

Position the slot in the tube directly over the place where the two parts touch. Solder this tube onto both sides of the locket.



Prepare the locket to receive the cradle (the outer tube of the pair) As before, care at this stage will make the process both neater and easier.



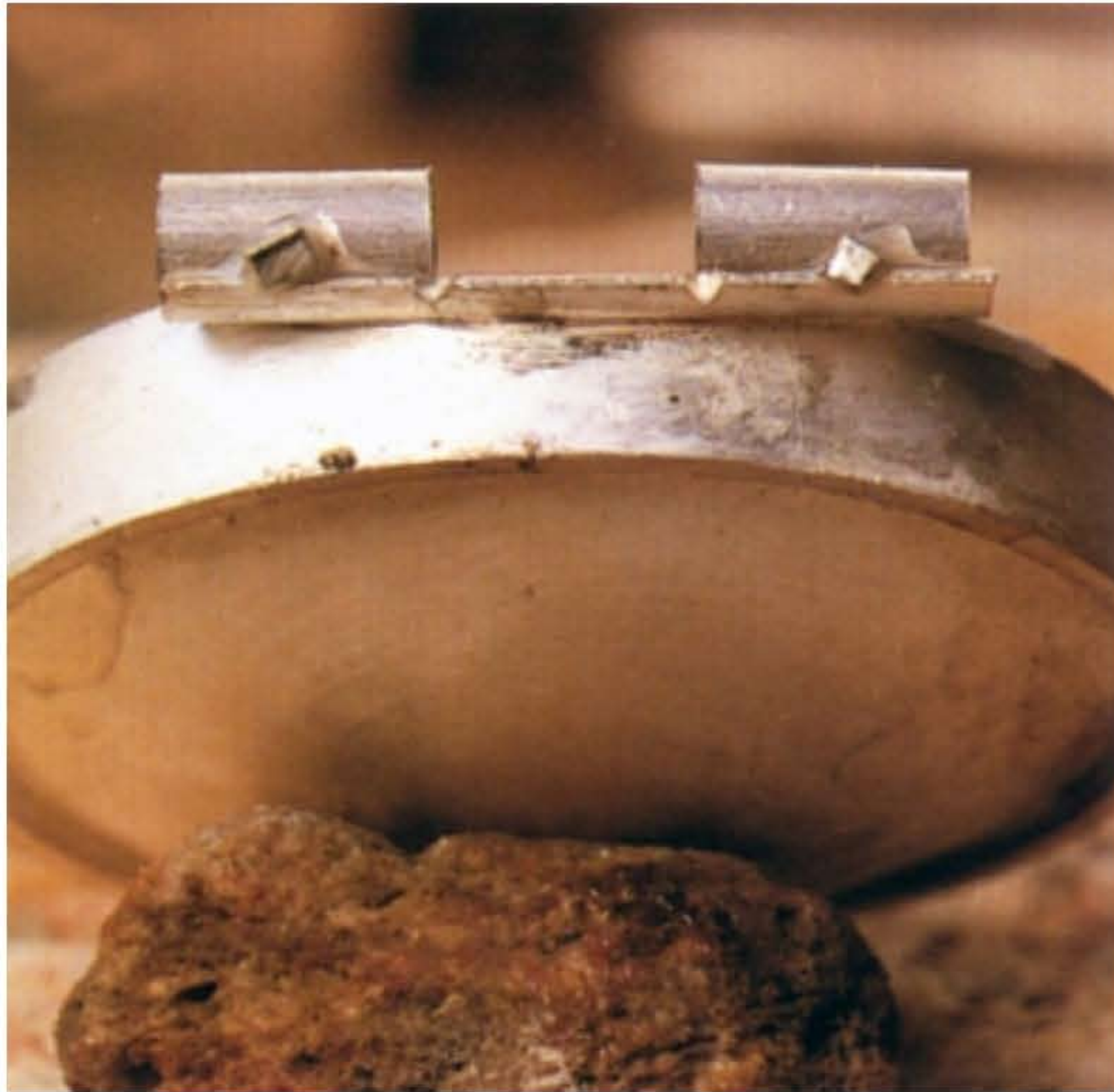
Saw a slot in the cradle tube and position it onto the locket with the slot facing down. Lay a piece of solder on each side.



When the cradle tube is attached, cut the pieces apart, leaving 1/3 of the tube on one side and 2/3s on the other.



*Place a knuckle into the center of one of the cradles
and solder it with a tiny chip of solder.*



Mark the location of the outer knuckles with small notches filed into the top of the cradle. Unlike pencil or ink markings, these will show up throughout the firing.



The finished cradle hinge is both elegant and practical. The cradle increases the strength of the hinge and creates a stop that controls the arc of opening.

If the pieces don't move, it might be just flux glass that is locking them together. Drop the piece in pickle and cross your fingers. If that doesn't do it—i.e. if you've accidentally soldered the halves together—heat the pieces and gingerly pull them apart, then go back a few steps and try again.

Assuming that all is well, use a saw to cut along the length of the cradle, making the cut about a third of the way around the tube from the first slot. Looking at the end of the cradle tube, and imagining a clock face again, if the first cut was at 6, make this one

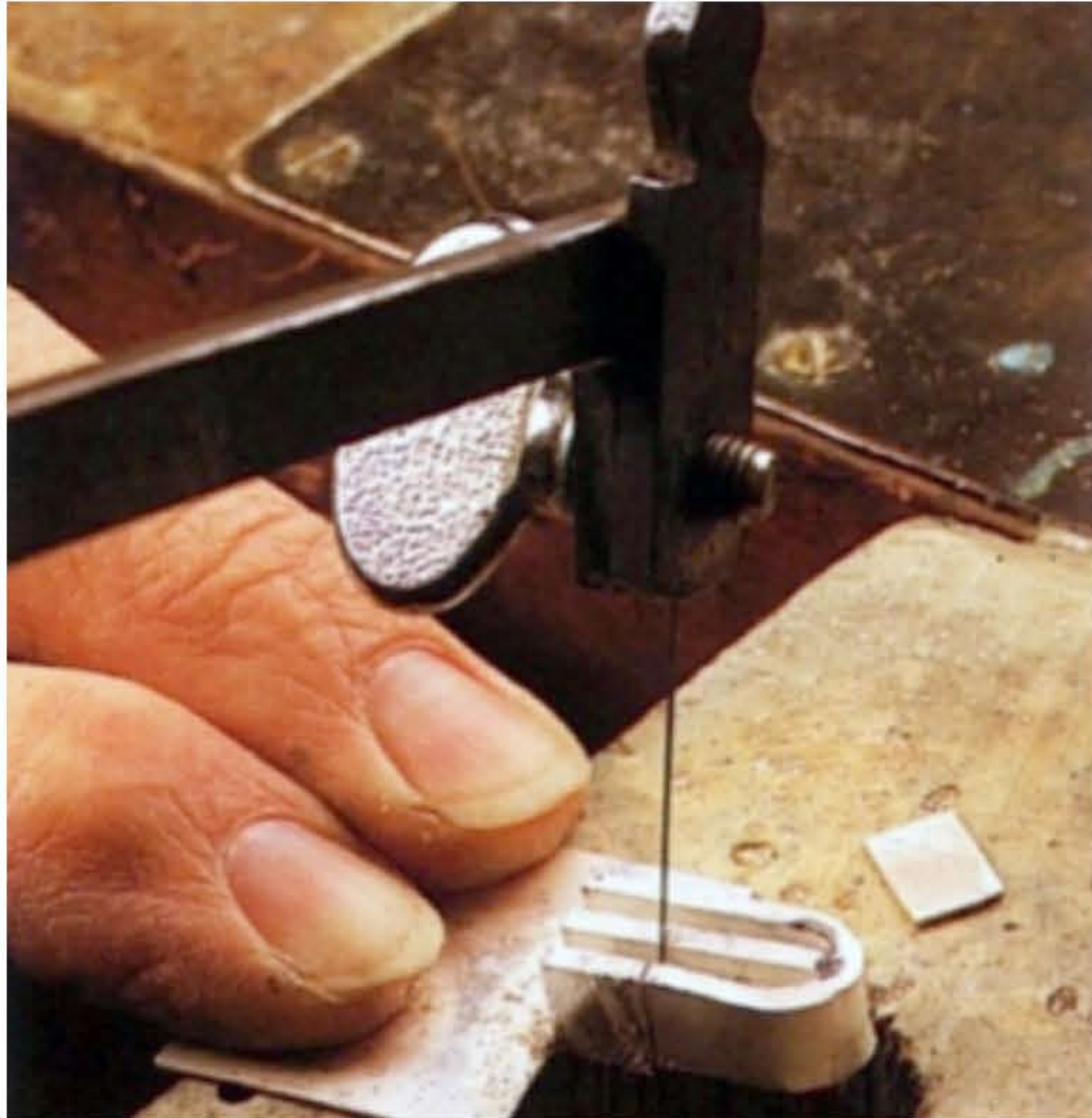


The box walls are made as described earlier and a bottom is cut and fitted so it snaps into place. It is set aside until after the lid is soldered into place.

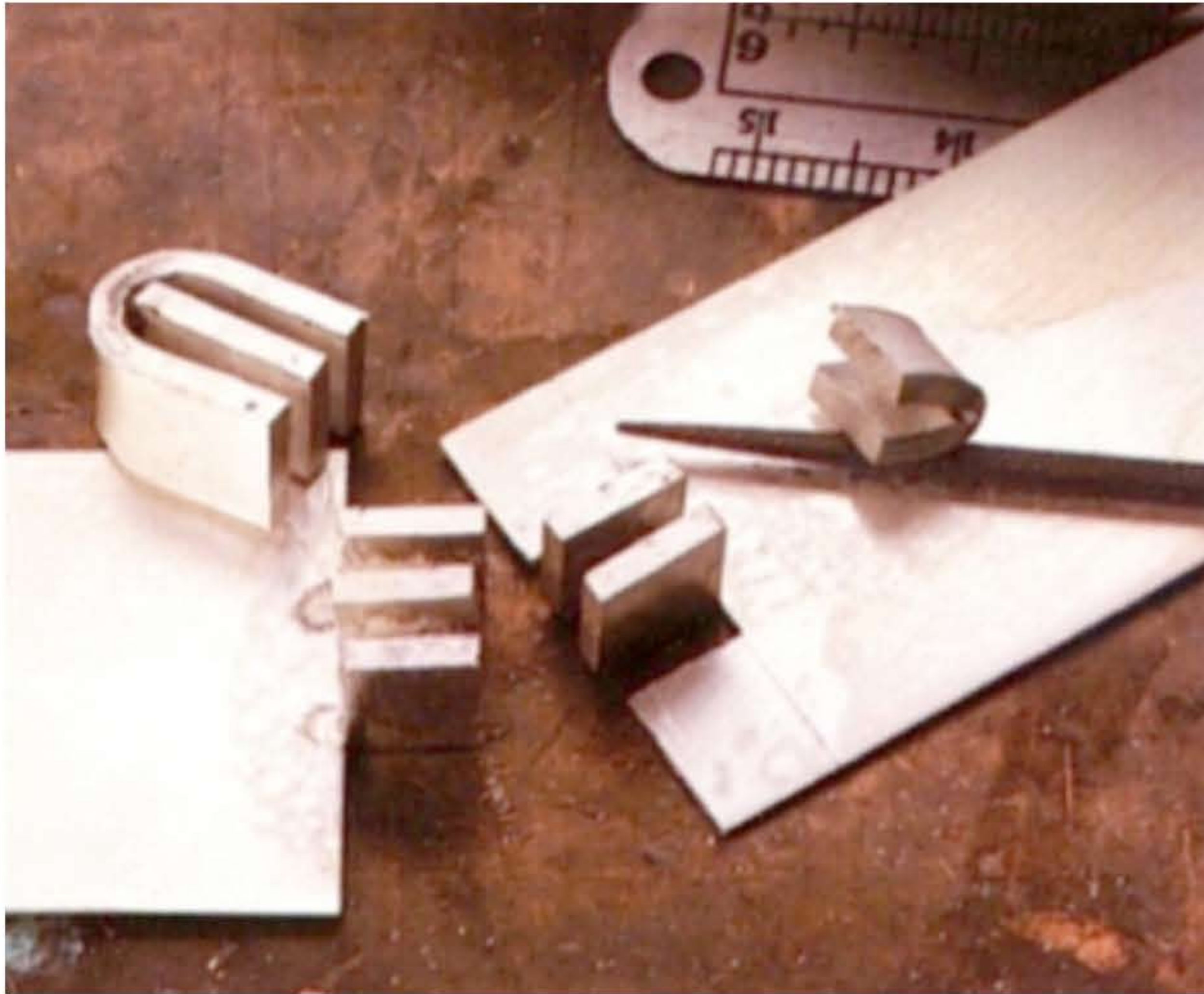
Drill a small hole (approximately one millimeter) in the center of each panel, then saw the squares out. String the pieces on a wire, clamp them into a vise, and file the edges uniform and smooth.

Stack the five panels together then slide #2 and #4 part way out of alignment as shown. Lay two short lengths of wire on top so one touches only #1,3,5 and the other only #2 and 4. These will be soldered in place to temporarily hold the units in proper spacing. Note that a wire has been fed through the holes to ensure that the pieces remain aligned. Solder this wire with tiny pieces of hard solder, taking pains that nothing drips between the segments where it would solder them together.

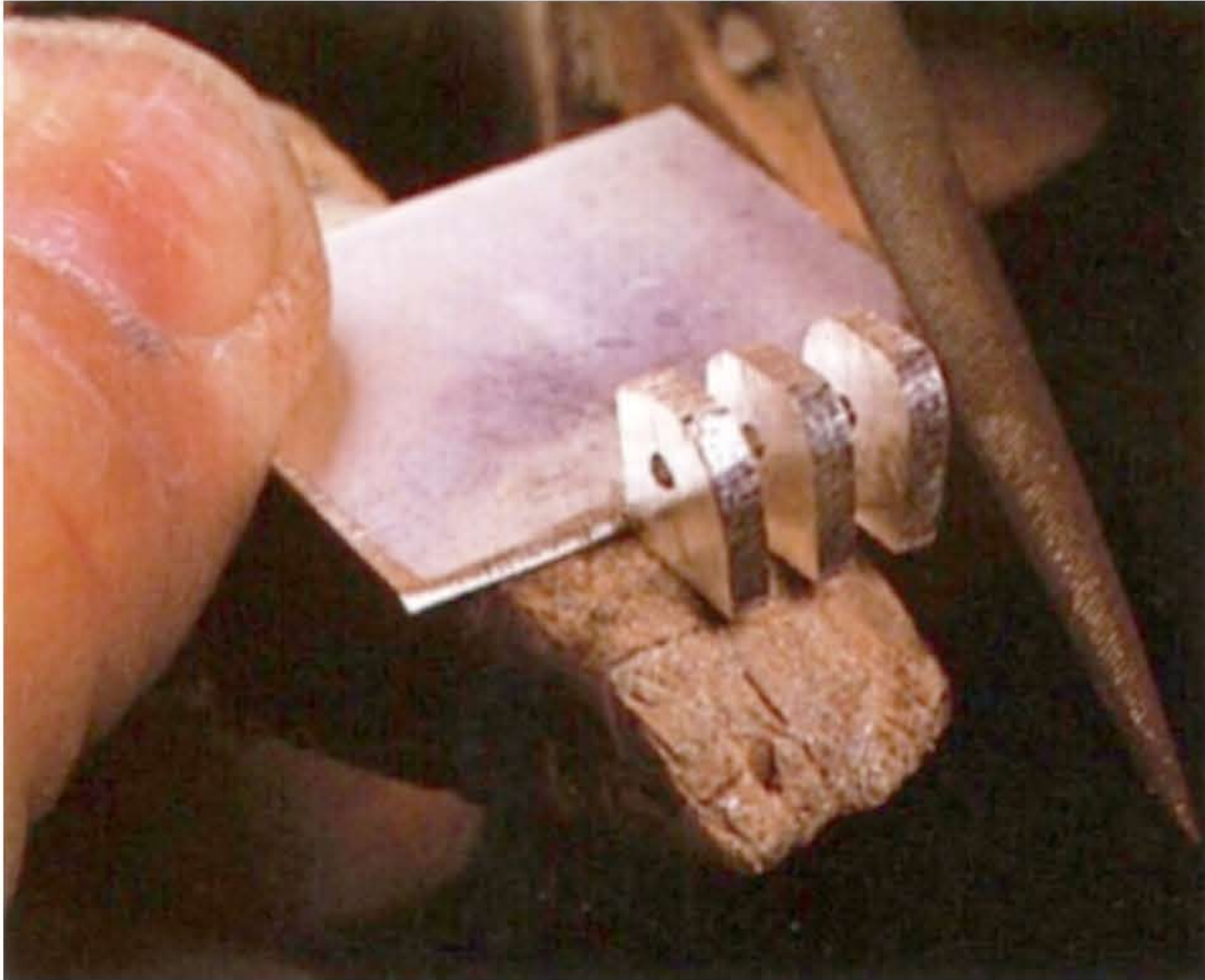
After quenching in water, clean the top surface with a fine-toothed file to prepare it for soldering onto the lid. Note that I keep the unit assembled for this step so the force of the filing won't distort the shape. Gingerly separate the two hinge components.



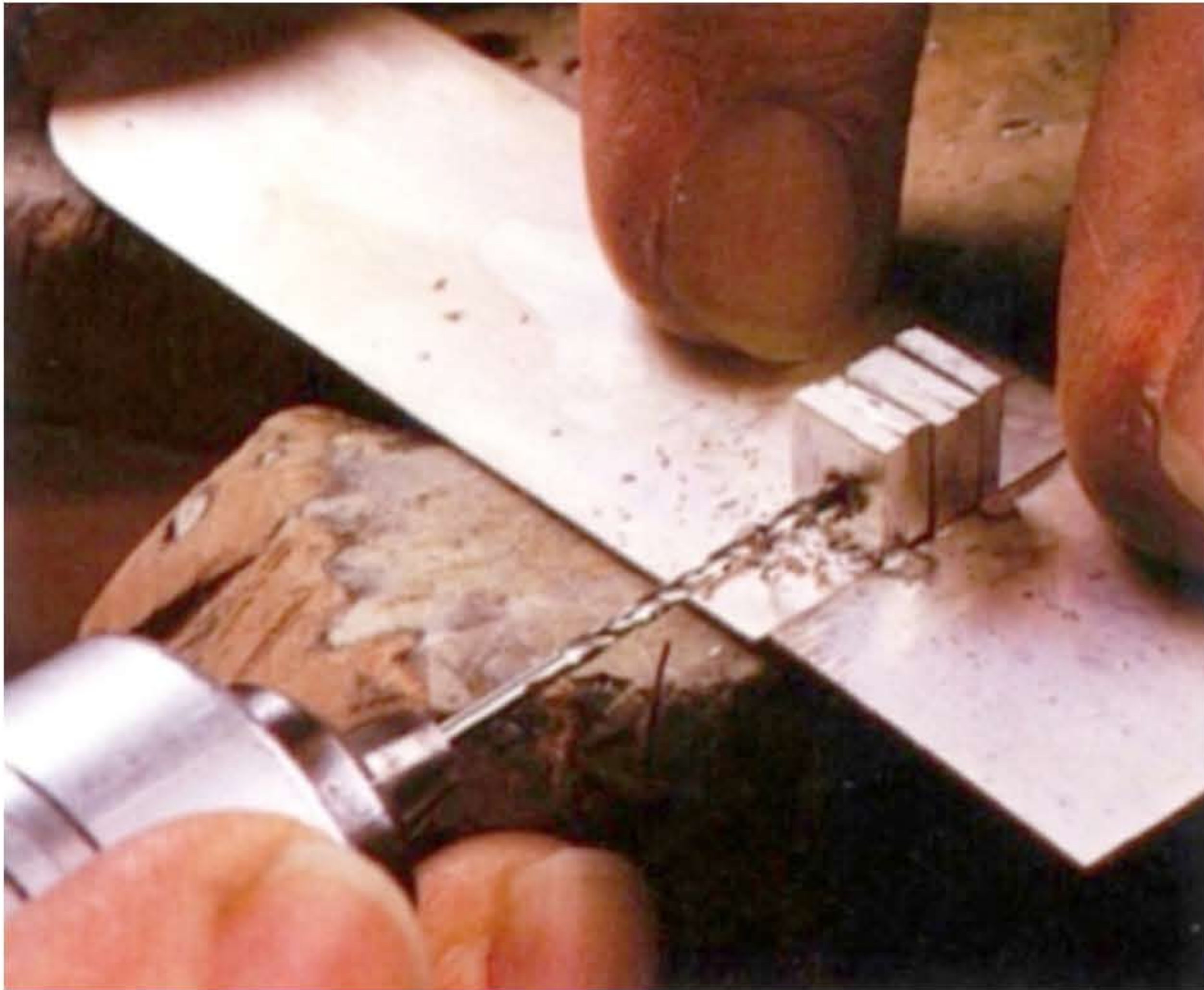
The first set of knuckles is soldered onto the lid, typically centered. After confirming the joint, the space between knuckles and the holding rod is sawn off.



Careful sawing is necessary to create a hinge that moves smoothly.



Use files to trim the pieces, checking often so you don't take away too much.



Assemble the hinge components and drill a hole through the five panels.



The hinge is assembled with a pin, then the entire unit is set into the upside-down box. The top section is soldered into the box, then the bottom is inserted and soldered.



In this box, the lid has been left long to fit into a notch cut into the box. This makes a subtle and elegant closure.



When you are sure the lid is working correctly, solder the bottom into the box.



The finished box.

Attaching the Knuckles

Working on what will be the underside of the lid, mark the centerline. This is most easily done by setting the dividers to a spacing that is, by eye, a little larger than half the width. With one leg overhanging the panel on the left, scribe a short line. Lay the leg of the divider overhanging the right side and repeat the process—the result is two lines that indicate the center of the sheet.

Apply a film of flux and center the three-knuckle unit so its edge is even with the edge of the panel. Lay a piece of solder at each end of each piece and heat until the solder flows. Rinse, pickle and dry the piece.