

PAIR OF COW HORN KNOB STICKS



Cow horns as I received them—nailed to a piece of timber .

These horns are said to be over 40 years old and had started to delaminate



Horns removed from the timber and the worst parts of the delaminated ends
trimmed off with a hacksaw



Using vernier gauge/calipers measured around the horn and cut where the horn was 25mm in diameter to match a shank leaving the pieces shown for use on other projects.



Horns cut and levelled off at both ends to allow a nice fit for the shank and cap. These need to be perfectly level to prevent gaps appearing when you match the shank and caps which would spoil the overall appearance of the stick

The one on the left of the photo on the left has been partially sanded down using 80 grit sandpaper. The horn on the right is as it was cut.



Measure the tops of the horn at their widest points and select a piece of material with which to cap the hole. At this point you could pack the horn with any suitable filling material such as car body filler but remember you will be adding weight



Here I have selected a piece of olive wood as the capping material and cut out a suitably sized piece on the scroll saw after I had already sanded it perfectly flat on one side



After measuring the internal 'circle' of the horn I selected a suitable material (in this case a bone spacer) which fitted into the internal 'circle' and used a dremel with a straight cylindrical burr to shape around the inside of the horn to make the fit perfect. Once happy I glued the spacer to the olive wood with superglue



Having dealt with the top I turned my attention to the bottom of the horn. The hollow part of the first horn was around 10mm so I cut and glued in a hardwood dowel to help prevent the bit straying when using the 16mm spade bit to drill out the hole required for the shank dowel



The end of the horn now marked up with the size of the dowel hole I want to create with the spade bit leaving an even amount of horn all around to allow for the collar to be recessed into



Next job was to create a 16mm dowel on the end of the chose shank. I have marked up a centre line on the dowel and filed off a small slope to allow the epoxy a bit of movement where the fit was too tight.



Having chosen to use a beaded metal collar on these particular sticks it was time to measure up on the shank and horn the area to be trimmed to allow the bead of the collar to recess into .

I added masking tape to both shank and horn and carefully filed away the amount required to recess the collar always adding back any part of the centre line I filed away . The centre line marks the point at which the joint fits best and will indicate how to align all the components when finally glueing the stick together.



Now happy with the dry fit I glued the collar to shank

Next job was to dry fit the whole stick to check that everything looked right and fitted correctly. In this instance I was making two sticks with the same fittings so repeated the process on the other.



After removing the masking tape I started to sand down the area towards the bottom of the horn as this would be more difficult to do once the shank, collar and horn were all glued together



With both shanks and collars done I glued the horns onto the dowel leaving the end caps off so I could add extra epoxy from the top to fill any small gaps which result from the curvature of the horn.

Once the epoxy was dried I added the caps from earlier and glued them on with epoxy adhesive. The caps were marked 1 and 2 and as the holes were slightly different sizes and also marked with an arrow to the top so I didn't put them on the wrong way around



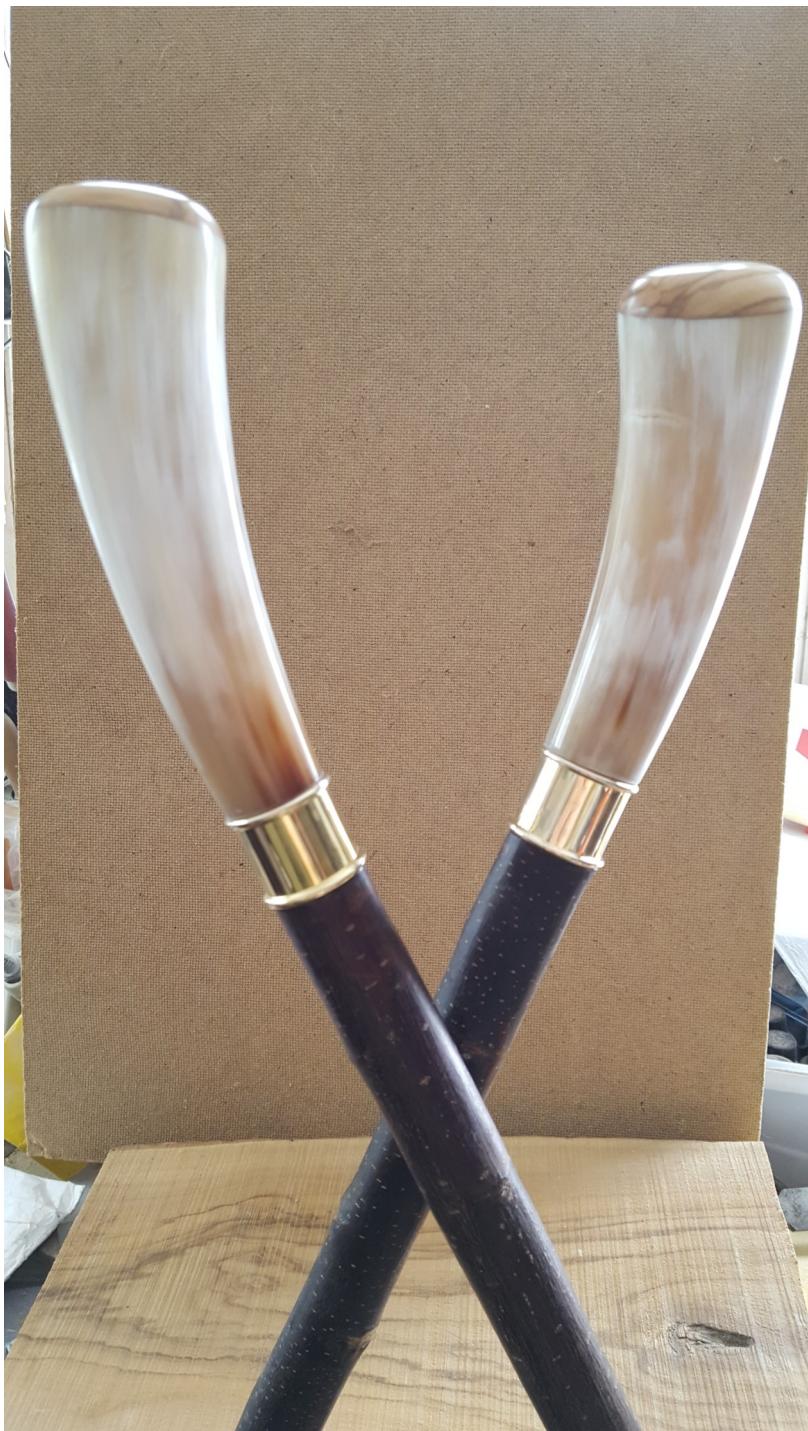
The olive wood caps were then shaped to fit the horn. Firstly using a powerfile to remove the majority of the overlap and to get the rounded shape and then with 80 grit sandpaper , then the following grits to both the wood caps and horn 120, 220, 0000 wire wool then 1500, 1800, 2400, 3200, 3600, 4000, 6000, 8000 and finally 12000 grit m micromesh paper



Olive caps after sanding
and polishing



Handles done now ready to finish the shanks



Shanks rubbed down with 0000 wire wool and two coats of spirit sanding sealer each cut back with 0000 wire wool and now ready for the finishing coats

At the time of producing this I had not applied the finishing coat to the shanks or any protective coating to the end caps