (1)  
↓

(6)  
B



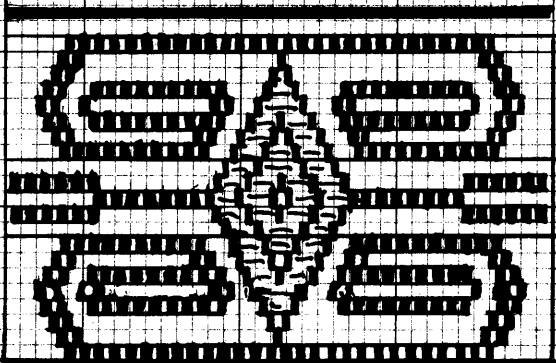
↑ (3)  
\* (2)  
\* (1)  
↓

(7)  
B

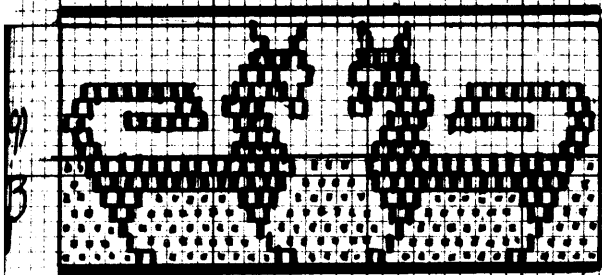


↑ (3)  
\* (2)  
\* (1)  
↓

(8)  
C

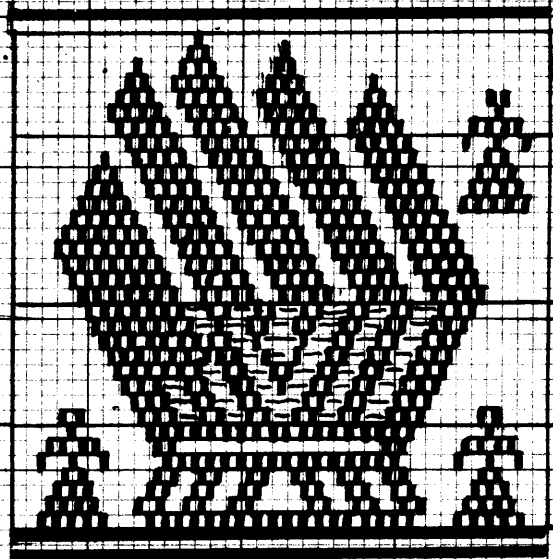


↑ Col (3)  
\* (2)  
\* Col (1)  
↓

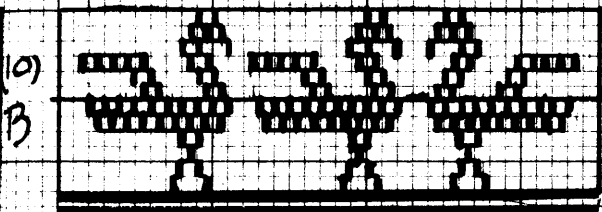


↑  
(2)  
\*  
(1)  
↓

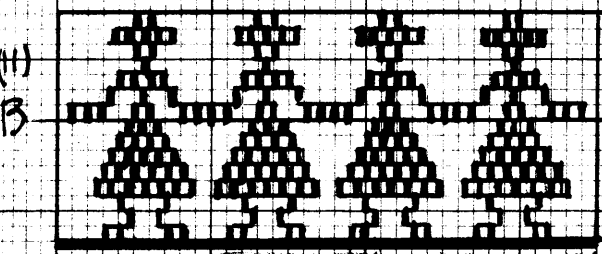
(15) C



↑  
Color (4)  
\*  
Color (3)  
\*  
Color (2)  
\*  
Color (1)  
↓

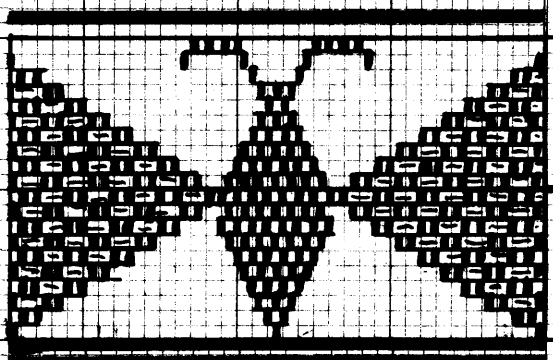


↑  
(2)  
\*  
(1)  
↓

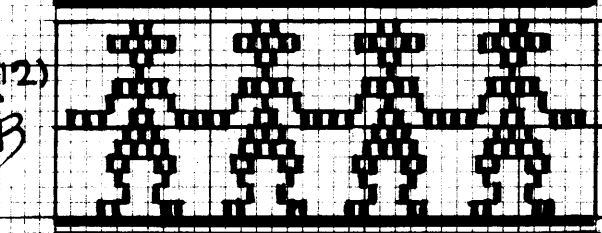


↑  
(3)  
\*  
(1)  
↓

(16) C

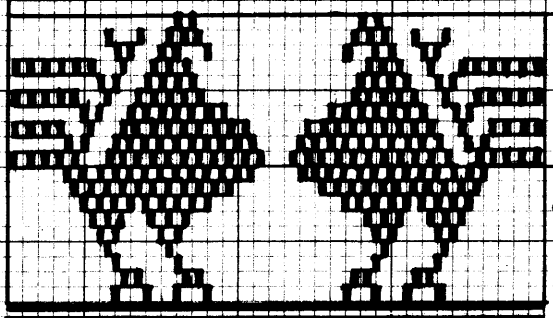


↑  
Color (2)  
\*  
Color (1)  
↓

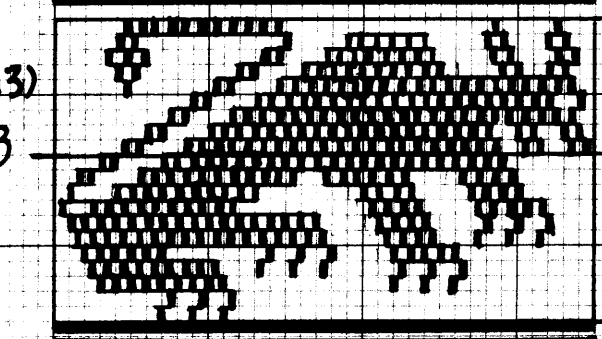


↑  
(2)  
\*  
(1)  
↓

(17) B

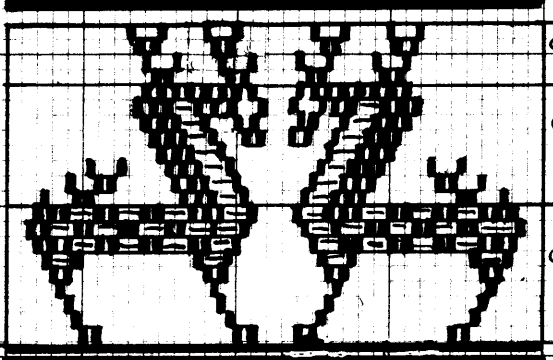


↑  
Color (2)  
\*  
Color (1)  
↓

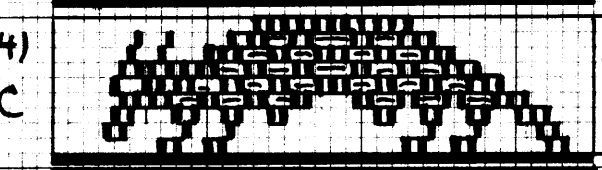


↑  
Color (2)  
\*  
Color (1)  
↓

(18) C



↑  
Color (2)  
\*  
Color (2)  
\*  
Color (1)  
↓



↑  
One Color  
↓

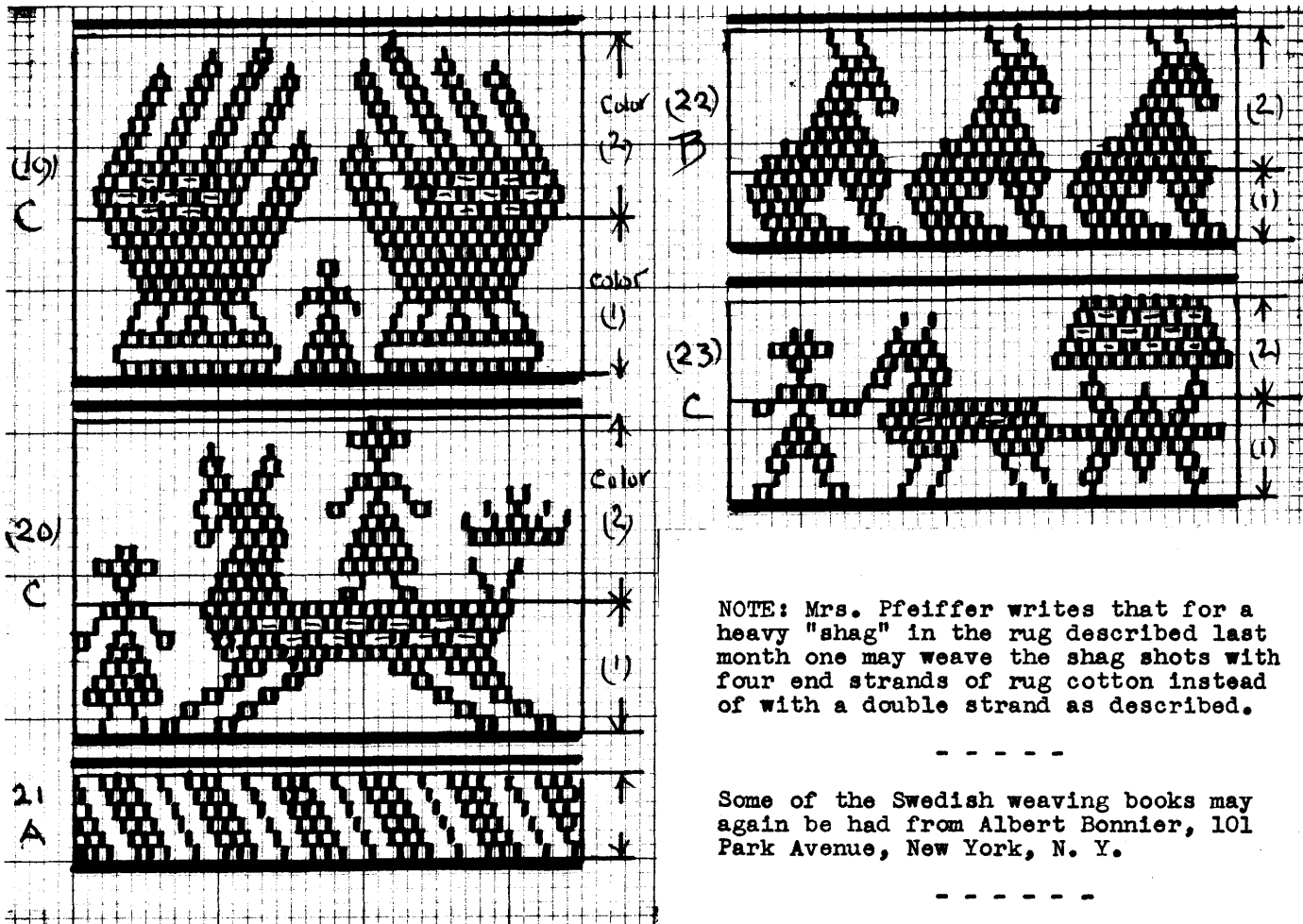
I wove pattern (1) across the end and then pattern (17) as a border. The body of the rug I wove in pattern (4), with (18) -- woven upside down -- as a border on the other end, and pattern (1) to finish.

As in this weave the warp is set so close it makes a handsome fringe, which may be tied in the Philippine manner, shown in the Recipe Book, Series VII, 7.

The points at which the color changes are to be made are indicated on the diagram. The small patterns, it will be noted, have frequent changes -- after four or six shots. The pictorial patterns usually have two colors, though some of the larger figures, No. (15) for instance, have more. The numbers shown on the diagram do not represent a particular color, as the color to use depends on the color sequence, as explained above. For instance, if you begin your piece with four repeats of pattern (1), followed by pattern (18), the lower half of this figure will be in purplish red and the upper part in blue-purple, with the bit behind the antlers in pale yellow. Instead of keeping a small shuttle for each color, it is convenient to measure off the length of colored yarn required for the section to be woven. A single shuttle will then suffice. Needless to say, the ends of the colored yarn should be turned in neatly along the line between the pattern section and the border.

This is not a difficult weave, and even a beginner should have no particular trouble with it. The important matters to keep in mind are the firm beat and the clean edges. A sample is a help. Sometimes Guatemalan pieces of this type may be purchased from importers, and small samples may as usual be obtained from Mrs. Maybelle Gano, 2016 Castillo St., Santa Barbara, Calif.

*May M. Atwood*

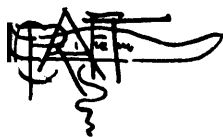


NOTE: Mrs. Pfeiffer writes that for a heavy "shag" in the rug described last month one may weave the shag shots with four end strands of rug cotton instead of with a double strand as described.

Some of the Swedish weaving books may again be had from Albert Bonnier, 101 Park Avenue, New York, N. Y.

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



for  
August, 1945

Basin, Mont.

This Bulletin is the third in our "Twill-Weave" series, and deals with patterns of the "reverse twill" or "point" variety. Draft No. 1 is the smallest pattern of this series. It may also be threaded with threads 5 and 6 omitted, which makes the repeat even smaller. This threading is the basis of much Scandinavian weaving and is known as "Rosengang," or -- translated -- "Rose-Path." The English name is "Bird-Eye." Drafts No. 2 and No. 3 are larger point threadings and when woven as twill are called "Herringbone." When woven to make a diamond figure they are called "Goose-Eye." These drafts are familiar to all weavers, but they are included here for the sake of a logical presentation and also to illustrate the difference between these drafts and the "Dornik" variation. Draft No. 4 is the dornik version of Draft No. 1, and drafts No. 5 and No. 6 are the dornik versions of drafts No. 2 and No. 3.

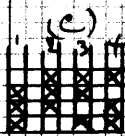
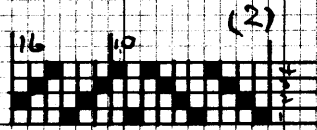
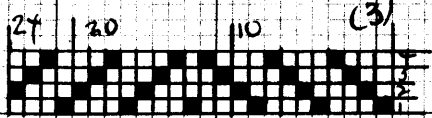
The word "dornik" or "dornick" or "dornock" appears to be derived from the Flemish name of a town in Belgium -- "Doornik" -- where fabrics woven in this manner originated. The dornik variation is a device to overcome a weakness in the herringbone weave when used for suitings. These are sometimes woven on the ordinary herringbone threading as at 1, 2, or 3, but it will be found that the three-thread skip at the "return" points of the pattern make a roughness in the weave that is unpleasant. The dornik variation removes this three-thread skip. For linens, and for figured fabrics in color however, the more conventional threadings are preferred.

Any pattern in each group -- number of harnesses -- may be woven on any one of the tie-ups given for the group, though what might be called the "normal" weaving for each group is the one with half the harnesses up and half down -- the 2-2 twill as at (b) for the four-harness patterns; tie-up (d) for the six-harness patterns; tie-up (j) for the eight-harness patterns. The correct treadling for all patterns, unless otherwise noted, is to weave the treadles in order, one shot on each treadle, and repeat. No. tabby, -- not in reverse but always in the same direction. Of course many variations in treadling are possible if one chooses.

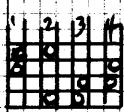
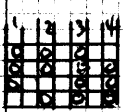
For suitings and coat-fabrics the more closely combined weaves are to be preferred; for "afghans" or couch-blankets, baby-blankets and the like, the more open weaves may be used. Draft No. 15 makes an attractive "spots" suiting when woven in homespun yarn. Draft No. 14 makes a gay and colorful blanket when done in several colors: Warp the first nine threads in the first color, the second nine threads is the second color, the first nine threads of the second repeat in a third color, and so on, for as many colors as desired. The warp should be Germantown or a similar coarse yarn. Weave in the same material and in the same colors, in the same order, -- nine shots of a color. The same system may be used for a blanket on draft No. 25, warped and woven with twelve threads of a color. Use tie-up (j) for this. The effect is bolder than the six-harness version.

Of the more elaborate drafts: Pattern No. 18 is familiar to Guild members who have the Guild Recipe Book, but as it seems to belong here as a part of the picture of this type of weaving it is repeated. Several of the unusual point and dornik drafts on the diagram are from an ancient German book on weaving that has recently come into my possession.

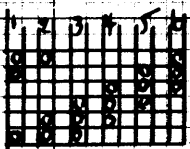
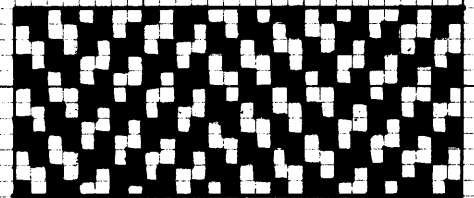
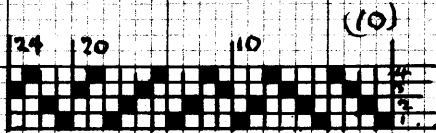
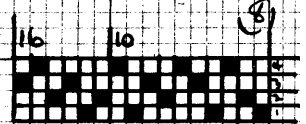
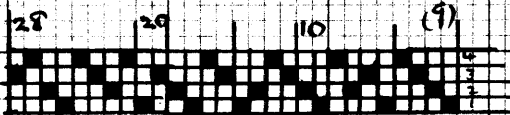
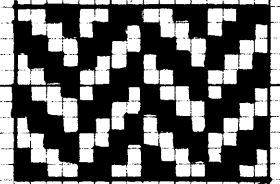
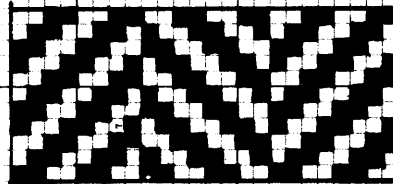
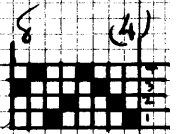
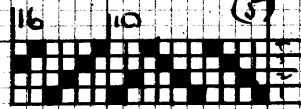
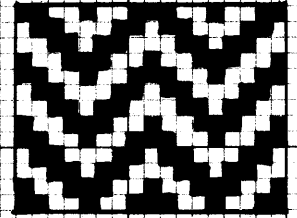
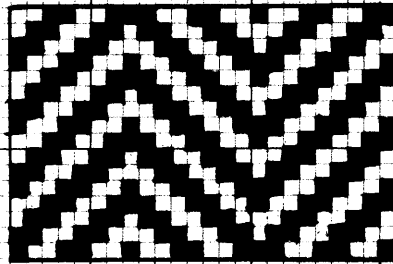
Page Two



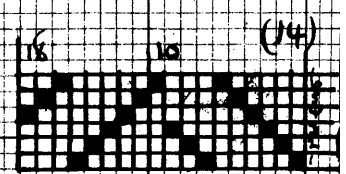
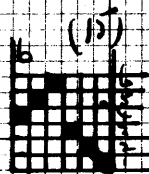
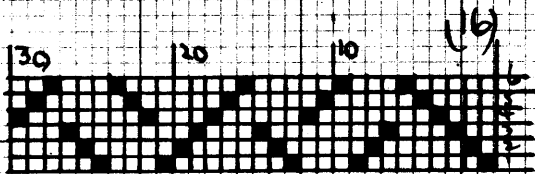
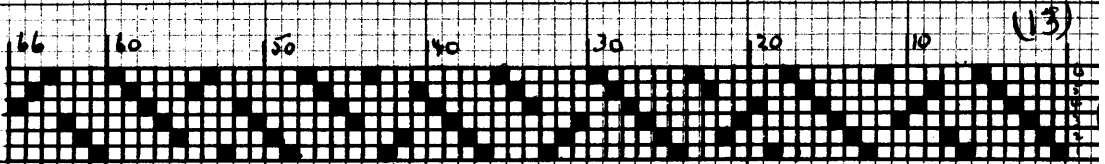
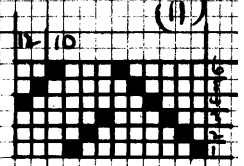
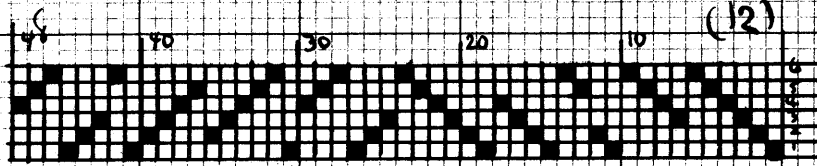
sinifing



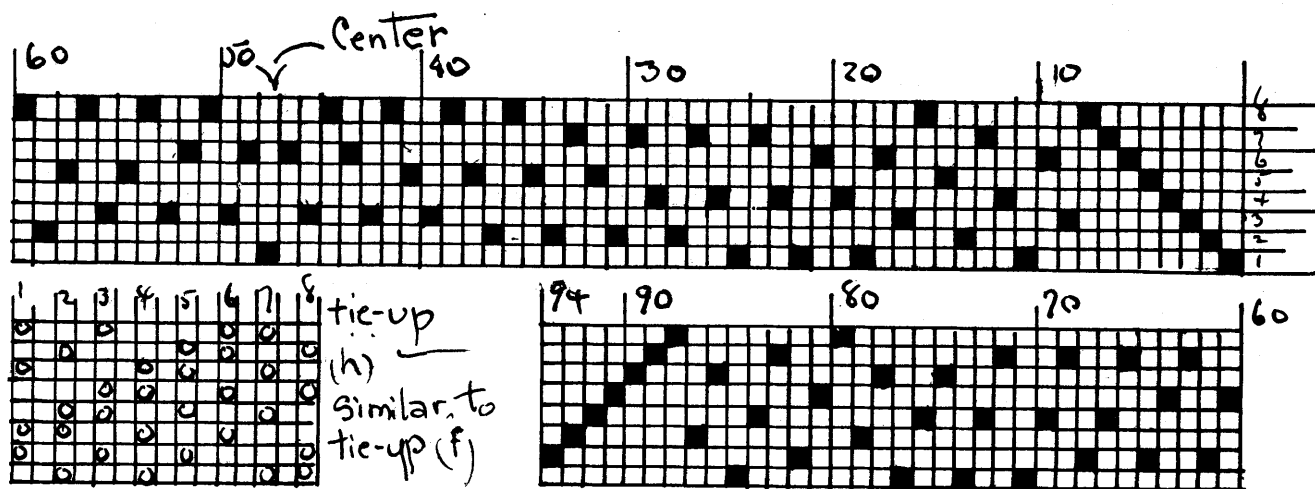
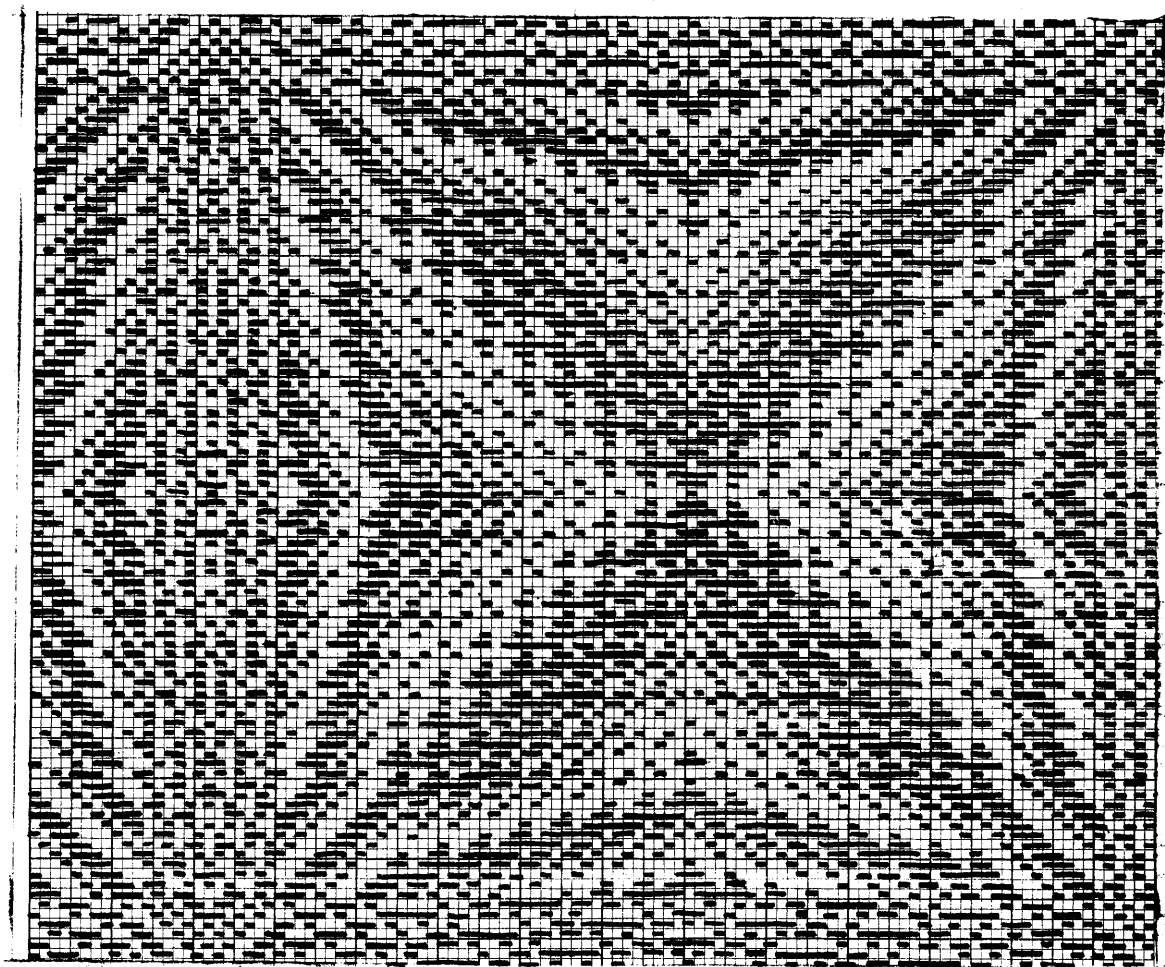
fining



tie-up (d)



# Bulletin, August, 1945

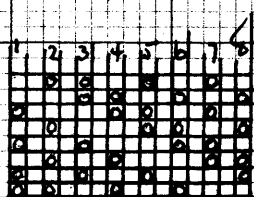


Draft and Drawing by Mrs. Mabel B. Dean after a sample of Swedish weaving contributed by Mrs. W.F. McNulty.

Weave:	(continue)	(continue)	(continue)	(continue)	(continue)
1, 2, 3, 4,	3, 6, 1, 4,	7, 2, 5, 8	6, 3, 8, 6	2, 7, 4, 2	5, 2, 7, 4
5, 6, 7, 8,	6, 1, 4, 7.	2, 5, 8, 3	3, 8, 5, 3	7, 4, 1, 7.	1, 6, 3, 8
3, 6, 1, 4,	1, 4, 7, 2	5, 8, 3, 6	8, 5, 2, 8	4, 1, 6, 4,	7, 6, 5, 4
7, 2, 5, 8	4, 7, 2, 5	8, 3, 6, 1	5, 2, 7, 5	1, 6, 3, 8,	3, 2,
(One shot on each treadle No tabby.)					Repeat

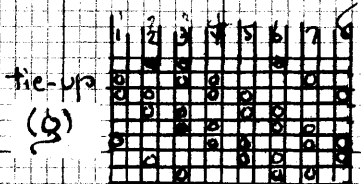
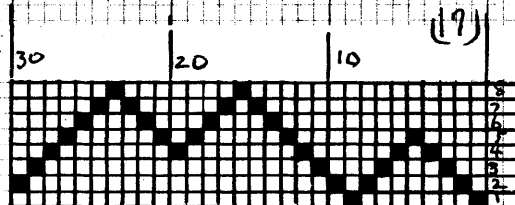
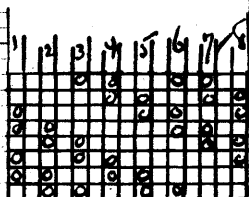


# Page Three

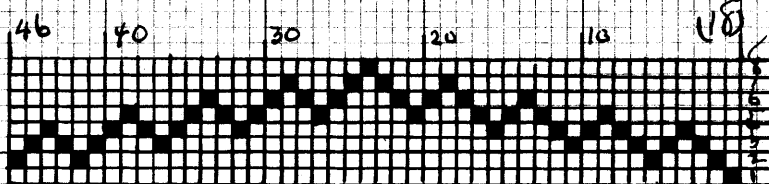


tie-up  
(f)

tie-up  
(e)

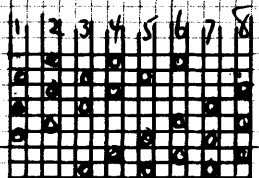
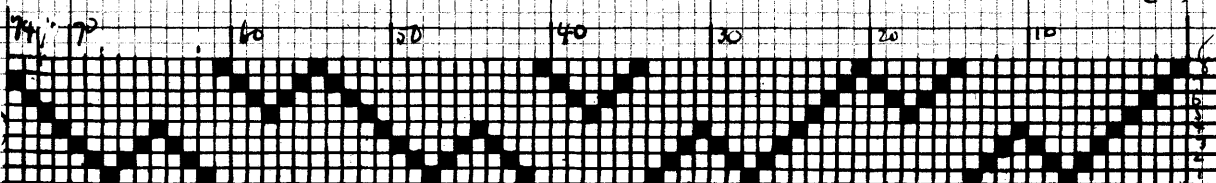


tie-up  
(g)

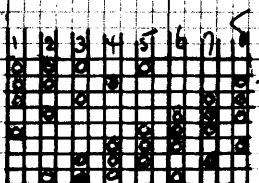
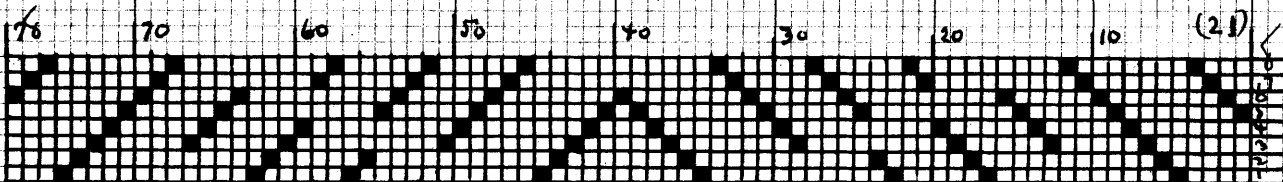
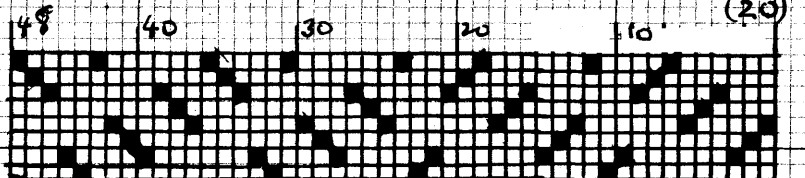


Weave: 1, 2, 3, 4, 5, 6, 7, 8, 7, 6, 5, 4, 3, 2, Repeat.

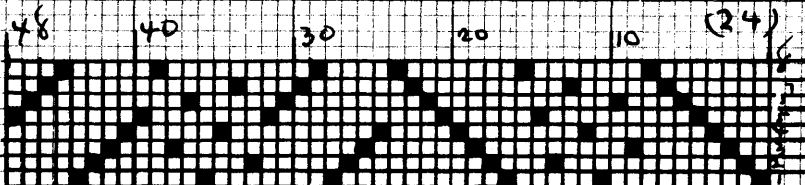
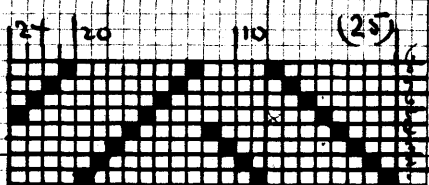
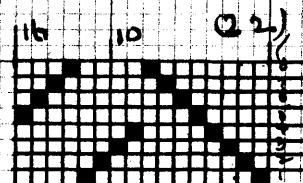
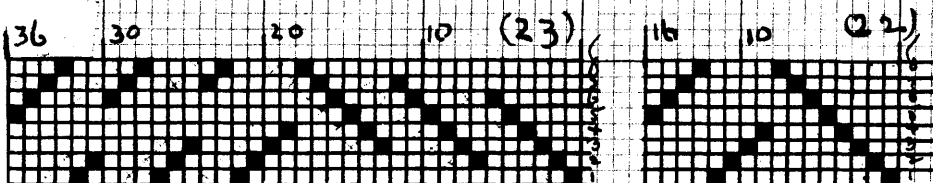
Use  
tie-up  
(e), (f)  
or (h)



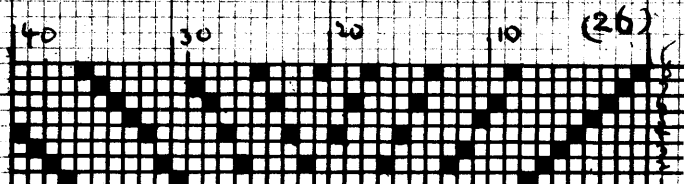
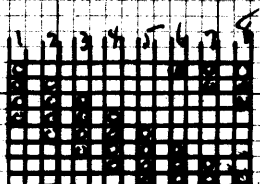
tie-up  
(h)



tie-up  
(i)



Tie-up  
(j)



Draft No. 27 is an elaborate and handsome pattern of the point variety taken from a Swedish sample, contributed by Mrs. W. F. McNulty. The ingenious draft and the handsome drawing are the work of Mrs. Mabel Dean and are reproduced by permission. The sample was done in a fine mercerized cotton in a cream color, warped and woven at 50 or 52 ends to the inch. The fabric was, I understand, used for drapery. It does not seem to me a suitable threading for linen as there are some fairly long skips, but it would make a lovely light-weight shawl if done in very fine worsted yarn, or an attractive baby-blanket or couch-blanket done in coarse yarn.

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It is growing more and more difficult to obtain supplies, and those of us who have good stocks of material on hand can count themselves fortunate. It is practically impossible to obtain anything from the Lily Company, I regret to say, and it is useless to send them orders. They pay no attention to orders and do not answer letters or telegrams. If they do happen to send a dribble of material it is almost always something one has not ordered. Their service appears to be completely disorganized. I suppose this trouble will be remedied in time, but for the present we shall have to forget about them as a source of supply. I have done everything I could do to get some favorable action on this as it means inconvenience to many of our members, but for the time being it is "no soap."

Some cottons are to be had from Canada, but as to get them we have to pay the Canadian duty as well as the U. S. duty, the cost is preposterous. Perhaps before long we can get cottons again from Sweden.

I plan to spend a lot of time in the next month or so trying to find some dealer who can still supply at least a few of the yarns we need and shall hope to have some useful news for the next Bulletin. Meanwhile it is "catch as catch can." At one time I got a good deal of excellent material at low cost from the yarn jobbers in New York and elsewhere. I have not seen their samples for some time, and they may have little to offer, however it is a possibility. The firm with whom I did most of my business was the J. C. Yarn Co., 111 Spring St., New York, N. Y.. The difficulty in trading with the jobbers is that their stocks are not standardized and that when a lot is exhausted it is rarely possible to get "more of the same." Also, if a certain lot is small they prefer to sell all of it to the same customer. One should not order a few skeins of this and a few skeins of that, but order in fairly generous amounts. Also, the special lots are often sold out before one receives the samples and sends in the order. From out here in Montana I found it advisable to order by wire anything in which I was interested. Those who have friends in New York could no doubt persuade said friend to visit the jobbers in person and make selections. Perhaps one of our Guild members would volunteer to undertake this service -- for a commission, naturally. I shall try to arrange this.

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At Missoula last month we set up one of the large looms with jute and made rugs in the Spanish open-work weave, as suggested in a recent Bulletin. These rugs were a great success; everybody was much pleased with them. We also made rugs in the "Boy and Girl" pattern in "no-tabby" weaving, and these two came out very well. The Lily leaflet in which these rugs were described has proved popular and for a time was out of print. The Lily Co. has had the leaflet reprinted lately and have offered to send me a stock for distribution, so I shall be glad to forward the leaflet, without charge, to anyone who will send a large self-addressed and stamped envelope.

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Mary M. Atwell

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

September, 1945

Basin Montana



Among the interesting things we did this summer were some experiments with what I have called the "polychrome" method for weaving patterns in the summer-and-winter weave. Several good weavers gathered here at Basin after the session at Missoula, and they found this method of weaving so fascinating that it seems like a good idea to describe it again in the Bulletin. Especially as the previous notes were published several years ago and are now out of print.

Essentially, the thing is perfectly simple. It consists in weaving some parts of a pattern in one color and some in another, giving a livelier and more interesting effect than weaving in the conventional manner. From the practical point of view, however, there are some difficulties. One of the difficulties is the large number of different sheds required -- usually many more than there are treadles on any treadle loom. The only way to surmount this difficulty is to make a "skeleton tie-up" as indicated on the diagram, and to make the resired sheds by holding down at the same time as many treadles as may be required. This sometimes entails real acrobatics, as unfortunately we are equipped with only two feet. However it is entirely possible to weave in this manner, and any particularly difficult shed may be tied to a special treadle, as the skeleton tie-up requires only ten treadles and most eight-harness looms have fourteen. This particular difficulty, of course, does not present itself if one weaves on a loom of the hand-lever type, such as the Structo or the "Missouri" table loom. On a loom of this type one must select each shed, anyway, so the number of sheds makes no difference.

To simplify the technique I usually weave with a pattern material heavier than used for the traditional weave, and put in both tabby shots between the series of pattern shots. I also use only one of the "tie" harnesses. Of course if one prefers, both tie-harness may be used, in the traditional way, but the effect of the weave is excellent with the use of one of the ties throughout, and it is simpler and more rapid to weave in this manner.

For our work this summer we used a highly conventional and typically Colonial pattern that happened to be on a Structo eight-harness loom. Draft No. 244, page 246 in the SHUTTLE-CRAFT BOOK. A bolder pattern would ordinarily be my choice for weaving in polychrome, but there proved to be a special interest in seeing what could be produced on a pattern of this type, so I have used the same draft for the sketches on the diagram, which show some of the experiments we made. Some of these figures bear little or no resemblance to the original pattern, and demonstrate the fact that a threading in summer-and-winter weave does not necessarily presume a particular figure but may be taken as a basis for designing. A threading in overshot weaving may be varied in the treadling to produce a variety of effects, but there are only two standard patterns possible -- the "woven as drawn in" effect and "rose-fashion." In summer-and-winter weave however, a great variety of figures may be produced on any threading. The ones shown on the diagram illustrate this point, and do not, of course, exhaust the possibilities of the draft in question. Guild members should find it interesting to work out other figures for themselves.

Pattern (a) on the diagram shows the conventional figure, as developed in two colors, with the addition of the small dots in the corners which may or may not be found desirable. Patterns (b) and (c) are simple and conventional variations. Pattern (d) however is somewhat on the "modern" side and produces a lively and amusing effect. Pattern (e) is bold and handsome when woven in

strong colors. Pattern (f) shows a series of interlacements which may be as regular or as eccentric as the weaver chooses. This type of pattern has a great fascination for me. I should like to do this for a runner with the ends in interlacements on the order of those shown on the sketch, and the body of the piece in the lengthwise stripes. This would also make an excellent pattern for a chair-seat or similar piece.

A variety of materials may be used in the polychrome weave. On our warp, which was Egyptian cotton 24/3 set at 30 ends to the inch, we first wove the figure as shown in the book, in the conventional manner, using tabby like the warp and a fine worsted yarn ( a 15/2) for pattern. For the figure as at (a) on the diagram we used the same yarn for pattern, in a double strand, with the same tabby. For (b) we used a coarser yarn in a single strand for the pattern shots, and some of the other figures were worked out in "thrifty-knit" strand cotton. The fabric produced is thicker, firmer and heavier than an ordinary summer-and-winter weave fabric. The fabric in wool would make very firm and durable upholstery material suitable for chair-seats. The pieces in cotton would make table mats thick enough to protect a table from hot dishes, and would make a handsome table setting of the informal type. I believe the technique could be used with excellent results for rugs, done in wool rug-yarn, cotton chenille, or light weight rug-filler, over carpet warp set at 12 ends to the inch.

The figure as at (a) may be developed in two colors, or in two pattern colors and a back-ground color. If no back-ground shot is used the background shows dots of both colors used in the pattern. The effect is more clear-cut if a back-ground shot is used to cover this. In our experiment we used blue and rose for the pattern and cream for the background. For (b) we used black and red for the pattern and cream for the background. For (e) black for the perpendicular stripes, red for the interlacing squares, blue for one of the horizontal stripes and green for the other. Of course any combination of colors may be used.

When a coarse yarn or the heavy strand cotton are used for pattern weft a single succession of shots makes a single unit of the weave, as against four pattern shots and four tabby shots to the unit in the conventional weave. In detail, the weaving of pattern (b) is as follows: as noted above, the system is to weave certain blocks of the draft in one color and some in another. As eight-harness looms are practically all of the "rising shed" type, this means that to weave a certain block the rest of the pattern blocks must be raised. By reference to the draft it will be seen that the fine perpendicular stripes are on block 5 (harness 7) of the draft and that the square behind the stripes is on block 6 (harness 8). It follows that to weave this figure block 6 should be in black -- treadle 1-2-3-4-5 on the skeleton tie-up. Follow with a shot on block 5 in red -- treadle 1-2-3-4-6. The back-ground shot must be woven across all the blocks except 5 and 6 -- treadle 5-6. After making these three shots weave A and B in tabby. Repeat three times. For the cross-bars in red raise harness 1, alone -- treadle 7. Weave treadle 8 in the background color, and weave the two tabby shots. (The shot in the background color weaves on the under side of the fabric and lies under the red shot. It is required to preserve the texture of the fabric. Weave one succession of the black, red and background shots as at the beginning and repeat the cross-bar. Repeat the last two ~~units~~ units twice more, and complete the figure with three repeats of the first unit. Now weave block 5 in red, and all the other blocks in the background color -- a single unit. The large square may be in red, or a different color, say blue: weave block 5 in red, blocks 2, 3 and 4 in blue, blocks 1 and 6 in background, -- repeat three times. (It is understood, of course, that two tabby shots follow each unit of pattern shots.) Next red on block 5, blue on block 2, background on blocks 1,3,4 and 8 -- one unit. Then red on 5, blue on 2, black on 4, background on 1,3 and 8 -- repeat for three units. The above gives all the shots used in the pattern and the figure can be completed without difficulty. The other figures may be woven in a similar manner,

The possibilities of this weave on four harnesses are, of course, much more limited than on an eight-harness pattern. However many interesting effects may be produced on a simple two-block threading as indicated on the diagram.



For pattern (h), for instance, treadle 3 and then 4, both shots in black, tabby A tabby B -- repeat as desired, for the black band at the bottom of the design. Repeat the same treadeling, in tan, for four repeats of the unit. Then treadle: 1, red; 2, tan; tabby A, tabby B. Repeat twice. Treadle 1, black; treadle 2, red; tabby A, tabby B, Repeat twice, and so on. By the clever use of colors this simple weave can be made highly effective. The texture of the fabric is, of course, exactly the same as that of the fabric on eight harnesses. The only difference is in the elaboration of the figures.

It is increasingly apparant to me that the thing that oftenist handicaps our good weavers is lack of training in design. Beginners are necessarily limited to the simpler weaves and patterns and do not feel this lack. It is almost impossible, for instance, to weave a four-harness overshot pattern in a way that is definitely bad from the point of view of design. But good weavers, who have mastered the technical part of the craft, and the techniques in which fairly free design is possible, sometimes find themselves in difficulties. It is heartbreaking to see a beautifully woven piece that is a failure due to faulty design and poor arrangement. While it is not always possible to enroll for a professional course in design, anybody can do a bit of study that will prove helpful. Any public library has at least a few books on historic ornament, and anybody may make tracings and study these books. And anybody can work out textile patterns on squared paper, and study them to find out why some arrangements are pleasing and some are not. In this way one gains facility.

There is, to be sure, a group of weavers that claim to dislike pattern, and who go in for what they are pleased to call "textures," -- as though texture were not a quality of any textile fabric, whether patterned or not. This attitude, I suspect, is often simply an "escape" from the problem of design, and covers nothing more "original" than ignorance. It is, of course, true that too much pattern is distressing, just as a poor color combination may cause pain, like a false note or a disagreeable odor. But that does not mean that pattern and color are undesirable. Pattern is part of the fundamental geometry of the world, and we need a certain amount of pattern, just as we need color. These things add immeasurably to the pleasure and comfort of life.

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I have just received some beautiful Persian yarn from Paternayan Bros, Ind., 10 West 33rd St., New York, N. Y.. The price of this yarn is \$3.20 a pound, and it comes in a great many beautiful colors. One may have to wait a month or two for orders to come through as some special color may not be in stock. But the material is worth waiting for.

One wonders what will become of the enormous stock of wool stored by our government. Enough to meet the peace-time needs of the country for ten years, it is estimated. Here in Montana, a wool-producing state, the warehouses are stuffed to the roofs with Australian wool! The wool-growers are wondering what will become of them when all this wool is dumped on the market. Perhaps when the government gets tired of holding it they will burn it, as they did the cotton crop a few years ago.

- - - - -

I have learned with some surprise that Mr. Milo Gallinger quotes me as saying about his eight-harness loom that "it is the best loom being built in this country." This is an error, as I do not recommend the Gallinger looms, and I have requested Mr. Gallinger not to misquote me in this manner. It is possible that the eight-harness loom Mr. Gallinger is making at present is a good loom. I have not seen it and cannot say. I was not enthusiastic over the eight-harness loom he built a few years ago, which I did see.

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May M. Atwell

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin Montana

October, 1945

Christmas will soon be with us again, and it is time to begin planning our Christmas weaving if our friends are to have hand-woven gifts this year. So, what shall we make for this peace-time Christmas? and how shall we make it?

As usual, the accent must be on the smaller articles that can be made without a great outlay of time and material. Also what we make must be gay and attractive, in the spirit of the season, and should also be useful if possible. In these times there is really no great charm in a useless article, no matter how well it is made.

What to make must still depend largely on what materials we may happen to have on hand, or are able to obtain. Scarves, baby-blankets, ski-hoods and ski-belts, -- if we have worsted yarns. If we have linens, towels, table sets. Or bags, pillow-tops, tea-aprons, and so on in cotton or any other suitable material. These things are the old stand-bys, and it is hard to improve on the list. I feel that at Christmas time it does not pay to be too "original." The sentiments of good-will and friendship are "old stuff" and do not find their most appropriate expression in something "queer."

To judge by my mail, the article in which most people are interested at the moment is the trifle known as a "place-mat." I confess that to me this little oblong scrap of fabric seems one of the amiable futilities of our art. But perhaps this is because I live in the mountains where ladies' luncheons, afternoon "tea-fights" and cocktail parties are just things one reads about in the magazines. I admit it would not occur to me to weave the things and that it would give me no thrill to receive a set as a gift, so ones friends' tastes and activities should be considered before setting out on a program of place-matting for Christmas. But the things are amusing to make and some people do find them useful.

Like any small, self-contained article, the place-mat presents a special problem in design. It should be planned as a unit, with some regard to the purpose for which it is to be used, and should never look like just a piece of fabric cut off and hemmed.

The size that appears to be favored at present is about 16" X 12". The pieces may be woven on a warp set 16" wide and woven 12" deep, or on a warp set 12" wide and woven 16" deep. In setting the warp 16" wide there is the advantage that a runner for the center of the table may be woven on the same set-up; also, of course, it takes somewhat less time to weave twelve inches than to weave sixteen. There is the disadvantage that the hems come at the top and the bottom with the selvages along the short sides, -- which is, for some reason, unpleasant. But this difficulty may be overcome by making the warp somewhat wider and putting a rolled hem on all four sides.

A certain amount of queerness may be attractive in a table set, provided the friend for whom the gift is intended is one who likes the unusual. But in the effort to be original it is well to avoid using queer materials that may not wash well or that will rough up in use. Wool, of course, is an unsuitable material, for a number of reasons. I confess to a personal dislike for

silk and rayon for the table, and the glitter of celophane -- which has been the fashion for some time -- seems to me to have a "cheap" effect. But that is, of course, a matter of taste.

Anyone will agree, I fancy, that linen is the best material for table pieces, and as we are able to obtain some linens once more this is the material I should use if I planned an orgy of place-mat weaving. And I should make them in all-white in the Beautiful Spanish weave. As this weave was fully explained in a recent Bulletin and a pattern for a place-mat in the weave was given, I shall not give directions here. This back-number of the Bulletin is available to new members of the Guild.

Gay table-sets in bright-colored cottons are very attractive for informal use. And several of the Guatemalan weaves previously described in the Bulletin are well adapted to this purpose. One of the simplest of these -- described in a Bulletin that is now out of print -- is shown on the diagram. The threading is plain twill. If a fine warp is used, such as a 24/3, set it somewhat closer than for a good tabby fabric and thread double, as: 1,1,2,2, 3,3,4,4, and repeat. It is better to thread two heddles than to draw two threads through the same heddle as when this is done there is a tendency to twists in the warp. A warp-setting of 36 to the inch will prove satisfactory for the 24/3 warp. The work may be done at a setting of 30 to the inch, but the effect will not be as good.

For the mat sketched at (a), weave 2" in tabby -- for a turned hem -- weave one repeat of the twill, using a bright colored cotton -- Lily's Art. 914 in a double strand or a coarse perle cotton. Weave four shots of white tabby. (The tabby shots, by the way, should be in material like the warp and in a double strand.) Treadle on the pattern treadle, marked "p" on the diagram, which raises harness 1 alone. Weave a shot of colored pattern weft through this shed. The material should be coarser than that used for the twill stripe. I use Lily's "thrifty-knit" strand, (Art. 514, but of course other material of similar weight might be used. Tabby both ways, A, B,. Repeat these three shots. To begin the pattern, treadle (p) and with a pick-up stick through the shed take up the groups of threads of the lower shed where the pattern occurs. In detail, take the stick under the first three raised threads and pick up the group of threads between the thirs and fourth raised threads; take the stick along through the shed across nine spaces and again take up a group of threads from the under shed. Continue in this way all across. Set the shed-stick on edge and weave a shot of pattern weft. Weave A and B, in tabby weft. This is the entire process, which is simple and rapid and extremely effective in result.

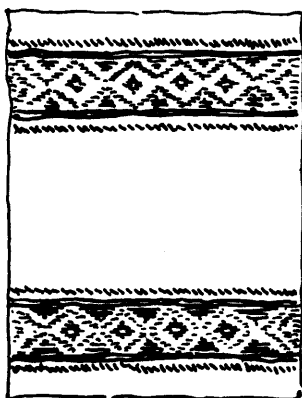
It should be noted that the figure is in the tabby spaces and the skips make the background. This may be a bit confusing at first, but one becomes accustomed to it. Simple patterns composed of diagonal lines may be arranged in great variety. In making ones own patterns note that one should never pick up more than three groups of threads together. These pick-ups make skips on the wrong side of the fabric and if they are too long the fabric is weakened, and the wrong side is unsightly.

Having woven the pattern border, weave four shots of tabby and repeat the twill stripe. The center of the piece may be woven in tabby, or in twill as preferred.

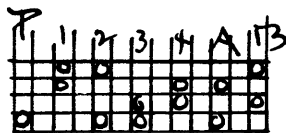
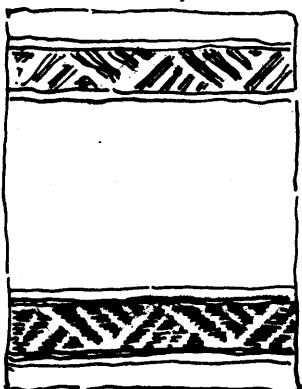
For those whose inclinations run to bags rather than to table mats I have a suggestion which may be found time-saving and amusing. We all know, of course, that on a twill threading one may weave double width fabric or a seamless bag if one chooses. Applying this idea to the making of the "Phillippine Bag" shown in a previous Bulletin: warp some material such as Lily's Art. 714, plain or in colors, at a setting of 30 to the inch. (This is too open a setting for a good tabby fabric, but permits a close weft which is desirable for the present purpose.) Make the warp 10" or 12" wide. Weave as



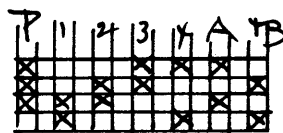
(a)



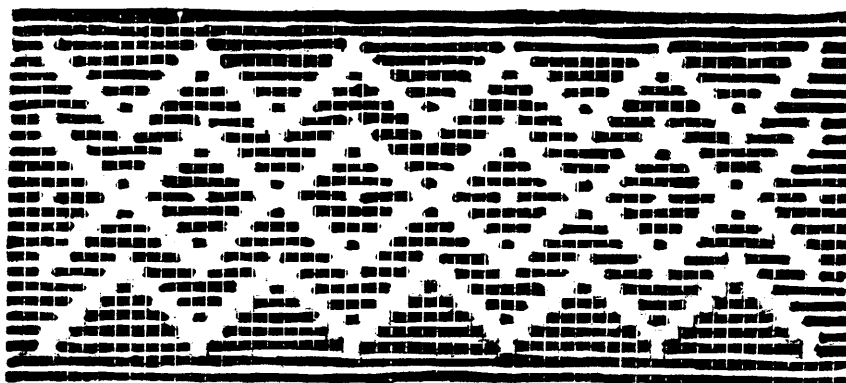
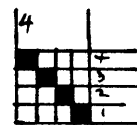
(b)



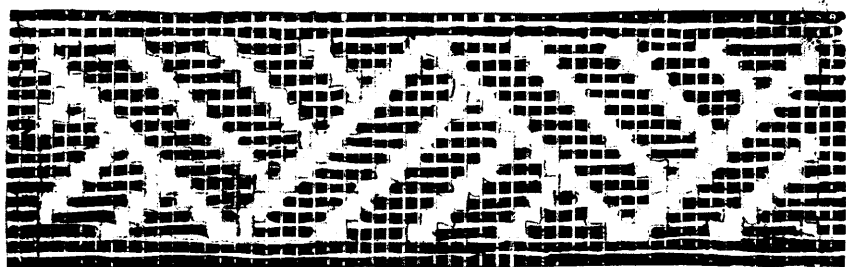
Rising Shed



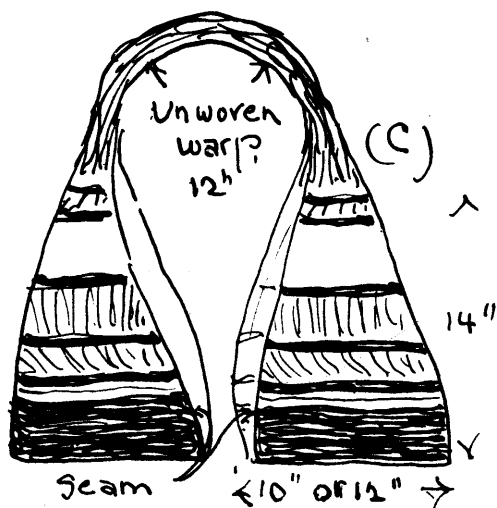
Sinking shed



Detail of Border (a)

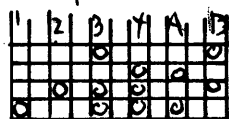


Detail of Border (b)

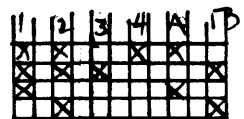


Wrap the handle firmly and then "cox-comb" in colors. Sew up center seams.

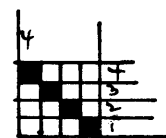
tie-ups for double width weaving



Rising shed



Sinking shed



For large bag, warp 10" or 12" wide

Weave heading: A, B, A, B. For  $\frac{3}{8}$ "

Weave Bag: 1, 2, 3, 4, Repeat for

14" Leave 12" of warp unwoven

and treadle 1, 2, 3, 4 for 14". End

with heading: A, B, A, B,  $\frac{3}{8}$ "

The bag should be woven in bands of several colors—the darkest at the bottom. In weaving the second half of the bag, reverse the order of stripes.

indicated on the diagram. The tabby heading "sews" the bottom of the double fabric. When the weaving is complete, turn the two half-bags inside out so that the heading comes on the inside. Wind the unwoven part of the warp, which makes the handle, with carpet warp or other material, binding it as tight and firm as possible. With colored material like the weft used in the bag, cox-comb the handle in some decorative manner. Then sew the selvages of the two half-bags together to a convenient height, and the bag is finished.

For a bag to be attached to a handle, set the warp to the width desired for the depth of the bag. Weave the tabby heading, then the fabric for the bag on the treadling given; weave the tabby heading. Turn the bag inside out and attach to the handle.

On four harnesses the two fabrics are necessarily in plain weave and the only form of decoration possible is in changes of color and the use of materials of different weights, but some very attractive effects may be produced in this way, -- especially if the warp is widely enough spaced to give a weft-face fabric. On eight harnesses any four-harness pattern may be woven in double width. A draft for the "Monks Belt" pattern arranged for double-width weaving is given in the Recipe Book and will serve as a model for similar arrangements of other patterns. An eight-harness twill will give excellent results.

An amusing double-weave "stunt" is to weave a tabby heading and then weave a seamless bag, treadling: 1,3,2,4 and repeat. When the bag is as large as desired, open the shed that separates the two fabric by raising harnesses 1 and 2. Use threadles 1 and 2 together, on the "rising" tie-up or treadles 3 and 4 together on the "sinking" tie-up. Insert a small chusion between the two fabrics and close the bag by weaving a tabby heading. One then has a pillow complete, without sewing. The ends may be fringed if one likes. Or, for a bag, omit the tabby heading that closes the top, turn the piece inside out and attach a handle.

- - - - -  
I have referred above to materials supplied by the Lily Company in spite of the fact that at the moment these are difficult to obtain. Many of our Guild members have stocks of this material on hand. And I have the assurance of the Lily Company that now that the war is over and the government restrictions being removed, they will soon be able to supply us again. This, I am sure, will be good news to many.

Some excellent linens are again to be had from Hughes-Fawcett, 115 Franklin St., New York, N. Y..

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Mr. L. C. Wilderman, MISSOURI LOOMS, 7731 Sappington Ave., Clayton, St. Louis 5, Mo., asks me to announce that he is now able to ship out orders for his four-harness and eight-harness table looms within two days of receipt of order.

Miss Veva Carr, Tavares, Florida, has some weaving equipment and material that she is willing to sell. She has a large eight-harness McKay loom and a small eight-harness McKay "parlor" loom, besides other equipment. For details and prices, please write Miss Carr.

- - - - -  
With the blessed return to peace we shall no doubt get back to normal in the course of time. But we have come a long way from normal during the last few years and cannot hope to be able to get everything we need and want within the next few weeks -- or even years. For a long time we shall have to continue getting our materials where and as we can, and to contrive our work to fit what we can get, or what we may still have as left-overs from pre-war days. The fighting is over, but the war will be with us for a long time.

May M. Swater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



for

Basin Montana

November, 1945

A question from one of our Guild members, several weeks ago, set me off on a new series of experiments with Maori twining, and I have been getting so much pleasure out of it that I hasten to pass along the details in the Bulletin. I believe those among us who wish to make the inevitable Christmas table mats -- and who want to make something a little "different" -- will find this interesting technique well suited to their needs. And also to the materials more or less obtainable.

As I do not fancy sitting on the ground to weave on a warp stretched between two stakes, as the Maori weavers do, I set up my experimental piece on an old picture-frame. This was not highly convenient, however, and I persuaded Mr. Gilmore to make me a standing frame -- illustrated here-with on the diagram. This proved delightful. Anyone who happens to have an upright embroidery frame, or an old-fashioned upright tapestry loom could use that equipment satisfactorily, others could, I am sure, have an affair such as the one Mr. Gilmore made for me constructed by a local wood-worker. Mr. Gilmore does not wish to make these frames for sale, as he is swamped by loom-orders, but kindly contributes his design for publication in the Bulletin.

The piece I am making is to be a bag when finished. For the upper part it has more or less open twining, such as suggested below for a table mat, with a band of "taniko" pattern weaving at the bottom. It seems to me very handsome indeed. The taniko technique, however, would not altogether suit a table piece, and is also somewhat slow of execution, so I shall not explain it here. The directions were given in a previous Bulletin on Maori weaving, of which copies are still available.

Maori weaving cannot be done satisfactorily on a harness loom, for the reason that one end of the warp must be free. The warp material must be quite coarse, even for fine weaving, and should be a stiff, hard material. I am using a fine jute for my piece. A very heavy linen, as stiff as shoe-thread, is used by the Maoris for their finely woven head-bands. For table mats one might use celophane, raffia, and strands of the hardware-store fibre described in a previous Bulletin. For fine pieces silks (if one has a pre-war stock of material) or fine cottons may be used. For mats over the jute warp I find Lily's "thrifty-knit" strand cotton, used double, a very satisfactory material.

For such pieces as belts or head-bands or bag-handles, the warp should run in the crosswise direction of the web, with the weft twining running lengthwise. For table mats the warp may run the long way or the short way of the piece as preferred. Set up the warp on a double two-thread row of twining, that may be four threads of the same color of in two colors, two threads of each. If the material is too fine to make a firm twining over the warp to be used, double the strands, using eight threads instead of four. Attach the strand of weft to the left side upright of the frame, and tie it also to the right hand upright, using a loop knot that can be released easily. The warp material, cut into lengths twice the desired length of the warp, should be set up on this foundation cord as illustrated on the diagram. Separate the strand of weft threads -- if in two colors, one color above and the other below. Lay a double strand of warp through the shed, with half above and half below the foundation strand. Separate the two upper strand and bring up the two lower strands of the weft between them. Lay a second pair of warp-ends through this shed. Separate the two upper strands and bring up the two lower strands between. Through this shed take the upper half of the first warp-pair in a downward

direction. Through the next shed of the twining lay a new pair of warp-ends and through the following shed of the twining, bring down the second warp-pair. Continue in this manner till the warp is as wide as desired. As the twining progresses the foundation strand will become twisted, and must be released from the right hand upright and the twist taken out.

Now attach to the foundation strand on each margin of the warp a group of either two or three strands of weft-material. These strands form a roll along each edge to give the edges a finished appearance.

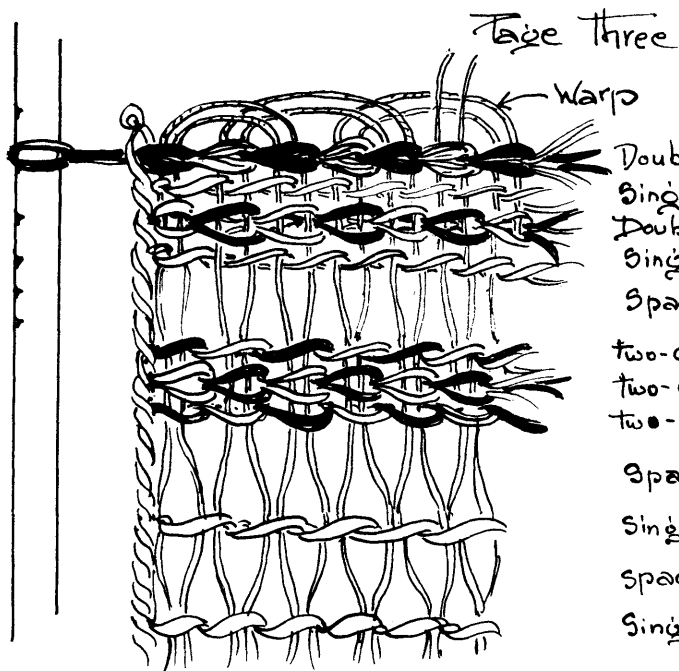
If the first row of twining is to be a single two-thread twining as shown on the sketch, make the weft-strand about three times as long as the width of the work. Double it at the center around one of the strands of the roll on the left hand side of the work, and twine the ends over and under two warp-ends all across. The easiest way is to make the twist with the fingers and lay the two warp-ends through the shed between the two twining ends. I have also tried twisting the two weft ends and attaching the twisted strand to the right hand upright. The twists may then be opened with the fingers and the warp-ends drawn through. However this method seems to me somewhat slower than the other. When the right hand side is reached, knot the two ends around one of the strands of the edge-roll. The ends may if preferred be twined back over and under a few warp-ends, or they may be drawn back into the work with a large needle. Or the ends may be permitted to form a short fringe.

For the next row of twining, attach the weft-ends to the second strand of the roll, on the left. All the twining is done from left to right.

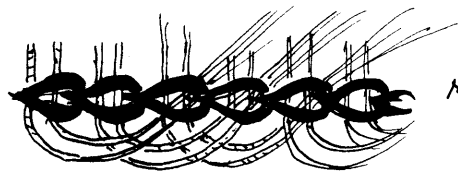
The rows of twining may be close together, altogether covering the warp, or they may be spaced some distance apart giving an open effect. By the use of a variety of colors and various groupings of two-thread and four-thread twining, a surprising variety of effects may be produced. The sketch is greatly exaggerated, to make the process clear, and gives little idea of the finished fabric as the twining should be drawn tight to make the fabric firm.

Following are details of a table mat, 9" X 14", as I made it: I set up the warp 9" wide, which took 126 single warp-ends, or 63 ends of light-weight jute cut 32" long -- twice the length of the piece with a little over for the finish at the bottom. I set up the warp on a four-thread twine in a color similar to the warp. I then put in a row of two-thread twining in a dark green color. Then a four-thread double twine in two colors--orange and cream. Next another two-thread twine in dark green. These rows were pressed up as close together as possible. I then left a narrow space -- about  $\frac{3}{8}$ " -- and made a two-thread twine in two colors, wine and gold. I followed with another two-thread twine in the same two colors, but taking the dark thread over the warp-ends crossed by the light thread on the previous row. I then made a four-thread double twine in wine and cream, again taking the dark threads over the warp-ends crossed by the light color in the previous row. I followed this with two rows in wine and gold, twined in the opposite direction from the first two rows. This produced an interesting little chevron pattern. Again I left a space and repeated the first little border -- in dark green, orange and cream. This series of twinings made a border about 2" deep. For the body of the piece I made rows of two-thread and four-thread twining alternately at intervals of  $\frac{1}{2}$ ", and ended with a border like the one at the beginning, using various two-color combinations. This is extremely simple but also very effective, and can be done in about the same time it would take to weave a piece of the same size in a conventional manner.

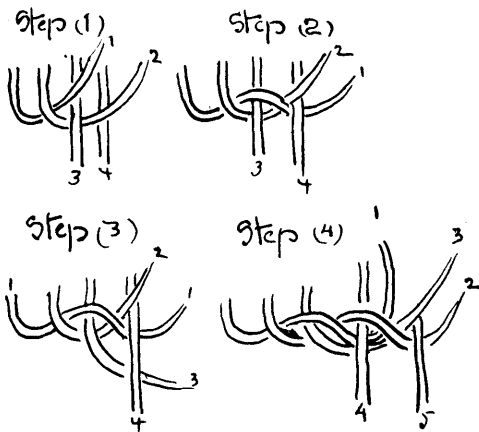
I did this twining over pairs of warp-ends, as illustrated on the diagram. The rows that are brought close together to make a pattern should be twined over the same pairs in each row, but after leaving a space the pairs should be divided, as also illustrated on the diagram.



Double two-thread twining - two colors  
 Single two-thread twining  
 Double  
 Single  
 Space  
 two-color, single twining  
 two-color - double  
 two-color - single  
 Space  
 Single, -Two-thread  
 space  
 Single, -Two-thread



Method of finishing of the ends - clip close

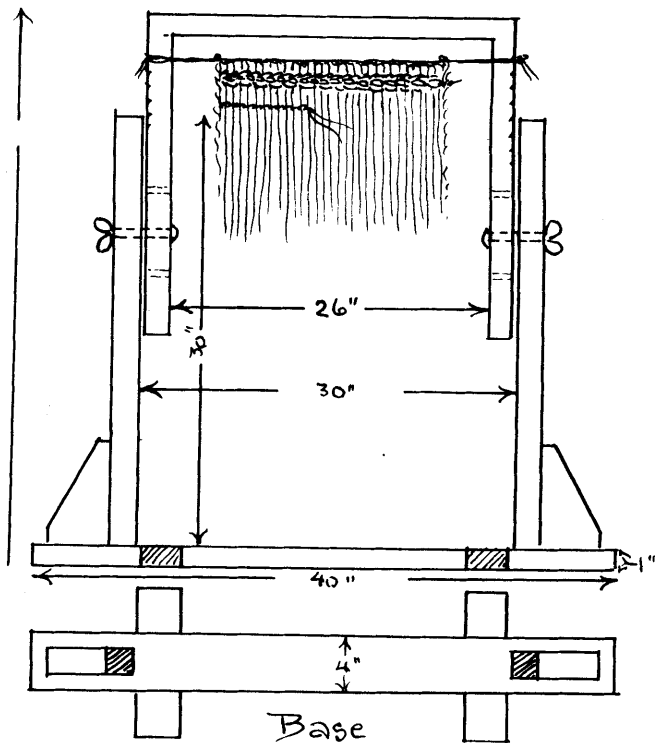


Maori braided finish - by request.

(This method may be used to finish rugs. Make the braid on the wrong side of the piece, draw each "tuck" of the braid as tight as possible, and clip the ends close.)

After the set-up - step (1) on (2) - alternate (3) and (4), dropping one thread on the left and bringing down the next to the right

Mr. Gilmore's frame for Maori weaving (not drawn to scale)



This type of weaving would, I believe, prove useful in hospital o. t. practise. I hope some Guild members will try it and let me know of their results.

Very handsome belts may be made in the taniko technique. For these the warp is set up as described for the table mats, but is only a few inches long -- the width of the belt -- while the weft-twining should run lengthwise of the piece. If the piece to be woven is longer than the width of the frame, the set-up may be made for the width of the frame and the twining ends, cut long enough for the entire length of the belt. When the work has been completed, to the right hand side of the frame, detach the piece and take the woven part to the back of the frame and continue the work. When making the finish along the bottom of the piece, take the warp-ends back on the wrong side and do not clip them off. Line the belt with a strip of thin leather or silk.

There is an extremely interesting book, THE EVOLUTION OF MAORI CLOTHING, by te Rangi Hiroa, (P. H. Buck.) Published by the Board of Maori Ethnological Research, and printed by Thomas Avery and Sons, Ltd., Devon St., New Plymouth, New Zealand. I do not know whether or not copies of this book are to be obtained at present, but anyone who enjoys the unusual "native" forms of weaving would like to have it for reference.

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Mr. F. C. King, 1229 Atkinson, Detroit 2, Michigan, has a Structo 20" eight-harness loom, together with a good deal of Material, which he offers for sale at \$100.00. The loom, he writes, is in practically new condition.

Howard Bradshaw, Manufacturer of hand loom equipment, Spartanburg, South Carolina, writes that he is now operating on full-time civilian production and can make prompt shipment of reeds, heddles, heddle-frames and so on.

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I have had to have the pamphlet for Finnweave and Mexican double weaving reprinted, and shall be able to supply the new pamphlet for \$1.00, including all the patterns supplied with the previous leaflet. It is now available.

I expect to make the same Christmas offer as in previous years -- gift subscriptions to the Bulletin for \$4.00 and the Recipe Book for \$7.00. The subscriptions, unless otherwise ordered, will begin with the issue for January, 1946, and if ordered in time, the Recipe Book can be mailed to reach the friend for whom the gift is intended as close to Christmas day as possible.

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Mrs. Frances Cohn writes that she has for sale several dozen Guatemalan character dolls, dressed in hand-woven costumes and posed with a native loom. These dolls are mounted on a block of wood. I have not seen them and do not know the size or other details. The price is \$2.50 plus postage.

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*May M. Atwater*

# THE SHUTTLE - CRAFT GUILD

## BULLETIN

for



December, 1945

Basin, Montana

For a number of years the December Bulletin has been devoted to technical matters -- useful though rather dull. And the subject for this month is a particularly dull one, though one that is troublesome to many weavers -- to judge by my correspondence. The arithmetic of weaving.

The method of determining quantities of material for a proposed project has been explained before, but questions continue to come in so here it is again: Calculate the total linear yardage and divide by the yardage per pound in the material to be used. Quantities of warp material may be figured very exactly; multiply the number of ends per inch in the proposed warp by the number of inches in width, then multiply this result by the number of yards in length. This gives the linear yardage. Reduced to a formula:  $E$  (ends per inch)  $\times$   $W$  (width in inches)  $\times$   $L$  (length in yards) =  $T$  (total yardage)  $\div$   $Y$  (yards per pound) =  $M$  (material required).

Many materials are marked with the yardage per pound. If not, the figures representing the material -- as "20/2", "24/3", etc -- tell the story. Cotton and wool yarns are based on the highly unmetrical figure of 840. That is to say a #1 cotton yarn runs 840 yards to the pound. A 20/2 yarn, which means a two-ply yarn made up of two ends of #20s, will run 840  $\times$  20 = 16,800 yards to the pound. However if warp-yarns are purchased spooled instead of in skeins, it must be remembered that weights are net and include the spools or cops, and as there is no yardage in the weight of the spool, the yardage of the material as purchased will be less than the calculated figure. How much less can be determined by weighing an empty spool and computing the loss of yardage from that.

It is also true that the theoretical yardages do not always accord with the actual yardages. A hard-twisted yarn will run shorter to the pound than a loosely twisted material, and unless the material is marked with the exact yardage per pound it is impossible to determine this difference exactly without measuring and weighing.

In my opinion it is rather futile to calculate and purchase the exact amount of material required for a short warp. It is more practical to keep in stock fair quantities of the standard warps. But if for any reason it is necessary to order only the material required for a special warp, make a generous allowance over the calculated quantity. It is far less expensive to have a little material left over than to run short.

Calculating quantities of weft for a given project is similar to making the calculation for warp: determine the total linear yardage and divide by the yardage per pound of the weft material. If the same material is to be used for both warp and weft, and a "50-50" fabric is to be produced, the quantities of warp and weft will be the same. However, if warp and weft are different, or of two kinds as in overshot weaving, and if the number of weft-shots to the inch is different from the number of warp-ends to the inch, the quantity of warp may bear very little relation to the quantities of weft required. The quantities of weft vary widely with the weave and pattern, and with the beat. The only way to arrive at a moderately close approximation is to make a sample, exactly as the main piece is to be woven, and count the weft-shots to the inch. Multiply this number by the width of the proposed weaving, in inches, divide by 36 to reduce this figure to yards, and you will have the yardage for one inch of fabric. Multiply by the number of inches to be woven, and you will have the total yardage. And here again it is wise to make a generous allowance to cover any possible shortage, and in weaving to be careful to weave the same number of weft-shots to the inch as in the sample from which the calculation was made.

Inexperienced weavers are sometimes puzzled over how long a warp to make for a particular project. No exact rule can be given for this as the allowance for take-up and shrinkage varies widely with the material used and with the weave. And there is a certain amount of unavoidable wastage at the ends of the warp. This wastage is greater on a large loom than on a small one but is rarely less than one yard. This wastage is one reason for putting on fairly long warps and planning the weaving of several pieces on the same warp, rather than the practise of making a separate warp for each small project. The wastage, of course, is the same for a long warp as for a short one. The take-up is much greater when a very coarse weft is used than when warp and weft are similar. It is usually much greater than one expects. The rate of shrinkage can be determined with exactness only by making a fairly large sample and washing it. It is a major disaster to run half a yard short when making a coverlet, or a piece of suiting, so here again it is unwise to figure too close. And in my opinion it is desirable to weave a sample -- to keep -- on each threading one puts on the loom. Additional warp must be allowed for this.

A different problem in arithmetic is presented by the arrangement of a pattern on the loom. The pattern draft gives a single repeat of the threading, and usually needs to be balanced, to end as it began. For a small pattern this is a simple matter, but a large pattern may give a good deal of trouble. One must first decide on the width and the warp-setting and determine the number of warp-ends on which the pattern is to be arranged. If the warp is to be made to suit the pattern this may be considered a tentative figure and a few warp-ends may be added or subtracted to fit the arrangement. But if, as sometimes happens, the warp is already on the loom, the arrangement must be made to occupy exactly this number of ends. A certain amount of familiarity with draft-writing is desirable at this point, but perhaps a concrete example will illustrate the method and prove helpful.

Suppose we wish to make a pillow-top, 20" square on a warp of 24/3 cotton set at 30 ends to the inch, using the "Velvet Rose" pattern in over-shot weaving, draft No. 147, page 202 in the Shuttle-Craft Book. (An illustration on page 131 shows a woven piece in this pattern with several repeats.) The draft as written begins with the square "table" figure, and rather obviously it would not give a good effect to begin the threading with this square. Without the frame that surrounds it, in the complete pattern, this figure would have a very incomplete and truncated appearance in the corners and along the edges. If we wish this figure in the corners we must begin with the frame, and a study of the draft will indicate that the threading should begin at thread No. 187 of the draft. From this point to the end of the draft requires 40 threads. Two repeats of the complete draft will require 452 ends, and for the table and frame, to end as we began, will require the first 111 threads of the draft. This totals 603 warp-ends, and eight additional threads for a four-thread selvage on each side makes it 611 threads, or 11 threads more than the tentative 600 ends in the proposed warp. If the warp is being made to fit the arrangement it is a simple matter to warp 611 ends instead of 600, as the small additional width is unimportant. For use on the loom it is good practise to write the arrangement in the form given below:

Selvage, 1,2,3,4	4	warp-ends
Thread 187 to end of draft	40	" "
Two complete repeats of draft	452	" "
First 111 threads of draft	111	" "
Selvage, 4,3,2,1,	4	" "
	<hr/>	
	611	" "

But suppose the loom is already warped with exactly 600 ends -- what shall we do? There are a number of solutions to the problem, of course. My suggestion is to omit two threads from each of the large blocks on either side of the center in the main figure. As there are two of these blocks in each figure, and as we have two repeats of the pattern, this will make the pattern threading eight threads shorter, or 595 warp-ends instead of 603. This will leave only five threads for selvages, but this will be enough to keep the edges from pulling in. The schedule of this arrangement would be as follows:



Selvage 2,3,4		3 warp-ends
Thread 187 to end of draft	40	" "
Two repeats of modified draft	444	" "
First 111 threads of draft	111	" "
Selvage, 4,3	2	" "
	<u>600</u>	" "

Now suppose that using the same draft, for the same purpose and on the same warp, we wish to have the main figure, instead of the table figure, in the corners of the piece. Where shall we start the threading? Obviously directly after the table, or at thread No. 71 of the draft. From this point to the end of the draft takes 156 warp-ends. Adding two complete repeats of the draft, gives us a total of 608 threads. As the draft ends with the main figure it is unnecessary to add any threads to balance the design, but eight additional threads for selvages gives us a total of 616 ends.

Selvage, 1,2,3,4		4 warp-ends
Thread 71 to end of draft	156	" "
Two complete repeats	452	" "
Selvage , 3,2,1,4	4	" "
	<u>616</u>	

For a warp of exactly 600 ends, the simplest way to modify the draft would be to omit one pair of blocks from each of the two table figures in the arrangement. This would make a difference of exactly 16 threads.

Each pattern we may wish to use presents a similar problem in arrangement. It is hoped that this example will sufficiently illustrate the method to simplify the problem for beginners.

Another exercise in counting and arithmetic, that should precede the drawing-in process, is the determining of the correct number of heddles on each harness. Some weaves and patterns require the same number of heddles on each harness, but this is unusual, and it is far easier to shift heddles before than during the threading. To arrive at the required number of heddles, count the heddles on each harness in a single repeat of the draft; multiply by the number of repeats in the threading, and add the number of heddles on each harness in the selvages and in any parts of the draft used to balance the pattern. For instance, in the first arrangement scheduled, -- the one on page Two -- it will be found that the arrangement requires 146 heddles on harness No. 1, 167 heddles on harness No. 2, 160 heddles on harness No. 3, and 138 heddles on harness No. 4.

If there are more than the required number of heddles on the harnesses, and if the warp does not completely fill the loom, the extra heddles need not be removed, but half of them may be pushed close to the end of the frame on each side and tied back with a cord. If the warp fills the loom, however, heddles bunched along the edges may interfere with the edge threads of the warp and it is better to take them out of the loom.

If many heddles must be shifted, it is best to take the harness frames out of the loom for the purpose. Some looms are so constructed that it is easy to remove the harnesses, while in others it may be necessary to untie a number of knots. In the purchase of a new loom this is a detail to be considered. Also in many looms standard harness frames are used, equipped with catches that are easy to release, while in other looms there are harness frames with stiff hooks and catches that lead to broken finger-nails and a lot of unnecessary work. I have actually seen some harness frames so constructed that the bars could not be released at all, so that it was impossible to shift the heddles. Such a loom, of course, is highly undesirable.

The flat steel heddles used on many modern looms may be shifted very quickly and easily by use of the thin metal strips usually supplied with these looms. Twisted wire heddles are not usually handled in this manner but must be strung on the bars one by one, care being taken not to cross them.

One of our Guild members, Mr. Herbert Boothman, of Victoria, B. C., Canada, has devised an ingenious method of tie-up that permits making tie-up changes quickly and easily. He has kindly contributed the suggestion to the Bulletin.

The system consists in using a double cord from each lamm to each treadle. These cords should be long enough to pass from the treadle, up through the hole in the lamm, without raising the treadle, and remain on the loom at all times. After putting in these cords, raise the treadle to the weaving position and draw up the cord till it is taut. Lash the double cord firmly just above the upper edge of the lamm. Do this for each cord in the set-up. When making a desired tie-up draw up the cord or cords required for the shed and slip a small stick or stiff wire under the lashing.

The most convenient method, I think, would be to use a stiff wire of proper length for each lamm, and take up on it all the ties for that lamm. For instance in our "standard" tie-up there are three ties on each lamm: on lamm No. 1 there should be a tie to the B tabby treadle, one on treadle 4 and one on treadle 1. On lamm No. 2 there should be ties on treadles 1, 2, and A, and so on.

In four-harness weaving, to be sure, the tie-up is not often changed, as most of the four-harness weaves can be produced on the standard tie-up. But changing a tie-up on six or eight harnesses often involves a lot of time spent sitting under the loom, and Mr. Boothman's invention would cut down this time a great deal. It would be wise, however, to attach the cords to the treadles by means of snitch-knots so that adjustments could be made when necessary.

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I have recently had the material on the Finnweave and the Mexican double weave reprinted, in the form of a pamphlet, which I shall be able to supply at \$1.00, instead of the \$1.50 I had to charge for the loose-leaf affair. The pamphlet contains all the patterns in the original set except the large double sheet with the Alsatian figure, and several additional patterns have been included.

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One of our members writes that she has been able to get some nice light-weight wool yarns from Harry A. Bartlett, Harmony, Maine.

So far the ending of the war has not helped much to ease the problem of supplies. No doubt conditions will improve little by little, -- unless the labor war in which we are at present engaged lasts unduly long. Apparently if anything decisive is to be done it will have to be Congress that does it. Perhaps we could speed things along a bit if each of us were to write to his or her Congressmen and Senators. The House Office Building, and the Senate Office Building, Washington, D. C., is all the address necessary.

We shall not see our industries re-converted or our returned servicemen provided with jobs if the unions are permitted to sabotage production. Labor has a right to the highest wages obtainable, of course, but should -- it seems to me -- concentrate on obtaining higher wages by earning more, rather than through work-stoppage and violence. "Collective bargaining" is all well and proper, but when an individual goes out to bargain with a gun or a blackjack he is called a hold-up man and is very properly put in jail. Why similar "bargaining" tactics, causing hardship and losses to the entire community, should be considered legitimate when practised by the unions, is somewhat hard to understand. Aroused public opinion, acting through Congress, could put a stop to it.

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May D. Atwater