



Mixed Metal Heart

Author: Patti Bullard Ph.D.

Mixed Metal Heart

Difficulty: Easy



The beauty of mixed metals paired with a traditional heart shape is sure to bring joy to the jewelry maker as well as the lucky recipient of this fun-to-make-and-wear pendant. Considered to be an intermediate level of difficulty, this project utilizes techniques that include metal shaping, stamping, hammering, cold connections (riveting with copper tacks), and wire working.

We hope this tutorial will inspire new ideas and additional mixed metals projects that can be individualized with your own unique style of artistry. Wired Up Beads extends a special acknowledgment and heartfelt thank you to Sharilyn Miller for sharing her copper tack riveting technique with us.

Materials

- * Brass sheet metal, 24-gauge (2.5-inch square)
- * Sterling or nickel silver sheet metal, 24-gauge (1.5-inch square)
- * Copper sheet metal, 24-gauge (1.25-inch square)
- * Solid Copper Tacks, Size # 10 x 5/8 (4)
- * Sterling Silver Round Wire, dead soft 14-gauge (12 inches)

Tools

- * Classic Wubbers Round Nose Pliers
- * Classic Wubbers Medium or Wide Flat Nose Pliers
- * Large Wubbers Bail Making Pliers
- * Italian Heavy Duty Flush Wire Cutters
- * Large Hand Punch or drill to make holes that are approximately 3mm or 1/8 inch
- * Euro Punch Pliers— 1.80mm (Optional)
- * Permanent Marker
- * Metal Cutting Shears
- * Chasing Hammer
- * Euro Tool Texturing Hammer—Narrow Sharp Stripe/Dimples
- * Metal Stamp/Punch—Heart Design
- * Steel Block
- * Files—Flat metal (cut 2)
- * Disposable Two-Sided Acrylic Nail File--200/400 grit (optional)
- * Quad Wooden Dapping Block
- * Wooden Punch Set
- * Euro Tool Brass Brush
- * Sunshine Polishing Cloth

Safety Warnings

Always wear safety glasses to protect your eyes.

Handle all sheet metal carefully to prevent cuts

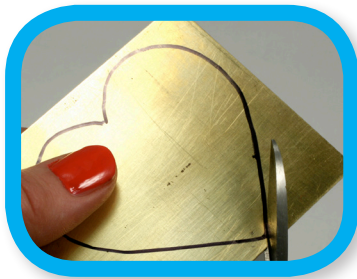
NOTES

Step 1

With scissors, cut out the three different heart patterns included in the Appendix. Using a permanent marker, trace each heart onto the piece of sheet metal that is designated on each pattern.



Step 2



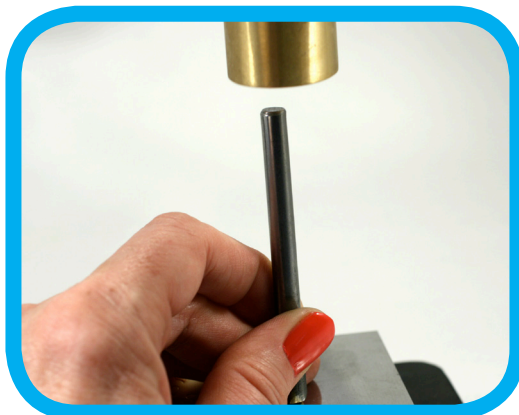
Cut out the metal heart shapes using your metal cutting shears. Take care not to cut yourself on the sharp edges of the metal. If the hearts are not completely flat after cutting, place them on a steel block and flatten them with a rawhide mallet. File all rough edges smooth using a flat metal file (cut 2) and/or a disposable acrylic nail file (two-sided, 200/400 grit), which can be ordered from our website or bought at Sally's Beauty Supply.

TOOL TIP

A flat metal file (cut 2) is very helpful for smoothing the edges of 24-gauge sheet metal. Because the teeth of the file run in one direction only, it is important to make contact with the metal when you push it away from you, but to lift the file away from the metal as you move it toward you. This will help prolong the life of your tool.

Step 3

Place the brass heart onto a steel block. Using random placement of the metal heart punch, stamp hearts onto the metal using the punch and a brass mallet. It will give a nice design effect to let some of the hearts lap off the edge of the metal.



NOTES

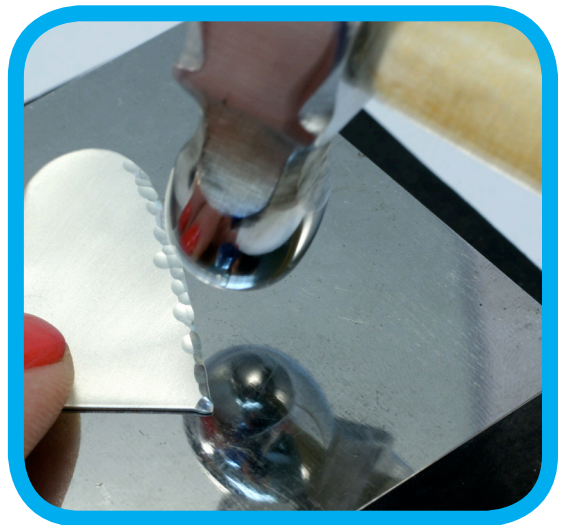
Step 4

Using the small, back end of your chasing hammer, tap just along the outside edge of the brass heart shape. Light, controlled taps will leave a hammered border without overly distorting the edge, resulting in an attractive band of texture that should be approximately 1/8 of an inch wide.



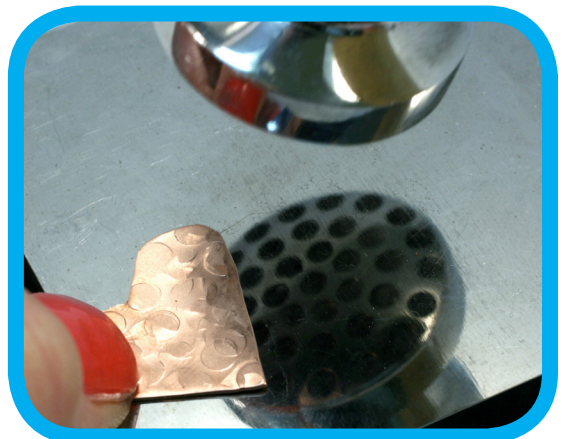
Step 5

Repeat Step 4 along the edge of the silver heart shape, leaving a hammered border that is approximately 1/8 of an inch wide.



Step 6

Using the dimpled side of the Euro Tool Narrow Sharp Stripe/Dimple Texturing Hammer, texture the small copper heart from edge to edge. Then, finish the outside edge of the copper heart with the back end of your chasing hammer as recommended in Step 4, but making a slightly narrower border that is about 1/16 of an inch wide.



Step 7

Using the guidelines on the small heart pattern included in the Appendix, punch or drill holes in the copper heart. The holes should be approximately 3mm or about 1/8 inch in diameter. A hand punch sold by Harbor Freight works well for this project. After punching the copper heart, center it on the silver heart and use the holes to mark the placement for punching the silver heart. After the silver heart has been punched, use it to mark the brass heart for punching. Stack the three hearts to check the alignment of the holes.



TOOL TIP

The Harbor Freight Hand punch is an excellent tool, but because of its size, it is difficult to place the punching pin in the precise spot that has been marked. The punching pin on the Euro Punch Pliers (1.80mm) is easy to place in the right spot. You may find it helpful to use the Euro Punch Pliers to punch a hole that can be easily “found” with the punching pin on the Harbor Freight punch. The jaws on the Euro Punch Pliers are deep enough to “pre-punch” the copper and silver hearts used in this tutorial, but will not reach far enough from the edge to punch the brass heart. However, if the punch is slightly off on the brass heart, you can easily ream it a bit with a diamond file. Because of the size of the head of the tack, a small adjustment of this sort on the brass heart should not affect the riveting process or the look of your pendant.

Step 8

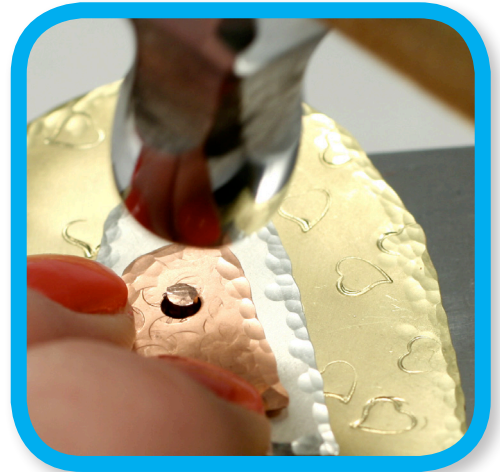


Place a copper tack through the corresponding holes of the three hearts so that the large head of the tack is on the backside of the brass heart. As the three hearts are held snugly together and using Heavy Duty Flush Cutters, flush cut the end of the tack so that it extends approximately 1/16 of an inch beyond the top of the copper heart. After trimming the tack, lay the three hearts on a steel block, with the tack in place.

NOTES

Step 9

Using the small end of a chasing hammer, start to gently and squarely tap the center of the trimmed end of the copper tack. It is best to work slowly and with light pressure so that the end of the tack begins to flatten evenly rather than bend over to the side. Once the tack has begun to widen, carefully tap around the perimeter, sloping or beveling the edges and smoothing them down. Cautiously check the finished rivet for sharp edges. If needed, continue to smooth the rivet by hammering and/or filing. After finishing the first rivet, the three hearts should be held together snugly enough so that there is little movement between them.



TOOL TIP

Copper tacks should be made of solid copper rather than a copper-plated metal. They are available at local hardware stores or may be ordered from www.wiredupbeads.com.

Step 10

Repeat Steps 8 and 9 to form the second rivet. When this is completed, the three hearts should be held tightly in place, with no movement evident between the three pieces.



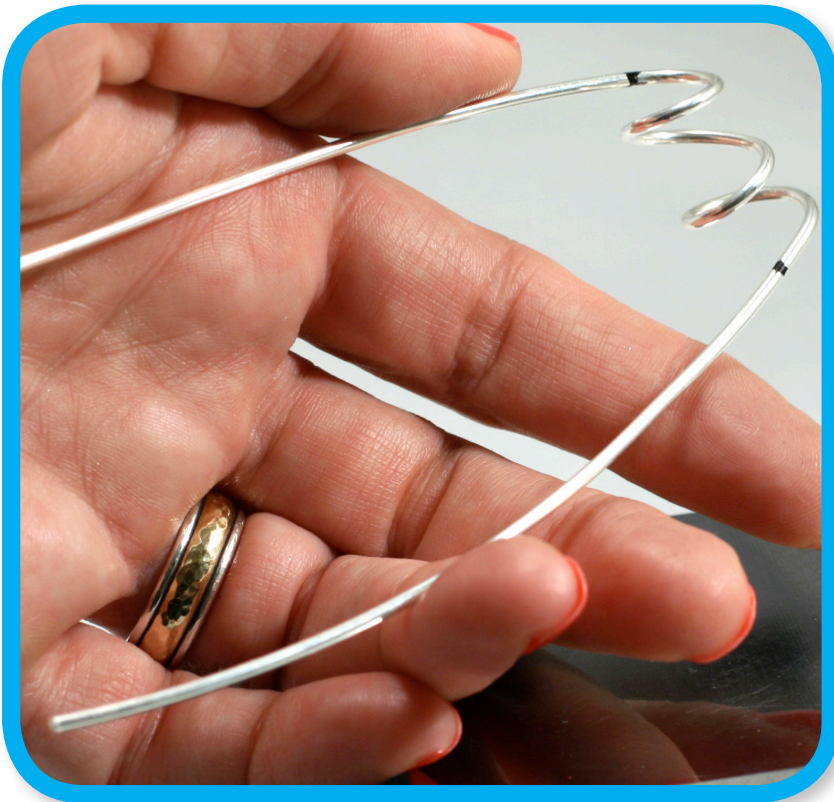
Step 11

Flush cut both ends of a 12-inch piece of dead soft, 14-gauge round sterling silver wire. Measure 4 inches from each end of the wire and mark with a permanent marker.



Step 12

Place one of the marks on the 14-gauge wire on the edge of the larger jaw of a pair of the Large Wubbers Bailmaking Pliers and form a curved bend in the wire as shown. Begin to coil the wire, rolling it in the direction such that the coil is moving off the end of the large jaw. While making this coil, it will be necessary to periodically open the jaws of the pliers to reposition the wire so that it can continue to be coiled. To add character and interest to your bail, you may want to vary the pressure used to hold the wire as you coil so that the coils have some variation in circumference and spacing. Coil until you have wrapped the large jaw of the Wubbers Bailmaking Pliers three times around and both ends of the wire are pointing in the same direction. If needed, adjust the length of the wire ends so that they are the same. This can be done by slightly unrolling the coil on the side that has the shorter end and rolling the opposite, longer end of the wire to match in length.



NOTES

Step 13



With a pair of Wubbers Classic Round Nose Pliers, begin forming a small loop on one end of the wire that will form the bail. The open space inside this loop should measure approximately 3mm or 1/8 inch in diameter. Continue rotating the loop with the Round Nose Pliers, turning it as far as possible without catching the second jaw in the coil. At this point, grasp the coil in the jaws of a pair of Wubbers Classic Medium or Wide Flat Nose Pliers. Continue making a tight coil by rotating the wrist that is holding the pliers and simultaneously pushing and curling the long part of the wire with your other hand. Stop coiling when it measures about 5/8 inches across the middle of the coil and the length of the bail measures approximately 1 1/4 inches from the bottom of the coil to the top of the bail.



TOOL TIP

Using a pair of calipers, locate the point on one of the jaws of the Wubbers Classic Round Nose Pliers that measures 3mm in diameter. For convenience, mark that point with a permanent marker, which can later be removed with rubbing alcohol.

TOOL TIP

When making wire coils, use just enough pressure to grip the wire firmly with the Wubbers Classic Medium or Wide Flat Nose Pliers. If excess pressure is used when gripping the coil, marring may result. A little practice combined with the use of Wubbers Pliers can greatly reduce marring and in most cases even eliminate it.

Step 14

Repeat Step 13 and coil the second end of the wire on the bail. Make any needed adjustments to the shape so that it looks like the bail shown in the photo. Place the bail on the heart pendant and mark the appropriate placement for the rivets that will secure it into place. Prepare for riveting by punching holes in the positions marked.

Step 15



You may wish to add some dimension to the edge of your pendant. To do so, use the Quad Wooden Dapping Block and a medium-sized Round Wooden Punch to gently curve and shape just along the edge of the brass heart. Start in the depression of the wooden block with the least amount of curve, placing the edge of the heart near the center of the depression. With a chasing hammer, tap the wooden punch on the edge of the heart, producing a slight curve in the metal. Repeat around the perimeter of the heart, sliding the punch around the edge and adjusting the heart

within the depression as needed. It may be helpful to move to a steeper depression in the block to add the finishing touches. The curve should be subtle enough as well as close enough to the edge of the brass heart so that it will not distort and/or raise the edges of the silver and copper pieces.

Step 16

Using the techniques described in Steps 8 and 9, rivet the bail onto the heart pendant using the remaining two copper tacks.



NOTES

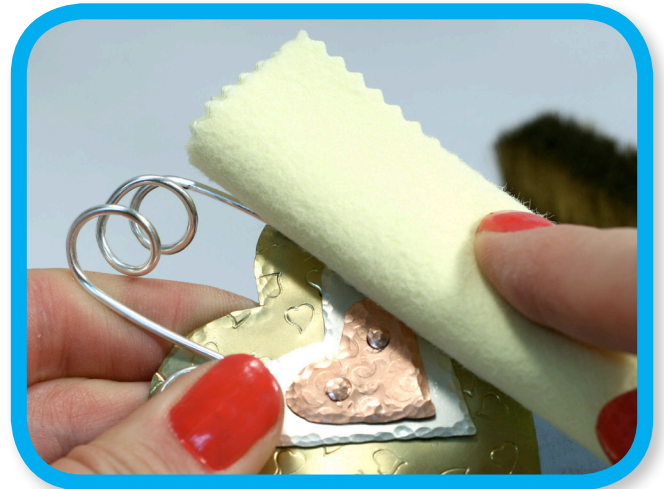
Step 17

Once the heart pendant is completely assembled, it is time to polish it. To help ensure a flawless finish, begin by brushing the pendant thoroughly with a soft Euro Tool Brass Brush. This will even out the surface of the metal, prepping it for a beautiful shine. The piece may now be hand finished or tumble polished. For more information about tumble polishing, please visit our free tutorial, [Tumbling Magic 101](#).



Step 18

A Sunshine Cloth is an excellent tool for hand polishing. Wrap it around a flexible support such as an acrylic nail file. A flexible support makes it easier to work with the slightly curved surface of the pendant. Briskly polish the heart with the Sunshine cloth, and watch the flawless shine begin to appear.



Appendix

Brass



Silver



Copper