

# Coptic Binding with Endbands & Bone Covers

Islam Aly

[www.islamaly.com](http://www.islamaly.com)

## GBW Standards of Excellence 2025, Iowa City

Coptic binding is one of the earliest methods of bookbinding. The technique was developed by early Christians in Egypt, around the 2nd century CE, and remained in use for many centuries. Its structure is made from folded sections of parchment, papyrus, or paper, which are sewn through their folds. The sections are then linked together with a chain stitch across the spine, rather than attached with cords or glue. This distinctive sewing not only creates a strong structure but also allows the book to open completely flat, a feature that continues to make it popular among artists and bookbinders today.

### Tools

- Saw (for cutting raw bone into workable slabs).
- Drill (for piercing holes).
- Bookbinding needles.
- Plexiglass template and binder clips.
- Files and sandpaper (coarse to fine grit) or file.

### Materials

- Folded paper signatures (text block).
- Bone (cow, camel, or another large mammal bone).
- Waxed linen thread.
- Leather straps for the book closure
- Bone or wooden fastening pin.

### Preparing the Covers

To prepare bone covers, begin by selecting large, dense bones such as cow femur or camel bone, avoiding porous or brittle sections since denser bone creates stronger covers. Clean the bones thoroughly by boiling them in water, with a small amount of soda ash if needed, to loosen any remaining tissue, then scrape and rinse until completely clean. Once prepared, saw the bone into flat slabs sized for your book covers, removing any curved, irregular, or uneven surfaces. Secure the slabs in a vise or clamp and use a file or coarse sandpaper to even out the thickness, then work through finer grits to achieve a smooth, workable surface.

For the connecting joints, mark the drilling points along the edge with a pencil and ruler, then drill carefully and slowly to prevent cracks. Insert a thin wire or steel rod, approximately ¼ inch in length, to connect the two slabs, securing it in place with PVA or animal glue.

Afterward, file and sand all edges until smooth, rounding the corners slightly to avoid sharpness. Finally, attach a plexiglass template to the slab with binder clips and drill the sewing and endband holes with care, working slowly to avoid fractures.

## **Sewing the Binding**

Start by folding the paper into signatures and piercing sewing holes along the folds with an awl, making sure that all signatures are the same size as the bone covers. To attach the signatures to the covers, begin by sewing the first signature to the back cover using a chain stitch. Continue adding each subsequent signature, linking it to the previous one, and repeat the process until the front cover is attached, creating a strong, flexible, and evenly bound book.

## **Adding Endbands**

To sew the endband, begin on the outside of the cover and bring the needle through the leftmost hole from the inside, leaving a short tail to tie off later. Carry the working thread across the top edge and pass the needle back through the same hole, from inside to outside, forming a loop. Then insert the needle under the existing thread, which forms an X, and pass it under the X itself. Move to the next hole in the cover and repeat the process, sewing through each hole from inside to outside, looping the thread and passing under the X to create a neat series of chain stitches, adjusting tension as you go to keep them even. When reaching the end of the cover, carry the thread across and insert the needle into the top hole of the first signature. Continue the sequence—looping the thread over the cover edge, passing through the holes, and sewing under the X—to connect all signatures to the cover while forming the endband. Finally, bring the thread up to the top edge of the book and tie it off securely to complete the endband.

## **Suppliers**

- Talasonline.com – Bookbinding thread, tools, supplies
- Hewit.com – Leather, cords, conservation supplies
- Hollanders.com – Bookbinding kits and tools
- 

## **Bibliography & References**

- Szirmai, J.A. *The Archaeology of Medieval Bookbinding*. Aldershot: Ashgate, 1999.
- Greenfield, Jane, and Hille Meggs. *Headbands: How to Work Them*. Oak Knoll Press, 1984.
- *Book Model Collection at the UII Conservation Lab*:  
<https://www.lib.uiowa.edu/conservation/book-model-collection/>