Photo by Matt Graves

CATENPILE *technique*

Jessica Lambert

The rigid-heddle weaving journey often begins with plain weave. Later, many weavers discover that twills, overshot, waffle weave, leno, and even lace are possible with clever manipulations using pick-up sticks, multiple heddles, and other tools. Now you can add another technique to your bag of tricks, one that doesn't aim to mimic multi-shaft designs. I invented a technique I call catenpile, and it is now my favorite way to weave on a rigid-heddle loom.

The idea of catenpile is simple. Open a shed, throw the shuttle, and *before* beating, pull bits of the weft up and out of the warp and slide them onto a knitting needle to form loops. Weave one pick of plain weave after each row of loops to secure them. Once you have a few rows of loops, you can chain them together using a crochet hook to create cables, elegant diamonds, lavishly complex Celtic knots, and anything else you can dream up.

First, let's look at the system I have developed for charting catenpile designs. The chart in Figure 1 represents the catenpile design pictured here in hand-dyed Tencel. (The diamonds in the cloth are elongated because the cloth is warp-dominant; in a balanced plain weave, the diamonds would be squarer, as they are in the chart.) To read the chart, keep in mind that catenpile is worked on an open shed. The vertical lines of the graph represent all the raised warp ends, and the columns represent the spaces between the ends. Likewise, the horizontal lines can be thought of as the plain-weave picks woven between each row of loops. The shaded cells are the spaces where you will place loops. The paths your chains will take are traced over these shaded cells in black lines.

To work the first row of the diamond catenpile chart, start from the side where your shuttle entered the warp and work across to the opposite side. Skip eight spaces before pulling up the first loop and sliding it onto a knitting needle, then make a loop in the same way in the next space (see photo on the next page). Skip eight spaces, pull up loops in the next two spaces, and skip eight more spaces. Beat with the knitting needle still in place, change sheds, and weave a single plain-weave pick. You can now remove the knitting needle and start on the second row of the chart.

The diamonds repeat and the red lines outline a single pattern repeat. When you have done a repeat or two, it is time to chain the pattern together. Chaining a section must be done before winding onto the cloth beam. For me, this means chaining about every other time I advance the warp. When it comes time to chain, experience with crochet is helpful but not necessary. Insert your crochet hook into the

Catenpile diamonds woven

All photos by Jessica Lambert unless otherwise noted

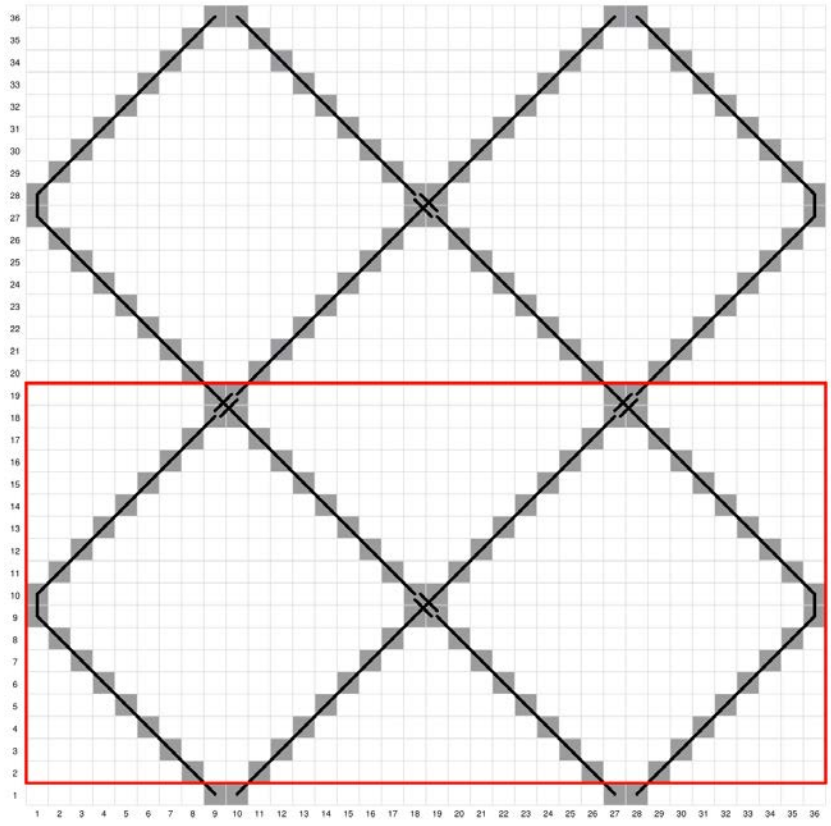

Figure 1: Catenpile diamonds chart

Pulling up a loop and placing it on a knitting needle

first loop, then insert the hook in the next loop as indicated by the chart and pull it through the first loop. You now have the second loop on your hook and can insert the hook through the third loop and pull it through. Continue in this way until you have chained all the loops for that chain and then move on to the next chain in the design.

Where the chains cross each other, the chain that is meant to cross on top is indicated by double lines. Sometimes the chain you are working may need to cross under a chain you have already completed. This is accomplished by chaining up to the point where the cross occurs; then remove the hook from the loop, insert the hook under the completed chain from the opposite side, catch the loop you just removed, and pull it through to the other side before removing and reinserting your hook so that you can continue chaining in the correct direction as shown in the top photo on the opposite page.

Sometimes a pattern, such as the one for the Arabesque Runner (page 60), will have chains that join and split. Splitting a chain is quite simple: work one branch of the chain as far as you want, return to reinsert your hook through the loop before the split, and then chain the second branch from there. Joining, on the other hand, requires you to chain both branches to the joining point and then, with the final loops from both branches on the hook, pull the next loop through both loops on your hook.

When you have finished a section of chaining, resume weaving and looping according to the chart. Alternate between weaving/looping and chaining as frequently as you wish, but at least often enough to keep unchained loops from being wound onto the cloth beam. Once you have completed an entire

catenpile pattern, the last loops in each chain need to be secured. I have found a few ways to do this, but my favorite is to work the final loop as a slipknot as follows:

1. Throw the shuttle.

2. Finish the chain by pulling the final loop out of the warp and through the second-to-last loop, and then keep pulling until the loop is large enough for the shuttle to fit through.

3. Pass the shuttle back and up out of the shed through the same space as the enlarged loop and thread the shuttle through the loop.

4. Pull the yarn tight to close off the slipknot.

5. Insert the shuttle back into the shed through the same space from which it came out and pass it through the shed. Repeat for the last loop of each chain to secure the entire pattern.

Crossing under a chain to continue another chain's path

Pass the shuttle out of the warp and through a large loop to secure a chain.

For successful catenpile weaving, there are a few things to keep in mind. First, don't forget the basics of good weaving: watch your selvedges and fell line and keep your beat consistent. Second, remember that the angle of your weft before beating is important, and you will want to follow that angle with the knitting needle as you loop your weft onto it. Finally, to prevent the catenpile design from distorting your ground cloth, select an appropriately sized knitting needle and keep the loops consistently snug around it rather than allowing them to get loose or tight. If your loops are too large, the warp ends will not be sufficiently tied down, and they will behave as if the weft is floating. If the knitting needle is too small, the cloth will pucker around your catenpile stitches. The best way to determine the correct size needle is to weave and wet-finish a sample. For a balanced plain weave with a sett of 12 ends per inch, start with a size 8 (5 mm) knitting needle, and if the chained loops seem either too strained or too open, size up or down.

Once you master this new technique, your mind will run wild with all the patterns you can create to enhance your projects. Catenpile weaving makes a rigid-heddle loom an even greater joy to weave on. While I have enjoyed experimenting with catenpile on my own, I relish the prospect of seeing what the technique will become as more and more weavers try their hands at this new and exciting way to weave. ✻

JESSICA LAMBERT enjoys weaving while her youngest child naps, watching Marvel movies with her husband, and rock climbing.