

Making a Forged Bangle



W Forging - Wikipedia

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Forging is a manufacturing process involving the shaping of metal using localized compressive forces. The blows are delivered with a hammer (often a power hammer) or a die. Forging is often classified according to the temperature at which it is performed: cold forging (a type of cold working), warm forging, or hot forging (a type of hot working). Forging has been done by smiths for millennia; the traditional products were kitchenware, hardware, hand tools, edged weapons, cymbals, and jewellery.

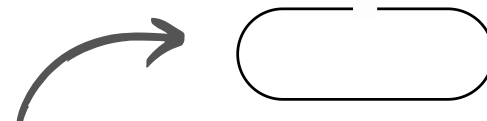
YOU WILL NEED:

- 170mm x 4mm round wire
- saw frame & blade
- soldering kit
- half round pliers
- file
- permanent marker
- ruler
- raw hide mallet
- planishing hammer
- bangle mandrel

This is a design made many times before. It is currently on sale from John Garland-Taylor

1. MAKE A PILL SHAPE

Anneal the wire, quench & dry. Create a lozenge shape with half round pliers or with soft hammer so that you have a flat middle section for the best soldering job. Run the saw blade through where the two ends meet to make the perfect join.



2. SOLDER THE JOIN

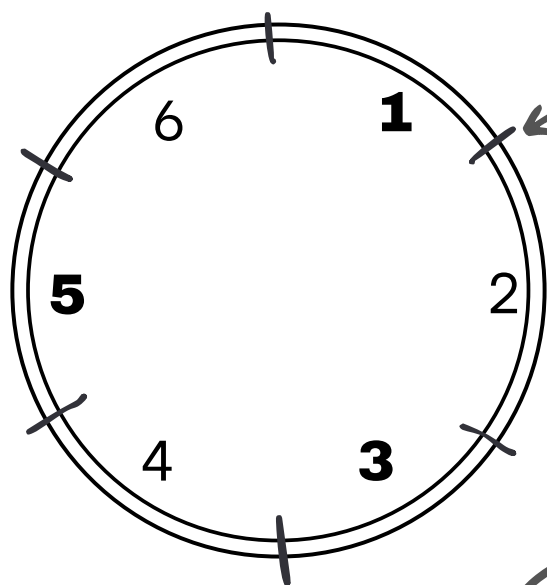
Once the two sides match perfectly, both the face to be soldered and the position of the wire lines up (marrying up/kissing) wipe with a little flux (borax) where you'd like to keep the area clean and the solder to flow - not too much or spread out too far. Take the minimum amount of hard solder (you only need enough to fill the tiniest gap not along the wire) and place either on top, underneath (let gravity & weight of metal keep it still) or pick solder it. Quench, pickle, rinse & dry.

3. MAKE THE BANGLE ROUND, CLEAN & POLISH

Use a rawhide mallet to gently hammer the long ends of the pill down onto the workbench to open the shape. This can then be placed on a steel bangle mandrel to make perfectly round. Look for the high points (where the wire sits away from the mandrel) and tap down, as the mandrel is tapered it's good to take the work off, turn it around and repeat. Remove any excess solder, deep file marks and anything that would remain in the hammered piece. Polish the bangle.

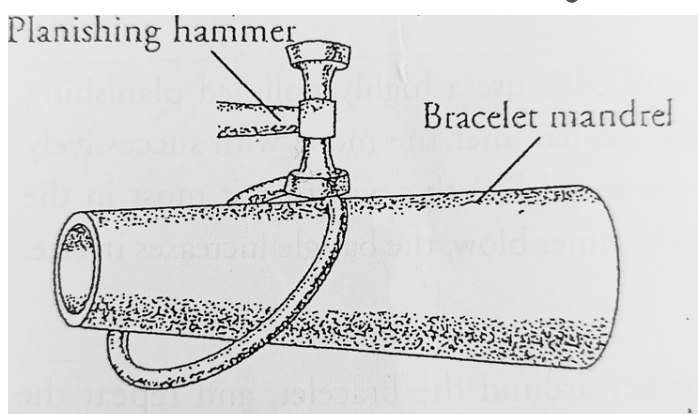
4. MEASURE THE AREAS TO BE HAMMERED

Divide the bangle into six equal areas, (conscious of the solder joint) and mark with a sharpie pen, mark both sides by drawing a circle around the wire at each of the six points. These are the segments that will be hammered (1-6). Focusing on alternate segments (1, 3, 5 & 2, 4, 6) you will hammer one side (1, 3, 5), turn it over then hammer the remaining three segments (2, 4, 6). This will create the beautiful finished look. Draw a guide on paper in case you have to re-mark it.



5. FORGE THE ANGLES

Pop the bangle on the mandrel and at a 30°, use a planishing hammer to strike the midway point in the first segment (1). Continue to strike the segment to the edge of the marking with progressively lighter strikes (to create a tapered look flowing into each segment). Move the bangle around to the third segment (3), missing out the one in between (2) and repeat forging. Repeat one last time on this side, again missing a segment. Finally take the bangle off the mandrel, flip & angle again at 30°, forge the remaining un-hammered three segments.



6. FINE TUNING AND SIZING

Refine the hammer blows to make them even in the six segments, one should flow into the next. At its thinnest point (middle of each section) the metal should not be under 1.5mm. To make the bangle larger simply forge each segment either side of the centre point. Polish and admire!