

# CONNECTING IT COLD

*Joining parts without fire*

In kindergarten, the best part of the day was arts and crafts, where I discovered the rapture of vibrant paper and tempera paint in turquoise bottles — though the best projects were the ones that involved the little box of brass paper fasteners. I was delighted with those button-topped, two-bladed wonders that had the power to transform flat sheets of paper into moving, complex, 3D objects. I also adored the special grommet setter for threading strings through other things — using that tool was just heaven on earth. Years later I fell in love with rivets again in a metals class, and then, with the tap and die set from the tool closet, learned to create my own minute threaded holes and wire “screws.” Today, cold connections are my favorite way to work with delicate or flammable materials and to add movement with an industrial edge to a piece.

For this month's tips, I contacted Julie Jerman-Melka, of Flying Anvil Designs ([www.flyinganvil.com](http://www.flyinganvil.com)) and Christine Dhein, the assistant director of the Revere Academy of Jewelry Arts ([www.christinedhein.com](http://www.christinedhein.com)) for their insights on the cold connection.

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NEXT TIME

## WORKSPACE SETUPS

Have a tool, modification, or bench trick to share? Email us at [HDriggs@interweave.com](mailto:HDriggs@interweave.com), subject line “Cool Tools,” or write to Jewelry Artist, Attn: Cool Tools, 300 Chesterfield Parkway, Suite 100, Malvern, PA 19355. Please include your complete contact information with all submissions.



## JULIE JERMAN-MELKA

"I use several cold connections in my work, but the one I use most often is hollow rivets. Here are a few tips that make hollow riveting easier for me:

- I use thin wall tubing because it is easier to flare and hammer down.
- I make tiny punches from old drill bits and stone setting bars. I prefer the tiny punches because they allow my fingers to get

closer to the piece and I have greater control. I file the tip of the bur or bit to a pointed taper and then polish it to a mirror finish. I have made various size tapers that I use for different size tubing.

- I'd be lost without my tube cutting jig. It gives me precise cuts, and the thumb keeper holds the tubing secure while sawing the tube. The saw blade doesn't stick, and I end up with very few broken blades.
- My favorite hammer for flaring the tubes is my Geisonhammer. It doesn't slip off the punch and it is balanced for precise strikes."

## CHRISTINE DHEIN

"I learned to make this drilling jig from Julia Turner, a fellow instructor at the Revere Academy of Jewelry Arts in San Francisco. This simple tool makes layout and drilling disks for assembly with spacing rivets accurate and easy, every time! Follow these simple steps to create your own."

### MATERIALS AND TOOLS YOU NEED

Disk Cutter	Ruler	Masking tape
Shear	1.2mm drill bit & drill	1.2mm round wire
Scribe	Slightly larger drill bit	0.4mm copper sheet

1. Cut two squares from 0.4mm copper sheet. To determine the size of the squares, measure the diameter of the disk cutter to be used, and add 10mm.
2. Using the disk cutter, punch a disk from the center of one of the squares. Set aside and keep what remains of the square.
3. Flatten both squares, and tape them together face to face.
4. Using a centerpunch, create a guide for the drill bit before drilling two holes on diagonally opposing corners of the squares.
5. Rivet the two pieces together with flush rivets and remove the tape.
6. To begin to lay out the points for drilling, mark two lines that divide the circle in half, one vertically and one horizontally to create four equal quarters. Be as accurate as possible with the layout and drilling. Any errors will be repeated on every piece of jewelry made with this jig.

7. Scribe a circle on the back plate of the jig to be sure the holes are equidistant from the edge of the disk. Begin by setting a pair of dividers to 2.5mm. Press one leg of the dividers against the lip of metal inside the circle, and as you trace around the circle, use the other leg to scribe a smaller concentric circle.

8. Use a centerpunch to create divots at all intersections of the scribed lines; these will guide the drill bit. Be sure all centerpunch marks are equally spaced, and drill in each divot using a 1.2mm drill bit, which will accept 16-gauge riveting wire. Drilling the fifth hole in the center of the circle is optional.

9. Use a slightly larger drill bit to countersink the holes; countersinking will allow pieces to lie flat against the jig.

### TO USE THE JIG

1. Place a flattened disk, cut with the same size disk cutter, into the recessed area of the jig and tape it into position.

2. Flip the jig over. Using the holes in the jig as a guide, drill 1.2mm holes in the disk.

3. Remove the piece, replace with another disk of the same size, and repeat.

4. Countersink both sides of the holes on the drilled disks. Place the disks on top of each other, and the holes will align perfectly. Assemble with spacers and riveting wire.



done with a small, disposable butane torch. I like to think of them as a bridge technique between true cold connections and traditional torch use. Here's how Robert Danzik (PVC & Silver Brooch, page 35) makes them:

Hold each wire vertically at the top end in crosslock tweezers. Dip the end to be balled into paste flux. Heat the wire about 1/2" above

the wire. Gradually pull the wire down until the balled wires.

You'll also find the balled wire technique in Hadar Jacobson's *Folded Washers & PMC*, page 31, and Amy Martin's *Hammered Flexible Bangle*, page 17.

