

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

*RAFT*

for

Basin, Montana

January, 1941

(Copyright, 1940, Mary M. Atwater)

I do not know of anything in weaving that is more satisfying than taking a handsome new coverlet off the loom and spreading it for the first time over the bed it is to cover and adorn for years to come. Everyone who weaves should certainly make at least one coverlet, and January is a fine month to use for the making, so the question is not whether or no to weave a coverlet but instead just how to make one of surpassing beauty.

When I ask myself how I shall make my 1941 coverlet I find that I must decide first where the coverlet is to be used, as the decorative plan of the room in which it is to lie must decide the type and style of pattern. Of course when we think of a coverlet we think first of blue and white, and a Colonial pattern. For an old four-poster, or a maple spool-bed in a Colonial room this, of course, is the only suitable choice. And a Colonial coverlet also "composes" delightfully with an unstylized bedroom such as most of us inhabit. However such a coverlet is almost ludicrously out of place in a modernistic setting or in rooms done in the Spanish manner. I am therefore giving several suggestions in the hope that one or another will help solve the January coverlet problem for some of our Guild members.

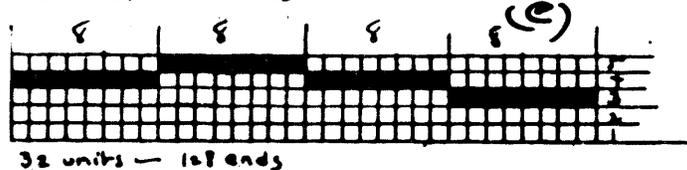
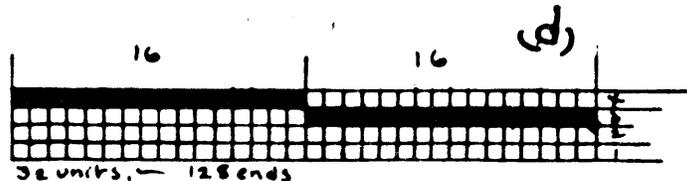
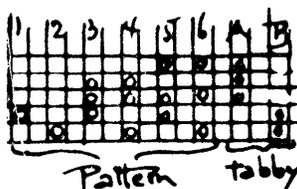
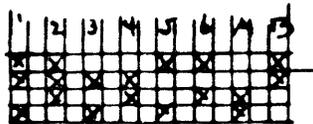
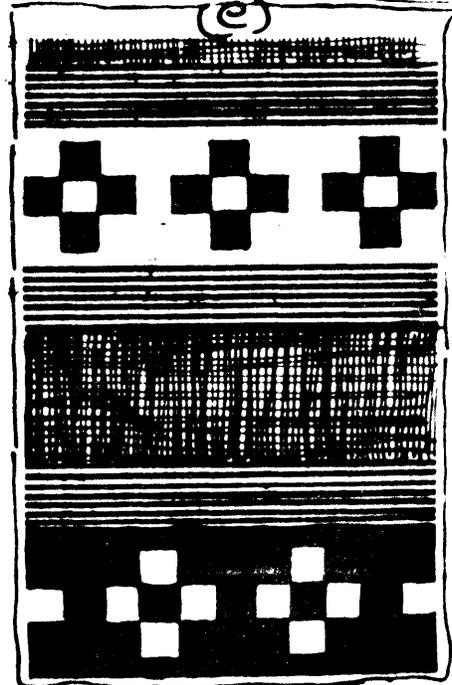
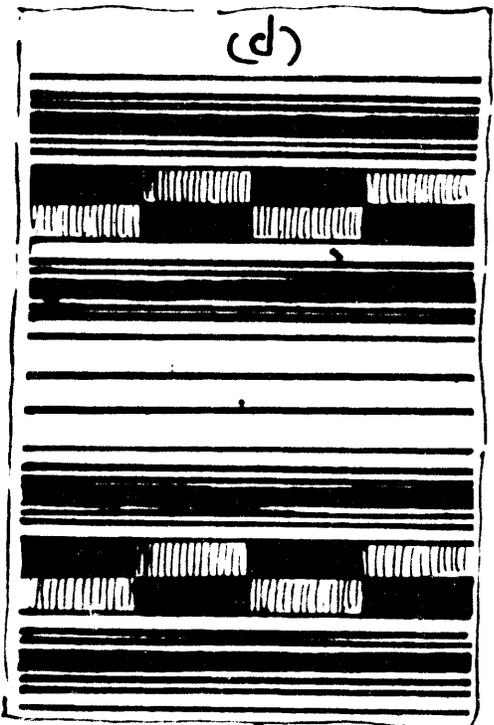
First choice is of course a Colonial pattern. We have a great many of these patterns already, but here is one that is a little "different." It is from the "Speck" book of drawings in the Pennsylvania Museum. I do not seem to find any information about weaver Speck, but judge from examination of his drawings that he was probably a contemporary of John Landis, whose book of drawings is also in the Pennsylvania Museum. As a designer I consider John Landis the finer artist, but many of the Speck drawings are of interest. A number of them, like the one shown on the diagram, are designed for weaving in two colors. This particular effect is quite unusual in patterns of that time, and as a matter of fact I have never seen an old piece of weaving woven as shown. Just what technique was intended it is impossible to say. Clearly the patterns are not intended for double weaving, and certainly the effect cannot be produced in the overshot weave. Only the summer and winter weave lends itself to a two-color effect of this kind, as described in the Bulletin some time ago. It is an interesting way of weaving and seems worth considering again in detail. Several of the two-color Speck patterns are included in the Recipe Book, and the same system might be applied with attractive results to many of our better known patterns. A three block pattern like this one requires eight harnesses in summer and winter weave, and a four-block pattern can be developed in the two-color technique on ten harnesses. The pattern may be woven all in one color on five harnesses, and may also be woven on four harnesses in the overshot weave. The draft for overshot weaving is given at (a) on the diagram, and the five-harness summer and winter weave draft at (b). At (c) is given the draft for the two-color weave. The complete tie-up for (c) takes fourteen treadles, but an "X-Y" tie-up may be made to ten treadles as shown.

I have given the set-up and treadling for a coverlet in the overshot weave on four harnesses. The summer and winter weave drafts take a few threads more than the overshot draft, but the arrangement may be made in practically the same manner. For draft (b) a plain solid border might be set on a sixth harness -- to weave with all the pattern shots. For draft (c) a border in solid stripes might be set on two additional harnesses if available. The treadling for (b) is not given as anyone familiar with the summer and winter weave will have no difficulty in treadling the pattern from the illustration on the diagram.

To weave pattern (c) treadle the blocks as indicated on the diagram. The blocks should be woven in order and size to follow the design, of course. First weave two repeats of the pattern unit on block No. 3; then a single repeat of No. 2 followed by a single repeat of No. 1. No. 6, 5, 4, a single repeat each. Then three repeats of block No. 3 and so on. (Observe that for each unit of the weave there should be four shots of each color and four tabby shots. The treadling as given, repeated.)

Patterns (d) and (e) given on this page are suggestions for coverlets in designs taken from ancient Navajo blankets. They might be woven as heavy blankets or carried out in fine material as for the usual summer and winter weave coverlet. The plain sections should not be woven in tabby, however, but with pattern shots in a plain color on treadles 1 and 3, alternated with tabby shots. The stripes, of course, are also woven in the same manner in contrasting colors. The original of pattern (d) was in black, red and white. The original of (e) was in tan, and shades of brown. Spanish or Indian colors should be used, of course. These patterns would be good for coverlets in a Spanish type room of the informal kind, or for summer camps or as couch-covers in a man's room. Done in heavy wools these patterns would make handsome automobile blankets. The treadling for the figures seems so obvious that it would waste space to write it out in detail.

I have in mind a room that seems to demand a different type of coverlet from either the Colonial or the Indianesque patterns given. For this I plan to use the pattern given on page four, sketched from an ancient piece of German linen weaving, and done in a technique similar to the Finnish technique described in the December Bulletin. This might seem a nobby-pobby affair, but it seems to me to have a quiet charm that is quite individual, and that will suit perfectly the room in question. For a coverlet this should be done in quite coarse material. A coarse linen for warp, with the inset figures in heavy silk would be handsome. Or No. 5 perle cotton for warp, set at 20 ends to the inch, with the figures in mercerized strand cotton, or in No. 3 perle, or in coarse silk, would also be suitable. Of course more dashing colors and a different pattern figure might be used if preferred.

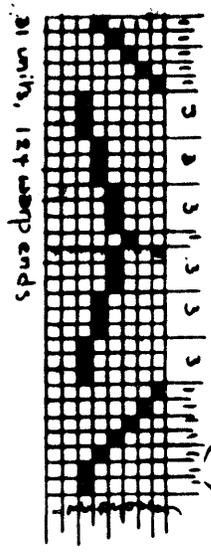
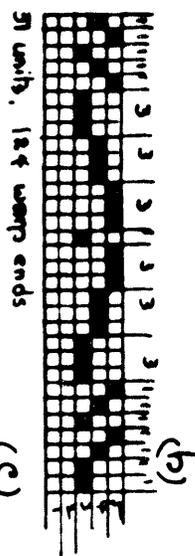
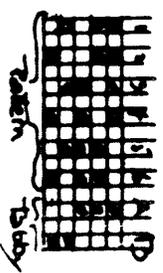
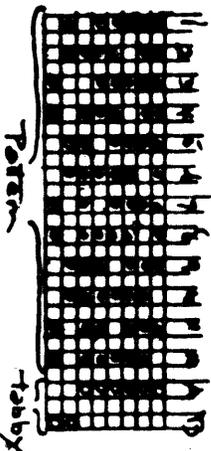
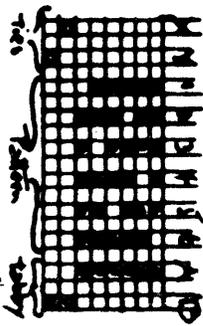


Pattern # 29 from the "Spock" book of Drawings in the Pennsylvania Museum of Fine Arts.



For a complete in overcoat wearing:  
Warp, Reptile section 24/3 at 50 ends to the loom  
Tabby like the warp  
Pattern wft, Amospan or Scotland yarn.

Thread (a) as follows:  
Solvage, 1, 2, 3, 4 - - - 4  
Border, 6 times 216  
Pattern, 9 990  
First 56 threads 56  
Total ends 1268



31 units, 124 warp ends

Weave (a):  
Border  
Treadle 3, 5 shots  
1, 2  
3, 2  
4, 2  
5, 2  
6, 2  
7, 2  
8, 2  
9, 2  
10, 2  
11, 2  
12, 2  
Repeat six times.

Pattern:  
Treadle 3, 5 shots  
1, 2  
3, 2  
4, 2  
5, 2  
6, 2  
7, 2  
8, 2  
9, 2  
10, 2  
11, 2  
12, 2  
Repeat.

Weave (a)  
Block No. 1, treadle 1, dark; treadle 2, light; tabby A  
5, dark; 4 light; tabby B  
Repeat

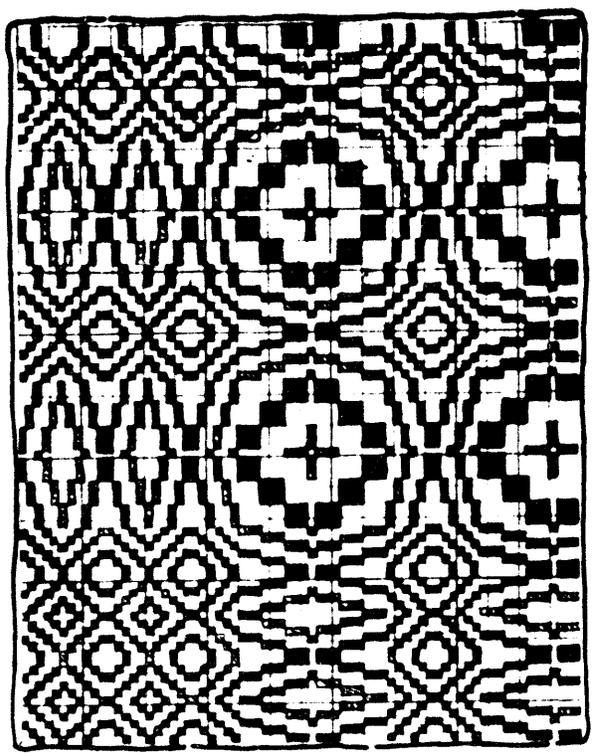
Block No. 2, 5, dark; 6, light; tabby A  
7, dark; 8, light; tabby B  
Repeat

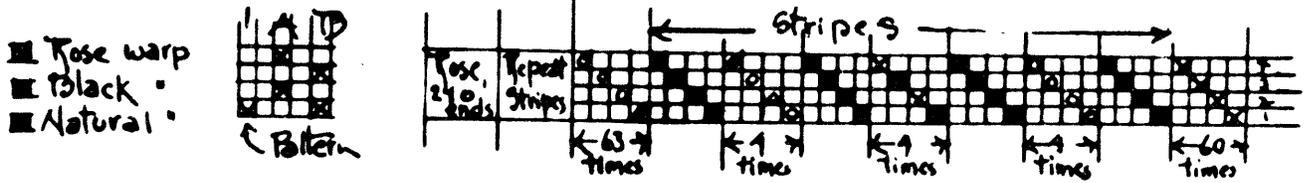
Block No. 3, 9, dark; 10, light; tabby A  
11, dark; 12, light; tabby B  
Repeat.

Block No. 4, 1, light; 2, dark; tabby A  
3, light; 4, dark; tabby B  
Repeat.

Block No. 5, 5, light; 6, dark; tabby A  
7, light; 8, dark; tabby B  
Repeat

Block No. 6, 7, light; 10, dark; tabby A  
11 light; 12 dark; tabby B  
Repeat.

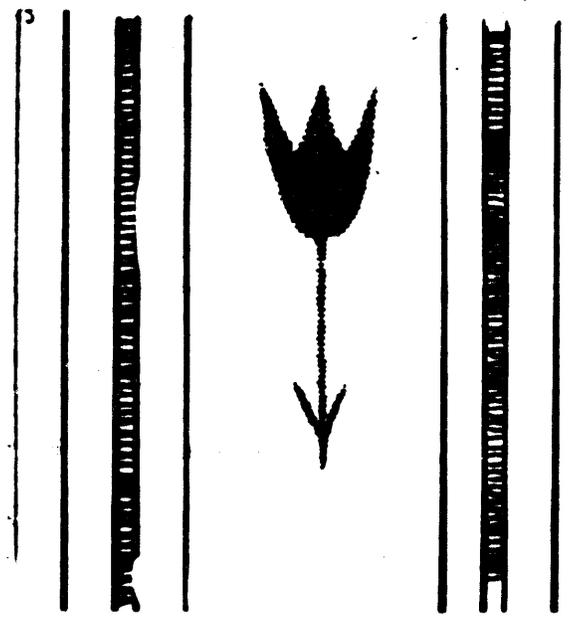




used instead of the tulip pattern shown on the sketch.

For a single-bed coverlet in one width warp 42" or 45" wide, in perle cotton No.5 at a setting of 20 ends to the inch. Warp the first 12" -- or 240 threads -- in a madder rose; thread 4 threads in black or purple, or other dark color; 16 ends in natural; 4 ends dark; 16 ends alternately rose and dark; 4 ends dark; 16 ends natural; 4 ends dark. For the center strip warp 252 ends in natural. Repeat the stripes and the 12" section in rose. Thread in twill as shown above. Weave in plain tabby, in natural. Weave the figure by inserting a coarse weft in rose on treadle 1 followed by two tabby shots, in a manner similar to the technique described in the December Bulletin -- working from the wrong side.

To get the figure correctly, draw it out on paper full size and trace it on the stretched warp, or attach the drawing under the warp and work over it.



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A good many people have already written asking questions about the institutes for next summer. The summer plans are not complete at this time, but I expect to be in Vancouver again at the University of British Columbia for the last two weeks of July, and in Banff -- in the Canadian Rockies -- for three weeks in August, at the school of art conducted in Banff under the auspices of the Department of University extension of the University of Alberta. The meeting in Banff will be instead of the one held in previous summers at Olds, Alberta. I shall not be at Hartland again. I may not go east at all next summer, though there are some tentative plans for eastern meetings. I do not arrange these affairs myself, but merely participate as instructor. If any group of Guild members is thinking of organizing such a meeting I shall be glad to hear from them, and as early as possible. It is sometimes difficult to fit desired dates together to make the travelling expense as light as possible for each group. At present no dates are definitely arranged except those for the two meetings in Canada as explained above.

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Enough names have been received to warrant printing the Finnweave patterns. They will be ready to send out about the middle of January. I am having some extra copies printed so that those who wish the set, but have not sent in their names, will be able to obtain them. The price of the set will be \$1.00 as announced. I am having the sheets punched so that those who have the Recipe Book can include these as a supplement.

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*Mary M. Atwater*

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For some weeks I have been doing a series of experiments in the "leno" weaves, and the chief impression resulting from these studies is that what I do not know about the cross-weaves would probably fill several large volumes. However I have worked out a number of delightful things that were new to me and will perhaps be new to most of our Guild members, and here they are -- together with answers to a number of questions that have been coming in recently.

First: What is the leno weave? How does it differ from other weaves? The essential quality of the cross weaves is in that the warp-threads do not run straight through from end to end of the web, but are given a twist or a cross, in pairs or in groups.

Second: What is the object of the cross? For what purposes are the cross-weaves used? The main purpose of the cross is to hold the weft firmly in place, even in a very open weave. The leno weaves are extremely useful for draperies, and also for light-weight wool fabrics, for summer scarves, summer sweaters and shawls. There are also decorative values as the lace-like fabrics produced are interesting and handsome.

Third: Are these weaves very difficult? Are they beyond the capacity of a beginner? Textile experts consider the cross-weaves the most intricate branch of weaving, and have been known to state that they are impossible for a hand-weaver. But the actual weaving of leno is extremely simple and many forms of the weave are well within the capacity of the ordinary hand-loom. A special set-up of the loom is required, however. There is nothing very difficult about making this set-up -- except the fact that there are so many ways of doing it incorrectly -- and a new weaver need not hesitate to try it. It is not a weave, however, for the type of weaver who hates to make loom adjustments and is content to weave the same pattern year after year. And it is not a weave for all looms. It works best on looms of the "jack" type, though it is not impractical on a counter-balanced loom. But do not attempt leno on a loom equipped with string heddles, or on a very small loom, or on a loom that makes only a shallow shed. The looms I have found amiably inclined toward leno are the Reed-Macomber "Add-A-Harness" loom, the Gilmore looms, the large Struete treadle loom, and the Bernat treadle loom. It is possible, though quite difficult, to weave leno on the larger Struete table looms, but I do not advise it.

How is the special set-up made? To this there are a number of answers. The Steel Heddle Manufacturing Co., 2100 Allegheny Avenue, Philadelphia, Pa., supplies a flat steel doup heddle assembly that is extensively used in the trade. These heddles do not, however, fit the ordinary hand-loom and to use them efficiently it is necessary also to get a set of four harness frames. For anyone who plans to do a great deal of leno weaving it would pay to purchase this equipment, that could be set in the loom when desired. However the expense is considerable as the heddles alone cost \$60.00 a thousand. As tied string doupes serve the purpose very well, most of us, I fancy, will prefer to "make our own."

Some people attempt to weave leno with no equipment but a set of string loops or half-heddles, commonly known as "doupes," and if a very coarse warp is used this method works after a fashion, though it seems to me sloppy and inefficient. The doupe and standard method described in a previous Bulletin is greatly to be preferred in my opinion, though an additional harness is required. For this set-up tie the doupes just long enough to hang on the bottom bar of harness 2 with the end of the loop drawn through the eye of a heddle (the standard) on harness 1. Great care must be taken to tie all the doupes exactly alike, and exactly the right length. If too long, so that the loop comes well through the eye of the

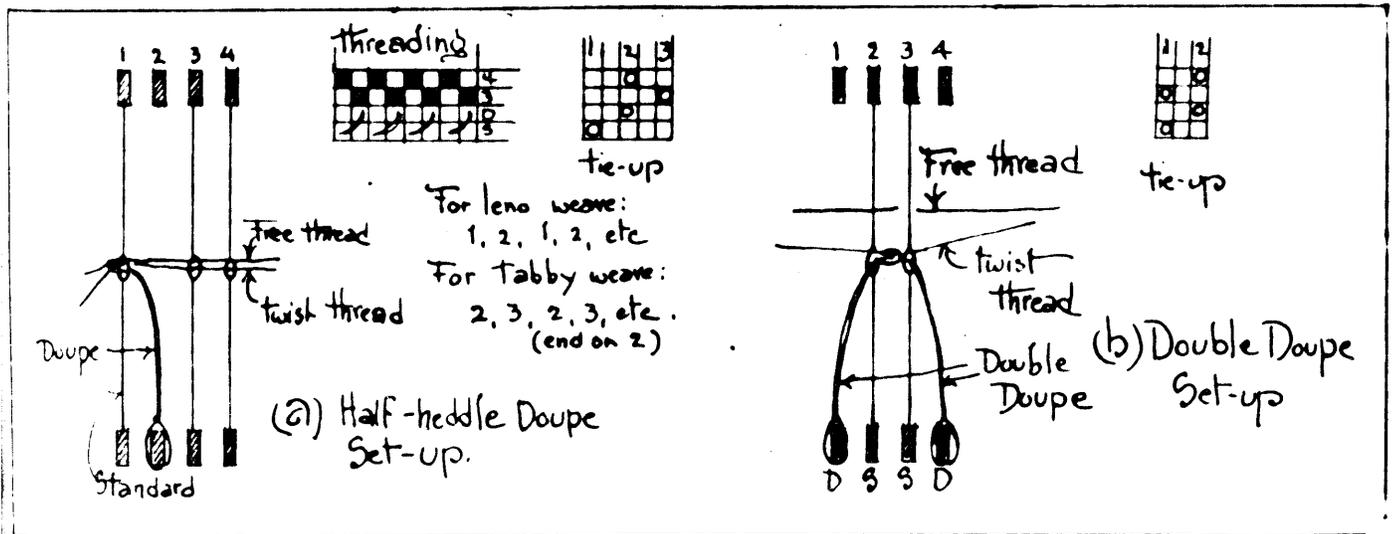
standard, the twist shed will not open well; if too short the twist thread will be drawn through the eye of the standard by the doupe and a broken warp-end will result. Tie a sample doupe on your loom and then make a guage, by setting two pegs or two large nails in a board the right distance apart, and tie the rest of the doupes over this guage. Sometimes a book of the right size may be found and the doupes may be tied around this.

To set up a four-harness loom for leno with this type of doupe, first thread the warp: 3,4,3,4, through the two back harnesses. Then beginning at the right hand side of the loom, take the loop of the first doupe, from harness 2, through the eye of a "standard" heddle on harness 1. To facilitate this process raise harness 2 a few inches. The loop should pass from right to left through the eye of the standard. Take the first warp-end, threaded on harness 3, over the loop of the doupe, to the left of the standard, and draw the second thread -- from harness 4 -- through the loop of the doupe. Thread each pair of warp-ends the same way. This is illustrated in the sketch below, at (a).

I have been experimenting with a different system of set-up that seems to me rather more efficient -- at least on looms of the "jack" type. The four-harness arrangement goes like this: Use harnesses 2 and 3 for standards, and tie a double doupe between harnesses 4 and 1. This double doupe is like the ordinary string heddle and has an eye at the center. Attach one end of this double doupe to the bottom bar on harness 4; draw it through the eye of a heddle on harness 3, then through the eye of a heddle on harness 2, and finally attach it to the bottom bar of harness 1. The eye of the doupe should come exactly between the two standards. This is illustrated below at (b). For each pair of warp-ends, draw one through the eye of the doupe, and bring the other over the doupe between the two standards. Set the standards with the one on harness 3 slightly to the left of the one on harness 2, so that the warp-ends pass between to the right of the standard on 3. In weaving, only two treadles are required, as shown. Weave 1,2,1,2 for leno. The free shed stands open when the loom is at rest, and for tabby weave this open shed without a treadle, alternately with either treadle 1 or treadle 2.

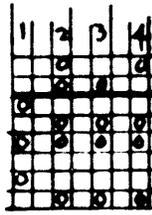
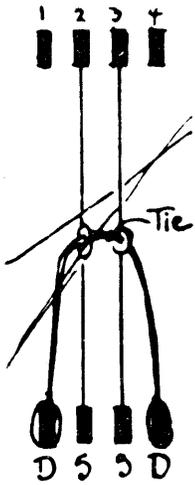
This two-thread leno is the twist commonly known as "marquissette." It is the only form of leno suitable for a four-harness loom. However, a variation in texture may be produced by making each two pairs of warp-ends twist in opposite directions. To produce this effect set the first pair of standards as described, with the one on harness 3 to the left of the one on harness 2. Set the next pair with the standard on 3 to the right of the one on 2, and bring the pair of warp-ends between the standards to the left of the one on 3. This opposite twist is quite effective if used with a coarse warp.

The double-doupe set-up appears to me to be easier to make than the half-heddle set-up, and also to operate more neatly and positively. Moreover the doupes remain in place when the warp is taken out and can be re-threaded without trouble.

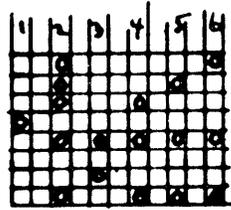


# Diagram Bulletin, February, 1941

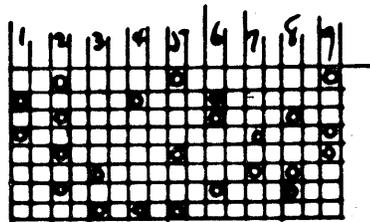
(c)



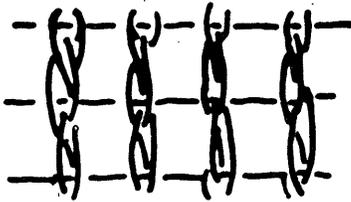
Tie-up (d)



Tie-up (e)

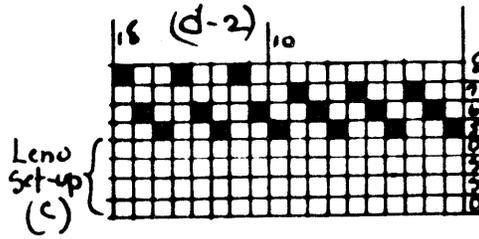


Tie-up (f)

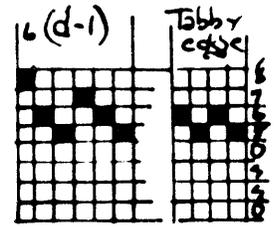


three-thread Leno

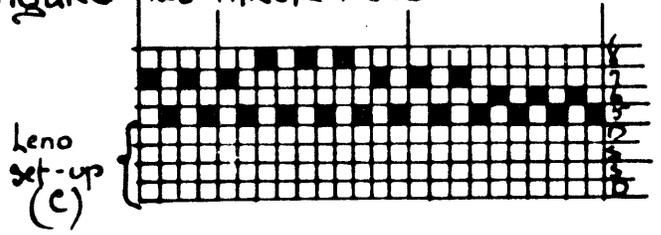
(d) Three-thread Leno



Leno Set-up (c)

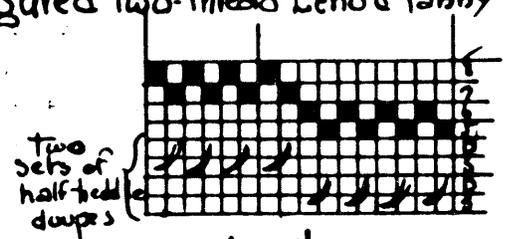


(e) Figured two-thread Leno

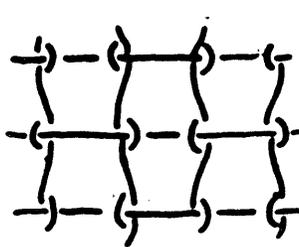


Leno Set-up (c)

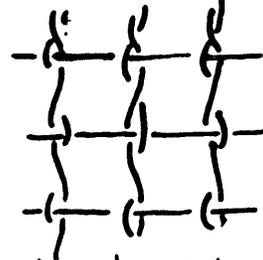
(f) Figured two-thread Leno & Tabby



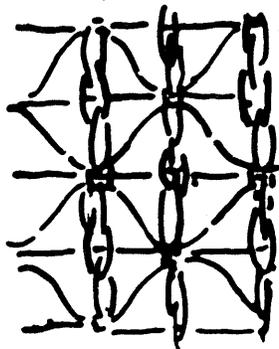
Two sets of half-heddle doups



two-thread Leno with opposite twists



two-thread Leno



Effect of (d-1)

Weave (d-1): tabby, treadles 1, 2, 1, 2, etc.

Pattern: 1, 3, 1, 4, repeat

Weave (d-2) 1, 3, 1, 3, 1, 4, 1, 4, repeat

Weave (e) tabby: 1, 2, 1, 2, etc.

Pattern: 3, 4, 3, 4, 3, 5, 3, 5, 3, 6, 3, 6, repeat

Weave (f) tabby, 1, 2, 1, 2, etc.

Leno all across, 2, 3, 2, 3, etc.

Pattern 4, 5, 4, 2, 6, 2, repeat for 1st figure

7, 8, 7, 2, 9, 2, " " 2nd "

In sleying a warp set up for leno, sley the threads that twist together through the same dent of the reed. Otherwise the twist will not pass the reed and cannot be woven. For the marquissette set-up, for instance, on a fine warp set at fifteen ends to the inch and sleyed through a fifteen dent reed, take the first pair of threads through the first dent; skip a dent; sley the second pair through the third dent, skip a dent, and so on. In the case of the three-thread leno draw the first group of three through one dent in the reed; skip two dents; sley the second group of three through the fourth dent; skip two dents, and so on. For some elaborate forms of leno a large number of threads must go through the same dent of the reed and a very coarse reed is required.

The warp used for leno should be a strong, elastic and hard-twisted material, as the threads are subjected to a special strain on the cross shed. Egyptian cotton, spun silk, and a fine hard-twisted worsted yarn such as Bernat's "Fabri", make satisfactory warps. If two warp-beams are available, the cross threads and the free threads may be warped to advantage on different beams as the take-up of the twist thread is greater than of the others. Unless one plans a very great yardage, however, this is unnecessary, provided the warp used is springy.

If it is desired to weave leno in linen the two warp-beams are a necessity, as linen has no elasticity. Also it is necessary to equip the loom with a contrivance called a "jumper," which relieves the strain on the cross-shed. This jumper is a bar set across the loom behind the heddles just below the eyes of the heddles. The free threads pass over this bar and the cross threads under it. The bar is operated by springs that draw it down two inches or so below the level of the free threads. On the cross shed this bar is released, giving the cross-threads enough slack to relieve the strain and to permit the cross-shed to open. The jumper is useful for any leno weaving, but is not absolutely necessary for strong and elastic warp materials.

A variety of weft materials may be woven over a leno warp, though for the leno and tabby pattern effects it is best to use a weft similar to the warp.

As usually woven, the simple two-thread and three-thread leno is woven to make an open fabric composed of square meshes in a lace-like effect. This is excellent for curtains, and may be varied by weaving bands of leno and bands of tabby to make a pattern of plain and openwork stripes that is highly decorative. Many ancient Peruvian fabrics have a leno foundation enriched with elaborate designs put in in a tapestry effect over this system of square meshes. These figures may be woven in with a series of small shuttles as the work progresses, but I find it easier and quicker to put them in with a needle -- while the fabric is on the loom, of course. The technique may be used for curtains and is also interesting for scarves. Initials or small decorative figures may be introduced in this manner to give individuality to these pieces.

As noted above, the two-thread leno or marquissette is the only leno suitable for the four-harness loom, but on eight harnesses a good many pattern effects can be woven in leno. A few of these are given on the diagram. The threading at (d-1) produces an interesting wavy effect, and the similar threading at (d-2) is also excellent. The three-thread leno in these patterns gives a heavier and more solid mesh than the two-thread leno and is to be preferred if one has a loom with enough harnesses. However the effect of pattern (e), in two-thread leno, is lighter and daintier and more suitable for scarves than the three-thread weave.

It will be noted, as shown on the diagram, that the set-up for the twist differs a little for these patterns from the four-harness double-doupe set up described for use on a four-harness loom. The double doupe is made with a single tie instead of with an eye at the center. This tie should come just in front of the eye in the standard on harness 3. In setting up the three-thread leno threaded as shown on the draft do not use any doupes for the plain borders. To thread the doupes, set the standard on harness 3 to the left of the one on harness 2 each time; bring the two threads on harnesses 5 and 6 between the standards and over the doupe, and draw the third thread through the doupe in front of the single tie. This same system is used for pattern (e) though of course only two threads are involved -- the first between the standards and the second through the doupe in front of the tie.

For pattern (f) two sets of doupes are required, and to put the weave on eight harnesses it is necessary to revert to the half-heddle doupe and single standard system, as indicated on the diagram. This is a very handsome weave for curtains.

A special use for the leno weave is in the making of the "Twice-Woven" rugs described in a previous Bulletin. Groups of six threads in the leno set-up, sleyed close together, with wide spaces between these groups, will serve better for the first weaving than warp-threads set for tabby, as the leno twist will hold the weft material far more firmly and more closely than the tabby weave, with no chance of pulling out when the strips are cut apart. The three-thread leno is best for this, but the two-thread twist may be used if only four harnesses are available.

Scarves in leno are particularly attractive, and as they take very little material and can be woven very rapidly, they make a specialty that might well be developed commercially with excellent profits. For these a warp either in Fabri yarn or spun silk is suitable, and a great variety of weft materials may be introduced -- "novelty" silks and worsteds, silk chenille, etc.. I have an idea, though I have not tried it out, that a silk warp set close and threaded to leno, woven in a rather coarse silk, would make handsome neckties. Perhaps some Guild member will feel like making the experiment. If so I shall be interested to learn of the result. Belts and girdles might be woven in a similar manner.

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The dates for the institute at Banff next summer have been definitely set -- August 11 - 30. The weaving classes will be held in connection with the School of Art conducted at Banff by the Department of University Extension of the University of Alberta. An attractive leaflet describing the school and the classes in painting, dramatics, sculpture, and so on, may be obtained by writing to Mr. Donald Cameron, Department of University Extension, University of Alberta, Edmonton, Alberta, Canada. Everybody has heard of the beauties of Banff and Lake Louise in the Canadian Rockies. The weaving institute in this setting should be very delightful, and as we shall have three full weeks there will not be the same rush as at shorter sessions. I plan to have several of my own looms at Banff in addition to the equipment belonging to the University. And I suggest that Guild members coming to Banff bring along any small looms or inkle looms they may have. Several of our members have already written me that they are planning their summer to include the Banff institute, and I hope we shall have a fine gathering.

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Mrs. Philip Leonard, Leonardo, N.J., requests me to say in the Bulletin that she has a second hand MacKay six-harness loom, in good condition, that she wishes to dispose of. She does not name a price. If interested please write Mrs. Leonard.

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The West Texas Woolen Mills, of Eldorado, Texas -- J.M. Christian, Manager, is now in operation. I have received from them some sample skeins of very nice fine wool yarn, and also some wool roving with which I am experimenting. Hand-spinners will find this roving a great saving of time and trouble. It is excellent material to use for padding in making the padded effect in the Finnweave, and when twisted with a fine hard-spun yarn it can be woven successfully.

Here is another address of considerable interest: Oriental yarns for pile rug-making and other purposes in a delightful line of colors, at \$2.00 a pound are supplied by D.K. Beyrmanjian, 245 Fifth Avenue, New York, N.Y.. These yarns are similar in type and quality to the Permat tapestry yarns and are far less expensive.

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May M. Atwater

# THE SHUTTLE CRAFT GUILD

## BULLETIN

*RAFT*

Basin, Montana

for March, 1941

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I have received requests from several Guild members for two special weaves, and here they are. As they are not in the least alike, those who do not care for one of them may find the other interesting.

First: I have been asked how to make double-faced rugs with a "stuffer" warp. This is a technique widely used in commercial rugs and carpetings -- some of the "cheap and nasty" kind -- and I have been prejudiced against it. However rugs of this order when made of good material can be handsome and serviceable, and in the experimental work I have been doing I have found some new ways of using the technique that seem to me to hold very amusing possibilities.

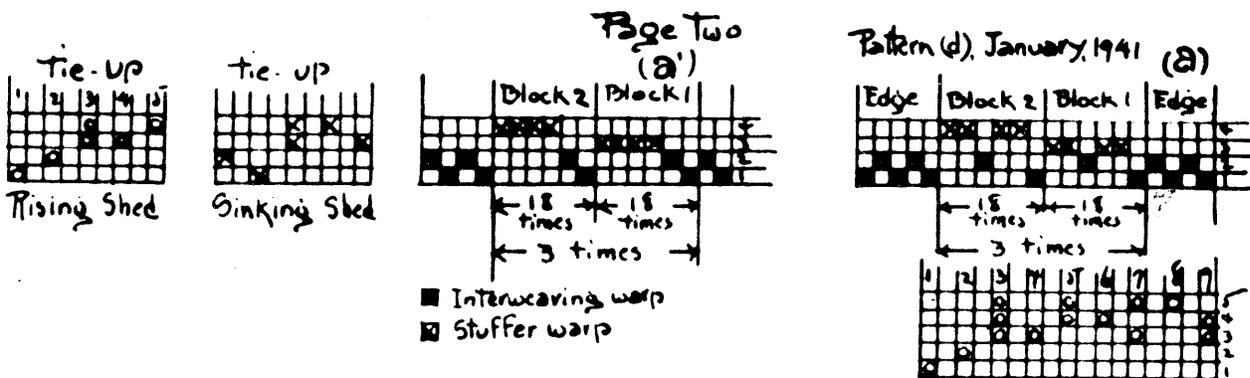
Some commercial carpetings are made with as many as six separate warps: three "stuffer" warps, an interweaving warp for the face and an interweaving warp for the backing, and a "catcher" warp to bind the two interweaving warps together. For hand woven rugs, however, one interweaving warp and one stuffer warp will, I believe, be found ample.

The two warps must be carried on separate warp-beams, as the take-up is different, and also because one warp should be held at a firmer tension than the other during weaving. The loom used should be a large, heavy loom, as hard beating is required, and if the loom is not already equipped with two warp-beams it is necessary to add the second beam. The second beam can be set in the loom below the regular beam, if there is space, but if the loom carries a large sectional beam there will not be space for a second one, and in that event the best position for the second beam is above the back-beam. A second back-beam, or "slab-stock" must also be installed, 1 1/2" to 2" above the one already in the loom. The warp from the raised beam passes under this slab-stock to the heddles. The illustration on page 89 of my Shuttle-Craft Book shows a loom equipped with a sectional warp-beam set above the slab-stock, which should make this clear and a diagram seems unnecessary. The second beam and slab-stock could no doubt be so constructed that it might be removed when not in use. No doubt Mr. E.E. Gilmore, our Guild-member loom-builder, could supply the equipment to fit any loom. His address is 1200 West Harding Way, Stockton, California.

For my experimental rug I used ordinary carpet warp -- single for the interweaving warp and doubled for the stuffer warp. Any strong, coarse material might be used for the stuffer warp, as it is completely covered and does not appear at all in the finished effect, but do not use soft or fuzzy material as it might pull apart and ruin the rug. I used a 15-dent reed, sleying the interweaving warp one thread to the dent and the stuffer warp two to the dent -- 15 single ends and 15 double ends to each two inches in the reed. This was satisfactory, but for a large rug I advise a 12-dent reed sleyed in a similar manner, with six single ends of weaving warp and six double ends of stuffer warp to one inch. The rug for which a draft is given on page two is figured for a 12-dent reed at this setting.

Any summer-and-winter weave pattern may be used for this weave, each unit of the weave consisting of two single ends of interweaving warp threaded on harnesses 1 and 2, and two double ends of stuffer warp threaded on a pattern harness. The threading may be in the usual order for the summer-and-winter weave, as shown on draft (a), or as shown on draft (a'). The first method produces, I think, the handsomer texture, but the second method is easier to beat together. As in other summer-and-winter weave effects, two-block patterns may be woven on four harnesses and for the more elaborate patterns additional harnesses are required. The method of weaving is entirely different from the summer and winter weave and no ordinary tabby is used. The warp material should be rug-yarn, chenille, or finely cut rags, in two or more colors. As a complete tie-up for the weave on four harnesses requires more than six treadles, the tie-ups given require the use of both feet together in making the sheds.

To make a rug in this technique after the Indian pattern at (d) in the Bulletin for January, 1941, thread as at (a) or (a') herewith. This is figured for



a width of 36", but can, of course, be made wider or narrower if desired. Suppose we wish to weave the plain part of the rug in white on one side and tan or grey on the reverse. Treadle to raise harness 1, alone (treadle 1 on the rising shed tie-up, treadles 1-3 on the other) Weave a shot of white. Now treadle to raise 1 and all the pattern harnesses -- in this case 3 and 4, (treadles 1-3 rising or treadle 1, alone, sinking) Weave this shed in tan or grey. Of course both sides may be woven in the same color if preferred. Beat hard. The second shot will slide directly under the first. Now treadle to raise harness 2 alone, then harness 2 and the pattern harnesses, in the same manner just described, and weave another pair of shots. Repeat these four shots as desired for the plain part of the rug. Treadle in the same manner for the stripes, simply changing the color of the weft.

For the pattern, suppose we wish to use black and red. Treadle 1-4 black; 1-8 red; 2-4 black; 2-8 red, and repeat. For the second block treadle 1-5 black; 1-4 red; 2-5 black; 2-4 red, and repeat. This treadling is the same for either tie-up.

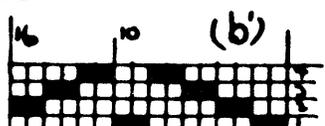
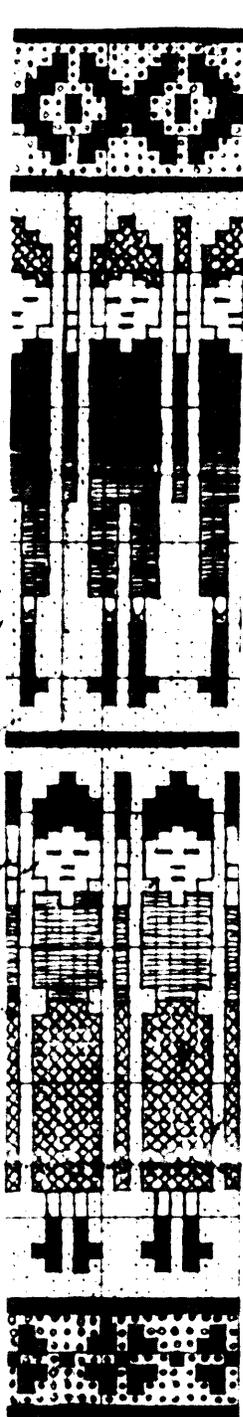
Any two-block pattern may be woven in the same manner on four harnesses. For instance rugs with a center in one color and a border all around in a second color. This effect, however, is so similar to some of the poor commercial rugs that it is perhaps better to avoid it. Or any of the patterns on page 218 of the Shuttle-Craft Book.

A rising shed tie-up is also given above for the two three-block patterns in the January Bulletin. The manner of treadling is similar to that described: 1, alone followed by 1-3 in the opposite color for a plain effect all across, with 2 alone and 2-3 for the second pair of shots. For the first block: 1-4; 1-5; 2-4; 2-5 and repeat. For the second block: 1-6; 1-7; 2-6; 2-7 and repeat. For the third block: 1-8; 1-9; 2-8; 2-9 and repeat. Exactly the same system may be used for patterns on eight or ten harnesses.

In experimenting with this weave I discovered that an effect similar to the Finnweave, and in any Finnweave pattern, can be woven very easily on this set-up, and of course this can be done as readily on four harnesses as on a more elaborate set-up. I made a border of white ducks on a green ground using the duck-figure at the bottom of Plate 3 of the new set of Finnweave patterns. The effect was very spirited and amusing. This seems to me a highly attractive way to weave bath-mats, nursery rugs, and such things. For this technique consider each unit of the weave, or two double ends of stuffer warp, as a unit of the pattern. Raise all the stuffer warp -- treadle 3, rising or treadles 1-2 sinking. Insert a pick-up stick under the groups of threads corresponding to the desired figure -- for the first line of the duck skip ten groups and pick up nine. Make this pick-up in front of the reed. Now treadle to raise harness 1, simply allowing the pick-up stick to ride the top of the shed. Weave a shot of the background color. Raise the stuffer warp and pick up all groups of threads corresponding to the background. Treadle on 1 again and weave the other color. Repeat these pick-ups using treadle or treadles to raise harness 2. These four shots weave one unit of the weave. Nothing could be simpler to do, and as the material is coarse the work goes rapidly. The figures, of course, will be the same on both sides of the fabric but reversed in color. If you weave white ducks on a green ground on one side the ducks will be green on a white ground on the reverse. The pattern used may be as elaborate as one chooses. In the 36" rug as given there are 108 pattern units.

As far as I know, this is something entirely new, and will provide us with an attractive novelty -- fun to do for ourselves, and offering, I believe, excellent sales-possibilities for those who weave chiefly for profit.

Page three



Rising Shed

Sinking Shed

■ Black ■ Brown □ Tan ■ Red ■ Blue or Green □ White or Ecru

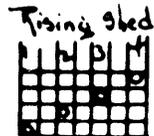
The second request was for an odd little weave from Norway that shows rows of quaint little Humanesque figures. I saw a piece of this weaving in Minneapolis last spring. The threading is the ordinary "Bird-Eye" or "Rosengang" threading as given at (b) above, done over a coarse warp set far apart in the reed so that the warp is completely covered by the weft. A #8 perle set at 11 or 12 ends to the inch, may be woven in a light-weight Shetland or similar yarn. But in my experiments I found that I got a better effect with a finer warp threaded as at (b') above: 1,1,2,2,3,3, and so on. A #10 perle set at 22 or 24 ends to the inch would serve. But thread each thread through a separate heddle and sley through a 22-dent or 24-dent reed, one end to the dent.

To weave, treadle: 1,2,3,4, and repeat, for the entire piece. The figures are produced by varying the colors. Considering each series of four weft-shots as a single "pass" in this weave, I found that with the material and setting I was using two passes were required for each square of the pattern. With a finer weft three or four passes might be required.

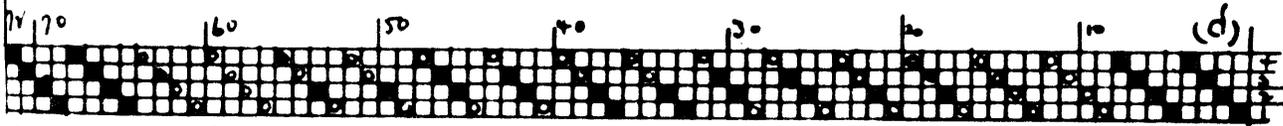
Beginning with the small border at the bottom of the design, weave two passes with all shots in black, followed by two passes with all shots in brown. For the next two passes weave: 1,brown; 2,black; 3,brown; 4,brown. Next: 1,brown; 2,black; 3,black; 4,brown,(twice). Center: 1,black; 2,3,4,brown (twice). Then again, 1,brown; 2,3,black; 4,brown,(twice). 1,brown; 2,black; 3,4,brown;(twice.) Two passes in brown; two passes in black.

For the girls's figures, beginning at the feet: Four passes, all shots in tan. Then: 1,2,3,tan; 4,black (twice); 1,2,tan; 3,4,black (twice); 1,2,3,tan; 4,black (four times); 1,2,3,tan; 4,white or ecru (four times); and for the skirt: 1,red; 2,tan; 3,4,red, -- repeat for 26 passes. And so on. It is easy to follow the design from the drawing.

This weave produces a heavy, tapestry-like fabric with long skips on the wrong side. It is suitable for a chair-seat or for a heavy pouch. I made such a pouch, using for handles and an inset at the sides a narrow strip woven as a warp-face fabric, using one of the small borders as a pattern. The draft for this is below, at (d). Use for warp the same material used for weft in the main piece, and set the warp very close through a very coarse reed. I used a 6-dent reed with 16 warp-ends to the dent. Weave with material like the main warp and treadle as shown.



Get warp very close, and treadle: 1,2,3,4, 1,1,3,2, Repeat. Weaves Border 1, in warp-face



■ Black ■ Brown or Tan

Any of the other figures may be set up to weave warp-face in a similar manner, and rows of men or rows of women might be amusing for belts. Take the weft "passes" for warp, of course, and thread 1,2,3,4. Weave in a plain material, treadling 1,2,3,4, 1,4,3,2, and repeat, all the way. For this type of weaving I find the little Norwegian type of belt-shuttle invaluable.

It occurred to me that there was no reason these odd little figures could not be woven in the technique of the cotton towelling -- whether Scandinavian or Italian we have never been able to decide -- described in a Bulletin of last spring. The threading for this is the simple "Diamond" threading as given herewith at (c). Treadle exactly as for the Norwegian technique just described, but tie the treadles as for the pattern sheds of overshot weaving. Woven in this manner the fabric is lighter and softer than in the Norwegian weaving, and the wrong side has the same texture as the right side, and is perfectly slightly, though of course the figures are not exactly as on the right side. I believe borders of little women at one end and little men for the other end of large towels would be unusual and entertaining. Also this fabric is in some ways better for bags, runners and so on than the heavy, rather stiff fabric produced by the Norwegian weave.

This is something of an innovation. I have never seen these figures woven in this manner, except on my own experimental piece. But it works, and should prove a useful trick. Set the warp far enough apart, of course, so that it will be covered by the weft, and weave in soft cottons, wool or soft silks. I wove my piece on a linen warp, about the weight of a #10 perle cotton, set at 22 ends to the inch. The weft I used was a crepe silk, with parts of the pattern in wool.

I have an interesting letter from Mrs. James Barber, of Bellingham, Washington, enclosing samples of her dyeing with dahlias, privet berries, tea, lichens and golden-red. She writes: "There is a booklet called 'Navajo Native Dyes and their Use,' by Stella Young and Nonobah Byron, Navajos, which is #2 of the Indian Handicrafts series published by the Department of Indian Affairs. Although it is put out for use in the Indian schools, it says on the back cover that it is available for purchase at the Phoenix Indian School, Phoenix, Arizona, and at the Chilocca Agricultural School, Chilocca, Oklahoma, where it was published in 1940. I do not know the price, but I fancy it is not much. It is a booklet about 9" X 12", containing seventy-five pages. It has a chapter on preparing the wool, one on natural mordants . . . and excellent recipes. Besides the recipes it has a botanical drawing of each plant and tells the part of the country where it is available." I feel sure that any of our Guild members who enjoy dyeing will be interested to hear of this booklet and will wish to send for it.

For the information of new members, woven samples of the weaves and patterns given each month in the Bulletin may be obtained from Mrs. Maybelle Gano, 2016 Castillo Street, Santa Barbara, California. Mrs. Gano also supplies samples of many of the patterns in the Recipe Book and other publications. The St. Louis Weavers' Guild has scheduled an exhibit of Mrs. Gano's samples for one of their spring meetings. It is often a great help, when attempting an unfamiliar technique, to have a sample that shows the desired texture and effect, and many of our members are finding this sample service very useful.

Here is an address for the metallic celophane material some people have been inquiring about: Jack Singer, 30 West 37th Street, New York, N.Y.. The address was sent in from Honolulu, by our member, Mrs. Edward L. Caum. The fad for this material continues. I do not admire it, myself, but if one feels the need of a metallic thread the celophane is better to use than ordinary tinsel, as it does not tarnish and is washable. Mrs. Caum says the price is \$1.80 for a 6-oz spool, and \$2.00 per pound in five-pound lots. The material is supplied in these widths: 1/50", 1/32", 1/16", 1/8", folded.

May M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



Basin, Mont.

for  
April, 1941

It sometimes appears to me that more people get into more varied and assorted kinds of trouble in the making of fabrics for clothing than in any other branch of our art. And this includes experienced weavers in other kinds of weaving as well as beginners.

Perhaps a "case history" from my files may help clear up a few points: Not long ago one of my correspondents wrote that she planned to weave a tweed fabric for a suit, using a homespun warp, set at 24 ends to the inch and a weft yarn of which she enclosed a sample. This material was a "fancy" worsted yarn composed of a rather coarse strand of fluffy untwisted material wound with a fine hard-twisted thread that may have been cotton or rayon. I did not test it. She said the warp appeared to be slightly oily, and she wished to know if it would be necessary to wash the finished fabric or whether the "usual steaming and pressing" would suffice. I replied at once, hoping to avert a tragedy, but I was too late. My correspondent wrote that she had found it impossible to "pull the warp through" in warping, so had discarded it and was getting a different warp.

Now just what "was wrong with this picture?" A number of things. In the first place, the material. The homespun warp was correct for a tweed fabric, but the weft very definitely was not. "Tweed" is a fabric intended for hard wear and rough usage; it is composed of wool (not worsted) yarns for both warp and weft and the warp and weft should be the same or similar in grist, with the same number of weft shots to the inch as there are warp-ends to the inch in the setting. Also, it is a twilled fabric, usually woven in plain 2-2 twill or one of its variations -- "herringbone" or "dornik." Though she did not say so, I fancy my correspondent intended to make her fabric in plain weave. Moreover the weft she had selected was not only all wrong for a tweed, but not a good weft for any kind of suiting. The soft untwisted part of the yarn would rough up very quickly in use and would come away, leaving only the fine hard-twisted strand. Also it would stretch and pull, so that a garment made of it would soon be a shapeless bag, no matter how expertly tailored.

It is quite true that the word "tweed" is loosely used by a good many people for any kind of rough fabric; but this is confusing, so it seems desirable to clear up this point. If you use worsted instead of wool yarns, even though you weave in a twill, you will not have a "tweed." And if you use wool yarns and weave in plain weave you will not have a "tweed" either -- you will have a fabric correctly called "hop-sacking." But there appears to be a prejudice against this name for some reason. At one of our institutes last summer one of the weavers exclaimed "Oh, I'm sure my husband wouldn't like that at all! I just wove him a suit and he wouldn't like to have it called 'hop-sacking.'" Mr. Millan, who makes a business of these wool fabrics, calls the plain weave material "homespun." This is not strictly correct as the name homespun belongs to the yarn and not to the fabric, but this use of the name would probably not cause much confusion so perhaps this is allowable.

Next let us consider the setting of the warp proposed by our "clinical example." A medium weight homespun warp is usually set at 15 or 16 ends to the inch, and I believe Mr. Millan recommends 16 ends to the inch for the lighter weight yarn he supplies for tweeds. I do not know of a wool yarn in general use fine enough for a setting of 24 to the inch. So it appears probable that this close setting was a mistake. And what about her remark that it proved "impossible to pull the warp through?" This seems to indicate that the method of warping she used was the method involving slewing a chained warp from front to back of the loom, drawing in through the heddles, and finally beaming. This is a method that, -- though tedious and troublesome -- works well enough for a smooth hard-twisted cotton warp such as perle cotton, but is entirely too severe for warping wool.

When I went to the Chicago Art Academy to learn to draw, our instructor amused the class by telling us that the important thing to keep in mind was: NOT TO SCREW UP THE PAPER. We soon discovered that this was not humor but very practical truth. If you groove your paper with hard lines, and then ruin the surface by erasing the lines, it becomes impossible to make a good drawing on that sheet of paper, no matter how inspired you may become. In the same way, if you begin a piece of weaving by ruining the warp you can't make a nice fabric on that warp no matter how carefully you weave. This is fundamental.

So perhaps this is a good place to discuss methods of warping, as for wool warps. I am a strong advocate of the sectional method of warping, for a number of reasons: it saves an immense amount of time and trouble; it does not injure the warp; the warping can be done single handed; a long warp can be put on the beam as easily as a short warp; fuzzy and kinky materials can be warped by this process without difficulty; it facilitates drawing in and slewing, as these processes are much easier when performed from back to front of the loom than from front to back.

I know very well that many good weavers object strongly to sectional warping -- they grow angry and all "hot and bothered" over the matter. I do not know why this is so and have come to accept it as just "one of those things." Possibly there are people who enjoy spending hours at the warping board and other hours -- with the assistance of as many helpers as can be recruited -- in the rather brutal "pulling through" process, and of course if they enjoy it there is no reason they should deprive themselves of this pleasure -- provided the warp when beamed is smooth and even and in shape to weave off correctly. But for a homespun warp, even if generously treated with warp-dressing, this method of warping is probably the worst possible way to do the job.

For a very short warp it is a bit of extra work to prepare the warp for sectional warping, however, and for such a warp the warping-board may come into emergency use. But there are methods of beaming a chained warp that do not tear it to pieces. The easiest and quickest method is with the use of a raddle. The raddle is like a coarse reed with a removable top-member, or like a comb with wire teeth set in a solid wooden base. To beam the warp clamp the raddle to the back-beam or "slab-stock" of the loom and arrange the warp between the teeth. Put a stick through the uncut loops at the end of the warp and attach this stick to the stick or cords from the warp-beam. Now put a stick through the uncut loops at the other end of the warp and another stick through the lease. Walk off from the loom till the warp is stretched out full length, held on the sticks. Clamp down the top-member of the raddle, and have some helper turn the beam as you walk slowly toward the loom holding the warp at the desired tension over the sticks. If the warp has been carefully made on the board, with no loose threads or inequalities, this process of beaming takes practically no time at all and works perfectly. Of course, as in any warp beamed to a plain beam, wind in sticks or strips of paper with the warp all the way.

At a pinch, a coarse reed may be used instead of a raddle, though this takes more time. Draw the loops of warp through the reed from front to back of the loom. Put a stick through the loops, take the warp over the back-beam and attach the stick to the warp-beam. (The harnesses must first be taken out of the loom, of course.) Now stretch the warp out in front of the loom and beam as above. The warp must come out of the reed, naturally, before it can be threaded through the heddles, so this process means slewing twice -- a job made unnecessary by the use of a raddle.

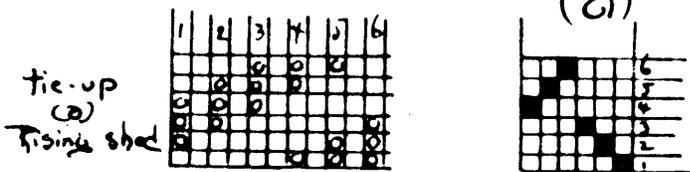
Even a fairly long warp may be beamed this way without too much grief, but for a long warp it is desirable to make a lease at each end and put in lease sticks -- either behind the raddle or in front of the reed, as the case may be -- to keep the warp in order. For a short warp of four or five yards this is not necessary.

A short warp is always wasteful, both in time and material. The wastage is the same for a five-yard warp as for a twenty-five yard length, of course, and the time of drawing in and slewing is the same. So that for practical considerations, it is always best to put on a fairly long warp. And for this it certainly pays to use the sectional method of warping.

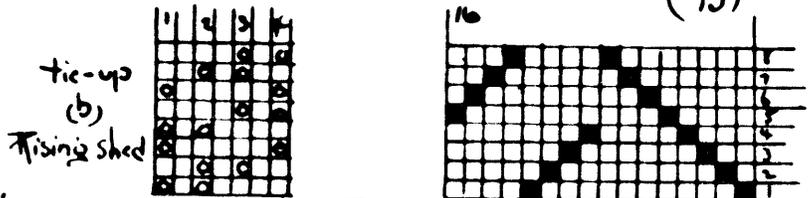
# Page Three

and (b) are patterns of the "Dornik" type

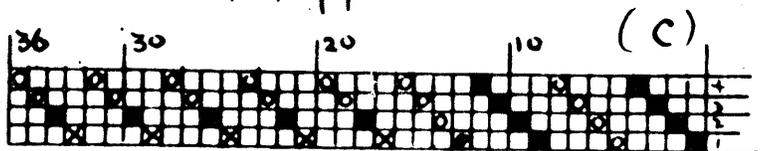
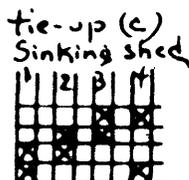
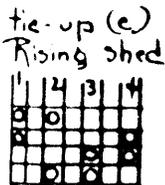
(a) is a "sporty" plaid effect from a sample of "Harris" tweed.



(a) Weave: 1, 2, 3, 4, 5, 6,  $\uparrow$  repeat



(b) Weave: 1, 2, 3, 4,  $\uparrow$  repeat



Weave: 1, 2, 3, 4 (or 4, 3, 2, 1)

- 4 shots Tan
- 4 " white
- 4 " Tan
- 4 " white
- 2 " blue
- 2 " white } 5 times

- Light brown or dark tan
- white (natural)
- ▣ Colonial Blue

Above are three new patterns for tweeds that will be found attractive and useful; (a) and (b) are from samples sent in by Mr. Roger Millen, and (c) is from a sample of authentic "Harris" from Scotland. For (a) and (b) warp in one color and weave in another -- using, of course, the same yarn, and with the same number of weft-shots to the inch as there are warp-ends to the inch in the setting.

For a "finished" width of 32", which appears to be the width recommended by most tailors, have the warp 33" or 33½" wide in the reed to allow for shrinkage, and allow generously for shrinkage in weaving. The exact amount of shrinkage depends on the yarn used and also on the weave and the setting. If sleyed far apart and beaten lightly the fabric will shrink more than if the warp is set close and the weft is solidly beaten up. Also if the weave is one of the "fancy" eight-harness twills with skips of more than two threads the shrinkage will be greater than for a fabric in 2-2 twill. As an example, (b) will shrink more than either (a) or (c). The method of finishing the woven fabric will also affect the shrinkage. A tweed fabric should always be washed -- and washed thoroughly -- when taken from the loom. This permits it to shrink and also lightly felts the wools together to produce a good texture and a firm fabric. The "usual steaming and pressing" mentioned by our clinical example is definitely not correct. For further details on this I suggest sending to Mr. Roger Millen, 52½ East Pitt Street, Bedford, P.A., for his leaflet on the making of tweeds. Mr. Millen makes a business of hand-woven tweeds and "homespun" fabrics and also supplies an excellent yarn he has specially spun for his own work. His leaflet, I understand, is supplied free with yarn orders, and may also be purchased for 25¢ if desired.

A simple washing provides all the finish required by hand-woven tweeds and is also a suitable method of finishing a worsted fabric. But how to finish a fabric composed of different kinds of yarn, it is impossible to say. So in planning a fabric for clothing, do not combine several kinds of material. This is really very important. If you warp in worsted, weave with the same or a similar yarn.

If you warp in wool, weave with the same wool yarn. If you have set your heart on combining wool, worsted, and perhaps a bit of cotton and rayon, be prepared to make a number of samples and experiment exhaustively before setting up the loom for a large project. It must be borne in mind that a fabric for clothing must not only look attractive in the piece, it must also hold its shape when cut and fitted, and it must be capable of withstanding reasonable wear. You do not want a garment that becomes baggy at the knees, that puckers at the seams, or that stretches in one direction and shrinks in the other, or one that comes off in little balls of fuzz after a little wear, -- no matter how pretty the fabric may look when taken off the loom. And don't spoil your chances of making a nice fabric by ruining the warp before you even begin to weave.

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In going over the March Bulletin I find that two rather important notes were somehow omitted in the directions for the rug-making with a stuffer warp: In weaving this type of rug, keep the stuffer warp stretched tight and the interweaving warp at a much lighter tension. Also, as the take-up is all in the interweaving warp, allow an extra yard for each four yards of stuffer warp in warping. That is, if you warp eight yards of stuffer warp, put ten yards of interweaving warp on the second warp-beam.

I am really very enthusiastic over the pick-up method of weaving patterns in this technique, as described last month. I have just finished a fairly large rug done in rows and rows of odd Peruvian animals and birds, and am delighted with the result. There are a number of patterns in the Recipe Book that would lend themselves well to this technique: Series III No. 23 for a small rug, Series I No 20 for a room in Spanish style, Series VII No. 11 for the weaving room, and so on. Any Finnweave pattern, of course, may be used. Series V No. 11 would make a handsome rug and could be woven without the pick-up on eight harnesses -- or on four harnesses by the pick-up method. The patterns on the special "Step Pattern" sheet could also be used in a similar manner. Here is something that is unusual, practical and handsome, and also quite rapid. I hope Guild members interested in rug-making will try it, as I believe they will find it fun to do and of a good deal of special interest.

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I am returning to my camp in the hills at Basin, so hereafter kindly address all mail to Basin, Montana.

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For the benefit of those who may not happen to have the equipment for sectional warping: Mr. F.E.Gilmore, 1200 West Harding Way, Stockton, California, can supply sectional warp-beams to fit any large loom, and can also supply the necessary "creel" or spool-rack and the desirable little warp-tensioner designed by Mr. A.B.Gardner.

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May M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

Basin, Mont.



for

May, 1941

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The weaves and patterns given recently in the Bulletin have been chiefly coarse weaves and bold patterns, so to keep the balance even, for this month here is a weave for those who like fine weaving and dainty effects.

Quilted weaving has been mentioned in the Bulletin before, but given only for weaving on eight or ten harnesses. In recent experiments with this weave I have found an easy and pleasant way to do the thing on four harnesses, so it seems worth while to bring this useful and attractive weave again to the notice of Guild members.

Of course in a way this might be considered a weave more appropriate for winter than for early summer. However there are interesting ways to use it for summer purposes, and also winter will probably come again for most of us. Done in cotton, and heavily padded, this weave will be nice for a pad for the baby to play on. Small pieces woven in this manner will make nice pot-holders -- always useful things to have about -- and for those of us English enough to use a tea-cosy here is an excellent way to make one. Of course the weave is chiefly useful for bed-quilts, for quilted bed-jackets, baby's coats and hoods, dressing gowns for cold weather, and so on. But even in summer a silk or cotton bed-spread, lightly quilted, is a pleasant and handsome thing.

The weave is a form of double weaving, two separate fabrics being woven. Padding is inserted between these two fabrics and the fabrics are "sewed" or caught together at intervals by the weave. It is not a weave for coarse or harsh materials, but fine cottons, silks or fine worsted yarns should be used. Please note this provision. It will make me very unhappy if somebody writes: "I have set up my loom for the quilted weave in the May Bulletin using heavy linen floss for warp and weft. Somehow I don't seem to be getting an attractive effect." So please do not try this weave in linen at all, or in coarse materials of any kind.

For my experiments in this weave I used Bernat's "Fabri" yarn in two colors, setting the warp at 48 ends to the inch, and also at 30 ends to the inch. The former setting makes a closer and heavier fabric, of course than the other, and for robes, hoods and so on I prefer the 30 to the inch setting. For a bed-quilt the closer setting would be better. Spun silk -- the usual fine kind -- should be set about 60 to the inch, and the setting for 20/2 cotton or #20 perle cotton the same. Bernat's Perugian cotton might be set 48 to the inch. I made my pieces in two colors -- one for the upper fabric and one for the lower fabric -- but of course all the warp may be in the same color if one prefers. One might if one wished use two different materials for the two fabrics, as silk for one side and worsted for the other -- fine spun silk and a fine yarn such as Bernat's "Afghan" yarn, for instance. However this involves problems of shrinkage and take-up and should not be attempted without the use of two warp-beams. It is safer, and usually more satisfactory, to use the same material throughout.

The weft, of course, should be the same material as the warp, for the two fabrics are plain tabby fabrics.

Draft (a) on the diagram produces diagonal lines of quilting, twill-fashion, and draft (b) produces a small diamond figure. By repeating the first 20 threads three or more times, and then the last twenty threads the same number of times one can produce a "herring-bone" or a large diamond effect.

These drafts show clearly enough the system used in producing this weave. A wide variety of simple figures may be designed in a similar manner, so these should be considered simply as "key" or "type" patterns that may be varied as desired.

The draft at (d) indicates how the dots of the quilting may be set further apart if desired. For a heavily padded piece this is better than the close "sewing" of the fabrics. The dots may be set much further apart than on the draft as shown simply by repeating the 1,2,3,4 threading as desired between the quilting harnesses. As: 1,2,3,4,1,2,3,4,1,2,3,4,1,2,3,5, and so on.

And for ten harnesses the pattern may simply be carried two harnesses higher. This seems perfectly clear so I do not feel it necessary to write the drafts.

It will be noted on the tie-up that treadles 1 and 2 weave the upper fabric in plain weave, and treadles 8 and 9 weave the under fabric. Treadles 3,4,5,6 and 7 make the quilting sheds, and treadle 10 separates the two fabrics for the introduction of the padding. The same tie-up may be used for (a), (b) and (c) except that for (c) treadle 3 should not be used unless it is desired to make a close row of dots all across the fabric.

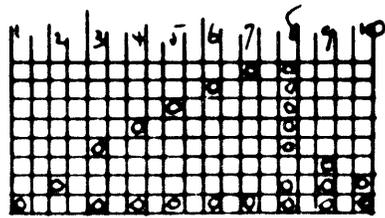
For a heavily padded piece the padding may be introduced in wads with the fingers but this may tend to lumpiness and it is better to weave a strand of padding material with a shuttle. The material I used in my experiments -- an ideal material for the purpose -- was wool "roving" obtained from the West Texas Woolen Mills at Eldorado, Texas. This address was given in the Bulletin some months ago, and several Guild members have written me that they had difficulty in obtaining material or getting answers to letters. This mill is a new project and is just getting into full operation so there have been delays. However I have taken up the matter with them and they tell me that in future they will be prompt in filling orders. This roving is a strand of soft, untwisted wool and comes in several weights. Of course several strands can be used together if one wishes heavy padding. This makes a much softer and nicer padding than any twisted yarn, though one could use Germantown or Bernat's "wooley-down" or any other soft, fluffy yarn if one preferred. The regular yarns, however, are far more expensive and really not as satisfactory for padding, so it seems sensible to use the roving.

The treadeling for the eight-harness patterns is given on the diagram.

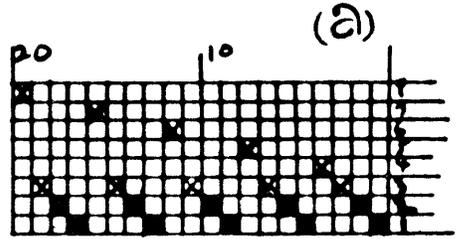
For the weave on four harnesses it is necessary to resort to our old friend the pick-up stick. But it is a very simple form of pick-up and quite rapid, with the advantage that one is not restricted to rather small and formal figures, but may produce scrolls, stars, rosettes, or any figure reducible to dots. The quilting patterns of ancient quilts can be followed very nicely, though for an elaborate pattern it would be wise to dot off the figure on cross-section paper as a guide.

The manner of weaving is the same as for the eight-harness patterns. Treadles 1 and 2 weave the upper fabric; treadles 3 and 4 weave the under fabric. Treadle 5 is the quilting shed, and treadle six is for the padding. After weaving plain weave on the first four treadles for a heading, make the first pick-up this way: treadle on 5 and -- for pattern (a) -- take up on the stick, in front of the reed, thread 1; skip four and take up the sixth thread; skip four, and so on. Now treadle on 1, permitting the stick to ride the top of the shed. Weave. Take out the stick and treadle 2, weave. Weave 3 and 4 for the under fabric. Weave 1 and 2 for the upper fabric, and 3 and 4 for the under fabric. Treadle 6 and insert the padding. Make the second pick-up on treadle 5, taking up the second thread, skip four and take up the seventh, and so all across. Treadle 1 and weave, as before, and so on. Put in the padding each time before making the next pick-up.

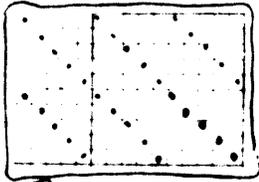
Drafts for Quilted weaving



Rising shed

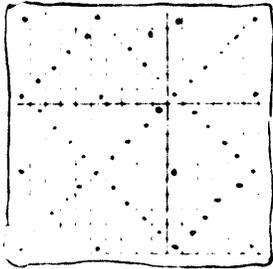
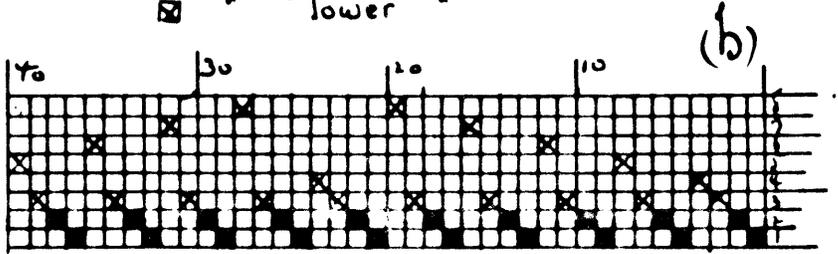


■ Color of upper fabric  
⊠ " " lower



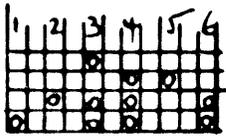
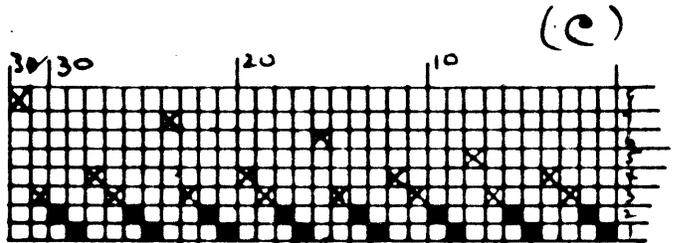
Pattern (a)

tie-up as for (a)

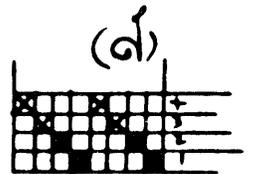
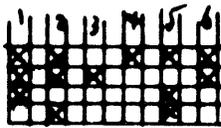


Pattern (b)

tie-up as for (a)



tie-up  
↓ sinking shed  
↑ rising shed



Weave: Plain, treadle 1, treadle 2, color ■ (top fabric), treadle 8, treadle 9, color ⊠ (bottom)

Pattern: treadles 3, 2, ■; treadles 8, 9, ⊠. 1, 2, ■; 8, 9, ⊠

treadle 10, weave padding

treadles 4, 2, ■; treadles 8, 9, ⊠. 1, 2, ■; 8, 9, ⊠

treadle 10, weave padding

treadles 5, 2, ■; treadles 8, 9, ⊠. 1, 2, ■; 8, 9, ⊠

treadle 10, weave padding

treadles 6, 2, ■; treadles 8, 9, ⊠. 1, 2, ■; 8, 9, ⊠

treadle 10, weave padding

treadles 7, 2, ■; treadles 8, 9, ⊠. 1, 2, ■; 8, 9, ⊠

treadle 10, weave padding

Repeat

For pattern (b) weave as above, then

treadles 3, 2, ■; treadles 8, 9, ⊠; 1, 2, ■; 8, 9, ⊠

then repeat the complete treadling in reverse.

I have been continuing my experiments with rug-weaving, as it seems to me that in a general way we make rugs less well than anything else. Some of us are even making rugs in the overshot weave, and even using cotton "roving" or "rug-filler" for weft. I want to say again that in my opinion the worst possible weave for rugs is the overshot weave, and the poorest weft material is cotton roving. It is quite true that I made rugs like this myself in the early days of the hand-weaving revival. Two of them are even shown in my Shuttle-Craft Book, which I deeply regret. These rugs are soft and heavy and quite attractive in appearance when first made. But alas! How they do look after a little wear and a few washings. I do not think them worth making.

Rugs done in the Ghiordes Knot and in the Soumak technique are handsome and durable, but they require a great deal of time and a great deal of expensive material. These are excellent techniques for very handsome and valuable rugs, and when we want to make that kind of rug those are two of the best ways to make them. The summer and winter weave, when done in wool rug-yarn or cotton chenille, makes an excellent rug, though somewhat light in weight. The same is true of the crackle weave, which resembles summer and winter weave in structure. But the technique described in the March Bulletin seems to me better than either of these weaves as it produces a much heavier fabric and offers the greatest possible freedom in pattern. There is a way of making these two-warp rugs that permits a design in several colors on one side and a plain or striped effect on the other. I shall have notes on that for the Bulletin before long. I am very enthusiastic over this two-warp technique for rugs. The fabric produced is as firm as Soumak and of course can be woven much more rapidly, and as the thickness of the rug is largely in the "stuffer" warp, which does not appear at all on the surface and can be an inexpensive material, the cost is less. The technique lends itself to cotton chenille, and even to rags, though wool rug-yarns make the nicest rugs of course.

Recently I have come upon a cotton rug-yarn made by the Lily Mills, Shelby, N.C., that seems to me to have possibilities for the cheaper rugs. It is similar to the familiar and odious cotton roving but is not nearly as thick and so lends itself better to the better techniques. I tried a rug in this material on draft (c) from the March Bulletin, with very agreeable results. For warp I used #5 perle cotton, threading four threads to the heddle. I set the warp at 20 ends to the inch, so this manner of threading of course has the same effect as a very coarse warp set at 5 to the inch. Ordinary carpet warp set at 15 to the inch and threaded with three threads to the heddle would be satisfactory, or perle cotton #3, set at 10 to the inch and threaded double. I wove exactly as described in the March Bulletin, and also as described for the cotton twelling in this weave, in an earlier Bulletin. The effect is very lively and attractive, a series of 1,2,3,4 stripes then a narrow pattern border; some more stripes, a row of the quaint little human figures; some more stripes and borders for the center, and other row of human figures headed the other way, stripes, another narrow border, and stripes to match the beginning. An entertaining rug for the bath-room or for a child's room. I tried the weave using the Lily material for the background and cotton chenille for the figures. This was nice, too; and so was the weave done all in chenille. It also works well in light-weight rug yarn. Bernat's "Smyrna" is too coarse. I did not try it in rags, though this would probably work well if the rags were cut fine enough. This is really plenty of fun. And you would laugh if I told you how often I re-threaded and re-aleyed to make it come right! Note that this weave must be very firmly beaten up, so that the warp is completely covered. The warp should be stretched tighter than usual for other weaves, and much care must be exercised not to permit it to narrow in. Otherwise it is as simple and easy as possible. So here is another simple and interesting way to make really nice rugs.

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I have for distribution some attractive booklets describing the School of Art held at Banff, Alberta, Canada in August, under the auspices of the University of Alberta. Our weaving session of three weeks will be a part of this school. If you wish one of these booklets, please let me know.

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May M. Ottavali

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for  
June, 1941

Basin, Montana

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The June Bulletin has always been our "Summer Camp" number, as "old" members of the Guild will recall. The accent is on forms of weaving that require little or no equipment, and that will serve as a pleasant passtime on the porch or out under the trees.

Weaving crafts of this order are card-weaving, inkle loom belt-weaving, Osage braiding and Mexican plaited work. All these are interesting crafts with fascinating possibilities for the summertime weaver. But for this summer I want to suggest something I fancy few of our Guild members have tried -- weaving in the Maori manner.

Some time ago a Guild member -- Mrs. Shepherd -- who lives in New Zealand, sent me a fascinating book called "The Evolution of Maori Clothing," by Te Rangī Hiroa (P.H. Buck), which describes in great detail the various forms of weaving practised by the Maoris. I have experimented from time to time with some of these techniques, and here are the results of my research.

Maori "weaving" is in many ways more like basketry than like weaving on a loom. All the various effects are produced by twining instead of by an over and under interlacing of warp and weft. The "loom" used by a Maori weaver consists of two stout stakes planted in the ground at a convenient distance apart. Between these stakes the weaver strings four stout strands and sets up the warp by braiding the warp-ends into this foundation strand. The warp is usually quite coarse and stiff, and hangs down like a fringe. The weaver sits upon the ground before this erection and proceeds to make jewel-like patterns in "taniko" weaving.

I have tried it this way, stringing the warp between two pegs on an inkle loom, and it can be done -- even by a clumsy-fingered civilized weaver, -- but it is difficult. I find I have a strong prejudice in favor of working over a warp firmly anchored at each end, and I fancy this prejudice is shared by most of us who are not Maoris, so I shall describe the method I evolved for my own use which I find more convenient. Those who prefer to resort to the weaving stakes are, of course, entirely free to do so.

There are a number of techniques in Maori weaving. I shall not attempt to describe them all as some of them seem of no great practical interest though ingenious and amusing. The various forms may be roughly classified into three main groups: (1), the simple two-thread and four-thread twining, with such enrichments as the ornamental twist -- which I call the "roll," -- and an odd effect of loops that I will call "the butterfly;" (2), the "tag" fabrics, including those ornamented with feathers, tufts of dog-hair, braided and knotted tags, and so on; (3), the taniko pattern weaving. For the purposes of this Bulletin I propose to omit group (2) entirely, though with regret.

The forms of twining in group (1) lend themselves agreeably to a number of attractive and useful articles: couch-blankets or "afghans," for instance; also bags, table mats and so on. I made a small blanket in the following manner, setting up the warp on a loom in the ordinary way. For warp I used Bernat's "Smyrna" yarn in natural white, set at 12 ends to the inch. A softer yarn of the same weight would make a prettier piece. However, this one is nice. For the twining material I used Germantown yarn, doubled. At each end I made a "roll" using three colors in the Germantown yarn, but doing the four-thread twining under the roll in a finer, harder yarn. Next to the roll I put in a bit of tabby weaving in material like the warp, and after that several rows of two-thread twining spaced fairly close together. Next I left an open space about two and a half inches wide, with a "butterfly" row through the center. After this I did several more rows of two-thread twining, followed by a band

of tabby weaving. I alternated these bands of twining and tabby to the other end, where I repeated the "butterfly" and the roll. Of course one can arrange these bands of twining and tabby in any order desired, and the rows of twining may be made close together or a little distance apart to give an open effect. When the twining is done in a variety of gay colors the effect is very pretty.

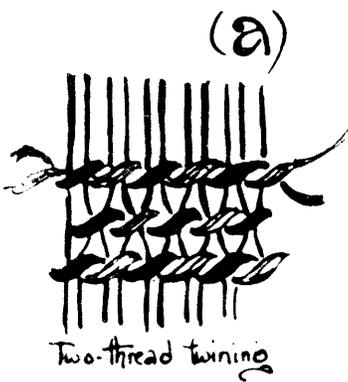
Just how to do the twining most easily I cannot say. I tried several methods. Sometimes I tried using one of the long-stemmed crochet hooks used in the Mexican lace-weave. I also tried putting one of the strands of a two-strand twining through a tabby shed, and making all the twining with the other strand. The Maori book tells everything but just how the weavers use their chief tools, their fingers, so I suppose we must find what is for us the easiest way. The twining should always be done from left to right. That much I can say definitely, and the twining should be done over pairs of warp-ends. When making the second row of twining split the pairs of the first row. I have shown this on the diagram which shows at (a) the two-thread twining -- which is the simplest -- and at (b) the four-thread twining. At (c) I have indicated the manner of making the roll, and at (d) the butterfly.

At (h) and (i) I have shown the manner in which I made a bag. For this I did not use the loom but made the warp in a wooden frame. I set two nails in the frame, one on either side close to the top, and two more close to the bottom, and also two at the center, as shown on the diagram. Between the upper pair of nails I tied a strand of material heavy enough to be braided later and serve as a handle; and I tied a similar strand between the two nails at the bottom of the frame. Then to stiffen the thing so that it would not sag at the center I put a wire across above the upper pair of nails and one below the bottom pair. Over the wires and the strands for handles I set up the warp, making double half-hitches set as close together as possible. The material I used was the new cotton rug-yarn recently put on the market by the Lily Mills Company. It is a delightful material for many purposes and comes in delightful colors. It is called "Tulip Rug-Weave Yarn." After completing the warp, which I made in stripes of several colors, I made a row of four-thread twining in the same material as the warp, close above the lower end of the warp. Then turned the frame end for end and put a similar row of twining close against the other end. About an inch and a half from each of these first rows I put in the next rows, also in four-thread twining; and then a fifth row of the same across the exact center of the warp. I then intied the strands at the top and bottom and folded the warp together at the center and put both wires across the frame above the nails at the center, as shown at (i). After that I put a third wire through the fold and caught it under the nails at the bottom of the frame. I finished the bag with rows of two-thread twining taken 'round and 'round the bag; first from left to right across the front, then by turning over the frame, from left to right across the back. These rows of twining were made quite close together to give firmness to the bottom of the bag.

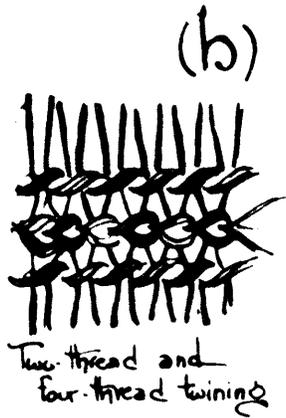
This is not difficult to do, and with the coarse material does not take much time, either. It makes an attractive and unusual bag. When done in this heavy rug-yarn, however, it is not a suitable way to make a small bag though excellent for a large shopping bag or knitting bag.

Table mats in the same material may be made on a frame in exactly the same manner except, of course, that these are made flat and not folded at the center.

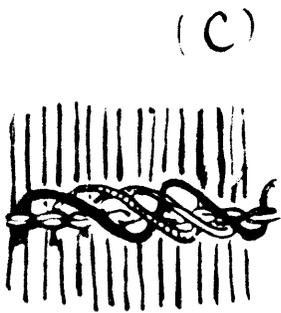
The most elaborate and handsome form of Maori weaving is the taniko technique. This weave is used for the borders of garments, for girdles and head-bands, rarely for large pieces. The fabric is extremely firm and hard, and has the effect of needle-point. It could be used for the making of chair-seats with good effect. I tried it in rug-yarn as for a small rug, and though the work goes slowly it is really no slower than Gibraltar Knot or Soumak, and makes a very handsome and unusual rug. The pieces sent me from New Zealand are head-bands, quite narrow, done over a coarse, stiff linen warp with the twining in silks of several colors. The patterns used in taniko weaving are all geometric patterns in diamonds, triangles and so on, and traditionally the background is black.



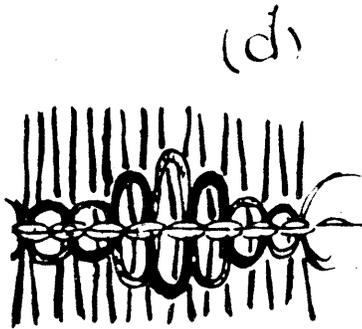
Two-thread twining



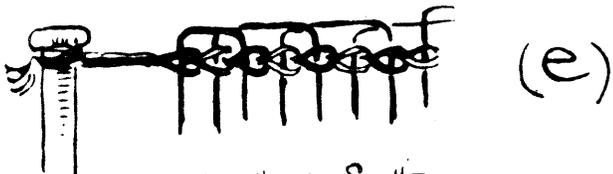
Two-thread and four-thread twining



the Roll



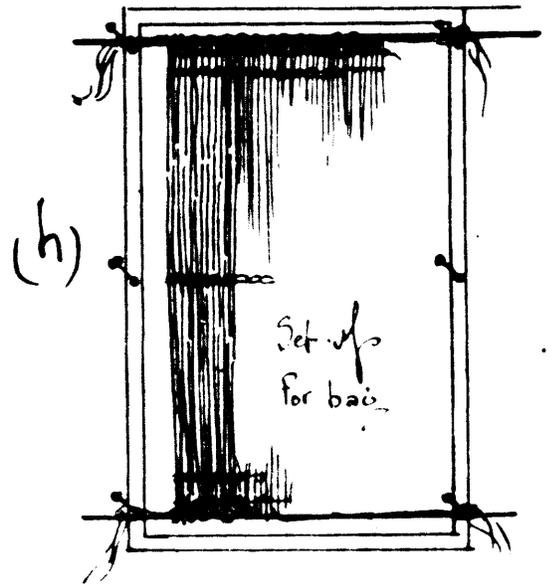
the Butterfly



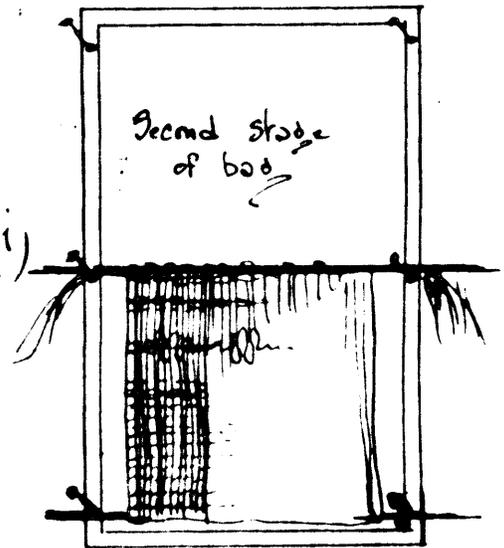
Maori method of setting up warp for taniko weaving



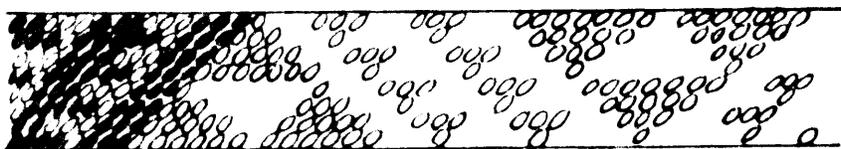
Detail of taniko technique



(h)



(i)



Effect of taniko Weave

The warp for taniko weaving should not be set as close as for the simple twining. It should be a coarse, stiff, smooth material. The warp in the head-bands sent me from New Zealand is of linen, like a very coarse she-thread. The Maori system of setting up the warp is shown on the diagram at (e) and if one chose to set up the warp in a frame this same system might be followed. However, I did my teniko weaving on the loom, making a four-thread twining and a roll to serve as a finish.

The weft consists of a heavy strand of material compose of a foundation strand -- which does not show in the pattern -- and a strand each of the colors to be used in the design. If, for instance, the pattern calls for black, white, green and yellow the weft strand will include threads of these colors and also the foundation strand. As I was working on a loom, with the warp stretched in a horizonat position instead of hanging perpendicularly like a fringe, I found it convenient to take the foundation strand through a tabby shed, which held it in position. Whether or not to do this is a matter of choice. All the other threads of the weft strand are carried at the back of the work except the strand of the color being woven. Suppose you wish to begin with black: take the black strand in front of the first warp-thread -- the one on the extreme left side of the warp. Take it down between the first and second threads to the back, above the reast of the weft strand, Take it under the entire weft strand and up to the top of the weave again between the first and second warp-ends. Now take it slanting across the second warp-thread, down and around the weft strand and up again between the second and thirs warp-ends, and so continue for as many "stitches" in black as required by the pattern. When a change of color is to be produced, simply leave the strand of the first color at the back with the rest of the weft strand and bring forward the strand of the color desired next. The foundation strand serves simply to keep the twining in correct alignment and to control the width of the weaving. All this may sound involved when described in words, but it is really quite simple and it is hoped that the sketch at (f) on the diagram will make it entirely clear. When the row of twining is complete it should be pressed firmly against the heading. When the work is done on the loom this beating up may of course be done with the batten in the ordinary way.

One difficulty with the teniko weave is the unsatisfactory edge. The native head-bands I have are lined with a silk fabric which takes care of the rough edges, but for my rug-experiment it was necessary to find a different solution. I tried making a built-up edge over four warp-ends on each side, after the manner described for rugs in the Ghiordes Knot, making this edge with the foundation strand of weft. This proved very satisfactory. The ends of the twining weft may be clipped off tidily underneath when the work is finished.

I have been finding the new rug-yarn supplied by the Lily Company a delightful material to work with and have been making a number of small experimental rugs. Three of these will soon be published in a leaflet that will be sent out by the Lily Company. If you do not receive one I suggest that you write for it as I believe you will find it interesting.

Mrs. Maybelle Gano, 2016 Castillo Street, Santa Barbara, California -- who is official sample-maker for the Guild -- requests me to say that the price of single samples is 50¢ or \$1.00, depending on size and weave, and that she will supply the full set of samples for a year at a subscription price of \$10.00. Many of our members are finding this sample-service extremely useful. It is sometimes hard to visualize an unfamiliar weave or texture from diagrams and the sample of the fabric itself tells more than a whole volumn of words.

Our California members will, I am sure, be interested in the enclosed announcement of the weaving "institute" to be held in Fallbrook, under the auspices of the Fallbrook Union High School. Forty-five floor-ooms are available for this meeting, so we can have forty-five different weaves if we like, and that should provide plenty of excitement for everybody. I shall look forward to meeting many of our California Guild members at this session. I suggest making reservations as promptly as possible.

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Mary M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

Basin, Montana

RAFT

for  
July, 1941

(Copyright, 1941, Mary M. Atwater)

For this month we are going to make a trip to Mexico, as the guests of Mrs. J.K. Smith, one of our Guild members, who recently made a weaving exploration "south of the border" and has generously shared her treasure trove with us.

Among the interesting things in Mrs. Smith's collection is a Mexican "belt-loom." I have long wanted to see and try one of these primitive looms, and as Guild members may have been sharing this feeling I shall describe the equipment in detail, and am showing a sketch of it at (a) on the diagram.

The warp is stretched between the small round beams at either end. These are grooved as sketched, to hold the cords that attach one beam to a stationary object of some kind, and the other beam to the waist of the weaver. The sheds are produced by means of heddle sticks. There is no reed and the woven web is kept out to the desired width by means of a rude "template" consisting of a little round stick with small nails in the ends.

Mrs. Smith's loom is set up in fine cotton -- natural white and dark blue -- and a beautiful piece of double weaving has been started upon it. For this weave there are four heddle sticks, consisting of short lengths of bamboo, marked 1,2,3,4 on the sketch. No. 1 is much larger in circumference than the other three and is not provided with string loops, but has simply been slipped under every other thread of the blue part of the warp. Heddle-stick No. 2 is provided with a length of cord that passes over the stick and down in a loop under alternate blue threads -- the blue threads that lie under stick No. 1. These loops of cord act as heddles and when stick No. 2 is lifted it raises the warp-ends held in the loops of cord. Sticks 3 and 4 are supplied with heddles in the same manner, and raise alternate white threads of the warp. This type of heddle-stick is used on some tapestry looms and may be familiar to many members of the Guild, but as there may be some who have never seen such a heddle I have sketched it in detail at (b) on the diagram.

The rest of the equipment consists of two flat shuttles, one carrying white weft and one blue weft, of the same material as the warp, and of two flat sticks pointed at the ends, -- a narrow pick-up stick and a wider shed-stick.

To weave one lifts heddle-sticks 3 and 4, raising all the white part of the warp. Insert the shed-stick and set it on edge to hold the shed. Now with the pick-up stick, take up the white threads corresponding to the desired figure. Take out the shed-stick. Raise heddle-stick No. 2 (leaving the pick-up stick in place) and insert the shed-stick. Set it on edge, and weave a shot of dark weft. Take out the shed-stick and insert it through the shed made by heddle-stick No. 1. Weave a second shot of blue. Now take out the pick-up stick as well as the shed-stick. Raise heddle-stick No. 2, which with the blue threads carried over stick No. 1, brings up all the blue threads. Insert the shed-stick. Pick up the dark background with the pick-up stick. Take out the shed-stick and make a shed by lifting heddle-stick No. 3. Weave white. Make a shed by lifting stick No. 4 and weave the second shot of white.

This process interested me greatly, as I have often wondered just what technique was used by the Mexican weavers, and by the ancient Peruvians, in producing their double-woven fabrics. This no doubt is it. However, I confess that to my clumsy civilized hands the process of weaving on this primitive equipment is very slow and difficult. I have a strong prejudice in favor of a good solid loom with harnesses, steel heddles, treadles and a satten. The Mexican method may, however, be used on a four-harness loom with entire satisfaction, and it seems to me simpler and easier than the

"Finnweave" technique we have been using, as it eliminates the "cross" and the inserting of the round-stick, which always give trouble. Do it like this: set up the loom exactly as for Finnweave. Treadle to raise all the light threads (if you wish to weave a light figure on a dark ground), and make the pick-up with the pick-up stick in front of the reed, exactly as for Finnweave. Leave the pick-up stick in place and treadle to raise one of the harnesses carrying dark threads, simply permitting the ~~shuttle~~ pick-up stick to ride the top of the shed. Weave a shot of dark weft. Treadle to raise the other harness carrying dark warp, and weave the second shot of dark weft. Now treadle to raise all the dark part of the warp and pick up the background. Treadle to raise first one and then the other of the two harnesses carrying light warp and weave light. The sheds will be shallow but can be woven easily enough without a shed-stick if one uses a flat shuttle or a small throw-shuttle. Simple and neat as can be. I shall do my Finnweaving Mexican fashion from this time on.

There are slight differences in effect between the Mexican double weaving and the Finnweave fabrics. This appears to arise from the fact that the Mexicans apparently do not follow the system of omitting the first and last threads of each group when making the second pick-up. The result is that the Mexican fabric is not exactly reversible, and the wrong side is somewhat less handsome than the right side. In this detail the Finnweave system seems to be the better one to follow.

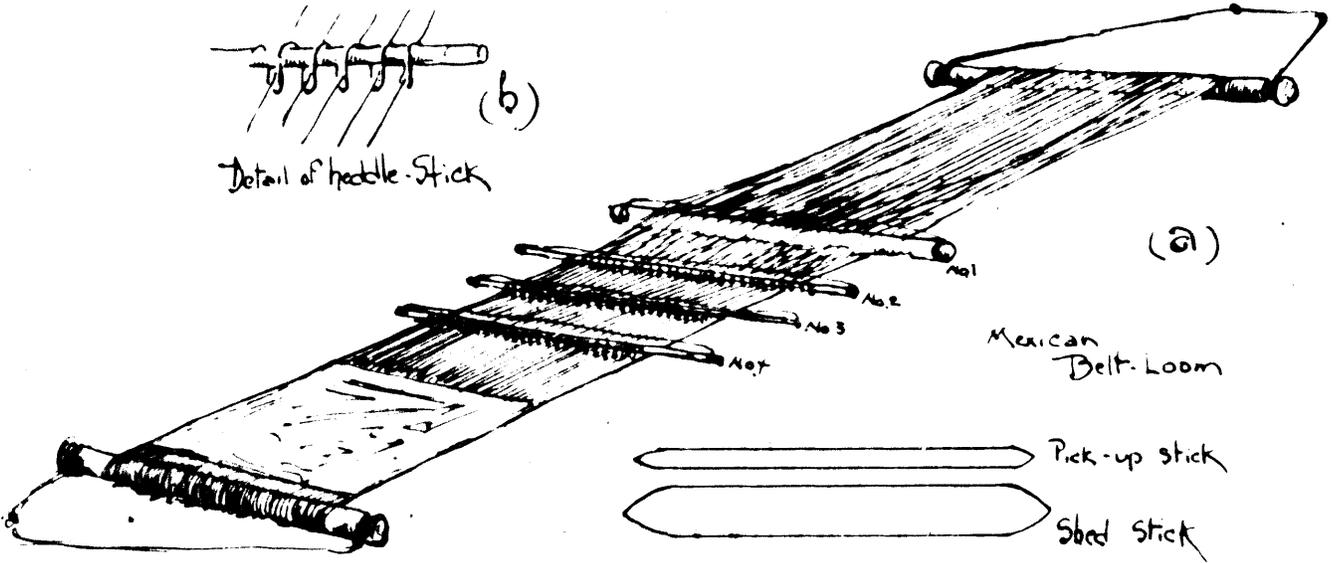
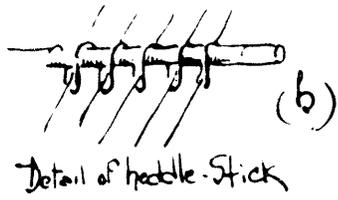
In Mrs. Smith's collection there are a number of bags made in this double weave, almost all in fine cotton, about like our 20/2, in natural white and dark blue. The number of warp-ends to the inch is usually about 56. The seams of the bags are finished with a crocheted or braided cord, and the tops are made by braiding the warp into many tiny braids, all white or all blue, and then plaiting these braids together for a few inches. Finally the ends of the braids are tied together in groups of four, and a braided cord to serve as a handle is threaded through them.

The piece in Mrs. Smith's collection that interested me most was a very unusual girdle consisting of a narrow band to which are attached a number of small rectangular pouches, done in the double weave and in a variety of patterns. This girle, I understand, is worn for decoration, about the hips, while a broad, heavy belt goes around the waist. I believe, though, that at the moment -- with pockets such an important style accent, -- a girdle like this on a plain sports dress would be extremely attractive. I have sketched the detail of this girdle on the diagram at (c). The little pouches are flat, and are finished up the sides and across the tops with close-set buttonhole stitching. They are attached to the narrow band by short buttonholed cords at the upper corners, and are ornamented with fat little tassels at the lower corners. The narrow waist-band is of fine cotton, closely woven, and could be made on an inkle loom or be done in card-weaving.

Of course this unusual and charming girdle might be carried out in other weaves than double weaving. The "miniature" overshot patterns would be attractive for the little pouches, with the treadle varied from one to another. The warp for the pouches should be  $3\frac{1}{2}$ " wide, and for each pouch a piece 5" long should be woven. Fold each of these pieces crosswise at the center, buttonhole the selvages together and buttonhole around the top. Attach the pouches close together along the lower edge of the narrow supporting band, as shown on the sketch.

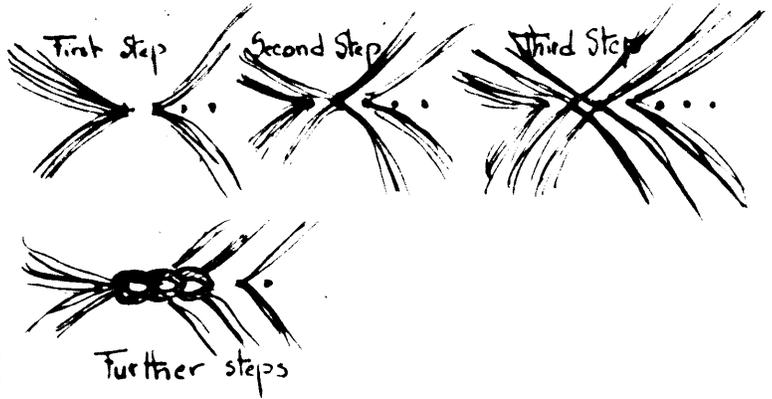
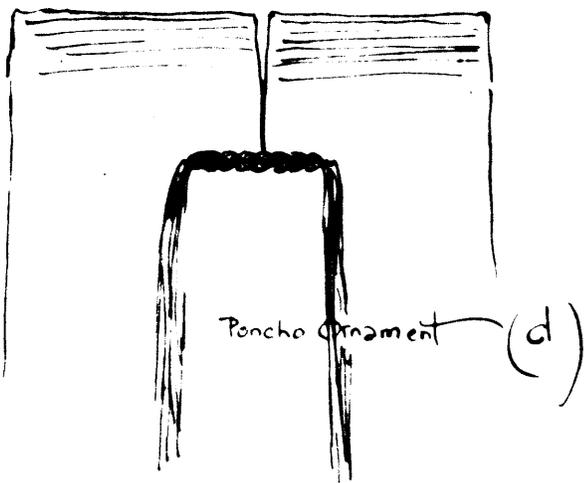
I fancy these pouches are not intended to be used otherwise than as decoration, though a coin or a card might be carried in one or another of them. The piece seems to me a decorative and fanciful interpretation of a cartridge-belt -- an appropriate motif, alas! in these warlike times.

An interesting garment in Mrs. Smith's collection is a poncho-like shirt or blouse done in white cotton. The fabric is fairly heavy, being closely woven, with a corded effect across the shoulders and the part below the neck-opening varied with single rows of leno between bands of tabby. As the warp is close set and the beat firm the leno does not produce a lacy effect but simply varies the texture of the fabric. The most interesting feature of this piece, however, is an unusual decoration set crosswise just below the slit of the neck-opening. I have sketched this decoration at (d) on the diagram. It is composed of six strands of rayon, about the weight of #5 perle cotton, each strand being of thirteen ends. The detail sketch at (e) shows the manner in which it may be made.



Mexican Girdle with Pouches (c)

(c)



Make a row of eyelets, or cut tiny up-and-down slits in the fabric as I have indicated on the sketch. With a heavy crochet hook draw two of the strands of silk or rayon through eyelets 1 and 2, allowing long ends to hang down. Separate the two strands and between them draw the next two strands through eyelets 2 and 3. Separate these two strands and draw the last two strands through eyelets 3 and 4. Now take up one of the first pair of strands and twist it strongly outward. Draw it through eyelets 4 and 5. Take the second of the first pair and twist it strongly in the opposite direction from the first twist, and draw it also through eyelets 4 and 5. Separate these two strands as shown. Now take up and twist the second pair of strands in the same manner, and draw them through eyelets 5 and 6. Proceed in this manner till the end of the row of eyelets is reached. This is simple enough to do and the effect is very proud and handsome. The eyelets should be set quite close together, and the twist made extremely firm and hard.

I believe a similar decoration would be handsome at the top of a large bag, and the long ends might either be permitted to hang down for decoration or they might be braided to form handles for the bag. Other uses for this ornament suggest themselves -- on a hat-band, for instance. But if you happen to have a blouse that appears too plain and uninteresting, try it across the front as on the Mexican poncho. It is very emphatic and interesting -- and also vaguely military in effect for some reason.

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Soon after this Bulletin is in the mail I shall be on my way to Fallbrook, California, for the first of the summer "institutes." While I am away routine correspondence will be handled at Basin by my daughter, Mrs. Clarence Biehl, and of course mail will be forwarded to me. But for a prompt reply address me in care of the Fallbrook Union High School between the dates of July 7-19.

From Fallbrook I go directly to Vancouver, and my address between the dates of July 21 - August 2 will be in care of the Department of University Extension, University of British Columbia, Vancouver, B.C., Canada.

From Vancouver I go to Banff, and between the dates of August 11-30 my address will be the Banff School of Art, Banff, Alberta, Canada.

While I am in Canada please do not send me packages of work by parcels post, as there would be difficulties with the customs. Drawings sent by first class mail will, of course, go through without difficulty.

I am looking forward with much pleasure to meeting many of our Guild members this summer-- some whom I have known by letter for as long as eighteen and twenty years but have never before met "man to man." I have some new things to show you all -- things that seem to me very interesting and that I am all excited over passing along. What a wonderful art is this craft of ours! Always new amazelements and delights ahead. Never an end where one may stop and say: "I know it all. After this it will just be 'old stuff.'"

It is said that Abelard, of romantic memory, who with his Eloise lies in marble under a marble canopy in Paris' Pere Lachaise, with the votive wreaths of lovers hung on the iron railing about him, "knew all the knowable" in his day and age. And not long ago a young Swedish weaver, newly come to this country, wrote me that she was expert in "all" kinds of weaving. But these are just quaintnesses, not to be taken seriously.

May M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin, Montana

August, 1941

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Questions about the "Crackle" weave continue to come in, and there are still a good many requests for the pamphlet on this weave published some time ago. The pamphlet is out of print and I have not planned to re-issue it as there are now so many good crackle-weave patterns in our Guild Recipe Book. However if enough people want it to justify the cost of re-printing I shall be glad to have the work done, so let me know if you wish it.

In the mean time, here again is the story of the crackle-weave, together with some new patterns: The weave is an ancient Scandinavian weave and its Swedish name is "Jamptlandsvav." I came across it some sixteen years ago and as it looked useful I introduced it through the Bulletin. The unpronounceable name seemed to me a handicap, so I christened it "crackle-weave" for our purposes -- a name suggested by a fancied resemblance between the back-ground effect and the "crackle" in pottery. A good many people have found fault with this name, and I am entirely willing to concede that a happier title might have been chosen, but the fact remains that most of us know the weave by this name and it may as well stand. Of course anybody that chooses can use instead the old Swedish name. But the weave really requires an American name different from the ancient one, as we use the weave in many ways that differ from the Scandinavian practice.

Of all the special weaves introduced through the Bulletin -- with the possible exception of the "Finnweave" -- "crackle weave" has gained wider acceptance than any other. In fact it is now familiar to most hand-weavers who have passed the "Honeysuckle" stage of development. Just why is this weave so valuable? The chief reason, no doubt, lies in the structure of the weave, -- a closely combined fabric, similar to "summer-and-winter" weave fabrics, with no long overshot skips. Most of us have discovered by this time that "four-harness overshot," though a handsome weave, is not suitable for some purposes. It is perhaps the worst possible weave for rugs, linens and upholstery, and in fact undesirable for any fabric designed to withstand friction and wear. The summer-and-winter weave is entirely satisfactory for these fabrics, but only simple two-block patterns are possible in this weave on four harnesses. The crackle-weave is in a way a makeshift form of summer-and-winter weave that permits weaving on four harnesses many patterns that require six harnesses in summer-and-winter weave.

Another reason the crackle-weave has become so popular is the fact that it permits patterns of a "modern" type. Modern effects depend largely on an exaggeration of proportions -- large, plain figures combined with fine detail. In overshot weaving the size of a block is limited by the practical length of an overshot skip. A very long skip weakens the fabric so greatly that it must be avoided. As there are no long skips in crackle weave the pattern blocks may be made of any size desired. And as there is increasing demand for patterns of the modern type a good many of the published crackle-weave patterns have been of this order. Some people have even got the idea that the weave is a new thing used only for modernistic effects. Of course this is as far as possible from being the fact. One may be as "Colonial" as possible in crackle weave if one wishes, and the weave itself is traditional and ancient. Some among us appear to have a violent prejudice against the modern trend in design, and for that reason have avoided using the crackle weave. The above notes will, I hope, reassure these weavers.

The Scandinavian patterns in this weave, as far as I have been able to discover, are limited to a few rather simple forms of the "Diamond" and similar patterns. The drafts in quite general use in this country show a much wider variety, and are for the most part drafts written by me and published from time to time in the Bulletin, our Recipe Book, the out-of-print pamphlet, and in Bernat's "Weaver" magazine. Only a few of our Guild members have experimented with draft-writing in this weave, and in the hope that more will do so I am going to explain again the system I find simplest in preparing these drafts. It is quite true that these drafts are quite difficult to write, because the weave -- being a make-shift -- is not entirely logical. I will make the process as clear as I am able to do/.

There are four possible pattern blocks in crackle-weave as in overshot weaving, but each of these four blocks is written on two of the four possible pattern sheds, with the result that each pattern shot weaves across two pattern blocks. The "units" of the weave for each of the four blocks are shown on the diagram at (a). Each unit of the weave may be repeated as many times as desired to make large blocks. But when we attempt to write the blocks in succession we come upon the first complication. If the four units A, B, C, and D are written one after the other we will find a four-thread skip between A and B, and another between C and D. Four-thread skips are not permitted in this weave, so in order to preserve the movement of the weave it is necessary to write two "transition" threads between A and B, and again between C and D. This is shown on the diagram. It will be noted, too, by an examination of the draft, that though the unit of the weave is of four threads, the blocks overlap and that a single unit block actually weaves across seven threads instead of four. This little fact plays havoc with proportions in a small figure, though if all the blocks are quite large it can be ignored.

In the summer-and-winter weave the blocks may be woven separately, or may be woven to overlap in any manner desired. This is not true of crackle weave. In the latter weave the blocks overlap in an inevitable order. The 1-2 pattern shot weaves across blocks A and B, and nothing can be done to prevent it. The 2-3 shot weaves across blocks A and B; the 3-4 shot across blocks B and C; the 1-4 shot across blocks C and D. This greatly limits the design possibilities, of course. However by designing a three-block figure and omitting one of the pattern shots we can weave a pattern with one detached block and two blocks that overlap. Several of the patterns in the Recipe Book are designed in this manner.

It is possible in crackle-weave to write two "opposite" blocks in succession, as for instance to write a "C" block after an "A" block. But in doing this particular attention to the "transitions" ~~xxxx~~ is necessary. If done incorrectly one may not only have a four-thread skip, which ruins the effect, or a two-thread skip on a shed not included in either block, with the result of a very ugly "accidental" in the weave.

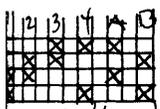
With these details out of the way: My system is to write the draft first in "short" form as for summer-and-winter weave, as shown at (b) and (c) on the diagram. But one cannot thread safely from the short draft in this weave, because of the transitions and the inconsistencies. It is therefore always necessary to expand the draft, as also shown on the diagram. The figure may, however, be developed on paper from the short draft, always bearing in mind the inevitable overlappings. Such a development will not be entirely accurate, due to the oddity in the overlapping between the blocks, as explained above, but it will give a clear enough idea of the pattern as woven.

If all this appears quite complicated, I am sorry but cannot make it any simpler. It is perhaps these technical difficulties that account for the limited number of traditional Swedish patterns in this weave. But those among us who enjoy technical puzzles should, I think, get a lot of fun out of doing some original crackle-weave drafts.

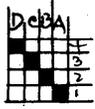
Crackle weave lends itself to three methods of weaving that produce quite different effects. Of these the first appears to be the only one used by the Swedish weavers. The other two are our own innovations:

Method No. 1 is exactly like overshot weaving in that the blocks are developed by repeating a single pattern shot as often as may be required to "square" the block, an alternating tabby in material like the warp being woven between pattern shots.

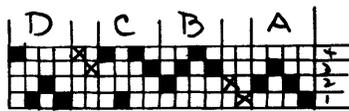
# Page three



Pattern Tabby  
up, all patterns



Short draft

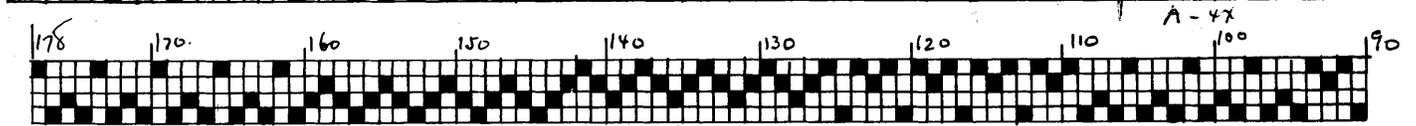
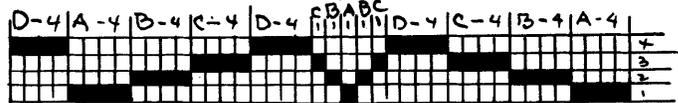


Single units in twill  
Succession, showing  
added threads (x)

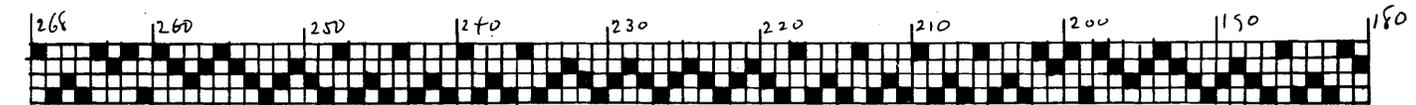
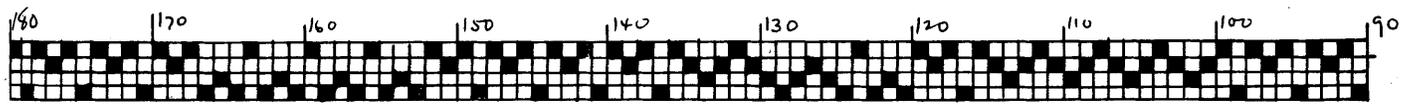
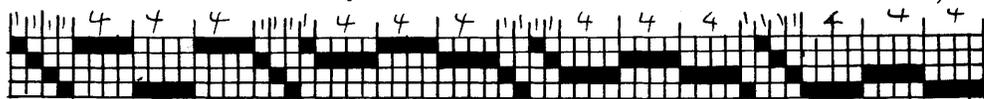


(a)

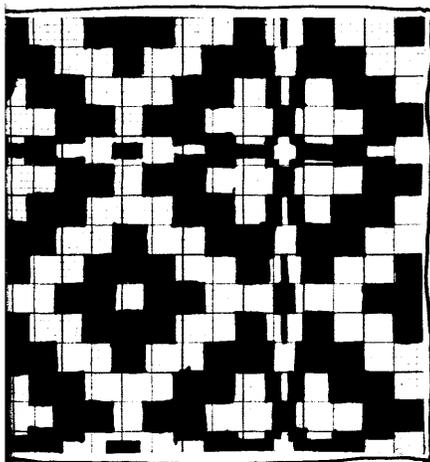
A Colonial Pattern — short draft (b)



A Modern Arrangement — short draft (c)

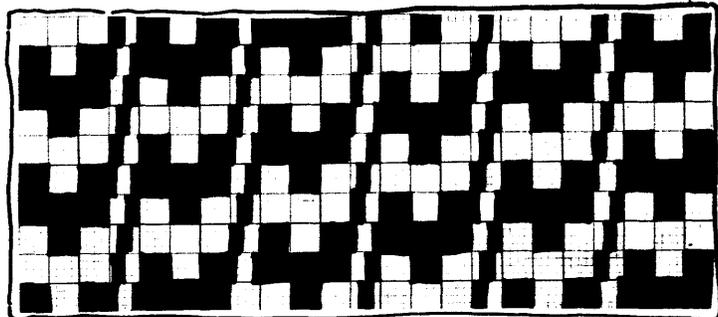


Pattern (b)



Weave, (b)  
Treadle 4, 13 shots  
" 3, 13 "  
" 2, 13 "  
" 1, 13 "  
" 2, 3 "  
" 3, 3 "  
" 2, 3 "  
" 1, 13 "  
" 2, 13 "  
" 3, 13 "  
" 4, 13 "  
" 1, 13 "  
Repeat

Pattern (c)



Weave, (c) Treadle 4, 13 shots  
" 3, 13 "  
" 2, 13 "  
" 1, 13 "  
Repeat

Method No. 2 is to weave as though in summer and winter weave. That is to develop each block with alternating pattern shots on the two pattern sheds on which the block is written, alternating with a tabby in material like the warp. For instance block "A" should be treadled: treadle 1, pattern; tabby; treadle 2, pattern; tabby; and repeat. Block B would be woven on treadles 2 and 3 alternately, and so on. This gives a subtler effect than method No. 1 and is nice for upholstery and for fabrics in which one does not desire a too pronounced figure.

Method No. 3 is to weave without a tabby in the Italian manner. By using three colors, -- one for the pattern and two for the background -- this method produces some very interesting and unusual color effects. It makes a somewhat heavier, somewhat softer fabric than either 1 or 2 and is nice for draperies, upholstery, bags and so on, but should not be used for linens. The manner of treadeling has been explained before, and is given on some of the patterns in the Recipe Book, but here it is again for easy reference:

Block A  
 treadle 1, pattern  
 " 2, background (a)  
 " 1, pattern  
 " 4, background (b)  
 Repeat as required.  
 End: treadle 1, pattern

Block B  
 treadle 2, pattern  
 " 3, background (a)  
 " 2, pattern  
 " 1, background (b)  
 Repeat as required.  
 End: treadle 2, pattern

Block C  
 treadle 3, pattern  
 " 4, background (a)  
 " 3, pattern  
 " 2, background (b)  
 Repeat as required.  
 End: treadle 3, pattern

Block D  
 treadle 4, pattern  
 " 1, background (a)  
 " 4, pattern  
 " 3, background (b)  
 Repeat as required.  
 End: treadle 4, pattern.

(For weaving on the Structo loom, transpose as usual.)

For this weave the material used for the "pattern" may be slightly heavier than the material used for the background shots, -- but not greatly heavier. No tabby is used.

Of the two new patterns given on the diagram Pattern (b) is strictly Colonial in form. If desired, the figures may be set further apart by increasing the number of units in the final "D" block of the draft, and, of course, weaving the last block in the repeat an increased number of shots to correspond. Pattern (c) is a twill variation in the modern manner and may be woven in a variety of ways. The simplest treadeling is given on the diagram. The large blocks may, of course, be made as much larger as desired by adding to the number of units -- or one might write either the first or last in each group of three large blocks larger than the other two, or each of the large blocks might be written with a different number of units, if one wished a more fantastic effect.

- - - - -

Mr. Gilmore has recently devised a new belt-loom similar in some ways to the "inkle" loom but with a number of improvements. It is a table model, but sturdily constructed and carrying as long a warp as the inkle loom. Those of us who are addicted to belt-weaving -- a fascinating business! -- will be interested to hear of this new little loom. It sells for only \$5.50. Mr. Gilmore's address is 1200 West Harding Way, Stockton, California.

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When this Bulletin reaches subscribers I shall be leaving Vancouver for Banff. Till the end of August my address will be in care of the Banff School of Art, Banff, Alberta, Canada.

- - - - -

*May M. Atwell*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin, Montana

September, 1941

(Copyright 1941, Mary M. Atwater)

I have been doing something lately that has given me so very much pleasure that I am passing it on to the Guild, though I realize that it may not appeal to all our members. I cannot hope, of course, to include within the narrow limits of our little monthly "news letter" material that will suit all our varied tastes, each month. But what I do hope is that in the course of a year each of our members will find at least some one thing in the Bulletin of so much special interest that it will make up for the issues that make no particular appeal. Perhaps for some among us this will be the Bulletin for 1941.

Among some colored plates of ancient Peruvian textiles I came across this piece that seemed to me remarkably beautiful. The piece appears to be a bag, but whether a large or a small one it is impossible to say. The weave is an odd form of tapestry I have noted in some few other Peruvian pieces, and also in the "marriage girdles" from Guatamala. Curiously enough it is similar to the technique used in much ancient Coptic weaving. Even some of the figures in the marriage girdles -- the figure of a little crouching rabbit, for instance -- are almost exactly the same. And there is a vaguely Egyptian effect in the pattern of the Peruvian piece that so charmed me. It makes one wonder what possible connection there could have been between ancient Egypt and the American continent. But that is a problem for ethnologists rather than weavers.

Though the form of the pattern in the Peruvian piece suggests Egypt, the color pattern does not -- and it is this extremely subtle and far from simple color arrangement that gives the piece its remarkable effect. I am unable to analyze the charm of this color pattern; it is almost as though there were something occult and meaningful about it. It gives one a strangely happy and satisfied feeling. I tried the pattern in other colors, and in a different arrangement of colors, and found that much of the exhilarating sensation was lost. Perhaps just these colors in just this arrangement have some inherent mathematical affinity with the pattern. It is one of those things that one feels and knows without being able to give the reasons.

The colors themselves are neither brilliant nor exciting: a deep blue -- not the purplish blue we know as "navy", but a cool, dark, blue --; a deep, dull red, a little lighter in value than the blue; an acherish golden yellow; a dull lightish blue about the shade sometimes called "Colonial," and a warm natural white.

It is the arrangement of the colors in the weave that is of chief interest. I have laid out the design on the accompanying diagram, and have indicated the colors by hatching, and I suggest that those who are interested may lay in the colors on this diagram with crayon or charcoal and so get an idea of the effect. This color pattern, though it looks simple at first glance, is quite intricate, and far more subtle than anything I have seen in modern design -- or in the colorings of ancient Egypt. We are apt to think of the Ancient Peruvian Indians as primitive and simple people. Primitive in many ways they undoubtedly were, but this interesting color pattern seems to show that as artists they were anything but simple.

The peculiarity of the weave is that the weft does not everywhere run straight across the warp, but that in the arcs and inverted arcs of the pattern the weft follows the contour of the figure. I have indicated this on the diagram.

I tried the thing in various materials, and with large figures and small figures. I was fascinated by it and could not let it alone, though I had other pressing work that should have been occupying my time. The pieces I liked best were a small rug done in wool rug-yarns, and a chair-seat done in "raw" silk, both with large, bold figures. I also made a piece in the new Lily cotton rug-yarn that was very nice indeed. For the rugs I wove deep end-sections in the tapestry weave with plain center sections done in the dark blue of the pattern. The center of such a rug might also be woven in broad horizontal bands of all the five colors, but it would be well to follow the succession of colors from one or another of the perpendicular rows of figures. For instance: dark blue, red, white, light blue, red, yellow, white, light blue, and repeat; or dark blue, light blue, white, red, dark blue, yellow, white, yellow, and repeat; or dark blue, white, red, dark blue, light blue, white, yellow, and repeat. The fourth row of figures shows no dark blue at all, so it would be less effective.

For warp I used ordinary carpet warp set at 15 ends to the inch and threaded with three ends to the heddle, giving the same effect as a very coarse warp set at 5 ends to the inch. A coarse linen -- if one could get it -- would make an excellent warp. To press the weft firmly together I used a little wooden tool such as the Navajo weavers use for their rugs. The one I have was sent me from New Mexico, and perhaps by writing to the Trading Station at Gallup, New Mexico, one might obtain a similar one. For those who may wish to make one for themselves I have given a sketch on the diagram. It is similar, of course, to the comb used in other types of tapestry weaving, but is larger and heavier. It is a delightful tool, like a little hand with strong, thin fingers.

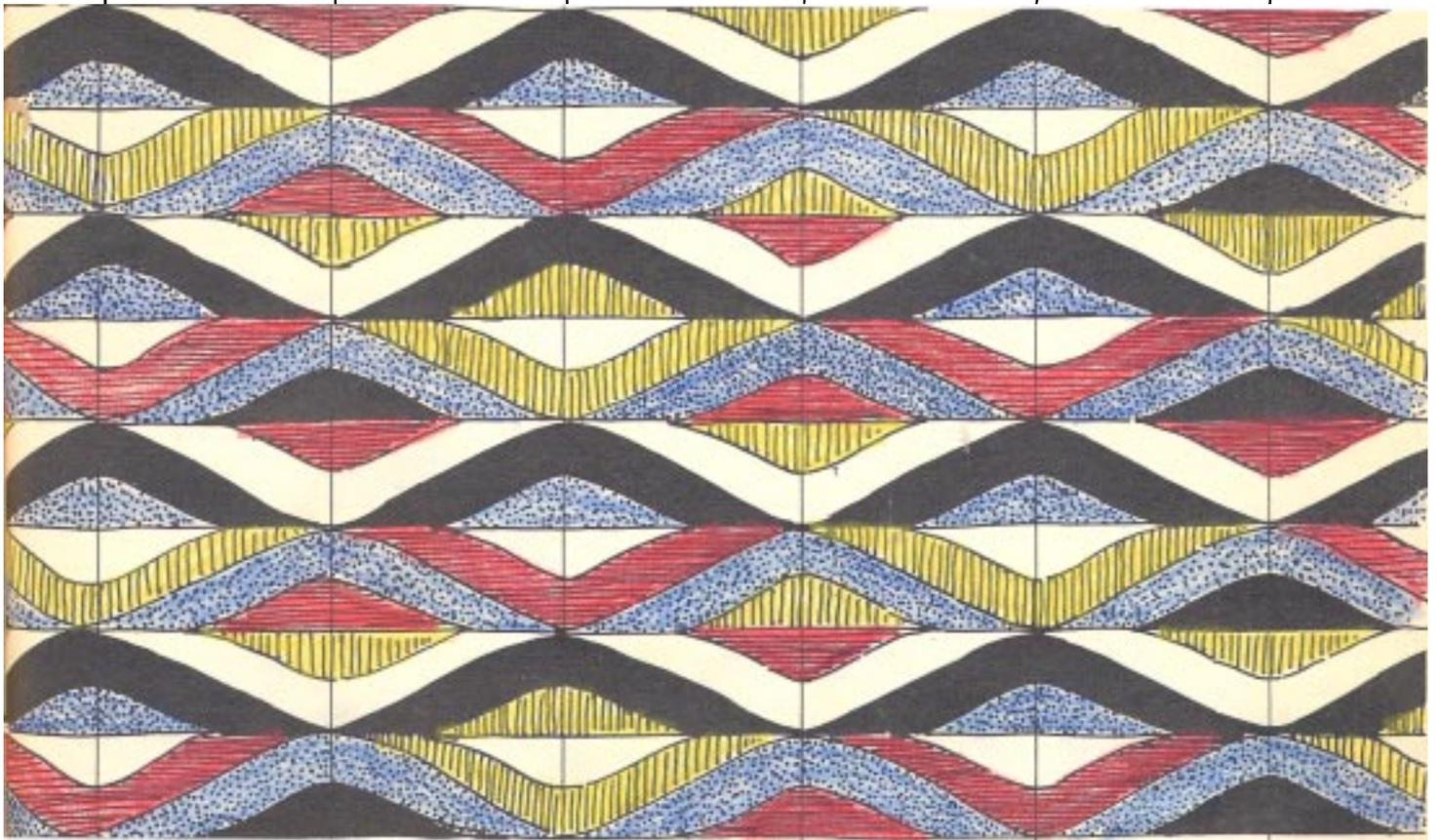
It will be noted that the pattern resolves itself into a series of horizontal bands, each composed of a row of small pyramids covered by larger pyramids or arcs, with inverted arcs and pyramids between. After each of these bands is completed it is possible to beat with the batten of the loom and so level off the work. But in the weaving of each band one must depend on the comb for firmness. During weaving the warp should be kept stretched very tight indeed, so that the weft will not pull it out of line, and the weft must be very slack so that it will beat together nicely. Small flat "poke-shuttles" are convenient

To make a small rug, as I made mine, warp 363 ends of carpet warp and thread three threads to the heddle. The threading may be made on two harnesses or in twill or on any pattern that produces the two tabby sheds. This gives a width of 24" in the reed. Considering each group of three warp-ends as a single end of warp, count off 30 ends from the right hand margin and mark the 31st, with a crayon or charcoal. This will be the center of the first figure. Count 30 more and mark the 31st. This should be the center of the second figure, and of the rug. Count off thirty again and mark the 31st. There should be thirty ends remaining to the left hand margin. The ruled lines on the diagram numbered 1,2,3, represent these markings. If desired the three groups of threads corresponding to these markings might be warped in a different color from the rest of the warp. The warp does not show in the result and the markings are useful in keeping the figures correctly centered.

To begin the figure, count thirteen each way from the first marked war-end. This will be the base of one of the pyramid figures in the first row. For the other -- there are only two in this arrangement -- count off thirteen ends on either side of marked end No. 3. Build up the pyramid figures by weaving back and forth, missing a warp-end on each shot as you go. This is shown on the diagram. The two figures may be woven at the same time, by using two shuttles, or one may build up one figure completely and then go to the next. I tried both methods and found that the second suited me the better, but it is a matter of personal convenience.

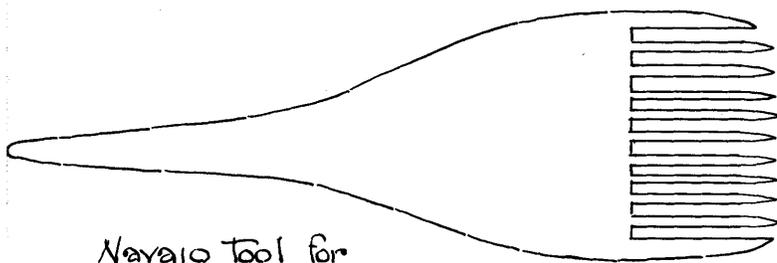
When the two pyramids are complete, weave the two arcs above them, as indicated on the diagram. The weft now follows the contour of the pyramid, taking in one additional warp-end on each shot. Continue this till you come within three warp-ends of the center marked strand.

An Ancient Peruvian Tapestry 2

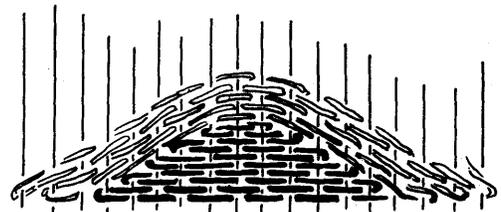
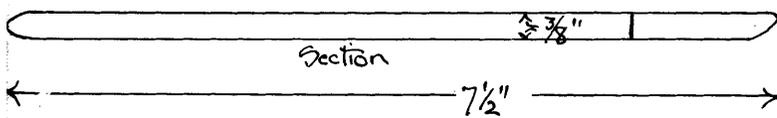


3

- 2 ■ Dark blue
- 2 ■ Light blue
- Natural white
- Red
- Gold



Navajo tool for  
Tapestry weaving



Method of building up the figures

When the two arcs are complete weave the inverted arc at the center, and halves of inverted arcs at each side. To weave the inverted arc at the center, begin at the fourth warp-end counting from marked end No. 1, and take the weft as far as the fourth end from the marked end No. 3, crowding the weft down into the space with the comb. Continue, omitting one warp-end on each shot till you have taken up thirteen warp-ends on either side. This should leave you 27 unwoven ends at the center. In this unwoven space build up the inverted pyramid. This may be woven in the same manner as the arc, but I find it better to begin at the bottom, in the center of the space, carrying the weft straight across, in the manner of the first row of pyramids, as this seems to keep the warp in better order.

When the inverted pyramid at the center, and the halves of inverted pyramids at the sides, have been completed the weaving should make a straight line across, and the first row of the pattern is complete. One may then beat firmly with the batten.

Each row of the pattern is woven in the same manner.

The arrangement suggested does not include the complete repeat of the pattern. For a wider rug simply put in additional figures. The diagram shows the repeat, and of course the pattern may be carried for any width desired.

The pattern and weave of this piece are extremely simple, as will be seen. It is the amazing complexity of the color-pattern that gives it its distinction. For a sun-porch or morning room I cannot think of anything more striking and delightful than chair-seats and cushions in this fascinating weave, with a rug or rugs as described, and with window draperies in plain natural white with borders in this weave.

A knitting bag done in "raw" silks in this weave would also be a very satisfactory possession. Such a bag should be finished in the Peruvian manner, with a braid over the edges and a braided cord for handles. A conventional wooden mounting would seem hardly appropriate. For these braids the weft-material used in making the pattern should of course be used.

If one preferred a lighter weight fabric than that produced by the coarse weave as described one might use finer materials and a closer warp-setting. However the large, bold figures seem to me more beautiful than the effect of the weave in small form.

Like so much ancient Peruvian weaving, the effect of this patterns is quite "modernistic," and so is entirely suitable for use with furniture of the modern type. It would be sadly out of place in a Colonial setting of "early pine" and "Whig Rose." It is not Spanish, but in a room done in the Spanish style it would be not inappropriate. We are accustomed to a mingling of Spanish and "native" American, naturally enough.

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This Bulletin has been prepared before my departure for the summer series of "institutes," but by the time it is received I shall be at home again in Basin, and all mail should be addressed to me here. I always see many things of interest on my trips and shall no doubt have some interesting notes on the institutes for the next issue of the Bulletin. Meanwhile I hope that Guild members who are not completely wedded to "Honeysuckle", "Lovers Knot," or the Swedish weaves will try this interesting Peruvian pattern, and I shall be interested to hear whether or not those who do try it experience the same pleasure that weaving it brought to me.

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May M. Atwell

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin, Montana

October, 1941

(Copyright, Mary M. Atwater, 1941)

The main subject of our October Bulletin has always been the matter of weaving for Christmas. Christmas will soon be here again, and come war or come peace, we must prepare for the holiday.

But before going into plans for Christmas I want to say a few words about the summer series of "institutes" that began, this year, with the meeting held at the Fallbrook Union High School, in Fallbrook, California, and ended two weeks ago at Banff.

The Fallbrook meeting was particularly interesting and pleasant for a number of reasons, and I am happy to report that it is definitely planned to hold it again next year -- probably at about the same time, the first two weeks in July. The Fallbrook High School is a beautiful, modern building, on top of a hill, with a gorgeous view over rolling country -- covered with dark green orange groves and aguacate orchards -- to the mountains. We had ample space for our work, including a delightful patio terrace where we were served afternoon tea and iced drinks every afternoon, and a "model home" which was open for social gatherings and other purposes. Excellent meals were served at the school cafeteria, and we even had a bus to take us up and down the hill between our work-rooms and the cafeteria. To add to our pleasure, a clever little "newspaper" was published for us each day in the school print-shop. In short, everything possible was done for our comfort and pleasure by Mr. Potter, the Superintendent of this remarkable school, and by his charming wife, Mrs. Mary Cornell, who directs the weaving classes at Fallbrook, was in charge of the looms and materials and technical arrangements, and we were generously provided with everything we needed -- plenty of looms, plenty of nice yarns, plenty of everything.

Between fifty and sixty weavers attended the Fallbrook meeting, and as far as I am able to judge, we all had a fine time and did a lot of interesting weaving.

From Fallbrook I went to Vancouver, B.C., for the third annual institute at the University. The meetings this year were held in more convenient quarters than last year, we had much better equipment, and excellent materials to work with. I mention materials particularly, because due to war-restrictions, it is a difficult job in these times to assemble suitable yarns for all the different kinds of weaving we wished to do. Mrs. Ellis of Vancouver, and Miss Stewart of the University, who organized the work and acted as my assistants, did a fine job. We had an unusually congenial group of weavers and did a lot of interesting work.

From Vancouver I went to Banff, where the University of Alberta holds its summer School of Art. The Banff meeting was remarkable in several ways: The setting, in that beautiful and famous mountain resort, was delightful, and the association with the Banff School of Art was interesting and stimulating. I only wished that there might have been time to attend the painting and sketching classes, the pottery classes, and some of the many other activities of the school. For weavers with non-weaving wives, husbands, sons and daughters Banff offers an excellent solution of a problem -- there is something at Banff to interest each and all, including a very popular art-class for children, to say nothing of golf, horse-back riding, boating, fishing, hiking, and delightful trips to near-by places of interest, all set in the most magnificent mountain scenery imaginable.

This was the first summer that weaving was included in the work of the Banff School of Art, so it was something of an experiment. However everybody appeared pleased with the results and I understand it is planned to have weaving in future as a regular feature of the school.

Mrs. Ethel Henderson of Winnipeg, a graduate of my course of weaving by correspondence, organized the work at Banff and acted as my assistant, and much of the success of the affair was due to her excellent work. I have certainly been most fortunate in having such generous and enthusiastic and able helpers in all these institutes.

At all the summer institutes we did double weaving by the Mexican method described in the Bulletin for last July. This is so much simpler and quicker than the Finnish method that nobody cares to do it the Finnish way any more, and we shall have to call it "Double weave" instead of "Finnweave," hereafter. No more groping behind the reed for the "cross" and the "round-stick" or finding the place for the shed-stick! But of course anyone who prefers can still do it the complicated way if he prefers.

Some of the special weaves that proved most interesting to those attending the institutes were the new rug-weaves, the weave for cotton towelling, the "boys and girls" motif in "no-tabby" weaving, the hoods described in the October Bulletin of last year, and a Scandinavian warp-face weave given in the Bulletin some years ago and now revived with excellent results. These weaves would also be excellent for Christmas weaving.

The little hoods -- we made a lot of them at Banff -- were done in a medium weight worsted yarn, threaded to "Monk's Belt", and made up on the pattern given us by Mrs. Coulter of Victoria. They are clever and attractive little things, though made this way are hardly warm enough for winter. For winter sports and motoring it would be better to make them as described last year -- in double weaving in wool, and quilted if desired.

At Vancouver, and also at Banff, we used the "boy and girl" motif, on the diamond threading, for knitting bags and also for pillow-tops. For the bags we had a row of boys on one side with a row of girls on the other, and bands of a conventional pattern at the top on each side and also for the bottom of the bag. These were very lively and amusing in effect, and quite unusual. They would, I am sure, make an excellent Christmas specialty -- either for sale or for holiday giving. Each weaver had his or her own idea of costume and dressed the quaint little figures to suit individual taste. I hear that in some places the "boys" have been woven in uniform, as soldiers. We made these pieces on carpet warp set at 15 ends to the inch, woven in a four-ply worsted yarn, beaten to cover the warp completely.

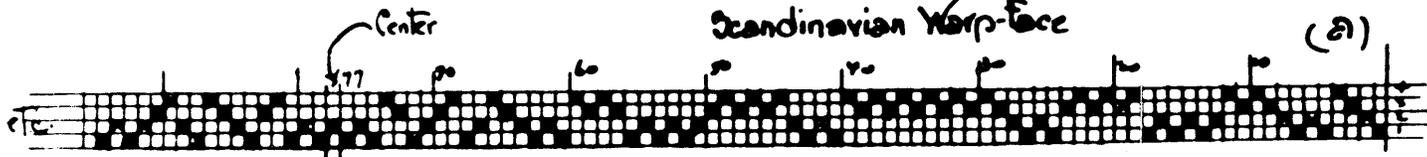
This "no-tabby" weave has many delightful possibilities, I recently made some small experimental rugs in this weave, using the new cotton rug-yarn supplied by the Lily Company. These came out so well that I did a leaflet for the Lily Company which they have been sending to weavers on their mailing list. The leaflet shows three of the rugs in color, and gives the directions. There is no charge for the leaflet. Many Guild members have no doubt received it, -- if not, write to me or to the Lily Company and ask for one. I have been provided with a stock of the leaflets for distribution.

I believe these gay little rugs will make excellent Christmas gifts. They are unusual and attractive and also useful.

We used the Scandinavian warp-face weave for "ski-belts", and these proved particularly interesting, and will be fine for Christmas. As the draft was published so long ago I am repeating it at (a) on the diagram. For lack of space I have shown only a little more than half the threading, but I believe it will not be difficult to follow. The pattern may be threaded in two contrasting colors -- a dark color and a light color -- as shown on the draft, but the effect is livelier and more interesting if many bright colors are introduced. It seems best to make either all the dark threads or all the light threads of the same color and to introduce the other colors in the second set of threads. For instance make all the dark threads of dark blue and for the light threads use white, yellow, green, red, orange, light blue, or any other desired shades. Or make all the light threads of the draft in white or tan and for the dark threads use a variety of brilliant colors. We did it both

# Page three

## Scandinavian Warp-Face



■ Dark colors      ■ Light Colors



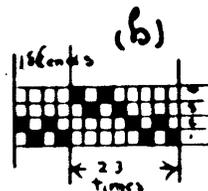
Warp: 7 ends dark  
tie-up      77 light

Weave: 1, 2, 3, 4, 1, 4, 3, 2. Repeat

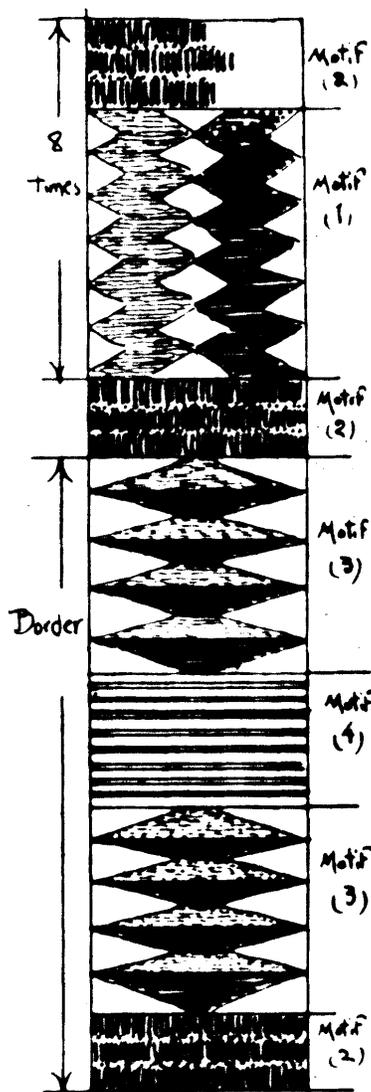
## Mrs. Cook's Girdle



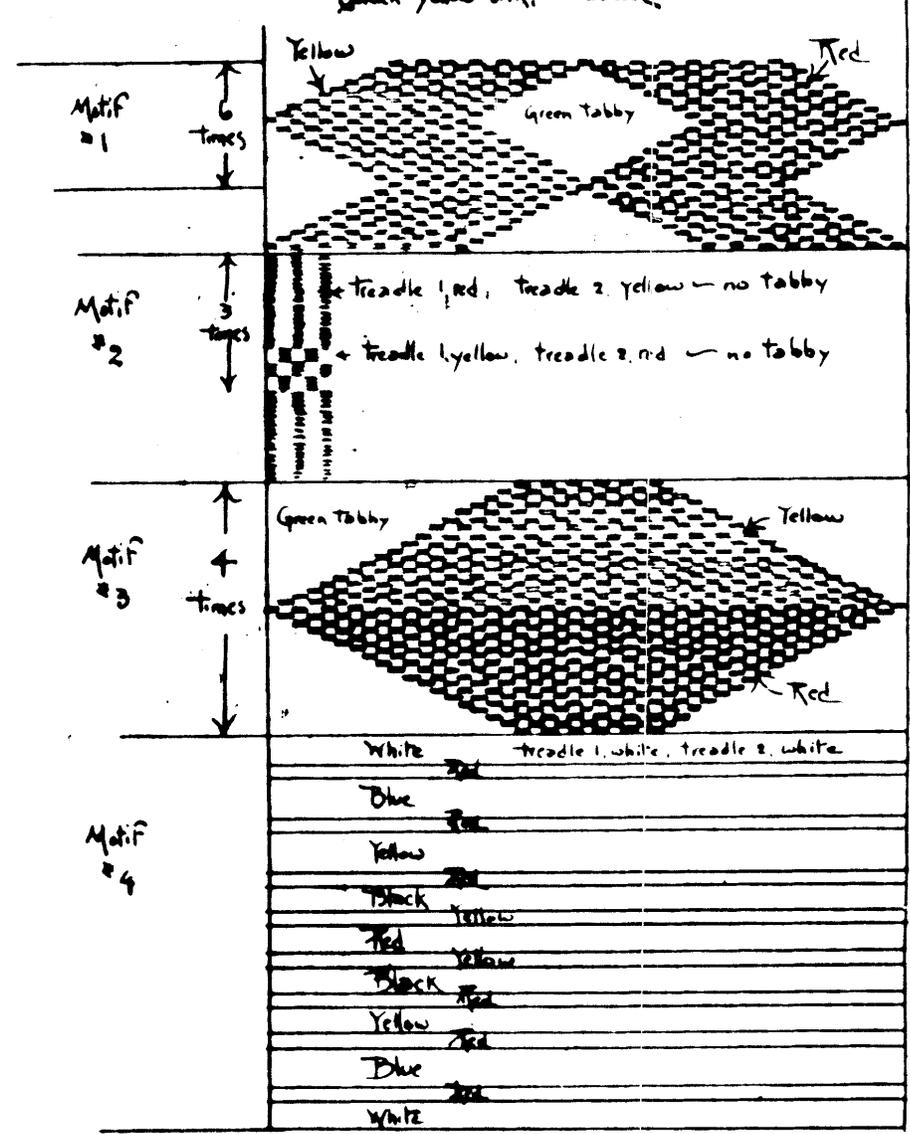
tie-up



Warp: Green spun silk at 30 ends to the inch  
Weft: Dobby, like the warp. Bottom: Dull red and golden yellow silk, -clubbed!



Arrangement of motifs



Motifs #1 and #3 are woven with a tabby background, the figures being laid in on treadles 1 and 2 alternately. Motif #2 is woven in red and yellow, alternate shots, on treadles 1 and 2, -no tabby. Motif #4 consists of a series of stripes in solid color, woven on treadles 1 and 2 alternately -no tabby.

ways at Banff, and which way proved handsomer was a matter of taste. For these pieces we used a four-ply worsted yarn, a little different from any yarn we have on our sample cards. Our Shetland yarns would serve. We found it best not to take the warp through the reed at all, but to weave it without the reed or the batten, using a small flat "poke-shuttle" and pressing the weft together with the shuttle. As we wove these pieces they were about 3" wide. Some people preferred to weave them a little wider, but they were firmer, and the pattern was more brilliant, when they were made at the width suggested. As this is a warp-face weave, with the effect entirely in the warp, the weft should show very little or not at all. For weft a double strand of material like the warp may be used, or a coarser yarn if preferred. The color of the weft does not matter greatly though if convenient it is well to use the predominating shade of the set-up. One thing to bear in mind in all warp-face weaving is that the weft must be drawn tight to keep a good edge and to keep the width uniform.

We finished these ski-girdles with long braided fringes, but they might be set in a large wooden buckle if preferred.

As usual, I saw many interesting things on my travels that were new to me. Among them was a charming silk girdle worn by Mrs. Cook of Vancouver who attended the Vancouver institute. Mrs. Cook said the piece had come from an exhibition of the crafts of all countries, held in London. She did not know from what particular country this special piece had come, but from certain indications in the weave and material I fancy it originated in north Africa. Be that as it may, we worked out the weave at Vancouver and as it is simple and effective some of our Christmas weavers may enjoy using it. The threading is given at (b) on the diagram.

The warp in this girdle is a rather fine silk in a vivid green shade. Spun silk at 30 ends to the inch would give much the same effect. Instead of silk a mercerized cotton might be used. The weft in the piece was also silk, -- tabby like the warp, and for the pattern figures double strands of silk in dull red and gold, with stripes of several other colors in the border.

As indicated on the diagram, the stripes, and also the motif separating the figured sections, are woven without a tabby, on treadles 1 and 2, the weft being beaten close to cover the warp. For the pattern motifs a tabby is used and the figures are laid in in a very simple manner on treadles 1 and 2 alternately, as indicated on the diagram. Part of the piece appears to have been woven using two small shuttles, each carrying a single strand of colored weft, for each part of the pattern. These shuttles were carried through the same shed in opposite directions. The result of weaving in this manner is a clearly outlined figure on both sides of the fabric. Part of the work, however, seems to have been done with shuttles carrying double strands. The effect on the right side of the fabric is precisely the same, but the wrong side shows an irregular outline.

This is an extremely simple weave, and might be used for wider pieces -- for bags, runners, pillow-tops and so on -- without difficulty. Other patterns of course may also be developed in this technique. Rayon might be used instead of silk, and the weave is also interesting when developed in wool over a cotton warp. It is one of the simplest and most rapidly executed of the "inset" techniques, and should appeal to weavers who like the freedom in design and use of color presented by weaves of this order.

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A leaflet on the "inkle" loom, showing a number of new patterns and techniques, is in preparation and will soon be issued. The price will be \$1.00. Mr. Gilmore has developed a "modified" inkle loom that is in several respects more convenient and easier to use than the old English type. It is a table model, but sturdy in construction and entirely practical. Though these little looms can be used only for the making of narrow fabrics, they are fun to use, and provide a delightful small textile craft for odd moments, conversational moments, and for radio-time.

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May M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin, Montana

November, 1941

(Copyright 1941, Mary M. Atwater)

It is some time since anything has been said in the Bulletin about scarves, and as we may wish to make some scarves for Christmas, and as there is still time to do so, here are a few suggestions and a new pattern.

Scarves, like other small personal pieces, are very much a matter of the fashion of the moment. I can remember years when the scarves were very narrow -- more like neck-ties -- and years when scarves were as wide and long as a cape. So in planning Christmas scarves this question of fashion comes first. For this year scarves appear to be moderate in both width and length. Brilliant color is prominent, but the desired effects are "smart" rather than "pretty." The accent appears to be on cleverness of weave rather than on pattern figures. We can be as gay and fantastic as we like, but above all we must be sophisticated.

A scarf is largely -- perhaps chiefly -- a note of adornment, but it must also be agreeable to wear -- soft, not scratchy, light, warm and "tuck-in-able." For this reason the yarns used should be soft, light, worsted yarns of the best quality. "Iceland" is an excellent yarn for scarves, and so are the better grades of Shetland. For winter-weight scarves, for cold climates and for ski-addicts, some of the heavier knitting yarns may be used. But "home-spun" and other wool yarns should be avoided, and also the harsh low-grade forms of knitting yarn.

The width to make a scarf depends somewhat on the material used. A filmy scarf can be wider than one made of heavier material. About a yard and a quarter appears to be the most desirable length. Fringes? Perhaps. It is a matter of taste. But if used the fringes should be quite short. None of the long dangling fringes we used to make.

There are, of course, a great many weaves that are suitable for scarves. I do not count the overshot pattern weave among them, however. The plain weave is often used for these pieces, a decorative effect being produced by setting the warp in stripes of different colors, or weaving stripes of different colors, or both. The plain weave makes a firm fabric, lighter in weight than any other weave except leno, but it does not make as soft a fabric as one or another of the twill family of weaves. For winter scarves, which should be warm as well as soft, the twill weave is on the whole to be preferred to plain weaving in my opinion.

The Scotch Tartan patterns make handsome scarves and are always useful as they suit almost any costume. They also have the sentimental value, when woven in the clan pattern of the wearer, that many of us feel. We like to remind ourselves of the bit of Scotch that we count in our ancestry. The tartans are more fashionable some years than others, but they are never out of style.

If you happen to have a crackle-weave threading on your loom, here is a simple and easy way to make a scarf with an unusual effect: Use a fine worsted yarn for the warp and the same yarn -- in the same or a different color -- for the tabby weft. At irregular intervals weave in a single shot on one or another of the pattern sheds, using by preference one of the novelty yarns. These shots may be in several colors if one pleases, and should not be woven in any regular order. Flake yarns, that are alternately hard-twisted and loosely twisted, are excellent for this, or yarns showing tufts of color. The effect of this simple weave can be very gay and amusing, but it takes a bit of ingenuity to avoid an effect of pattern.

The unusual twill pattern given at (a) of the diagram will be found excellent for scarves, and also for automobile "knee-blankets" and for a coat-fabric also. The warp should be set closer than for an ordinary 2-2 twill and there should be only about half as many weft-shots to the inch as there are warp-ends to the inch in the setting. For a scarf I suggest Shetland or similar yarn set at 18 or 20 to the inch. For a couch-blanket or automobile blanket -- these things make such delightful and useful Christmas gifts! -- I suggest Germantown yarn set at 15 or 16 to the inch.

The effect of this weave is "smart" and modern. It produces lengthwise stripes in a shaded effect and in a slightly uneven weave -- due to the double threads -- that gives the fabric the subtle simplicity that is the modern note. The threading might also be used for a tweed coat-fabric with good effect.

The threading at (b) is a modification of the (a) threading that produces lively lengthwise stripes in a twisted cable effect. The threading may be repeated as written, or the plain dark stripe may be repeated twice to set the gay stripes further apart. This threading is suggested for scarves. It would not be as good as threading (a) for other things. Any desired colors may be used for this pattern, and a very lively effect results from using different colors for each of the gay stripes. The weft should be in the color used for the plain sections. These sections as shown on the diagram are indicated in a dark shade, but of course may if preferred be in white or a light color.

Both (a) and (b) might be used for bags to make a smart bag and scarf set, with perhaps a girdle to match, woven in the manner of the Canadian girdle shown at (c).

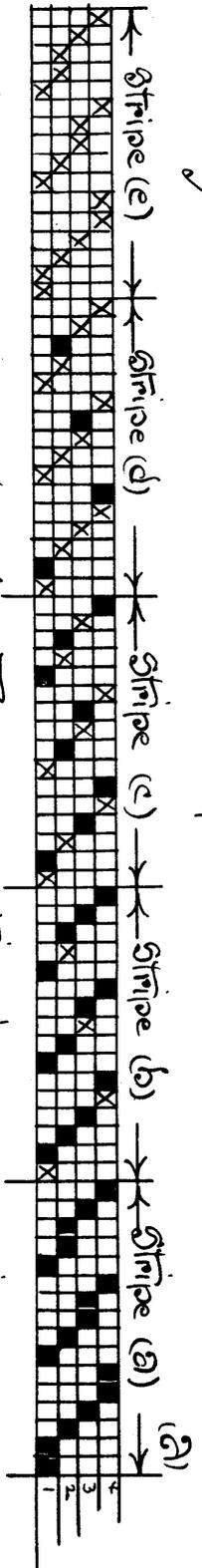
This little girdle is not, perhaps, remarkable for durability, but it is at least temporarily attractive, can be made easily and quickly, and provides a good way to use up odds and ends of colored yarn. Possibly a similar effect could be used for scarves and matching bags. Though I am not at all in sympathy with the "weaving for now" idea that is being used as an excuse for the making of sleazy and impractical fabrics, it is true that small articles for personal use and adornment need not be made with an eye to great durability; for fashions change and what we like this winter we may not care for at all a year from now, and what we shall like five or ten years, -- or twenty or a hundred years -- from now, is something we need not worry about.

When it comes to fabrics for upholstery, drapery fabrics, suitings, and so on, the case is different. A fabric that will pull to pieces at a touch is not suitable as a chair-covering, even in our impermanent times; and we want our clothing to keep its shape and remain in one piece, at least till we become tired of wearing it. Durability should be the foundation quality of any really fine piece of weaving, for what is really beautiful now will still be beautiful even if Russia is defeated, and even under a hated dictatorship, through misery and pain, till perhaps the world returns to sanity -- as we must believe it will in the end. Good craftsmanship has survived periods in history as hideous as the times in which we live, and will no doubt survive these times also. We are doing our bit by upholding the standards of good workmanship within our craft. It seems worth doing.

But that does not mean that we cannot at times amuse ourselves and our friends with frivolous bits of work intended only for the pleasure of the moment.

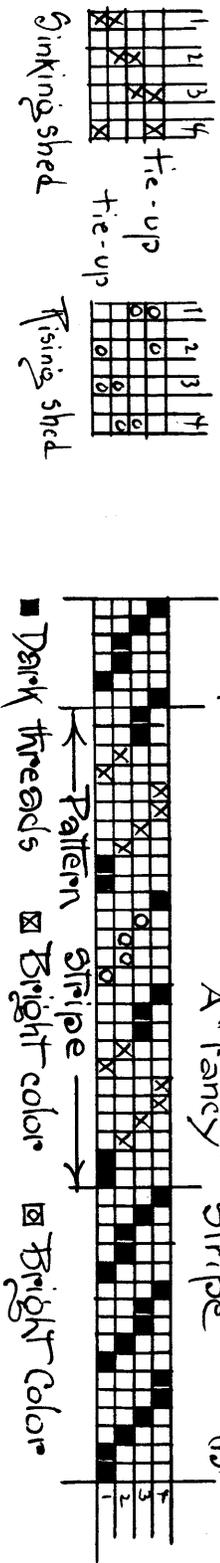
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One of our Guild members, Miss Olga Morse, has sent me a very interesting little Indian "loom" which seems to me the absolute lowest denominator in weaving equipment. This little loom is sketched on page Four. It consists of a small branch of a tree, with a fork at the end, flattened on the inner side and bent in the form of a bow. The warp-ends, consisting of hard-twisted cotton strings, are knotted at the top of the bow and attached in the crotch of the fork with a double hitch. The unwoven end of the warp is loosely braided together to keep it in order. The weaving, in

# A "Fancy" Twill Pattern for Scarves, Blankets or Coat Fabric

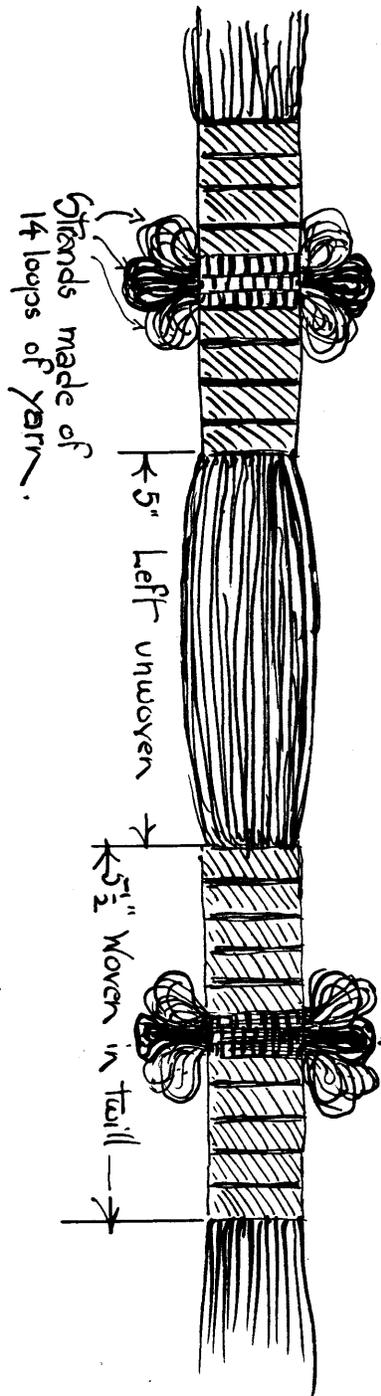


Dark threads    Light threads. Repeat each stripe three or more times

A "Fancy" stripe (b)



Canadian Girdle (c)



Material: Canadian "4-ply" yarns. Shetland or light-weight knitting yarns may be used. Warp, 32 ends in dark blue, set at 20 ends to the inch. Weft, yarns similar to the warp in girth, but in a variety of kinds and colors. The woven sections are beaten close, made in bands of bright color with a few shots in dark blue between. At the center of each woven section three heavy strands of colored yarn are introduced, as illustrated. The girdle is made two yards long and is finished with fringed ends.

a simple pattern of small oval figures, done in three colors, is produced by twining two weft strands over and under the warp, against a background in a tapestry effect. Miss Morse writes that this form of weaving appears to be the only one practised by the coast Indians of Oregon, and was used for the making of head-bands. In ancient times the warp was made of cedar-root fibres and the weft of spun dog-hair.

To me this little loom is extremely interesting, and I believe will interest members of the Guild. As a camp-project it would be fun to make and weave on such a loom, and I shall certainly have a try at it some time -- though when confronted by the work of primitive peoples I am always humbled by the consciousness of my clumsy civilized fingers. We of our times need the help of the best equipment we can find in order to produce fabrics of anything like the fineness and beauty of the things "poor savages" can make on a frame of rough sticks. Primitive they may be, but in their art they are anything but crude.

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Miss Ella Jurgens, who is one of our Charter Members, and also a member of the St. Louis Weavers' Guild, requests me to say that the St. Louis Guild will hold an exhibition at the St. Louis Art Museum in Forest Park, November first to November Thirtieth. She writes: "In addition to textiles we plan a display of looms of all types. We have a very old walnut one from long before the Civil War, and also loom accessories old and modern. . . . In January 1942 we plan a program of 'International Weaving' and invite contributions." Miss Jurgens' address is 5895 Cates Avenue, St. Louis, Mo..

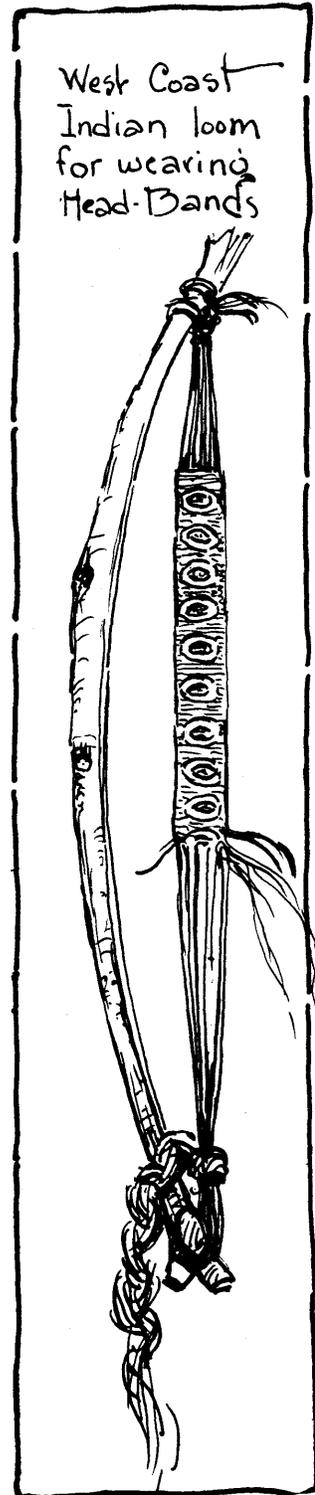
I am sure that Guild members who may be in or near St. Louis at the time of these exhibitions will be interested to visit them. The St. Louis Guild is one of the most prominent weavers' organizations in the United States and includes many weavers of top rating. There are sure to be many unusual and beautiful pieces on display.

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The inkle loom leaflet is now ready for distribution.

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As usual at this season we offer Guild members a rate of \$4.00 on gift subscriptions to the Bulletin for friends. The Bulletin makes a useful Christmas gift for weaving friends, as do also the Guild Recipe Book, and our special leaflets. The Christmas gift rate for a subscription to the Bulletin and the Recipe Book, in combination, is \$10.00. Kindly order as early as possible so that sufficient books may be on hand.



May M. Atwater

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

for

Basin, Montana

December, 1941

December is the month we reserve for a discussion of equipment and methods -- not very exciting, perhaps, but perhaps useful.

In the matter of equipment, there is the little "New American" inkle loom, designed and supplied by Mr. E.E. Gilmore, 1200 West Harding Way, Stockton, California. This is a nice, sturdy little loom and has a number of improvements over the "Old English" type of inkle loom. The price is only \$5.50. Many interesting and useful things can be woven on the inkle loom, and the making of them is a fascinating little craft that will appeal to most hand-weavers. Our new inkle loom leaflet with directions and patterns for six different techniques is now ready -- price \$1.00 -- and is as complete as I am able to make it at this time. Of course "inkles" may be woven on an ordinary harness loom if one wishes, so the pamphlet will be of interest whether or not one has an inkle loom. However it is amusing to weave these narrow fabrics on the special equipment.

Mr. Gilmore writes me that he has also just perfected a measuring device for measuring the yardage in spooling warp. He plans to offer this new "gadget" for sale, but I do not know the price. For myself, I have never felt an overpowering urge to measure the yardage in spooling warp. I simply make certain of putting enough on each spool so that the spools will not run out during warping. What is left on the spools can be wound on shuttle bobbins and used for tabby, so if there is a bit left there is no waste. However a good many people have asked where such a measuring device could be obtained and will be interested in this announcement.

I have had a long correspondence with the manufacturer of a new type of loom that appears to me to have wonderful possibilities. The loom in its present form is an automatic fly-shuttle affair, designed for commercial use and not adapted to handicraft. But I feel sure the unusual shedding principal could be worked out for a handloom. So far the manufacturer has not been willing to undertake the re-designing necessary, -- and there are some practical difficulties, such as the heavy operation of the loom -- but I am in hopes of getting some action on this sooner or later, and when I do shall give the information through the Bulletin. Any improvement in our equipment is of great interest to us all.

And speaking of looms, I feel I must say again some things that I have said many times before. As I go about the country to the various weaving "institutes" I am filled with amazement at the way so many of us appear willing to weave on poor looms, looms that are out of adjustment, looms that balk at doing the things a loom is supposed to do: to hold the warp stretched and even; to open a good, clear, wide shed -- and to do it easily and willingly --; to beat properly without undue effort on the part of the weaver. Weaving is a delightful occupation, but fighting a balky loom for each shot of weft is no fun at all. There are excellent looms on the market in these days of renewed interest in weaving. There are also, unfortunately, many poor, bad, and abominable looms. Of course this is the fault of the weavers. If we refused to buy or use the unsatisfactory looms the manufacturers would not make and sell the things.

I should like to ask each member of the Guild to take time out this month to go over his or her own weaving equipment. Does it operate easily and smoothly? Is the balance correct? Is the beater rigid, and heavy enough to deliver a good beat? Is the warping equipment adequate and practical? Is there ample weaving space in front of the heddles? Is the frame solid in construction and absolutely "true"? Are the ratchets adequate? If you find a fault, do something about it. Of course the fault may not be in the loom but in the weaver. I have seen people working on good looms that were so far out of adjustment that good weaving was impossible. We become so interested in what we are making that we sometimes forget the loom, but that's really a poor excuse.

If the fault is in the loom, it should be diagnosed and remedied if possible. If the frame of the loom is not solid and absolutely square, there is no cure and the loom should be junked. This may seem a hard saying, but it is the truth and there is no way of getting around it. Any other fault can usually be corrected.

I suppose I am a lazy person, for I feel very strongly that -- provided the results are equally satisfactory -- the best way to do a thing is the easiest and quickest way. That is why I advocate sectional warping, and why I think a four-harness loom should have six treadles instead of four. The essential thing in warping is to get the warp on the beam as smoothly and evenly as possible, and as this can be accomplished in an hour -- without assistance -- by using the sectional method, when to make and beam the same warp would take ten hours by the board and chain method, with the help of one or two assistants, it seems to me only good sense to warp sectionally. The essential thing in treadeling is to open the correct shed, and as this can be done with one foot, and a minimum of searching for the right treadles when one has six treadles instead of four, it seems like good sense to have the additional treadles.

Speaking of treadles : I am often asked whether it is better to have the treadles attached to the back or the front of the loom. This is largely a matter of personal fancy, and leverage. For a small loom, let fancy dictate, but in most large looms the leverage is better with the treadles attached at the back, and the loom therefore works lighter. In a loom with more than four harnesses there is another reason for hinging the treadles at the back: an eight harness loom requires twelve treadles as a minimum, and if it is equipped with fourteen or sixteen treadles, so much the better. This means that the treadles must be narrow and set as close together as practical. If the treadles are attached in front the weaver's foot must go down between the adjoining treadles when a treadle is depressed, and if the treadles are set very close together there is danger of barked toes. If the treadles are hinged at the back one can engage the end of the treadle with the toe and there is no danger of interference.

There is, too, the recurring question of metal heddles versus string heddles. String heddles make a prettier looking loom than metal heddles, but few of us keep a loom as a parlor ornament exclusively. Metal heddles are the more practical. They are easier to thread, do not break or become tangled, and they add enough weight to the harnesses so that in a loom of the jack type it is unnecessary to use the complicated double tie-up. It is not true, as is sometimes claimed, that string heddles put less friction on the warp than metal heddles. In fact the exact reverse is the case. Otherwise you may be sure the manufacturers would use string heddles on fast-operating power looms for the weaving of delicate warps. They do not do so.

Every weaver, except one who specializes in "yardage" of a single standardized kind, should be equipped with several reeds. It is impossible to get all warp-settings through a single reed, and different warps and different weaves require special settings. No one thing makes more difference in the texture and effect of a woven fabric than the setting of the warp. If the setting is incorrect the resulting fabric will be unsatisfactory, no matter how well it is woven or how well-chosen the pattern, colors and materials. If only one warp is used it is necessary to limit ones work to the warps and weaves suited to that particular dentage. This seems a pity, as reeds are not costly. They may, though, soon to be hard to obtain due to war-quotas on metals, so I should like to suggest that it would be a good idea to invest in any needed reeds as soon as possible. If the war lasts long enough we may not be able to buy either reeds or heddles.

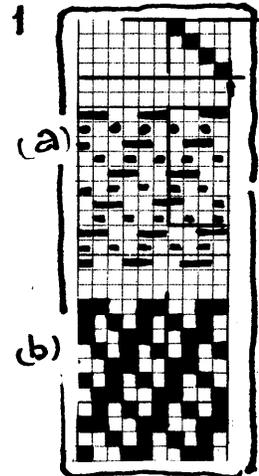
Many yarns we like to use are also becoming difficult to obtain and may disappear altogether before long. Those of us who are addicted to linen, rayon and celophane would do well to stock up while some material is still available. Wool and worsted yarns may soon be very costly or entirely unobtainable. We still have cottons, however, and it might be well to find new and interesting ways to use cotton yarns. I have long felt we were not getting as much out of cottons as we might, and now will be a good time to turn our attention that way.

One of our difficulties with cotton has always been that the dealers and manufacturers do not supply the soft, unmercerized cottons that are most suitable for hand-weaving. We have had to get such cottons from Sweden. Now we can no longer get them from abroad, and it should be possible to persuade a manufacturer to make something similar. I have written to the Lily Company along these lines, and should like to ask Guild members to write them also. It is easy to see that a manufacturer hesitates to introduce a new type of yarn without some assurance that there will be a market for it. Such assurance we should be able to supply. The address of the Lily Company is Shelby, N.C..

Several Guild members have written me recently telling of having difficulty in obtaining samples and price-lists from the Lily Company. This is due to the fact that the company does a large wholesale business and unless inquiries are directed to the hand-weaving department they may not get proper attention. So when writing the Lily Company, please remember to address the Hand-Weaving Department.

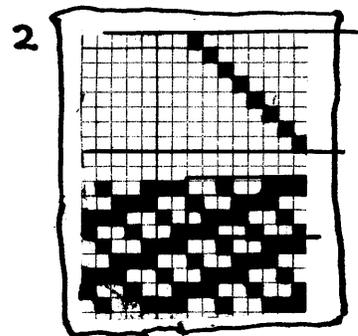
To change the subject, and answer another technical question frequently asked, let us consider the procedure in finding the draft of a sample of twill or other small "fabric" weave. I have never learned how other weavers perform this useful little operation, and I have never seen any printed directions. I can only describe the method I use. If any of our Guild members can suggest something better I shall be greatly interested to hear about it.

The methods used in writing drafts for the various pattern weaves are fairly well understood among us, but even expert weavers sometimes have a harrowing time with one of these small weaves. Part of the trouble, of course, is due to the fact that a fabric is often finished in such a way as to hide the course of the threads and to make the structure of the fabric confusing. Also, it is not always easy to determine from a small sample which may be warp and which may be weft. Of course if a selvage is present it is easy enough to see which way the fabric was woven. Otherwise one may have to make a guess, based on the material and other factors, or one may find it expedient to analyze the fabric in both directions. At any rate, determine which set of threads to call warp and which weft. Then, with a large needle, separate the picks of weft and lay out the plan of interlacing on cross-section paper. I use paper ruled 10 X 10 to the inch as this is large enough to be easy to follow and gives a clear picture. The drawing may be made either as at (a) or as at (b) -- whichever method appears to give the clearer idea of the weave. The threads must be traced very carefully, of course, and it may be necessary to use a magnifying glass to see them clearly. Suppose the drawing when complete looks like the one shown. Mark off the repeat of the weave, in both directions. It is at once obvious that what we have here is an ordinary four-harness twill, woven with alternating twill and tabby shots. An elaborate analysis is unnecessary. This little weave, by the way, produces a firm and handsome fabric and is a good weave for suitings.



Suppose, though, that you take the warp in the other direction. The drawing will then appear as at (2) and it will be plain that to reproduce it requires an eight-harness twill threading, with a weft-repeat of four shots.

Somewhat more difficult is the weave shown at (3) on the following page. The drawing indicates a repeat of eight warp-ends, and the weave could be reproduced on eight harnesses threaded to a twill as shown in the threading draft at (a). However as the weft-skips are nowhere of more than two threads it seems probable that this draft might be written for four harnesses. To determine whether or not this is possible, write out the tie-up for the four weft-shots of the repeat, as shown. A study of this tie-up draft will show that on each of the two treadles involving harness 1 there is also a tie to harness 5, so if we write the fifth thread of the draft on harness 1 the pattern will not be affected. In the same way it appears that on each of the two treadles involving harness 2, there is also a tie to



harness 7. The seventh thread of the draft may therefore be written on 2. In the same manner it will be found that the sixth thread may be written on 3 and the eighth thread on 4. The resulting draft appears as at (c).

To make this discussion more interesting, a few drawings of simple weaves are given without drafts, so that Guild members may have the pleasure of working out the threadings for themselves. Woven samples of these weaves may as usual be obtained from our official sample-weaver, Mrs. Maybelle Gano, 2016 Castillo Street, Santa Barbara, California.

I have recently done an article on braids useful to a hand-weaver, -- an article that will appear in the next issue of Bernat's WEAVER magazine. Guild members may wish samples of the various braids shown in this article, and if so I believe Mrs. Gano will be able to supply them. No matter how clear a picture may be, an actual sample tells the story more clearly.

And here is what I have to say in reply to a question often asked me recently: "Should hand-weavers 'sign' their work?" To me this appears to be chiefly a question of taste and convenience. An artist signs his work, and the signature adds to the interest and value, if the artist is a distinguished one. Names woven into the corners of old coverlets add interest and value after the passage of years. So if you wish to weave your name into a large and important piece -- that might be considered a "work of art," by all means do so. But you would not put a signature on a cake or a pan of biscuits, so it seems to me somewhat silly to take the time and trouble to weave a signature into such things as towels and pillow-tops. Of course for linens it is sometimes appropriate and interesting to weave initials as part of the decoration, but unless the pieces are intended for your own use, the initials or name should be that of the person buying the article or receiving it as a gift, and not the name of the weaver.

A signature to a work of art should be as modest and inconspicuous as possible, or it detracts from the artistic effect of the work. And to weave in a very small name is not an easy job by any method, unless one weaves on a Jacquard loom. Consider whether or not it is worth the time and trouble. Cross-stitch would do the job just as usefully, if it has to be done. If a signature is desired as a trade-mark on hand-woven articles offered for sale, this might appropriately be a small symbol of some kind -- as a series of dots woven into a heading.

But I think the rule suggested above is a safe one to follow-- unless the signature adds interest and value to the piece, and unless the work is of outstanding excellence, let it be nameless. At least that is my feeling in the matter.

Who started this thing, anyway?

*May M. Atwater*

