

## SCROLL MOUNTING

**Susanne Barrymore**

**I would like to preface this description of my oriental scroll mounting technique with the statement that I have not received formal training in this process. Over the years I have gradually found different and better ways than I used in making my very early scrolls. I would encourage anyone trying to do this to feel free to develop their own better ways of doing it.**

### **Mounting painting with primary paper backing:**

Adhesive for mounting the painting with its primary paper backing:

Ideally, the adhesive must not alter the appearance of the paper or change the colors. It must remain flexible and not make the paper brittle. It shouldn't deteriorate with age, or attract pests, or contain any chemical constituents which might damage the paper over time. It should be reversible, that is, water soluble in the event the picture ever needs remounting in the future.

Be sure the backing paper you use has reasonably good tensile strength when it is damp, or even wet. With practice you will find that you can determine which backing paper will be strong enough when wet.

According to information in **Japanese Scroll Paintings, a Handbook of Mounting Techniques**, by Masako Koyano, put out by the foundation of the American Institute for Conservation in 1979, the glue traditionally used is wheat starch paste, which can be simply the flour used for baking. Use one part flour with about 12 parts water, cooking and stirring frequently, either on the stove or in a microwave. I add some Alum to the glue. According to one account, this acts as an insect repellent, and according to another, improves the texture. I can't vouch for either. If stove top, watch carefully that it doesn't burn, and stir with a whisk which makes good contact with the bottom, like a flat bottomed conical whisk. It should be completely cooked to a translucent state. Correct consistency with water if necessary, and strain to eliminate any lumps. This will store in the refrigerator, and can be re-boiled to extend its storage time. Do not freeze. This changes the texture unfavorably. I've found it better to make small quantities, unless I'm mounting a number of pictures at once. For example, 1 tablespoon of flour in 3/4 cup of water.

Before mounting a picture check to be sure the picture is square at the corners: fold top to bottom, and side to side, to be sure they are the same length, and trim to correct any difference. If picture has strong color or dense black, which might run, try setting with warm iron before mounting. One time when I was trying to mount some pictures with very bright colors, the colors kept running, in spite of ironing them. A very experienced

Chinese painter suggested I try spraying the painting with Tole spray or pastel and charcoal fixative, or something with similar capacity, and that helped greatly.

Get the wheat paste to a good spreading consistency. It seems to help to warm it, if it has been stored in the refrigerator. Place picture upside down on smooth clean work surface, such as Formica or white enameled Masonite. If picture has no color likely to run you can put glue directly on back of picture. Dampen picture with light water spray first and smooth flat with brush or hands. Using a brush with firm bristles, like a plastic disposable paintbrush for house painting, brush glue on from center out to edges and beyond. This is easier to do. In this case also dampen the backing paper before applying it. It may be better to place the rougher surface of the mounting paper down to make better contact with the picture. I use the technique of rolling the backing paper up on a long stiff strip of Styrofoam while applying it to the back of the picture. Position it straight across the end of the picture and then firmly unroll it and keep it taut, smoothing it out at each turn. It is easier to handle when the backing paper doesn't have glue on it.

**Technique for applying glue directly to backing paper:**

However, if you have a picture with any colors which may run, or if you are mounting fabric to use for making a scroll, then it is important that you learn the technique of applying the backing paper which has had the glue applied to it, rather than placing glue directly on back of picture which may cause colors to run. For primary picture mounting, use regular wheat paste glue, which is reversible. For subsequent applications of backing paper, or mounting fabric, it is desirable to use Japanese glue formulated for this purpose. There is a copy of the label on the outside of the Japanese glue container with this write-up.

For applying glue on large surfaces of backing paper I often use the miniature paint roller and plastic tray which can be found in paint stores. The small roller is about 4 inches long, and comes in a sloping plastic tray, which I store in a moisture proof food storage container, which can be found in just the right size to accommodate the roller and tray. However, the tray is made of a poor grade of plastic, so ultimately I just attached a wedge with tape to the bottom of a moisture proof food storage container of the right size for the 4 inch roller.

To handle larger pieces of paper, roll it up on a ruler or some other strip to keep it straight. This is tricky if you are putting the glue on the backing paper rather than on the back of your painting, and I've developed various techniques to do this. After spreading the glue uniformly on the backing paper I place a long strip of foam core board, shaped rather like a wide ruler (about 3 inches wide, and as long as you need for the width of your backing paper) along one edge of the backing paper and press firmly so the paper adheres. You may find it helps to wait a little while so the glue is somewhat less wet so it doesn't stick together as you roll it up. Then I carefully lift it up so it hangs straight, or slide it off the edge of the table where the gluing of the paper was done, and proceed to roll it up on the board with the glue side out. I lay it flat along one edge of my picture, and then gently pull with the board to gradually unroll and deposit the backing paper onto the back of the picture. It may help to place something weighted to secure it. Often there

are little wrinkles which you can work out with your fingers, or stretch the paper to remove. The paper is surprisingly strong if you don't get it too wet. It is easier to control the glued paper when rolling it onto the guide strip if it isn't too damp, but after getting it in place you should lightly spray it with water so that it adheres well to the back of your picture. However, if the picture has color, which may run, use caution with the quantity of water. Experiment with brightly colored test pieces. Use a standard paint roller to help smooth it, rolling from the center outward, and then use a stiff bristled wallpaper brush to tamp the paper into the back of the picture. Dry picture by placing piece of felt on it, egg crate florescent light diffuser (available in home improvement stores), and weights so it will dry flat. Prop up weights if they are such that they would interfere with evaporation. Remove dry picture from work surface and trim backing paper to leave approximately ¼ inch, or more, on all sides to which to attach fabric.

When the picture with primary backing is dry, roll it up to check that the picture is firmly and uniformly attached to the backing paper before proceeding.

### **Preparing fabric for scroll:**

Fabric for scroll is pre-mounted with paper backing. I have found some Chinese premounted silk at the China Cultural Center, Inc., 970 N. Broadway, in China Town in L.A. This varies quite a bit in quality, but makes it easy to use. You may need to add another layer of paper to the back of some of the premounted Chinese silk, because it is often very thin, with very poor quality paper used. To mount your own fabric, use the technique wherein the glue is applied to the paper, rather than directly to the fabric. If you put glue directly on the fabric too much glue gets into the fabric, making it too stiff and heavy. I use the same Japanese glue which I use for the other mounting processes. It helps to dampen the fabric and to tape the fabric down before backing it with paper to keep the grain of the fabric straight

### **Cutting mounted fabric for scroll:**

As far as the size of the fabric used on the sides or top and bottom, I do not use any particular rule. In the book by Masako Koyano, mentioned at the beginning, there are a number of pages showing, by outline, many variations. The main consistent feature is the relative length of the top piece to the bottom – about twice as long. See attached copies made of some of the pages from that book. To some extent it is based on some artistic impulse I have, derived from the painting, and often it is dictated by a recipient's request to have a scroll of a particular size.

When cutting fabric, check that you are taking into account any linear pattern or grain of the fabric, which might look askew. Also, if there is a very obvious one way directional pattern, keep that the same on all sides of the picture. When attaching pieces, check their alignment with a triangle to be sure they are square with the picture. Narrow ribbons of fabric or metallic thread may be mounted along top and bottom edge using **Tacky Glue**

from a squeeze bottle. Inserts are placed first, then side bands, then the top and bottom pieces over edges.\* Overlap is about 3/16 inch. Use prepared Japanese glue applied with small stiff brush. In any of the following gluing operations where you are applying glue along a narrow edge place along an edge of cardboard work surface or edge of table so you can apply glue right to the edge and not be concerned about getting it on the underlying work surface. Since the fabric strips often have a tendency to have loose threads you can simultaneously apply glue to help seal that edge while gluing the paper edge by laying your fabric strip upside down carefully lined up along the edge of the picture, and then brush the glue simultaneously on the under edge of the fabric strip to be attached and the backing paper margin. Place some long weights on the fabric strip to hold it in place while gluing. Cut fabric pieces oversize and after they are all assembled, trim outside edges straight all the way down. To determine your margins for cutting, measure out from the edge of the picture, top and bottom, and then with a ruler mark where this margin will extend on the top and bottom of the picture. Before cutting the margins check that the width is the same, top and bottom, and if not, adjust the lines for the margin to compensate for any error so that the top and bottom will be the same width. On large pictures allow an extra 1/4 inch on sides to be turned under. I generally do not turn the edge of smaller pictures, so any fraying problem with edges is sealed with dilute glue, or special fray sealant. I use both a large paper cutter and an Olfa cutting wheel on a special Olfa cutting board to cut fabric.

\* When your decorative insert, ribbon, or fabric, is dark, it may show through the fabric being used for the scroll. This has been a problem especially with some of the very thin pre-mounted Chinese silk. In that case, cut one or more small squares of the mounting fabric and glue over the ends of the decorative ribbon to camouflage it before placing the strips on the side of the pictures.

Turning edges on larger scrolls: Trim larger scrolls, leaving approximately 1/8 inch extra to turn under on sides. Place scroll upside down on firm surface. Use something like a beveled orange stick, or some other tool, which will score the surface without cutting through the paper. Place a ruler about 1/8 inch in from edge, score a line down the ruler into the scroll, then use the beveled edge to turn the edge up against the ruler. Use an iron at a low setting to set the turned edge down as flat as possible on the back, using your fingers to turn the edge down ahead of the iron. The paper may separate from the fabric, but this you can fix when you glue this turned edge down. Using a glue like **Magic Stitch**, which is extruded through a fine nozzle, lift the turned edge just enough to insert the glue, which you may want to spread smooth with your finger before pressing the edge back down. If cloth separated from paper this is the time to re-glue that with the same glue. Press firmly along edge to be sure it is well attached.

I have found with the fabrics I have mounted, when turning the edge, the paper and fabric may separate. As I mentioned, you can re-glue that while you are gluing the turned edge, but if I anticipate this will be a problem ahead of time, I run a thin line of a fray sealer, which can be bought in a container with a narrow opening for applying it. This should glue the paper to the fabric at the edge. Allow it to dry before trying to turn it.

### **Preparing paper pockets:**

Attaching paper pockets top and bottom of scroll in which the end bars will be glued. Cut strips of backing paper so their length is wider than the scroll. Their width will vary with the size of the bar to be inserted, but usually about 1-2 inches. It must be large enough to accommodate the anticipated end bar, with enough extra to glue in place. Use a triangle to be sure it is aligned with the scroll. Lay strip of paper across near end of scroll, leaving enough of fabric which will curve over front part of bar. Place triangle across paper, leaving about ½ inch paper exposed on edge toward end of scroll. Turn this up, apply glue, then smooth it down and turn free flap of paper strip down over it. Be sure the turned down strip is big enough so that it extends beyond the bottom edge of the scroll at end and sides, making it easy to lift after final paper backing layer is applied. Trim the excess off when trimming the backing paper.

### **Final paper backing:**

Originally I used only one layer of paper for the back, but since so many finished scrolls seem to tend to curve or hang poorly, I now have been putting two layers of paper on the back, and have been more generous with the amount of glue I use. This seems to have helped make the scrolls stay flat. Place scroll upside down and dampen slightly. It is a good idea to lightly spray both back and front of the scroll, and allow the dampness to spread uniformly. There is often a tendency for the various different fabrics used, the decorative trim, and the picture itself, to wrinkle unevenly when dampened, and you must gently flatten and stretch it with your hands to try and eliminate any unevenness before applying final backing paper. Apply special Japanese glue to backing paper, preferably to the rough surface of the paper, using a brush or small roller, always moving from the center of the paper out beyond the edges, to avoid it being picked up by the roller. Roll it up as described above for backing a picture with bright colors, and apply to back of scroll.

It looks as if it would be much easier to simply put the glue directly on the back of the scroll, which is how I use to do it. I found many times my scroll may have slipped sideways in the process, and there would be some glue on the front of the fabric. This is very hard to remove so it doesn't show. Applying the glue first to the backing paper as described helps avoid the picture slipping sideways and getting some glue on the front face.

For the second layer of paper it is safe, and easier, to apply the glue directly to the back of the first layer of paper, and then roll the dampened second layer of paper on the foam core board strip as done before. Using the large paint roller to help smooth the picture, I then use the brush to pound straight down to help mesh the fibers of all the layers, and make sure all glued surfaces are in contact. A final rolling with the paint roller will smooth it again.

Now the scroll is covered with the piece of felt, and an egg crate florescent diffuser. I place a number of heavy weights in many places, propping them up so it will dry evenly under them, and allow this to thoroughly dry, perhaps 3 or 4 days, depending upon the weather. If they are not completely dry when you remove them they are more likely to curl unevenly.

### **Waxing, burnishing, trimming:**

Before removing dry pictures: rub the backs of scrolls with block of Carnuba wax, and burnish by rubbing with string of beads. This will help them to roll up smoothly. I have found it best to trim the excess paper off the edges with sharp scissors. After pictures are trimmed roll each one up tightly and unroll to check that all seams, etc., are intact, and can be safely rolled. At this time you can carefully re-glue any little part that shows any separation.

### **Mounting end bars:**

For bottom of scroll I use bamboo which is the right length from node to node to permit some to show at ends, but a wood dowel would work perfectly well. I sometimes grind off intermediate nodes to obtain a piece of bamboo the correct length. Sand ends smooth, and if it is black bamboo, I dye ends with sumi. When dry and ready to use, polish clean with a little furniture polish, or equivalent, so there is no excess sumi that might come off on your hands when applying to the scroll.

Top bar: For small scrolls use a hollow bamboo or hollow plant stake with no nodes, through which a cord for hanging can be placed. For a larger scroll use a piece of wood molding cut with one rounded corner leading to a flat side, and two corners at other edge.

Apply both end pieces in the same way, but pay close attention to how they will end up once rolled into place. The pockets are a double thickness of paper and are stiff, so I find it helps to brush the surface with water first to soften it. Glue is applied to inside of pocket flap, and then end piece rolled up until the fabric front can be rolled down over it to cover end piece rolled up in paper. For the final edge of the fabric on the bamboo I use a line of Tacky Glue for a better adhesion. Try to have most attractive part of bamboo be to front, and top end bar, if molding, end with the curved surface to top front.

As you roll the end bars into place, use a plastic triangle to check that the bar is exactly at right angles to the sides of the scroll. It takes very little irregularity to be obvious to an observer.

### **Tie string:**

Choose string or scroll webbing of appropriate color for scroll. On small scrolls feed string through tube using a wire with a hooked end, tie and allow a free end long enough to wrap around rolled up scroll two or three times, and then tuck under in traditional attachment. When using molding use screw eyes placed some aesthetically satisfying

distance apart on the top bar. If you have them, use the traditional eye used in Japan, which is hammered in, and has a small decorative metal shield through which it goes. Something like an ice pick to pre-punch holes is helpful. For these larger scrolls use the traditional webbing, if available, and tie in manner illustrated in scroll conservation book. Sign and date scrolls, and if there is important annotation for calligraphy or subject matter, write this on the back with indelible pen.

Traditionally the artist signs the scroll with a carved stone chop pressed into a cinnabar impregnated material and then carefully pressed onto the picture. Where to place it is determined to some extent by viewing the picture subject matter as having a direction to left or right. If that is evident, place the chop behind the direction of movement. When using a scroll with another object like a bonsai, it is sometimes preferred to have the movement in the picture as going toward the bonsai, in which case, the chop would be on the side away from the bonsai.

### **Summary of steps:**

- Heat glue in microwave or otherwise.
- Check that picture is square at corners.
- If picture has color or intense black, which might run, heat with iron. Also can use pastel or charcoal spray fixative to keep bright colors from running.
- Mount picture with flour paste and dry.
- Trim leaving ca. ¼ inch mounting paper around edge.
- Mount fabric on sides of picture. Use triangle to check if square with picture. If putting an insert of ribbon or other decorative material top and bottom, do first.
- Measure margin, allow additional amount if going to turn edge on sides.
- Turn edge, iron and glue.
- Add pockets top and bottom, check with triangle. Allow sufficient fabric to go around bamboo and molding to be used, about 4 cm.
- Apply 2 layers of backing paper and dry.
- Before removing dry picture, wax and burnish while still attached.
- Trim with especial care those with turned edge. More control if trim edge with scissors.
- Complete the mounting top and bottom. Traditionally hanging ribbon should go around scroll three times for tying. About 22 to 25 inches for some medium scrolls.
- Roll scroll up and unroll to check there are no weak points in mounting.
- Sign with chop, and use indelible pen for any notation to be written on back.

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