Late-Fifteenth-Century Girdle Book

By Lady Gwerfyl verch Aneirin (known as Aneira)

Process and Documentation

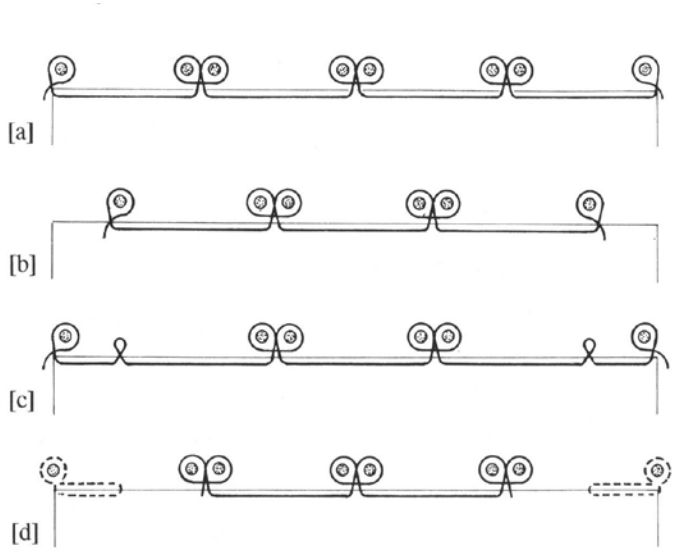
This little girdle book was designed as a girdle book typical of the late 1400s. There are only 23 extant girdle books, but there are many representations of them in paintings and sculpture from 1400 to 1600, with the majority in the fifteenth century.[1]

Sewing Supports

I began by choosing a style of page support and board attachment that would be characteristic of the late 1400s but also easily achievable with a minimum of woodworking. Romanesque books (dating roughly from 1050–1350) typically used alum-tawed leather thongs as the sewing support for the pages, but thongs were also used well into the gothic period (when hemp cords became more common).[2] I used four alum-tawed thongs, two of which were slit down the middle for use as double supports. Each thong was a double thickness of leather, instead of one thickness of a heavier leather, because I only had one skin to work with.

Sewing Technique

I chose to use integral endbands for this project, where endbands are sewn on at the same time as the pages are sewn to their supports. Figure 9.8 (p. 188) from Szirmai's *Archaeology of Medieval Bookbinding* shows the sewing pattern (option [b]):



1 J. A. Szirmai, *The Archaeology of Medieval Bookbinding* (Ashgate: Aldershot, U.K., 1999), pp. 236–237).

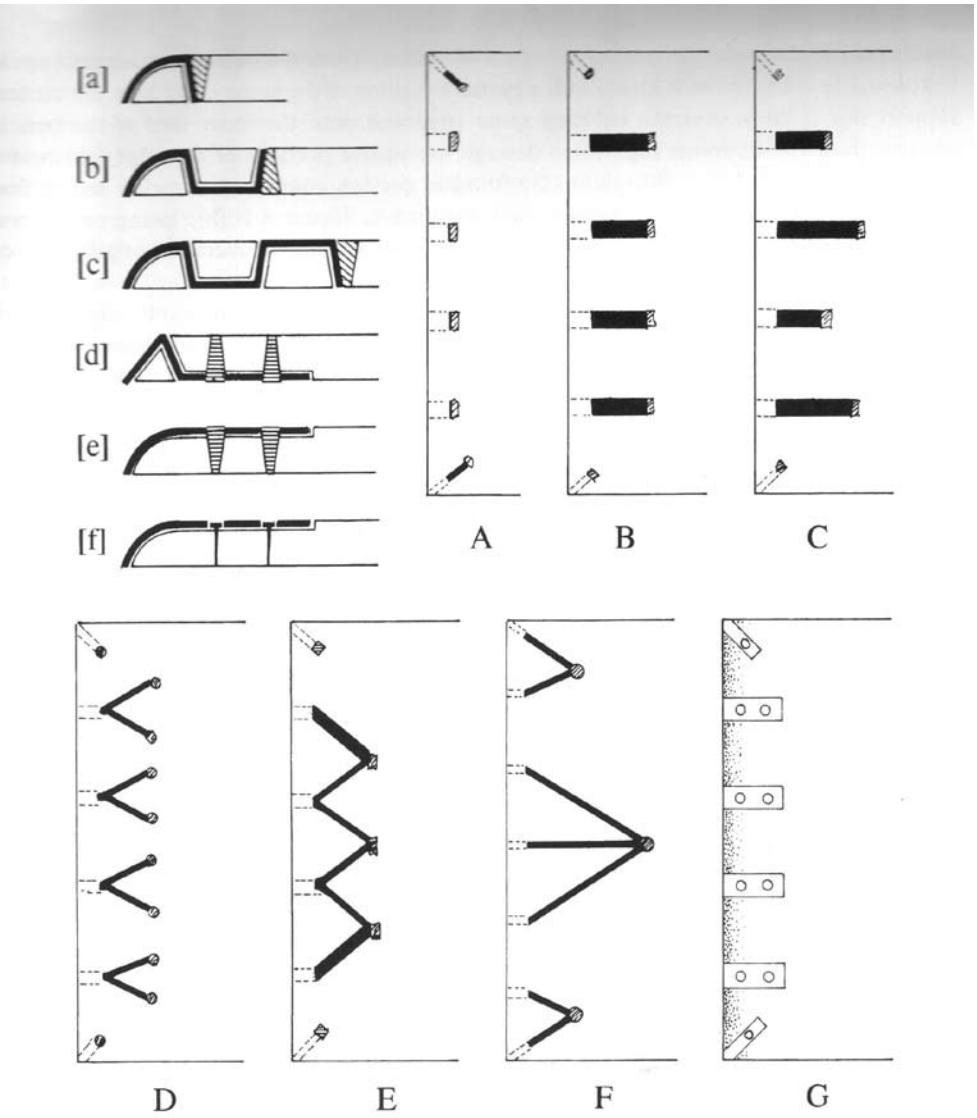
2 Szirmai: "The sewing supports of romanesque bindings consist almost invariably of thongs of whit-tawed leather . . . split longitudinally across the spine" (p. 147); he discusses the transition from thongs to cords on p. 183.

This photo shows this book, plus two others, sewn on their thongs:

Board Attachment

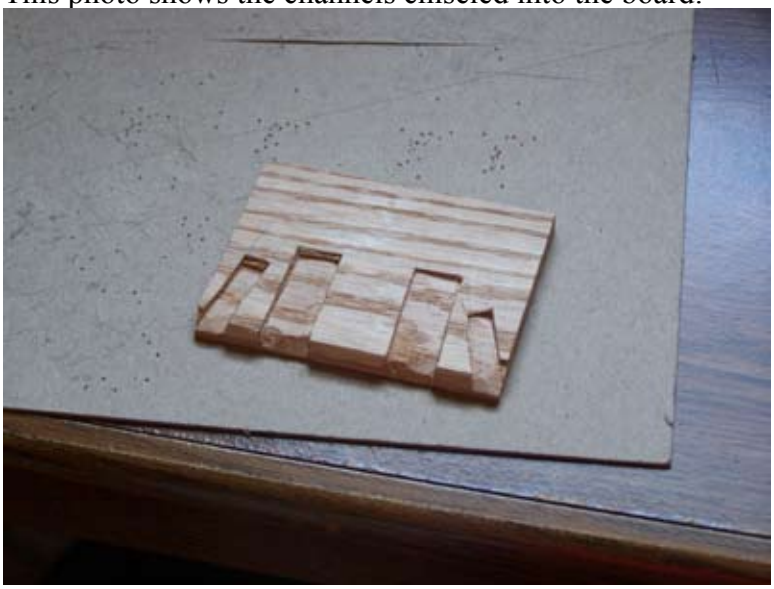
The boards are oak, a very common wood for book boards.[3] The method of board attachment I chose was to run the thongs over a slightly beveled outer edge, in shallow channels, and secure the thongs with nails. Trenails or iron nails would have been used; I chose to use brass nails. This diagram from Szirmai shows lacing paths for gothic bindings (Fig. 9.33, p. 223):

3 Szirmai, Tables 8.3 and 9.10 (pp. 151 and 217).



Diagrams [a]–[f] are profiles of the gothic-period board edges (I used profile [f]) and A–G shows lacing paths on the outer board face (I used path G, with the nails offset from each other). In addition, I added nails through the thongs into the edges of the boards. I did this to avoid stress on the endpapers when the books are open. There are two ways to avoid stressing the endpapers: line the spine to stabilize the boards, where additional strips of leather wrap the outside of the spine around to the inner board edge, which I wanted to avoid because it was more typical in the later gothic period, and to have the thongs enter tunnels in the board edge instead of channels (more typical during the romanesque period), which I wanted to avoid because it would involve drilling 45-degree tunnels into the board edges and I do not have a drill press.

This photo shows the channels chiseled into the board:



Edge Trimming

Romaneque books were typically trimmed so that their pages were flush with the boards. In the gothic period, typically boards were slightly larger than the pages.[4] (This relates in part to method of edge trimming: when a drawknife was used, boards were attached first and the edge of the knife rested on the boards. The plow was introduced in the 1500s, which allowed edges to be trimmed before board attachment.[5]) I chose to use a plow but to make the edges nearly flush with the boards. (See Photo 1 in Existing Girdle Book Photos.)

Gessoing the Boards

After the thongs were nailed into the channels, I used gesso to smooth the surface. This does not appear to be a widespread practice but was used occasionally; Szirmai discusses gesso as an in-fill on the inner face of the boards in some carolingian and romanesque bindings and shows an image in Fig. 8.20 (p. 164). Rather than purchase the ingredients separately, I used Natural Pigments' "Easy Gesso," which contains marble dust, chalk, and hide glue in one package, preground.

Rounding the Spine

After the edges were trimmed, I rounded the spine, a technique introduced sometime around the late fifteenth or early sixteenth century.[6] This creates a convex curve in the spine.

Edge Decoration

Many examples of edge painting can be found on existing medieval books and in representations in art.[7] I chose an iris-and-dragonfly motif adapted from the interior pages of the *Hastings Hours*. I rubbed cornstarch powder into the edges of the book to keep the pages from sticking together during the painting process, then drew the design with calligraphy ink and painted it with thinned acrylic paint.

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4 Szirmai, p. 157 and Table 9.11 (p. 2.18).

5 P. J. M. Marks, *The British Library Guide to Bookbinding* (Toronto: University of Toronto, 1998), p. 39.

6 Marks claims rounding was introduced in the early sixteenth century (p. 35), but Szirmai dates this technique to the fifteenth century (pp. 192–194).

7 See Mirjiam Foot's thorough article, "Medieval Painted Book Edges," in *Studies in the History of Bookbinding* (Aldershot, U.K.: Scolar Press, 1993).

This photo shows the painted edge and gessoed boards:

Covering Styles

There were many ways to cover girdle books. [For the purposes of this discussion, please note that the long "tail" of girdle books is actually at the bottom (foot) of the book, not the top.] For example, a book could be bound as a girdle book, with the tail as an integral portion of the book; a book could be bound traditionally with an added overcover that had a tail; leather covering could overhang the edge of the book at the head to protect the pages. "Chemise" bindings even included extra leather to cover the fore-edges.[8] The tail of the covering could end in a Turk's Head knot, a metal hook, or a drawstring. (See various photos of open girdle books in Existing Girdle Book Photos.)

For this book, I merely extended the tail of the binding leather; on the uncovered edge of the boards, I used brass metal edging to protect the exposed wood.[9]

The Knot

The knot is a two-lead, five-bight Turk's Head knot made of matching leather strips that wraps around the binding leather.[10] The binding leather is folded in two and tucked inside the knot. (This wasn't always done; occasionally the binding leather was left to protrude out from the middle of the knot; see some of the photographs in Existing Girdle Book Photos.)

Metal Furnishings

a) Bosses

The bosses are sand-cast brass. I was looking for a way to produce quantities of bosses with minimal effort; unfortunately, with the cleanup time sandcasting entails, I don't think this is a good solution for the bosses. Simple bosses like these, with a basic pattern on the surface, were very common (see Szirmai, Figs. 9.55 and 9.56 for examples and diagrams). Bosses were cast, turned, or hammered into shape and affixed with nails, either soldered on or through holes drilled in the boss.[11]

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8 See Szirmai's discussion of girdle books and overcovers on pp. 236–241 and of chemise bindings on pp. 164–167.

9 Szirmai, p. 237: "Any edge of the boards left uncovered by the protruding covering received a narrow edging strip."

10 The knot was tied using the instructions in Peter Owen, *The Book of Decorative Knots* (New York: Lyons & Burford, 1994).

11 See Szirmai, pp. 263–267.

For these particular bosses, I used a large brass rivet to make the master and used a jeweler's saw to cut a pattern of lines across the top. All tools and materials came from Master Aldred Blackwood's shop. Then, wooden sandcasting molds were packed with a claylike sand. I pressed the master into the sand several times in each mold and cut channels for the metal inflow and air exit. Theophilus describes a sandcasting method similar to this, uses a wax master encased in clay instead of a two-part mold filled with clay.[12]

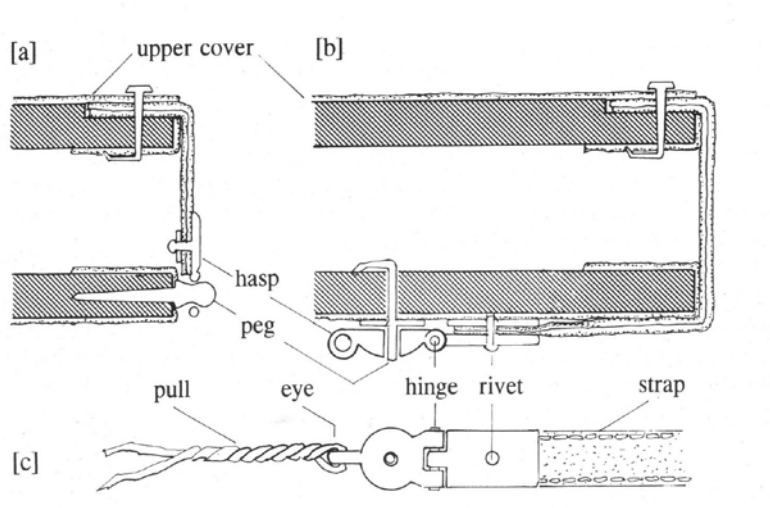
Scrap brass was heated in an electric crucible until molten, then poured into each of the molds. In total, 24 bosses were successfully cast. (The extra 16 bosses will be used on other books.) Cleanup entailed using an abrasive wheel to remove excess metal from the channels (sprews). The use of an electric crucible and power tools for cleanup are, of course, modern; Theophilus describes the use of a hearth and metal files for melting the metal and cleaning up the cast pieces, respectively.

This photo shows the bosses still connected to their sprews, before cleanup:

After the bosses were cleaned up and polished, I drilled holes through the center to accommodate nails to affix the bosses to the wood boards.

b) Peg and Latches

The peg and strap combination are based on Figure 8.23, option [a] (p. 168), from Szirmai:



12 Theophilus, *On Divers Arts*, Trans. John G. Hawthorne and Cyril Stanley Smith (New York: Dover, 1963), p. 105–106.

The peg was turned and filed from a thick piece of brass wire; the hasp was cut, drilled, and filed from a piece of brass sheet. Note that anchoring end of the leather strap is underneath the binding leather; to accomplish this, I chiseled a shallow channel in the edge of the back board prior to binding. After the leather cover was attached, I cut a slit in the leather at the outside edge of the channel and loosened the leather from the channel. This let me slip the end of the strap into the channel, where it was secured with a brass nail.

Cover Decoration

The cover is decorated with inlaid green leather and gold acrylic paint, designed to imitate gold tooling (for which I do not have the necessary tools). Gold tooling was known in the Islamic world from the thirteenth century but was not introduced in Europe until the mid-fifteenth century.[13] Marks's book shows several examples of inlaid and gold-tooled bindings, including a lovely example of both techniques from 1616 (Figure 46, p. 58). Aside from the dragonfly motif, the imitation-tooled designs were inspired by Figures 46 and 72 (ca. sixteenth century) in Marks's book.

The green leather was pared before it was inlaid, which involved scraping it with a paring knife to thin it. Pieces were cut with an exact-o knife, which were then used as a template to cut and remove matching pieces from the binding leather.

13 Marks, p. 51.