1-1-2005

Millimeter Binding / Edelpappband

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The Edelpappband, or "Millimeter" Binding

By Peter D. Verheyen

INTRODUCTION:

What we call the "millimeter" binding in North America is a "nobler" version of the German "pappband," or paper binding, hence the name "edelpappband." The technique is based on the German case (Bradel) binding which is covered in paper. What distinguishes the technique is that cloth, leather, or vellum trim is added to the head and tail, foredges, and/or corners for greater durability, making the book more elegant at the same time.

In Denmark, a variant with the leather trim running along the entire length of the head and tail is referred to the Rubow binding after the librarian who suggested it, but in essence they are all variations on the same technique which can be developed even further.

All varieties can be made "in-boards" or as case bindings, instructions for the cased version of which follows. The style is an ideal introduction to working with leather as only small amounts are needed and scraps can easily be used. It is also a good exercise in working very precisely.

This style of binding is well suited for smaller, thinner, books, and with the right proportions creates an extremely elegant binding suitable for editions as well as one-of-a-kind bindings.

The "edelpappband" is distinctly different from the "Danish millimeter" binding which has the shoulders backed to 90°, is made in-boards, and is covered with a full leather spine which is worked into the groove and is only visible for a few millimeters on the boards.

ADHESIVES:

Adhesives which are used in the process of this binding style include wheat paste, 50:50 PVA/methylcellulose (or PVA/paste) mixture and straight PVA. Use of synthetic adhesives is for ease of use. Gelatin (hide glue) can be substituted for PVA.

Paste is used initially for pasting up the spine, for working the leather, and occasionally adhering the sides. This is because it extends the "open time" and provides"slip."

50:50 mixtures may be used for putting down the sides, applying counter linings and fill. They may also be used for casing-in.

Straight PVA is used for assembling the case, and may be used for applying counter linings and fill. It may also be used for casing-in.

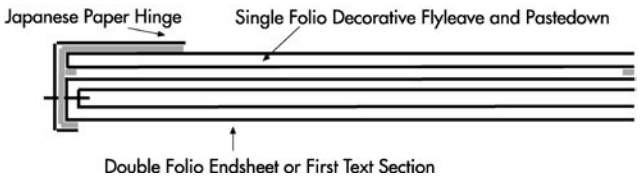
The choice of adhesive will depend on such factors as climate, controlling warping, and the materials being used.

TEXTBLOCK PREPARATION:

Endsheets:

The endsheets are generally one of two varieties. The first is a single folio of paper, decorative or plain, which is very narrowly (2-3mm) tipped onto the first and last signatures. The other is a double-folio endsheet signature which is sewn along with the text signatures. A variation of the latter is adding a tipped-on folio to the double-folio. In both cases add either a guard of medium weight Japanese paper or thin cloth. The Japanese paper guard is pasted out and wrapped around the first and last signatures so that the paper wraps around the signature on the textblock side by 2-3mm. If using a guard of thin cloth, tip this to the textblock side of the first and last signatures and then wrap around the signature. The remainder will be glued down during casing in.

Endsheets

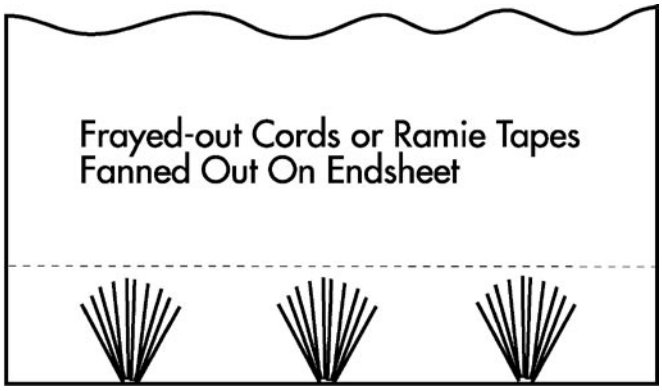


Sewing:

Thread should be selected so that swell appropriate to the board thickness is created. To see the effect of swell, wrap different thicknesses of thread around a pencil as many times as the book has signatures. Some of that swell will be absorbed by the paper and by rounding. The remainder will create the swell which is managed by backing and the board thickness. The book can be sewn using a linked stitch (unsupported), on ramie or linen tapes, or frayed out cords. The latter are cords which are untwisted, laid neatly next to each other, and sewn in the same manner as tapes. Sewing holes should be pre-punched using a jig for consistency with the kettle stitch 1cm in from edges and the appropriate number of sewing stations for the size of the book. Generally 3 for smaller books.

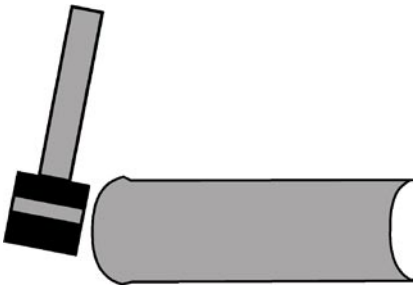
Even a small textblock can be rounded and backed. When making a square backed textblock, backing is still important. To begin, paste or glue up the spine, making sure that the adhesive is not too thick and is worked between the signatures. This step will ensure a solid text block. If the textblock was sewn on ramie tapes or frayed out cords, separate out the

fibers, paste out, and fan out onto the endsheet. If the textblock was sewn on cloth tapes, they can be pasted down now or during casing in.

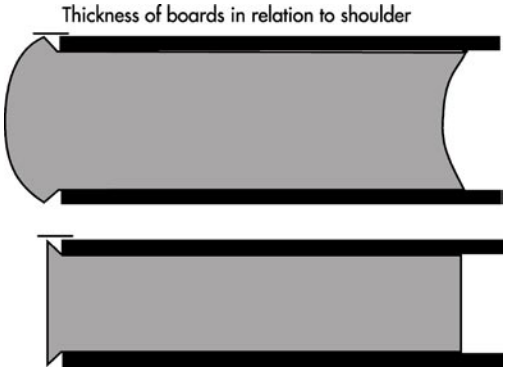


Rounding and Backing:

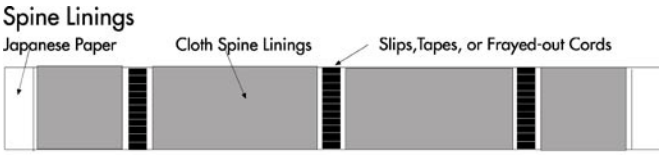
If a rounded spine is desired, round the textblock by first gently massaging into shape, and if needed by working the spine from both directions with a backing hammer, with the blows beginning below the center, and then working towards the shoulder. During rounding, place the thumb along the foredge and fan the hand out across the textblock to help pull the book into shape and prevent it from "bouncing" while using the hammer. Flip the book over and repeat from other side. Repeat as needed. Blows should be gentle, yet firm.



To back the book, mark a distance twice the board thickness from the shoulder. Board thickness will be determined by the size of the book and amount of swell, with the thickness of the board equal to the height of the shoulder after the book has been backed. This structure is ideal for smaller, delicate, books. Board thicknesses can range from 40 - 60 pt.



Place the book in a job backer, or between boards and in backing press, with the edge of the backing cheeks or boards lined up the marks made earlier. With the backing hammer, backing tool, folder, and/or fingers, work the spine of the book so that the shoulder creates a 45° angle to the textblock.



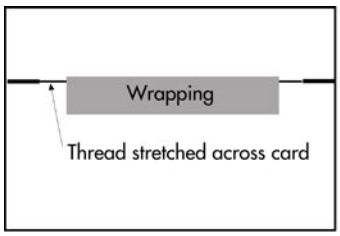
While the book is still in the backing press, line the spine between tapes, and tape and kettle stitch with thin cloth or paper. Do not line between kettle stitch and book edge. PVA can be used as an adhesive for this.

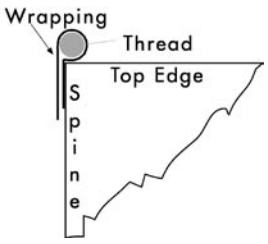
EDGE DECORATION:

Edges can be decorated by burnishing, coloring, graphite, or gilt. Paul Mitchell's A Craftsman's Guide to Edge Decoration is an excellent guide to this topic. Most traditional binding manuals will have chapters on this topic.

ENDBANDS:

Endbands can be hand sewn or made by wrapping a thread of the appropriate thickness with paper, cloth, or leather. Scraps of old marbled or paste papers can be especially attractive. The height of the endbands should be slightly lower than squares. The stuck-on endbands should not extend beyond kettle stitch. Most traditional binding manuals will also have chapters describing simpler sewn endbands. If the endbands are sewn, apply a cloth lining over the threads from the edge to the kettle stitch. After the endbands have been applied a paper spine lining can be applied along the length of the spine slighly overlapping the endbands.



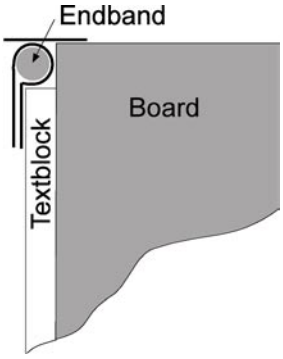


MAKING THE CASE:

Boards:

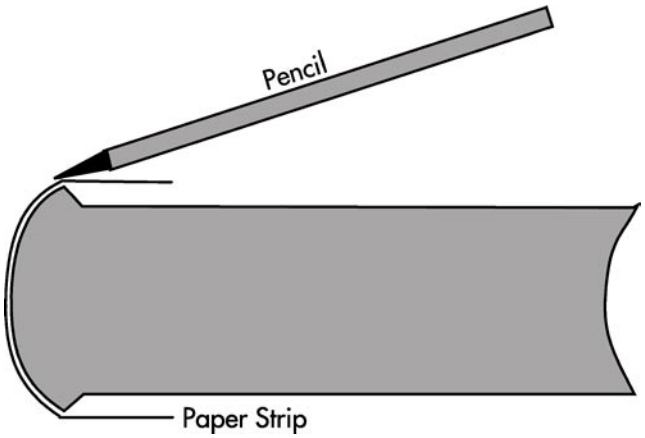
The board thickness will be have been determined at the time of backing.

Cut boards to size so that the height of the boards equals the height of the textblock plus the

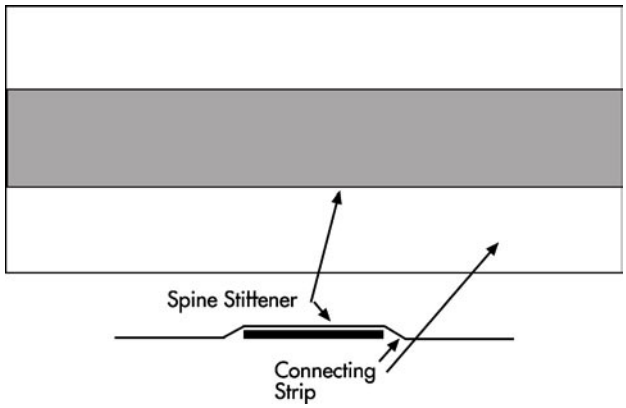


endbands. If we want to be perfect, this would equal the height of the textblock plus two board thicknesses. The width of the boards should be the width of the textblock plus one cm. This may seem very large now, but once the case is assembled and rounded, but before covering, it will be trimmed to the proper width so that we have even squares all around.

Measuring the Spine:



To measure the width of the spine, pull a strip of paper across the widest part of the spine, usually the tapes or headbands, and mark exactly at the shoulder on both sides. Double check at the other end to make sure the spine is not uneven. If there is a difference choose the larger of the two. Cut a spine stiffener out of card weight paper (10pt) to that width and slightly longer than your boards, grain running parallel to the spine. For smaller square backed books, I will use the same thickness of card for the spine stiffener as for rounded books. This thickness may be increased on larger books.



Cut a connecting strip of 80 lb paper to a width of spine stiffener + 6 cm, and slightly longer. Apply PVA to spine strip and center on connecting strip. Rub down with folder, turn over, and accentuate edge of spine strip with folder.

Assembling The Case:

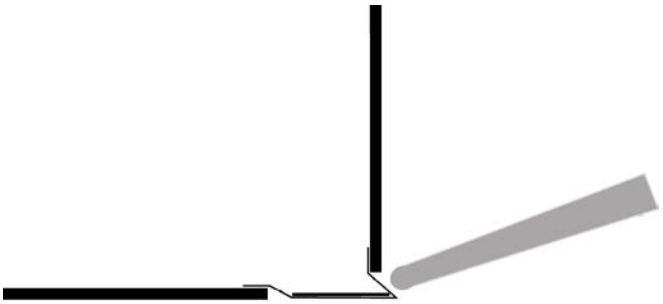
The groove between the board and spine stiffener will be between 5 - 7mm in width dependent on the thickness of the covering materials. If you use paper it can be slightly narrower, if you use thick cloth it will have to be wider. Initially, it is a good idea to mark this distance with dividers, but within a short time you should be able to measure this distance by eye. You will also want to have a narrow strip of waste board handy to line up your boards with along the top edge.

Arrange your two boards and spine strip in a step like manner with the spine piece on top, paper side up (card side down). Brush adhesive on all three, flip spine piece around and brush on some more. Align your first board with your marks on the spine piece, then using your piece of waste board as a guide put down the other board and rub the paper down.

BOARDS MUST BE PARALLEL TO SPINE STRIP AND LEVEL WITH THE SPINE CENTERED ON STRIP

Fitting The Case:

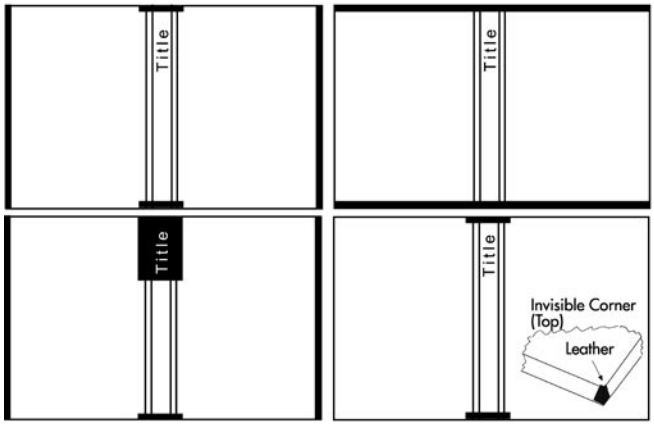
Fit the case by first sharpening the joints of the case with a bone folder.



If appropriate, round by rolling the case gently, but firmly, in the ball of the hand over the edge of the bench. It is important is to round the spine evenly so that it matches the round of your book. If over rounded, the spine can be flattened by rubbing down with your folder or fingers.

Fit the cover to the book, marking the top of your case and book on the spine and spine stiffener. Using a knife or sharp pencil mark the foredge square. This will help give you an even square on all three sides of the paste-down even if the book is not quite square. The top and bottom edges are always parallel. Trim off the excess of the foredge.

TRIM:



Trim can be be of leather, vellum, or cloth. In this style of binding it can be applied in numerous ways: along the top and bottom edges; fore-edges; head and tail caps; and "invisible corners.

These can also be combined. Leather should be trimmed as thinly as possible. A Schärfix or Brockman paring machine will be indispensable. Blades should be changed often, when one notices that resistance is increasing. Always start off with a fresh blade.

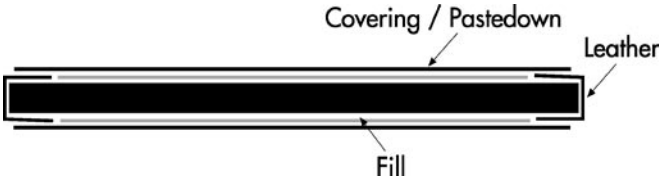
Preparing the Leather:

Cut the leather strips to slightly larger than needed. Edge-pare with a paring knife or scalpel to reduce the chances of cutting or tearing into the strip on the paring machine. Using the intended fill-in as a guide, set the gap on the paring machine. If your leather is thick, it can be desirable to pare in two passes. Pull leather through, keeping it tight to the roller and tension even. DO NOT push towards the blade as this will create slack which can cut holes into the leather.

Applying the Leather:

Dampen leather from grain side and paste out flesh side well, letting the paste soak in. Re-paste and apply leather to case as desired. Make sure material is tight to boards, especially at the joint. Rub down firmly, but gently, with paper between folder and leather. Teflon folders are excellent. Mitre or pleat corners. Let dry.

This image shows what will happen if you do not work the material into the joints well. The result will be that the foredge of your case will be shortened and the joint as well, leading to problems in opening the cover.



When dry, mark leather to indicate extent of paper covering using a very fine bone folder or fillet. Fill in. Leather trim at headcaps and "invisible" corners should also be pared and sanded for a smooth transition. Cut and apply the decorative paper covering according to the design. In applying the decorative paper, making sure material is tight to boards, especially at the joint. Paste or PVA/Methlycellulose mix can be used, whereby paste offers much greater working time and greater "slip" for adhesion. Turn-in where applicable. Let dry between absorbent boards and under light weight. Then, trim-out and fill-in inside of case. Any stamping should be done at this time.

Casing-In:

Re-round (if needed) and shape the case so that it fits well around the textblock.. Case in, either using edged boards , rods, or a bone folder to rub in the joint (be careful not to tear your material). Use the first two if you have a press. If you don't, use your folder. Before placing the book in the press, insert a piece of card "fence" between the pastedown and your flyleaf. This will help absorb some of the moisture, and prevent the turn_ins from impressing themselves onto the flyleaves. Place the book in the press, giving a good hard nip for about 20 seconds or so, then take out, change the cards and let dry under weight.

Completing:

When dry, set the joints by opening the book cover to 90 degrees and supporting it with the hands, push the board downward to set the joint. This will help the book open nicely.

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See also the titles mentioned in the "Edelpappband, or 'Millimeter' Binding" section.

Peter David Verheyen began his involvement in the book arts while a work-study student in the conservation lab at the Johns Hopkins University Library. Interned in the conservation lab of the Germanisches Nationalmuseum in Nuremberg, Germany, 1984 and 1986. Formal apprenticeship in hand bookbinding at the Kunstbuchbinderei Klein in Gelsenkirchen, Germany, passing examinations in 1987. Studied at the Professional School for Book Restoration at the Centro del bel Libro in Ascona, Switzerland in 1987. Mellon intern in book conservation at the Folger Shakespeare Library, 1988. Worked in Chicago with Heinke Pensky-Adam at Monastery Hill Bindery and as assistant conservator to William Minter. In 1991 he began work as assistant conservator at the Yale University Library. In 1993 he became rare book conservator at the Cornell University Library, before establishing the rare book conservation lab at the Syracuse University Library. He is current Exhibitions and past Publicity Chair for the Guild of Book Workers. His bindings have been exhibited widely with the Guild, its regional chapters, and in invitational and solo exhibitions. In 1994 he founded Book_Arts-L and shortly thereafter the Book Arts Web at <http://www.philobiblon.com>. He can be reached at <verheyen@philobiblon.com>.