

AN EXPERIMENTAL BOOK STRUCTURE FOR CONSERVATION

Linda K. McWilliams
Drawings by Margaret Brown

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Restoration Office

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change vellum spine liner
to
vellum spine stiffener

These pages describe an experimental book structure for conservation which evolved from attempts to find a suitable method for resewing Middle Eastern books. The major requirement for this structure was that no adhesive should be used on the original spine folds. Furthermore, to produce a binding which would appear sympathetic to contemporary Middle Eastern bindings, the structure should have a flat spine with little or no swelling and no backing. The spine should be flexible on opening yet not go concave. Original sewing holes should be utilized if possible and the board attachment should be stronger than the thinly pared leather which commonly attaches the boards to the textblocks of Middle Eastern bindings.

The structure which developed has proven suitable for many types of bound materials. Its basic feature is a one-piece sewing support which wraps around the textblock, extending from head to tail and from fore-edge to fore-edge. The sewing support is a laminate of two layers of "airplane" linen with a middle layer of paper. A strip of vellum stiffens the spine ^{of the sewing support.} Sewing passes through horizontal slits cut through the vellum and the sewing support. Boards may be attached directly to the sewing support, providing a continuous support from head to tail ^{along} across the joint. After sewing, the structure may be covered in a number of different styles, from a limp cover to a stiff cover with either a French joint or a tight joint. Covering methods will not be described in these notes.

Historical precedents for this type of sewing may be found in European ledger binding of the late Middle Ages, which often featured exposed and decorated sewing through the covering materials, with semi- or inflexible spines. A similar ^{structure} ~~method~~ is also described in current German binding ^{literature} ~~literature~~ ^{as a method} for binding pamphlets.

it is hoped... we hope... or omit a... unnecessary
The following text and diagrams discuss and illustrate this basic structure, hopefully in sufficient detail to allow others to experiment with its use. The materials suggested are experimental as well but are those which have worked well so far. An asterisk in the text indicates that the step being described is illustrated by a diagram.

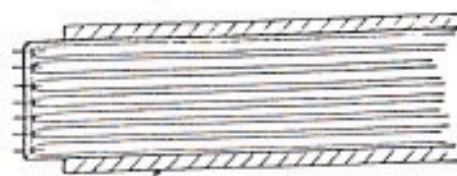
Vellum spine liner and sewing support. The width of the vellum spine liner is determined by judging the finished width of the spine, which depends upon the style of covering chosen.* The spine liner should be cut about one inch longer than the text pages ^{with the ends pared}. The weight of the piece of vellum will depend upon the size and weight of the text block. It should be flexible on opening the book, but not so thin that the weight of the text causes the spine to take a concave shape when the book is closed.

The sewing support is made up with two layers of linen and a middle layer of paper, laminated with a PVA adhesive.* It should be trimmed to the head-to-tail length of the sections and left wide enough to wrap around the textblock, extending slightly on the fore-edges. The fore-edges of the sewing support can be trimmed after sewing, ^{(If squares are desired on the finished binding, the sides of the sewing support should be left} long enough to accommodate them. ^{slightly} The vellum spine liner should then be adhered to the inside of the sewing support, and the ends which extend at head and tail folded to the outside and stuck down.* ^{at the head and tail over the sewing support} This fold of vellum provides support for the endband sewing, preventing it from pulling through the backs of the sections. ^{at head and tail} If a ~~slig~~ rounded spine is desired, dampening the vellum before adhering it to the ^{sewing support} spine liner will cause it to dry with a slight round. Adhering the vellum to the outside of the sewing support will create a concave spine.

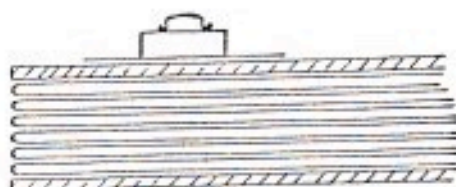
WIDTH OF VELLUM SPINE LINER is determined by judging width of spine after sewing



THICKNESS OF SECTIONS under light pressure
(no swelling desired or anticipated)



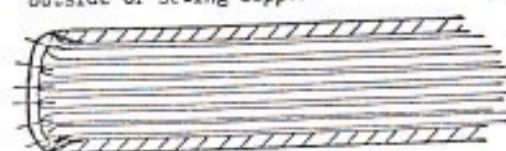
FLAT SPINE with boards attached to
outside of sewing support



THICKNESS OF SECTIONS PLUS BOARDS
under light pressure (swelling from
sewing to equal thickness of boards)

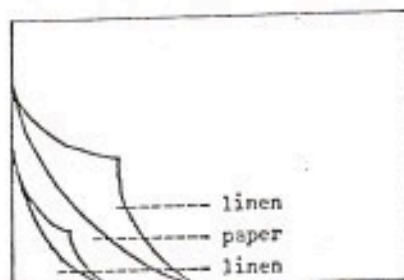


FRENCH JOINT with boards attached to
outside of sewing support

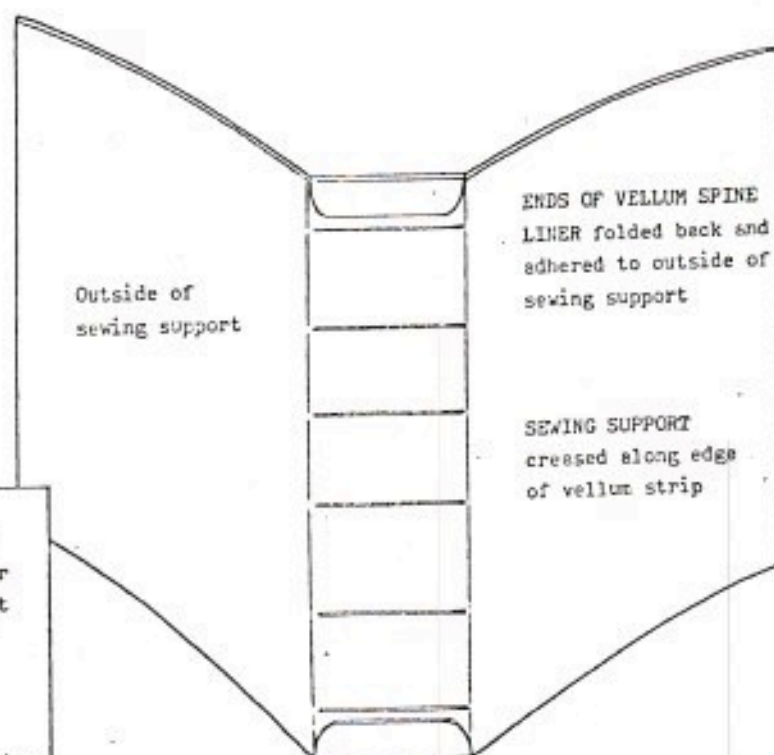
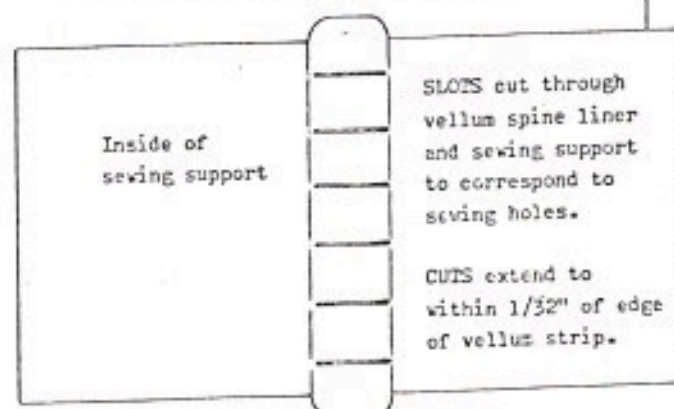


TIGHT JOINT with boards attached to
inside of sewing support

SEWING SUPPORT laminated with PVA adhesive



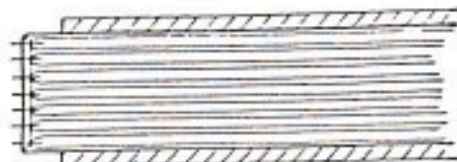
VELLUM SPINE LINER cut to desired width
and attached to inside of sewing support



WIDTH OF VELLUM SPINE LINER is determined by judging width of spine after sewing



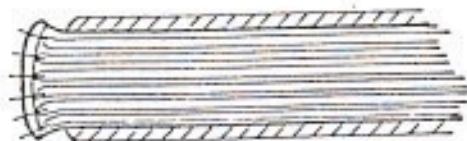
THICKNESS OF SECTIONS under light pressure
(no swelling desired or anticipated)



FLAT SPINE with boards attached to
outside of sewing support



THICKNESS OF SECTIONS PLUS BOARDS
under light pressure (swelling from
sewing to equal thickness of boards)

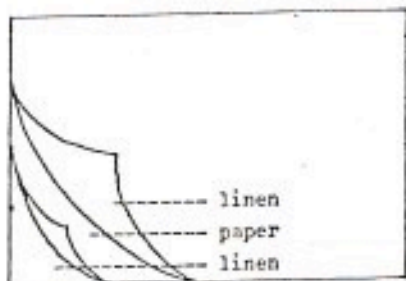


FRENCH JOINT with boards attached to
outside of sewing support

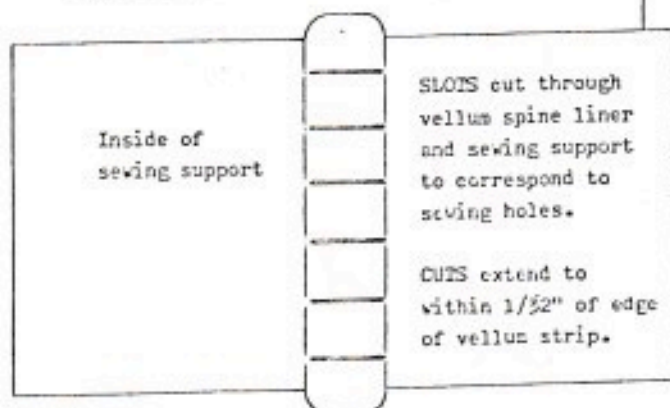


TIGHT JOINT with boards attached to
inside of sewing support

SEWING SUPPORT laminated with PVA adhesive



VELLUM SPINE LINER cut to desired width
and attached to inside of sewing support



Outside of
sewing support

ENDS OF VELLUM SPINE
LINER folded back and
adhered to outside of
sewing support

SEWING SUPPORT
crossed along edge
of vellum strip

Horizontal slits should now be cut through the vellum spine liner and sewing support to correspond to the sewing holes.^{*} The cuts should extend to within 1/32" of the edge of the vellum spine liner, so that the strip is not cut into separate panels. A chisel is useful for making these cuts. Before beginning the sewing, the sides of the sewing support should be folded to the inside and creased along the edge of the vellum strip.^{*}

This text will go on next page with drawings.

Sewing. The sections are sewn all along.^{*} If the thread comes out the second to the last hole, it next enters the end hole of the succeeding section. If it comes out of the ^{last} end hole, it enters the second hole from the end of the succeeding section. This means that every other section is not caught up at the ^{last} end hole, but if endbands are worked through each section, they then will be. Thread appears inside the section only between every other pair of holes, giving the appearance of "two-on" sewing and the advantage that a relatively heavier weight of thread may be used with less swelling.

Endbands. Endbands can be sewn continuously with the main sewing, but a separate sewing insures that a break in the endband thread will not loosen the sewingx main sewing. Endbands can also be worked in the traditional manner over a separate cord. ^{structure illustrated} In the diagram, the endband consists of a continuous wrap around the end panels of the spine liner and sewing support,

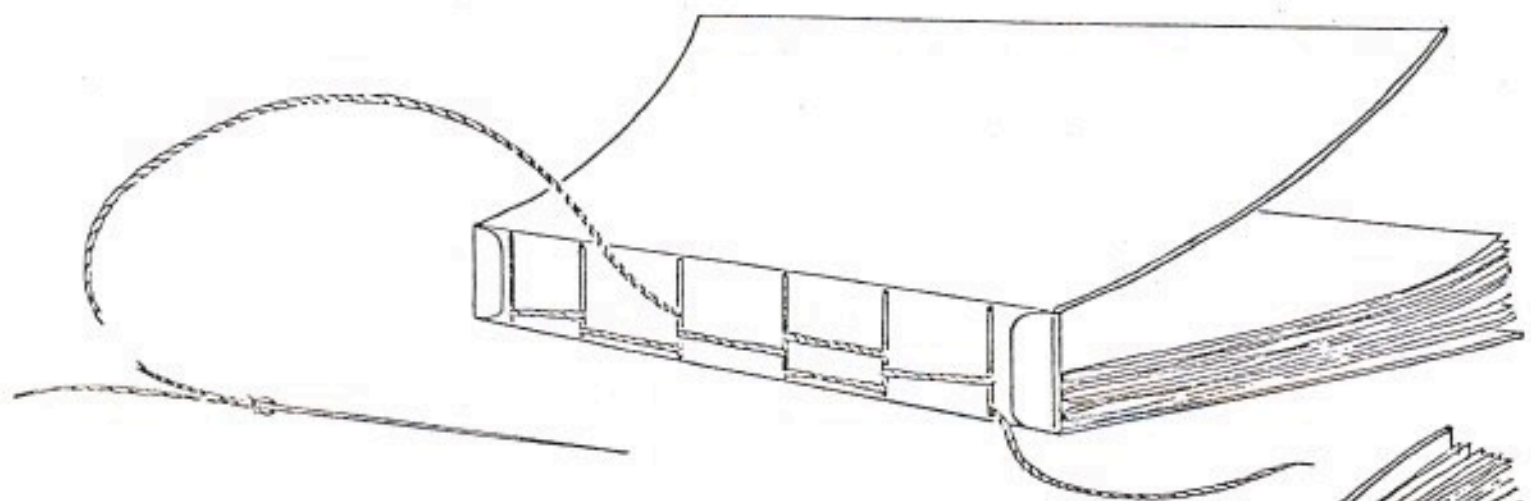
going through the center of each section. An additional wrap around the spine liner and sewing support between sections may be necessary to make a solid wrap

Note on covering. ~~If leather is used to cover the spine, it should~~

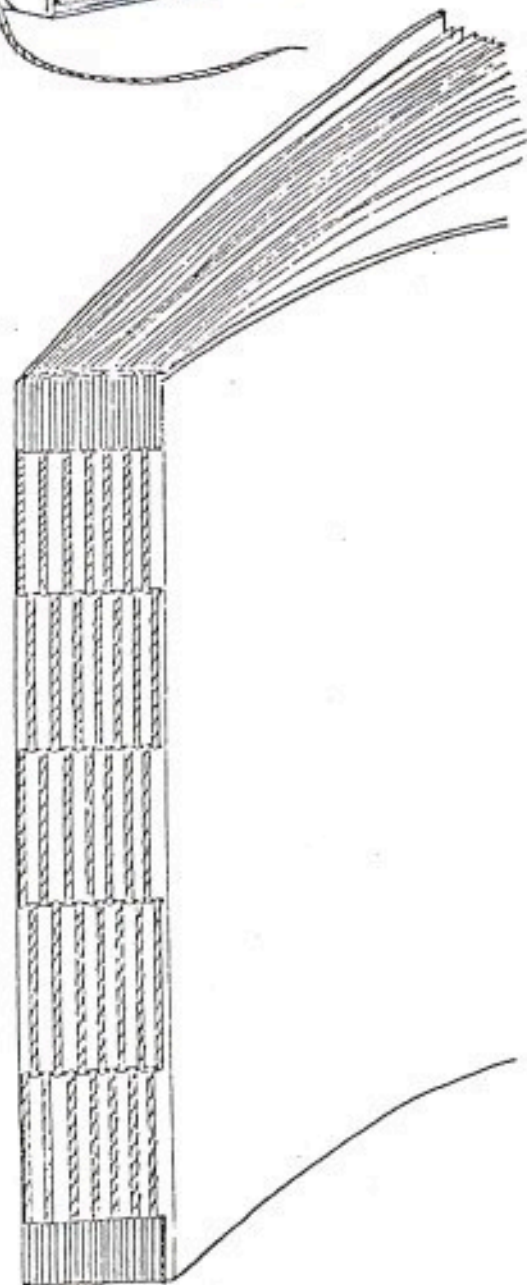
support should be When covering, the covering material rather than the ~~needle sewing~~ be slit at the head and tail turn-ins as if covering a book with laced-in

if the sections are thick.

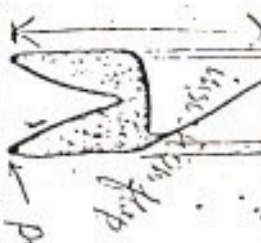
endbands, thus retaining the full strength of the linen in the joint.



Text from Sewing. on →



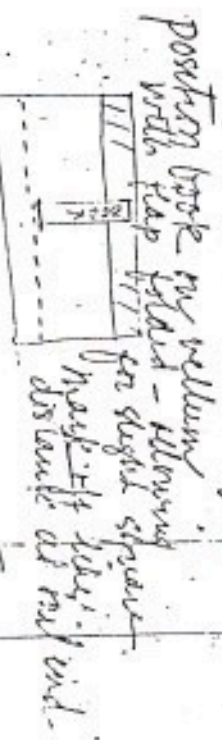
into between
1st and
young hole



punch holes

A. ↑ extracted fractionally
before adding -
to next slight square

measure distance & add more with divider
using straight edge
draw with ruler
square
place in two by two hole
between card



this next fold must be absolutely
parallel to 1st young square paper
to make distance difference as
square - square
measure outside edge of flap
and from
place in pen.

about 2/3's of center
width,

C. Space for
allow
to be
used
using it
square
on
distance
mark
edge of
to