

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



January 1948  
Volume XXV, Number 1  
Basin, Montana

Subject:  
Colonial Coverlet  
Weaving as-drawn-in

A question which often comes to the Shuttle-Craft desk is, "I have been asked to give a talk on handweaving for the Women's Club (or the Art Club, or the Parent-Teachers Club); what do you think would be the best subject matter?" Handweaving happens to be a subject in which most people, whether or not they have woven, are interested. And this interest is not limited to groups of women; men, we find, often have a more intelligent and realistic approach to weaving than do women. Probably the most enthusiastic audience I ever had at a weaving talk was at a Kiwanis Club meeting.

For a public talk on weaving there is, first of all, the common approach: recounting one's own experiences with the craft. The reason why one first started weaving (and there is usually an interesting story here); one's early adventures in securing a loom learning about materials, finding a book of directions (probably the majority of weavers have found their initial stimulation and early instruction in Mrs Atwater's SHUTTLE CRAFT BOOK OF AMERICAN HANDWEAVING), and then laboriously, through trial and error, preparing a warp, threading the loom, and producing that first, thrilling pattern. The speaker usually takes an exhibit of textiles which he has woven and collected and, if possible, demonstrates the actual weaving on a loom. Such a program makes a very realistic and stimulating program for any organization, a program which will hold enthusiastic listeners asking questions and recounting their own weaving experiences until supper time or late evening. And usually some new handweavers are born from such a contact with the craft.

But there is another type of weaving talk which has a vital appeal -- a talk on the Colonial American Coverlet. In almost any group of people there will be several who can say, "We have an old blue and white coverlet, my husband's great grandmother -----," or, "My great Aunt Nancy who lived in Tennessee made coverlets, and linen bed ticks, and shirts -----," or, "Up in our attic we have part of an old loom which my grandmother brought with her across the prairies when the family pioneered." The early traditions of handweaving are close to us in this country. The early American Coverlet holds a warm response to most of us. It is amazing how many coverlets emerge from just a few inquiries and a small classified ad in a newspaper will bring astounding results in treasures from moth balls. A few years ago I attended an American Federation of Art meeting for which a Guild member collected and displayed local coverlets, talked of the general history of the coverlet and the specific histories of some of the local ones, and then told something of the evolution of handweaving to its present status. The meeting brought many hidden coverlets to light and brought a deeper appreciation of our American heritage to everyone who heard it.

Since January has always been the Guild Coverlet month, this is a good time to think of such matters. We need not go into the history of the coverlet as this has been given many places. Mrs Atwater's SHUTTLE CRAFT BOOK is the most complete and comprehensive book on the subject; other books, though they do not give technical information on weaving, are: HANDICRAFTS OF THE SOUTHERN HIGHLANDS by Allan H Eaton (Russel Sage Foundation, New York, 1937; A BOOK OF HANDWOVEN COVERLETS by Eliza Calvert Hall (Little, Brown and Co, Bos-

ton, 1925) A booklet which should interest many Guild members is HAND WOVEN COVERLETS IN THE NEWARK MUSEUM, compiled by Beatrice Winsor, Director, Newark, New Jersey (1947). This intelligently written, well illustrated booklet may be secured from the museum for \$1.10.

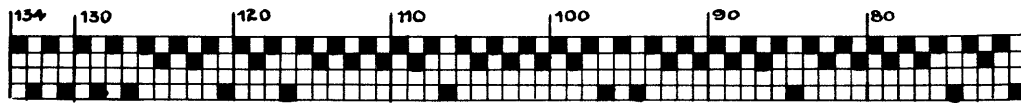
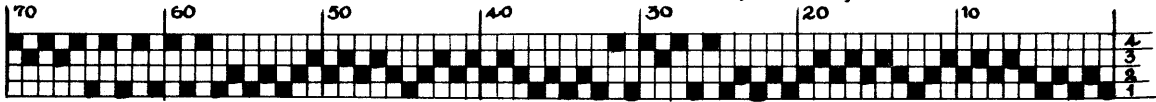
The common coverlet techniques were Overshot on four harnesses, Summer and Winter on six to ten harnesses, and Double Weave on twelve or sixteen harnesses. Plainly enough the Overshot technique was most commonly produced because of the rarity of the multiple-harness looms. Regardless of type, the materials were usually the same: white cotton or linen warp and tabby and home dyed, home spun wool pattern weft. The Coverlets were usually made in two strips with a seam down the middle and a border all around the edge. Some were hemmed and some had woven and tied fringes all the way around. Occasionally, particularly when the Summer and Winter weave was used, the coverlets were made in three strips. The weaving was balanced and symmetrical, so that the pattern was identical whether viewed across the warp or up or down the warp. The symmetrical development was either star-fashion, with forty-five degree diagonal lines of blocks crossing in the center of each pattern unit, or rose-fashion, with balanced snow-ball or rose figures, surrounded by circles and with no connecting lines. In the best woven coverlets the weaving was perfectly balanced; that is, the background was a 50-50 tabby fabric having as many tabby shots per inch as there were warp ends. This means that the pattern weft was an extra, added thread. One can see that the coverlet design was a highly stylized form, lacking the creative freedom which we seek now in our handweaving, but having the charm of symmetry, balance, excellent proportion and stylization.

But these comments do not apply to all old coverlets, as there were poor weavers and poor weaving a century and a half ago as well as now. I have sometimes thought that it was the exception to find a coverlet without a single threading error (something which we simply will not tolerate now) and all too common are the coverlets with ovals instead of circles, oblongs instead of squares, sixty degree diagonals instead of forty-five degrees. An examination of such poorly designed coverlets usually shows that the errors were due to lack of understanding of the basic principles of weave construction, and not to actually poor weaving. Before machine textiles were produced in this country the home loom was a means for producing the needed household fabrics; it was not a means of creative expression as it is today. The average weaver followed directions for producing the desired textile, but plainly did not analyze the weave and understand how it was produced. Evidence of this may be found in carefully preserved, old, faded and yellowed drafts, often full of pin holes which mark the progress of the loom threader, and in columns of weaving directions on the backs of old envelopes or other scraps of paper. All too often these old drafts contain errors and, though the weaver meticulously followed her draft, she did not have the understanding of drafting to correct the errors, or perhaps even recognize them as such. Then in the weaving, the early weaver was bound to a set of directions, "Spring pedal two, six times; spring pedal three, eight times; etc." If her directions were written for a different warp setting or for a different weight of weft material than she was using, no matter how perfect the balance of her weaving, her pattern was not symmetrical. Often too, good design was lacking because of poorly selected and poorly proportioned borders.

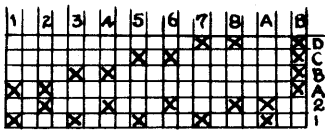
Modern weavers produce their symmetrical Overshot patterns by weaving as-drawn-in, arranging the pattern by eye, directly on the loom as the weaving progresses, rather than through following written directions. This is one reason why now, we can often produce better coverlets than our great grandmothers could.

Overshot Pattern Arrangement. As our Overshot coverlet pattern for this month there is Mrs Atwater's Overshot adaptation of a John Landes pattern. The profile Draft may be interpreted for 6-harness Summer and Winter, for 12-harness 2-1 Double Twill, or for 16-harness Double Weave. Since a standard width for modern looms is 40 inches, we shall plan the coverlet for two 40-inch strips which, allowing for narrowing-in will weave about 78 inches. For a narrower loom or a wider coverlet, three strips may be woven, the center one

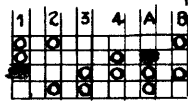
Draft from the "John Landes Book" by Mary M Atwater



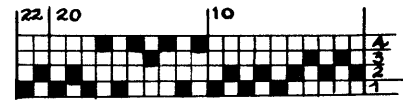
Summer and Winter Tie - Up



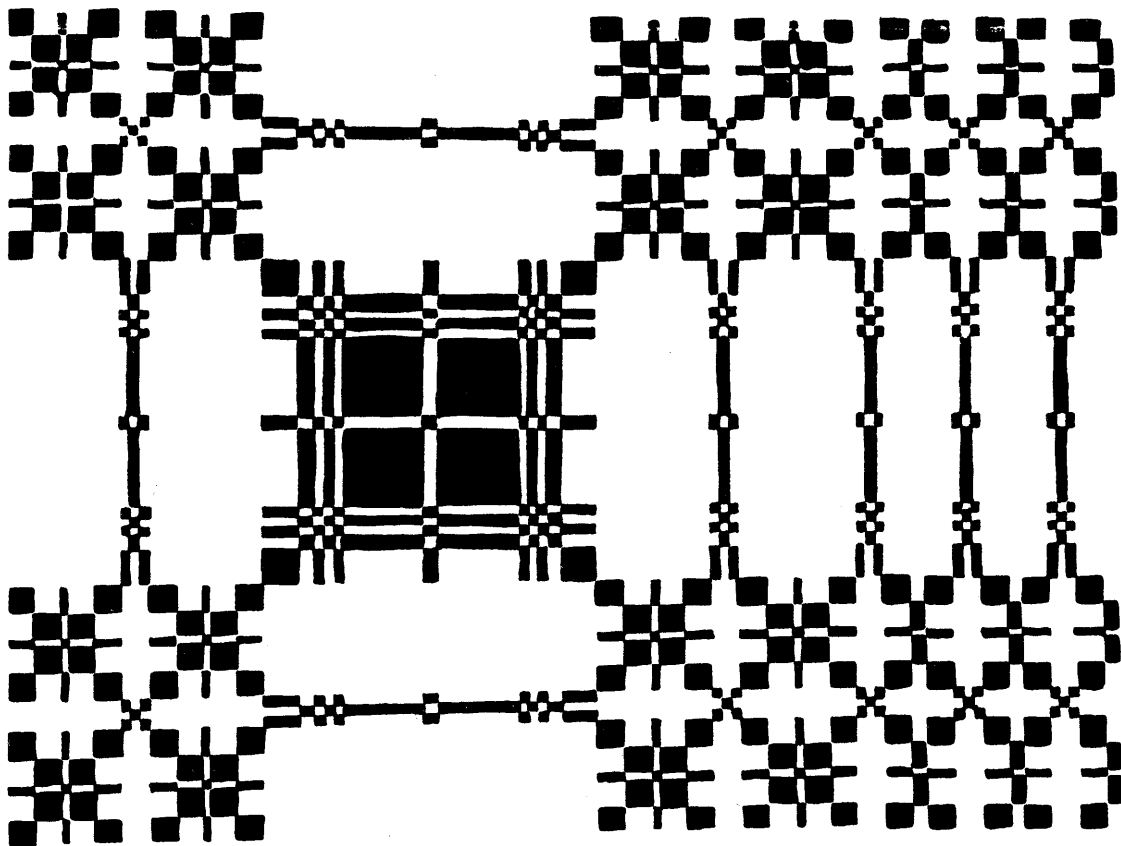
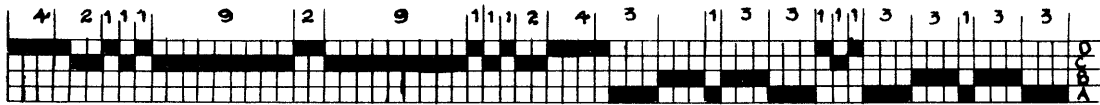
Overshot Tie-Up



Border



Profile Draft



straight pattern and then one edge rethreaded to make a border. As a double bed is about 52 inches wide, the drop at the sides will be 13 inches. A logical border would be ten to twelve inches. Suppose we select 24/3 cotton for tabby and warp, set at 30 to the inch, and Bernat's Fabri for pattern weft. The 40-inch wide warp will have 1200 ends. Subtract 360 to estimate a 12-inch border, which leaves 840 warp ends for the pattern repeat. Divide the total 134 draft threads into 840, which gives 6 repeats of the draft with 36 threads left. Now, one cannot overlook the fact that the center seam must match perfectly so it is usually necessary to add a completing unit at the center seam edge. In this case the unit to repeat is threads 1 through 30, so one subtracts these 30 threads from the remaining 36, leaving only 6 threads which are added to the border allowance.

A border must be well planned so that its design will harmonize with the pattern. It is wisest to select a small unit from the pattern and repeat it over and over. In this case, a good, continuous border may be made by using threads 16 through 37 -- 22 threads (see illustration). Divide 22 into the 336 warp ends of the border allowance, to give 16 repeats of the border unit with 14 remaining threads. But notice that the border unit ends with a 1-2 block and the pattern starts on 1-2. One must subtract the final 1-2's from the last border repeat, which leaves 19 remaining ends. All of these 19 may be threaded to twills for a wide selvage, starting 3,4,1,2,etc, and ending on 1; or one may make the selvage 6 threads wide (3,4,1,2,3,4) and start the border at thread 25, continuing through thread 37, and then repeating the 16 units.

To weave the pattern as-drawn-in. It is assumed that the standard tie-up is used and that the weaving is perfectly balanced. The first step is to find which treadle will give a pattern block at the right hand side of the weaving, just inside the border. (The pattern block is recognized by a gap in the top warp shed, at the proper place, which will give a skip of pattern weft over the warp.) In this case, since the first pattern block is threaded on 1-2 it will weave on treadle 1. Weave this treadle a sufficient number of times to square the block; if the weaving is perfectly balanced this will require the number of shots, less one, that there are warp threads in the depressed block, or 5 shots. Now depress an adjacent treadle, either 2 or 4, and see if a block shows just at the left of the block woven, and having one common thread with it. If such a block does not appear, press the other adjacent treadle and it is bound to turn up. Weave this block until it is square. This one will weave on treadle 2, being a 2-3 block, and it will require 6 shots, as it is a 7-thread block. Now try the adjacent treadles (1 and 3) to find the block which lies just to the left of this and has a thread common with it. It will be treadle 1 again, a 3-thread 1-2 block which requires 2 shots. It can now be seen that a diagonal line of pattern blocks is developing from the lower right hand edge of the pattern toward the upper left, the line going diagonally through the corners of each block. This is the line to follow with one's eye while weaving. As long as an unbroken diagonal which extends at exactly 45 degrees is maintained, a perfect pattern is being produced. One thing which the weaver discovers while weaving as-drawn-in is that all blocks along a continuous draft succession have even numbers of warp ends and are woven with odd numbers of shots, while turning blocks have odd numbers of warp ends and are woven with even numbers of shots.

To weave the border as-drawn-in, the same system is followed. Weave the selvage with single twill shots from the extreme corner of the warp. When the twill diagonal touches the first pattern block of the border, start squaring these blocks along the diagonal line and continue this until the first pattern block is reached. By following this method, a perfectly matched border, exactly alike on all four sides, is produced.

Overshot weaving is done in many different ways and it is not intended to imply that this balanced, symmetrical weaving is the only method. However, this is a basic technique and all weavers should master it whether or not they are weaving coverlets, before progressing to individual variations of style and technique.

*Larriet Anne Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



February 1948  
Volume XXV, Number 2  
Basin, Montana

Subject:  
Scotch Tartans

Here is a "trend of the times" Bulletin, the trend being, without any doubt, Scotch Tartans. Just glance into any fashion magazine, or for that matter up any crowded street, to see the gait of plaids. There is the current popularity of the wool plaid sport shirt for both men and women, and don't overlook the cute little gadget on page 59 of the January 12 LIFE. The handwoven tartan standbys remain: scarves and neckties and, in heavy yarns, blankets, afghans and auto robes. The number of recent requests from Guild members for tartan setts shows that handweavers show that handweavers like to keep up with the times and now, with Fabri again available, we have a suitable yarn which makes the weaving of tartans feasible. Since it has become customary to devote the February Bulletin to twills, tartans logically fit into the scheme.

The word "plaid" as we use it is actually a figure of speech, metonymy I believe, in which one uses one word for another which it suggests. The actual Scotch name for the material which has an orderly color arrangement of crossing stripes, is "tartan" whereas "plaid" is a shoulder scarf about 1½ yards wide and 4 yards long, made of tartan. But such figures make our language colorful. We have generally come to distinguish the traditional Scotch tartans from designed ones by calling the latter "plaids" and retaining the name "tartan" for the former. The tartans have a limited color range: bright red, bright yellow, a deep, bright blue, a dark, mossy green, black and white, and rarely a pale blue. (Colors shown at the end of the Fabri color cards.) The original tartans were of fine homespun yarn and were woven as a balanced 2-2 twill. The people of Scotland have worn tartans since the middle ages and different patterns were used by different localities, towns and clans in much the same way that different huipil designs in Guatemala are produced by each village. But Sir Walter Scott is generally credited with standardizing the tartans in the early nineteenth century when he was prominent in the nationalistic movement which instituted the Regimental setts.

Several Bulletins have been previously published on tartans and there are four Recipe Book sheets which give tartan setts. It is therefore unnecessary to repeat the general information previously given. The Tartan Bulletins for March 1946 and October 1935 are still available at 35 cents each and the Recipe Book sheets (Series IV numbers 6, 7 and 8 and Series VI number 17) for 25 cents each. This month we have twenty new tartans. In making the selection I was partly guided by the attractiveness of the plaid; for instance, the Macduff and Maclachlan were irresistible. Then I was constantly having such thoughts as, "I wonder if all four of the Guild Kennedys will like this?" For convenience of reference the setts are arranged alphabetically and the other available ones are included.

Fabri may be set for a light fabric at 20 to the inch or firmer at 24 for tabby weaves. 24 to the inch should be used for the 2-2 twill, or 30 for a firm suit fabric. To make a larger plaid the sett figures may be doubled. Each of the tartans is composed of two figures, the division indicated by the space in the sett draft. In weaving tartans, or any plaids, it is of the utmost importance that the warp sett be copied exactly in the weft, and that the weave is perfectly balanced.

BARCLAY (184 ends)

40 green  
12 red  
40 green  
  
40 blue  
12 green  
40 blue.

BRUCE

October 1935

CLAN CAMERON

March 1946

CAMERON OF LOCHIEL

October 1935

CAMPBELL OF ARGYLL

Recipe Book, IV-7

CARNEGIE

March 1946

CUNNINGHAM (136 ends)

28 red  
2 black  
2 red  
4 white  
2 red  
2 black  
28 red

28 black  
2 red  
8 black  
2 red  
28 black.

DOUGLAS (170 ends)

36 green  
4 white  
14 blue  
4 white  
36 green

36 blue  
4 white  
36 blue.

DUNBAR (194 ends)

12 black  
36 red  
4 black  
8 red  
4 black  
36 red  
12 black

36 green  
10 red  
36 green.

ELLIOT (200 ends)

28 red  
16 blue  
4 red  
16 blue  
28 red

108 blue.

FRASER (200 ends)

48 red  
4 white  
48 red

22 green  
4 red  
22 blue  
4 red  
22 blue  
4 red  
22 green.

HENDERSON

October 1935

HOME (228 ends)

48 blue  
4 green  
4 blue  
4 green  
48 blue  
  
2 red  
2 black  
2 red  
48 black 48 black  
4 green 2 red  
4 black 2 black  
4 green 2 red.

JOHNSTON (132 ends)

24 green  
4 black  
4 green  
4 yellow  
4 green  
4 black  
24 green  
22 blue  
4 black  
4 blue  
4 black  
4 blue  
4 black  
22 blue.

KENNEDY (140 ends)

22 green  
2 red  
2 green  
2 red  
6 green  
2 yellow  
4 green  
4 black  
4 green  
2 yellow  
6 green  
2 red  
2 green  
2 red  
22 green  
  
8 blue  
8 black  
8 blue  
8 black  
8 blue  
8 black  
8 blue.

LIVINGSTON (246 ends)

44 red  
6 green  
14 red  
6 green  
44 red  
  
30 green  
6 red 4 green  
4 green 4 red  
4 red 4 green  
4 green 6 red  
6 red 30 green.

MacALPINE Recipe Book, VI-17	MacLACHLAN (158 ends) 24 red 4 black 6 red 4 black 24 red	MONTGOMERIE March 1946
MacARTHUR Recipe Book, VI-17	20 black 24 blue 8 green 24 blue 20 black.	MORRISON (226 ends) 32 green 10 black 32 green 36 black 4 green 32 blue 8 red 32 blue 4 green 36 black.
MacDONALD OF SLEATE March 1946	MACLEAN OF DUART Recipe Book, VI-17	
MACBETH Recipe Book IV-7	MACLEOD OF HARRIS March 1946	
MacDOUGALL Recipe Book, IV-8	MACNEIL OF COLONSAY (174 ends) 18 green 4 white 18 green 14 blue 18 green 4 white 18 green 18 black 18 blue 8 black 18 blue 18 black.	RAMSAY (172 ends) 36 red 2 black 10 red 2 black 36 red 36 black 2 white 10 black 2 white 36 black.
MACDUFF (176 ends) 14 black 30 red 14 black 16 red 18 green 14 red 4 black 14 red 4 black 14 red 18 green 16 red.	MACQUEEN Recipe Book, IV-8	ROBERTSON (140 ends) 28 red 2 green 4 red 2 green 28 red 4 blue 4 red 28 green 4 red 28 blue 4 red 4 blue.
MACFARLANE Recipe Book, IV-8	MENZIS (164 ends) 8 white 6 red 8 white 12 red 4 white 2 red 20 white 2 red 4 white 12 red 8 white 6 red 8 white	
MacGILLIVRAY Recipe Book, VI-17	64 red.	ROSE March 1946
MACINNES Recipe Book, IV-7		RUTHVEN (192 ends) 48 red 24 blue 4 green 16 green 2 red 6 white 4 green 16 green 48 red 24 blue.
MACINTYRE Recipe Book, IV-7		
MACKAY Recipe Book IV-8		
MACKINTOSH Recipe Book, IV-8		

SCOTT (184 ends)

48 red  
 4 black  
 2 red  
 4 green  
 2 red  
 4 black  
 24 red  
  
 24 green  
 4 red  
 2 green  
 2 white  
 2 green  
 4 red  
 2 green  
 2 white  
 2 green  
 4 red  
 24 green.

SKENE

October 1935

STEWART DRESS

Recipe Book, IV-6

STEWART, Royal

Recipe Book, IV-6

STEWART, Hunting

March 1946

STEWART OF APPIN

March 1946

STEWART OF ATHOLL

March 1946

SUTHERLAND

March 1946

WALLACE (152 ends)

36 red  
 4 black  
 36 red  
  
 36 black  
 4 yellow  
 36 black.

Occasionally inquiries come about sources of real handspun yarns. I have recently had samples of beautiful yarns from the National Industries for the Blind, 15 West 16th St, New York 11, N Y. Mr Eugene D Morgret, Assistant, writes, "National Industries for the Blind is a non-profit agency for the blind, working with the various workshops throughout the country in the development of new trends and ideas for blind workers. The fifty odd shops with whom we are working extend from Boston to San Diego." There are three weights of yarn at \$4.90 a pound for the heavy, \$5.55 for the medium and \$6.90 for the light weight. Sample cards will be supplied on request. These yarns are undyed and Mr Morgret says this is because, "we are not 100% certain yet, as to what colors will be most in demand. We would appreciate having a reaction to the matter of dyeing." We might suggest the tartan shades. Perhaps Guild members writing for samples would like to state an opinion. Not only is the yarn good, but purchasing it would serve a very worthy cause.

Here are two apologies. First, there is a very obvious error in the Standard Overshot Tie-Up given in the January Bulletin; treadle one should be tied only to harnesses 3 and 4 and Tabby A only to 1 and 3. Second, I am sorry if anyone was inconvenienced by the late arrival of the January Bulletin. It was the storm in New York which caused the delay. The printer wrote that it stood for ten days after its customary shipment date before it could be picked up. We try to have the Bulletin in the mail by the sixth of each month but in the past few months there have been other delays due to strikes in New York. These are troubled times, with nature as temperamental as nations.

Mrs Atwater will next month present the third of her series of Bulletins on Design in Handweaving. (Color in design, September 1947; Pattern in Design, November 1947) The March one will be on Texture in Design. The Rug pamphlet will probably not be ready until the end of the month. It's price will be \$1.50. The price of the Summer and Winter pamphlet published in December is \$1.00.

Enclosed are sample cards of the Bernat Fabri showing the colors we are handling. The service on orders has been disappointingly slow. But we have a large supply of yarn on the way now, including the tartan colors which are shown at the end of the cards, and hope to give more efficient service.

Harriet C Douglas  
 The Shuttle-Craft Guild  
 Basin, Montana





# THE SHUTTLE-CRAFT GUILD

## BULLETIN



March 1948  
Volume XXV, Number 3  
Basin, Montana

Subject:  
Texture in Design  
Easter Parade Pick-Ups

The problems of texture appear to be more puzzling to most hand-weavers than the other problems of textile design -- proportion, color and pattern, previously discussed. Weavers either take texture for granted or they seem to think that to produce texture they must ignore everything else and confine their efforts to putting together odd materials -- the more unsuitable for the textile purpose the better, apparently.

Every textile fabric, of course, has a texture -- whether beautiful, suitable or practical is another matter. The designation "texture weavers" is silly in the extreme, and shows simply a rather pitiful lack of understanding of the textile craft. As a matter of fact, every woven fabric has two textures -- the surface texture, smooth or rough, and what textile men call the "handle." In planning a fabric both textures must be considered.

What are the factors that go to make up texture? The material used and the weave. By weave we mean the structure plan of the fabric, the plan of interlacing of the material, the setting of the warp in the reed, and the beat. The surface texture depends chiefly on the material and the handle depends chiefly on the weave.

To plan a fabric successfully we should have a clear idea of the type of fabric we wish to produce -- whether thick and soft, or thin and firm; whether for use as drapery, floor-covering or clothing. The textile art is a practical art and a fabric so poorly planned that it cannot be used for any practical purpose is as childish as a mud pie. I am trying to put this as strongly as I can because I feel that the nonsense of the so-called "texture weavers" has misled or confused many honest craftsmen, and has done our ancient and honorable craft a great disservice. To be queer is not necessarily to be original, and to be original is not necessarily to be admirable or important. There is plenty of queerness in an insane asylum, for instance, but it does not amount to anything. This is, after all, a world based on reason.

I do not mean to say that experiment is undesirable. There are many new and interesting yarns available to weavers in these days and for those who enjoy experiment nothing could be more fascinating than finding out how these may be used to best advantage. But in all such work the main purpose -- the creation of an honest fabric for practical uses -- should be kept clearly in mind.

I believe we all realize the importance of the choice of material. No one would plan to weave a smooth, silky fabric using stiff, rough yarns, or a rough tweed of fine worsted. But weavers do not always realize that a stiff, hard fabric can be produced with soft yarns -- which may or may not be desirable. This is a matter of weave, setting and beat.

Yarns spun for warp are usually harder spun and are often of better quality than yarns spun for weft. It is entirely proper to use warp-yarns for weft, but to use weft-yarns for warp is to invite disaster. No matter how liberally one uses warp-dressing, a weft-yarn when used as warp will pull apart and fuzz up in the reed and cause endless trouble. This is especially true of linens. A good warp-linen usually costs twice as much as a weft linen that may be quite similar in appearance. But do not be tempted. The thing simply will not work.

Warp yarns as spun for the textile factories is usually made with a right-hand twist, while weft-yarns are twisted to the left. The reason for this is that when a closely woven tabby fabric is produced in warp and weft yarns with the same twist a crepey effect results. I have had people send me samples of old tabby flannels with a question about the threading to produce the pattern. Flour-sacking after frequent washings often shows a similar crepe pattern. This may or may not be desired. To avoid it use warp and weft twisted in opposite directions. In a twill weave, or in any weave but a close tabby, this problem does not arise.

There are three general types of linen yarn, and which to use for a particular purpose depends largely on taste. There are first the "line" or "singles" linens, then the hard-twisted plied "round" linens, and the more loosely twisted plied linen "floss." Many people appear to be afraid to use singles linen for warp -- due perhaps to an unhappy experience with weft linen. However a good quality line linen warp, if treated with warp-dressing and kept damp, will give no trouble. When woven in the same material, or in a weft singles of the same grist, it makes a very handsome fabric, especially good for towelling. The round linens are somewhat wieri and produce a rather hard fabric. The linen floss produces a silky effect, very beautiful for damask.

Mixtures of material in the same fabric are apt to be dangerous and should not be attempted without experiment. Of course in the familiar overshot weave almost any material may be used for the pattern overlay, the tabby foundation giving the fabric firmness. But for "50-50" fabrics it is safest to use only one kind of material. A weaver once wrote to ask me how to finish a dress fabric in which she had combined two kinds of wool yarn and some threads of rayon, both in warp and weft. It was a question I could not answer. I doubt if her fabric could be finished in any satisfactory manner, for some of the material would shrink under finishing while some of it would stretch, and a puckery effect would be inevitable. If two different materials are used it is wise to use one for warp and the other for weft. Differences in shrinkage will cause some distortion, of course, but not necessarily with fatal results.

But the single factor that most greatly affects texture is not, after all, the material, or even the weave, but the setting in the reed coupled with the beat. At one of my summer institutes we happened by chance to have a fine illustration of the importance of warp-setting. We happened to have two looms set up in the same weave -- crackle weave. And one of these warps had been set very much too close and the other not nearly close enough. Before re-sleying to the correct setting we wove samples on these two looms, and these samples, together with one woven at the correct setting, gave us a very impressive object lesson. I should like to suggest that it would pay any weaver to make a similar set of three samples: re-sley whatever pattern you may have on the loom, setting the warp twice as close as for normal weaving. After making a sample, sley again at half the number of ends per inch as in the correct setting and weave another sample. The results will prove surprising and interesting. You may find that for some purpose you have in mind one or the other of the unusual settings may give just the effect you wish. The ordinary setting is not always the best setting for all purposes.

If the texture of a piece on the loom seems unsatisfactory, try re-sleying to a slightly different warp-setting. Sometimes this will change failure into success.

The closest possible interlacing of warp and weft is the plain tabby weave, and therefore this weave produces the firmest fabric, in relation to weight, that may be produced with a given material. For a true tabby warp and weft must be the same material or materials similar in grist, and there must be the same number of weft-shots to the inch as there are warp-ends to the inch in the setting. If the warp is set close the beat must also be close. If the warp is set in an open manner, the weft must be lightly woven so that the number of weft-shots per inch will be the same as the number of warp-ends. Otherwise it is not a true tabby. In some materials a fairly open tabby is practical -- materials such as soft wool yarns that cling together and felt together in finishing. But an open tabby is impractical in slippery materials such as mercerized cottons and the shiny kind of rayon. For a very open fabric in such material the leno weave is required.

If a warp is set so close that the weft is completely covered it is impossible to weave a tabby as the weft cannot be beaten together firmly enough for the required number of weft shots. It may, of course, be woven in plain weave, but the resulting fabric is not tabby but a warp-face rep. The weft used should be a good deal coarser than the warp, and when solidly beaten up the resulting fabric is much thicker than a tabby and is firm and hard. A fabric much used for upholstery as it has outstanding wearing qualities.

If a warp is set so far apart that it will not make a satisfactory tabby, and when the weft is firmly beaten up the warp is completely covered, a weft-faced rep is produced. This weave also makes a thick, firm fabric with many possibilities.

To many of our weavers all this will seem very primary information, but I hope they will bear with me. Many of our Guild members are beginners, and it has been my experience that these simple fundamentals of fabric structure are a dark mystery to a great many people. They weave by rote, and if the directions they follow do not produce the type of fabric they had hoped to make, they do not know what to do about it. I am hoping that these notes will prove helpful.

The Guatemalan weavers produce a very handsome soft, thick cotton fabric, with almost the handle of wool, by using a very fine cotton for warp, threaded in pairs and set close enough to cover the weft. This warp is woven with a weft of several strands of the same material, but rather lightly beaten. The structure of the weave is exactly the same as that of a warp-face rep, but the texture is entirely different. This illustrates the importance of beat.

Many weavers seem to think that the beat is a characteristic of the weaver, and that some weavers beat firmly and others lightly. But beat should be varied according to the fabric. One does not -- or should not -- hammer a fine wool scarf, and one should not gently fan a rug. Those who are unwilling to vary the beat according to the fabric should confine themselves to weaving the type of fabric best suited to their favorite beat.

Some people beat with a single tremendous thump that snaps warp-threads and soon dismembers the loom. Two short, sharp strokes with the batten accomplish more than a single heavy blow. The beat, of course, should be as even as possible or the fabric will show ugly streaks. For a firm fabric this seems to me the best way to beat: open the shed and throw the shuttle; beat -- two smart strokes but not a heavy thump --; change the shed and beat again. Repeat, beating always with the shed open.

An even light beat is far more difficult than an even firm beat. For a very light beat, such as for light weight scarves, an open tabby for curtains and so on, close the shed and bring the batten down gently with a single beat.

For a close beat with a warp set close to cover the weft it is sometimes necessary to beat against a flat shuttle or a strip of wood made for the purpose. If the latter is used it should have a knife edge to go against the web and a flat edge on the other side to go against the reed. After changing the shed over a shot of weft, insert the stick and beat. The stick must, of course, be long enough to go all the way across the shed.

The effect of weave on texture is obvious. The more closely a fabric is combined the firmer and harder the fabric. As noted above, the tabby weave gives the closest possible interweaving. In any weave over a tabby foundation, such as the overshot weave, the summer-and-winter weave and so on, the tabby is the fundamental fabric and controls the texture. The twill weaves produce a thicker, softer and more pliable fabric than tabby and are pre-eminent for dress-fabrics, blankets, and many other things. The satin and damask weaves give the maximum of smoothness and brilliance, but must be used only for smooth, hard materials. The warp-face weaves give maximum lengthwise strength and the weft-face weaves maximum cross-wise strength. All our weaves boil down to these main types and in making a choice of weave for a particular project we can be guided by knowledge of the special qualities of each of these plans of interlacement. There is nothing complicated about this, but in the excitement of choosing colors and a pattern for a new piece of work one is sometimes inclined to forget these underlying and absolutely vital matters. After all, no matter how good the weaving, or charming the colors and pattern, what we are making is "cloth," and if it is not a good cloth, suited for a practical use, the thing is a failure. Or merely an amusement -- like a mud pie.

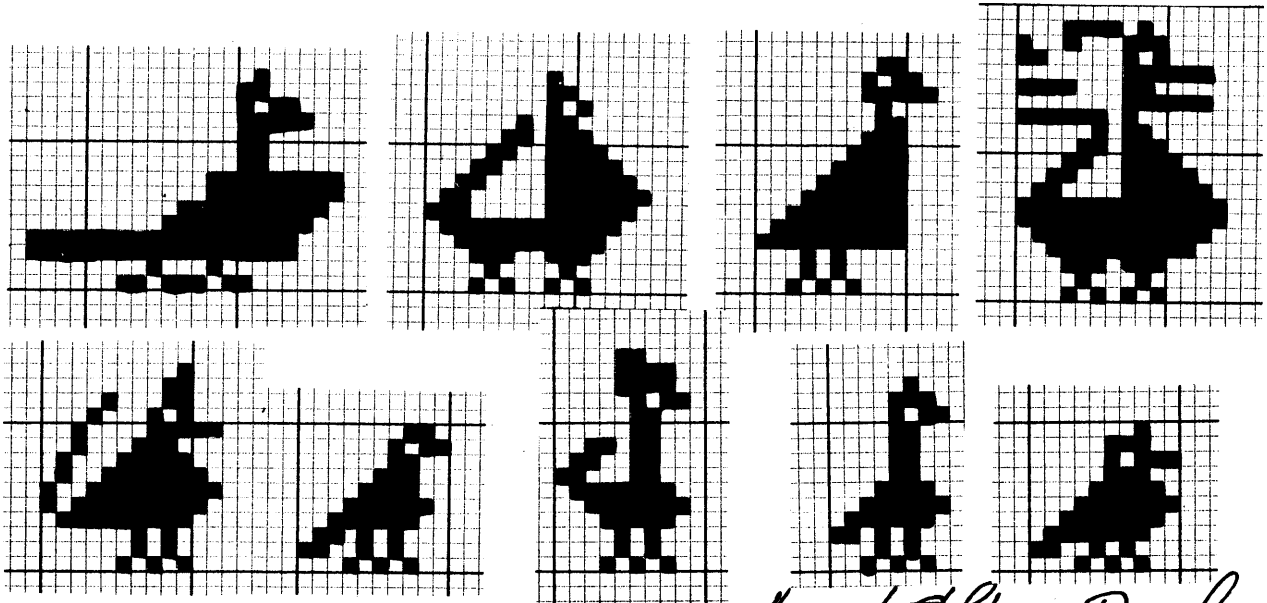
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The forthcoming pamphlet on rug-weaving gives notes on some fourteen rug-making techniques and a large number of new patterns. I have tried to put into it all I have been able to find out about this important branch of our fascinating craft. I believe it will prove useful.

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*Mary M. Atwater*

To those weavers who are always on the look-out for new pick-up designs to put on cocktail napkins, towels, bibs, aprons, etc, take your pick from this Easter Parade of personalities, adapted from Swedish designs.



*Harrist Clare Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



April 1948  
Volume XXV, Number 3  
Basin, Montana

Subject:  
Damask Table Cloths  
Linen Table Mats

Ever since our Basin students last summer went mad about damask tablecloths I have wanted to give a Bulletin on damask and other table linens. What better time than spring, when most weavers get new-spring-linens fever.

Damask is known as the Cloth of Kings, and after producing a two by three yard linen damask tablecloth, any weaver will agree. The tablecloths we wove are truly heirloom pieces. Our potential great-grandchildren came in for a good bit of joking as the work progressed; but it is good to occasionally weave something for the future and wonder where it will be a hundred years from now. Mrs Atwater put a sale value on the cloths of \$100, and we could have all sold ours immediately -- but what weaver would? One interesting comment came from a visitor who looked at the work on the loom and said, "I would as soon put burlap on my table as that." But she later saw a completed cloth, after it had had several all-night soakings, followed by vigorous washings and ironings, and wanted to buy it at any price. This is a warning to those who have not previously woven linen -- it looks very discouraging on the loom. Repeated washings and ironings improve the quality, so such a tablecloth should be used often.

To quote from AMERICAN FABRICS, "Damask came to us from China, via Damascus in Asia Minor, and is one of the oldest and most popular staple cloths to be found today. Linen or cotton single damask is made on a five-shaft satin weave. It is a very durable, reversible fabric, sheds dirt; the firmer the texture the better is the quality. Launderers well and holds high luster." The simplest two-block pattern for a five-shaft damask requires ten harnesses, but a four-shaft damask, which is almost as effective, may be woven on an eight-harness loom.

Damask is woven on a twill threading, each block of the pattern being a four-harness twill for a four-shaft damask, or a five-harness twill for a five-shaft damask. For a draft, any two-block profile draft may be used. Several such drafts are given on page 218 of the SHUTTLE CRAFT BOOK and others are very easily designed. To thread a four-shaft damask, thread Block A: 1, 2, 3, 4, repeated the necessary number of times; thread Block B: 5, 6, 7, 8, repeated as necessary. To thread a five-shaft damask (the type we wove) thread Block A: 1, 2, 3, 4, 5, repeated; Block B: 6, 7, 8, 9, 10, repeated.

Since we were so delighted with the simple effectiveness of draft number 159 of the SHUTTLE CRAFT BOOK, the detailed threading plan for this is given below, for both the four-shaft and five-shaft damasks. A plain twill (that is, simple alternations of Blocks A and B) makes an effective border, but we added interest by threading one repeat of the main pattern block through the center of the twills. The profile draft is reproduced on the diagram, with three parts marked.

<u>Five-Shaft</u>		<u>Four-Shaft</u>	
I (14 twills)	-140 ends	I (20 Twills)	-160 ends
II (main pattern block)	- 95 ends	II (main pattern block)	- 76 ends
III (11½ twills)	-115 ends	III (15½ twills)	-124 ends
Complete draft 4 times	-680 ends	Complete draft 5 times	-680 ends
Center 1/2 block	- 50 ends	Center 1/2 block	- 40 ends
Total	<u>1080 ends</u>	Total	<u>1080 ends</u>

This scheme is given for the material we used -- number 12 natural linen, set  $36$  inches wide at  $30$  ends to the inch. A much finer damask could be woven of  $40/2$  linen set at  $36$  or  $40$  ends to the inch. Notice that the threading arrangement is similar to that used for a coverlet, with a wide border on one side and a half block in the center, because we made the tablecloths two full yards wide, with a seam up the center. And "seam" is not an accurate term as one merely catches the edge warp threads together firmly, and the joining is hardly noticeable.

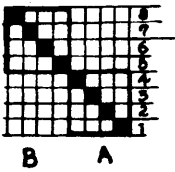
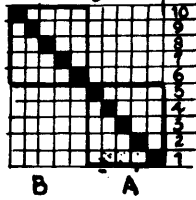
The damask tie-up for both four-shaft and five-shaft, rising shed, is given on the diagram. For a sinking shed, tie to the blank spaces instead of to the o's. The weaving is simple. Merely treadle 1, 2, 3, 4, repeated the necessary number of times for Block A; treadle 5, 6, 7, 8, repeated as necessary for Block B. Damasks should be woven as-drawn-in. That is, each block along the diagonal from the lower right corner should be squared exactly. Taking the four-shaft damask as our example, this means that one treadles 1, 2, 3, 4, 5, 6, 7, 8, repeated 20 times, to make the first twill border. Then weave 1, 2, 3, 4, five times for the first pattern block; 5, 6, 7, 8, three times for the second block. The center of the pattern is treadled 1, 2, 3, 4, 5, 6, 7, 8, 1, 2, 3, 4; then one completes the pattern by treadling 5, 6, 7, 8, three times, and 1, 2, 3, 4, five times. Start the next twill with 5, 6, 7, 8 and follow it with 15 complete twills, and one is then ready to start the central patterns. It is imperative that the weaving be balanced -- exactly as many weft shots per inch as there are warp ends. A variation in the beat will not only spoil the effect of the damask, but it will also ruin the matching of patterns at the center joining. Some weavers prefer to weave linens on a wet warp, but we did not find this necessary. A strong tension is required for the weaving, but be sure to loosen a linen warp when the loom is idle. While our weaving was in progress, Mrs Atwater found one student weaving backwards, having discovered one shot two inches back for which one harness had failed to raise. She immediately said, "Leave it. That's a Squaw mark." Though we certainly do not encourage errors in our weaving, we found that one or two "Squaw marks" of a non-serious nature actually added to the interest. I might mention that the loom we used was a 10-harness Reed-Macomber, a loom ideally suited for such a project. The treadles, even with the heavy tie-up, are light to operate and the loom is strong enough to withstand the high tension and beating.

Damask should always be woven with identical thread for warp and weft. The pattern is merely a shadow effect from a difference in texture, one block being chiefly warp faced and the other chiefly weft faced. However, with a slight change in the tie-up one may weave a double-twill, in two colors, on the damask threading. My favorite table cloth of those we wove last summer was done on the double-twill with a dark brown linen weft over the natural linen warp. The double-twill tie-up is given on the diagram. If weaving with two colors be sure to test the linen for color-fastness. This warning comes from sad, sad experience.

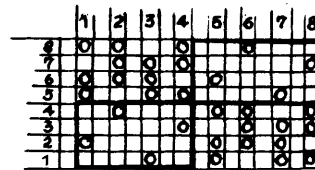
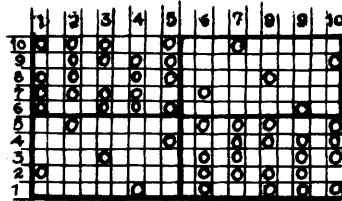
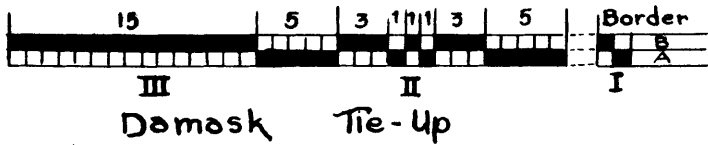
Four-harness Linen Luncheon Mats: Damask is a serious matter, so now we turn to something light and gay. I made spring linens in a warm yellow linen on the draft given second on the diagram, adapted from a Swedish draft. These mats were heavy and firm -- a good weight for mats which are used with informal table settings. For both warp and weft I used Terralin 20/2 colored warp from Terrace Yarns, 4038 South West Garden Home Road, Portland 1, Oregon. This address is valuable as the Terrace people carry many excellent types of domestic linens including colors and a good 12/2 linen carpet warp, at reasonable prices. One pound of linen in one color, with a small amount of a second color, will make eight large luncheon mats and a runner (a five-yard warp).

Prepare a warp of 339 ends, set at 24 to the inch. Thread the draft through thread 142; then repeat threads 143 through 153 for 55 threads, ending on 2, 1; thread backwards from 142 to 1. The proportions may be changed at will by reducing the number of 4, 3, 4, 3, 4, 1 units and increasing the repeats of the last ten threads. Luncheon cloths may be threaded by increasing the number

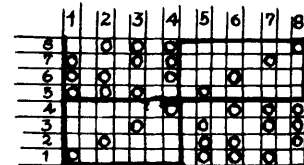
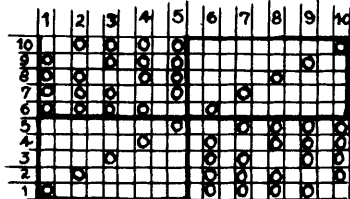
Threading analysis



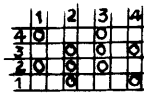
Profile Draft 159 Shuttle-Craft Book



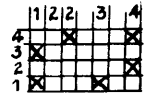
Double-Twill Tie-Up



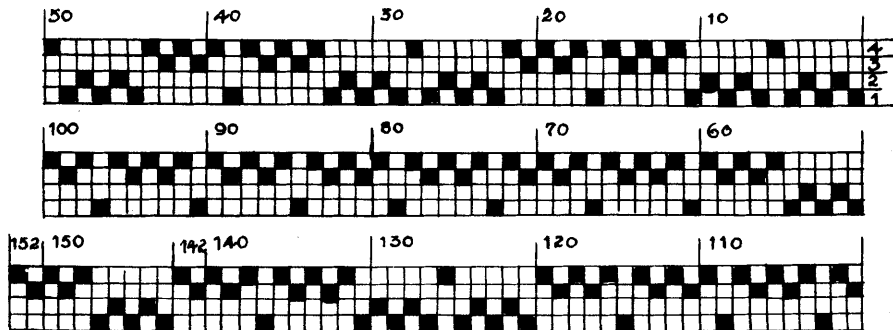
Tie-Up



Rising shed



Sinking shed



Weave the second draft as follows:

\*Indicates second color.

Method 1

Treadle 1  
2\*  
(A) 1  
For simple block alternation.

Treadle 4  
3\*  
(B) 4

Treadle 1  
2\*  
(C) 1  
4 repeat,  
end with 1.  
For repeat blocks.

Treadle 4  
3\*  
(D) 4  
1 repeat,  
end with 4.

Method 2

Treadle 1  
2\*  
(E) 1  
2\*  
1  
For simple block alternation.

Treadle 4  
3\*  
(F) 4  
3\*  
4

Treadle 1  
2\*  
(G) 1  
2\*  
1  
4 repeat to 4.  
For double size blocks.

Treadle 4  
3\*  
(H) 4  
3\*  
4  
1 repeat to 1.

number of repeats of the last ten threads to the desired width for the center of the cloth. Weave with weft of two colors, using weft identical to the warp when treadling 1 and 4, and use weft of a second color when treadling 2 and 3. The weights may be the same or the second color may be heavier. I used the Terraline in three strands for one of my experiments and got a very good, heavy mat. The color effect, when yarns of the same weight are used, is more subtle.

The emphasis in this draft is on texture and subtle color variations, rather than on pattern. There are two pattern blocks and these may be alternated at will. The treadling schemes for two different methods of weaving are given on the diagram. Notice that when one block is repeated an extra tabby shot is thrown between the three basic shots, as shown at (C), (D), (G), (H). If one wishes to make large block repeats, use Method 1. Method 2 is not as effective when it is woven with more than two repeats, as shown at (G) and (H). Be sure to beat firmly so that the weaving is balanced. Tabby hems may be made by alternating treadles 1 and 4. These mats have a right and a wrong side.

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The announced pamphlets on Rugs, and the Bronson Weave have been delayed due to Mrs Atwater's recent illness. Guild members will be glad to know that Mrs Atwater writes she is now feeling better, though somewhat shaky after a period in the hospital, and is able to be back at work. The Twill pamphlet will be ready for distribution in April.

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Advanced weavers who have wished to study under Mrs Atwater will have an opportunity in August. We are planning an "Institute" for experienced weavers, to be held in Basin, August 16 through 28. Mrs Atwater will be here to do the teaching and I shall assist her. As we have facilities to handle only ten students we shall have to ask for reservations and an enrollment fee of one half the \$50.00 tuition, by the end of June. This fee includes Mrs Atwater's personal instruction, full use of our studio facilities and library, and materials for all weaving.

Basin is a ghost mining camp, located in a slit in the mountains, near the continental divide -- scenery and summer climate incomparable -- nothing better in vacation spots, we think. There is still much of the flavor of the gold rush days to be found in the many old mines and mills of the vicinity, and the mountain streams are full of trout. There is "flavor" here, though accommodations are not first class. By taking early reservations we can reserve the local hotel (or rooming house, if you will). Those who wish better accommodations can find them at the Boulder hotel, the county seat nine miles away. And for luxury accommodations there is a Ranchotel at Boulder Hot Springs, ten miles away. Basin is located on the main highway, half way between Helena and Butte

After our very pleasant and forever memorable experiences of weaving in Basin last summer, I am sure that we can guarantee a lot of fun, as well as a lot of good weaving. We shall have plenty of four, six, eight, ten and twelve harness looms -- Reed-Macombers, Gilmores, Bernat, McKay, etc, all set up for Mrs Atwater's special weaves.

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Have Tartan weavers thought of the currently very smart skirt and sweater combinations? Fabri knits into beautiful sweaters -- for a fine one, single on a #2 needle, for a heavier one, double on a #5 needle. By the way, did the Tartaners notice the Whitney Darrow cartoon in the February 14 NEW YORKER? And speaking of knitting, we have also been knitting sweaters of the hand spun yarn from the National Industries for the Blind.

*Harris Colman Douglas*



# THE SHUTTLE-CRAFT GUILD

## BULLETIN



May 1948  
Volume XXV, Number 3  
Basin, Montana

Subject:  
Two-Harness Weaving  
Open-Work Weaves

Here is another Bulletin for two-harness weavers which, at one time or another, means all handweavers. A brief classification of two-harness weaves and information on several types was given in the Bulletin for August 1947. This Bulletin will deal with group 8 of the classification -- the Open Work Weaves. The material is not original or new; it may be found in a number of places; but a gathering-together for ready reference of dispersed information is always useful. Information on the Open Work weaves may be found in a number of back issues of the Bulletin, in "Notes on Weaving Techniques" by Florence E House, in "American and European Hand Weaving" by Helen Louise Allen, in several articles from the old "Weaver" magazine, and there are other sources.

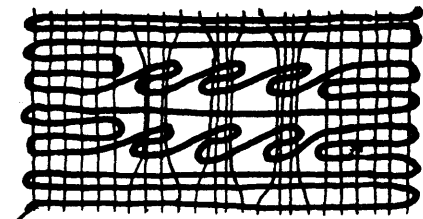
In the present article we shall not be concerned with the historic or geographic aspects of any of these weaves, or with the correct, traditional methods of weaving them, or with the traditional materials for carrying them out. The concern is with reproducing the various effects, unbound by tradition, so that they may be adapted by the individual weaver to modern materials and modern textiles. Lengthy explanations need not be given, since diagrams are more helpful than directions. In the short space of one Bulletin the treatment cannot be exhaustive.

Though many of these weaves are called "lace" or lace-weaves, this terminology is not strictly accurate, as lace-making is a full craft in itself, employing different tools and methods from handweaving. There are two basic means for making open-work in two-harness handweaving. One is the grouping of certain warp threads together, by carrying the weft back and forth over small areas, to leave open slits or holes, as in Spanish Eyelet. The other is the twisting of two or more warp threads together to form a lace-like open work area, as in leno. Most of the open-work or so-called lace weaves are merely developments of these two techniques, and combinations of the two. It is therefore valuable to the handweaver to be thoroughly familiar with these two techniques.

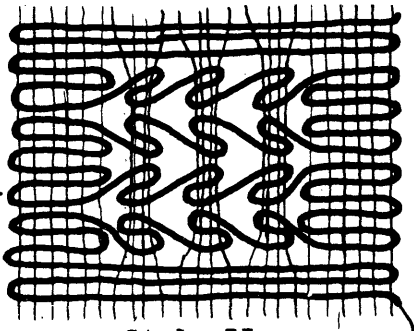
Most of the open-work weaves may be used either for large pattern work or for bands to provide simple ornament for linens or place mats or other textiles. The latter use has great importance in the finishing of articles, as one or the other techniques may be quickly produced to give a hem-stitched like edge, or finishes similar to the darned lace which was so meticulously, laboriously and beautifully created two or three generations ago. In producing patterns or all-over effects almost any design which can be drawn on squared paper, such as cross stitch patterns, may be used.

SPANISH OPEN WORK Mrs Atwater introduced this weave to Guild members in about 1933 and there have been several Bulletins on it since then. Copies are still available of the Bulletin for August 1944 which takes up the weave in some detail for table linens. The weave is well adapted for linen or other stiff fibers but it does not work out effectively for cotton. It may be used very interestingly in soft wool, Fabri for instance, to produce open-work scarves or to make simple borders or medallions in tabby-woven baby blankets and shawls. The weft may be the same weight as the warp or much heavier, though color unity is wisest.

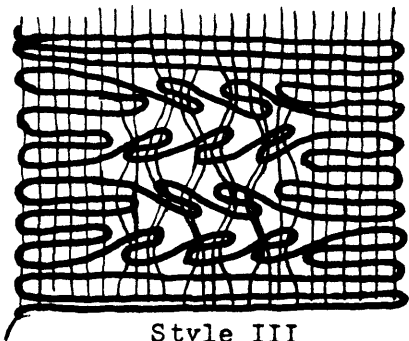
Method of weaving Style I: Weave a heading of tabby, finishing with the shuttle at the right side of the warp. Open the next tabby shed (A) and carry the shuttle to



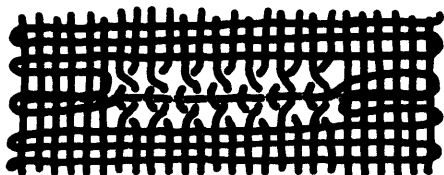
SPANISH OPEN WORK - Style I



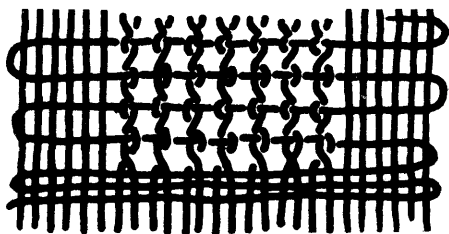
Style II



Style III



PICK-UP LENO - Style I



Style II

warp thread and pull it to the right and over the second top warp. Continue thus.

Style II: To make several rows of the leno, when the first row is completed and the selvage properly built up, change the tabby shed and throw the shuttle from

the point where the first open-work slit is to occur; change to the other tabby shed (B) and carry the shuttle back to the edge; change to shed A and carry the shuttle to the point where the second open-work slit is to come; on shed B return the shuttle to the first slit. The distance between holes is arbitrary and is counted, for convenience, on the top warp shed only. If the holes are to be spaced at every four top warp threads, the system to be followed is always forward 8, backward 4, repeated. The size of the open-work hole may be adjusted through the amount of tension put on the weft; pull the weft tightly to make large holes. If longer slits are desired, build each area higher thus: forward 8, back 4, forward 4, back 4, repeated. It is not advisable to use the beater until the entire line of open work has been completed. The best system is to use a flat shuttle such as a belt shuttle, with one beveled knife edge which can be inserted in the shed to press each small area as the work progresses. Be sure to build up the edges so the selvages will be firm and even. If the row of eyelets is to be repeated, carry the shuttle through shed B all the way to the right edge and repeat the same process, always working the eyelets from right to left.

Style II: This gives a more interesting effect for large open-work areas. It is done merely by working the eyelets first from right to left, then the second row from left to right. The only caution here is to be sure the edges are built up properly.

Style III: This method is for weaving done in the Style II manner, but the effect is changed through staggering the spots through splitting the warp groups in half with each new row. The diagram indicates this.

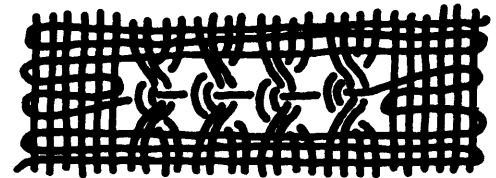
Patterns: Patterns may be produced either by making the design in open work and the background in tabby, or by reversing this. All patterns should be carefully designed on squared paper and woven in Style I or Style II. Be sure to build up the areas to make exact squares. The plain areas of a pattern are made merely by carrying the shuttle across the appropriate number of warp groups, to space eyelets at the desired places.

PICK-UP LENO: In making leno one may either use a pick-up stick, pick up the entire shed and throw the shuttle through it, or wind the warp on a small, pointed pick-up shuttle and make the pick-ups directly with the shuttle. Pick-ups are all made from right to left. The pick-up shed must be the one which places the right hand edge thread on the top shed. Selvages may be built up as in Spanish open work.

Style I: Open the tabby shed; with the stick, pick up the right hand warp thread on the lower shed (which lies to the left of the top edge warp thread); Pull it to the right and above the top edge warp thread, holding it on the pick-up stick. Reach between the first and second warp threads, pick up the second lower

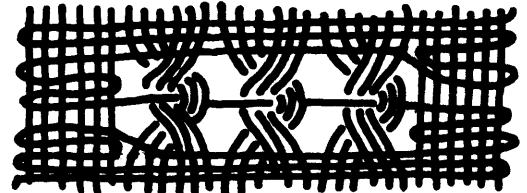
left to right; twist the warp threads for the second row exactly as they were done for the first row. The illustration here indicates the weakness of the edges if they are not built up properly.

Style III: This is double leno, made by picking up two threads from the under shed and carrying them together over two threads of the upper shed.



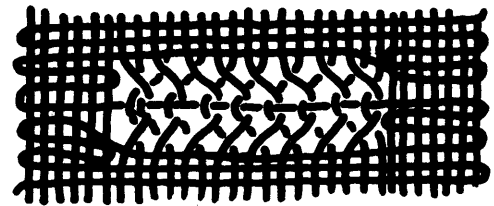
Style III - Double

Style IV: Triple leno is made in the same way, by picking up three threads from the under shed and twisting them over three threads of the upper shed. Occasionally even larger groups are used.



Style IV - Triple

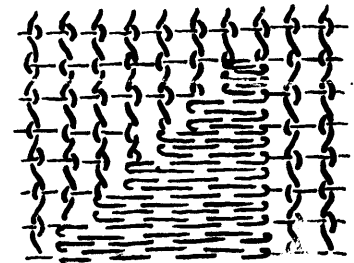
Style V: In this system a more lacy effect is achieved by carrying the first and second under warp thread over the first top warp thread. After that, pick up single threads, carrying the third under warp over the second top warp, the fourth over the third, etc. This too may be exaggerated by taking the third under thread over the first upper one.



Style V

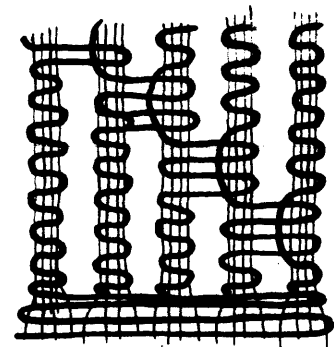
Patterns: Patterns may be made in plain weave by alternating areas of plain weave done in the Spanish open work manner with areas of leno. There are several more or less standard techniques which combine these two. Remember that all leno pick-ups are made from left to right.

PERUVIAN GAUZE: This technique was explained by Mrs Atwater in the Bulletin for December 1935, copies of which are still available. It is woven with an all-over gauze, or leno, base and a pattern weft is inserted in a tapestry-like manner to make designs. Each pattern area requires a separate weft end, and different colors may be used. The pattern weft ends are carried over one pair of twisted leno threads and under the next, beaten down so that they completely cover the warp. The method is almost like darning and some weavers even reproduce this by darning in the patterns. The illustration indicates the method.



PERUVIAN GAUZE

DEMA-DESH: This is a Balkan technique used on cotton towels and described in the books by Miss Allen and Miss House. It is produced by weaving equal groups of warp threads separately, each one with an individual weft thread. Simple diagonal designs are produced by carrying one weft end across several of the warp areas, tying them together in the manner shown on the diagram. The unused weft end must be carried across the pattern area either on the surface or underneath, making a right and a wrong side to the weaving.



DEMA-DESH

GREEK LACE: (Illustration on Page Four) This technique is well described by Berta Fry in the "Weaver" for January 1942. It again is a combination of the Spanish eyelet and the triple leno techniques, but is always woven with two weights of weft. The weft threads are thrown in groups of five, five tabby shots of light weight thread like the warp, separating five shots of pattern work in heavy weft. Weft ends are cut and fastened after each fifth shot.

MEXICAN LACE: This technique too is described by Miss Allen and Miss House. It is usually done in pattern work with double leno for the background and either single leno or plain tabby for the pattern. The difference between it and ordinary

double leno is that the spots are staggered to give a diagonal, lacy effect, by splitting the groups on each alternate row of leno pick-up. Weave the first row in plain double leno as in Style III. For the second leno pick-up row, change the position of the warp twists by making the first pick-up a single one (Style I) but make all other pick-ups in the double method. At the end of this row there will be two warp ends left to make in single pick-up. Alternate these two rows.

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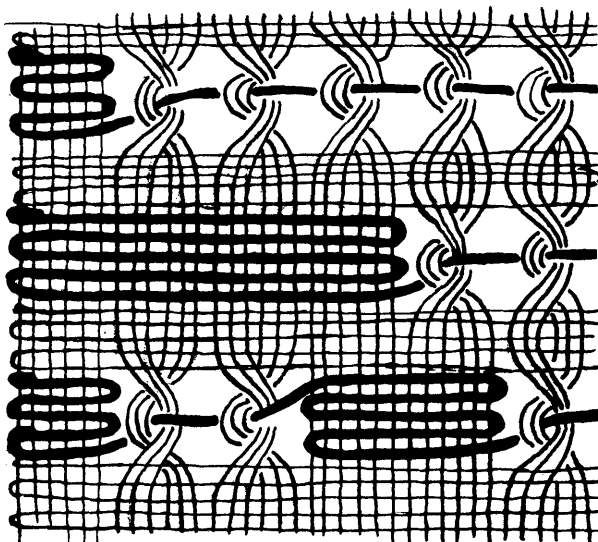
The Guild "Institute" announced in the April Bulletin to be held in Basin the last two weeks in August, is developing. Several applications have already been made and there is even a very active inquiry from a London weaver. We should have an interesting group of weavers from all over the country. Let me mention again that this will be a fine opportunity for those Guild members who have long wished to study techniques and draft writing under Mrs Atwater, and for those who wish to combine a western vacation with some serious weaving. Bring your families along to enjoy mountains and streams while the weavers are busy.

This year, as previously, I shall be teaching the weaving course at Montana State University during the six week summer session. The course starts June 14 and ends July 24. The work may be taken either full or half time, with or without credit. Last year we had space and equipment for twenty-four students divided into beginning and advanced groups. Facilities are adequate and, with the extra summer attractions such as concerts, lectures and trips through the Yellowstone and Glacier Parks and the National Forests which the University provides, the period on the campus at Missoula is always a delightful one. Anyone interested may write to the Registrar, Montana State University, Missoula, Montana, or directly to me.

Another summer course, in a different part of the country, is to be conducted by a Guild member. Mrs Elsie Gubser will teach handweaving and lace making at Chautauqua, New York for eight weeks starting July 5. Anyone interested in studying weaving at Chautauqua should write to Mrs Elsie H Gubser, 647 North Denver Avenue, Tulsa, Oklahoma.

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Occasionally inquiries come from weavers who wish to delve into the field of spinning and need to secure spinning wheels. Here is an answer. Spin-Well Products, Box 22, Sifton, Manitoba, manufactures and sells a good spinning wheel for \$15.65. But even better, they also manufacture a very efficient little wool carder -- likewise \$15.65. Many potential spinners deprive themselves of the pleasure of spinning because of the very unpleasant job of carding wool on old fashioned cards. This carder is a well made little machine which cards wool if one merely feeds it and turns a crank.



GREEK LACE

Mr Roger Millen, our tweed expert who before the war supplied us with the fine Waterside tweed yarns, is again producing tweed yarns for handweavers. Samples may be secured from Mr Millen, The Kent Manufacturing Co, Clifton Heights, Pennsylvania.

And for "Tartaners" again -- the lovely little book THE CLANS AND TARTANS OF SCOTLAND by Robert Bain has recently been reprinted in London. The Craft and Hobby Book Service, 640 Grace St, Monterey, Calif is stocking this. Price? -- \$3.75.

*Harriet Helen Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN

June 1948  
Volume XXV, Number 6  
Basin, Montana



Subject:  
The Cross Weaves  
Two and Three Thread Leno

Textile experts have told me that the cross weaves or lenos are the most difficult of all weaves. The simple marquisette cross, to be sure -- which we have been using for a number of years -- presents no great difficulties, even on a four-harness loom. But lenos in pattern are a different story.

My struggles with this weave date back a long time -- to the time I asked a member of the staff at the Lowell Textile School to design a leno equipment for use on hand-loom. He replied somewhat stuffily that hand-weavers could not weave leno. Of course this was nonsense for the cross weaves had been known and used for centuries before the invention of power machinery. I found an old English book on weaving, published about eighteen hundred, and that gave me part of what I wanted.

At that time I made some experiments with the steel doup heddles used on power machines but found these could not be used on our looms without some drastic changes in the equipment, so I abandoned that project, and we went on with tied string doupes. Recently Mr. E. E. Gilmore has built a loom equipped to carry the steel doupes and some weeks ago came up from California bringing this loom, and ever since I have been experimenting to find out what it will and will not do.

Both Mr. Gilmore and I feel that the special equipment is rather impractical for weavers who weave leno occasionally only, though for anyone weaving leno scarves, curtains and so on, as a business it would pay to have a loom of this type. However, many of the things I have been trying out on this loom are entirely practical with string doupes and will, I believe be of interest to leno-minded Guild members.

The steel doupes cannot be used on an ordinary hand-loom because they require very narrow heddle-frames set very close together. However they operate on the same principal as the four-harness string set-up once described in the Bulletin. This set-up consists of two harnesses carrying ordinary heddles, to serve as "standards" for the leno, and a harness on either side of the pair of standards to carry the doupes. These doupes when made of string are like string heddles with a single tie -- no eye. They are attached to the bottom member of harness 4, pass through the eyes of two standards, -- one on harness 3 and one on harness 2, -- and fasten to the bottom member of harness 1. The single knot comes between the two standards, against the standard on harness 3. This set-up is illustrated on the diagram at (a). The knot should be large enough to catch in the eye of the standard. The advantage of this type of doupe is that a variety of patterns may be woven on the single leno set-up.

In Mr. Gilmore's loom the doupes are not provided with separate harnesses, but are strung on bars, either side of the two standard harnesses, and weighted. I think a similar arrangement to carry the string doupes would be entirely practical and by making the set-up in this manner two harnesses would be released for pattern effects. The doupes are operated by the standards and have no independent connection with the treadles.

In leno weaving one of the difficulties has always been the shallowness of the shed, due to the twist behind the doupes. On power looms this is compensated by a "jumper." This is sometimes a bar across the loom

held down by springs. The twist thread is taken under this bar, through a "pattern" heddle and through the doupe. On the twist shed the bar is raised providing a release of tension and a deeper shed. On his new loom Mr. Gilmore gets this effect by using a special harness, set low in the loom behind the regular harnesses, that rises on the twist shed.

Mr. Gilmore's loom also has two warp-beams, which is desirable for some forms of leno in which there is much more take-up in the cross thread than in the free thread or threads. However for most lenos the warp may be wound on a single beam.

As noted above, this type of doupe is not attached to the treadles at all, but is held down in position by a weight. When the front standard is raised the pattern thread threaded through it is raised, and when the back standard is raised the slot in the doupe releases the pattern thread which is raised by the pattern harness, thus making the pattern effects possible. To produce the same pattern effects in the ordinary way would require a great many more harnesses, as a standard and a doupe, a "free" harness and a pattern harness, would be required for each pattern block.

However there are a number of leno effects that cannot be produced on doupe-heddles of this type and for these effects the single doupe and single standard are necessary.

To thread the special doupes proceed as follows: It will be noted that in the drafts as given on the diagram the free thread in each pair or group is written first, followed by the pattern or doupe thread. Thread the back harnesses first, repeating the units of the weave as desired for large or small blocks. When this part of the threading is complete, put in the leno. To do this take the pattern thread through the doupe in front of the knot. Or, if the steel doupe-heddles are used, through the slot of the doupe. Then take the free thread, or pair of free threads over the doupe between the two standards. The front standard should stand to the right of the back standard, the threads being threaded from right to left. If the reverse twist is desired, thread the pattern thread first, followed by the free thread or threads, and thread the doupes from left to right between the standards, the front standard being to the left of the back standard.

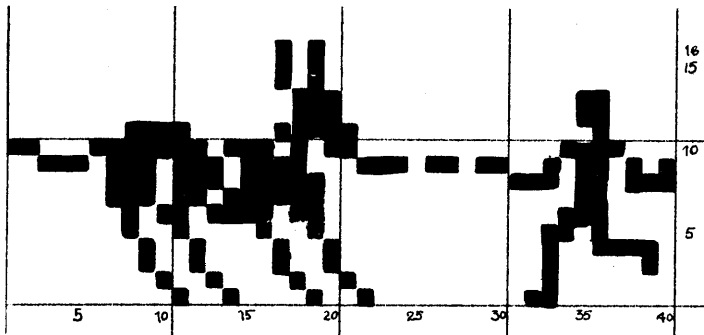
In sleying, the two threads of a two-thread twist -- or the three threads of a three-thread leno -- must be taken through the same dent of the reed. One dent, or two dents for a widely spaced leno, should be omitted between sleyed dents. It is, though, not desirable to set the groups very far apart. The woven mesh should be square and the beat firm enough to give a practical fabric. The exact setting is a matter of taste, and anyone unfamiliar with this weave should do a bit of experimenting before undertaking a large project.

On the threading given at (b) on the diagram, any arrangement of four pattern blocks may be woven, and as shown by the three tie-ups given at (b1), (b2) and (b3) three different effects may be produced. The tie-up at (b 1) weaves the pattern blocks in leno with the other three blocks in plain weave. Tie-up (b 2) weaves two overlapping blocks in leno and the other two in plain weave. The third tie-up -- (b-3) -- weaves the pattern block in plain weave with the other three blocks in leno. This, of course, is the most open effect and for most purposes the most desirable.

Draft (c) on the diagram may be used for three-block patterns in two-thread leno, each unit of the weave repeated as required for the size of blocks desired. When threaded as shown on the draft, with a repeat of six threads, it gives a number of attractive textures -- very nice for light-weight wool scarves or for glass-curtains. Here are a few treadelings I thought attractive: -- on tie-up (c-2) -- the treadles in this order: 2,4,3,4,2,5,3,5,2,6,3,6 and repeat; also 2,4,1,2,5,1,2,6,1, repeat; also 2,4,1,4,2,5,1,5,2,6,1,6, repeat; also 2,4,3,4,2,1,2,5,3,5,2,1,2,6,3,6,2, and repeat. No doubt there are many others equally good.

# The Shuttle-Craft Guild

## FORUM



"The Stubborn Donkey," an original design by Mrs Greye La Spina, Windy Knoll Weaving Studio, Quakertown, Pa, who says, "For some esoteric reason people just love it on towels."

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Mr Henry Klancke, Elgin, Ill, sends a formula for a liquid "to be used at the ends of fabrics to prevent ravelling

until the pieces can be hemmed." He also uses it when he wishes to take one piece out of a woven length on the loom. He puts it along the tabby headings of the pieces left attached to the loom and then bastes the two edges together. The recipe is, 1 tube (1 3/4 ounces) Duco Cement, mixed with 2 ounces Acetone. Cap tightly and let stand a week, shaking twice daily. Apply with a medicine dropper. "To use, apply the thinned Duco to the first few threads of the start of the tabby. Let dry before proceeding to weave. The consistency of the cement used is such that it will prevent the fabric from ravelling, yet is not too stiff to prevent sewing through. Caution: Duco Cement, wet or dry, and Acetone are inflammable."

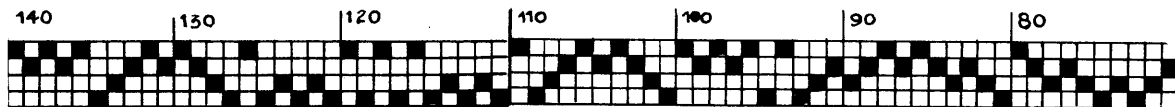
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Mrs Harold McMillan, Columbus, Ohio, president of the Central Ohio Weaver's Guild reports, "At our April meeting the big moment of interest will be the GRAB BAG. That means each weaver must bring in a sealed envelope an interesting draft with woven sample and place the envelope in a large box for the drawing." The Ohio Weaver's Guild now has a membership of 46. Mrs McMillan writes further, "Perhaps through the Guild sheet we could learn what other Guilds or clubs are doing, besides taking samples to meetings."

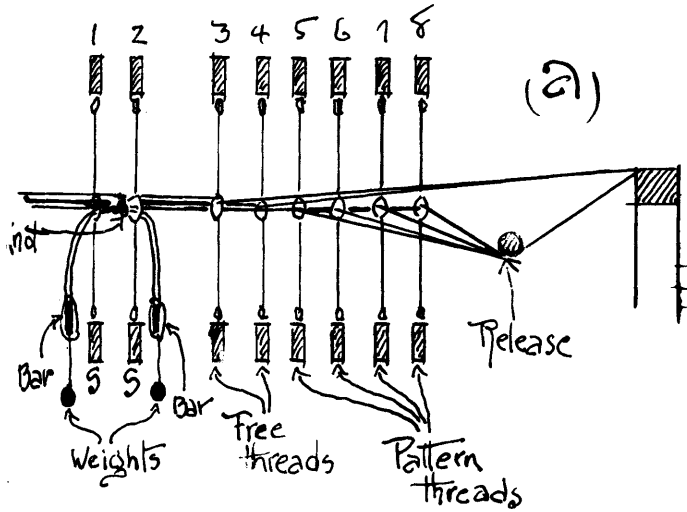
In this connection, many new Shuttle-Craft Guild members, and old members who are moving to new communities, write asking if there is a local Guild they can join. It would be useful to the Guild in general if we had a registry of local Guilds. We might even publish a directory. So why don't secretaries send us information regarding membership, officers and activities?

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"Mayor's Chain" original draft for rugs by Mr A Bulman, Flat Rock, Mich

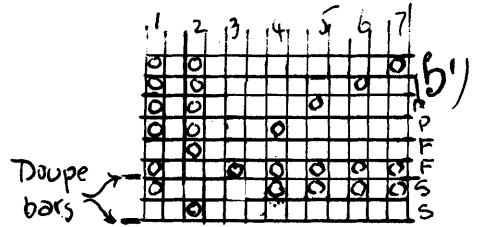
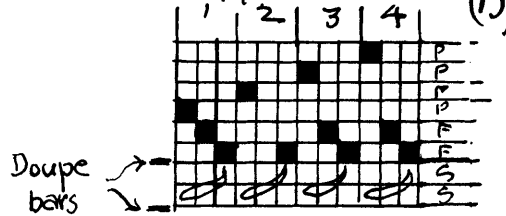


Do you have an idea to pass along?

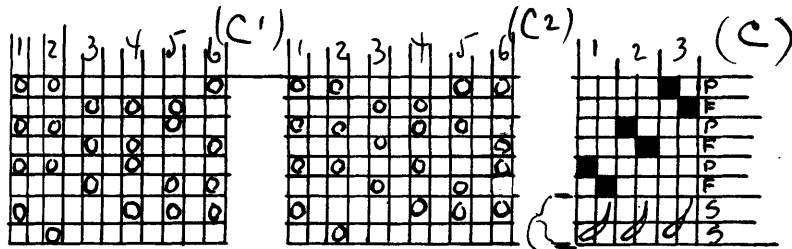


Eight-harness set-up for three-thread leno in a four-block pattern — using weighted bars for the doupes. The same set-up may be made on ten harnesses, using two harnesses for the doupes

Three-thread leno in 4-block patterns (b)



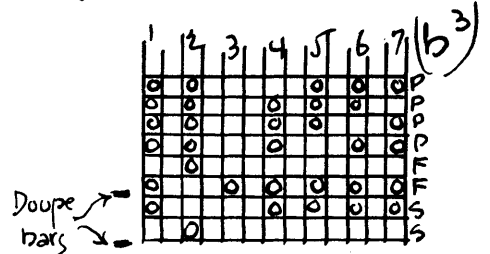
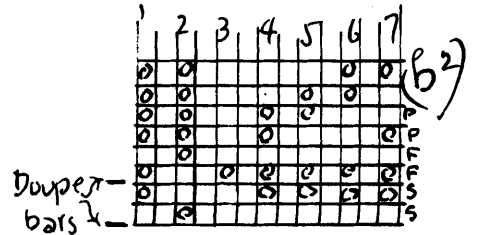
Plain: 2, 3, 2, 3, —  
 leno: 1, 2, 1, 2, —  
 Pattern: 2, 4, 2, 5,  
 2, 6, 2, 7.



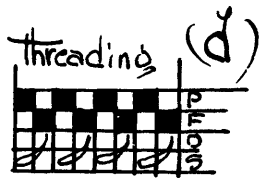
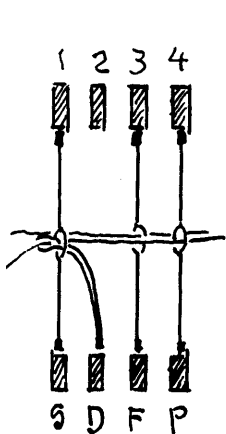
Plain: 1, 3, 1, 3, or 2, 3, 2, 3,  
 leno: 1, 2, 1, 2, 1, 2  
 Pattern: 2, 4, 2, 5, 2, 6

Two-thread leno, — 3-block patterns.

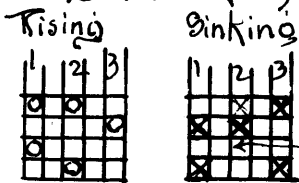
(c') weaves 1 block leno, 2 blocks plain  
 (c'') " " " plain, 2 " leno.



(b) weaves single blocks in leno — back-ground plain  
 (b<sup>2</sup>) weaves 2 blocks leno, 2 blocks plain  
 (b<sup>3</sup>) weaves single blocks plain — back-ground leno.



Four-harness "Marguisette"



Weave: plain, 1, 3, 1, 3  
 leno, 1, 2, 1, 2.  
 False tie, or weight may be required on harness 2.



An interesting way to weave a leno pattern, giving a more solid effect to the pattern blocks, is to weave in the manner of the Spanish openwork weave. As follows: suppose the first pattern block, on the right side of the web, is to be in plain weave -- say on treadle 4. Open this shed and weave from right to left across the block. Then treadle 2 and weave back left to right. Treadle 4 again and weave right to left across the first block, the adjoining leno space, and across the next pattern block. Treadle 2 and weave left to right across the last block only. Treadle 4 again and weave right to left across pattern block two, the adjoining leno space and the third pattern block. Proceed in this manner all across. When this row is finished, treadle 2 and weave left to right all across. This manner of weaving will, I believe, prove very attractive for table pieces.

As Guild members know, I am an enthusiast for pick-up weaving. It is amazing what one can do with a pick-up stick. With this simple affair one may produce any pattern figure desired with the greatest freedom, and make effects that would require an elaborate draw-loom if produced in a mechanical manner. The leno weave lends itself pleasantly to pick-up weaving, and for this the simple marquisette set-up on four harnesses is just as good as an eight-harness leno. Though of course it is entirely practical on the eight-harness set-up. For convenience I have shown the four-harness set-up at (d) on the diagram, though it has been given often before in the Bulletin. To make a pattern in leno and plain -- simple patterns are best, though any pattern designed for double weaving might be used -- weave all across on treadle 1. Treadle on 2 and take up on a lick-up stick all the leno background. Now treadle on 3 and with another pick-up stick take up the figure. It is best to slip the second stick through the shed made by the first stick and then under the raised threads of the figure. Set the second stick on edge and weave. Treadle on 1 and weave all across. Repeat. The pick-up may also be woven in the manner of the Spanish weave of course. This method of weaving naturally takes more time than the ordinary method, and the technique is not recommended to those who weave for profit and must make their time count. But for those who weave chiefly for the pleasure of making things that look as they wish them to look, the extra time hardly matters. Even this form of leno weaving goes rapidly enough.

Another interesting leno technique is the ancient Peruvian method of combining leno and figures in tapestry. These figures may be darned in with needles, but a special set-up that makes it possible to weave them in is as follows: Instead of using harnesses 3 and 4 -- threading (b) on the diagram -- for the free threads of the weave, set up these harnesses with string heddles made with a single tie -- at the level of the bottom of the eye. Harnesses 5 and 6 will then be used for the free threads leaving only two pattern harnesses, of course. Take the first group of three threads -- a single unit of leno -- through one of these part heddles, above the knot, and then in the usual way through the doupe set-up. Take the second group of threethreads above the knot of a part-heddle on the other harness, and alternate in this way all across. The part-heddles will not interfere with the leno, but by raising first harness 3 and then harness 4 sheds for the tapestry will be produced. This will be found useful for scarves and similar pieces when it is desired to introduce small colored motifs or initials in the borders. This method is possible only on looms that operate with a rising shed, but as most eight-harness looms are now built on that plan, this will not prove a difficulty to many.

The cross-weaves are a fascinating study, and I hope these experiments of mine will lead leno-minded Guild members to some new and interesting adventures in weaving.

*May M. Atwater*

There is still room for additional enrollments in Mrs Atwater's Basin Institute to be held August 16 through 28. See the April Bulletin.

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



July 1948  
Volume XXV, Number 7  
Basin, Montana

Subject:  
Ways to Weave Overshot,  
Short Overshot Drafts.

What can we do with Overshot? This is a question in many weavers' minds during the hot season when weaving should be pure recreation -- when summer heat dulls the inclinations toward large warps which demand exercise in weaving. We want nothing of draperies and heavy rugs, of hot, woolen suit materials. A narrow warp which requires the minimum weaving effort, detailed work which stimulates the creative imagination, eliminates summer brow-drip, encourages a vacation at home. Why not put on a 14 to 20 inch wide warp of 20/2 or 24/3 cotton threaded to a simple, Overshot repeat, sleyed 30 per inch?

The Overshot technique is probably the most used weave among the people who weave for fun. It is also probably the least fully explored of the many weaves. From the Overshot weave, particularly the small drafts, are woven delightful all-over patterns and pretty little borders. Too often the weaver's imagination stops with the designing of border arrangements. The many ways of weaving the Overshot through play of color and the no-tabby methods of weaving are unexplored channels. Do you know that beautiful tapestry-like fabrics in several colors may be produced on the Overshot threadings; or the sometimes called "Lace Weave" which is merely a honey-comb variation in the weaving? It is well to know that a simple Overshot threading may be used as the basis for some of the most beautiful fabrics for small articles such as handbags, pillow tops, chair seat covers, etc.

Weaving as-drawn-in, the traditional method for weaving Overshot and commonly a one color technique, was explained in the January Bulletin. Now we are interested in non-traditional or more unconventional methods of weaving, and in the use of several colors. The first way is to use one color for the tabby background, a second color for the main sections of the pattern and a third for the minor parts of the pattern. A little experimentation with colors is usually necessary to achieve the best balance between pattern and color. It is well to keep in mind that in a well designed piece equal emphasis cannot be given to both color and pattern. In an all-over pattern the purpose of the color should be to emphasize the pattern. One color must be more dominant than the others to carry the feeling of the pattern. Second and third colors must be added carefully, harmonizing in placement with the pattern, so that a horizontally striped effect is not dominant.

One very interesting way to weave all-over patterns in two colors is to use the same weight of thread for both tabby and pattern weft and to reverse the relationship of the two for different elements of the pattern. Fabri is an excellent material to use for such work as it packs in adequately as tabby and yet makes a good pattern coverage which obviates "stringiness" in the final appearance. By using one color as tabby for part of the pattern and as pattern weft for another part, reversing it with the second color, the horizontal stripe effect is eliminated.

An excellent way to use up an accumulation of bobbins and small amounts of threads is to weave these into many-colored tabby stripes with an all-over pattern woven with natural color stranded floss of Perle #3. Simple patterns or all-over textured or stripe effects made through alternating two pattern sheds are the most effective designs for mats or runners. Place mats for china which has many colors in the pattern are good woven in this way.

**WEAVING ON OPPOSITES:** This technique requires two colors and does not use a tabby. It is most effective when one uses a fine material which packs down to a partial warp coverage. Cotton is usually not successful unless a weight no heavier than the warp is used. We use Fabri in its many beautiful colors for this and for the following two weaving techniques. Weave:

- Block A - 1 shot in color A on shed 1-2; 1 shot in color B on shed 3-4; repeat as desired.
- Block B - 1 shot of color A on shed 2-3; 1 shot of color B on shed 1-4; repeat as desired.
- Block C - 1 shot of color A on shed 3-4; 1 shot of color B on shed 1-2; repeat as desired.
- Block D - 1 shot of color A on shed 4-1; 1 shot of color B on shed 2-3; repeat as desired.

The twill threadings such as Rosepath and Goose Eye may be woven to give a perfect warp coverage. A handsome fabric for formal runners, bags, pillow tops or dining-room chair seats may be woven on a 10/2 warp set at 15 or 20 to the inch and woven with fine weft for this complete coverage.

**ITALIAN METHOD:** This too is a no-tabby weave but it is done with three colors, one for pattern and two for background. A heavier pattern weft may be used or all three wefts may be of the same weight. To weave with a heavy pattern weft:

- Block A - 1 shot of pattern weft on 1-2 shed; 1 shot of background (a) on 2-3 shed; 1 shot of background (b) on 4-1 shed; repeat.
- Block B - 1 shot of pattern weft on 2-3 shed; 1 shot of background (a) on 3-4 shed; 1 shot background (b) on 1-2 shed; repeat.
- Block C - 1 shot of pattern weft on 3-4 shed; 1 shot background (a) on 4-1 shed; 1 shot background B on 2-3 shed; repeat.
- Block D - 1 shot of pattern weft on 4-1 shed; 1 shot background (a) on 1-2 shed; 1 shot of background (b) on 3-4 shed; repeat.

When ending a pattern block always add a final shot on the pattern shed so that each block begins and ends with a pattern shot. To weave with tabby and pattern wefts of the same weight:

- Block A - 1 pattern shot on 1-2; 1 background (a) on 2-3; 1 pattern shot on 1-2; 1 background (b) on 4-1; repeat.
- Block B - 1 pattern shot on 2-3; 1 background (a) on 3-4; 1 pattern shot on 2-3; 1 background (b) on 1-2; repeat.
- Block C - 1 pattern shot on 3-4; 1 background (a) on 4-1; 1 pattern shot on 3-4; 1 background (b) on 2-3; repeat.
- Block D - 1 pattern shot on 4-1; 1 background (a) on 1-2; 1 pattern shot on 4-1; 1 background (b) on 3-4; repeat.

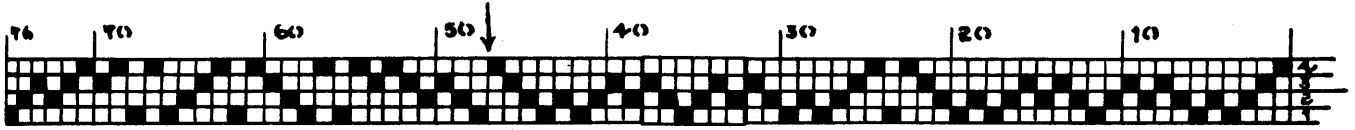
End all blocks with a pattern shot.

**NO-TABBY WEAVE:** This weave makes a complete warp coverage. It is particularly effective for small drafts woven in simple patterns such as diamond-like arrangements, but if four colors are used great care must be taken with the color selection and order. The weaving is all done twill fashion and the pattern appear in the colors. To weave:

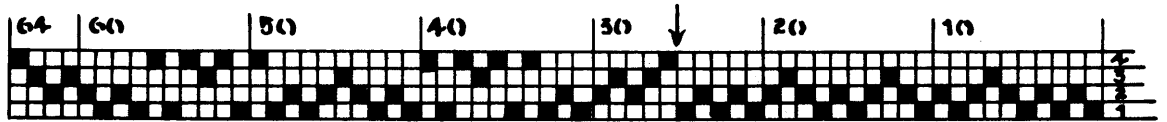
- Block A - color (a) on shed 1-2; color (b) on shed 2-3; color (c) on shed 3-4; color (d) on shed 4-1; repeat.
- Block B - color (b) on shed 1-2; color (c) on shed 2-3; color (d) on shed 3-4; color (a) on shed 4-1; repeat.
- Block C - color (c) on shed 1-2; color (d) on shed 2-3; color (a) on shed 3-4; color (b) on shed 4-1; repeat.
- Block D - color (d) on shed 1-2; color (a) on shed 2-3; color (b) on shed 3-4; color (c) on shed 4-1; repeat.

Three, instead of four colors may be used by making colors (a) and (b) identical; or two colors by making (a), (b) and (c) identical. When reversing the direction of the color order in order to balance a pattern figure, a better effect is achieved if the order of treadles is also reversed to 4-1, 3-4, 2-3, 1-2, from the forward twill order.

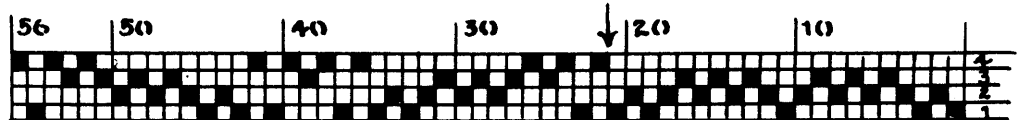
LAMPLIGHTERS



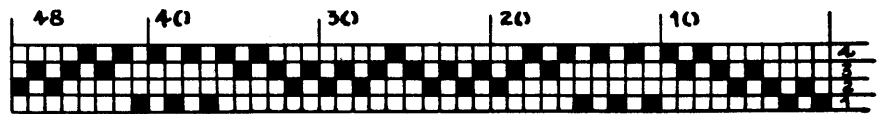
BASIN DIAMOND



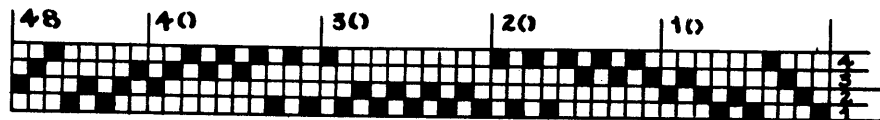
GREGSON SPRINGS



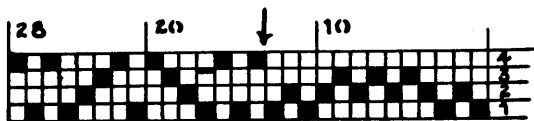
WAGON WHEEL



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A pattern on Opposites



These are short Overshot drafts which are attractive when threaded to repeats across a narrow warp (10 to 20 inches). The arrows above the drafts indicate the units which should be repeated to balance the threading after the necessary number of repeats have been threaded. The drafts without arrows require the addition of only the first three threads or the first thread. The drafts are pleasant for borders or all-over patterns.

**HONEYCOMB:** This is an unbalanced weave in which the tabby should be the same color as the weft but very much heavier, and the pattern should be of a different color and, if possible, much lighter. An interesting material for summer bags may be made on a 24/3 warp set at 30 to the inch, with white straw-twist or a heavy rayon cord for tabby and 40/2 cotton for the pattern. All patterns do not make effective Honeycomb so one should experiment with the draft to be used. Patterns with large pattern blocks and no twills are best. The technique is interesting for pillow tops and for the pattern borders on draperies. The pattern shots make the little background holes of the honeycomb and the tabby shots make the lace-like surface. Two tabby shots lie between each pattern alternation, but the order of tabbys must be such that the same tabby lies on each side of a pattern block. For instance, in a simple succession of Block A, Block B, Block C, Block D, one should first tabby A, then weave the colored block, tabby A; tabby B, weave block B, tabby B; tabby A, weave Block C, tabby A; tabby B, weave Block D, tabby B. To weave the pattern blocks;

Block A - shed 1-3-4, and shed 2-3-4, alternated 12 to 20 times according to the size of the holes desired and the weight of weft.

Block B - shed 1-2-4 and shed 1-3-4 alternated.

Block C - shed 1-2-3 and shed 1-2-4 alternated.

Block D - shed 2-3-4 and shed 1-2-3 alternated.

This makes a fabric with a definite right and wrong side as there are long skips of the fine pattern weft on the wrong side.

An interesting project is to make a sampler which shows the various techniques for weaving the Overshot drafts. The weaver, however, should be warned that these different techniques do not harmonize well with each other and should not be combined in one article.

\* \* \* \* \*

One of our Guild members has asked me to announce that she imports for her shop the Knox linens in a number of colors and sizes: 50/2, 40/2, 40/3 and 16/3. She says, "We handle no cheap yarns but try to sell the better yarns at a price weavers can afford." If interested in these write to Gynethe E Mainwaring, The Weavers' Workshop, Dodgeville, Wisconsin.

\* \* \* \* \*

Mrs Atwater's long-awaited Rug pamphlet is finally here from the printer and I'm sure that Guild members who have already received their copies are as delighted with it as I am. It is a fine addition to a weaver's library. The price is \$1.50.

\* \* \* \* \*

A delightful experience of the summer thus far has been the visits in Basin of several Guild members. Any Guild members who are taking a northwestern vacation will find Basin half way between Butte and Helena on the main highway. I should like to invite each one of you to stop if you are going through this way in August.

*Harrist C Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



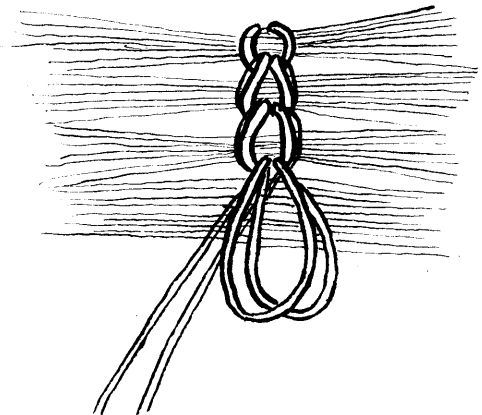
August 1948  
Volume XXV, Number 8  
Basin, Montana

Subject:  
Suggestions for  
Warping and Weaving

This month we have a "Forum" Bulletin -- a discussion of little technical matters, means of simplifying warping and weaving. Many Guild members have written in requesting short articles on subjects such as warping, selvages and tension, so here are these things gathered together.

CHAIN WARPING The best kind of warping board is made of four pieces of hard wood (oak is excellent) arranged to form a square. The warping pegs should be made of  $3/4$  inch dowels about six inches long set into  $3/4$  inch drilled holes. Measuring the warp is facilitated if one turn of the warp from peg to peg is exactly one yard. There should be four pegs at the top of the warping board with the two inside ones set at the left of center so that the cross which lies between these two pegs will be about 24 inches from the end peg.

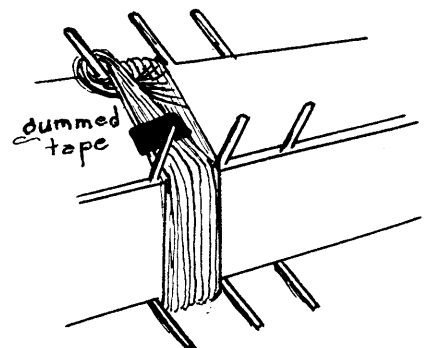
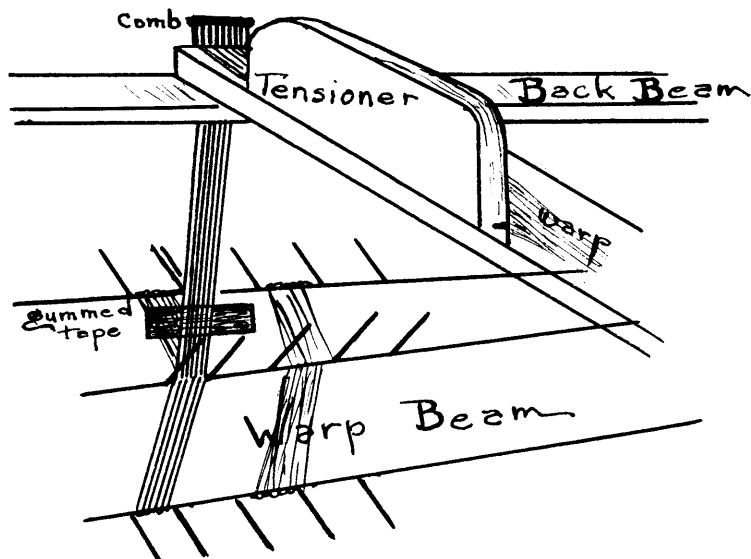
In preparing a chain warp on the warping board be sure that the tension is even throughout, but not tight. Winding too tightly will strain the pegs and pull them together which ruins the tension of the warp and eventually ruins the warping board. A partly made chain should never be left on the warping board for any period of time or over night as this stretches the yarn. Do not think it necessary to make an entire warp in one chain. It is usually easier to make small chains of 100 to 150 ends. To facilitate counting as one winds the warp, separate each ten threads with a chain made of a long double strand of heavy thread. Hold the center loop around the first ten threads and pull a double loop through it. Let the ends hang down with the loop up until another ten threads have been warped and make a second chain around them, etc. This small chain may be placed at any convenient spot on the warp and should be removed before the warp is chained off the board. In chaining the warp off the pegs always face toward the warp, which means walking back and forth in front of the board.



In beaming a chained warp it is usually a time saver if one can sley and thread the loom from front to back, make the tie-on to the warp beam, and beam from the front, pulling the warp through the reed and the heddles. For a very

weak warp such as a singles linen or a fine wool this is impractical as the heddles put too much strain on the thread. In this case merely sley and do the threading after the beaming is completed. To sley, fasten the warp chains tightly to the breast beam. Two leash sticks may be placed through the cross and these two sticks tied to the breast beam. The cross then lies between the two sticks and the warp ends are picked carefully, in order, from this point. Some weavers prefer to tie the cross with a loose loop of heavy thread and work directly, picking the warp ends or pairs of ends from the center of the loop. In this case tie the chain very firmly to the breast beam about two inches below the cross. Tie the beater to the breast beam and to the center structure of the loom so it will stand upright. When sleying two ends to the dent, after the sleying is completed insert a leash stick or a pick-up stick an inch to an inch and a half wide through the side of the cross nearest the reed. Push the stick back so it will lie flat against the reed and tie it firmly to the reed. The warp will then go through the reed with one thread in each dent lying under the stick and the second thread lying on top of the stick. This facilitates the selection of threads for the process of drawing the warp through the heddles. The stick may be left in place during the beaming or it may be removed. For beaming, place the loom so that a long length of warp may be unchained (four or five yards). Pull out the warp tension, straightening the ends, as far from the loom as possible to reduce the amount of handling of the warp. Never start straightening the warp directly at the loom and working back gradually; this increases the tangles and unevenness of the warp and also greatly increases the work. Comb the warp with the fingers and not with a comb. Do as much of the straightening as possible by merely pulling the warp through the hands and shaking it. Minor, final organization of threads may be done directly in front of the reed and a comb may be used if the warp is held under tension. Putting a comb into a loose warp will increase the tangles and is apt to break and knot the warp ends.

SECTIONAL WARPING The source of most tension difficulties in sectional warping is in the poor spread of the section of warp between the pegs on the beam. The warp often has a tendency to hump up in the center of the sections so that it winds tighter on the edges. A good way to make a perfect spread is to carry the warp from the tensioner pegs through a comb. Attach a small comb



(scotch taping it on is adequate) to the end of the tensioner which rests on the back beam of the loom. Measure off on the comb the exact distance between pegs of the sectional beam; distribute the warp ends as they come off the pegs evenly through the dents. When the tensioner and comb are completely threaded put a piece of scotch tape across the top of the comb to keep the threads from coming out. This will make a perfect warp spread so that any number of yards may be beamed without a tendency to hump in the middle or at the pegs. Mrs Douglas Fessenden has another system for doing the same thing. She purchases all her reeds three inches longer than the weaving space of her loom and saws off the extra three inches. She then draws the warp from the tensioner through the small piece of reed, setting it closer in the three or four dents at each end (three ends per dent instead of two, or two instead of one) to compensate for the space taken up by the pegs. She then attaches this section of reed to the end of the tensioner with scotch tape.

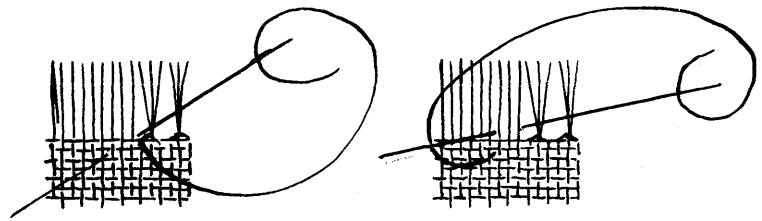
A cross or leash is not necessary for threading a sectionally beamed warp. The threads lie in perfect order on the beam and may be picked off in the same order with the right hand if the section of warp ends is held under tension by the left hand. Some threaders find this awkward and prefer to have the threads held in order at the end of the warp. For this, place a piece of sticky paper across the section of warp after the bout has been wound. Cut the paper about five inches long; press the dampened, gummed side firmly to the stretched section of warp a few inches below the point where it is to be cut. (Notice the illustrations) Double both ends back so that both sides of the warp are held and then cut the bout. Loop the end of the bout of warp around a peg on the left side of the section with the loose end under the loop and pulled to the right so that it will not hang over an unwound section.

WARP DRESSINGS Certain warps (fine singles linens and some single-ply wools) are made of thread so weak that there is a tendency for warp ends to break during weaving. The common remedy for a weak warp is to treat it with a dressing by dipping the warp chains and allowing them to dry before beaming. When the weakness is discovered after the warp has been beamed, the dressing may be painted or sponged onto the stretched warp in front of and behind the heddles. A satisfactory dressing is made by boiling flax seeds in water until a paste the consistency of starch is formed and seiving off the seeds. A few weeks ago Mrs Clyde Hudson stopped at the Basin weavery just at the moment when we discovered the necessity for a dressing on a linen warp. It looked as though weaving would have to be delayed while we drove ten miles to the nearest drug store for flax seeds and then brewed a supply of dressing. Mrs Hudson had the proper 'solution' when she volunteered, "Just get a bottle of wave-set." The wave-set worked perfectly and has the extra advantage of being quick drying. Mr Hudson, a pharmacist, made his contribution when he suggested that we add a pinch of sodium benzoate to a brew of flax seed as a preservative. Ordinary flax seed dressing must be kept in a refridgerator and even so it sours very quickly.

FINISHES The common finishes for handwoven pieces are hems, or tied or whipped fringes. In the new Rug pamphlet Mrs Atwater gives a number of interesting ties for fringes. An easy method for making a whipped (hemstitched-like) edge was demonstrated to the Missoula weaving class by Martha Colburn. Here are



her directions and diagrams. Thread a needle with a bit of the warp or tabby material. Raise all the harnesses so that the warp slopes. Start at right selvage with a tiny knot in the thread. Insert needle to left under three warp threads and two tabby threads. Put needle under same three warp threads looping thread under needle.



Pull thread tight. This may be put in very rapidly when the piece is still held under tension on the loom. To hemstitch the beginning end of a piece, insert a stick on a tabby shed and then weave a few rows of tabby. Remove the stick and put in the row of stitches upside down.

SELVAGES Making good selvages is one of the most common difficulties of the beginner. The generalization may be made that only after much experience and concentration can a weaver learn to make a practically perfect selvage. But there are a number of little tricks which can help. First of all, never put any tension on the weft while beating. Make the weft turning from one shed to the next smooth, then allow the weft to lie on a loose diagonal in the shed for the first beat. Any tension on the weft thread makes the weaving narrow-in all the way across, drawing in the edges to the point where the beating will loosen and often break the edge warp threads. A very slight narrowing-in — just enough to make the edge three or four warp threads lie a little closer together — may be made by putting a slight bit of tension on the weft thread before the shuttle is thrown through the shed (after the second beat has been made). This will obviate the tendency toward loops at the edges and, when perfect shuttle control is developed, will produce almost perfect selvages. A narrowing-in of about a quarter of an inch on each side is permissible. If the weaving is as much as an inch narrower than the warp in the reed, the weaver should beware. Almost all weavers, even with the strictest concentration on selvages, make one selvage more even than the other. Don't worry about this. It just seems to be the way we weave.

Threading a selvage is sometimes a problem. For simple Overshot weaving or any weave which has a tabby (four harness) the selvage is merely threaded to twill: 1, 2, 3, 4 for as many threads as desired on one side, and 4, 3, 2, 1 repeated for the other side. Most four-harness drafts start on harness 1, so the selvage twill should end on harness 4. A two-thread selvage threaded on harnesses 3 and 4 is sufficient to hold in a pattern which starts on harnesses 1 and 2. If five threads are to be used for the selvage, thread them 4, 1, 2, 3, 4; if six threads, 3, 4, 1, 2, 3, 4; etc. If the draft starts on harness 4, the last thread of the selvage must be either 1 or 3.

The twill selvage works properly only if the weaving is done with a tabby. In weaving plain twill with one shuttle there is often a loose thread

on one side or the other, or on both sides, which does not catch in the weaving. If this occurs on only one side, simply remove the thread. If it occurs on both sides it may be corrected by breaking the weft and re-starting it on the opposite side. If the last twill repeat is completed in the threading so that the last thread is four the first shed will make a pair of threads down on one side and a pair up on the other side. Throw the shuttle for the first shot from the side which has two edge threads down and all the edge threads will catch. Then, if the direction of the twill is changed or if a shot is skipped both edge threads will fail to weave. In weaving a twill which requires changes in the direction of the weaving order the only way to catch in the edge threads on the reverse twill is to carry the shuttle around the edge warp, or to break the weft at each change of direction and start it from the opposite side. In weaving twill yardages which do not require a perfect selvage it is a common practice to make the edge threads of carpet warp or rayon which may be pulled out when the yardage is completed. On a delicate wool yardage warp where there is a strong tendency to narrow-in the edges some weavers make the two edge warps of carpet warp or of some other heavy, inelastic material and draw them out when the weaving is completed. If a firm selvage is desired for a plain twill fabric the four threads on each edge of the warp should be threaded 1, 3, 2, 4 instead of 1, 2, 3, 4. This will give a tabby selvage but it is not practical if the direction of the twill is to be reversed as two edge threads on each side will not weave when the direction of weaving is changed. This situation may be remedied whether the edges are threaded 1,3,2,4 or 1, 2, 3, 4, by weaving with two shuttles carrying identical weft. Lock the two weft threads around each other at each side. Edge threads are locked in all two-shuttle weaving by always retaining the same shuttle relationship. For instance, always place one shuttle at the side of the loom and the other one in front; or lay one shuttle down toward the reed and the other one toward the weaver. Some threadings require reversing the order for each side of the loom.

Some threading techniques will not make a good selvage. This is true of the four-harness weaves which do not tabby, and also of some of the multiple harness weaves. A selvage, however, may be added by threading it on two extra harnesses and tying these alternately to the pattern harnesses so that they will weave alternately. A wide selvage of this kind is sometimes drafted onto a waffle-weave threading but experience shows that it is not practical for this weave or for any other which has a great deal of take-up; The selvage will turn out to be a ruffle. Just two selvage threads are often adequate to hold in the pattern. On Bronson the selvage is merely threaded to 1, 2, repeated for the desired width. On Summer and Winter a good selvage may be produced by merely threading an extra pattern block which is never treadled in. On a four-harness Summer and Winter thread the selvage 1, 5, 2, 5 repeated as desired; for a six-harness pattern thread the selvage 1, 7, 2, 7; etc.

There are several very poor practices in making selvages which should be avoided. One of these is threading the edge threads double in the heddles. This gives a heavy, cord-like, unpleasant edge. Another poor practice is threading the edge half-dozen threads closer in the reed. This increases the tendency toward making loops on the edges. It is also undesirable to warp the edge threads of a heavier material as this makes the edges unpleasantly conspicuous.

BEAMING THE WARP In rolling a warp onto a solid beam it is important to obviate any distortion of tension from the knots which tie the warp to the beam. This may be done by rolling a piece of corrugated cardboard around the beam with the first two or three turns, or by using several thicknesses of heavy wrapping paper. Or a leash stick may be inserted directly over the knots on the first turn of the beam. It is advisable to use one of the same methods when rolling the woven cloth onto the cloth beam.

CUTTING THE WARP A weaver often wishes to cut off a woven piece but at the same time does not wish to waste the inches of warp required for a new tie-in and respreading the warp. If the warp tension is good there is a simple way to eliminate this waste. Weave a half inch to an inch of tabby, the amount depending upon the tendency of the material to ravel. Insert a wire or a stick into a tabby shed and throw two more tabby shots. Then lash this wire or stick to the tie-in stick attached to the cloth beam. This method saves time as well as warp. It is well to mark the end of the woven piece with one shot of colored thread at the point where the cloth is to be cut off. Miss Kathryn Lyon tells me that she weaves only a few shots before putting in the wire and then brushes these with colorless nail polish to hold them, before cutting off the weaving. I use small welding rods for wires and find these small welding rods very useful for many things around the weavery. They are easily cut to any length.

BOBBINS I find that the most convenient kind of bobbin is a small square of paper with one end cut like the flap of an envelope. The cut end of the paper is wound around the shank of the bobbin winder, the thread inserted under the edge. Thus any size shank may be used and one is never at a loss for a bobbin to fill. Also, the paper may be cut to fit any size shuttle and if a bobbin is too long for a shuttle the ends may be snipped off. I use large paper quills of this kind to make bobbins for sectional warping instead of winding the warp on large spools. Then any thread left over may be merely inserted on the quill into a shuttle and used for weft without the bother of rewinding. Mrs Hudson contributes the information that a number 3 Camera spool holds almost exactly one ounce of material if it is wound firmly and that the spool fits the large Gilmore shuttle.

SALES OPPORTUNITY FOR HANDWEAVERS One of our Guild members has decided to try her hand at rather large scale marketing of handwoven articles and textiles. Anyone who is interested in having the products of his loom marketed write to Mrs C W Smith, 317 West Spruce Street, Missoula, Montana. Mrs Smith is an experienced weaver and a good judge of quality in both handweaving and finishing of articles. The business will, of course, have to be on an experimental basis at first.

*Larrist C Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



September 1948  
Volume XXV, Number 9  
Basin, Montana

Subject:  
Use of Metallic Wefts  
The Basin "Institute"

Interest in the use of metallic yarns for handweaving is increasing as the manufacturers develop more and more satisfactory metallic yarns. Many letters come to the Guild requesting information on sources of suitable metallic yarns and regarding suitable ways to use them. With the recent advent of several fine metallic handweaving yarns, the time seems ripe to give the subject a little serious discussion.

Whether or not metallic threads are suitable materials for handweaving has been a subject of very warm contention among handweavers since they first appeared on the market. The argument will, of necessity, lie between people of different points of view, neither one of which is all wrong or all right. There is too much flexibility in our present era for anyone to lay down rules or dogmas concerning the proper thing or the improper thing. Research laboratories are busy developing new materials from synthetics and plastics and every month these new materials become more significant to daily living. The only significant dogmas which can be applied to the use of any new weaving material are the same ones by which materials have been judged from the beginning of time: can the material be used to produce a good, usable, appropriate, pleasant appearing and feeling textile? It is easy enough for good textile judges to agree on the first two points. It is on the qualities of appropriateness and appearance that disagreements arise, just as they arise when the subjects of the new painting, architecture, music, dress and every other of the arts of living are under critical observance. In our present age of change, suitable uses must be found for the new things science develops. Often we fling ourselves to extremes in an initial enthusiasm for something new, but inevitably with the trials of time the trend will settle back a little. New means, methods and tools, if found to have no advantages over old ones, will not be pursued. Progressive minds will constantly be seeking new uses for new things as well as for old ones. It can be only through sincere trial and error and success that we move forward.

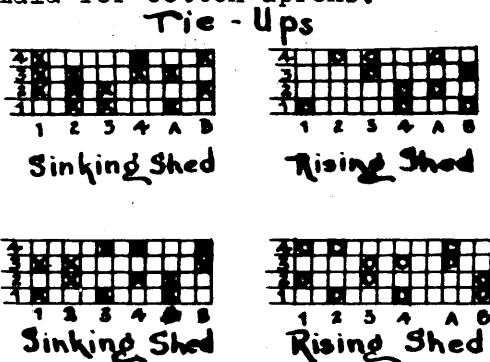
The traditionalist will be hurt by the use of glittery metallics in textiles. The person who has not been steeped in the traditions of animal and vegetable fibers or who finds constant interest in new approaches, will like to adventure into new textile fields. The solidness of the approach is determined by the attitude toward the new materials. The person who tries to use new materials in traditional manners will find the new materials highly unpleasant. Just as linens, cottons and wools all have weaves which are peculiarly suitable for them, so methods of weaving which are suitable for metals must be developed. For instance, a Colonial Overshot coverlet woven with a gold metallic pattern weft would be a most discouraging weaving project, whereas a glance at some of the new drapery textiles illustrates the vitality of textiles made partly of metallics.

In designing handwoven textiles one must always keep in mind the fundamental characteristics of all textiles: texture, pattern and color. A good, satisfying textile does not result if equal emphasis is placed on all of these elements. If pattern is the important feature, materials are selected which will make the pattern clearer and few color changes are used. If colors are to be stressed the pattern is minimized so as not to distract the mind from the color effect. If texture is the important feature, color is used with restraint and the pattern is limited to a type which will reinforce the texture. Since the unusual texture (as well as the light reflecting qualities) is the important quality of the metallic yarns, the obvious way to use the metallics is as a point of emphasis. Using it in simple plain weave or only in twills is monotonous and leads to poor emphasis. Therefore certain patterns which are not highly designed will enhance the effectiveness of the material. The plain and twill weaves are usually best where the new metallic yarns are used to enhance the effectiveness of a color combination. It is even possible to use a metallic as a means of emphasizing a pattern. But it is very important in designing a textile in which metallics are to be used to determine at the outset the relative value of the metallic to the pattern, to the color and to the texture. In regard to this it is also important to select carefully the type of metallic to be used.

Very recently a number of outstanding metallic yarns have been developed which are all non-tarnishing, washable, ironable, non-odorizing and have a soft texture. Available from Hughes-Fawcett, Inc, 115 Franklin Street, New York 13, New York are several types: Lane and heavy and fine Guimpe in gold, silver and copper in which the metal has a silk core to give it strength and flexibility; gold, silver and copper plyed with number 12 linen; as well as the plain metallic in a range of exciting colors. Available from Terrace Yarns, 4038 S W Garden Home Road, Portland 1, Oregon are fine gold and silver metallics plyed with nylon. The metallic strands which are twisted with silk, linen or nylon have a strength and flexibility which make them highly plausible handweaving materials. Weavers will find them pleasant and easy to use. The materials are being used for warp as well as for weft but the present remarks will be restricted to their use as weft.

There is a whole field of experimentation in adapting these sympathetic metallics to a wide variety of textiles. Their use in drapery and upholstery fabrics is a wide area in itself, as is their use in woolen suit and dress materials. These too are subjects for future treatment. At the moment we are interested in the metallics used in table linens and in dress materials.

The characteristic which we considered in selecting suitable threadings to use for metallic wefts was simplicity first of all. The second characteristic was the absence of long weft skips. The patterns developed from the following drafts are primarily textures which can be used to emphasize the material rather than to distract the eye with designs. Experienced weavers will recognize Draft A as the familiar Huck used for centuries for towels. Draft B is a simple, four-harness Summer and Winter draft. It is given by Mrs Atwater in GUATEMALA VISITED as it was used in one section of Guatemala for cotton aprons.



Draft A was woven on 40/2 bleached linen set at 36 ends to the inch. For table mats the warp should be 14 inches wide, a total of 504 warp ends. A coarser material requiring a wider setting is not recommended as this would make the weft skips in the metallic thread too long. The Lame we found to be the most satisfactory pattern weft metallic for this warp and threading. Mats were woven with metallic borders and 40/2 linen like the warp for tabby hems and for the body of the mats. The metallic thread may be used as tabby in the body of the piece.

Borders may be woven in several ways and are most effective when woven with a heavier edge. One edge arrangement is made by throwing three or four shots through the shed made by treadle 3, hooking each shot around the edge warp thread; then throwing three or four shots through the shed made on treadle 4. Another edge is made by throwing six or eight shots on harnesses 3 and 4 alternately. A third is made by using tabby A alternately with pattern treadle 3 and tabby B alternately with pattern treadle 4. A pleasant border is treadled as follows, repeating the ten shots for the desired width:

Tabby A	- linen	Tabby B	- linen
Treadle 1	- metallic	Treadle 2	- metallic
Tabby A	- linen	Tabby B	- linen
Treadle 1	- metallic	Treadle 2	- metallic
Tabby A	- linen	Tabby B	- linen.

The effect is not as pleasant when the metallic weft is used for all the shots. Another simple border may be made by throwing by throwing alternate tabby shots of linen and metallic with strong edges on either side of the border woven with a dozen or more shots alternating tabby A in linen with treadle 3 in metallic or tabby B in linen with treadle 4 in metallic. These last two may also be woven with three shots of the metallic for each block, alternating back and forth to give squares.

Draft B points up the metallic weft most effectively when woven in the Guatemalan manner, using no tabby for the pattern work. Throw one metallic shot on treadle 1 and one shot on treadle 2. Then compensate these by throwing the third shot on treadle 3 and the fourth on treadle 4. In other words, simply treadle 1, 2, 3, 4, using pattern weft without a tabby. This gives an all-over metallic texture which has a good bit of interest. To make squares one may use the metallic for treadles 1 and 2 and the tabby thread as pattern on 3 and 4, repeating the four shots to make blocks as desired, then reversing to thread like the warp for 1 and 2 and the metallic on sheds 3 and 4. Dashes may be made by throwing the metallic on either 1 and 2 or 3 and 4 and then weaving tabby as far as desired. This method of weaving is very flexible and is worthy of a good bit of experimentation. A sampler is recommended.

We have woven this draft for dress materials, blouses and aprons on a 24/2 red cotton warp set at 36 ends to the inch. One very striking combination was made with using tabby identical to the warp and weaving the texture pattern with fine, black mercerized cotton or sewing silk and both gold and silver metallic. The metallic wound with nylon core is the type of thread we found best for this as it is very fine and is not harsh or prickly to the touch.

Damask threadings make an interesting basis for work with metallics, the number 12 linen wound with gold, silver or copper. We used the set-up given in the April 1948 Bulletin with number 12 singles linen set at 30 ends to the inch, fourteen inches wide, with pattern blocks at each edge (unit II in the April Draft) and a large table (unit III in the April Draft) in the center. The traditional way of weaving damask in symmetrical patterns seems hardly appropriate with the metallic weft so we made place mats with plain longitudinal stripes. This is done by merely treadling 1, 2, 3, 4, 5, over and over (for five shaft damask; 1, 2, 3, 4 repeated for four shaft) or weaving only on treadles 6, 7, 8, 9, 10, whichever stripe effect is desired.

A Twill Variation for full sized luncheon cloths was given in the

A Twill Variation for full sized luncheon cloths was given in the Bulletin for October 1946. This might be woven in a symmetrical pattern (woven as-drawn-in) on a number 12 singles linen warp set at 26 ends to the inch. It would be particularly effective woven with a tabby identical to the warp and one of the colored metals for pattern weft. If the weaving is to be done without a tabby and with the plyed linen and metal for weft, set the number 12 singles at 30 to the inch for warp.

#### THE BASIN "INSTITUTE"

The Basin "Institute" is progressing with high enthusiasm. Mrs Atwater arrived from Salt Lake City and is supervising all the weaving, keeping the looms constantly amused with her tales of weaving and weavers, mining life in Basin, her experiences in the high Andes, the state hospitals, the army and adventures of her very full life.

We have a wide geographic representation among the weavers: three from New York, two each from California, Iowa and Montana and representatives from Pennsylvania, Arkansas, Wisconsin and Michigan. Life in a ghost mining camp is a new experience for most of them and constantly interesting. The town of Basin always feels that a visitor is a personal guest to almost everyone so weavers soon feel at home. Though weaving and more weaving is the program we have sandwiched in plenty of outside fun -- a visit to some picturesque abandoned gold mines, breakfast picnics up mountain canyons, a dinner at the famous Rocky Mountain Cafe in Butte, an all-day Sunday picnic at a mountain cabin, an evening of color slides of Basin scenery and characters and our last summer's weaving, and more fun to anticipate. We eat family style dinner together each evening and our local hotel has really outdone itself in quality of food. And Montana summer weather, which is usually incomparable, has cooperated as much as the people.

As for weaving -- there are seventeen 4, 6, 8 and 10 harness looms, each one set up for a different technique, many of them for articles and some for samples. We are making double-stuffer rugs, aprons, blouses, pillow tops, several kinds of table linens, double weaving, leno, bags, Guatemalan belts and Inkle belts, as well as getting ideas for draperies, upholstery, suit materials, etc. Each afternoon after lunch Mrs Atwater teaches the group braiding and knotting and in the evenings we do draft writing. The sound of beaters can be heard up and down the Basin street until midnight.

One student, who had only a week's vacation and a fifteen hundred mile trip left with a bag full of "finishing" and braiding to do on the train, remarking that she never imagined she would visit a place where in four days the town's leading merchant and his wife would take her on a fishing trip, the station agent would bring her detective stories and the postmaster would leave his window to see her off on the bus.

With the success of this group it is probable that we shall repeat the Institute next summer, perhaps having one earlier in the summer too. In the meantime we shall be having a number of small, informal groups in Basin during the winter. We are taking no students during September, October and January but we shall be happy to have any weavers or potential weavers who wish individual instruction during the other months. In the past, because of limited studio space and poor housing and boarding facilities in Basin it has been necessary to discourage many people who have wished to come here for lessons. But now we have adequate space and looms and also a very good rooming and boarding house, so we are glad to welcome anyone who wishes to come.

*Harrist C. Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



October 1948  
Volume XXV, Number 10  
Basin, Montana

Subject:  
Christmas Gifts  
Angora Wool Ascot Scarf

October is our Christmas Gift month and this year we have something really lovely and out of the ordinary -- an Ascot scarf of Angora rabbit wool. It's a little scarf, about seven and a half inches wide and thirty two inches long, with pointed fringed ends, Spanish Eyelet detail, and a double-woven slit near one end to draw the other end through. It's a delightful little accessory, particularly when made of the soft, furry Angora wool. Since this yarn is difficult to obtain, we have purchased a large supply of it and can sell it to Guild members at \$4.00 a skein, and each skein contains sufficient yarn for five scarves. This is a 2-ply yarn, 40% Angora and 60% lamb's wool,  $5\frac{1}{4}$  ounce skeins with about 1500 yards per skein. The yarn is unbleached but the oil content makes it better for weaving and the only thing necessary for bleaching is a thorough washing in gentle soap suds. This washing is also necessary for raising the fur nap, and the scarves become softer and more furry with continued washings.

From the illustration it is plain to any weaver that the style is unconventional for a handwoven piece, but, with a little care, the narrow double-woven pocket can be made neatly. The Angora wool is recommended because there is an inevitable slight distortion in the weaving where the warp is respread above the pocket and the elastic, furry quality of the yarn reduces this. One pleasant feature about this little scarf is that after it is cut from the loom the only finishing to be done is to trim the fringe and wash it. There is not one stitch of sewing. It may be brushed with a small nylon-bristle brush to raise the nap a little more.

To weave five scarves, warp 152 ends, five yards long (a weaver who is extravagant of warp should use more), and thread it to the plain, four-harness twill. Except for the little pocket, or slot, through which one end is drawn in wearing, all of the weaving is done on the tabby sheds. To make the point at the end, start by weaving on the A tabby shed, under the four center warp ends, and continue the weaving according to the detailed directions on the next page. Use a flat shuttle with a knife edge and push the weft into place with this rather than using the beater. (A ruler is a good substitute for the beater.) Use the beater when weaving plain tabby. When six inches from the point have been woven, loosen the warp a little and make one row of Spanish Eyelet all across the scarf, going forward 16 and back 8 and drawing it as tightly as possible to produce gathers. It is wise at this point to draw the weaving together over the breast beam so that the warp slants in from the beater to about 3 or  $3\frac{1}{2}$  inches wide. Now weave for  $2\frac{1}{2}$  inches, alternating treadles 1 and 2. It is necessary to beat this too by inserting a stick in the shed. This will leave half of the warp ends unwoven and floating on the top. Now weave for  $2\frac{1}{2}$  inches alternating treadles 3 and 4, to weave the top surface of the pocket. The next step is to weave another row of Spanish Eyelet (forward 16 and back 8) with the warp loose and weaving very loosely to spread the warp again. It may be preferable to weave the Spanish Eyelet and the pocket with a double strand of weft, or to elongate the eyelets. When the second row



of eyelets is completed the warp will not be completely spread to its full width, so great care must be taken to let the weft lie very loosely in the shed, and perhaps even leave loops at the edges, to hasten the spreading. Using the beater will help spread the warp (slack warp tension here). There will be some distortion but most of this washes out. Weave about 18 inches in plain tabby and then start the eyelets for the other end, and the narrowing for the point. After weaving the first end it will be easy to reverse the directions.

Detail Directions for Weaving End of Scarf:

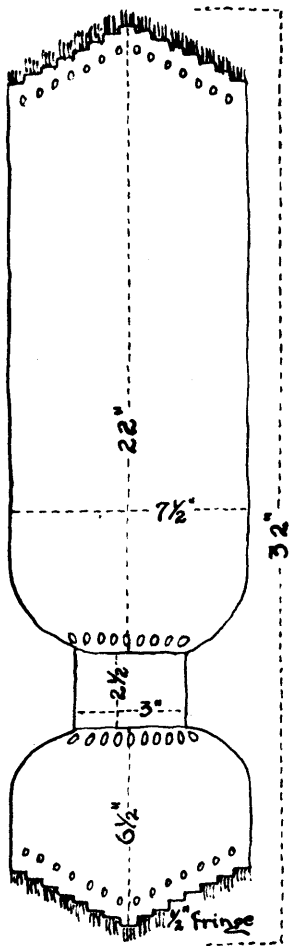
1. Open tabby A shed and insert shuttle 36 threads from the right hand edge, carrying shuttle under four warp threads;
2. Tabby B, return shuttle under 4 threads;
3. Tabby A, forward 4;
4. Tabby B, back 8;
5. A, forward 12;
6. B, back 12;
7. A, forward 12;
8. B, back 16;
9. A, forward 20;
10. B, back 20;
11. A, forward 20;
12. B, back 24;
13. A, forward 12; B, back 12; A, forward 16; B, back 4; A, forward 16; B, back 12; A, forward 12;
14. B, back 32;
15. A, forward 12; B, back 12; A, forward 24; B, back 12; A, forward 24; B, back 12; A, forward 12;
16. B, back 40;
17. A, forward 12; B, back 12; A, forward 32; B, back 20; A, forward 32; B, back 12; A, forward 12;
18. B, back 48;
19. A, forward 12; B, back 12; A, forward 40; B, back 28; A, forward 40; B, back 12; A, forward 12;
20. B, back 56;
21. A, forward 12; B, back 12; A, forward 48; B, back 36; A, forward 48; B, back 12; A, forward 12;
22. B, back 64;
23. A, forward 12; B, back 12; A, forward 56; B, back 44; A, forward 56; B, back 12; A, forward 12;
24. B, back 72 (to edge of warp);
25. A, forward 12; B, back 12; A, forward 64; B, back 52; A, forward 64; B, back 12; A, forward 12 (to edge of warp);
26. B, back 76 (to edge of warp);
27. A, forward 8; B, back 8; A, forward 68; B, back 60; A, forward 68 (to edge of warp); B, back 8; A, forward 8;
28. B, back 76;
29. A, forward 4; B, back 4; A, forward 72; B, back 68; A, forward 72; B, back 4; A, forward 4;
30. B, back to edge of warp and continue weaving plain tabby.

There are two suggested simplifications of this scarf. The first one is to omit the Spanish Eyelet detail around the edges, weaving with a plain, pointed end. The second is to omit the double-woven pocket, weave the scarf a few inches longer for tying in a loop at the neck. This last also makes a very pleasant scarf and is far easier to weave. It can be woven on a two-harness loom or on any tabby threading.

Another idea -- this Angora wool yarn should make a truly luxurious bed jacket woven on the pattern given in the Bulletin for November 1946. An occasional decorative warp end of the nylon-metallic thread mentioned last month could be used with it as the Angora would protect the wool from scratching.

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# Angora Wool Ascot Scarf



Tie-Up

	1	2	3	4	A	B
4	X		X	X	X	X
3		X	X	X	X	
2			X	X	X	
1				X	X	

Sinking Shed

	1	2	3	4	A	B
		0			0	
		0		0	0	
		0		0	0	
		0		0	0	

Rising Shed

Draft

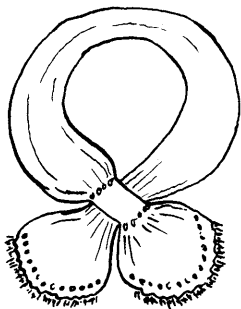
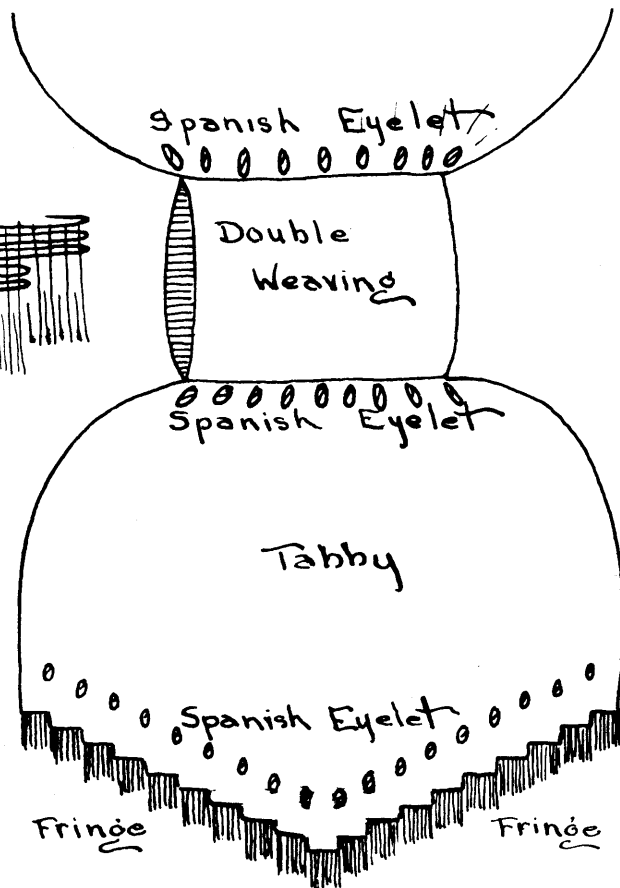
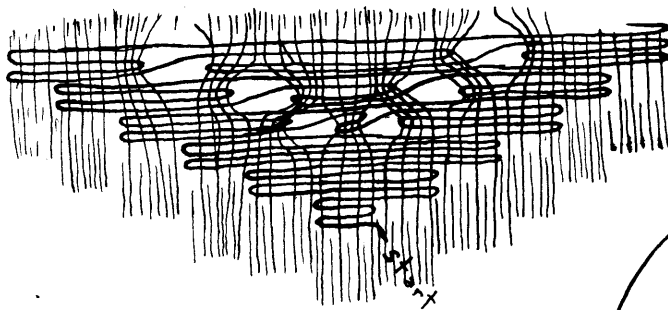
4					
	4				
		4			
			4		
				4	

Material: 2-ply, 40% Angora wool

Warp: 152 ends set at 20 ends per inch

For 5 scarves warp 5 yards.

Weave in tabby with Spanish Eyelet detail and double weave pocket.



For Apron makers here is an idea to try. Instead of weaving separate apron strings and gathering the apron onto them, weave the strings right in. Do it this way: weave the body of the apron (18 or 20 inches with hem allowance), then weave a pattern band about an inch and a half wide. But instead of throwing the pattern weft in the usual way, measure and cut strands of pattern weft about three yards long, and lay them in the sheds, centered. This will leave strands a yard or longer hanging loose at each side of the pattern band. Weave one half inch in tabby and then duplicate the pattern border in the same manner. Weave a half inch of tabby and the weaving is completed. When the apron is cut from the loom, fold the material between the two pattern bands, turn under one fourth inch of the last half inch of tabby and hem the top of the apron with a pattern band on each side. Now draw in each one of the long pattern weft threads from the pattern band on each side so that a shirring is made and the body of the apron hangs in gathers from the top band. Braid the long ends of pattern weft in a five or six strand braid on each side and the braids make attractive apron ties. Overshot patterns are most practical for this. This idea came from a member of our August class.

A Child's Bib, attractive and very practical, may be woven on the no-tabby weave with boy and girl figures, given in the Bulletin for April 1945. Thread seven repeats of draft (a) of this Bulletin (the 5-Block Diamond, draft No. 1 in the Shuttle-Craft Book) with four-thread selvages on each side. Weave with 20/6 stranded cotton for weft and beat to make a warp coverage. 194 warp ends of 24/3 cotton set at 18 to the inch will be required. The method of weaving is also explained at the bottom of Page Two in the Bulletin for July 1948. A plain color may be used for the body and for stripes and further colors added to produce humanesque figures or geometric designs. The soft, thickly woven weft gives an absorbant, pleasing texture to the bib. The warp will draw in about an inch to about ten inches wide. Weave about 12 to 14 inches per bib. Cut out a semicircular hole at one end and bind with bias tape, leaving enough tape at each end for ties. It is advisable to stitch this neck line several times on the sewing machine before cutting. Then hem the shoulders and the bottom.

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To those interested in the Bernat Fabri, we have a large fall stock on the way now and should be able to fill all orders by the time this Bulletin reaches you. We have added one color, a light grey, to those which we carried last winter. I shall be glad to send color samples to anyone who does not have them. I hope that there will be no change in the price of 75¢ a skein or \$6.00 a pound, but of that I am not yet sure. And the Angora wool is \$4.00 per skein..

I have just received a book which will naturally interest handweavers: MAN IS A WEAVER, by Elizabeth Chesley Baity, published in London in 1947. The Craft and Hobby Book Service lists it at \$2.75. It is a history of textile making from the Old Stone Age to the present and, though non-technical and rather naively written, it is well illustrated full of fascinating facts, myths and traditions about weaving, spinning and dying. A nice gift to a weaver.

Mr and Mrs Garnett January, Loom Craft Studio, John and Center Sts, Wilmington, Ohio write me that they will be presenting a class in Fundamentals of Handweaving during the week of October 25. The class is to be held in the Lounge of the Wilmington College Library and the fee will be \$20.00. Write to the Januarys for details.

And speaking of the Januarys, for some time I have been intending to mention the very nice little electric bobbin winder which they make. The motor has no rheostat but one soon learns to operate it efficiently. Cost -- \$8.50.

Mrs Atwater will write the November Bulletin and give us a new weave.

*Sarrist Douglas*

# THE SHUTTLE-CRAFT GUILD

## BULLETIN



November 1948  
Volume XXV, Number 11  
Basin, Montana

Subject:  
Four-Harness Damask Pick-Up  
The "All Americas Pick-Up"

There are, I believe, many good weavers among us who have never become acquainted with that amazing tool, the pick-up stick, and so have missed one of the most interesting phases of our art.

I know how it is. I think that at first we were all a bit set in the ways of American Colonial weaving. I certainly was, and had been weaving for many years before I discovered for myself the delights of pick-up. The only kind of pick-up at that time that was at all familiar to weavers in this country was the Swedish "embroidery weave" or "Dukagang." And this did not greatly appeal to me as I prefer to weave right side up and not be forced to resort to a mirror under the web in order to see what I am doing. This prejudice, I confess, is still with me.

But there are many, many forms of pick-up weaving. Every weave has its own form of pick-up, and there are a number of weaves used only for pick-up weaving. Some of these weaves are slow and some are rather difficult, but many are both swift and easy.

What the pick-up process does is to set the weaver free from the mechanical limitations of the simple hand-loom. By the use of the simple little tool -- the pick-up stick -- one may make, on an ordinary four-harness loom, patterns and textures that could not be woven mechanically on thirty or forty harnesses, and that would require an intricate draw-loom or a jacquard set-up. To be sure, pick-up weaving always takes more time than purely mechanical weaving, -- but any hand-weaving takes more time than machine weaving. Hand weavers are more interested in results than in time, as a rule.

True, there are those among us who derive their chief pleasure from the weaving of "yardage." Pick-up weaving would not be apt to appeal to them as it requires close concentration. I also requires a feeling for design. I have come across a few people who seem to be "pattern-blind" as others are color-blind. The shapes of figures appear to make no impression on them, and for them pick-up weaving is impossible, or at least too difficult to be worth while. Fortunately pattern-blindness is rare.

The pick-up weaves based on plain tabby include the extremely handsome Peruvian and Mexican tabby pick-ups and the Spanish open-work weave. These weaves have been described in the Bulletin. Based on a twill threading -- 1,2,3,4, and repeat -- are a number of pick-ups. The "Finnweave" and the Mexican form of double weaving, described in a special pamphlet. Also the double-faced weave used for girdles and other things in Peru, Bolivia and the Gran Chaco. The two-warp pick-up for rugs is usually woven on a threading of the summer-and-winter weave type, but if ordinary pattern weaving is not planned, with pick-up effects only, a twill threading will serve. The "One-skip" pick-ups and the summer-and-winter weave pick-up may also be woven on a twill threading, or on a summer and winter weave threading as preferred, and the one-skip pick-up may be woven on a "Bronson" threading of the "B" type, as explained in the "Bronson" pamphlet. This is similar to Swedish Dukagang.

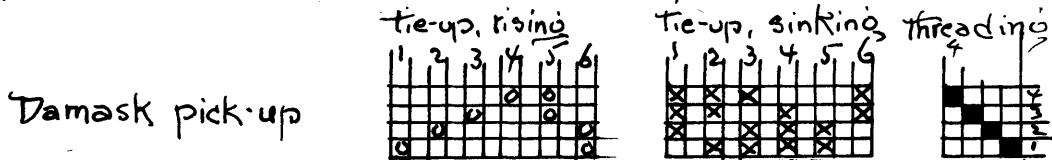
The weave that lends itself with least grace to the pick-up technique is our old friend, "four-harness overshot." However a handsome pick-up from Africa is woven on an eight-thread, two-block, overshot threading. This has been described in the Bulletin and is in the Recipe Book.

All these weaves have been described in the Bulletin at various times and the back-numbers containing the directions are still available for most of them.

There are also a number of weaves useful for pick-up weaving only. Most of these are weaves of the "native" type -- Guatemalan, Mexican, Philippine, Bolivian, Peruvian and so on. Many have been described in the Bulletin. Among them is the fascinating Guatemalan belt-weave from Totonicapan, described in the Bulletin and given also in GUATEMALA VISITED. Another is the Mexican and Peruvian two-warp pick-up -- handsome and effective when done in coarse material for hangings and similar decorative pieces. The four-harness double weave is also a purely pick-up technique, of course, and the associated quilted weave. Another very interesting pick-up is a Mexican warp-face weave used in Mexico chiefly for girdles, but easily woven as wide as one pleases on a four-harness loom. This was described some time ago in the Bulletin, but as this issue has been long out of print I am giving the directions again herewith. We had a loom for this weave at our Basin "meet" and people found it of special interest. It will be found useful for many purposes.

Recently, too, I have been experimenting with a pick-up damask weave, which is very simple and quite rapid and which will give four-harness weavers a chance at this finest of linen weaves. For table mats, borders for linen towels, for luncheon sets, if one is ambitious, this will be found very handsome. Though, as in other pick-up weaves, any pattern that can be drawn on cross-section paper can be woven in this manner, it is wise to begin with some fairly simple figure, and to weave blocks of at least two units. Single units are entirely practical, of course, but are sometimes confusing till one becomes accustomed to the technique.

For the damask pick-up use a linen warp set somewhat closer than for plain tabby, and thread: 1,2,3,4 and repeat, with tie-up as shown below.



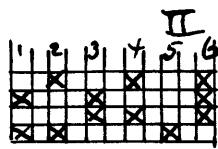
Weave as follows:

Treadle 5 and make the pick-up of the background, allowing a pair of raised threads for each unit of the weave. With the pick-up stick in place, treadle 1 and weave. Treadle 5 again and make the same pick-up; treadle 2 and weave. Treadle six and pick up over the same space; treadle 4 and weave. Treadle 6 and make the same pick-up; treadle 3 and weave. Repeat these four shots for each unit of the weave.

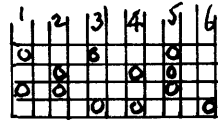
Suppose you wish to make a simple pattern of alternating eight-unit blocks: treadle on 5 and pick up eight pairs of raised threads; skip eight pairs, pick up eight and so on all across. Treadle on 1 and weave. Continue the pick-ups and treadling as above, repeating the four shots eight times. On the next pick up skip the first eight pairs and take up the next eight and so across. Make the following pick-ups and weave as above, repeating the four-shot unit eight times.

Suppose you wish to weave pattern (d) page 25 in the pamphlet on hand-woven rugs, allowing two units of the weave to each square of the figure: beginning at the bottom -- treadle 5, skip four pairs take up two, skip two, pick up four, and repeat. Treadle and weave the four weft shots and repeat. For the next line of the pattern: pick up two pairs, skip two, pick up four, skip four, and repeat. And so continue. The thing is simple enough and goes quite rapidly after one has the trick of it.

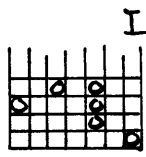
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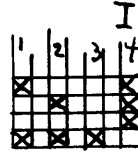
Sinking



Rising II



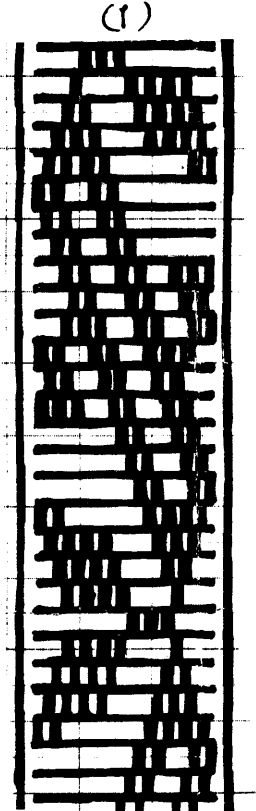
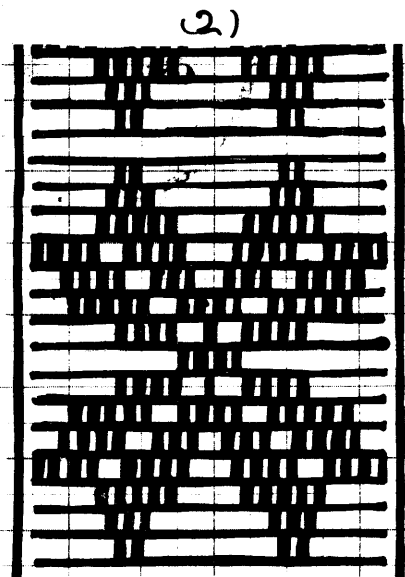
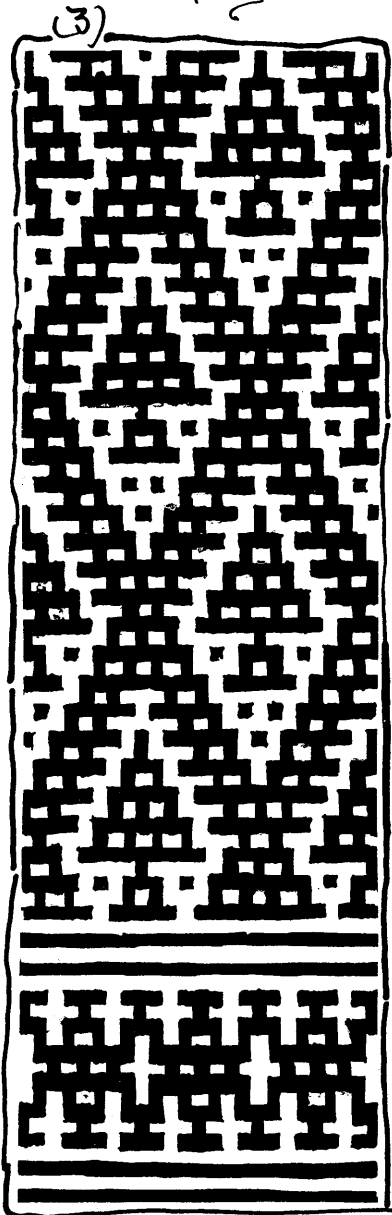
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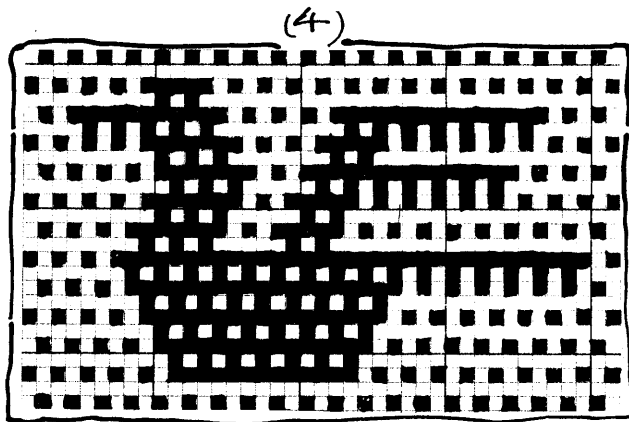
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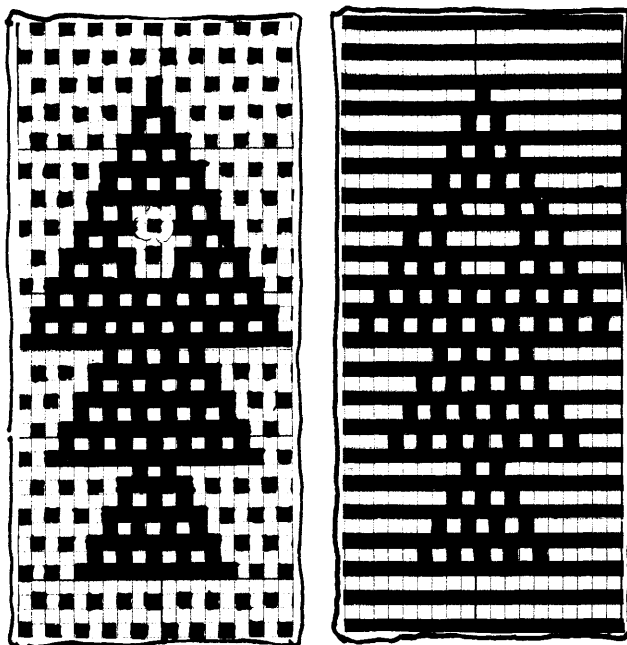


■ Fine white  
 ☒ Coarse colored



1, 2, Bolivian patterns  
 ~ style I  
 3, 4, Mexican patterns  
 ~ style II



Peruvian  
Style IIFish-Motif  
Style I

The weave shown on the diagram is a South American weave, and is also found in Mexican and Central American pieces and in Zuni Indian belts. It is, in my opinion, one of the handsomest and most useful of the pick-up weaves, -- suitable for table pieces, bags, chair-seats, and elaborate drapery. To many Guild members it may be familiar as the weave shown on Diagram No. Five of the "Inkle" pamphlet. The weave is most commonly used for belts and girdles, and when used for bags and wider pieces, as in Bolivia, the fabric often consists of wide and narrow pattern stripes set between plain rep stripes in many colors. This is a handsome effect and might be used to advantage for upholstery. Perhaps also for gay skirts and aprons. Such intervening stripes should be threaded: 1,2, 1,2,1,2 and so on, like the border as shown on the diagram and set very close.

The weave may be produced in two different ways: method I, which is Bolivian and Central American, and method II which is Mexican and Zuni. Of these the first is the simpler. Use the tie-up as given for I on the diagram and treadle 3 and 4 alternately for the plain bars of white and colored warp. When it is

desired to begin the pattern, after weaving on treadle 3, treadle on 1 and take up the first row of the pattern. For the Peruvian fish motif above this will be five threads, wherever a figure is desired. Use a narrow pick-up stick and leave it in the shed, but do not weave. Treadle on 4 and weave. Treadle on 3 and weave. Now treadle on 2 and take up the second row of the pattern -- four threads this time, treadle 4 and weave; treadle 3 and weave. And so continue.

The Mexican weave differs in effect as the background is not made up of solid bars but shows a very interesting texture. It is the handsomer effect of the two, but a little more difficult in execution. Use the tie-up under II on the diagram. For solid bars treadle 5 and 6 alternately. For the plain background effect treadle: 6,1,6,2 and repeat. For a solid effect of pattern skips treadle: 5,3,5,4, and repeat. To produce the fish motif above, after weaving on treadle six, treadle on 1 and make the first pick-up, of five pairs as for the first method. Do not weave. Treadle 2 and weave. Treadle 6 and weave. Treadle 2 and make the second pick-up. Treadle 1 and weave. Treadle 6 and weave. Continue in this manner for the entire figure. Weave all figures of the pyramidal type in the same manner.

For V-shaped figures -- for the fish, for instance, beginning at the point -- treadle on 1 and weave. With the shed open, pick up a single thread at the places where the figure is to occur. Treadle 6 and weave; treadle 2 and weave. With the treadle 2 shed still open make the second pick-up. Treadle 6 and weave; treadle 1 and weave. And continue in this manner. When weaving a diamond figure, weave in the second manner, as given above as far as the center, and reverse by weaving three shots under the middle pick-up and continue in the first way of treadling.

It will be noted that when weaving slanted lines, as in pattern (3) on the diagram, the lines are clear on one side and feathered on the other. This may or may not add to the effect. This figure, as illustrated, is woven all the way on the first order of treadling, as given above.

This may sound complicated, but with a little practise will be found simple enough, and more rapid than one might imagine. Much faster, for instance, than double weaving.

These weaves may be produced on various combinations of material. A combination that gives an excellent result in my opinion, is Egyptian cotton 24/3 at 15 ends to the inch for the fine warp and Lily's "soft-twist" in color for the pattern warp, at 30 ends to the inch. Use a 15-dent reed and sley one white thread and a pair of colored threads to each dent.

For a heavier fabric, use a 10/2 mercerized in white or natural for the fine warp and Lily's "Art. 514, strand cotton" for the pattern warp. Number 3 perle cotton makes a good weft for either warp.

For upholstery the fine warp might be linen and the pattern material rayon or wool.

Rep stripes, if introduced between stripes of pattern weaving as described above, should be in material like the fine part of the warp, and set close, -- Egyptian cotton at six ends to the dent in a 15-dent reed.

A few words should be said about that delightful tool, the pick-up stick. A pick-up addict soon makes a collection of sticks, as they should be in various lengths to suit the widths one may wish to weave. And some should be narrow, used simply to control the pattern, as in the forms of pick-up described herewith, while some should be wide enough to make a shed for the shuttle when turned on edge. All should be of hard wood, with rounded ends and beveled edges, and should be highly polished.

The familiar "poke-shuttle" is the type of shuttle generally used in pick-up weaving, but those who prefer can always make a shed for the throw-shuttle by using a wide shed-stick through the shed when formed.

To get a close beat, when making a warp-face rep fabric, open the shed, put the flat shuttle in the shed and beat against it before taking it through. As the pick-up stick in the shed is not as wide as the shuttle it does not interfere with beating. A special wedge-shaped shuttle with one knife-edge and one flat edge is a handy tool for this type of weaving, but is not generally available and must be made to order.

*May M. Atwater*

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In Basin we have been doing some weaving on this technique: wash cloths on the first mentioned set-up and towels to match on the second, with large monograms in the pick-up. We have worked out an alphabet in which the letters combine to make very handsome, large, modern monograms. We shall be glad to design monograms (a service which is often asked of us) on squared paper, to be woven in this technique, for a fee of \$1.50 per monogram. The minimum size for each letter is a little over an inch, but for combined letters more space is needed. We prefer the very large, striking combinations. These would be handsome also for personalized table mats and the texture of the weave is very suitable for this purpose.

We have been calling this the "All-Americas Weave" for want of a better name. But if it is found in North, Central and South America what name could be better?

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A new distributor of handweaving yarns is L L Lane, 4737 West Lafayette, Detroit 9, Michigan. Mr Lane has sent me samples of 20/2, 15/2 and Perle cottons in beautiful colors and at prices which will make handweavers smile in pleasure. He also handles nylon, rayon and silk yarns.

Trying to avoid raising the price of Fabri, even though the price to us has gone up, we are making only a slight change. From November first the price per pound for orders of two pounds or more will continue to be \$6.00. For smaller amounts the price will be 80¢ per skein (\$6.40 per pound) and to non-members of the Guild it will be 90¢ per skein. Guild members have responded enthusiastically to the Angora wool scarf and we can continue to supply the yarn.

*Harriet C. Douglas*



# THE SHUTTLE-CRAFT GUILD

## BULLETIN



December 1948  
 Volume XXV, Number 12  
Basin, Montana

Subject:  
 Warp Setting Guide  
A Twill Pick-Up

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A list of back issues of the SHUTTLE-CRAFT BULLETIN which are still available is enclosed. All Bulletins previous to September 1946 were written by Mrs Atwater. The files for 1947 are complete and an index for that year will be sent on request. All 1948 BULLETINS are available. The price of back BULLETINS to Guild members is three for \$1.00, to non-members 50¢ each. As stocks are getting low, state with orders whether or not substitutions are desired.

WARP SETTINGS FOR COTTONS

- 24/2 (10,00 yards per pound) is a fine, light weight cotton, suitable for light fabrics. Set at 40 ends per inch it makes a firm tabby; at 36 per inch it is good for Overshot, Summer And Winter, and Bronson.
- 20/2 (8400 yards per pound) is a standard warp, one of the most commonly used for two-shuttle and Colonial weaving. For a firm tabby, a setting of 32 to 34 ends per inch is good; for pattern work, 30 ends per inch.
- 24/3 (6720 yards per pound) is another standard warp, particularly good for Coverlets. This makes a firm tabby at 30 ends per inch and may be used for pattern weaving at 27 to 28.
- 10/2 (4200 yards per pound) makes an excellent warp for rather heavy fabrics such as table mats, draperies, coverlets, upholstery. Set at 27 to the inch the tabby is firm and stiff but the twill is good; at about 22 the tabby is good; settings of 18 to 20 are good for pattern weaving according to the type of pattern weft employed.
- 10/3 (2800 yards per pound) is an excellent warp for many of the pick-up weaves, for drapery material and bags. At 22 ends per inch the tabby is firm. This is commonly used for Double Weave at 40 ends per inch, 20 ends each of two colors.
- 20/6 (2800 yards per pound) is the same weight as 10/3 but it has a softer texture and drapes better. Set the same as 10/3.
- Carpet Warp (1600 yards per pound) makes a very stiff fabric suitable for only specialized purposes. For tabby it may be set at 15 to 18 according to the stiffness desired. For rugs the common setting is 12 per inch.
- Perle (or Pearl) cottons are highly mercerized, softly twisted cottons. #20 is the same weight as 20/2 cotton and will set similarly; #10 is the same weight as 10/2. #5 (2100 yards per pound) is often used for warp, set at 15 to 18 ends per inch.

WARP SETTINGS FOR LINENS

- 40/2 (6000 yards per pound) is one of the most beautiful of linens for handweaving. It makes excellent tabby at 40 ends per inch and a very firm tabby at 44 or 45 per inch, this setting being excellent for the twill weaves and Damask. Bronson is very good set at 36 ends per inch.
- 18 singles (5400 yards per pound) is difficult to weave except in the best quality because it is delicate and warp ends have a tendency to break. But this makes beautiful quality napkins and fine table linens at 36.
- 12 singles (3600 yards per pound) is a strong singles linen which usually warps and weaves with ease. It makes good tabby at 28 ends per inch and Bronson may be set at 26 to 28; The twills and Damask are good at 30 ends per inch.
- 10 singles (3000 yards per pound) is good for heavy table linens, hardly appropriate for Damask. It makes good tabby at 24 to 26 ends per inch and Bronson at 24.
- 20/2 (3000 yards per pound) is the same weight as 10 singles but it has a different quality, producing a more "finished" linen, and is better set a little closer: tabby at 28 and Bronson at 26.

The proper setting for any particular warp material is often one of the most puzzling problems for handweavers. Many letters come to the Guild requesting charts for thread settings. Although time and again such charts have been made and even published by various weavers, an experienced weaver recognizes the fact that rules for warp settings are an impossibility. Handwoven textiles are designed for such wide varieties of purposes, each purpose requiring a slightly different fabric, that a particular warp setting might be suitable for one purpose but completely unfeasible for another. Also, Most of the commonly used materials are suitable for use in many different techniques, and different weaving techniques require different warp spacing. The question may be asked, "What is the perfect Tabby setting for any specific warp thread?" "To make what kind of textile?" must be the question in reply.

Tabby textiles vary from a firm, stiff fabric to a sleazy, open one, and there are possible suitable uses for all types. However, it is true that for most common fabrics (such as weavers make into aprons, napkins, dress materials, etc) there is usually one good thread setting which gives a firm, well-balanced, soft-feeling texture. This might be called the normal tabby setting. When warp is set for the normal tabby, on a good loom which has a properly balanced beater, the fabric usually weaves normally with little effort; it requires a medium pressure on the beater -- no carefully adjusted fanning of the beater and no pounding.

In discussing suitable warp settings for Tabby it is equally important to consider the weft count. Tabby, by definition, is a balanced plain weave: that is, it has exactly as many weft shots per inch as there are warp ends. If the warp dominates the weft, or the other way around, the fabric is merely plain weave, not Tabby. This definition is extended to the Overshot and Summer And Winter weaves which have a balanced tabby background when correctly woven (which means that these weaves have actually twice as many shots per inch as there are warp ends because each tabby shot is followed by a pattern shot). Because of this added pattern weft it is often advisable to thread warps for pattern weaving a little wider than they would be set for good tabby. The practice of using a tabby thread which is finer than the warp is quite common, particularly in Summer And Winter weave in which the interlocking is close. This, of course, distorts the true tabby background, but in cases where areas of plain tabby are combined with bands of pattern weave this is often advisable to maintain the quality of the plain tabby weaving; it also increases the warp strength.

A number of generalizations may be made concerning the proper settings for warps, and these are about as valuable as generalizations commonly are: good guides, but not infallible. The best advice to weavers regarding thread settings for unfamiliar warp materials is to make samples of the weave at different settings and judge from these which is suitable to the weave and to the purpose for which the fabric is intended. A sample warp about two yards long and six inches wide can give invaluable experience in developing judgment and can also save much time and grief in weaving a large project. One of the points of superiority of an expert weaver is good judgment in warp settings.

The list of warps and comments on settings given on page two cannot be considered as a chart to follow exactly. However, it is a guide which can be applied to save time-consuming experimentation. We have limited ourselves here to the most commonly used warp threads in cottons and linens. Wools are a separate problem because the nature of the wool fiber allows far greater leeway to the weaver in warp settings. For instance, I have seen Fabri set at 15 to the inch and at 36 to the inch, both settings making excellent fabrics for their intended purposes. Experimentation in samples with any wool warp is important.

The "set" of the warp is determined by the sleying of the warp ends through the reed. Reeds are commonly sleyed with a single warp end per dent or with two ends per dent; infrequently three ends per dent. However, certain

irregular or unconventional settings may be made with a smooth cotton or linen warp and the final effect will be as smooth as with regular settings, provided the beat in the weaving is even and the number of weft ends per inch balance the number of warp ends. It seems that in a well constructed fabric the washing of the material makes the threads assume proper, balanced relation. If the setting is too wide or too close the ridges caused by the irregular sleying will not wash out. The advantage of using unconventional settings is that any specific reed becomes more versatile. For instance, most weavers possess a 15-dent reed because this is the size with which most loom manufacturers equip their looms. Thus weavers commonly use warps such as 20/2 or 24/3 cottons which can be set at 30 ends per inch, two per dent. But by sleying alternately 1 and 2 ends per dent, a total warp setting of 22½ ends per inch is achieved, which is useful for 10/3 or 20/6 cotton. A sleying of 2 and 3 alternately gives a total setting of 37½ ends per inch which is good for 24/2 cotton or 40/2 linen for Bronson weave. Going a step farther in this unconventionality, I have set 40/2 linen 3, 3, 2, repeated, in a 15-dent reed, to give 40 ends per inch, and after the material was soaked and washed the result was a perfectly even tabby fabric. A 12-dent reed may be used for warp settings of 6, 12, 24, and 36 per inch in regular settings. If the sleying is 1, 2 alternately, a setting of 18 per inch results; at 2, 3 alternately, a setting of 30 results. Too much imagination should not be applied to thinking up unconventional reed sleyings or results will be disappointing. The irregular settings work best with very smooth warp materials. If the warp thread is at all rough (as singles linen usually is) it becomes difficult to wash out the texture stripes caused by weaving irregular reed sleyings.

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Mrs Atwater's latest pamphlet THE "SPOT"WEAVE OR "BRONSON" WEAVE has come from the printer. Those who have already ordered this have found it well worth waiting for, certainly, as the pamphlet clearly defines and greatly widens the scope of this fine weave. The cost of the pamphlet is \$1.00.

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Many weavers, tired of Venetian Blinds or old fashioned window shades, have longed to weave window blinds of reeds. But the problem of securing suitable reeds for weaving is usually a stopping point. Recently a Guild member, Mrs Frances Cohn, 1641 Josephine, Berkeley 3, California, has informed me that she imports splendid reeds of several types from the Orient and can supply anyone who wishes to write her.

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For many years Guild members who have been able to travel to the little village of Basin, Montana have been welcomed here. Now, although the post office remains the same, the Guild headquarters have been moved to a near by ranch. Here we are now doing our weaving and writing with pictures of mountains, meadows, rocks and forests from every wide window. A roaring stream flowing past sings fine accompaniment, and two abandoned mines almost in the front yard give diversity of atmosphere. In this lovely setting we hope in the future to welcome many more Guild members as students and visitors. Already we have one old log guest cabin and by next summer we may have more new ones. The Shuttle-Craft Ranch, though surrounded by the Deer Lodge National Forest, is located directly on Highway 91, seventeen miles from Butte, nine miles from Basin. Our telephone is on the Butte exchange. We should like to share the beauty of our mountains and canyons, sunshine and crisp air, fishing and hiking, as well as the fun of our weaving, with as many Guild members as possible.

In the meantime, a very Merry Christmas and a Happy New Year,

*Harrist C Douglas*

A TWILL PICK-UP WEAVE  
 With Original Designs  
 by  
 Greye La Spina  
 Windy Knoll Weaving Studio  
 Quakertown, Pennsylvania

Thread the loom to four-harness twill. 10/2 cotton is suitable set at 36 or 40 ends per inch. Weave with same, in two colors (or white and one color).

Tie the loom so harnesses weave alone. All pick-ups are made on harnesses 1 and 2 raised together.

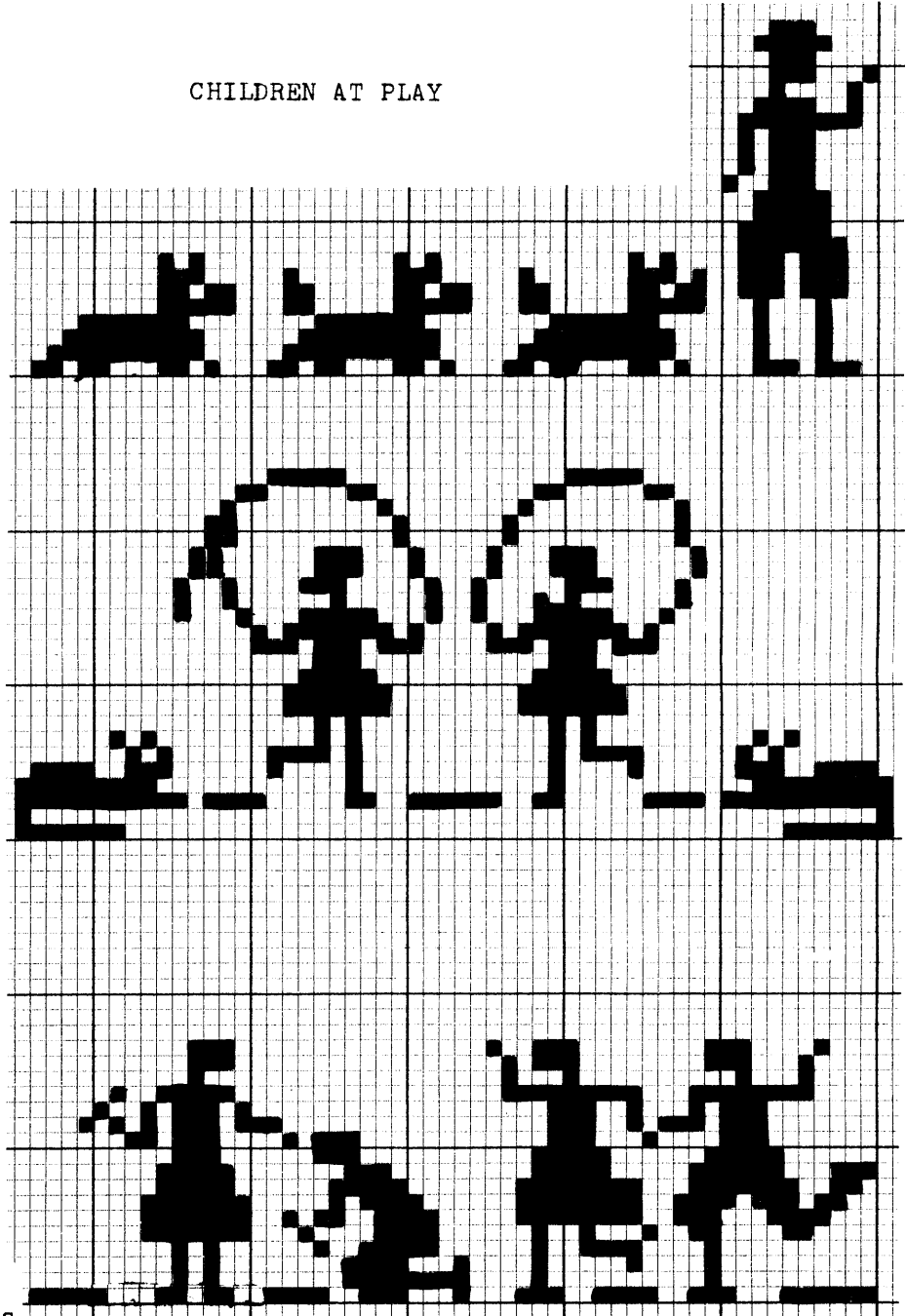
Weave plain by raising:  
 Harness 3, 1 shot color,  
 " 1, 1 " white,  
 " 4, 1 " color,  
 " 2, 1 " white,  
 and repeat as desired.

Design:  
 Two threads make a design unit. Make pick-up by passing the pick-up stuck under pairs of threads for the design, over pairs for spaces.

Weave Design:  
 Raise 1-2, make pick-up,  
 Raise 3, 1 shot color,  
 Remove pick-up stick,  
 Raise 1, 1 shot white,  
 Raise 1-2, repeat pick-up,  
 Raise 4, 1 shot color,  
 Remove pick-up stick,  
 Raise 2, 1 shot white.  
 This completes a single block of the design. (It will be noted that one color shot and one white shot combine to make Tabby A; the second half of each block makes Tabby B.

This is a simple, quick, effective pick-up technique suitable for towels, runners and other articles. It is original, as far as can be discovered.

CHILDREN AT PLAY



LIST OF AVAILABLE SHUTTLE-CRAFT GUILD BULLETINS  
As of, December 1948

<u>Year</u>	<u>Month</u>	<u>Subject</u>
1934	January*	"Patchwork" Coverlet in Summer And Winter Weave.
	May*	Warp-face pick-up; Summer And Winter variation.
1935	April*	Drapery in Bronson.
	October	Tartan scarves and other scarves.
	November* <sup>7</sup>	Methods of Weaving Overshot.
	December*	Warping; The Gauze Weave (Leno).
1936	February*	Blankets.
	March*	Drapery.
	May*	Dress Materials.
	June	The Weaving Crafts; Cotton Bronson Bedspread.
1937	August	Miniature Overshot Drafts.
	October	"Dier Twist" Leno; Honeycomb; Warp-Face Pattern.
	November	Three and Six Harness Weaving.
1938	January	Overshot or Six-harness Summer And Winter Coverlet.
	February	Small Overshot Patterns.
	March	Twice-Woven Rugs.
	April	Belt Weaves (Loom and Card).
	May	Spot and Lace Bronson.
	June	Cotton Dress Fabric Weaves.
	August	Osage Braiding.
	September	Bags (Double Weave and Bronson).
	October	Hassock in Double Weave; Maori Twining on Leno.
1940	May	Drapery in Texture Patterns.
	December	Weaving Don'ts; Finnish Linen Inlay.
1941	September*	Peruvian Tapestry.
	November*	Scarves; Canadian Girdle.
	December	Technical (Looms and Draft Developing).
1943	March*	Guatemalan Tie-Dye Weaving.
	April	Open Work (canvas weave) Curtains; Warp Settings.
	May*	Shadow Weave.
	June	Shadow Weave and Miniature Overshot Patterns.
	September	Bolivian Warp-face Girdle.
	November	Padded, Single-weft, Double Weave.
	December*	Interpreting Drafts and Tie-Ups.
1944	February	Ceinture Flechee; Pig-Pen Alphabet.
	May	Four and Eight Harness Leno.
	June	Shadow Weave.
	July	Draperies.
	August	Linens; Spanish Eyelet.
	September	Loop Rug or Bath Mat.
	October	Lattice Weave; Luncheon Runners.
	December	Equipment; Warping Methods.
1945	January*	John Landes Coverlets.
	March	Bolivian Warp-face Pick-up; Guatemalan Tapestry.
	April	No-Tabby Humanesque Figures for Luncheon Set.
	May	Maori Tags.
1946	February	Two-color Twills.
	March	Scotch Tartans.
	April	Linens; 8-Harness, Long-Eye-Heddle Damask.
	October	Christmas Weaving Using Metallic Wefts.
	November	Mexican Shawl.
1947	All Available	These Bulletins were Indexed in the December issue. Index available on request.
1948	All Available	These Bulletins were Indexed in the December issue. Index available on request.

\* Indicates only a few copies remaining.