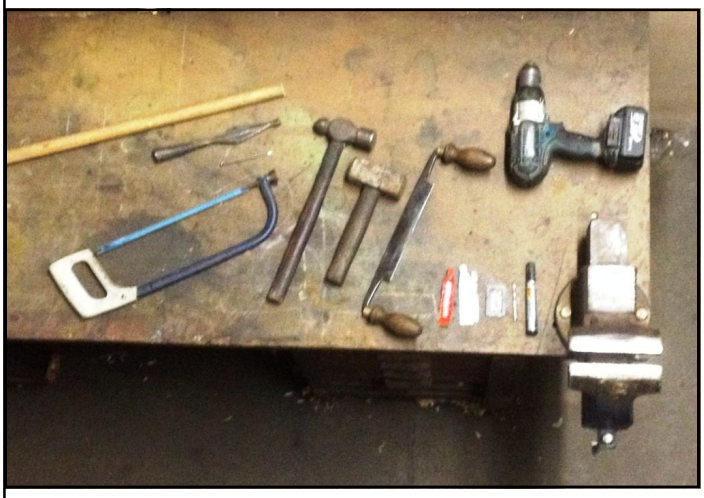
How To Fit a Spear Head

I have put this guide together in order to show one way of fitting a spear head to a spear shaft. In Regia we talk about fitting spear heads as though it is a simple enough task, however if someone has never done it before it may be quite a daunting prospect. Hopefully this step by step guide will help to instruct and reassure people as they fit their own spear heads.

It is not a compulsory method enforced by Regia Anglorum nor is it the only acceptable way to fit a spear head, it is merely the way I choose to do so. I have tried to replicate the process using tools most people will have easy access to. I have also tried to make the process as simple as possible however I have had to make the assumption that anyone embarking on fitting their own spear head will have some grasp of how to use the tools involved.

Tools Required:

- Spoke shave or draw knife
- Ball peen hammer
- Lump hammer
- Vice
- Hacksaw
- Drill
- Drill bit (0.5mm bigger than rivet)
- 2 part epoxy glue
- Marker pen



Materials Required:

- Spear head
- Spear shaft
- Rivet (100mm long nail)

1. Mark the length of the spear socket on one end of the spear shaft (Fig 1). Also mark the centre of the end of the shaft with a cross (Fig 2).

Fig 1.

2. Fix the shaft in the vice. Take the draw knife and cut from the marked ring to the end of the shaft using the cross as a centre guide (Fig 3).

Fig 2.

3. Repeat on the three remaining sides (Fig 4).

4. Shave the corners off the spike until it is completely round. Try the spear head to see if it fits well, if it does not, twist the head and any high points that need to be shaved off will be scuffed by the inside of the socket.

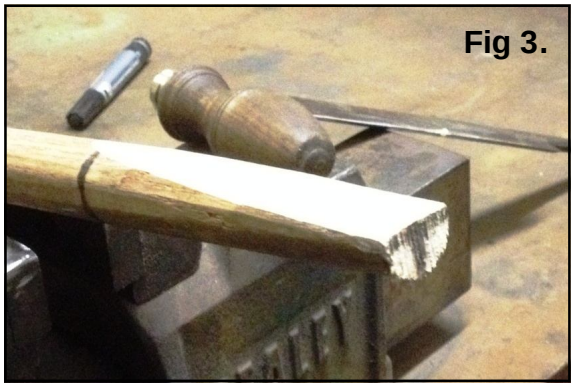


Fig 3.

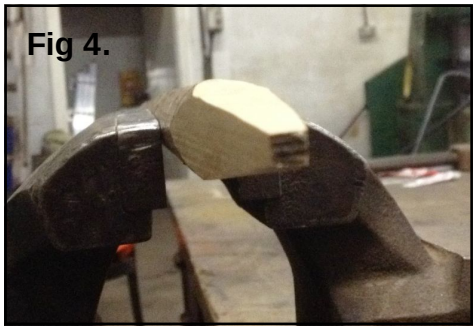


Fig 4.

5. You may find that your spear socket is too wide to fit onto your spear shaft (Fig 5).

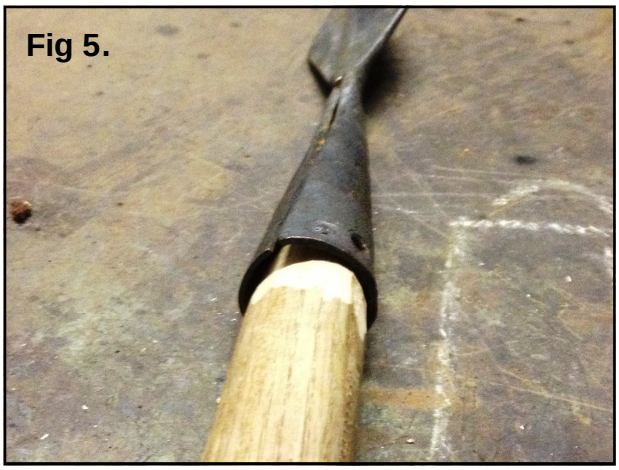


Fig 5.

6. Fix the lump hammer in the vice, we will use this as an anvil (Fig 6).

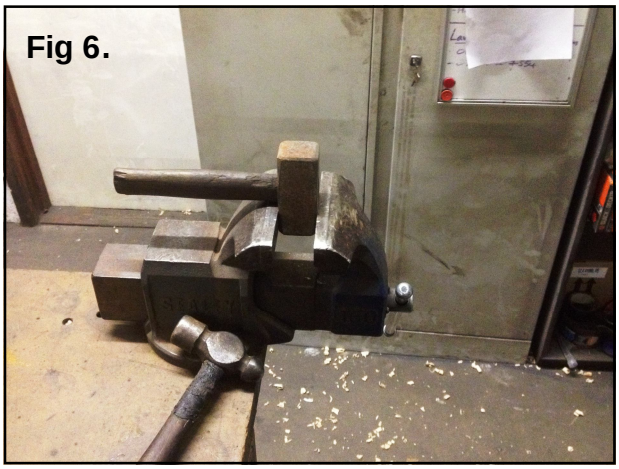


Fig 6.

7. Using light blows with the ball peen hammer squash the socket until it fits the spear shaft snugly NOTE: if your spear is made from spring steel you will probably not be able to do this.

   When hammering like this always make sure that you hammer straight down to stop the spear head from skipping off. If you need to hammer a different side turn the spear head (Fig 7).

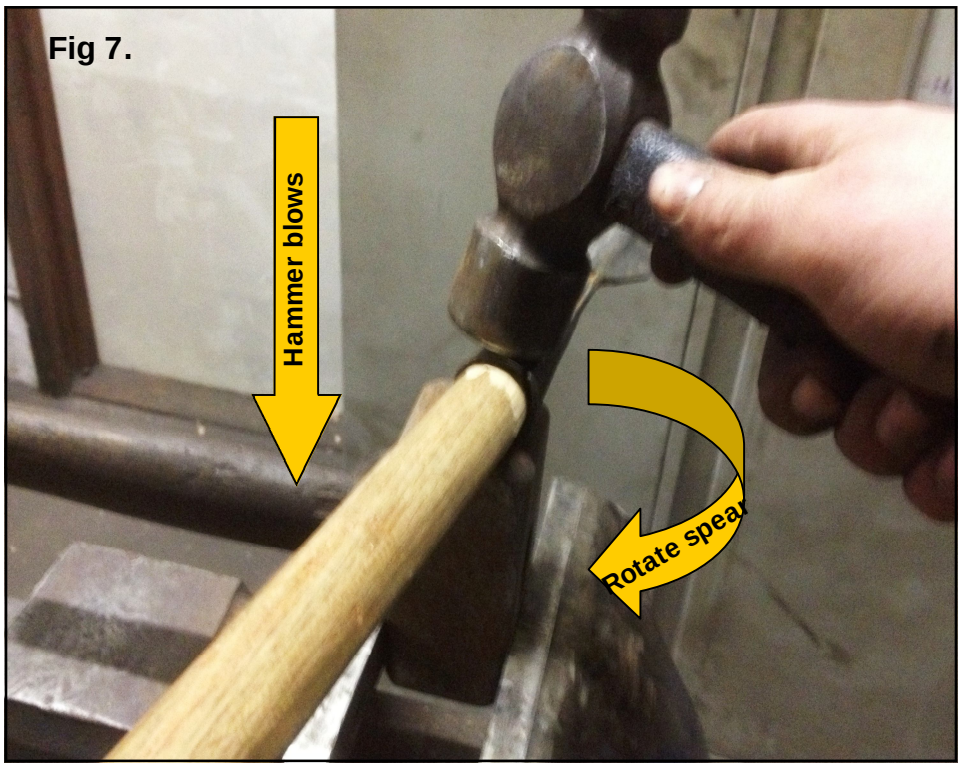


Fig 7.

8. Fix the shaft into the vice.

9. Drill through the rivet hole in the spear socket. If the drill bit does not pass perfectly through the hole on the other side turn the spear over in the vice and drill through the other side, this usually causes the holes to line up (Fig 8).

   Your rivet should fit snugly in the rivet hole in the spear socket. The hole in this spear is 5mm diameter and the rivet is a 100mm nail which has a diameter of 4.5mm. The hole you drill should be 0.5mm bigger than the rivet you are using to ensure it fits as tightly as possible.

10. Put the rivet through the rivet hole and mark the bit sticking out with the marker pen (Fig 9 & 10).

11. Place the rivet in the vice and, using the hacksaw, cut it down along the outside of the pen mark (Fig 10 & 11).


Fig 8.

Fig 9.

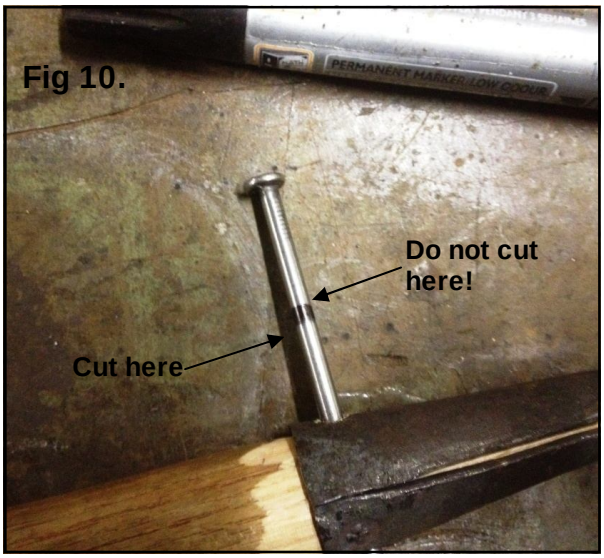


Fig 10.

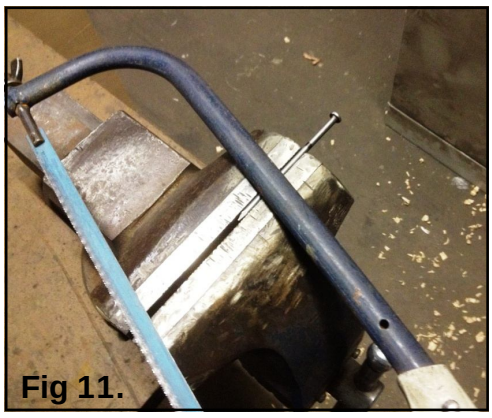


Fig 11.

There are formulas for working out the proper length of metal needed for a rivet head, however I have always found that the width of a marker pen tip is sufficient metal for riveting a spear (Fig 12).

Fig 12.

12. Take the spear head off the shaft. Remember which way it went on to make sure your holes all line up.

13. Mix some of your favourite 2 part epoxy resin and paste it all over the shaved part of the shaft (Fig 13). The epoxy strengthens the join and helps prevent the spear head from rattling as the wood dries out.


Fig 13.

14. Replace the spear head and put the rivet through the rivet hole (Fig 14).


Fig 14.

15. **Put the lump hammer in the vice.**

16. **Place the rivet head onto the lump hammer. Using light blows with the ball peen hammer squash the rivet down until it mushrooms over and covers the rivet hole (Fig 15 & 16).**

Fig 15.

Fig 16.

Here ends the lesson