

Preservation of a 15th Century Spanish Antiphonary

Special Collections & University Archives
University of Central Florida Libraries

Introduction

A large Spanish antiphonary was generously donated to the University of Central Florida Libraries. The antiphonary is bound in leather over wood boards with onlay metal bosses and decorated corner pieces. There are two front leather closing straps, which still have their brass clasps attached, and the back with two brass clasp catches. The size of the antiphonary measures 554 mm in height, 390 mm in width, and 110 mm across the spine when closed.¹ The condition of the antiphonary is relatively stable, however because of its size and weight, the antiphonary has been challenging to store. Special Collections & University Archives stacks area is constantly shifting to accommodate incoming collections, therefore the antiphonary has been moved to different areas of the stacks. Various housing models have been considered for the antiphonary's storage.



The methodology of the sled and tray combination was researched for housing of the antiphonary. Specific modifications to the tray base was also made to accommodate the metal bosses on the covers. This poster provides insight on the benefits of the sled and tray combination as well as trial and error that will occur for anyone considering recreating this housing.

Why "Sled" housing?

By the request of our archivist, the housing for the antiphonary should be minimal handling and not be fully enclosed. The container should also be allowed to move easily from a shelf. Based on these parameters, the University of Chicago Library's previous presentation of a design and build of a minimalist "sled" housing was most favorable.²

The sled allows the antiphonary to be stored flat, retrieved safely when necessary, and returned onto the shelf. The sled consists of a rectangular base and three walls for protection on its sides. One side is exposed to allow the antiphonary to be removed from the sled if necessary.

While a drop-spine enclosure would also be ideal, creating a full enclosure was not favorable at the time. While covered under a unbleached cotton cloth, our archivist observed the leather straps shrinking and expanding throughout the year. Even in a relatively controlled storage environment, Florida's fluctuating temperature and humidity caused expansion and contraction of the leather. Contrary to the sled, the risk of the exposed top is unprotected. However, the location of the antiphonary is assigned to a dedicated shelf. Depending on specific needs, the sled housing is an alternative solution to storing large antiphonals.

Tray Support

The tray support allows the antiphonary to gently slide off the sled. Rather than reaching into the sled, the tray requires no handling of the item when removing from the housing. Attached straps at the edge of the tray makes it easy to pull. In addition, shallow placements were cutout specifically for the metal bosses of the antiphonary to allow the cover to rest flat, which was inspired by Jeff Peachey's housing of a large bible.³ This was particularly beneficial because of weight distribution.

The overall weight was concentrated on five metal bosses as well as the corner pieces on the cover. To counteract this stress, by placing support on the board cover, rather than the bosses, helps alleviate the weight. The layered board and coroplast provide firm support directly on the wood areas of the book, reducing the stress to the bosses.

References

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- Peachey, Jeff, "1483 Koberger Bible". Accessed September 1, 2020. <http://jeffpeachey.com/treatment-portfolio/1483-koberger-bible/>

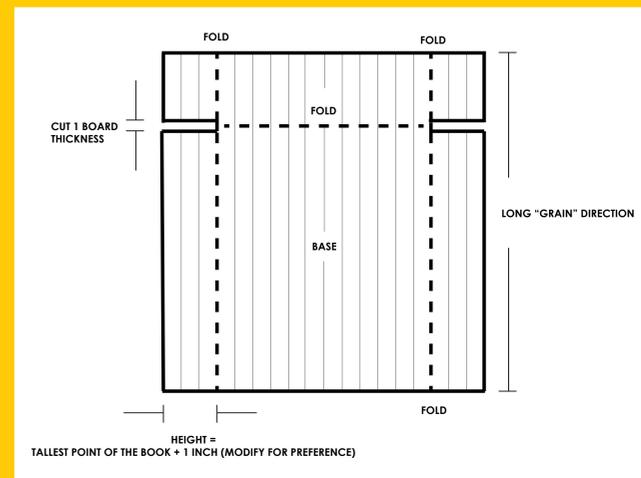


Figure I. Diagram of sled base design.

Sled Base

Using similar methodology for constructing a half tray for a drop-spine enclosure, the sled consists of three walls that cover the head, tail, and fore-edge of the book. The sled base was measured by the width and length of the book as well as the leather straps laid down as described in "Cover of Antiphonary". The diagram above shows the sled plan where to measure, cut, and fold.

The massive weight of the antiphonary was not ideal for bookbinders board, even layered board, due to potential collapse of the material. The use of archival grade 4mm coroplast for the fabrication of the sled was chosen because of its strength and durability. Keep in mind that not all coroplast is archival. Coroplast not specifically indicated can have coatings on the surface typically for commercial printing which makes it unsuitable for archival use.

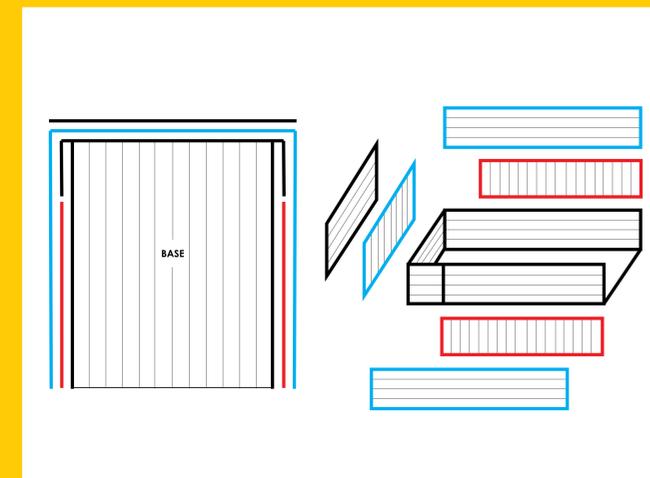


Figure II. Diagram of sled wall construction.

Sled Walls

The sled walls consist of 3 layers of coroplast as shown on the above diagram. Each layer of coroplast was adhered on top of another, alternating the "grain" of the coroplast, running long and short creating a visible grid. Hot glue was used because PVA would not bond properly because of the coroplast's smooth surface. Because the sled would be in a relatively controlled storage area on its own shelf space, it would not be near any other materials or collections. The duration of the adhesive to break down was concluded as not problematic because the sled can be replaced as these housings should not be permanent. Applying hot glue onto the layers to build the walls was done quickly because of little dry time. Tyvek tape was applied onto the edges of the coroplast to secure the seams. This reinforced the strength of the coroplast walls. Once the sled was completed, the tray support was investigated.

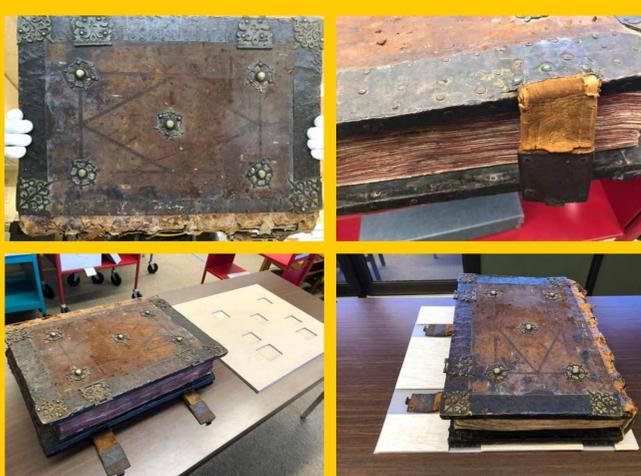


Figure III. Photographs of Spanish Antiphonary showing the metal bosses, corner pieces, and clasp latches.

Cover of Antiphonary

The metal bosses on the front and back covers carry most of the weight of the antiphonary. To relieve the weight from the metal bosses, an additional support tray with cutouts was constructed in order to have the antiphonary rest flat on its cover rather than the bosses. In addition the leather straps attached to the covers are slowly weakening. This is due to the weight of the metal clasps on the straps pulling the leather. My directive was to not perform any treatment on the leather straps. To prevent the loss of the leather straps, the support tray allows the straps with the metal clasps to lay flat. The cover had to be measured precisely for the placement of the metal bosses to be cut out. Because the leather straps were weakening, the book was placed flat on the front cover. This allowed the straps to lay gently flat to prevent increased stress because the metal enclosures were pulling the leather when locked.

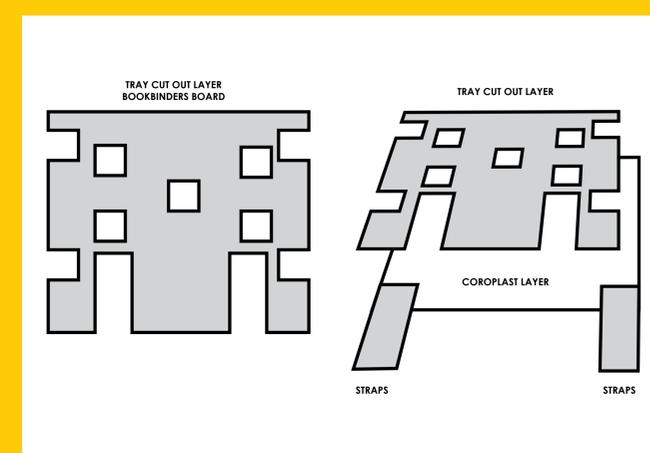


Figure IV. Diagram of tray support with cutouts and pull tab straps.

Tray

The tray consists of layers of bookbinders board .98 mm and coroplast. The cutouts on the top layer of the tray allow the metal bosses to rest on the shallow areas. Tracing the cover with tissue paper, an outline was made as a template to cut the board. Bookbinders board was used because the material was easier to cut with a boxcutter and straight edge. Once the bookbinders board was cut, the top of the tray was covered with natural Canapetta bookcloth. The coroplast was cut to the size of the top layer.

To remove the tray off the sled, straps were attached in between the bookbinders board cutout and coroplast layer as shown on the diagram above. Straps made from folded Canapetta bookcloth act as pull tabs that can easily move the tray without touching the antiphonary.

Results



The sled and tray combination is a housing model that works for our Spanish antiphonary. Rather than allowing the antiphonary to sit on the shelf with no protection, the sled has positive aspects. While it prevents the antiphonary from physical contact, the sled does not fully cover the item. As a precaution, our antiphonary is stored on its own shelf space, away from other materials and collections. Housing is checked periodically to make sure the item is stable.