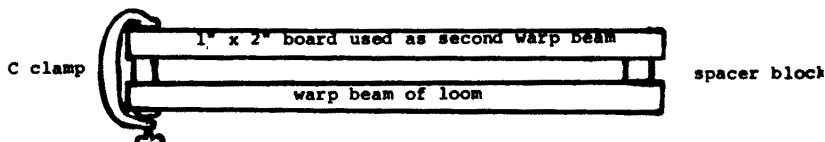


# SWATCH PAGE

## WEAVING VELVETS

When weaving a traditional silk velvet two warps are required. One for the pile which can be six to nine times longer than the second warp which is used for the backing cloth. Due to the costs involved, silk-faced velvets are often woven with a cotton backing. This makes the end product somewhat heavier and stiffer which is an asset or liability depending on the intended use of the finished product.

Because of the necessity of two warps it is most helpful to have two warp beams and two braking systems on your loom. If your loom isn't equipped for this, certain alterations can be made. A temporary second warp beam can be made by taking a 1" by 2" board which is as long as the warp beam which came with the loom and clamping it to your loom with small wooden blocks (children's building blocks work well) acting as spacers. It is advisable to have this second warp beam hang over the back edge rather than directly aligned with the beam on your loom so the two warps will not touch one another.



This set-up will allow each warp to move freely as an independent element in the weaving process.

If you need to add another braking system, the simplest way in the short run is to simply weight the second warp. This can be done with sandfilled pop bottles, lead weights, small baskets, or what ever. It is only satisfactory for small projects or samples however because this necessitates constant adjustment as the warp is woven off. The best solution is to put on a second warp beam (usually you can buy these from the manufacturer of your loom) and a second brake. Here a word of caution: remember that it is totally unsatisfactory to have two ratchet braking systems, one must be a friction brake in order to have even tension maintained on separate warps which are being taken up at different rates.

I have read of velvets being made with backings other than tabby or plain weave, but have never seen any other weave used where the pile was formed with the warp. (This is a comment on my lack of exposure, not on the validity of what I have read!) For the sample pictured here, I used four harnesses; two for the pile warp and two for the backing warp.

For sampling I used a one-yard backing warp for the foundation cloth of 20/2 cotton set at fifteen ends to the inch. I beamed this on the back beam with lease sticks and then threaded alternately through the first and second harnesses leaving a heddle on each of the third and fourth harnesses free for the pile warp between each cotton warp thread. For the pile warp I used a 6/2 rayon floss thread six yards long and set at thirty ends per inch. I chained this in two inch sections (sixty threads) hung over the second warp beam and threaded alternately on harnesses three and four. Be careful to have the warp supported at this point or it will be difficult to sley, as the threads will keep slipping out. At this point I sleyed a number fifteen reed three ends to a dent, i.e. one cotton backing thread and two rayon or pile threads in each slot of the fifteen dent reed. The threading reads 1, 3, 4, 2, 3, 4, etc. This is repeated as needed to cover the width of the sample. I did use four extra ground threads in the two outside dents on each side of the sample to act as a selvage.

At this point the two warps should be considered as one and tied onto the apron of the cloth beam in the standard manner in order to create an even tension for weaving. After this has been done it may be necessary to readjust the chaining on the pile warp, if a second warp beam was not used, so there is an even tension on all the threads. This can be done all at once, or a yard or two at a time, by simply combing out and rechaining. If a chained warp is used it must be evenly weighted so there is tension on all the threads at all times. It doesn't have to be tremendously heavy, but some resistance is necessary. It is quite acceptable for this tension to be less than that on the foundation warp.

Now weave an inch or two of straight cloth incorporating both warps, alternating harnesses one and three against harnesses two and four.

When you begin to weave the velvet proper, you will need to have six wires which are a couple of inches longer than the width of your warp, and a good razor blade. The diameter of the wire will determine the height of your pile. Commercial velvet usually has a pile height of one-seventh of an inch; however my original references were related to historical Persian velvets which used a wire with a 1 mm diameter, so I used a one-sixteenth inch copper wire.

With harness four raised, insert one wire exactly as you would any ordinary weft, then weave three shots of plain weave beginning with harnesses one and three raised. Now raise harness three and insert another wire and weave three more shots of plain weave. The weft for the plain weave should be relatively fine. I used the same 20/2 cotton which was used in the ground warp. Your harness movement should be:

- no. 4 raised, insert wire
- 1 & 3 raised, insert ground weft
- 2 & 4 raised, insert ground weft
- 1 & 3 raised, insert ground weft
- 3 raised, insert wire
- 2 & 4 raised, insert ground weft
- 1 & 3 raised, insert ground weft
- 2 & 4 raised, insert ground weft
- 4 raised, insert wire

Repeat until desired yardage is woven.

After the six wires have been used as inserts, the first two may be cut out and reused. The traditional way is to pull a razor long the top of the wire cutting the loops created in the warp by the wire. In this manner the wire is freed and the velvet pile is created in one process. Historically the wires used for velvet have a fine groove down the entire length which acts as a guide for cutting. I didn't have such a guide, which made the cutting somewhat time-consuming. I did try pulling the wire out and using a seam ripper to cut the loops. This was certainly faster but the pile wasn't quite as even.\*

In this way the wires are constantly rotating. Having four wires always in the fabric while weaving is probably a bit of over-kill, but the first time I attempted velvet with only two wires, half of my warp fell to the back of the loom when I cut the first wire out!

An advantage when weaving velvet is a heavy beater. It helps to pack the rows of pile tightly together, creating a richer fabric. The Persian looms used for velvet had beaters with ninety pounds of lead!

The velvet described herein is called a "W" velvet because of its construction and is quite a sturdy fabric.

#### Construction of "W" velvet



I also tried to weave what is called a "U" velvet, which is woven with fewer plain shots between the exposed pile; however I had some difficulty with the pile pulling out, and felt that it was not sturdy enough to be useful.

#### Construction of "U" velvet



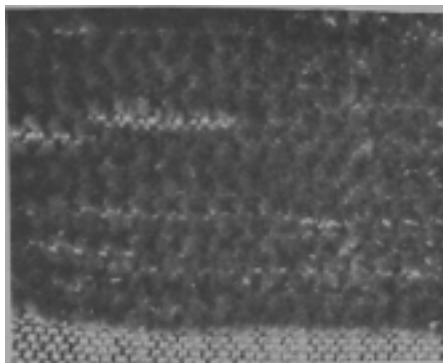
This particular weave, i.e. warp pile, has a number of possibilities. It is called velvet when the pile is composed of fine silk or silk-like yarns, but when made of a deeper pile composed of wool the result is to be seen in the famous Wilton carpets.

I have seen beautiful velvets made from warps which have been spaced dyed in the "ikat" technique and read of the Lyon's weaver George Gregoir who was known for his warp painted (chine) velvet portraits. Space dyed wool warps used with this technique but with the loops uncut are used to create "tapestry rugs."

\*Since weaving this sample I have used grooved wires and found that they not only simplify the cutting but greatly speed up the weaving process.

Further note:

Since my first experiments with velvet I have taken several commercial velvets apart and analyzed under a 10-40 power microscope several historical velvets made in Italy and France. There appears to be a great variety of weft treadling in the construction of velvets. Some used only three harnesses with all the pile warp exposed during each cutting. (When I tried this I lost all the pile warp when beating the next shot after cutting!) On all the velvets I looked at, their threading was slightly different than the sample I did and probably an improvement, as I did have a slight problem with bubbling on the back of the fabric. The standard form seems to have an even alternation between pile warp and ground warp. That is, the threading would be a straight 1, 2, 3, 4, with the ground warp on harnesses one and three and the pile warp on harnesses two and four.



Happy Weaving and Experimenting,  
Lotus Stack

Photo by Jay Magoffin