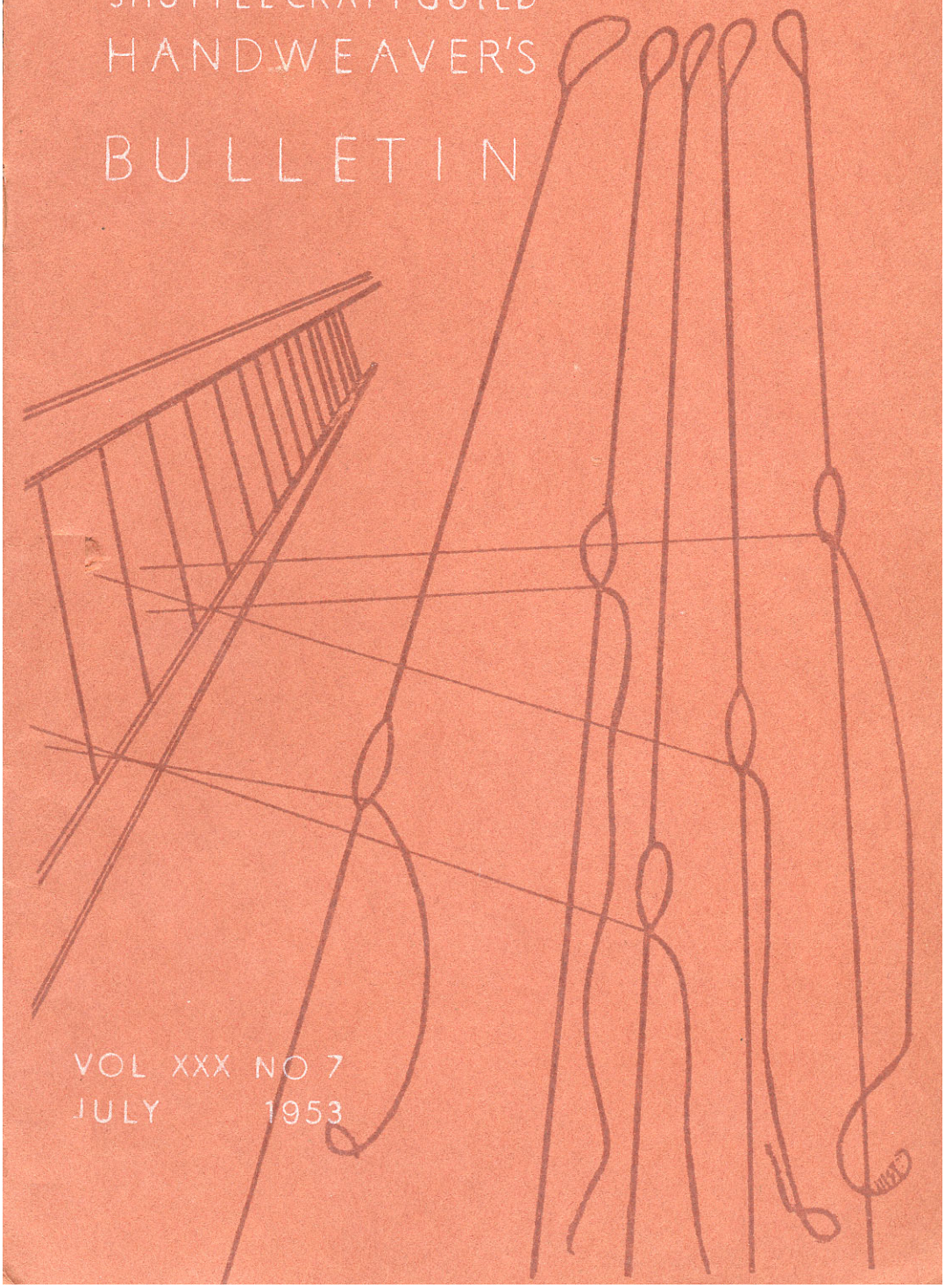
SHUTTLE CRAFT GUILD

# HANDWEAVER'S BULLETIN



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Handweaver's BULLETIN
Volume XXX, Number 7
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## THE SHADOW WEAVE

The Shadow Weave which was introduced in the June 1953 BULLETIN (reintroduced actually, as it was first presented to handweavers by Mary Atwater about twelve years ago) has its foundation in the 2-harness, 2-color Log Cabin weave. In the Log Cabin weave a light and a dark color are alternated on a plain weave threading (1, 2, repeated). The resulting effect is of 1-thread wide horizontal stripes when a dark weft is thrown in the shed which raises the dark warp ends and a light weft in the shed which raises the light warp ends, and 1-thread wide vertical stripes when this weaving order is reversed. Thus, two contrasting area of the same color mixture may be formed. Patterns in these two (from any 2-block profile draft) may be threaded by simply placing two ends of light or two ends of dark at the points where one block should change to the other, thus shifting the dark ends from one harness to another. These two pattern areas are balanced in the weft by throwing two shots of either dark or light at the point where a change from one block to another is desired. This is one of the simplest weaves to understand and design in, and it is interesting because the patterns are shadowy instead of strongly contrasting. It is unusually useful be

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cause the fabric is produced in tabby, the textile of greatest strength and versatility.

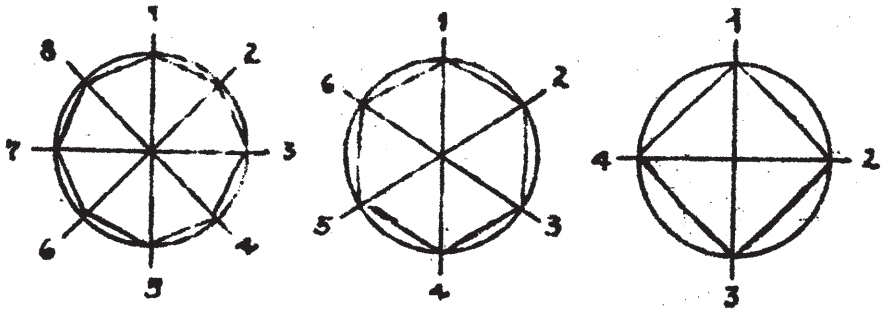
But the 2-harness Log Cabin weave has distinct limitations. There are only two possible pattern blocks, and block edges can be woven on only horizontal and vertical lines. These two limitations are obviated in the Shadow weave, which has as many pattern blocks as there are harnesses threaded, and can build designs on diagonal lines. Also, while the Log Cabin weave has the flat, tabby texture, the Shadow weave adds a slight raised texture outlining pattern areas.

In the Shadow weave as in the Log Cabin, each harness controls a single pattern block, so a 4-harness threading has a potential of 4 pattern blocks while an 8-harness threading has an 8-block potential. Because the pattern blocks are controlled by harnesses rather than by color alternation only, it is not necessary to double the color end in order to shift from one block to the next. The dark and light warp ends are alternated without interruption throughout (in most cases) which makes the warp for the Shadow weave simple to prepare and to beam. The drafts for Shadow weave may be built up like twills with continuous progress from one pattern block potential (a pair of light and dark ends) to the next which results in pattern areas built on diagonal rather than horizontal and vertical lines (a pattern effect which is unusual, and difficult to achieve except in this and a few other techniques). Or a single threading rhythm (a pair of light and dark ends) may be repeated several times to build up a brue block, which adds horizontal and vertical lines to the pattern outline.

The weave fits into Class VIII, the Rhythmic Weaves, since established units are not repeated throughout, and the threading cannot be made from a Profile draft with a key, because of the exceptions.

However, a twill, point twill, extended point twill or a Profile draft may be used as the basis for creating a Shadow Weave draft, provided all the exceptions as well as the rhythms are observed.

In the theory of the Shadow weave system, one must think of the harnesses as lying in two groups. For a 4-harness threading, group 1 is harnesses 1-2 and group 2 harnesses 3-4; on 6 harnesses the first is 1-2-3, the second 4-5-6; on 8 harnesses the first is 1-2-3-4, the second 5-6-7-8. Each harness controls a pattern block and the dominant or the dark color is usually threaded to the desired pattern harness. This thread must be shadowed by the threading of a secondary or light colored thread on the corresponding harness of the other harness group so that in a 4-harness threading, a dark end on harnexx 1 is shadowed by a light on harness 3, dark on harness 2 by light on harness 4, dark on 3 by light on 1, dark on 4 by light on 2. In a 6-harness draft a dark on harness 1 is shadowed by light on 4, dark on 2 by light on 5, dark on 3 by light on 6, dark on 4 by light on 1, dark on 5 by light on 2, dark on 6 by light on 3. In 8-harness threadings the combinations are 1 and 5, 2 and 6, 3 and 7,4 and 8, 5 and 1, 6 and 2, 7 and 3, 8 and 4. To understand these better it is advisable to make a circle diagram which indicates as many harnesses as to be used.



The progression of the dark or the primary threads is around the circle, either forward or backward, always from an odd numbered harness to an even number or the opposite, and the shadowing thread always lies exactly exactly across the circle from it.

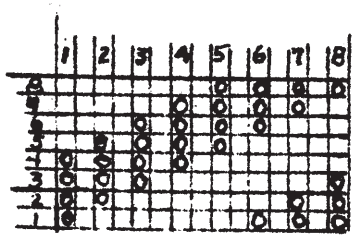
The rules given above apply when the drafting movement is forward around the circle. But when the movement reverses to a counter-clockwise direction an exception must be taken into consideration. Just as in Point twill drafts or Overshot drafts, an odd number of threads must occur in the reverse unit. This is accomplished by dropping the shadowing thread for the warp end which serves as the point of reverse. Then in threading the reverse direction, the shadowing thread precedes the main thread. Study drafts (1), (2) and (3), which illustrate these points. For a 4-harness Point twill reversing on harness 4, the order is: 1,3; 2,4; 3,1; 4; 1,3; 4,2; 3,1. The dark threads are underlined, and it is plain that the dark-light alternation is not broken.

The tie-up for any Shadow Weave is very simple. It is the balanced twill tie-up for the number of harnesses involved, and requires as many treadles as there are harnesses. The standard twill combinations are used for the 4-harness draft: 1-2, 2-3, 3-4, 4-1. The combinations for 6 and 8-harness threadings are easily seen on the circle diagram. For treadle 1 start at the harness 1 figure and progress clockwise through half of the figures around the circle. For treadle 2 start at the harness 2 figure and do the same. The first harness on each treadle is the same as the treadle number. Thus for a 6-harness threading the treadles are tied in the order: 1-2-3, 2-3-4, 3-4-5, 4-5-6, 5-6-1, 6-1-2. The 8-harness tie-up order is: 1-2-3-4, 2-3-4-5, 3-4-5-6, 4-5-6-7, 5-6-7-8, 6-7-8-1, 7-8-1-2, 8-1-2-3.

The treadling order is "on opposites" exactly

as the threading is made. Dark and light wefts are alternated throughout and the threading draft may be used as the treadling order by treadling 1 when harness 1 is indicated on the draft, 2 when harness 2 is indicated, etc, following the color symbols also. This will give the "woven as-drawn-in" pattern. The fabric is reversible but the pattern on both sides will be slightly different, so it makes no difference whether the tie-up is used on a sinking or a rising shed. Pattern variations may be made by weaving in the twill order (for instance following drafts (1) or (2) for a more complex threading, or by weaving in Point twill order, or weaving one draft on the threading for another draft. Or original patterns may be woven by following the theory rules given above on any desired succession. Any pair of treadles may be repeated over and over to build up a block.

Drafting original patterns in this technique is very simple. A Twill, Point Twill or Extended Point Twill draft may be selected as the design basis. For instance the 4-harness Extended Point Twill: 1,2,3,4,3,2,3,4,3,2,1,2,3,2, may be written on draft paper. Then rewrite this draft leaving a blank space after each thread. Fill in each of the blank spaces with the correct shadowing thread and the draft is complete: 1,3; 2,4; 3,1; 4; 1,3; 4-2; 4; 3-1; 4; 1-3; 34-2; 3; 1-3; 2-4; 3; 4-2; 3. Under draft (3) is given the 3-harness Extended Point Twill from which this draft was derived. Block patterns from Profile drafts are built up by repeating the light and dark pair of warp ends the correct number of times to give a block of the desired proportion. The general configuration of any pattern will be the same as that of the twill or the profile from which the Shadow weave draft was built, but the pattern effect will be soft and shadowy and the texture will be that of tabby with raised block boundaries.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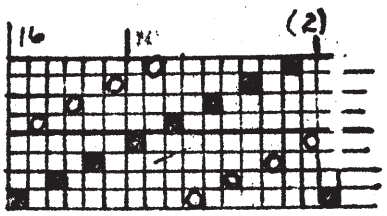
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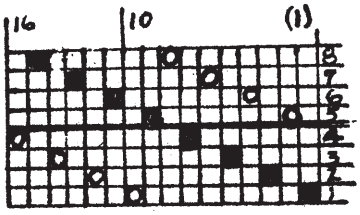
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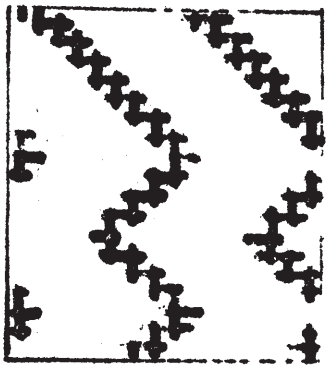

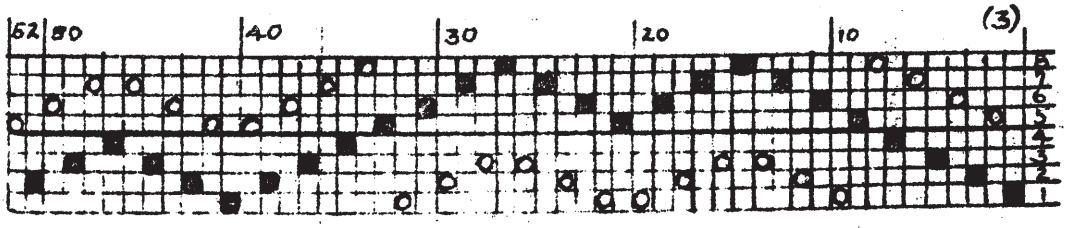
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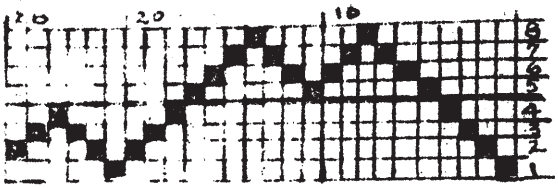
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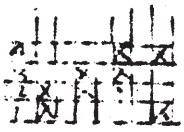

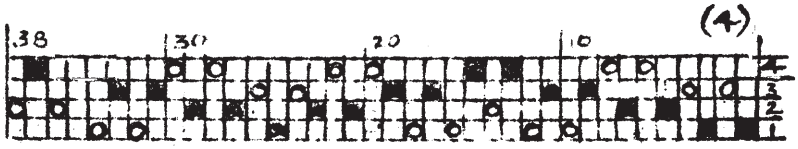
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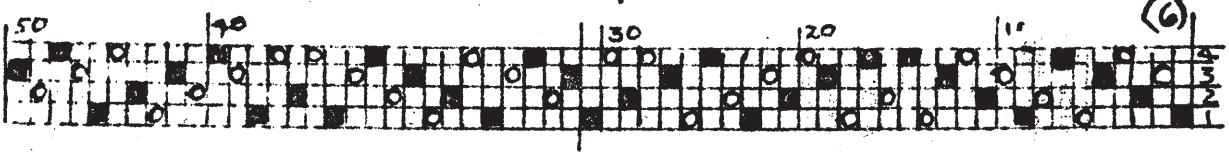
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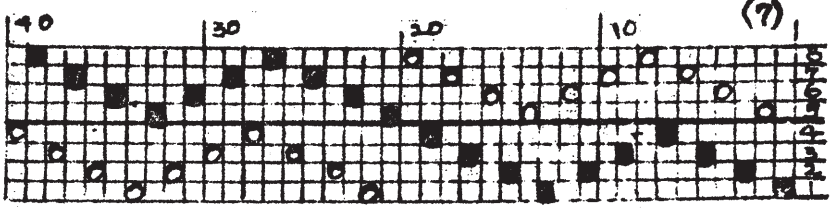
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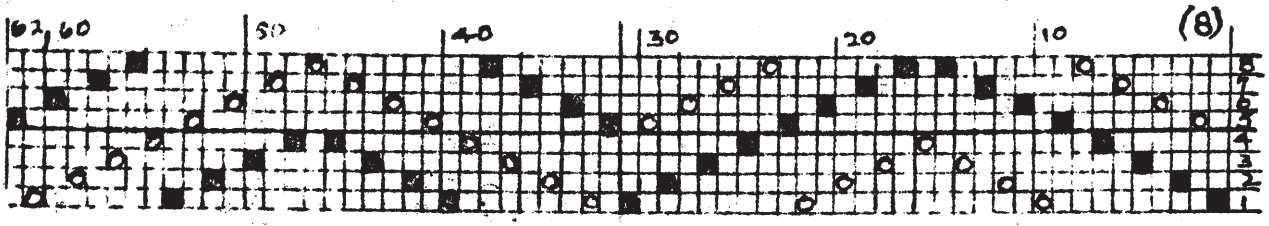
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The texture of the Shadow weave is almost impossible to describe or to reproduce in a drawing. For the 6 and 8-harness patterns and the 4-harness patterns which have block rather than twill development, it is basically a tabby-woven fabric with the two contrasting log-cabin color arrangements of horizontal and vertical pin stripes. The edges of blocks of patterns which are developed like twills consist of interlaced 2-thread floats which raise above the flat base fabric and somewhat resemble feather-stitching. This effect is indicated on the small diagram given on the draft sheet. In block development threadings 2-thread floats outline the edges, giving a somewhat different effect from the above. Since the fabric can hardly be visualized without seeing it, our best suggestion is that there are 2 samples of 8-harness twill-development threadings in the July PORTFOLIO and in the June PORTFOLIO a sample of 4-harness block-developed threading and a 6-harness Extended Twill threading. (Individual PORTFOLIOS are available at $1.25 each.) Four-harness twill-developed threadings have a deep ridged effect, almost like pattern corrugations.

Variations of Shadow Weave drafts are made by taking certain liberties with the rules given above. Drafts (5) through (8) by Mary Atwater illustrate these variations. Drafts (5), (6) and (8) show dornik or "opposite" developments. It will be noticed that at the centers of these patterns 2 dark threads lie side by side at the point where there is a shift to an opposite block, just as block shifts are made in Log Cabin. This brings a full break into the design which adds dramatic element. However, there is one disadvantage to making this arrangement: it creates a visual distortion in the texture of the woven fabric similar to that which occurs when small Overshot patterns are reversed without placing an even number of shots on the turning block. To the technical purist this distortion will be unpleasing

unless handled with the greatest finnesse in the draft so as to emphasize the effect. The same distortion will occur when the threading is handled as in draft (7) though it can be treated in the weaving to enhance the textural quality of the fabric.

A variation in the color effect of the Shadow weave may be made by warping with one pair of light and dark colors and weaving with different light and dark colors, or with just one color in the weft different from the warp colors. A shadowy underplaid may be made by beaming and threading solid stripes of the two colors as desired, and varying these with alternations of the two colors in the standard manner. Borders may be made around any pieces by threading a band of the darker color on each side of the warp, with a band of the lighter color inside, and the center area in the standard 2-color alternation manner.

## A BABY BLANKET IN SHADOW WEAVE

The Lily nylkara (half nylon, half vicara) yarn was used for weaving a baby blanket in draft (3) with drafts (1) and (2) repeated as right and left borders. A 617 thread warp, 8 yards long was prepared of alternating yellow and white -- 309 ends of yellow and 308 of white, and beamed at 18 ends per inch for a total width of about 34½ inches. Warp and weft for this required 2 pounds (16 tubes) each of yellow and white. The 8-yard warp was sufficient for 5 baby blankets 48 inches long, with 2-inch hems. The warping from the 32 tubes was rapidly accomplished by the horizontal drum method described in the June BULLETIN, and the beaming directly from the drum required only a few minutes. The threading was 5 repeats of draft (1), then 8 repeats of the 52-thread draft (3), followed by a pattern balance of threads 1 through 41, and ending with 5 repeats of draft (2).

The blankets were woven ex actly as drawn in, following the drafts. Eight repeats of the twill draft (1) made to allow for a border and the hem. Then about 38 inches were woven with the treadling following draft (3), followed by the pattern balance or the first 41 shots of the draft and eight repeats of draft (2). The beat was adjusted to balance the fabric exactly -- 18 shots per inch.

At first the fabric was disappointing on the loom as it seemed to be lacking in character -- a reaction which every weaver has at one time or another. However, disappointment vanished the moment it was cut off the loom and we feel that this is just about the most beautiful fabric ever woven in the Shuttle Craft Guild studio. The border could have been strengthened by beaming 48 yellow threads at each side of the warp and 32 white threads next, making the color alternation only in the central pattern area. But in a fabric so beautiful, this touch might have been redundant.

The nylkara is recommended expecially for baby blankets and other baby things as it is non-irritating and non-alergic. The fiber is amazingly soft and fluffy and it washes and presses easily, with no shrinking and no deterioration in appearance. The 4 pounds of material required cost about $20, allowing for the quantity discount, which makes the cost of this large blanket about $4.00 each. Crib size blankets 30 by 42 would cost about $3.00 each, and carriage blankets 24 by 36 even less. To weave these dimensions make the warp one inch wider to allow for take-in. The nylkara will soon be available on one pound cones as well as 2-ounce tubes. If making a chained warp of this material it is well to remove all knots by placing them at the beginning or ending peg, as warp knots pull out when they go through the heddles.

REPORT on the SHUTTLE CRAFT CEYLON FUND

"To give away money voluntarily to humanitarian causes is one of the most satisfying of human experiences," said the Phi Beta Kappa KEY REPORTER a few years ago. "One who has cultivated the art of giving knows it to be an art, and one of the gracious arts of self-expression." I give this quotation because it interprets the many expression which have come from Guild members sending in contributions to our fund for purchasing modern handweaving equipment for the village workshop which has been established by Dr Edith Ludowyk-Gyomroi in Menikdiwela, Ceylon. I believe that each person contributing to this fund is feeling that "most satisfying of human experiences."

The first of June we were able to send a deposit check to L W Macomber as first payment on Dr Ludowyk's equipment of $140. This month we add a further payment of $97.60. Contributors since the May list are: Mrs Elsie P Avery, Mrs Earl D Brown, Miss Viola S Heasley, Mrs Tusnelda Ericksen, Miss Ruth E Cross, Mrs H L Hooper, Mrs Charles Wahlquist, Mrs C L Meek, Mrs J B Ashworth, Miss Ruth Templeton, Mrs H Lee Ward, Mrs William S Wilken, Mrs Carl E Lesher, Mrs Geo J Lincoln, Mr A J Howie, Miss Ruth V Wheelock, The Yarmouth County Weavers' Guild (Nova Scotia, Canada), The Billings Weavers' Guild (Billings, Montana). Gratifying are three contributions from non-weavers, all people with strong international consciences, Dr Sarah Vinke a college professor, Mr Norman Winestine a merchant and Mr Bill James a newspaper man.

Our goal for this fund is $300, of which Mr and Mrs L W Macomber, the loom manufacturer, will contribute $100. We hope to have this amount by early fall so the equipment may start its long journey to Ceylon. Anyone wishing to make a contribution may make checks payable to Shuttle Craft Ceylon Fund.

## Irma's LEASE HOLDER

Irma Green wishes to share with Guild members her lease holder, which is one of the simplest and handiest gadgets for the weaver we have seen. It is a small platform which fits over the breast beam and has a group of pegs on the top which hold the lease of a chained warp for sleying -- much handier to use than the customary pair of lease sticks through the cross which are tied to the breast beam. It makes the selection of threads from the cross, or lease, much easier. The lease holder is best made of three pieces of 3/4 inch pine, one 4 x 6 and two 4 x 4. (The measurements need not be exact.) The 4 x 6 board is the platform. One of the 4 x 4 pieces is nailed under it, at the end, at right angles; the other 4 x 4 is nailed parallel to this near the center, exactly the distance from it as the width of the breast beam, as shown in the diagram. These serve merely to hold it to the breast beam. The platform has 6 12-penny nails driven through it from the bottom, arranged as shown on the diagram. A fancier workman will drill holes and set small dowels into the top, And that's all there is to it. The lease holder is placed over the breast beam and the cross of the chained warp is spread between the pegs as shown. For threading, the top thread is quickly selected each time. The lease holder is moved along the breast beam as threading progresses. The lease holder will be a boone to any weaver who takes a few minutes to make it.