

Bloomington, IN

1. Gisela
I hope this is of some help.
Don

MINIMAL INTERVENTION FOR PRESERVATION
OF COLLECTION PROBLEMS
"SPLIT JOINTS ON LEATHER BINDINGS"
DON ETHERINGTON

Faced with the problem of determining the best use of the conservation dollar, preservation administrators are always looking for ways to minimize the labor intensive procedures that have been prevalent over the last fifty years within the conservation endeavor. While at The Library of Congress I was instrumental in developing the concept of "phased preservation", a technique that protected, rehoused and supported material en masse with some minimal treatment at times.

In pursuing this philosophy over the last twenty years I have developed various ideas that are used extensively throughout the States. The latest idea is to use Japanese paper for reattaching or supporting weakened joints of leather bindings, particularly of 19th and 20th century vintage, on books no larger than 10" in height and 1 1/2" in thickness.

The procedure is relatively simple and has proven particularly effective on books that have a tight spine which generally would have required skilled expertise and extensive time to execute. Anyone who has contemplated rebacking a tight spine especially on a thin book with raised bands will appreciate the problems associated with this type of work.

Throughout many research libraries in their special collections department large groups of bindings bound by French and English trade houses throughout the 19th and 20th centuries are exhibiting detached boards or weakened joints, inside and out. This is caused by poor quality leather at the outset and by the trade practices of paring leather very thin for esthetic tastes and ease of working. In general the spine itself is intact and the sides of the boards are still in good condition, it is only at the joint where all the damage is apparent.

To alleviate the time consuming practice of lifting the leather spine and the leather from the sides of the boards, I have used a Japanese paper strip placed over the joint and extending over the spine and the boards by a very small amount. Another strip of Japanese paper serves to strengthen the inside joint. The paper used for the outside is a Moriki solid dyed paper which is very strong with good tear strength and for the inside a type of Japanese paper to match the original color of the leather cover, some dying of the colored paper can also be attempted.

Ideally, we would use the dyed paper as produced by the

manufacturer, as there are some thirty-five or so colors to choose from.

The strips for the inside are attached to the textblock before attempting the outside repair. This is to make sure allowance has been made for ease of opening at the joint. The other portion of the inside hinge will be attached to the board at a later stage.

A strip of japanese dyed paper is cut to size using a technique that allows for a slightly feathered edge. I use a sharpened bone folder dipped in the water jar where the brushes used for P.V.A. adhesive are standing as it seems to give just the correct amount of water with some P.V.A. in the solution to give a well defined line for tearing the paper strips. The strip is generally no more than 1/4" - 5/16" in width, extending about 1/2" longer than the boards.

The boards are placed in position on the book with a weight on top. I then paste, or use a mixture of rice starch paste and reversible P.V.A. to attach the strip across the joint rubbing down lightly with the palm of your hand so that the paper sinks into all the undulations and across the edges of the raised bands. The feathered edge of the strip blends into the leather very nicely. Leave to dry for an hour and then turn in the strip at head and tail. In most instances I turn it only down to the height of the square of the board, and then cut it off by the edge of the endpaper.

The attachment of the japanese strip to the inside of the board is now carried out. This attachment can either be over the original endpapers or slid under them. I generally let the book tell me what is possible. Obviously, attachment under the original endpapers (both the free fly end and the board paper) is the more sophisticated method. In general if the need to lift the inside board paper is purely cosmetic, then the added cost should be evaluated carefully.

After the book has been repaired I give the leather and the repair strip a light application of a surface coating, this wax coating is available from the Leather Conservation Centre*, it is a wax plasticised acrylic polymer SC6000 which seems to enhance the look and feel of the repair. If the book is valuable and heavily gold tooled on the spine I sometimes remove areas of the strip that may be covering some of the tooling and lift any original leather labels, slipping the edge of the japanese paper underneath. These techniques are more a visual improvement than anything else.

If a leather binding exhibits red rot I will previously treat the leather with Klucel G, a consolidator produced by

the Hercules Chemical Company, and obtainable from the normal conservation supply houses. This treatment is necessary, as the japanese strip gets rejected from books with friable red rot. The rationale for repairing leather bound books that are just broken at the joints with a strong japanese paper instead of a pared strip of leather comes down to one word "strength". I feel that the applications of two strips of japanese paper, one outside and one inside, tends to give a very strong board attachment to the spine and is a method of minimal intervention to the original binding. The time taken to carry out these procedures normally is about one hour.

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REPAIRING AN ORIGINAL CLOTH CASE BINDING

Sequences of operations.

1. Inspect and assess the deterioration of the textblock and binding. Work with the major motive in your head to make the book usable and durable without losing the feel and handle of the original. Try to not add any stress to the opening and flexibility of the binding.
2. Generally remove textblock from case by cutting along joint edge. If ends are intact then lift them off the textblock and then cut along joint.
3. Clean off spine removing all deteriorated glue and check sewing structure, if the spine lining and the spine of the textblock look sound then maybe leave the old spine lining.
4. Textblock consolidation can run the gamut from resewing to reinforcing weak sewing or strengthening the first and last signature. Type and condition of textblock will generally spell out your options.
5. Attaching original flyleaves or adding new ends are options that will vary from book to book. For joint attachment I generally prefer Japanese paper combined with the spine lining of linen. Attachment of endpapers to textblock will again be determined by the condition of the textblock e.g. if paper is brittle then wrapping Japanese paper hinge over shoulders of the spine. see diagram # 1
6. Consolidate the spine either with a paste and PVA mix or the reversible PVA. I generally attach the linen prior to reshaping of the spine as I think it helps to protect weak paper from the backing procedure. Be soft with the hammer.
7. Attach the second lining so as to assist in holding the shape. Generally I damp the second lining very lightly prior to attachment. It seems to dry more taut.
8. Now tackle the case. Trim off all excess material on the spine edge of boards. Cut original case about 1/32" from the spine edge and remove excess. Lift original cloth from board approximately 3/4" from edge.
9. Lift endpaper if desired approximately 3/4" from the spine edge also.
10. To alleviate the lump that shows sometimes under the cloth from the new spine strip, I sometimes remove excess board using masking tape as a means to remove evenly a small amount. Generally about 3/8" from the spine edge.

Use the handy gadget shown in diagram # 2 to hold cloth out of the way while working ; it also stops from creasing the cloth where you have lifted material.

11. Cut spine linen for case; I sometimes use blotter paper as it is more sympathetic for shaping.
12. Select japanese paper so as to color match original cloth and attach to a piece of linen. Sometimes dying of japanese paper will assist in achieving a better match. After trimming to size I coat paper with an acrylic wax to harden the surface of japanese paper.
13. I generally attach new japanese paper/linen sandwich to the front board first then attach spine inlay in exact position. Remember the gap between spine and board varies if it is a tight joint or french joint originally.
14. Cut new spine to exact width and attach to back board.
15. Apply adhesive to a polyester film strip and slip under original cloth and rub down and then slide out polyester film. Tap down cover carefully.
16. Case in either using new ends or fix linen hinge.
17. attach old spine and rub down carefully.

Diagram # 1

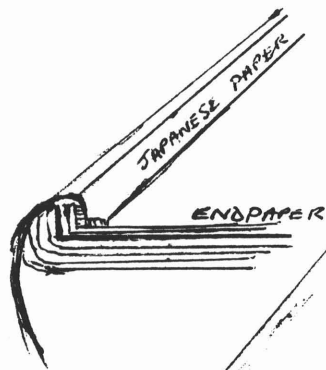
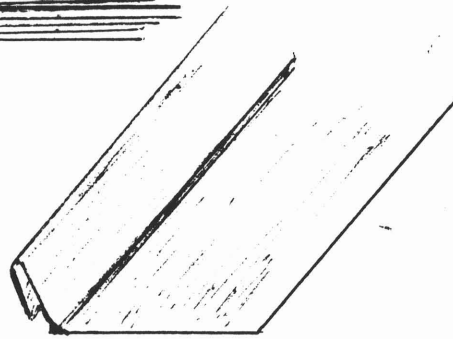
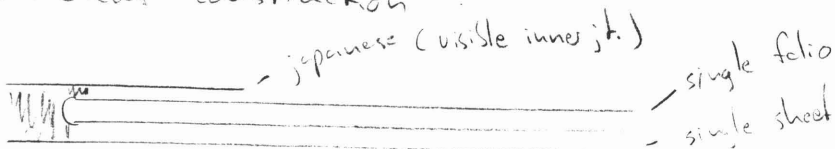


Diagram # 2



side sew

Endpaper construction



REPAIRING OF BROKEN LEATHER JOINTS USING JAPANESE PAPER.

Sequences of operations.

1. Assess condition of binding and textblock and endpaper construction and quality of paper.
2. Trim edges of boards clean and decide the method of original endpaper attachment.
3. Attach japanese paper hinge either on top or below original flyleaf with paste. Hinge about 1" wide.
4. Treat very acidic or red rotted leather with acrylic wax SC 6000 prior to attachment of hinge.
5. Dye japanese paper if required to match tone of original leather.
6. Lift board paper if possible along inside edge for japanese paper hinge to be placed under original endpaper.
7. Trim strips of dyed japanese paper to size, generally about 3/16" in width and about 1" longer than boards.
8. Attach strips along hinge overlapping spine and board edge by about 1/16" using either a mix or paste.
9. When dry turn in top and bottom turn in.
10. Slip japanese paper hinge under original endpaper.
11. Coat dyed japanese strips with acrylic wax SC 6000.

needle cut for tears (tenjugo)
blotter, etc.
watercut

1997

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Japanese Paper Hinge Repair

This technique is used for reattaching or supporting weakened joints of leather bindings, particularly of 19th and 20th century. In general the spine itself is intact and the sides of the boards are still in good condition. Books should be no larger than 10" in height and 1½" in thickness.

Joints are reattached with strips of solid dyed japanese paper and a mix of reversible PVA and rice starch paste. The solid dyed japanese papers offer a wide range of colors and is very strong with good tear strength. If a more sympathetic match in color is desired, the colored paper can be dyed.

This technique is particularly effective on books that have a tight spine which generally would have required skilled expertise and extensive time to reback.

The rationale for repairing bound books broken just at the joints with a strong japanese paper instead of a pared strip of leather comes down to one word — **strength**.

The application of two strips of japanese paper, one outside and one inside, gives a very strong board attachment to the spine and is a method of minimal intervention to the original binding.

pure paper edge over light colored leather. (avoid black line)

1. It is very important to attach a strip of japanese paper to the inside joints before attempting the outside repair. This is to make sure allowance has been made for ease of opening at the joint. Attach the strip of paper to the text block (under the original fly leaf if possible). The other portion of the inside hinge will be attached to the board at a later stage.
2. Choose a color of the solid dyed japanese papers to match the leather. Cut a strip ¼" to ⅝" wide, extending ½" longer than the boards. A sharpened bone folder dipped in a water jar where the brushes used for PVA adhesives are standing, seems to give

Keeps outside hinge from popping
(?)

*Test piece
for color change &
Klucel G & SC6000*

the correct amount of water and PVA solution to create a well-defined line for tearing the paper strips and leaves a feathered edge.

3. If the leather binding exhibits rot, treat with Klu-Cel G, a consolidant produced by the Hercules Chemical Company. This treatment is necessary if the japanese paper strip is not to be rejected by the deteriorated leather.
4. Position the boards on the book with a weight on top. Use a mixture of rice starch paste and reversible PVA to attach the strip across the joint. Press paper down lightly with the palm of your hand so that the paper sinks into all the undulations and across the edges of raised bands. The feathered edge of the strip blends into the leather very nicely. *light label feathered at head & tail* *PVA doesn't bond alone* *Cut strip at raised bands.*
5. Let outside hinge dry for about an hour before turning in the strip at head and tail. In most instances, the strip is turned in only to the height of the square of the board and cut off at the edge of the endpaper. In some books the strips can be left longer at the turn-in and will be covered by the inside hinges.
6. After the outside hinge is complete, finish attaching the inside japanese to the inside of the board. This attachment can either be over the original endpapers or slid under them. The attachment under the original endpapers (both the free fly end and the board paper) is the more sophisticated method. In general, if the need to lift the inside board is purely cosmetic, then the added cost should be evaluated carefully.
7. After the repair is complete, coat the strip with a light application of wax available from the Leather Conservation Centre. It is a wax plasticized acrylic polymer SC6000 which seems to enhance the look and feel of the repair.

Cost: \$45.00 to \$55.00

Time: Approximately one hour

Materials: Solid dyed japanese paper - Aikos
Reversible PVA - Bookbinders Warehouse
Rice starch paste - Talas
Klu-Gel G - Hercules Chemical Company. Available from Bookmakers
Acrylic Polymer SC6000 - Leather Conservation Center, 34 Guildhall Rd., Northampton, NN1 1EW, UK