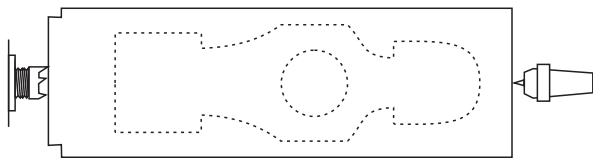
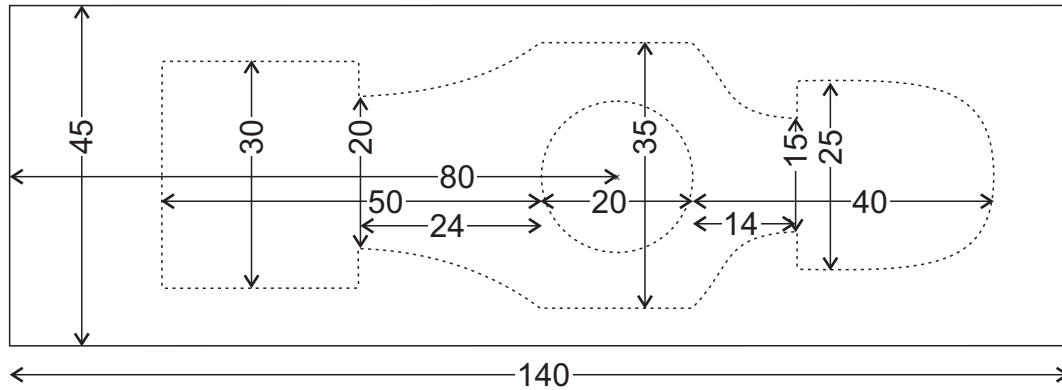


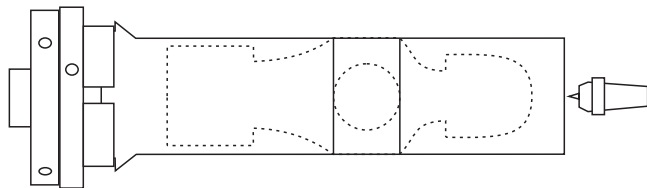
Ball Pein Hammer

Designed by Nicole Morley

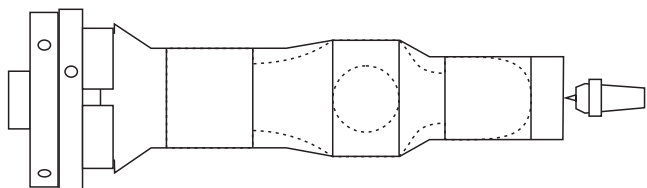
This is designed as a toy hammer but still with strength to ensure it does not break too readily. Two pieces of wood are required: for the head 45 x 45 x 140 mm long; for the handle: 35 x 35 x 300 mm long. Drill a 20 mm hole through the head wood at a point that is central between the long sides and 10 mm off-centre towards the ball end of the head.



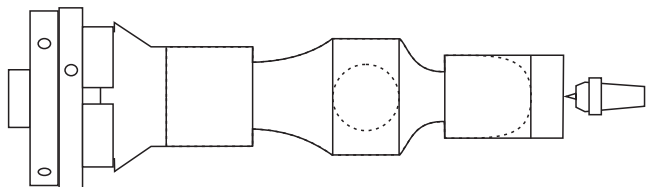
Mount the wood between centres. Cut a spigot for the chuck of your choice at the headstock end. Round the wood off.



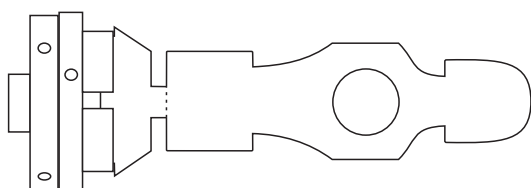
Mount the wood in a chuck. Bring up the tailstock for added support. Turn the wood down to 35 mm diameter. Draw lines around the wood at the edges of the 20 mm hole.



Turn the ball end of the hammer head down to 25 mm diameter and the flat end to 30 mm diameter. Draw lines around the wood at the inner edges of each side of the head - these lines are 24 mm to the left and 14 mm to the right of the lines drawn previously. Draw lines around the wood at the extremities of the head - these are 50 mm to the left and 40 mm to the right of the first lines drawn.



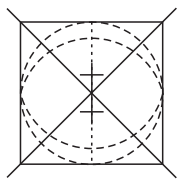
Shape each side from the lines drawn at the central section down to a diameter at the inner side of each end of the head that is 10 mm less than the diameter of each end of the head.



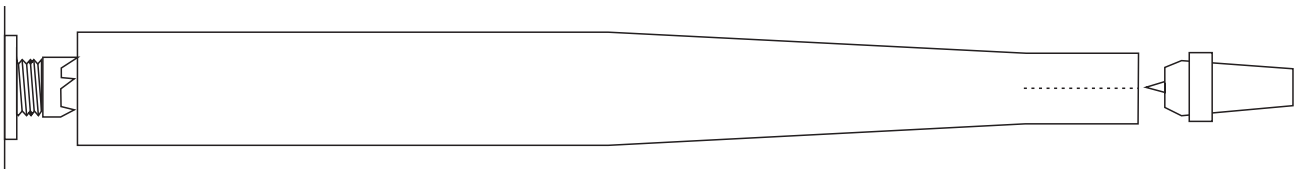
Take the tailstock support away. Round off the outer end of the hammer head. Start the cut to part the head off at the chuck-held end. Sand all surfaces. Complete the parting-off cut and hand sand that end.

Hammer Handle

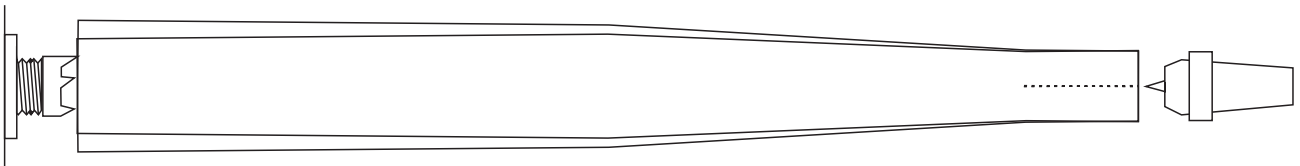
Use a piece with good straight grain wood 300 mm long and 40 mm square. Cut a fine wedge off the hammer head end for later fitting of the handle. You will need to bandsaw a central slot 32 mm into the head end. It is easiest to do this while the wood is square, but only if you have a live tail that will adequately hold the wood with the slot in it. Otherwise, mark boldly where the slot is to be and cut it after the handle is turned.



Mark up the ends before mounting the wood on the lathe. To make the grip of the handle oval offset the hand holding end by 3 mm to two new centres on a line that is the same orientation as the sawcut in the head end.



Mount the wood between centers on the center point of each end. Turn it round and down to about 32 mm diameter. Turn the hammer head end to a good fit in the previously drilled hole in the head. Slope the handle from about the centre point to this diameter. You may fit the handle and head together and use it like this. OR continue as below to make an oval handle



Move the mounting point at the wide end of the handle to one of the 3 mm offsets. Remove only a small part of the diameter - about half the height of the ghosting when the wood spins. Keep the cutting to less than half the circumference of the handle.

Remount the wood on the other offset and repeat the cut.

The drive spur end may be parted off, hand sanded off, or just left as part of this functional tool.

Sand and finish. Do not wax the head end which will be glued into the head.

To assemble put a little PVA glue inside the hole in the head. Place the handle so that the saw cut in the end is across the head then force the head very firmly onto the handle. Put a little PVA glue into the bandsaw cut and hammer the wedge into the slot. When the glue is set saw and sand the exposed end of the handle.

