

Caterpillar Book Binding

Written by Kathryn DiMartino

The Caterpillar is a unique sewing method utilizing pairs of holes across the boards and spine of the book, which has the final result of looking like a caterpillar or centipede. It is relatively easy to learn but can be very difficult to master. The following steps will help you bind your own book with the Caterpillar stitch. It should be noted that Caterpillar stitches could vary in tightness (and can be quite wobbly without a lot of packing, which we will discuss later), so it may not be perfect for every book. You may want to think about using a Coptic Stitch to bind the book more sturdily before finishing with the Caterpillar.

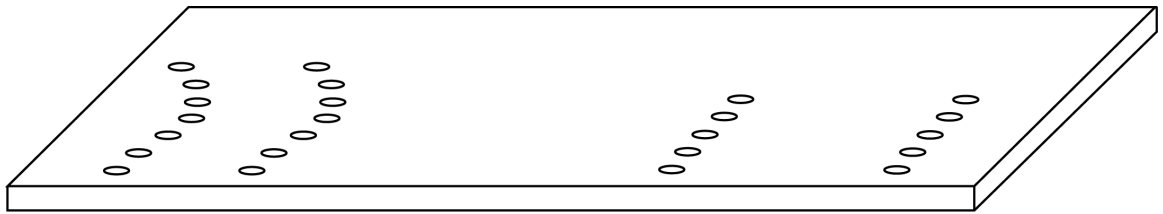
A Quick Guide to Preparing Your Boards and Signatures

Prepare your boards as you would a Coptic Stitch. Cut two boards of equal size and thickness you would like for your book. Make sure the grain of your boards runs *parallel* to the spine, as with *any and all* papers and boards when making a book. Cut cover papers approximately two inches larger on each side than the boards, trim the corners, and glue the cover papers to the boards. If you are using a particularly thick paper or fabric, you may want to cut one or more pieces of paper to fit in the area not covered by the thick paper/fabric to keep the end papers from having slight indentations. Glue your endpapers to the center of the back of each board (making sure the grain is running parallel.) Your boards are now ready to be pierced.

Your signatures should consist of three or more pages that are half an inch shorter than the height of the book boards. The width of each page you cut should be twice the width of the book boards minus half an inch. When folded, your pages should be smaller than the book boards by about a quarter of an inch on each side, minus the spine. I suggest having four or more signatures for your book. Your pages are now ready to be pierced.

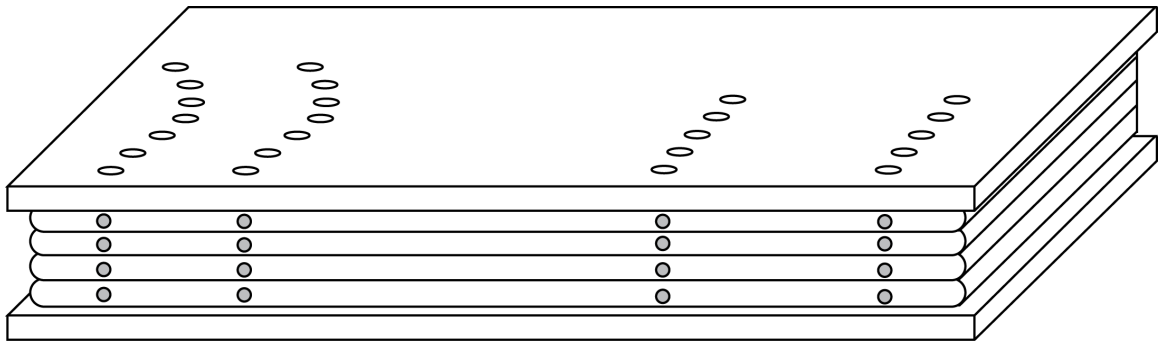
Piercing the Boards and Paper

1. **Decide how wide you want your “caterpillar” to be.** This may be dictated by the size of your book. If you are supplementing a Coptic Stitch with a Caterpillar stitch, you may have to work around the existing holes.
2. **Punch five or more sets of two holes of your desired “caterpillar” width in each cover, making each set an equal distance from each other and vertically parallel to the spine.** You don't have to punch them all in a straight line perpendicular to the spine edge, however. You can make slowly curving or undulating lines to better emulate a caterpillar. Note that you can take the holes all the way to the opening edges of the book boards if you desire.



↑ two different ways to punch the holes

3. **Punch holes of your desired “caterpillar” width through your signatures, at the same places on each signature.** The signature holes *must* line up, perpendicular to the spine, unlike the cover holes.



Sewing Your Book

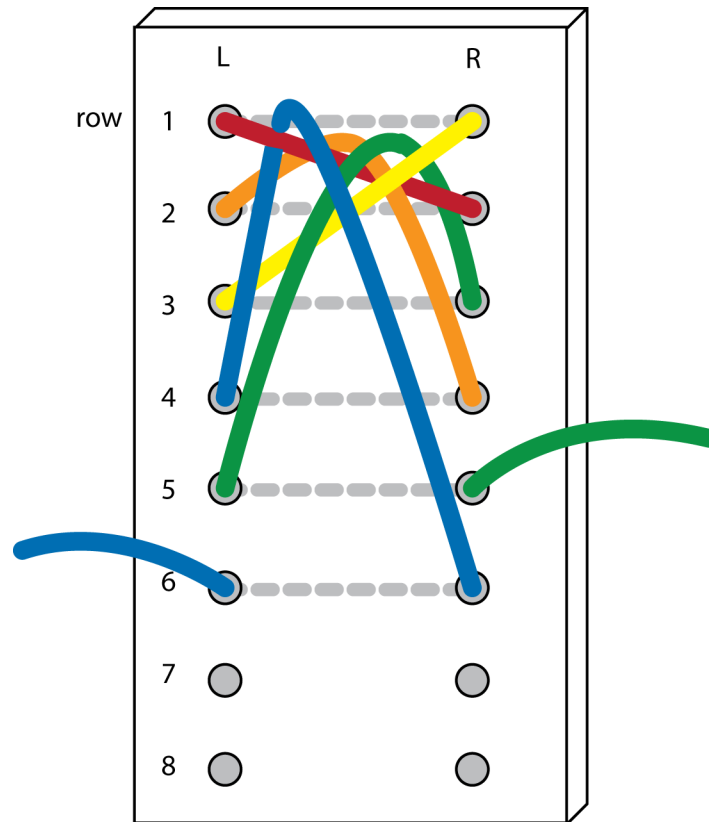
This is a two-needle sewing, so thread both ends of the length of thread through needles. You will probably require five feet of thread or more per “caterpillar”, especially if you are making a large book. Make sure you use waxed thread of a sufficient weight. While a slightly thicker thread or cord may look nicer for a more solid-looking caterpillar, it can be very difficult to work with at times. Follow the charts and instructions below for how to sew your book.

KEY

- 1st Red
- 2nd Orange
- 3rd Yellow
- 4th Green
- 5th Blue
- 6th Violet

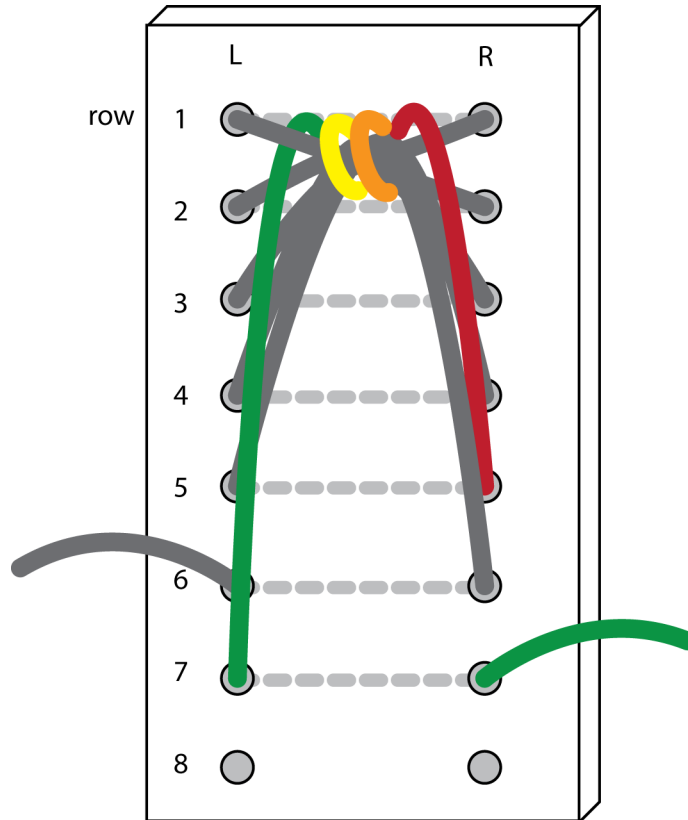
— — — dashed
behind book board

— solid
in front of book board



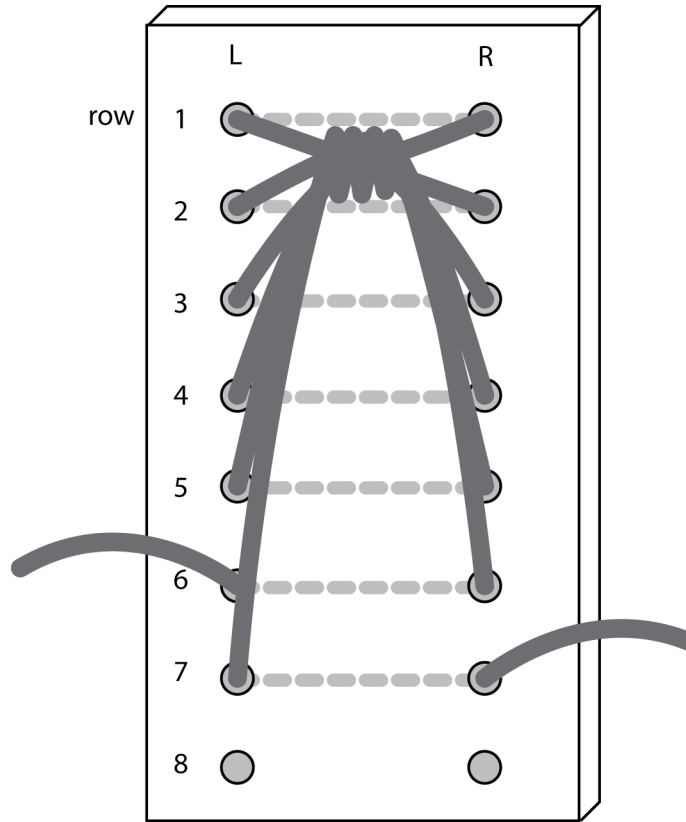
Part 1:

1. Feed one end of your thread through each of the top two holes.
2. Take thread from the left hole in row 1 (L1) down and through the right hole in row 2 (R2.)
3. Take thread around the back of the board and up through L2. Bring this thread up and under, then down and over the previous thread and through R4.
4. Take the thread from R1 over all threads and down to L3. Then around the back of the board and up through R3.
5. Take thread from r3 up and under, then down and over all threads and into L5. Bring thread around the back of the board and up through R5.
6. Take thread from L4 up and under the first thread (coming from L1), then down and over all other threads into R6. Bring thread around back of the board and up through L6.

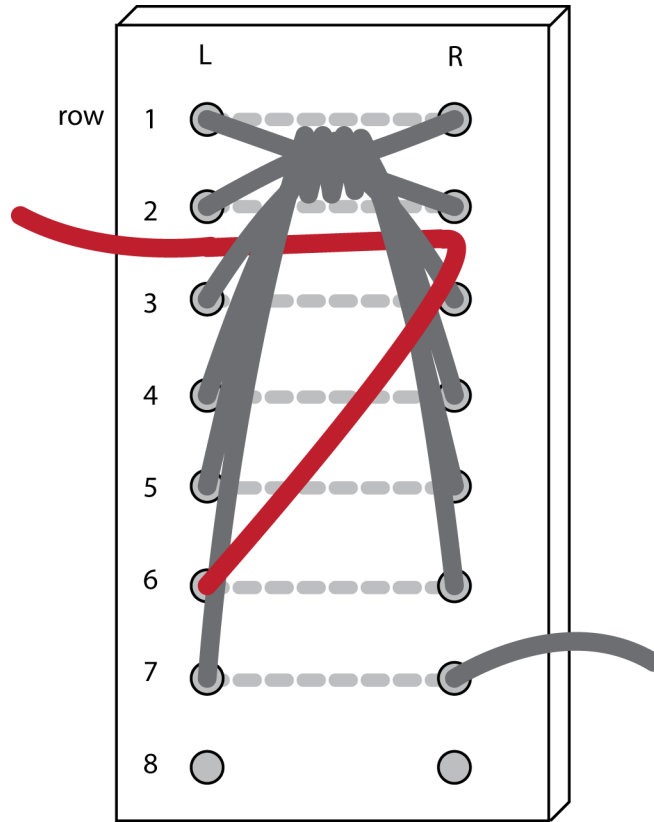


Part 2:

1. Tighten threads enough for them to bunch up together at the top, but be sure not to over-tighten them, or the next steps will be more difficult.
2. Take thread from R5 up and over all threads, then down and under all threads.
3. Repeat this motion 3-4 times, winding the thread around and creating a kind of bundle of threads.
4. On the last rotation, take the thread down and under the top thread (coming from L1) and then continue down and over all other threads, and then into L7.
5. Bring thread around the back of the board and then up through R7.

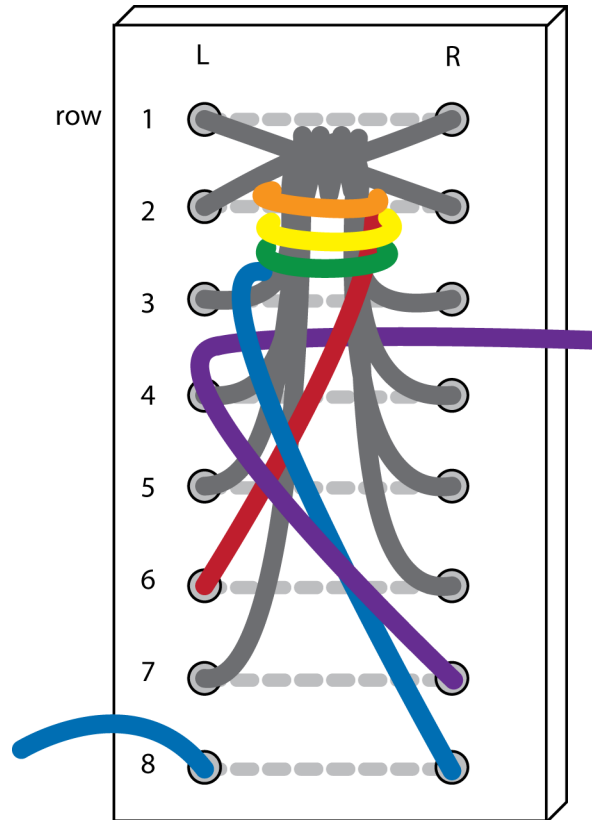


Tighten up your threads a bit, and your binding should now look like the image above.



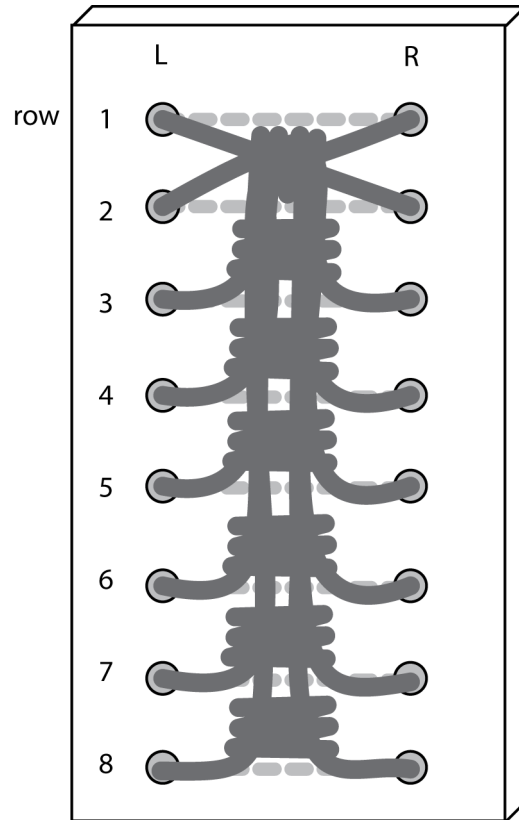
Part 3:

1. Take thread from L6 up and across all threads, and under all threads just above Row 3. Make sure you are entering the gap from right to the left.



Part 3 (continued):

2. Take thread across all threads, and back under again, looping the thread around all others. This is similar to the “bundle” we created at the top. For a more solid-looking caterpillar, make as many loops as needed to cover all exposed threads down to the “legs” created by Row 3. This is called “packing.”
3. On the final loop, bring thread from behind the bundle above and across all threads to the right, and down through R8.
4. Bring thread behind the board and up through L8.
5. Take thread from R7 up and behind the gap just before Row 4. This time you are entering from left to right.
6. Repeat Part 3 as many times as is necessary. Signatures are sewn on in the same way. Any time you would normally loop around the back of the board, you simply loop around the inside of the signature. You may have to leave a gap in the packing where the binding goes from the cover to the spine so that it closes properly.



By repeating the steps above, your binding will look similar to the one above. If you did a lot of packing, your caterpillar will look more solid, and will not have the exposed threads below each set of “legs.”

Finishing Your Binding

When you run out of holes, you can simply tie off the thread on the back of one of the inside of the covers. You may have to enter one hole with both threads to achieve this. Try to tie a knot in the center of one of the loops around the back for a neater look. Alternatively, you can continue to pack the threads down the binding before you enter the last hole and eliminate the “tail” of the caterpillar, then tie off on the inside of the cover.