

# PRACTICAL WEAVING SUGGESTIONS

VOL. 1-62



# DOUBLE WOVEN CLOTH

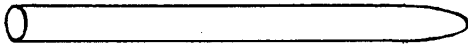
Elsie H. Gubser

A double woven cloth consists of two webs, one above the other, woven at the same time. This is an old technique. Developed, probably to add warmth to blankets. With man's desire for beauty, patterns were introduced. Looms were simple, back-strap affairs at first; four harness looms on frames came later and were used for the picked up patterns. After that, block patterns were made on multiple harness looms; then intricate patterns were woven on draw looms. Finally the Jacquard loom was built and is still in use.

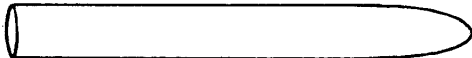
Since this is not a history, but a treatise on Practical Weaving, let us begin at once.

## EQUIPMENT

1. We must have a loom. Since most of us have a four harness loom, I shall restrict my instructions to four harness, either a counter balanced or a jack loom can be used. I prefer the jack type.



2. A round stick about half an inch in diameter, pointed at the ends.



3. A pick up stick, about three quarters of an inch wide, or wider, pointed at both ends. Be sure it is rigid and strong. You may have to raise it by hand to insert another stick.



4. A shed stick, a little wider than the shuttle. It should have one edge about a quarter inch wide and the other edge a "knife edge." Mine is a weaving sword from

Mexico. All these sticks should be wider than the web you expect to weave. Mine are 30 inches long, for my Structo is an old 10 harness, 26 inch loom.

5. A boat shuttle. I suggest that you do NOT use a poke shuttle because it is too easy to pick up lower warp threads with it.

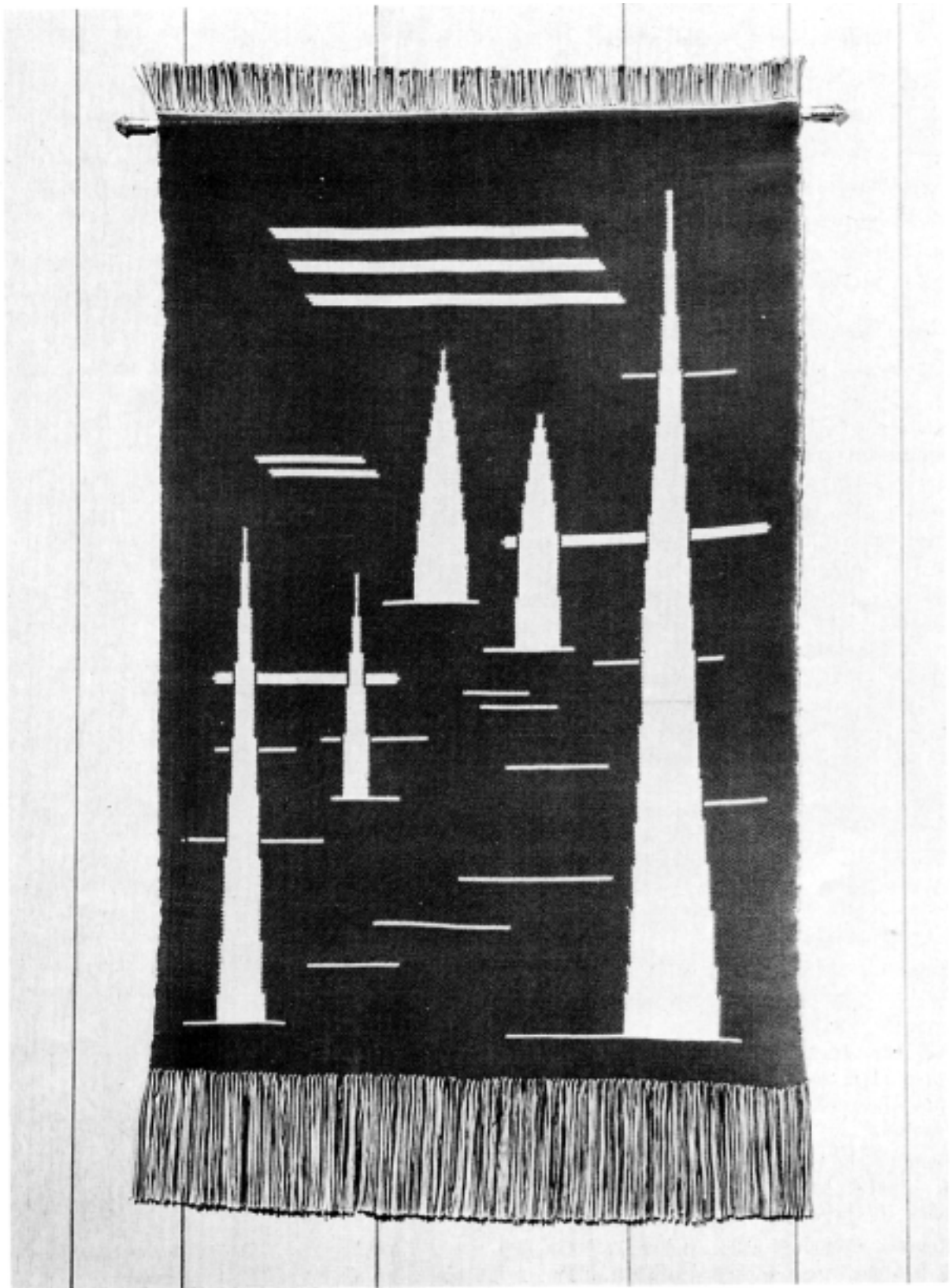
There are two methods to weave double, Finnweave and Mexican. Many Swedish books show diagrams and a few give translations in English. I shall first give rules I use for Finnweave. Since this is more difficult for me to do I never use it any more, but it was the first method I learned about 1935 from Mrs. Atwater's instructions.

With either kind of loom I suggest a direct tie up. You can handle both feet at the same time when needed. I prefer the Structo for Finnweave, because, even with trifocal glasses, I cannot see to insert sticks **behind** the beater. I shall give the first instruction for Finnweave for the Structo.

Start with Lily Art. 114 Perle 5, or 5/2, sett at 32 or 36 to the inch. Of course as you know, sett varies with the individual according to the beat. I use 32 on the Structo because with my beat I find I can weave "square" with it. 36 to the inch is too "warpy."

I thread the dark yarn through harnesses 1 and 2; the light through 3 and 4. I use a 16 dent reed, sleyed first two dark warps and then two light. If you have an 8 dent reed you can put 4 to the dent. I like the 16 better because the pairs are easier to pick up.

Remember to have your warp properly rolled or beamed—NO LOOSE WARPS, nor cut in warps. Use lots of paper. The tension is a little tighter than usual, but not as tight as when one does bound weaving.



**Reversible Wall Hanging Showing Light Pattern**

**Dark below - Light above.**

### **Plain**

1. Raise harness 3. Throw light weft.
2. Raise harness 4. Throw other light weft.
3. Raise harnesses 1, 3 & 4. Throw dark weft.
4. Raise harnesses 2, 3 & 4. Throw dark weft.

## **NOW FOR PATTERN**

### **Dark pattern on Light background**

Ending with 4 above.

1. Raise all dark threads (1 & 2). Pick up pattern. Two warp threads are used as a square on graph paper or for a block.
2. Set the pick up stick on edge, close to the reed and raise the light warp (3 & 4). Insert the round stick **BEHIND** the reed in the **LOWER** cross that is formed.
3. Remove the pick up stick and raise 1, 2 & 3. Insert the shed stick **OVER** the round stick and bring close to the reed from behind. Turn on edge and throw the light weft.
4. Remove the shed stick and raise 1, 2 & 4. Insert the shed stick **OVER** the round stick as in 3. Turn on edge and throw the other light weft. If you wish, you can slip the pick up stick in these above sheds behind the reed and insert the shed stick in front of the reed.

You Are Now Half Through

5. Raise all the light warps (3 & 4). Pick up background, splitting the pair on each side of the pattern.
6. Set the stick on edge and raise dark warp (1 & 2). Insert the round stick behind the reed in the **LOWER** cross that is formed.
7. Remove the pick up stick and raise 1, 3 & 4. Insert shed stick **OVER** the round stick in the back. Throw the dark weft.
8. Remove the shed stick and raise harness 2, 3 & 4. Insert the shed stick and throw

the other dark weft.

This finishes the first block. You see how much trouble this is. The method used by the Mexicans is much simpler. They use only one pick up stick and a beater or "sword" that acts as a shed stick. I use a shed stick on the Structo to help to separate the warp.

While in Mexico in 1940 I stopped by the roadside to watch a woman weaving the double woven bags on the back-strap loom of primitive days. It seems to be easier to use than our rigid looms. The tension is controlled by body movements. The Mexicans do not use graph paper patterns. They are not worried about weaving "square" either. Their "sword" is heavy enough to be a wonderful beater and seems to pack the weft closer than our beaters do.

## **DOUBLE WEAVE A LA MEXICANA**

Any type loom can be used but I find that the large treadle jack loom is better than the smaller table models. The weaving space between the heddles and the breast beam should be around 15 to 20 inches to provide good shed space. I shall give directions for a counter balanced loom later. The method I shall give I call "doubles," because I throw the same color two times.

In tying up my loom I find it easier to keep my place if I tie the first treadle on the left to harness 1 and the second to 2 and so on. If I want to weave dark patterns on light then 1 and 2 are dark and 3 and 4 are light.

### **PLAIN LIGHT ABOVE AND DARK BELOW.**

1. Raise harness 3. Throw light weft.
2. Raise harness 4. Throw light weft.
3. Raise harnesses 1, 3 & 4. Throw dark weft.
4. Raise harnesses 2, 3 & 4. Throw dark weft.

I use the right foot on harnesses 3 & 4, the left on 1 and 2.

## Reversible Handbag Showing Dark Pattern

Center band woven "doubles," top and bottom bands woven "singles" - note differences.



### PATTERN

1. Left foot on 1 and 2. Pick up pattern.
2. Right foot on 3. Weave half the background (light).
3. Right foot on 4. Weave other half of background.
4. Right foot on 3 and 4. Pick up background splitting pair on each side of pattern.
5. Left foot on 1. Weave half the pattern (dark).
6. Left foot on 2. Weave other half of pattern.



### **Repeat For Each Block of Pattern.**

As I said earlier, I call this method "doubles" and I suggest that you weave enough of it to be able to remember easily what you are doing. You can then weave "singles" which is done in the same manner, only you throw first the light with the pattern picked up, then removing all sticks and picking up the background, you weave the dark. Remove all sticks, pick up the pattern again and weave the background. Then remove all sticks and pick up the background and weave the pattern. This takes longer of course, but the edges of the pattern are more even. We're not in a hurry.

## **DOUBLE WEAVE ON A COUNTER BALANCED LOOM**

### **Dark on Light. Plain.**

1. Depress treadles 1, 3 and 4. Weave dark.
2. Depress treadles 2, 3 and 4. Weave dark.
3. Depress treadles 3. Weave light.
4. Depress treadles 4. Weave light.

### **Pattern Dark on Light.**

1. Depress treadles 3 and 4. Pick up pattern
2. Depress treadles 1, 2 and 3. Weave light weft using shed stick if necessary on each shot.
3. Depress treadles 1, 2 and 4. Weave second light weft.
4. Remove all sticks and depress treadles 1 and 2. Pick up background splitting the pair on each side of pattern.
5. Depress treadles 1, 3 and 4. Weave dark weft.
6. Depress treadles 2, 3 and 4. Weave dark weft.

This completes one block of the pattern.

In Finland I found a school that was making hundreds of sofa pillows and tea cozies of wool and cotton, using four harness counterbalanced looms. Of course they were using the Finnweave. They seemed to weave rapid-

ly. They were not too careful about exactness of patterns. Maybe they are like the Indians are when they weave their rugs; they do not worry about a mistake, "for only the gods are perfect"; they do not want to insult them.

You can see with all these methods you pick up the pattern and weave the background, then pick up the background and weave the pattern.

## **DOUBLE WIDTH AND TUBING**

Weaving a double width cloth is rather a slow process, but if you are not in a hurry, try it. It is a challenge to try to keep from having a heavy seam down the center of the double width. Thread, on the closed side, at least the last four dents, two to the dent instead of 4 helps a little. Great care must be used not to pull the weft in too tight at the selvages.

When doing double width or tubing you can tie up the harness as follows and weave twill fashion.

### **Double Width**

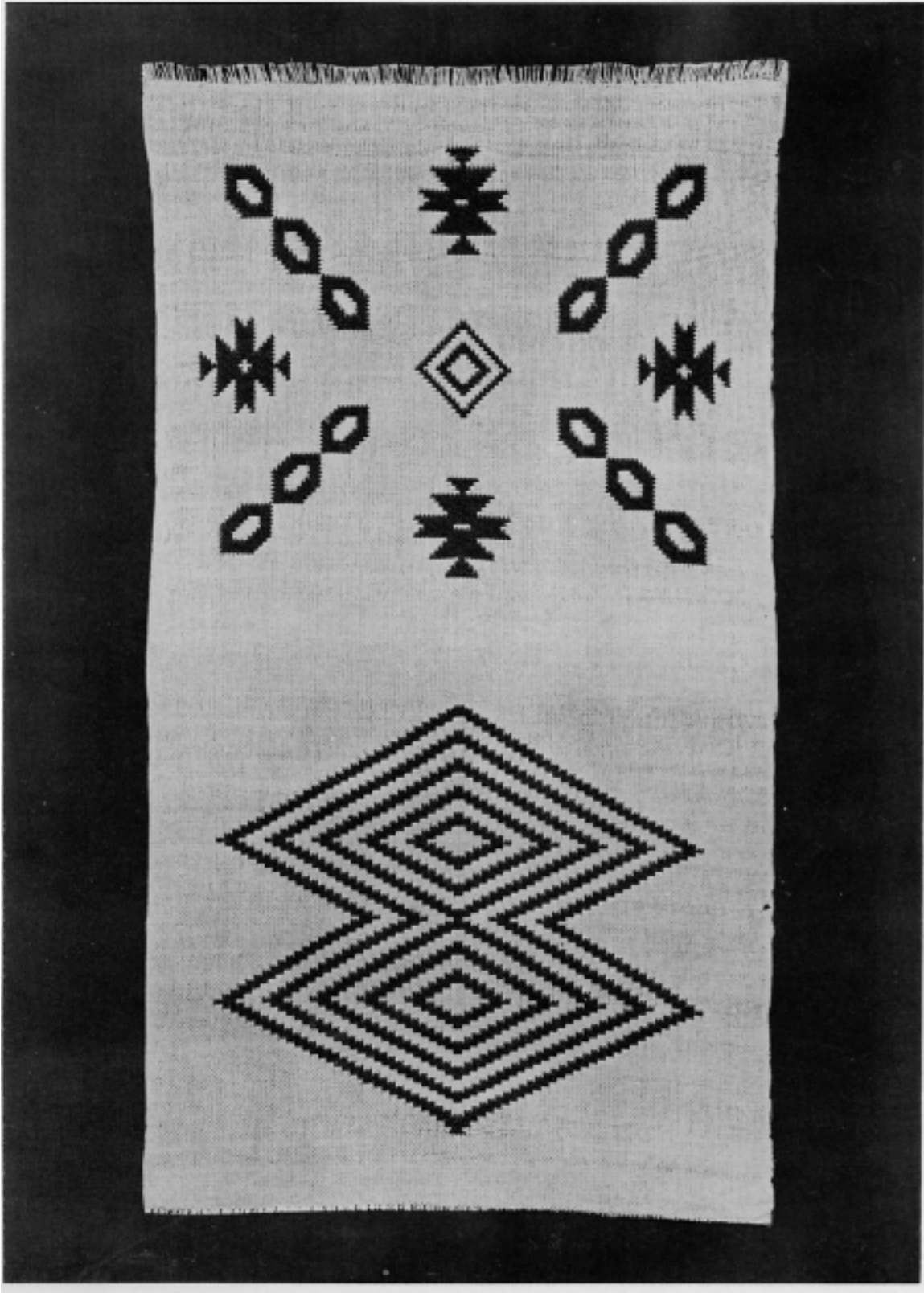
1. Treadle 1 to harness 3.
2. Treadle 2 to harness 1.
3. Treadle 3 to harnesses 1, 2 and 4.
4. Treadle 4 to harnesses 1, 3 and 4.

### **Tubing**

1. Treadle 1 to harness 1.
2. Treadle 2 to harnesses 1, 2 and 3.
3. Treadle 3 to harness 2.
4. Treadle 4 to harnesses 1, 3 and 4.

In tubing, each side is closed and there is no double warp thread at one side. Mrs. Atwater gives the following instructions to drop the warp thread in harness 1 when starting the threading; then treadle 3, then 1, 2 and 3; then 1; then 1, 3 and 4.

Harriet Tidball has an excellent Monograph on Double Weave, especially for those who want to use a multiple harness loom.



**Two Reversible Pillow Cover Designs**

## GENERAL SUGGESTIONS

1. You can pick up the background without splitting the pair on each side of the pattern. This keeps the pattern even on the edges on the right side of the web, but on the wrong side it is not so attractive.
2. When inserting the shed stick it is helpful to tilt it slightly with the narrow edge away from you to help from picking up any of the lower shed.
3. On the Structo, do not push the pick up stick completely to the reed because this has a tendency to raise the other two harnesses.
4. When inserting the shed stick be sure to keep it CLOSE to the top shed, so you will not pick up any lower warp threads that you cannot see.
5. If the warp sticks, run your finger nail or shed stick lightly over it and it will separate. You can also lift up on the pick up stick to help it open.
6. When changing sheds with the pick up stick in place, it is a good idea to have the stick close to the web. This also helps the warp to separate.
7. Be sure, when weaving, to allow your weft to make an arc to help prevent the sides pulling in.
8. In beating, be sure to beat first against the shed stick, then after it is removed, beat

again. I use a "lovely" old "sword" from Mexico, first in the 1 and 2 shed, then in the 3 and 4, to pack it close. I do not beat with it, but "work" it up and down.

9. Select soft twisted yarns for weaving. The tightly twisted yarns are too springy and will not stay beaten up. Any of Lily's two plys, like Perle, is excellent for double weave. I use 5/2 most of the time.

10. Select for your first weaving, patterns that are several blocks to the unit. Geometric blocks are good to start on. With them you will soon see if you are weaving "square." Also if you do not weave "square" select patterns that do not need to be woven that way. I usually weave "by ear" because I hate to have to watch the beat so carefully.

11. When you use wool and cotton, be sure the yarns are the same size. The wool should be threaded on the first two harnesses.

12. To close the edges on both sides of the web when doing patterns, begin by throwing the dark from the left and the light from the right. Watch as you pick up each color that it goes around the other color. I find it difficult to close the edges evenly, so I weave them open and sew them together if I want them together.

Double weaving is really not hard and it is fun.

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