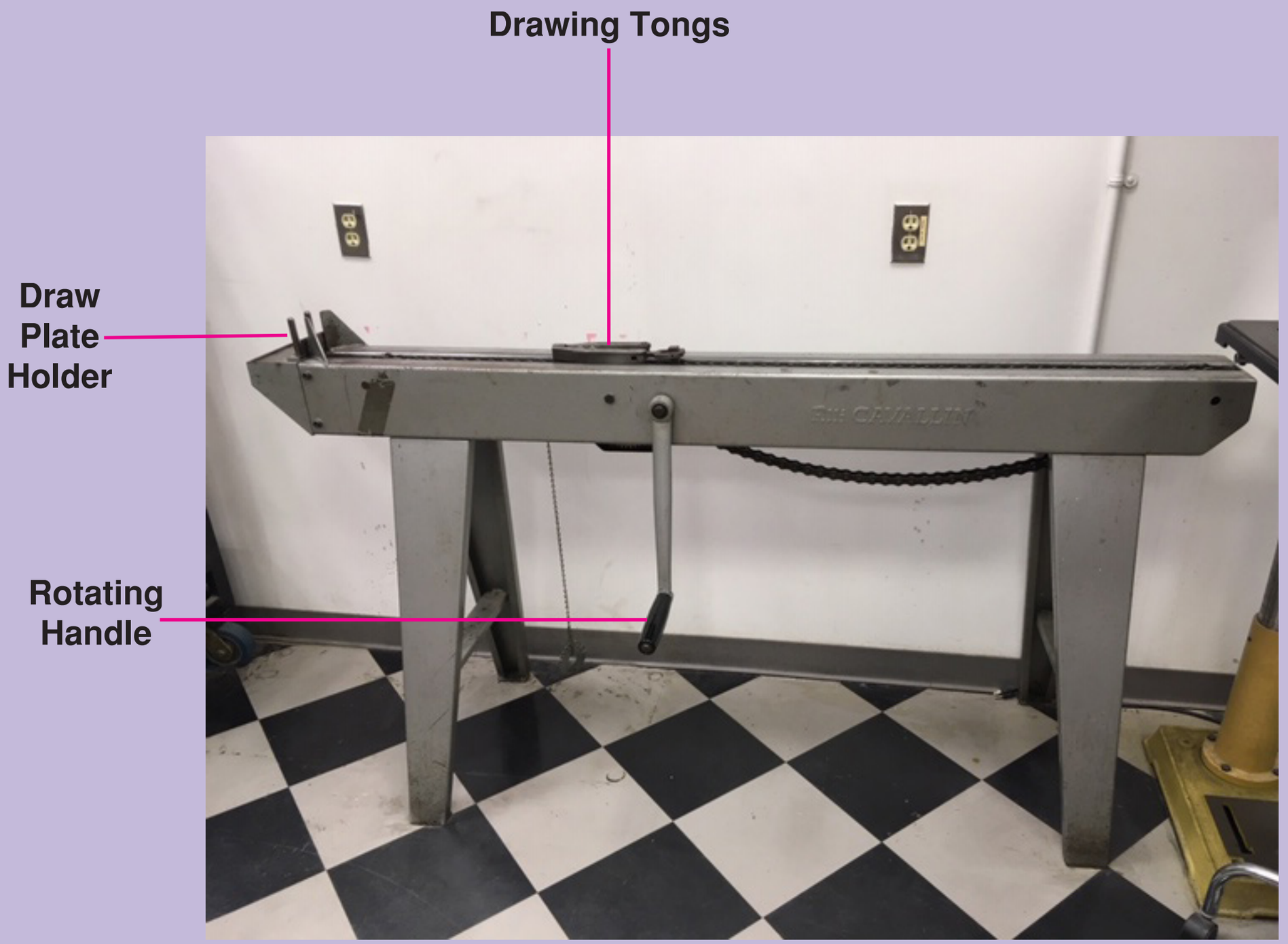
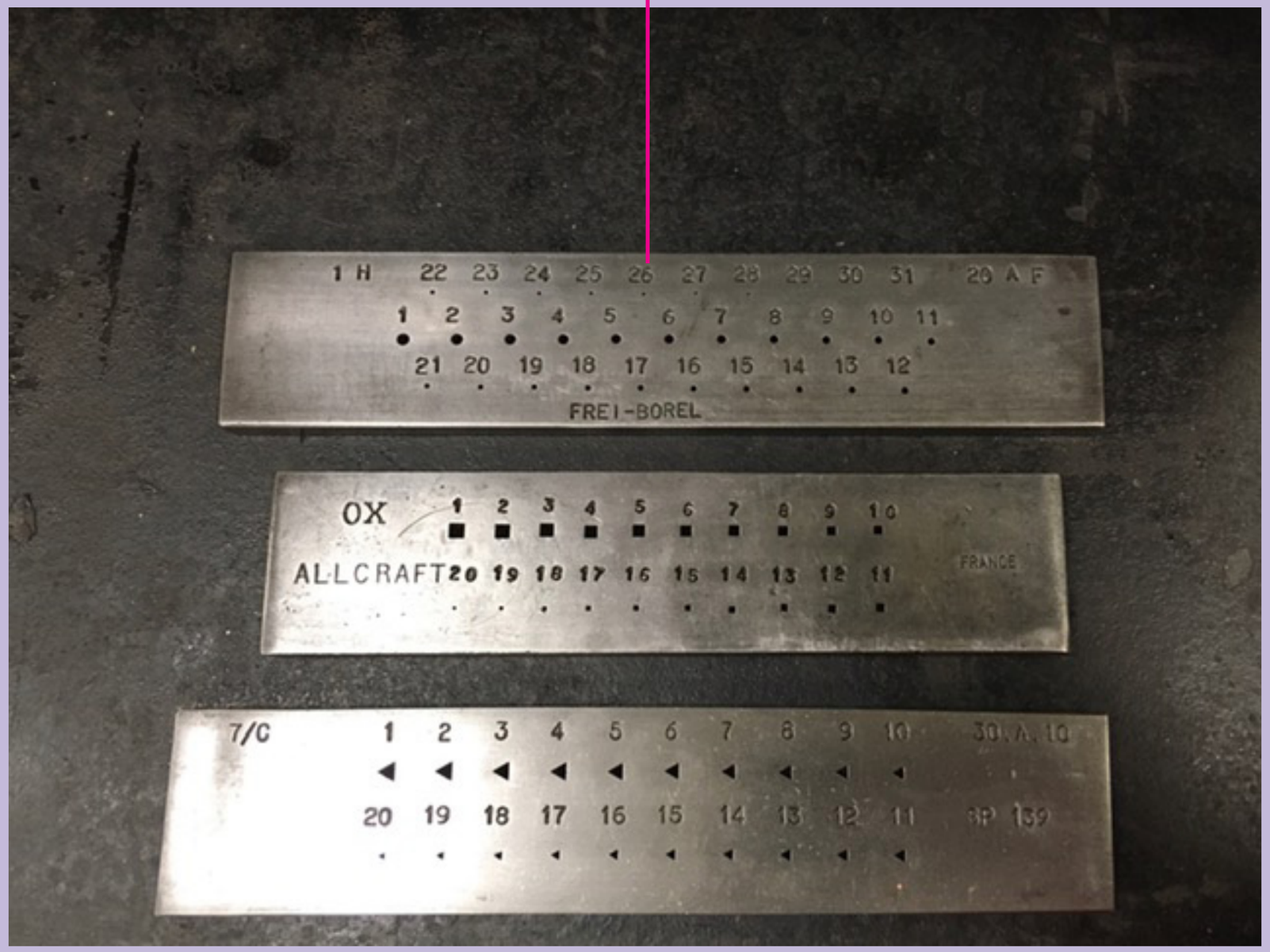
How to Properly Use the Wire Drawing Bench

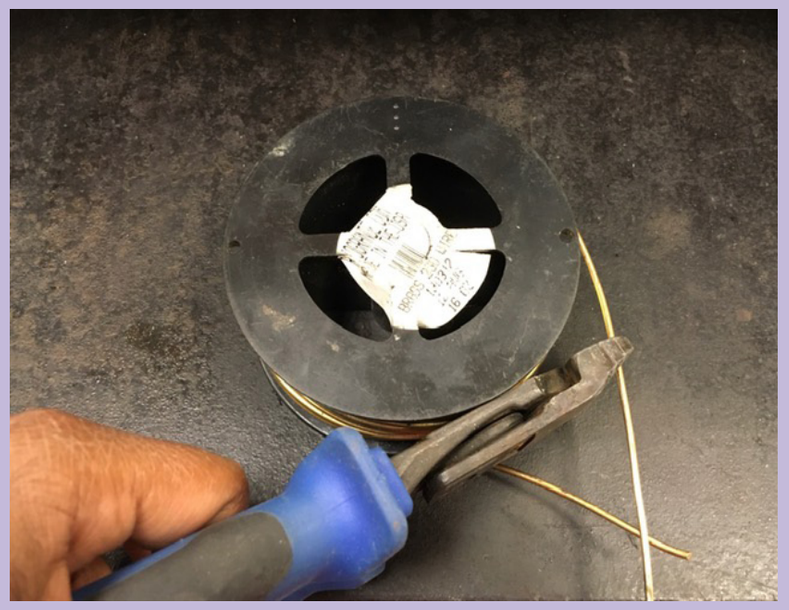


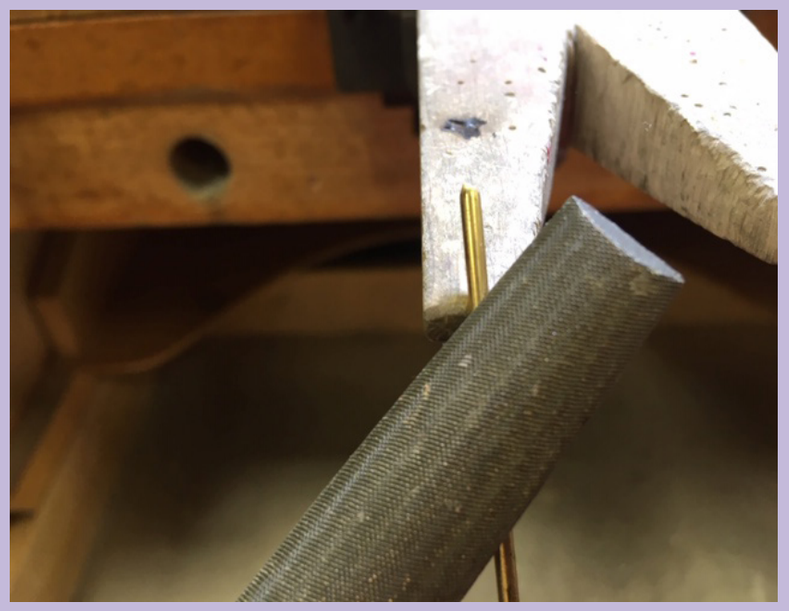
The wire drawing bench is a helpful tool to draw a piece of wire down to another gauge. The draw plate holder holds the draw plates in place while the tongs hold onto the wire as it is pulled through the draw plate.

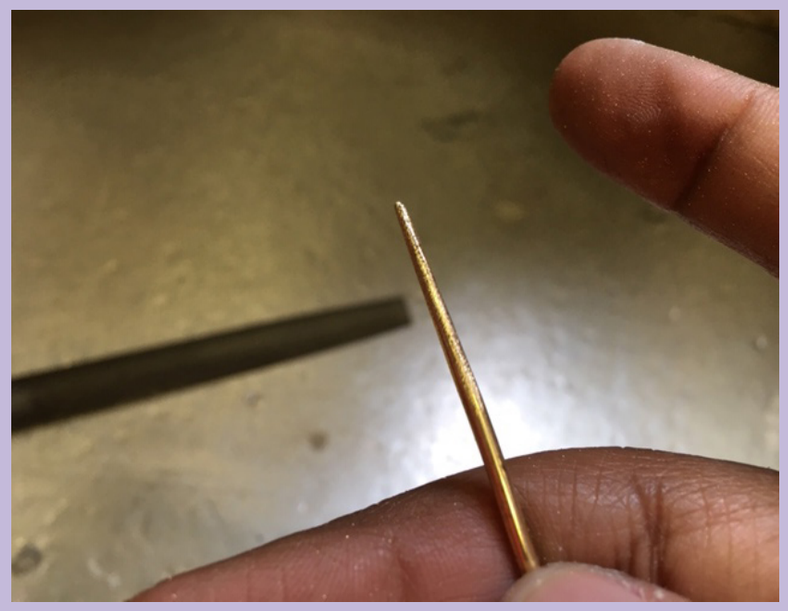
Draw Plates



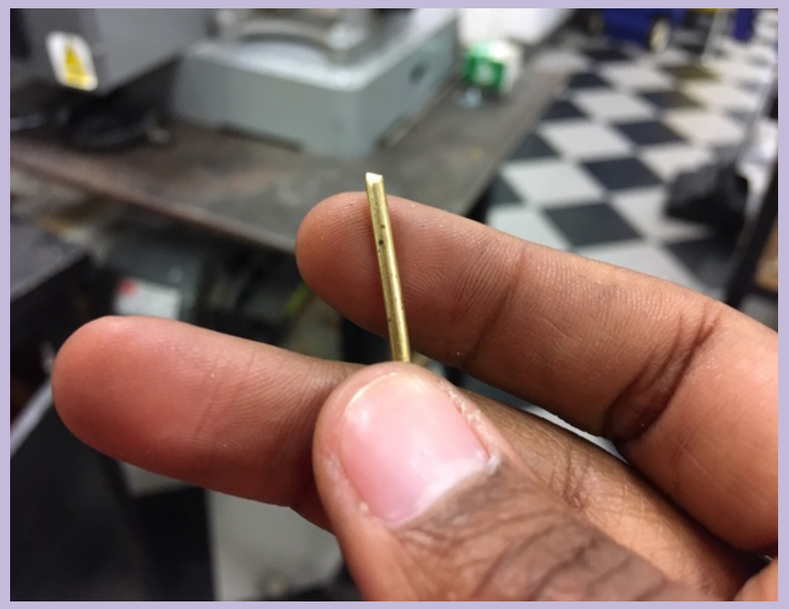
Draw plates come in various shapes and gauge sizes. It is also a good idea to have a metal guage or caliper nearby to help you with measurements.

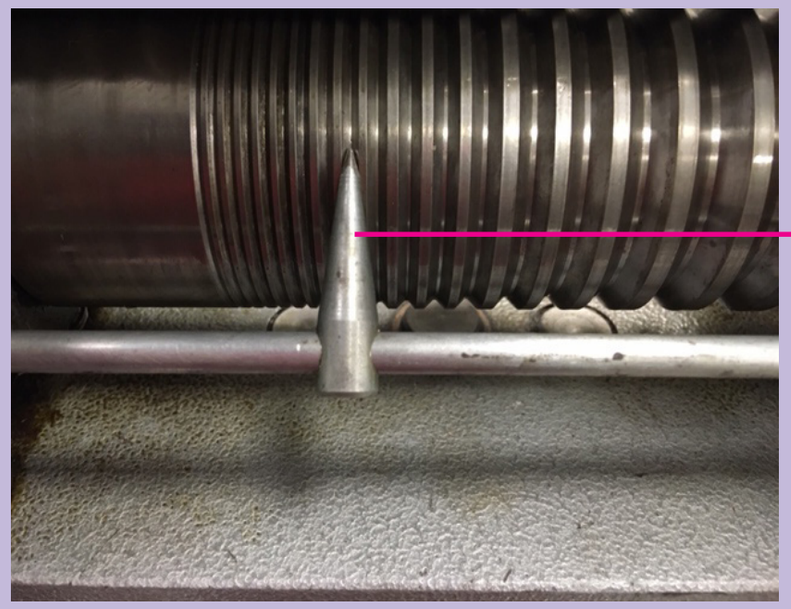


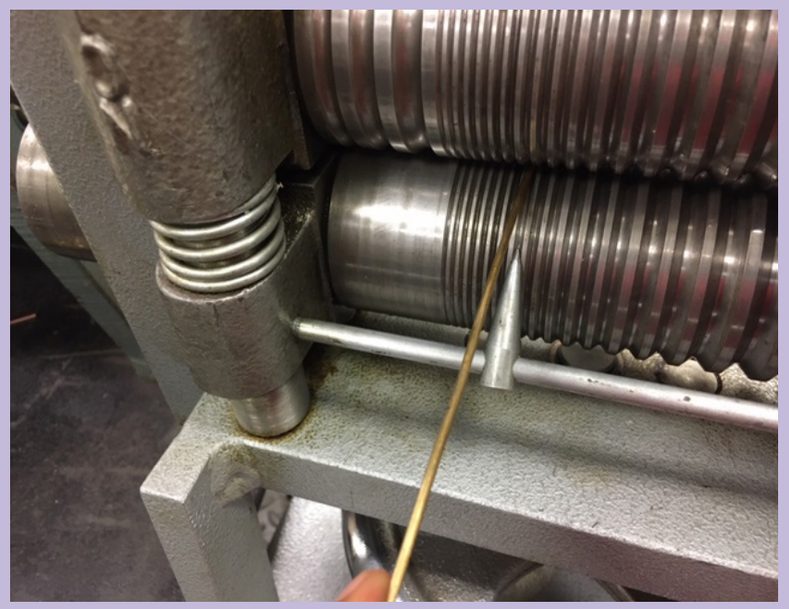


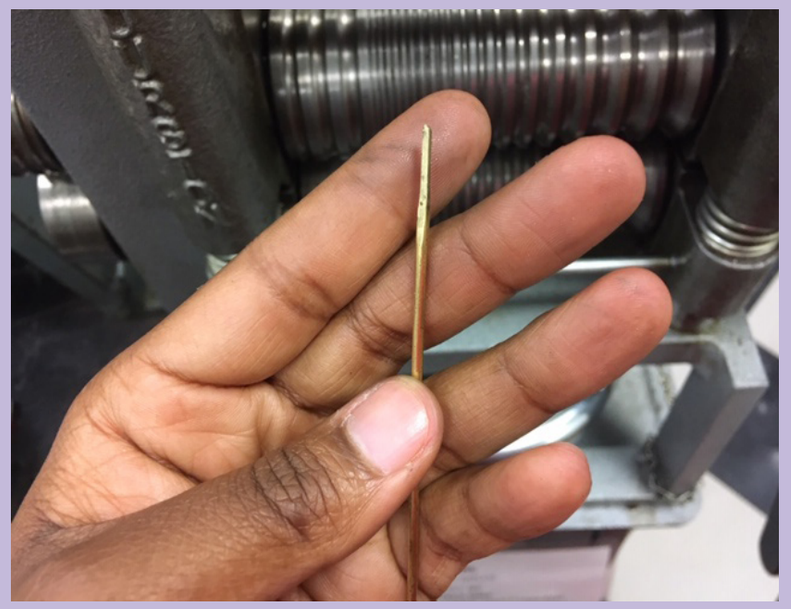


First choose a wire gauge that is closest to the guage you are trying to acheive using the draw plate. Once you have chosen your wire guage, you must prepare to taper it so that it can fit inside of the draw plate. To prepare your wire you can use a rough file until 10-15mm of your wire is tapered.

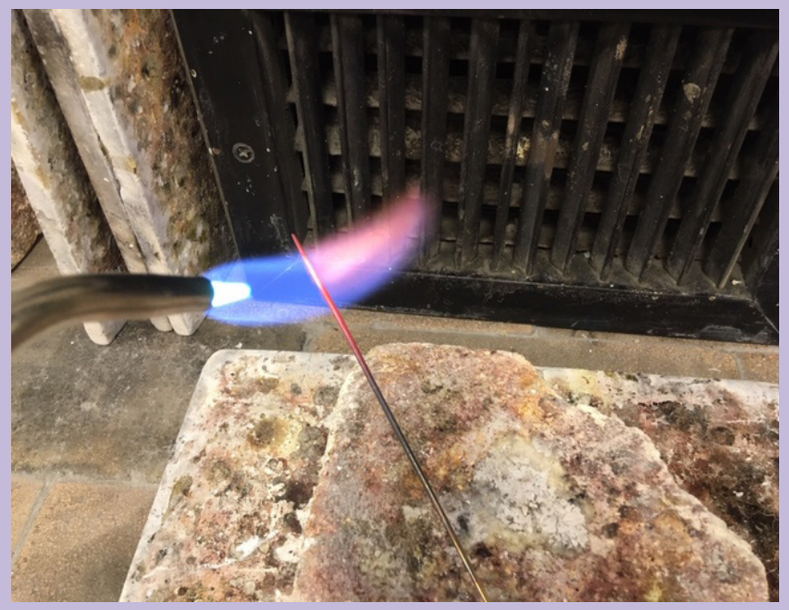




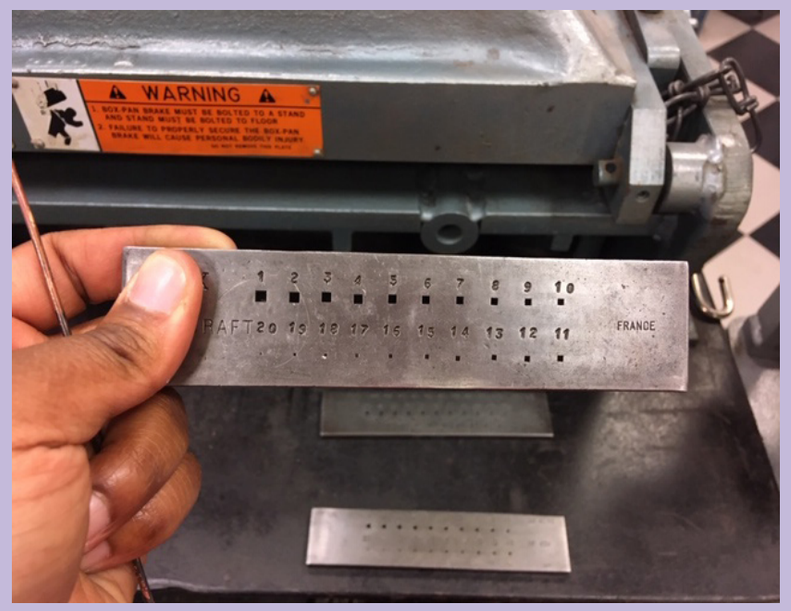


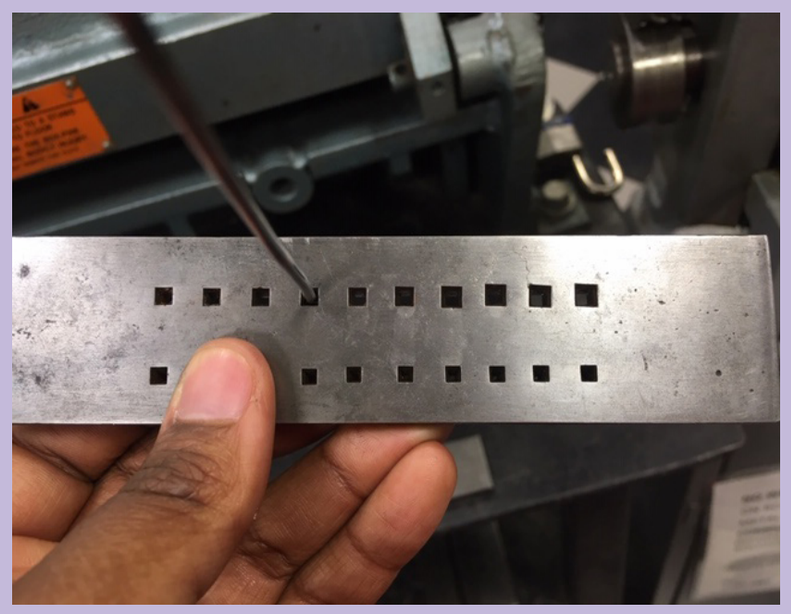


An alternative way to taper your wire and save time is to use the rolling mill. First you must use the marker on the square rollers to mark where you want to begin. You then place your wire against that specific section and use the handle to roll over only 10-15mm of your wire. A sharpie marker will help you know when to stop handle on roller. After you have reached 10-15mm, you can then roll the handle backwards to release the wire. Then move on to the next guage to continue to taper your wire.

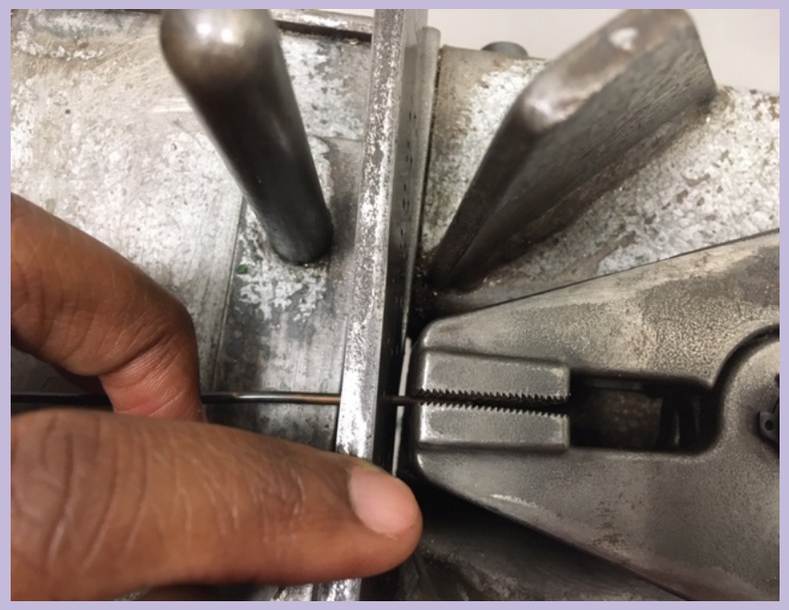


Once your wire is tapered, you can take it to the soldering station and anneal it. Be sure to anneal wire well or you can damage the draw plates because the wire can break away from drawing tongs/plates. After annealing you metal, you must quench your wire in water.



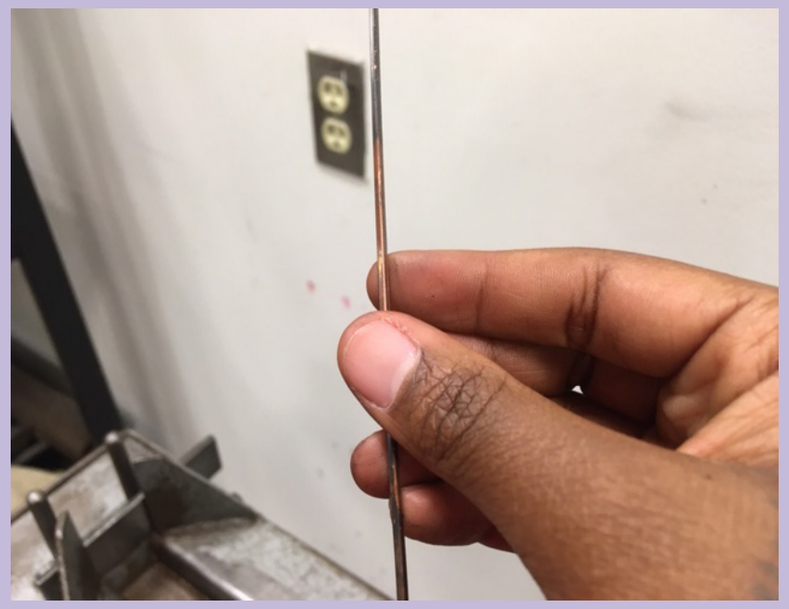


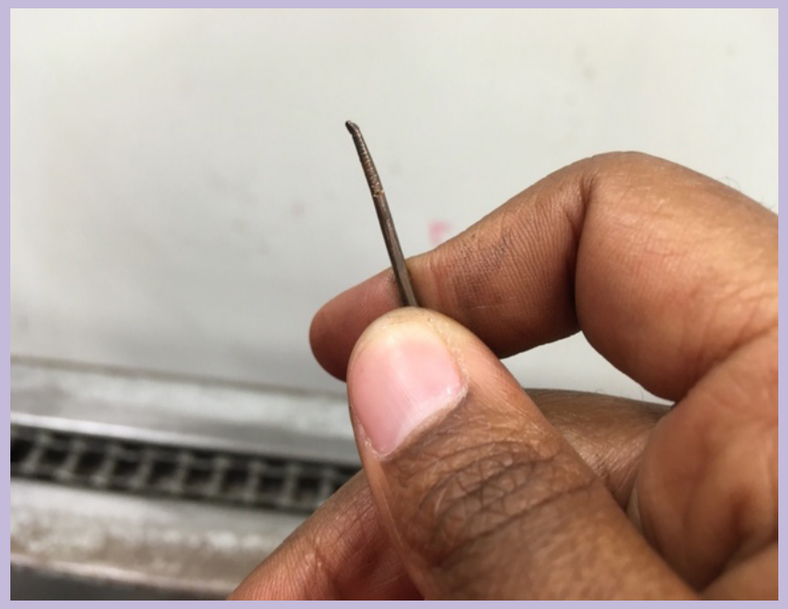
Be sure to dry your metal before putting it through the draw plate to prevent the plate from rusting. Once dry, choose the correct shape and size draw plate you want to use. Wire must always be inserted from the backside where you cannot see the guage size. Inserting the wire in the incorrect way can damage the draw plate and cause the wire to get jammed.



Place draw plate into the draw plate holder. Then place wire into the gauge size you want to draw your wire to. Use the drawing tongs to grip the tappered end of the wire.

Use drawing bench handle to pull drawing tongs on mechanism. You will continue to rotate handle until the wire has been completely released from the draw plate.





The more you make a pass through the draw plate, the more your wire hardens. You should at least make 3 good passes through the draw plate until your wire hardens. Be sure to consistently anneal your wire! The more you make a pass through the draw plate, the drawing tongs teeth will weaken the taper on your wire. You may have to refile or use the rolling mill to taper metal again. After annealing, you can begin drawing wire again until you reach the desire wire gauge.