



## *A Study in Doiley Design*

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That praiseworthy quality of linen, of increasing in beauty with use, makes it especially adapted to table linen. As the present day vogue for place mats rather than table cloths is as well adapted to the small looms which are convenient to house and simple to operate, there is much encouragement for weavers to make their own linen sets. There is however a mechanical difficulty in cutting a woven strip into doilies and finishing the cut ends so that they are like the selvages. Merely to hem the two cut ends, or even to hemstitch them with a decorative finish does not answer the requirements. And to sacrifice the selvages, those prime elements of beauty in a hand-woven fabric and the pride of a good weaver, by treating them with a decorative finish would be unthinkable.

The three doilies illustrated were designed to meet this difficulty. The first two were woven on the familiar Betsy Ross arrangement of the M'd and O's linen threading. For convenient reference the threading plan is given. It is arranged for five hundred and forty four heddles, to be reeded two to a dent in a number fifteen reed. It will be eighteen inches wide on the loom, and will finish about seventeen inches wide.

When setting up the loom for the first doiley thread the twenty-seventh and twenty-eighth heddles from each side with Bernat's linen floss, white, double in the heddle. For the main warp Bernat's forties twos, white, is a soft half-white shade, not chalky white as some bleached linens are, and makes a most satisfactory warp through which to weave

colors. The design of the pattern is best brought out when warp and weft are not the same tone. Yellow, pale green or peach, woven across the half-white, are very effective.

When beginning to weave the doiley throw across six or eight picks of linen special of the same color as the floss used as weft for the body of the doiley. Linen weaver may be used as weft instead of floss, if a lighter weight doiley is preferred. The floss makes a firm doiley which lies well on the table. These fine picks are for the turn under of the hem. The hem section is woven of floss and is twice as wide as the space between the cord and the selvaige,—about an inch. Twist together two strands of white floss and two strands of linen special of the floss color,—the doiley illustrated is yellow—, and throw through the next shed. It is necessary to add the yellow ends to the white floss to give the cord the same appearance as on the sides. There the white cord is modified by the yellow floss which crosses it. If only floss is used across the white warp the effect will be staring and unlike the side cords. Turn each end of this cord around the last selvaige thread and lay it into the same shed in which it was thrown for about an inch, or a little less. After weaving the center portion of the doiley, throw across a cord as before. Do not cut the linen floss weft when placing the cord, but continue after the cord with the same shuttle. After the second cord, weave an inch of floss for the second hem, and finally the six or eight picks of yellow linen special. Throw across two picks of some different colored

weft for a separation between doilies. Stitch on a machine with fine thread and a fine stitch on the last colored thread on each side of the separation before cutting the doilies apart. Turn under the fine linen edge, then baste this creased edge up to the cord. Hem with fine white thread and fine stitches, as damask napkins are hemmed, and press. The hem should be the same width as the space between the side cords and the selvage and give the effect of a border. If carefully hemmed the hem is scarcely distinguishable and the doiley is reversible.

To achieve absolute uniformity of size I use for a weaving measure a length of strong white tape. Turn under a quarter of an inch and stitch to prevent ravelling. With ink draw a line across the tape to mark the end of the fine linen turn-under, one quarter of an inch, another an inch and a quarter further on to mark the end of the hem. The center, including the cord, should be twelve inches. Stretch the tape beside a yard stick when marking it. The marks should be at  $\frac{1}{4}$ "",  $1\frac{1}{2}$ "",  $13\frac{1}{2}$ "",  $14\frac{3}{4}$ "",  $15$ ". Pin this tape along one selvage when weaving, using three pins put through cross wise, with the points tucked safely under to avoid pricks and bloodshed. As the work progresses, take out the lowest pin and place it ahead of the other two, always leaving two pins to hold the tape securely in position.

#### THREADING PLAN FOR M'S ANS O'S DOILIES

Right selvage, 4-3-2-1, double in each heddle.  
 Right edge, 4-3-4-3-2-1-2-1, A  
                   4-2-4-2-3-1-3-1, B  
 Pattern,      4-3-4-3-2-1-2-1, A  
                   4-2-4-2-3-1-3-1, B  
                   4-3-4-3-2-1-2-1, A  
                   4-2-4-2-3-1-3-1, B, repeated three times

There are forty-eight threads to one repeat of the pattern and it should be threaded ten times.

Left edge, 4-3-4-3-2-1-2-1, A  
                   4-2-4-2-3-1-3-1, B  
                   4-3-4-3-2-1-2-1, A  
                   4-2-4-2-3-1-3-1, B  
                   4-3-4-3-2-1-2-1, A

Left selvage, 4-3-2-1, double in each heddle.

544 heddles will be required, divided evenly 136 heddles on each frame. In this threading plan the front harness is considered the first.

#### WARP PLAN FOR DOILEY NO. 1.

Linen warp, 30 ends Bernat's 40/2 warp linen, white.  
 Linen floss, Bernat's No. 235, white, 4 ends.  
 Linen warp, 40/2, 488 ends.  
 Linen floss, 4 ends.  
 Linen warp, 40/2, 30 ends.  
 Total ends, 556, of which 548 are linen warp and 8 are floss.

On a foot power loom tie the treadles to be brought down as follows:

Treadle	Depresses harnesses	Shuttle goes from the
1	2 & 4	right
2	1 & 3	left
6	3 & 4	right
5	1 & 2	left
3	1 & 4	
4	2 & 3	

Weave the hem in small groups, as many as necessary to fill the space required for the hem. Linen floss needs fewer shots to square the blocks. The number also depends on the beating. Laying eight picks to the half inch the weaving directions would be:

Treadle	Shuttle from	
1	right	
2	left	6 picks
6	right	
5	left	6 picks

Repeat these two groups for the space of the hem. After laying in the cord on any shed except the last used or the one about to be used, weave the center

Treadle	Shuttle from the	
1	right	
2	left	6 picks
6	right	
5	left	6 picks
1	right	
2	left	12 picks
6	right	
5	left	6 picks

Repeat this treadling for the center of the doiley, ending if possible, with two small groups after the last large group, leaving space to place the second cord before reaching the mark indicating the beginning of the second hem. Weave the second hem as the first. The treadling used for the fine turn-under is unimportant.

Of course for a table loom operated by levers causing a rising shed, all these directions should be transposed. Depress, for treadle 1, all levers *except* 1 and 2, namely 3 and 4.

The tie-up given above is arranged for ease in treadling. It is quicker to place the foot on the outside treadle when changing groups. The two center treadles need not be tied unless desired, but are useful in taking the crosses which are necessary when tying on a new warp. The threading has no tabby, although treadles 3 and 4 make a near tabby. When taking the crosses to obtain the exact order of ends, four shed sticks will be required. Small metal curtain rods make good shed sticks. Depress harnesses 1 and 4 (treadle 3), insert the first stick and push it forwards. Next depress harnesses 2 and 3 (treadle 4), and insert the second stick. The third stick goes through when harnesses 1 and 2 are down (treadle 5) and the fourth when harnesses 3 and 4 (treadle 6) are down. If the cross does not appear between the first two shed sticks it will appear between the last two.

Napkins to match this set may be made on the same warp, using linen special for filler and weaving 16 inches for the center.

The second doiley is made on the same threading as the first, but has color introduced into the warp. This doiley must be developed in yarn of the same size each way. Linen special should be used to go through the forty's two's warp. If a heavier warp is desired, the threading must be rearranged for fewer ends to the inch, and linen weaver used. With the threading under discussion, Bernat's dyed warp, 40's, 2's, will be drawn in the warp as indicated in the warp plan following, and linen special of the same color used in weaving the border. The illustration, which was a study made on an eight inch loom, has yellow edges and center and brown border. Natural or white linen edges and center, with the border in color, is good.

The warp plan is as follows:

32 ends for selvage and edge (4 doubles in outside heddles), yellow in sample.

56 ends for the border, brown in sample.

376 ends for the center, yellow in sample.

56 ends for border, brown in sample.

32 ends for selvage and edge (4 doubles), yellow in sample.

The total is 552 ends, eight more ends than heddles.





