

# Japanese Manuscript Binding

This binding is modeled after the traditional-style of Japanese binding. It involves two sewings: an inner stitch made from mulberry paper for strength and an outer sewing for decoration. Any sewing pattern can be used for this book. Traditional touches like the cloth corner pieces and title label can also be used to suit the artist's purpose. One other feature is using a folded sheet for each page. Although this will add quite a bit of bulk for thicker papers, when using the traditional Japanese papers, it creates a pleasant feel. Also with a folded sheet, you only need to print on one side, eliminating the need for double-sided copying or printing.

The sewing pattern in these instructions are for the "Kangxi Binding" based on a Chinese pattern. It is a little more decorative than the standard four-hole sewing. It is named after one of the first emperor's of China's Qing dynasty, which began in 1644 A.D.

## Tools and Materials

*Pages:* Japanese paper, such as mulberry or sekishu, cut to height by twice the width

*Cover:* heavier Japanese paper, either plain or decorated, or any other flexible paper

*Corner Pieces:* 2 rectangles approximately 1" long by thickness of textblock + 1/2"

*Title Strip:* Rectangle of decorative paper, complimentary to cover paper

*Inner Binding Thread:* 2 strips (3/4" wide by 3" long) of mulberry or similar paper

*Outer Sewing Thread:* Silk or linen thread (approximately 18 weight), 4 to 6 times height of book

*Adhesive:* Use either a traditional starch paste or PVA

*Bone Folder*

*Awl*

*Ruler*

*Divider or Nailhead Gauge*

*Needle*

*Scissors*

*Paste Brush*

*Mallet or Hammer*

## Directions

1) *Cut and fold pages.* Gather pages and covers together (in correct order) and fold in half. Crease with bone folder. Stack and leave under heavy weight to compress the folds.

2) *Prepare inner binding.* Jog the pages even and clamp with a bull dog clip to hold everything in place. Punch two pairs of holes 1/4" from the spine edge (the open edge of the paper, not the folded edge!).

3) *Sew inner binding.* Make two pieces of "thread" from mulberry paper by twisting the paper on itself tightly. Make sure the two ends are especially tightly wound. Thread each end of one strand through one of the pairs of wholes, bringing the ends out on the back. Tie a single knot and cut ends off leaving 1/4" or so. Beat down with a hammer to secure the knot. Repeat for other pair of holes.

4) *Attach corner pieces.* Cut a piece of thin paper-backed cloth 1" by the thickness of the text + 1/2". Measure 3/8" from the spine at the head. Paste up one of the pieces and place one end at mark on head and wrap around onto spine. Make sure it is centered on the thickness of the book. Wrap sides down along spine and pinch together the corner. Wrap flaps down along head and rub down. Repeat for tail.

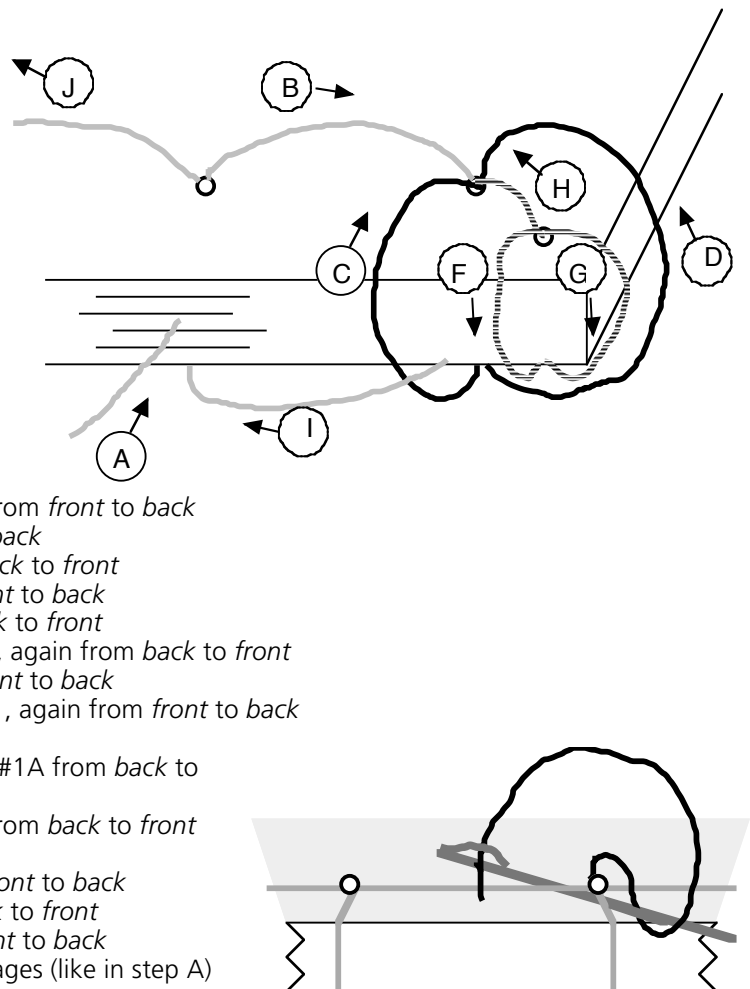
5) *Attach covers to textblock.* Apply two dabs of paste on inside of back cover. Center textblock on cover paper and rub down to hold cover in place. Using the textblock as a guide, fold up the overhanging edges of the cover. Carefully lift the textblock one side at a time and crease the

cover at the folds. Cut the flaps at the corners at a 45° angle to get rid of the bulk. Paste up the fore edge flap and rub down to secure in place (the head and tail are not pasted and the spine will be sewn). Repeat for front cover.

6) *Prepare outer sewing.* Mark a line  $\frac{3}{8}$ " from the edge of the spine. Mark where holes will be (depends on sewing pattern). Punch holes with the awl using a drilling motion. Watch out that you don't stab your fingers! For the Kangxi binding, four holes are punched  $\frac{3}{8}$ " from the spine. The head and tail holes are  $\frac{5}{8}$ " from the top and bottom edge. The other two holes are equidistant between the head and tail holes (the space between the holes should all be even). Then a single hole is punched at both the head and tail  $\frac{3}{16}$ " from the spine and  $\frac{5}{16}$ " from the top (or bottom). See the sewing pattern illustration for placement.

7) *Outer sewing.* Cut length of thread 4 to 6 times the height of the book (depending on thickness of book and number of sewing holes) and thread needle. While sewing, make sure to keep the thread tight as you sew. The thread will be entering and exiting each sewing hole several times. Make sure the needle does not pierce the thread and form a knot. To make the sewing neater, enter and exit the holes on the side in which the thread will next be traveling. See diagram on page 5 for basic sewing pattern.

- begin sewing in the second hole from the bottom (#3) from *front to back*; tie knot at end of thread and insert thread between pages and pull until tight
- around edge of spine and then back through #3, again from *front to back*
- from hole #3 to #4 (on *back*), then through #4 from *back to front*
- around edge of spine and then back through #4, again from *back to front*
- around tail, then again through #4 from *back to front*
- diagonally to #4A (on *front*) from *front to back*
- around edge of spine and then back through #4A from *front to back*
- around tail, then again through #4A from *front to back*
- diagonally to #4 (on *back*), then through #4 from *back to front*
- from #4 to #3 (on *front*), then through #3 from *front to back*
- from #3 to #2 (on *back*), then through #2 from *back to front*
- around edge of the spine and then back through #2, again from *back to front*
- from #2 to #1 (on *front*), then through #1 from *front to back*
- around edge of the spine and then back through #1, again from *front to back*
- around head, then through #1 from *front to back*
- diagonally from #1 to #1A (on *back*), then through #1A from *back to front*
- around edge of spine and then back through #1A from *back to front*
- around head, then through #1A from *back to front*
- diagonally to #1 (on *front*), then through #1 from *front to back*
- from #1 to #2 (on *back*), then through #2 from *back to front*
- from #2 to #3 (on *front*), then through #3 from *front to back*
- make a loop knot and insert thread back through pages (like in step A)



Trim thread to about  $\frac{1}{2}$ ". Put a small amount of paste on thread and push back between pages to secure and hide the thread.

8) *Attach title strip.* The title strip is cut from a complimentary paper. Traditionally it is  $\frac{2}{3}$  the height of the book and about  $\frac{1}{5}$  the width. It is glued about  $\frac{1}{8}$ " from the top and left sides (remember the book would open on the right in Japan).

# Japanese Wraparound Case

Sets of books, or multi-volume titles are often contained in a box. In Japan this is no exception. This box is a traditional wraparound case, open at the head and tail. It includes the bone clasps and the title strip. With some modification, flaps can be added head and tail to make it a "four-flap" enclosure.

## Tools and Materials

*Covering Material:* Any bookcloth (sized) or paper-backed cloth will work; this will also be used to hold the closures and line the inside; cut to size based on diagram below

*Board:* .082 binders board or 4-ply mat board or a laminate of thinner boards; make sure grain is parallel to the spine; cut to dimensions in diagram below

*Inner Lining:* Moriki or other decorative paper; cut to dimensions in diagram below

*2 Bone Clasps*

*Title Strip:* Rectangle of decorative paper, can be same as the book

*Adhesive:* Use the traditional starch paste or a modern adhesive such as PVA

*Bone Folder*

*Ruler*

*Square*

*Chisel or Flat Punch*

*Mallet or Hammer*

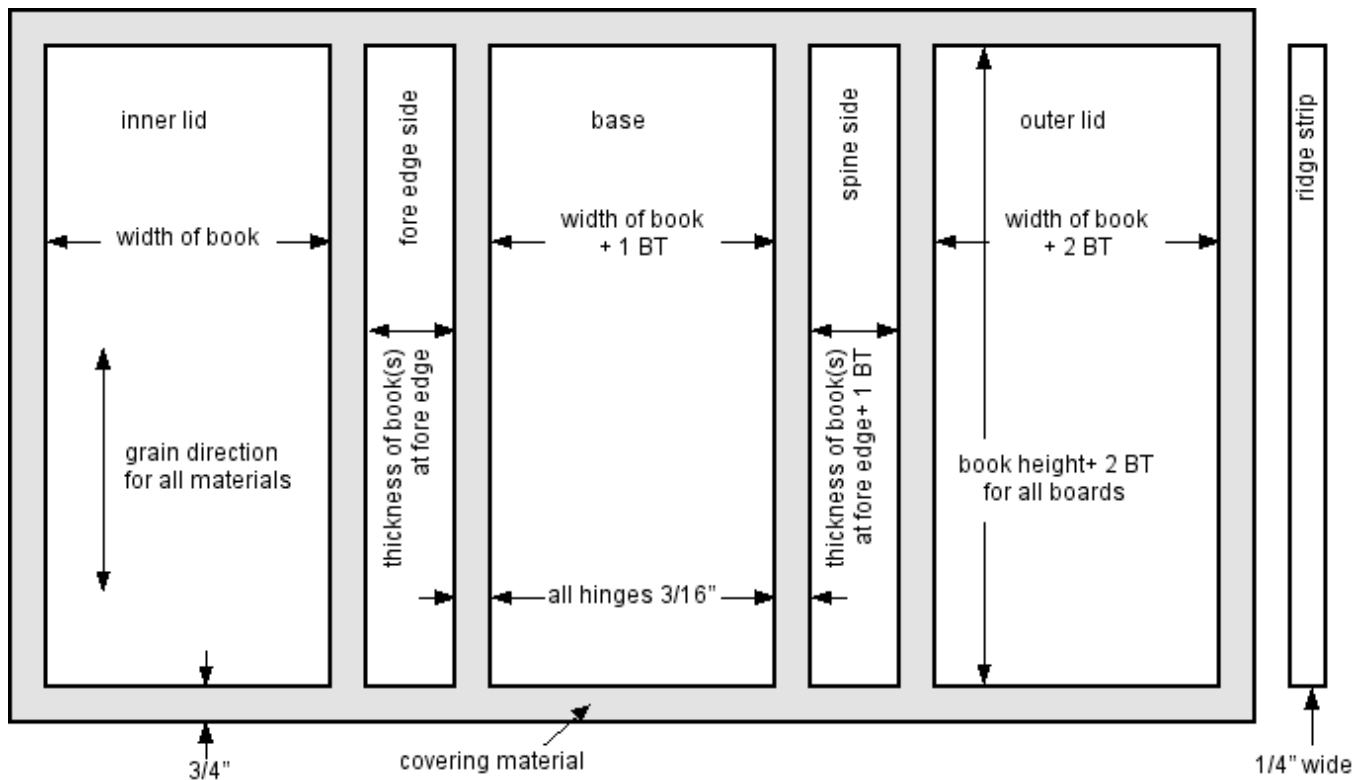
*Knife (X-acto style)*

*Cutting Mat*

*Paste Brush*

*Scissors*

*Dividers*



## Directions

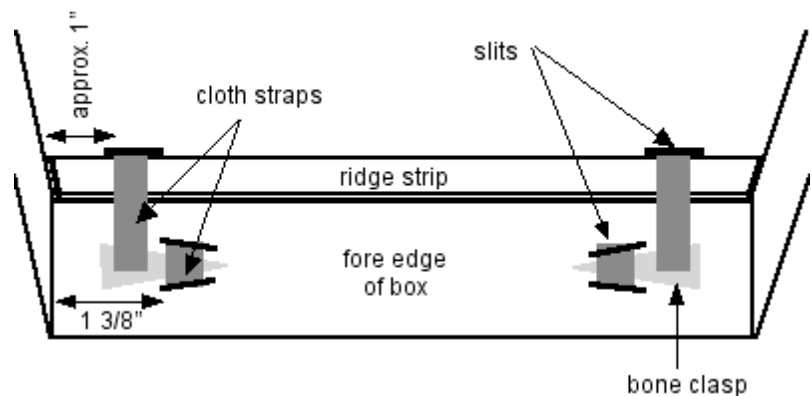
1) *Glue ridge strip.* This is adhered to one edge of outer lid board. Rub down and let dry.

2) *Glue down all five boards to cloth.* Use the illustration as a guide. Start on the left with inner lid. Leave  $\frac{3}{4}$ " margin between edge of cloth and board. Leave approximately  $\frac{3}{16}$ " between the boards (this will vary on thickness of cloth used). After adhering each piece, carefully turn over, place scrap paper over cloth and rub down to prevent air bubbles from forming under the cloth. When adhering the outer lid (with the ridge strip attached and on the outside edge) use bone folder to work cloth into corner and onto edge of the strip. Work cloth between joints after boards are firmly adhered.

3) *Turn in cloth.* Using a thin layer of adhesive, glue the turn in at the head. Use bone folder to turn the cloth up along the edge of the board and then over onto back side of board. Where the cloth meets cloth at left and right, press down along edge of board. Rub down. Repeat for tail and left and right edges. When folding over right and left sides, make sure the corner is tucked in. Place a small dab of adhesive where the cloth will meet cloth.

4) *Make the clasp straps.* Cut two pieces of cloth for the clasp cords, each  $\frac{3}{4}$ " by 4". Cut two pieces of cloth for the clasp holders, each 1" by 2". Each piece should be pasted up and folded into thirds. Make sure the exposed raw edge does not overhang. Rub down and place under weights. After they are dry, trim ends at a sharp angle.

5) *Attach clasp closures.* Mark where holders will be on fore edge side, approximately  $1\frac{3}{8}$ " from the head and tail and centered on the width. See illustration for orientation of the slits. Thread the clasp holders (the shorter strips) through the slits. Place bone clasp under the cloth (make the threaded end of each points outward) and pull tight for size. Glue down ends on inside of box. Remove the bone clasps and thread the other cloth strips through them. Place back in the holders, close the box, and draw the straps up over the ridge strip. Mark the where the slits will be in the corner of the ridge strip (see illustration). Thread both ends through the slits (with the bone clasp still on the strap) and glue down on inside of box. Pound each of the ends inside the box with a mallet to smooth any bumps on the inside.



6) *Line inside of box.* Cut two pieces of cloth to height of boards -  $\frac{1}{4}$ " by width of spine side piece +  $1\frac{1}{4}$ ". Adhere these over the spine side and fore edge side on inside of cover. Make sure they are centered up and down and left and right. Work cloth into joints. Rub down and let dry. Cut three pieces of lining paper for each of the three large boards (inner lid, outer lid and base). They should be  $\frac{1}{8}$ " shy of the edge all the way around. Adhere each to its proper board. Place scrap paper over paper and rub down and let dry.

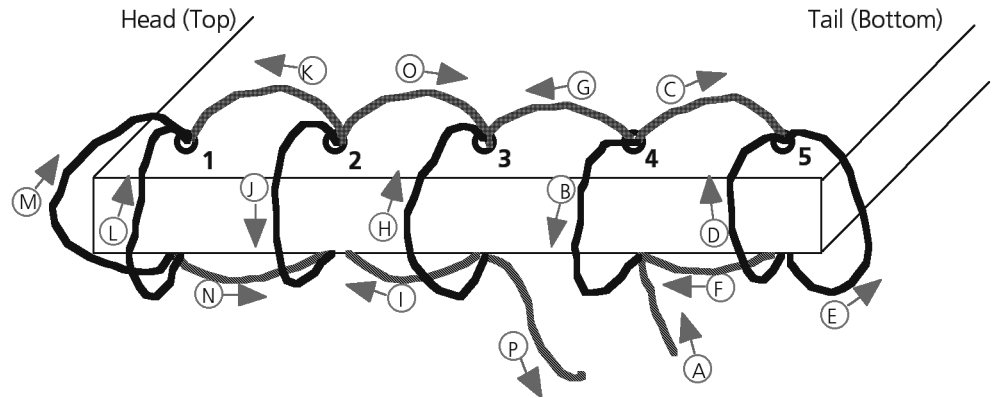
7) *Attach title strip.* Cut desired size title strip out and glue down where appropriate.

# Japanese Sewing Patterns

These are many alternative styles of sewing traditional Japanese bindings, but all are based on the basic sewing pattern, as shown below. For any of these styles, the instructions for gathering the pages, attaching the corner pieces and cover, and the inner sewing, as outlined above, are followed; only the sewing pattern changes.

## Basic Japanese Sewing

- begin sewing in the second hole from the bottom (#4) from *back* to the *front*; leave 4 inches of thread
- around edge of the spine and then back through #4, again from *back* to the *front*
- from hole #4 to #5, then through #5 from *front* to *back*
- around edge of the spine and then back through #5, again from *front* to the *back*
- around tail, then through #5 from *front* to *back*
- from #5 to #4, then through #4 from *back* to *front*
- from #4 to #3, then through #3 from *front* to *back*
- around edge of the spine and then back through #3, again from *front* to the *back*
- from #3 to #2, then through #2 from *back* to *front*
- around edge of the spine and then back through #2, again from *back* to the *front*
- from #2 to #1, then through #1 from *front* to *back*
- around edge of the spine and then back through #1, again from *front* to the *back*
- around head, then through #1 from *front* to *back*
- from #1 to #2, then through #2 *back* to *front*
- from #2 to #3, then through #3 *front* to *back*
- on *back*, wrap end of thread around thread in hole #4, then tie square knot with two ends of thread; poke knot into hole with awl

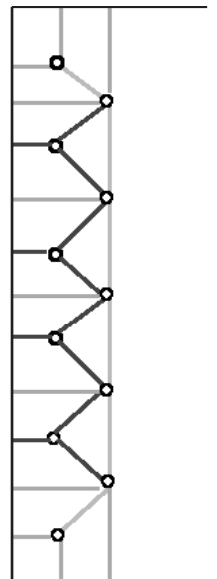


## Hemp-Leaf

The hemp leaf binding (*asa-no-ha toji*) resembles a hemp leaf. It is based on the Kangxi binding with added holes and sewing. Since it is sewn after the Kangxi pattern, a different color of thread can be used. With this pattern, the title strip is traditionally placed in the center of the cover, from left to right, but still adjacent to the head.

After the Kangxi pattern is sewn, a separate length of thread  $2\frac{1}{2}$  to 3 times the height of book is cut. This can be a different color. If desired, an extra long piece of thread can be cut for the Kangxi and the hemp-leaf can just follow in line. Punch three additional holes  $\frac{3}{16}$ " from the spine and equidistant between holes the four primary holes.

- begin sewing in the second hole from the bottom (#3) from *front* to *back*; tie knot at end of thread and insert thread between pages and pull until tight or continue with same piece of thread from the Kangxi sewing
- from hole #3 to #3-4 (on *back*), then through #3-4 from *back* to *front*
- around edge of the spine and then back through #3-4, again from *back* to *front*
- from #3-4 to #4 (on *front*), then through #4 from *front* to *back*
- from hole #4 to #3-4 (on *back*), then through #3-4 from *back* to *front*
- from #3-4 to #3 (on *front*), then through #3 from *front* to *back*
- from #3 to #2-3 (on *back*), then through #2-3 from *back* to *front*



- h) around edge of the spine and then back through #2-3 again from *back to front*
- i) from #2-3 to #2 (on *front*), then through #2 from front to back
- j) from #2 to #1-2 (on back), then through #1-2 from back to front
- k) around edge of the spine and then back through #1-2 again from *back to front*
- l) from #1-2 to #1 (on *front*), then through #1 from *front to back*
- m) from #1 to #1-2 (on back), then through #1-2 from *back to front*
- n) from #1-2 to #2 (on *front*), then through #2 from *front to back*
- o) from #2 to #2-3 (on back), then through #2-3 from *back to front*
- p) from #2-3 to #3 (on *front*) then through #3 from *front to back*
- q) make a loop knot and insert thread back through pages (like in step A)

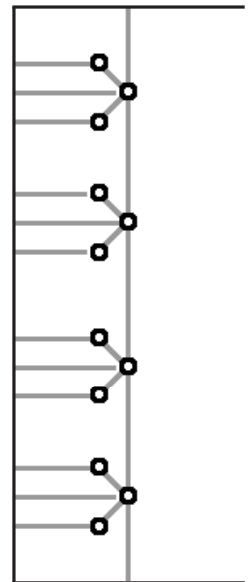
Trim thread to about  $\frac{1}{2}$ ". Put a small amount of paste on thread and push back between pages to secure and hide the thread.

## Tortoise-Shell

The tortoise-shell binding (kikko toji) also follows the basic pattern, but is a pattern in itself instead of an addition. The title label for this style would be placed in the same area as the Kangxi.

Punch four holes  $\frac{3}{8}$ " from spine. Head and tail are  $\frac{5}{8}$ " from top and bottom. Other two are equidistant. At each hole, punch another hole  $\frac{1}{4}$ " towards spine and  $\frac{1}{4}$ " towards head and  $\frac{1}{4}$ " towards spine and  $\frac{1}{4}$ " towards tail. There will be four clusters of three holes each for this sewing.

- a) begin sewing in the middle hole of the second cluster from the bottom (#3) from *front to back*;  
tie knot at end of thread and insert thread between pages and pull until tight
- b) around edge of the spine then back through #3 again from *front to back*
- c) from #3 to #3T (on back), then through #3T from *back to front*
- d) around edge of the spine then back through #3T from *back to front*
- e) from #3T to #3 (on *front*), then through #3 from *front to back*
- f) from #3 to #3H (on back), then through #3H from *back to front*
- g) around edge of the spine then back through #3H from *back to front*
- h) from #3H to #3 (on *front*), then through #3 from *front to back*
- i) from #3 to #4 (on back), then through #4 from *back to front*
- j) around tail of book then back through #4 from *back to front*
- k) repeat steps b through h to complete the tortoise-shell pattern at hole #4
- l) from #4 to #3 (on *front*), then through #3 from *front to back*
- m) from #3 to #2 (on back), then through #2 from *back to front*
- n) repeat steps b through h to complete the tortoise-shell pattern at hole #2
- o) from #2 to #1 (on *front*), then through #1 from *front to back*
- p) around head of book then back through #1 from *front to back*
- q) repeat steps b through h to complete the tortoise-shell pattern at hole #1
- r) from #1 to #2 (on back), then through #2 from *back to front*
- s) from #2 to #3 (on *front*), then through #3 from *front to back*
- t) make a loop knot and insert thread back through pages (like in step A)



Trim thread to about  $\frac{1}{2}$ ". Put a small amount of paste on thread and push back between pages to secure and hide the thread.

## Additional Resources

There are other variations on Japanese-style sewing. Some are traditional and some are inventions of modern binders. To learn more about Japanese bindings, Kojiro Ikegami's "Japanese Bookbinding: Instructions from a Master Craftsmen" is invaluable. Many other bookbinding manuals discuss stab-sewn and Japanese-style bindings. There are many, many variations. Shereen LaPlantz's two books, "Cover to Cover" and "The Art and Craft of Handmade Books" offers some interesting ones. Keith Smith's series on "Non Adhesive Books" also give good directions for new developments. And, of course, you can always create your own patterns!