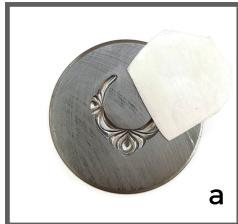




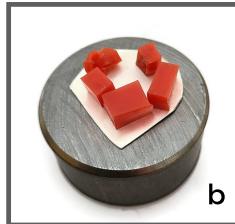
# Hollow Hoop Earrings

by Annie Pennington

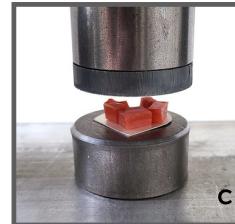
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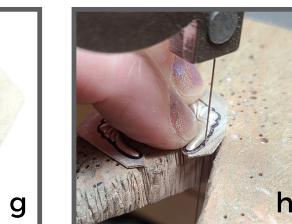
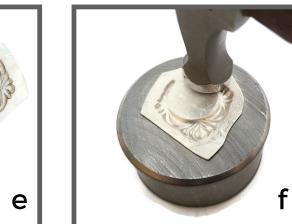
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## Make the Impressions

1. Cut four pieces of 22- or 20-gauge fine silver slightly larger than the impression die design. Anneal the silver (a).
2. Place one piece of silver on top of the impression die. Place tiny pieces of 95 durometer urethane on the silver over the design of the impression die (b).
3. Center the die on the lower platen of your press, and use a 2" tool-steel pusher to press the silver into the die (c). Release the pressure, rotate the die approx. one-quarter turn, check that the metal is aligned in the die, and press again. Repeat 1-3 times.
4. Anneal the silver, and repeat to press until you're satisfied with the impression. If you need to get detail in certain areas, use fewer and smaller pieces of urethane in those spots (d). If your metal is stuck in the die, use a bench knife or chisel along the edge to carefully pop the silver out of the die.
5. Repeat to make a total of four impressions (e). (All instructions moving forward should be repeated as needed to make a pair of hollow earrings.)
6. Place the silver into the die. Hold the silver in place, and use a plastic or rawhide mallet or planishing hammer to strike around the perimeter of the impression (f) to create a sharp bend between the flat portion of the die and the design.



## Trim the Impressions

7. Use a fine-tip permanent marker to trace around the impression on the top of the silver to create a border (g).
8. Use a jeweler's saw and a 4/0 or 6/0 blade to cut out the impression, following the outside of the marked line as a guide (h-i).

## Flatten the Edges

9. Place a piece of 400-grit abrasive paper on a flat, steel bench block (j). Using a circular and figure-8 motion, sand the bottom of the impression until it's flat (k).
10. Make sure approx. 1mm of the bottom edge is flat to allow for cleanup.

## Tools & Supplies

- 22- or 20-gauge fine silver sheet
- 20-gauge sterling silver wire
- 24-gauge sterling silver wire
- Jeweler's saw with 4/0 or 6/0 blade
- Soldering/annealing station; hard, medium, and easy silver solder
- Hoop earring impression die
- Tiny urethane pieces
- 20-ton hydraulic press
- Bench knife or chisel
- Hammers: plastic or rawhide mallet, planishing, chasing or riveting
- Fine-tip permanent marker
- Abrasive paper and polishing wheels: assorted grits and types
- Flat, steel surface
- Files: flat/half-round hand file and needle file, three-square (triangle) needle file, round needle file
- Scribe or awl
- Extra-fine tip chainnose pliers
- Flex shaft
- 24-gauge drill bit; larger drill bit
- Liver of sulfur and other finishing and polishing supplies
- Small pot, baking soda (optional)

## Create the Hollow Forms

- 11.** Place one impression back-side up on a soldering pad. Apply flux, and place pallions of hard silver solder along the edge (*l*).
- 12.** Heat the silver until the solder flows (*m*). Let the silver cool until it's no longer glowing, then quench and pickle if necessary.
- 13.** Apply flux to a solder-free impression. Align these two impressions, and use cross-locking tweezers to hold the two together (*n*).
- 14.** Heat the assembly evenly until the solder re-flows and runs around the perimeter of the seam.
- 15.** Let the assembly cool, and pickle it. Check the seam for any holes, and repeat as necessary. **NOTE:** If there is no hole along the seam, do not heat it again, or the gases trapped inside will expand and the hollow form may split or burst.



## Prepare the Hollow Form for Earring Findings

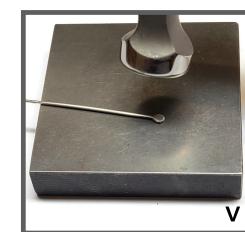
- 16.** Use hand files and needle files to smooth the edges of the hollow form. Make sure to leave a small border/edge around the entire shape (*o*).
- 17.** Hold the hollow form securely against a bench pin, and use a flat hand file to file the top two ends of the form flat (*p*). The flat area on both ends should be approx. 3/32" long.
- 18.** Use a triangle needle file to file a parallel groove centered on both ends. Once the groove is established, use a round needle file or cylinder bur to widen the groove into a rounded channel approx. 1-2mm wide (*q*). If your groove is deep enough, you should be able to press a scribe or awl at the center of the groove and create a pinhole opening into the hollow form.

## Create the Findings

- 19.** Form a 2.5-3mm wide strip of 24- or 22-gauge sterling silver into a tight u-shape (*r*). Repeat to form a second u-shape.
- 20.** File the rounded end until it's smooth, and adjust the grooves in the hollow form as needed to ensure a flush fit.

## Attach the Findings

- 21.** Apply flux to the rounded end of the strip, and sweat medium solder onto it (*s*). Quench and pickle, if needed.
- 22.** Use crosslocking tweezers to hold the strip in place on the hollow form, and heat until the solder re-flows and attaches the two elements.
- 23.** Repeat to solder the second strip to the other end of the hollow form (*t*). Pickle and rinse the form.
- 24.** Use flatnose pliers to adjust both strips so they stick straight up from the hollow form and are parallel to each other (*u*).



## Make the Ear Wires

- 25.** Draw a large bead on (ball-up) the end of two pieces of 20-gauge and two pieces of 24-gauge (optional) sterling silver wire. Pickle the wires.
- 26.** Use a planishing hammer to flatten the balled-up end until it's the same thickness as the wire (*v*).



## Create the Hinge

- 27.** Insert the flattened end into one of the u-shaped strips on the hollow form (*w*). Adjust the strip as needed to accommodate the wire. Use a scribe



to mark the strip where the center of the flattened end is located (*x*), then remove the wire. Mark the center of the flattened end of the wire (*y*).

**28.** Drill a 24-gauge hole perpendicularly through both legs of the strip (*z*) and the center of the flattened end of the wire (*aa*).



**29.** Trim the strip ends approx. 2mm above the hole on each side, and use a file and abrasive discs to round the ends (*ab*).



**30.** Place the end of a much larger drill bit on a hole, and twist it a few times to create a slightly beveled edge (*ac*). This will allow the heads of the hinge rivet to be set flush with the surface of the metal.



**31.** Insert the flattened end of the wire into the trimmed strip, and thread a 24-gauge wire through all three holes (*ad*). Trim the wire to approx. 1in. long.



## Form the Catch

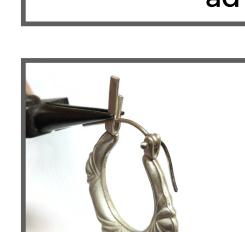
**32.** Create a gentle curve in the ear wire to complement the shape of the hollow form (*ae*).

**33.** Place the free end of the wire between the second u-shaped strip. Determine where on the strip the earring catch will be.

**34.** With the ear wire in place, grasp both strips above the catch location with extra-fine tip chainnose pliers and squeeze the ends together (*af*).

**35.** Still holding the catch, use a bench knife to spread the ends of the catch. Adjust the shape and opening of the catch as needed (*ag*). You should be able to insert and remove the ear wire with effort but without bending the wire.

**36.** Trim the ends of the catch as you did the hinge.



## Rivet the Hinge

**37.** Straighten the 24-gauge wire, and rest the balled-up end of the wire on a steel bench block (*ah*). Trim the end so that it extends above the strip the same amount as the thickness of the wire. File the end flat (*ai*).



**38.** Use a small ball-peen or riveting hammer to begin to mushroom the end of the wire to create a rivet head (*aj*).

**39.** Flip the earring over, cut the ball off the wire, and rivet this end of the wire.

**40.** Continue flipping and tapping until both ends of the wire spread into and fill the beveled edges of the hole on each side of the hinge (*ak*).

**41.** Trim the end of the ear wire to approx. 3mm past the catch, and round the end with a cup bur (*al*).



## Finish the Earrings

**42.** Use abrasive wheels, discs, papers, etc. to refine the earring and finish the surface as desired.

**43.** Apply a liver of sulfur patina to the earring, and use pumice powder to remove the patina from the high points and highlight the details. **NOTE:** To ensure there is no pickle trapped inside your hollow form, bring a small pot of water and baking soda to a boil, place your earrings in the pot, and let it boil for a few minutes. Repeat with fresh water before applying a patina. Repeat with fresh water after applying liver of sulfur.

