

Soldered Chandelier Earrings – Using the Wubbers Half-Round Mandrel Pliers

By Gwen Youngblood

Wondering how to use your new Wubbers Half-Round Mandrel Pliers? A good place to start is fabricating custom findings. The only limit is your imagination.



Materials List

- 16 gauge sterling silver wire
- Fine silver wire, any gauge
- Variety of sterling silver jump rings
- Solder – medium and easy
- Headpins
- Beads/pearls for charms
- Ear wires

Tool List

- Wubbers Jumbo Half-Round Mandrel
- Permanent marker (fine tip Sharpie)
- Wubbers Classic Medium Flat Nose Pliers
- Wubbers Classic Chain Nose Pliers
- Wubbers Classic Round Nose Pliers
- Safety glasses
- Pro-Polish Pads or light sandpaper
- #2 Flat or half-round hand file
- Shop towel
- Butane torch
- Liquid flux in a spray bottle
- Fine tip tweezers
- Pickle
- Metal Shears
- Set of needle files
- Flush cutters rated for at least 14 gauge wire
- Bench block and pad
- Plastic mallet or rawhide mallet
- Fine sanding sponge
- Quench bowl of plain water
- Soldering pick --clean
- Copper tongs
- Butane

Step 1

Wrap sterling silver wire around larger jaw of Wubbers Jumbo Half-round Pliers several times. Use the tips of thumbs and forefinger to push wire tightly against the jaw of the pliers.

A plastic mallet or rawhide mallet can be used to tap on the wire and conform it against the jaw of the pliers. This will “sharpen” the shape achieved.



Step 2

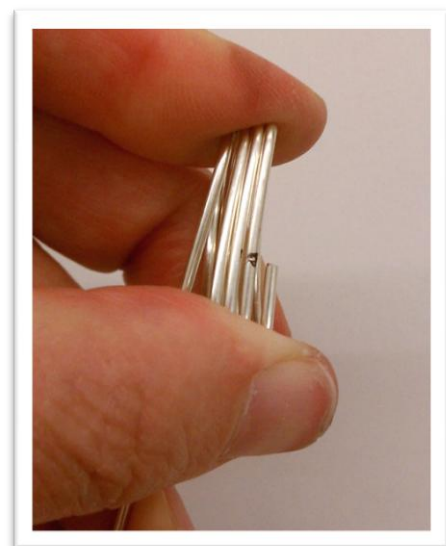
Remove the coil of wire from the jaw of the pliers.



Step 3

Trim the exposed end of the wire to be flat, i.e. flush cut.

Using a fine-tipped permanent marker, mark a spot on the first coil in line with the flush-cut end of the wire.

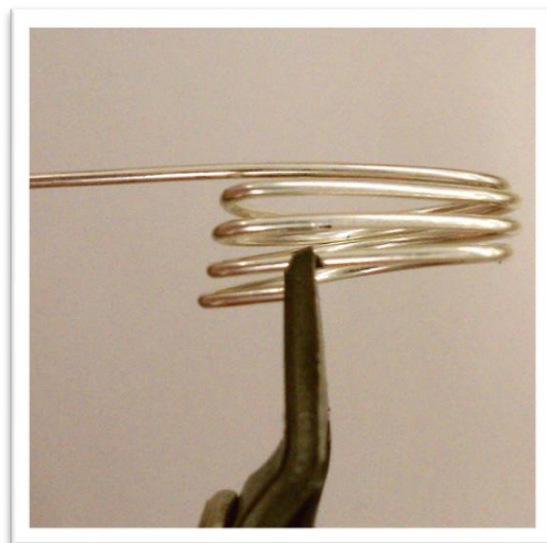


HINT: The back of the flush cutters provides the flat cut.

Step 4

Place the flush-cutters on the mark. The cutting jaws should be oriented with the flat back of the cutters facing away from the flat end of the wire. Cut the wire.

ALWAYS wear safety glasses when cutting wire and metal – small pieces of wire or metal can fly into unprotected eyes.



Step 5

A link shaped like a capital “D” will result.

Repeat Steps #3 and #4 to produce a second “D” link.

Pro-polish Pads can be used to remove any remaining permanent marker from the metal.

If there are any sharp places on the end of the wire, use the flat hand file to gently file the edge to remove the rough spots and refine the shape. Hold the end of the wire flat against the surface of the file. Push the file away from you to remove the offending metal.

NOTE: Jeweler’s files only work on the “push” – no need to work the file back and forth.



Step 6

Using the Wubbers classic medium flat nose and chain nose pliers, close the links tightly. The seam must be very tight in order to properly solder the links closed.

Repeat for all the jump rings.



Step 7

Arrange the jump rings adjacent to the “D” link until a pleasing configuration is achieved.



Step 8

Cut several small pieces of **Medium** solder to solder closed the “D” links and jump rings. An easy way to solder the links closed is to place a small piece of solder on the soldering surface and place the seam of the link *on top* of the solder.



Spray the link with flux. Light the torch and warm the link to dry the flux to a white powder. Once the flux is dry (white powdery), move the torch closer and apply more heat to the link. Keep the torch moving slowly. The flux will begin to change color. When the flux looks like dark syrupy caramel, the solder is ready to flow. A bright silvery flash of flowing solder will appear in the seam. Remove the heat quickly to prevent the solder from over-flowing.

Quench the piece in the bowl of water. Using only the copper tongs, place the piece in the pickle to clean. Leave the piece in the pickle for several minutes.

Using only the copper tongs, retrieve the piece from the pickle and rinse in the bowl of water. Dry with a shop towel; use a fine sanding sponge to remove any remaining discoloration.

Use the needle files to refine the solder seam if needed.

Repeat for all the jump rings.

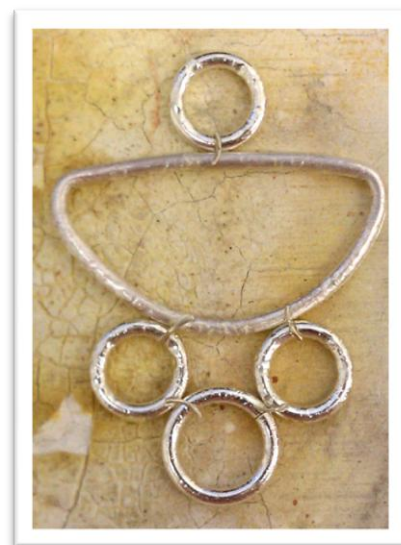
Step 9

Once all the “D” links and jump rings are soldered closed and cleaned, arrange the elements in the previously determined configuration. See Step 7.

Make sure the jump rings are touching the “D” link. Orient the soldered seams of the jump rings to touch the “D” link.

Cut small pieces of **Easy** solder – long, thin pieces work well. Place a piece of Easy solder across each junction where a jump ring is touching the “D” link.

Spray flux on the entire assembly.



Step 10



Light the torch and warm the assembly to dry the flux to a white powder. Once the flux is dry (white powdery), move the torch closer and apply more heat to the link. Keep the torch moving slowly. The flux will begin to change color. When the flux looks like dark syrupy caramel, the solder will flow. A bright silvery flash of flowing solder will appear in the seam between the “D” link and jump ring. Remove the heat quickly to prevent the solder from over-flowing.

Quench the piece in the bowl of water. Using only the copper tongs, place the piece in the pickle to clean. Leave the piece in the pickle for several minutes.

With the copper tongs, retrieve the piece from the pickle and rinse in the bowl of water. Dry with a shop towel; use a fine sanding sponge to remove any remaining discoloration.

Use the needle files to refine any of the solder seam if needed.

Repeat for the second “D” link.

Step 11

Cut small pieces of the **Fine** silver wire. Place the pieces of wire on the soldering surface.

Light the torch and heat each piece of wire. The piece of wire will gradually melt and form a small ball. Once the ball is formed, remove the heat and allow the ball to cool until the red is gone. Quench in the bowl of water.

Occasionally, a piece of the soldering surface or firebrick will adhere to the ball. Usually, quenching in the water removes this. If not, place the ball in the pickle for a few minutes, then remove and rinse in the bowl of water.

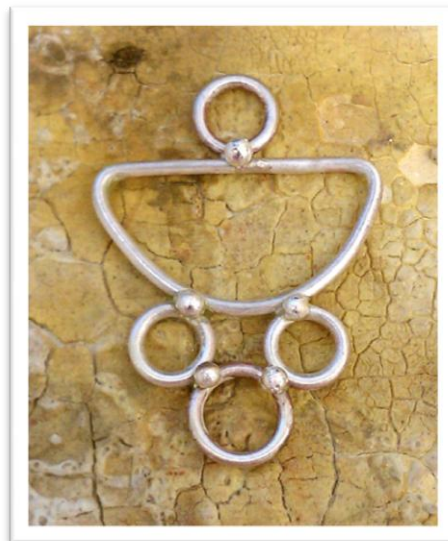


Remember: Use only the **copper tongs** when placing items in or removing items from the pickle.

Step 12

Place a silver ball on each junction point. If there is solder clearly visible in the junction and the ball is in contact with the solder, no additional solder is needed. If it is not clear that there is sufficient solder in the junction, cut a tiny piece of **Easy** solder and place in the junction, under the silver ball.

Spray flux on the entire assembly.



Step 13

Light the torch and warm the assembly to dry the flux to a white powder. Once the flux is dry (white powdery), move the torch closer and apply more heat to the link. Keep the torch moving slowly. The flux will begin to change color. When the flux looks like dark syrupy caramel, the solder will flow. A bright silvery flash of flowing solder will appear under the silver ball. Remove the heat quickly to prevent the solder from over-flowing.

Quench the piece in the bowl of water. Using only the copper tongs, place the piece in the pickle to clean. Leave the piece in the pickle for several minutes.

Repeat for the second "D" link.



Step 14

Using only the copper tongs, retrieve the pieces from the pickle and rinse in the bowl of water. Dry with a shop towel; use a fine sanding sponge to remove any remaining discoloration.

Use the needle files to refine any of the solder seams if needed.



Step 15

Using the headpins and beads/pearls, fabricate the charms and attach to each piece. Attach the ear wires.

OPTIONS:

- a. Instead of using the small silver beads, wrap the junction points with a fine gauge, contrasting wire.
- b. Texture "D" link and jump rings.
- c. Patina the earrings with Liver of Sulfur.



Review Questions

- 1) The back of the flush cutters provides the flat cut.
 - a) False
 - b) True
- 2) Flux is used to clean the pieces after soldering.
 - a) False
 - b) True
- 3) What wire is used to form the silver decorative balls?
 - a) Fine silver
 - b) Sterling silver
 - c) Silver filled
- 4) Only copper tongs are used in the pickle.
 - a) False
 - b) True
- 5) What color is the flux when the solder is ready to flow
 - a) Dark, syrupy caramel
 - b) White, powdery
 - c) Clear