## An Adventure for the Adventurous

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Illustration No. 1

Many weavers enjoy "Honeysuckling" along year after year, tying each new warp to the ends of an old warp left in the loom. But we are not all like that; some among us get a real thrill of adventure from trying the untried, seeking out old weaves and patterns that have been lost, or searching for something unusual and new.

Weaving is a very ancient art. Perhaps there will never be anything completely "new" in weaving. At least authorities state that the last fundamentally new thing was the invention of the drawloom by the Chinese—and this world-shattering event took place in the year Two Hundred, B. C.! However, for each weaver there are many new things. No one could live long enough to know and try all the weaves, and it is altogether probable that the fascinating weave I am about to describe has never before been produced on a civilized harness loom by the method suggested.

Last summer a group of experienced weavers gathered at the Drifting Snow Ranch in Montana. As it happened, there were no honeysucklers among us, and we went on a real spree of experiment and discovery, with some highly interesting results.

We had for study some beautiful and unusual pieces of weaving from Guatamala, from Peru and Bolivia, from New Zealand, and other far away places. Among us we solved the puzzle of the structure of all these fabrics and worked out practical techniques for reproducing them on the types of loom in use among us. We made no attempt to weave these things in the manner and with the equipment probably used by the original weavers.

As it happens, I lived for some time in Bolivia. It was a good many years ago and at the time I was not a weaver, so I missed a wonderful opportunity. However, I saw the women at their weaving and was not tempted to go and do likewise. The warp was spread flat on the ground between two heavy beams, held in place by pegs



Illustration No. 2

driven into the earth. The weaver crawled about on her web on hands and knees. It would be hard to imagine a more inconvenient method of weaving.

However, the results of this technique are extremely handsome, and our problem last summer—among others—was to find some way of producing these results on a civilized loom in a civilized manner.

We had for study a small "poncho", shown on illustration No. 1, and a small bag, illustration No. 2, probably intended for coca leaves. The poncho is the outer garment of the Indian men of that country. It consists of two strips of fabric, seamed together, with an opening left for the wearer's head. It is always predominently red in color, with lengthwise stripes of other colors and borders in pattern weaving. The bag for coca leaves hangs at the owner's belt when he is on a journey. He takes no other provision for a trek of several days across the high desert, chewing the coca leaves to relieve the pangs of hunger. The small quantity of cocaine he absorbs from this exercise comforts and sustains him. It seems to have no bad effects on his tough and sturdy body.

Many of the shawls and ponchos and bags of the natives, even at the time I was in Bolivia, were "made in Germany" and were of no artistic interest at all, but the pieces we had for study were ancient native weaving, done in a very fine, very hard-twisted woolen yarn.

We had no wool in the least like the material of the ancient pieces, but this did not matter greatly as we were not attempting to reproduce the texture of the originals but simply to study the structure of the curious and beautiful weave. We therefore used mercerized cotton #5 in the colors that most closely approximated the colors of the original. This material being much coarser than the old hand-spun yarn made it easier to see what we were doing. The color numbers, from Bernat's color card for perle cottons, are as follows:

Red	1045
Green	1018
Blue	1042
Yellow	1020
Brown	1058
Black	1031
Taupe	1013

The first experiment in reproducing the weave was done on a little English belt-loom or "inkle" loom, only the pattern figures being done and the background woven plain. This experiment is shown in illustration No. 3.

We next set up a narrow warp in a six-harness loom, including the number of threads required for the broad stripe of pattern weaving in the poncho, with two of the narrow borders. This warp was made as follows:

For the plain edge:

Taupe ...... 8 threads Red ..... 4 threads

First pattern stripe:

Brown and taupe, alternately—8 threads of each color.

Stripes in plain weave:

 Red
 .4 threads

 Taupe
 .8 threads

 Red
 .16 threads

 Taupe
 .4 threads

 Blue
 .16 threads

 Taupe
 .4 threads

 Yellow
 .4 threads

Second pattern stripe:

Taupe and red, alternately—6 threads of each color. Plain stripes:

Yellow ......4 threads
Taupe ......4 threads
Red ......4 threads
For the broad pattern stripe:

Green and taupe, alternately—8 threads of each color Red and taupe, alternately—6 threads of each color Green and taupe, alternately—8 threads of each color As this stripe makes the center of the piece, we repeated the rest of the warping in reverse order back to the beginning.

We set this warp at 48 ends to the inch, sleying four threads through each dent of a 12-dent reed. The manner of threading through the heddles is shown at (a) on the accompanying diagram.

It is possible to produce the weave on four harnesses, as shown at (b) on the diagram, but the six-harness

threading is much more convenient.

For weft we used a soft, coarse cotton, heavier than the warp, in a taupe shade. As the weave is a warp-face weave and the weft is completely covered, the color of the weft is unimportant. However, it shows a little at the edges, so that it is best to use the same color as the edge warp-threads.

We used one of the despised flat "poke-shuttles" for weaving—for reasons that will appear—and for the pattern work we used a narrow flat pick-up stick, pointed at one end. The pick-up stick must be narrower than the

shuttle.

The weaving proved unexpectedly simple. Weaving on the two tabby treadles alone produces a cross-barred effect over the pattern stripes, as shown at the bottom of the practise piece,—illustration No. 4. The square figures, alternately dark and light, that appear above the bars may be woven as follows:



Illustration No. 3

For the dark figure:
Treadle A, plain.
Treadle B and treadle I, together
Treadle A, plain
Treadle B and treadle 3, together
Treadle A, plain
Treadle B and treadle I, together
Treadle A, plain
Treadle A, plain
For the light figure:

Treadle B, plain Treadles A and 2, together

Treadle B, plain Treadles A and 4, together

Treadle B, plain
Treadle A and 2 together

Treadle A and 2, together Treadle B, plain

This simple way of weaving has, in itself, an interesting effect, and a piece might be woven in this manner all the way, with perhaps the introduction of cross-bars between the pattern figures.

To produce the more fanciful figures, the pick-up stick

comes into use. These figures may be woven, according to fancy, in a great variety of forms. Detailed directions cannot be given for more than one of these figures, but this will illustrate the method and any weaver of ingenuity will find it easy enough to produce other figures in the same manner.

To weave the X-figure that appears above the squares in the practise piece, and that is shown in large-scale detail on the diagram, proceed as follows:

Treadle A, plain. Hold down treadle 3, which raises alternate pairs of dark threads across the pattern stripe. Take up on the shed-stick the three middle pairs. Let treadle 3 go back into position and weave on treadle B. The shed-stick simply rides on top of the shed. Now hold down treadle 2 and take up on the stick two pairs on each side of the pattern stripe. Weave on treadle A. Now pick up the two pairs at the center on treadle 1; weave on treadle B. On treadle



Illustration No. 4

4 pick up two pairs on each side of the pattern and weave on treadle A. Pick up a single pair, at the center, on treadle 3 and weave on treadle B. Pick up the four pairs at the center on treadle 2 and weave on treadie A. On treadle 1, pick up the pair on each edge of the pattern border and weave on treadle B. Pick up three pairs at the center on treadle 4 and weave on treadle A. Weave treadle B, plain. Pick up all pairs on treadle 2, and weave on treadle A. This is the center of the figure. Repeat in reverse order back to the beginning: treadle B, plain, and so on.

The fabric should be very firmly beaten up, and it will soon appear that this is impossible by the use of the batten in the ordinary way. This is because the warp is set so close and so many threads are drawn through each dent of the reed. To get a firm beat, insert the flat shuttle through the open shed. Leave the shuttle in place and beat against it with the batten. This produces the desired effect. If the pick-up stick is narrower than the shuttle, it will not interfere at all with this method of beating. If preferred, a different type of shuttle may be used to carry the weft and a special stick, beveled down to a knife-edge along one margin, may be used in the shed as a beater. The thin edge, of course, should be against the web.

In our experiments, as noted above, we were not aiming at texture. However the texture of the piece produced proved extremely handsome. The fabric is firm and smooth and agreeable. It would make beautiful chair-covering, and would outwear almost any fabric I can think of.

The weave might also be developed in Fabri yarn, beaten more lightly, and used for scarves and mufflers.

Many other uses for this weave suggest themselves.

The finish of the ancient pieces deserves mention. All the edges of both the poncho and the little bag are finished with a narrow braid, that at first glance appears to be woven separately and applied. On examination it develops that the braid was made directly on the fabric in a very odd and interesting manner. The braid is made of a strand of very fine wool threads—16 green, 8 taupe, 4 red. These strands were attached to the piece in an inconspicuous spot and the weaving was done with a needle, passing first through a shed of the braid and then through the fabric in a sort of overhand stitch. Some shedding equipment, as a slot-and-hole heddle, may have been used in doing this work, as it is very regularly and evenly done, in a little pattern of diamonds. I find I can reproduce it, but awkwardly and slowly. I may find some easy way of doing it. Certainly it provides a very handsome finish. The little pattern is probably traditional, for the same diamond figure is shown in the braid finish of both pieces though they are not likely to be the work of the same weaver and possibly were not made at anywhere near the same period. The detail of the pattern figures in the main fabric is quite different. The same finish appears also in illustrations of ancient Peruvian pieces in d'Harcourt's fine book on ancient Peruvian textiles. A similar effect could be produced with less effort by weaving a narrow strip on the inkle loom or in card weaving and binding the edges.

And though there may be nothing new in weaving, this interesting ancient weave from a far country will be new, I am certain, to readers of The Weaver. For its qualities of beauty, simplicity of production, and sturdy durability it should appeal to all except confirmed honey-

sucklers.

