

# Making A Spiral Fluted and Wire Wrapped Dagger Handle

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Part 3



To sand out the flutes, a pin vice with a 1/2 inch sanding drum (Dremel type) is used. Start the sanding with a 120 grit drum. The sanding drums are just a little larger in diameter than the cuts made by the files. This helps to sharpen and straighten the edges of the flutes.



Sanding the flutes.



Finer grit sanding drums are used to smooth the bottoms of the flutes. This drum kit has grits from 180 up to 1200. Each of the flutes will be sanded to 1200 grit.



The entire piece is sanded to remove scratches and marks from file slips. The handle will get a final "shoeshine" sanding through 800 grit.



The handle is buffed on a stitched muslin wheel. The wheel is charged with White Matchless compound. A new wheel is being used for buffing this ivory. If you use a dirty buffing wheel on light colored handle material, it will fill the pores in the material with dirt. It can be nearly impossible to clean this dirt from the handle material.

Buffing will highlight all of the scratches that you still haven't worked out. So, check the piece over, sand and buff some more.



The handle polished and ready for installing the wire wrap.



Holes for the wire to pass under the fittings are drilled with a bit that is a few thousands smaller in diameter than the twisted wire will be. This is done to reduce the chance of making a hole that is too large. You do not want a gaping hole for the wire to pass through. The steel plates that were used when grinding the handle material to a cylinder, are attached to the ends of the material in the filing jig. The hole is drilled with the bit running against the side of the steel plates.



The gold wire, to be twisted for installing on this handle.



The tops of the drilled holes are opened with a die-sinker's file, creating grooves, to allow the wire to be folded across the ends of the handle material.



Holes to affix the ends of the wire into are drilled in the grooves in the ends of the handle material. On this handle, the holes in the bottom of the handle are drilled with a .049" drill bit. The holes in the top of the handle are drilled with a .062" bit. The affixing holes in the top of the handle are drilled larger than the holes in the bottom to make room for a wood wedge. This wedge will be used to hold the wire tightly in the hole while the epoxy sets.



The wire is twisted using a variable speed drill that has a cup hook clamped in the chuck.



The ends of the wire are held in a vice, the wire is placed in the cup hook and the wire then twisted.



Epoxy is mixed and worked into the affixing hole in the bottom end of the handle material. The wire is placed in the hole and bent over. The handle is clamped in a vice until the epoxy cures. You need to make sure that you get plenty of epoxy in the hole and around the wire to ensure that the wire is solidly secured in the hole. Before bending the wire over, clean up all excess epoxy with a Q-Tip. You don't want a glob of epoxy showing around the wire when the handle is finished.



After the epoxy is set, the wire is bent over the side of the handle material. A pop-cycle stick is used to fold the wire over making a nice square bend.





Place the wire in the groove on the side of the handle material and pull it tightly towards the top of the handle. While holding tension on the wire, bend the wire over, across the top of the handle material. Cut the wire, leaving enough to be glued into the affixing hole, without bottoming in the hole. The end of the wire is bent with needle-nose pliers to prepare it to be inserted into the hole. Epoxy is mixed and worked into the hole. Holding tension on the wire to keep it snug in the groove on the side of the handle, work the wire into the affixing hole in the end of the material. Use a pointed tool to poke the wire down into the hole and a pop-sickle stick to tightly bend the wire over the edge of the handle.

Once the wire is fully worked into the hole, the wire is tight in the groove on the side of the handle and the bend over the edge of the handle is formed properly, the tapered wood wedge is forced into the hole with the wire. Clean up any excess epoxy with a Q-Tip.



The handle with the wires installed.

