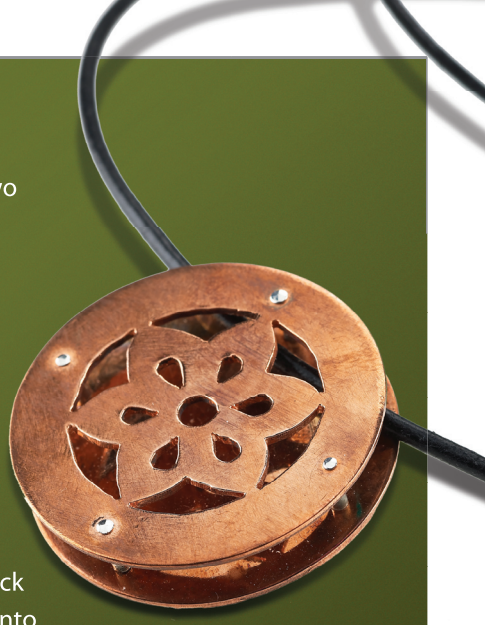
Cold Connections: Riveting

Want a riveting rivet project? Add depth to a piece by creating a stand-off rivet that features two designed discs. Here is the entire cold connections riveting project.



Lay out & cut design

step 1 Choose a design template and cut it out, leaving an edge that will extend past the edge of the copper disc. If you choose to draw your own custom design, make sure to leave at least 1/4" of space around the inside edge. This edge is where rivets will be placed.

step 2 Apply a thin layer of rubber cement to the surface of the copper disc and to the back of the design template; allow the rubber cement to dry slightly. Press the design template onto the copper disc, making sure it is centered. Allow the rubber cement to dry completely.

step 3 Using a center punch, make a dimple on the surface of the disc on the inside edge of each area of the design template that will be cut away. Using the 1mm drill in the flex shaft, drill a hole where each dimple was placed.

Please Note: Always wear safety glasses when using a flex shaft.

step 4 Secure the top of a saw blade into the top of a saw frame. Holding the copper disc with the design side facing up, thread the blade through the first drill hole. Slide the copper disc all the way up to the top of the blade. Secure the bottom of the saw blade into the frame so the blade is taut.

step 5 Place the copper disc on a bench pin. With smooth, even motions, begin sawing the outline of the design (use Bur-Life® as necessary to keep the blade lubricated). Once you've completely cut out the design, remove the copper disc from the blade. Repeat steps 4 and 5 until all areas have been cut out.

step 6 Using a needle file and sandpaper, smooth all edges of the cut-out copper design until they are smooth to the touch. Smooth the outside edges of both copper discs using files. Bring both discs to a high polish using a polishing wheel. For an interesting contrast, create a high shine on one disc, then use a 400-grit sandpaper to create a satin finish on the other disc.

Riveting the discs together

step 7 Use the saw to cut four 4mm-long pieces of sterling tubing. Use a file to smooth all edges. Mark the pierced copper disc where the four rivets will be placed using a permanent marker. **Please Note:** The markings should be approximately 1/8" inside the edge of the disc. Use a center punch to make a dimple at each marking. Use a 1mm drill attached to a flex shaft to drill holes through all the dimples. Smooth the holes and remove any rough spots using a file.

step 8 Place the pierced disc on top of the solid disc and tape them together. Drill through just the top and bottom rivet holes in both discs, using the previously drilled holes on the pierced disc as guides. Smooth the holes and remove any rough spots using a file. Remove the tape and separate the discs.

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Cold Connections: Riveting, continued

step 9 Thread the 18-ga. silver wire through one hole of the bottom copper disc. Set one 4mm tube (from step 7) onto the wire. Finally, place the pierced copper disc on top, allowing the wire to slide through the hole. Trim the wire, leaving approximately 1.5mm protruding from the top disc. Repeat this step with the second rivet hole.

step 10 Gently tap the top of each wire using a riveting hammer. Carefully flip the pendant over and use the riveting hammer to tap the wire coming out from the back. Continue this process until the rivets have formed on both sides.

step 11 Insert the drill through one of the previously drilled holes in the pierced disc. Drill a hole through the bottom disc, making sure you keep the drill perpendicular to the disc (this will ensure that the holes are aligned). Repeat for the remainig drill holes. Polish the rivets if needed.

supplies:

Description	Order #	Description	Order #
Dead Soft Copper Disc, 18 ga., 1 1/2"	**682-456**	Safety Glasses	**201-054**
Sterling Seamless Tubing, Hard, 1.1mm	**100-902**	Electronic 4" Digital Caliper	**115-189**
Sterling Round Wire, 18 ga.	**100-318**	Peddinghaus Goldsmith's Hammer	**112-403**
Adjustable Blade Saw Frame, 75mm	**110-054**	Slim Automatic Center Punch	**118-111**
Laser Gold™ Blades, 4/0	**110-304**	Premium Steel Bench Block	**115-315**
Bergeon Tubing Cutter	**113-000**	Swanstrom Pliers and Cutter Set	**111-026**
Bur-Life® Lubricant, Stick	**117-003**	Polished Steel Twist Drill	**349-087**
Friedrich Dick Needle Files, Set of 12	**114-765**	Assortment of Sanding Papers	**337-342**
Donegan Optivisor™	**113-208**	V-Slot Bench Pin & Clamp	**110-010**
C-Clamp Side-Mount Flex Shaft Stand	**117-261**	Rubber Cement	—
Foredom® SR 30 Flex Shaft	**117-534**	Permanent Marker	—