

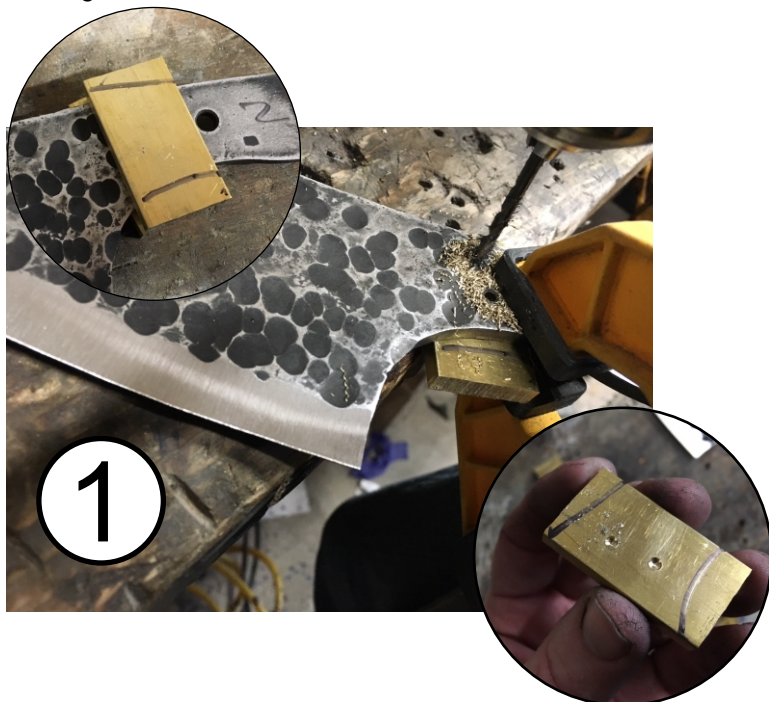
How to make Brass Bolsters

Bolsters can enhance many knife designs. They can be as elaborate or as simple as the designer wishes. Brass is commonly used for bolsters and is available in convenient 1/4 x 1 inch bar stock. Bolster holes should be pre drilled through the knife blank prior to heat treating.



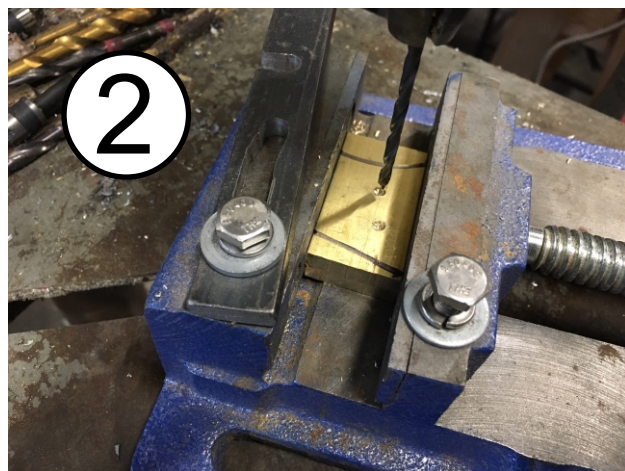
Mark Pin Location Holes

Two pieces of the brass are then cut to length. Clamp one piece to the knife blank and carefully start to drill holes through each of the pre drilled bolster holes in the blade. The object here is not to drill all the way through the 1/4 inch brass but just drill deep enough to mark the location of each blank hole on the bolster.



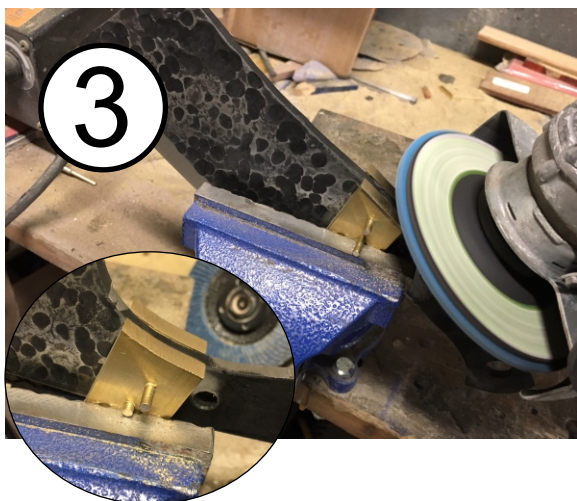
Clamp Both in vise and Drill Pin Holes

Now take both bolsters and place them both into a drill press vise. The piece with the hole location marks should be on top. We commonly use 1/8 inch pins for our bolsters. Take a #30 drill bit (.1285 for clearance hole) and with a drill press carefully drill through both bolsters while they are clamped together. If done correctly the square edge of each brass bolster will be perfectly aligned by the vise and the holes aligned.



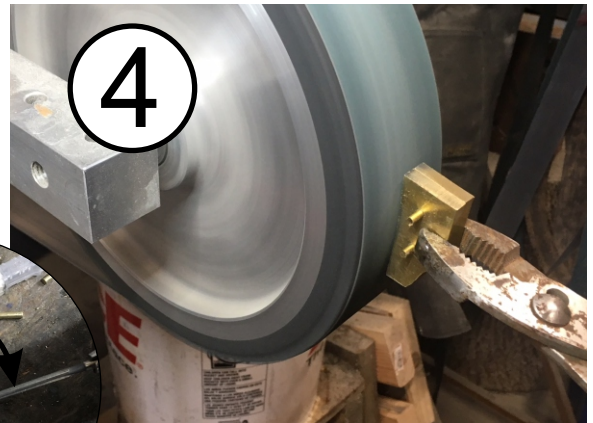
Rough Grind Bolster Shape

Test the assembly of the bolsters on the blade with pins. The unglued assembly can be placed into a bench vise. Now excess material can be ground off the bolsters with an angle grinder and flap sanding wheel. Do not grind down to finished dimensions. At this time you are just removing the bulk and leaving the final grinding until after the bolsters are secured in place.

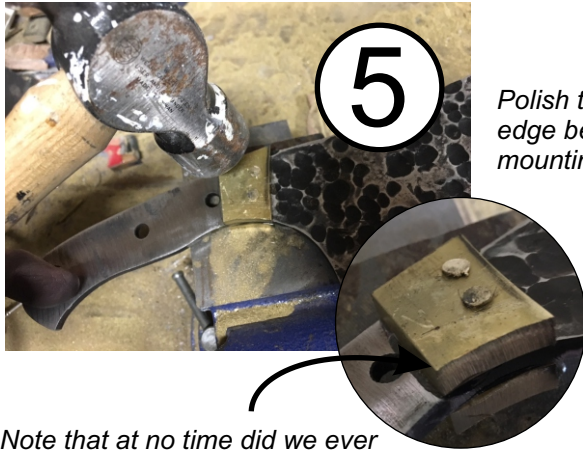


Grind and Polish Front Edge

Bolsters can be removed from the knife blank and then clamped back together with pins in place for alignment. The front edge of the bolsters can now be rounded or carved as desired. After this front edge is carved to shape, usually with a contact wheel on a belt grinder the front edge should be sanded with a fine grit belt and polished. Its much easier to polish this edge before its mounted to the knife.

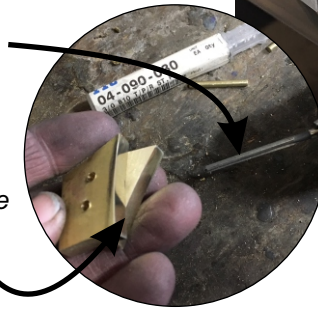


OBM 10" contact wheel used to shape front edge



Tapered Reamer

Polish this edge before mounting



Hammer Peen or Epoxy Together

Its recommended to peen brass bolster pins in place. Although not mandatory peened pins do make for a stronger mechanical bond. If you are going to peen the pins take a tapered reamer and ream each hole from the outside in. You want to end up with the larger side of the taper facing out and the smaller end of each holes taper facing the blade. This way once the pin swells from the hammer peening it will fill the tapered space and wedge the bolster in place.

Note that at no time did we ever grind the back edge of the bolsters. The straight square back edge is the factory edge of the 1/4 x 1 brass rod. This is important because now as long as the scale material is cut square we will get a perfect fit between the two.



The author using an OBM Small Wheel attachment on 2x72 grinder.



Shape, Sand and Polish

After the scales are mounted Bolsters can be rough shaped with a angle grinder and flap sanding wheel. Small wheel attachment on a 2x72 grinder works great for the inside curve. Brass can then be sanded smooth. We usually use from 80 to 220 grit on an orbital sander. Then hand sand with 400 and 800 before polishing on a buffing wheel.



If peened correctly pins should be almost invisible after final polishing