

How to make a medieval limp bound note book

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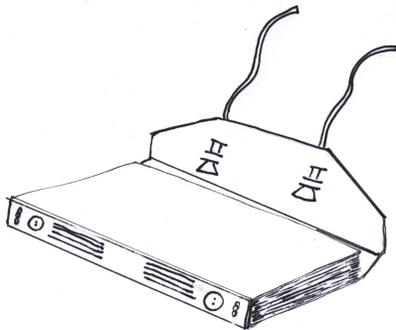


This workshop will show you how to make a historically correct looking note book. These note books were used for everyday records by merchants, monks, nobles etc. The original books could have either parchment or paper as pages, and their cover were either parchment or leather, hence the name limp bound, since they did not have wooden book boards. The spine reinforcement could be made of wood, horn, bone or as in this example, thick leather. This model features a wrap around cover with two straps that close the book by wrapping around two buttons (horn, bone, leather, metal) on the book's spine. There are several versions, but here we will show you the basic book. Knowing how to make a limp bound book, you can later adopt this technique to use whatever material you have at hand to make a note book for modern use.

Picture1. The original limp bound books, picture from Servais. The book we are making is the right most book, which in this case has lost it's overlap flap with the straps that otherwise would wrap around the buttons on the spine for closure.

The example in this books, uses ordinary sized 9 x 12" paper, to yield a 4.5 x 6" book, but you can make it in any size that you want. This also goes for the thickness of the book. These instruction gives a book with 64 pages - 8 gatherings of 2 bifolia each, but can be made with much more gatherings, as long as the number of gatherings is divided by 2, to make the sewing of the gatherings work. With very thin paper I would recommend doing at least 10 gatherings, since the spine otherwise will be very narrow, and that will make it harder to have a button large enough to hold the cords to close the book. Just remember that if you add gatherings, you will have to make the cover longer, since the length of the cover is = width of bifolia + thickness of spine + width of bifolia + thickness of spine + overlap (see picture).

This book features a cover of parchment, but it can also be done in leather for a historically correct book. When working with parchment, you will have to be careful not to get it wet, because it will then buckle and cockle. It is also a pretty stiff material, so for the overlap, you will have to make the creases hard, to make the overlap fit around the open end of the book. If you are using very thick leather, you may have to cut a ditch on the back side, to make it able to bend.



The straps are usually leather, raw hide or parchment strips, either straight, plaited or twisted, but ordinary cords are also found, just less often preserved. For leather and parchment covers, the straps are easily attached by slits in the cover, with the end of the straps enlarges, so that they do not slip through the slits. Other cords are sew on, often with a little reinforcement leather piece.

Picture 2. The notebook open, showing the strap attachment to the overlapping flap.

Material needed:

- * Paper for the pages. Preferably a thin, smooth and archival acid free paper
- * Wrap around cover. In period this was parchment or leather.

- * Thread. Strong linen thread is needed to sew the gatherings together. Preferably waxed.
- * Back reinforcement, this can be a strip of wood, leather, bone or horn in period, here we recommend a strip of sturdy leather.
- * Buttons and straps for closure. The buttons can be metal, wood, horn, or leather. The straps can be leather, parchment, cord or ribbons.

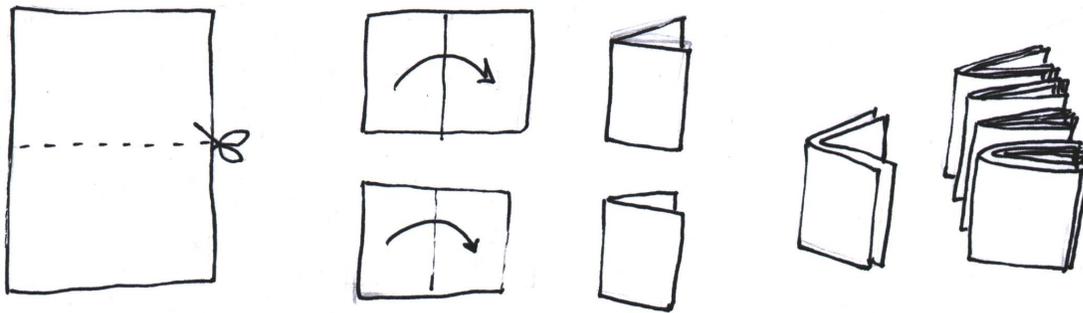
Tools needed:

- * Pen, ruler and scissors/X-Acto knife for drawing out and cutting the wrap around cover.
- * Needle for sewing the book.
- * Awl for making the holes in the gatherings and the back reinforcement.
- * A bone folder for creasing the paper when folding the gatherings. Using your nail works too.

Step 1.

Decide the size of your book, and create the amount of gatherings that are going to go into the book. In this example, take two 9x12" paper, cut them in half, fold each half along the middle (use your nail, a bone folder or something else hard and smooth, to make a sharp crease), and nest the 4 halves (the bifolia) inside each other. By only nesting 4 bifolia, we avoid having the edges stick out too much, and we do not have to trim the finished edge, unless we want to.

For 8 gatherings, you need 16 pieces of paper, that will be divided in two, folded and nested.



Picture 3. The making of a book block, a collection of gatherings.

Paper - cut in half.

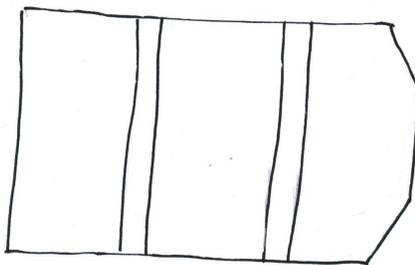
Fold in half, creating two bifolia.

Nesting the bifolia, to create gatherings.

Step 2.

Drawing and cutting out the cover, marking and creasing the overlap.

The size of the book is dependent upon the size and thickness of the gatherings, in this case the gatherings are 4 1/2 x 6" and the thickness of the spine, when compressed, is approximately 3/8" with an 80g paper (if you have thicker paper, you will have to press the gatherings together and measure the thickness and change the measurements of the cover accordingly). The thicker your material for the



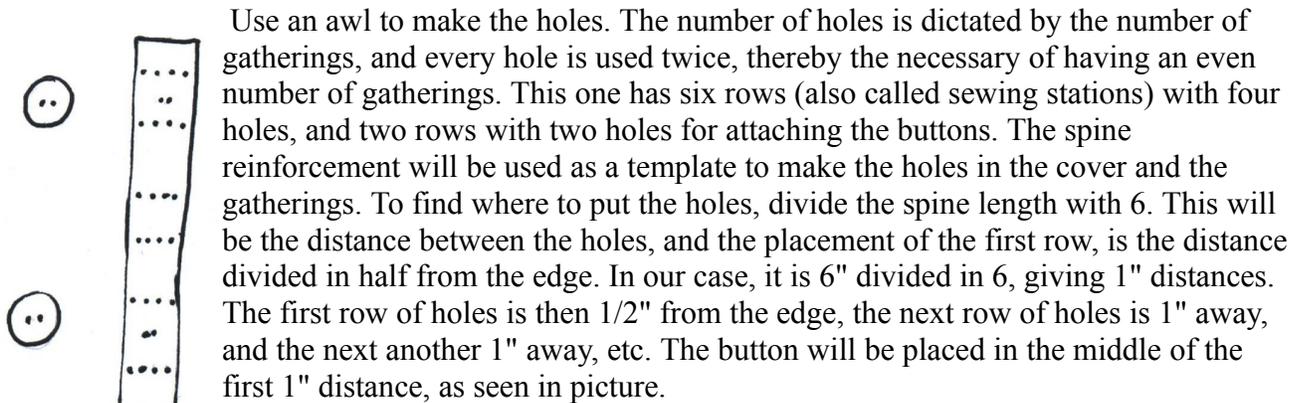
cover is, the more you need to add to the length to accommodate the folds. The height of the cover is the same as the gatherings, 6", because the medieval books had the pages flush with the covers, they did not have a "square" a measure of distance between the edge and the cover to protect the pages from wear, since they did not store the books standing, as we do today. The overlap flap can have a straight edge, or be shaped by angling the corners.

Picture 4. The cover, with lines marking the fold for the spine, and the fold wrapping around the text block, and the shaped edges on the overlapping flap.

Step 3.

Cutting out a spine reinforcement.

The spine reinforcement is what stops the back from bending, and needs to be rigid. The width of the spine reinforcement is dictated by the thickness of the book block (all the gatherings together, pressed flat) and the thickness of the cover. When the cover is folded, the book block has to fit inside it, and the spine reinforcement should not stick out over the fold of the cover on the back.



Use an awl to make the holes. The number of holes is dictated by the number of gatherings, and every hole is used twice, thereby the necessary of having an even number of gatherings. This one has six rows (also called sewing stations) with four holes, and two rows with two holes for attaching the buttons. The spine reinforcement will be used as a template to make the holes in the cover and the gatherings. To find where to put the holes, divide the spine length with 6. This will be the distance between the holes, and the placement of the first row, is the distance divided in half from the edge. In our case, it is 6" divided in 6, giving 1" distances. The first row of holes is then 1/2" from the edge, the next row of holes is 1" away, and the next another 1" away, etc. The button will be placed in the middle of the first 1" distance, as seen in picture.

Picture 5. The spine reinforcement, with all six sewing stations with four holes each, and the two holes for each button, showing the placement of the buttons.

Step 4.

Making the necessary holes for the sewing in the gatherings and the cover, by using the spine reinforcement as a template to ensure accuracy. Place the spine reinforcement in the middle fold of the gathering, and use the awl to make a hole through the papers at each sewing station (but not at the holes for attaching the button). Further use the spine reinforcement, to make the folds at the appropriate place in the cover, and use the spine reinforcement to measure out where to pierce the cover. Don't pierce the button holes – the buttons will only be stitched to the spine reinforcement.

Step 5.

Making and attaching the buttons to the spine reinforcement.

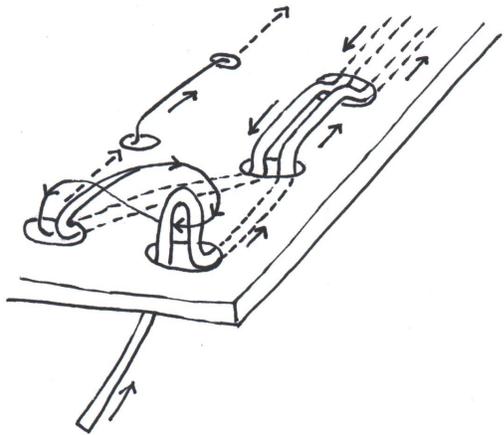
The buttons are attached before the book is sewn together, by simply stitching it to the spine reinforcement. If you have a stiff or thick cord for the closure of the book, you may need to make a neck for the button, so that the cord can fit and lock underneath the button. The button can be made of wood, metal, horn, bone or you can make a leather button. To make a neck for the button, place a match stick or wood pick on top of the button, so that when you are stitching, you are stitching over the stick. After a few stitches, remove the stick, pull the button up, and run the thread around the neck under the button, before tying off the thread. Test to wrap the cord around the button, and see if it works, or if you need to make the neck of the button longer or shorter, because after stitching the book together, you would have to undo the entire book to fix the buttons.

Step 6.

Sewing the gatherings to the cover and the spine reinforcement.

Place the first gathering inside the cover, with the spine reinforcement on the outside. You will need enough thread to go back and forth to the outermost holes as many times as you have gatherings, plus some extra inches for tying of in the end. There will only be one knot - the tail left at the first hole will be tied in a knot with the left over thread from the last hole, and the ends will be tucked away between the cover and the back of the gatherings. The first hole is stitched as seen in the picture - by leaving a tail of thread (as described to be knotted off later) and a loop sticking up on the outside of the spine reinforcement. Continue stitching the gathering down the spine reinforcement, until reaching the last

hole in the other end - leave a loop in this hole too. Add the next gathering, and go back along the spine, using the same holes as for the first gathering. When reaching the last hole, choose to use the hole next to the first hole, and go up, catch the first loop, go down and add the third gathering. At this point and at every added gathering, it is a good idea to tighten the stitches. If you wait too long to tighten, it will not be possible. Just be careful not to lose the first loops at the ends. Done correctly, you will have a row of chain stitch going across the spine outside the buttons, and two blocks of stitching with two threads in each hole between the buttons (see picture 8).

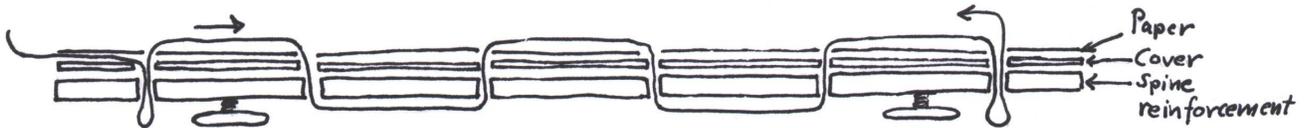


Picture 6. The first stitch in sewing the first gathering to the cover and spine reinforcement. The cover is omitted in the picture for clarity, see picture 7 for the different layers.

Here you can see the end left for tying off in the end, the first loop, and the first stitch going down the spine and returning in the same holes, attaching one gathering for each direction, with other words two gatherings per hole.

Also shown is how you move from the second gathering side ways to the second hole in the first sewing station to catch the loop (from the first hole) to make the chain stitch, before you go down and attach the third gathering.

Picture 7. The side view of the spine, showing the stitch going all the way and returning, and how it pierces all the layers. Also showing the button attachment.



Picture 9. A view of the finished spine, with the chain stitch rows on the sewing stations in the ends, the placement of the buttons, and the two threads carried on the outside of the spine between the sewing stations.



Step 7.



Attaching cords to the cover. Depending on what cords you are using, you can attach them in several ways. If you have a leather or parchment cover, and you are using a leather or parchment thong or cord, leave the end of the cord flat and wide, and make three narrow slits in the cover, and thread the cord through (see picture). If you use ordinary cord, use a small square or triangle of leather, to reinforce the attachment and to hide the ends.

Picture 10. Leather or parchment strap attachment with three slashes in the cover and the shaping of the end of the strap to keep it in place

Step 8.

The book is finished!