Ladle Construction
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The type of ladle being described here is typical of early American work. It consists of a copper bowl attached with copper rivets to a forged steel handle (the handle should be of wrought iron - but since wrought iron is not generally available, mild steel has to be substituted). Ladles like this could probably be found from the dawn of the Iron Age to the present, but there is documentation for this type of ladle in Colonial times[1] (pg.273). A reasonably good description of ladle-making and white-smithing is available[2].

The first element is the bowl. A circle of copper (4" diameter) is first annealed. Copper is annealed by heating the copper to a dull red and then quenching it. This is the opposite of steel! I used a Yager swage block with a hemispheric depression 4" in diameter but an oak stump with a smooth dishing depression would work just as well. The hammer to be used in dishing is a ballpeen BUT make sure that the ball portion has been rounded. Most ballpeens of reasonably contemporary construction tend to be slightly pointed and will mar your work. If you have one of these, round the ball before using the hammer. To dish the piece, start at the center and in a growing spiral, strike the copper. The blows need not be particularly strong. As the bowl deepens, return to the center and work to the edges repeatedly. It is a good idea to occasionally anneal the copper. Copper work hardens and you can split the bowl by continuing to work it after it becomes too hard. Since annealing doesn't harm the bowl, it's better to over-anneal than to be sorry.

After you are satisfied with the bowl, planish it. If you have a well-finished swage block, continue dishing but with a lead hammer (the hammer will soon conform to the correct curvature). Otherwise, invert the bowl over a mushroom (or planishing) stake and carefully smoothing all 'bumps'. The hammer to use is either a steel planishing hammer or a soft-metal mallet. Position the stake in such a way that you can strike vertically onto the head of the stake. Starting at the center of the bowl, start striking (gently!) while rotating the bowl in a gradual spiral. Eventually, you will be holding the bowl close to vertical and working the edge. DO NOT overwork the edge - you do not want it too thin. Stop when you are satisfied that the bowl is as smooth as you want it and as round as it should be.

Polishing consists of wire brushing followed by rouge buffing. The convex surface can be done with a muslin buff on a buffing/grinder machine and the concave surface can be done with a fine wire cup brush and a cup-buff driven by a drill press. You can, of course, polish using steel wool for a more hand-finished effect.

The second element are a pair of copper rivets. You can purchase rivets from virtually any hardware store but making them yields a more authentic appearance to the piece. A simple jig is needed. Find two scraps of mild steel (1/2" x 3/4" x 3" will do fine but 2 pieces of 1/4" by 3/4" angle iron are even better). Clamp the blocks together (if using angle iron, clamp in the form of a 'T') and drill a 3/16" hole 1/2" deep centered on the break between the pieces. If using blocks, clamp the blocks together with Vise-Grips or if using angle iron, clamp them together in the post-vise. The rivets are made of copper wire. Number 4 is a good bet but you can buy wire (5/32") at hardware stores. Cut two pieces of wire approximately 1" long. Insert the wire into the drilled hole and using the flat end of the ballpeen, hammer the wire into a rivet head. Unclamp the blocks and pop the rivet out. Repeat the process for the second rivet.

The third element is the forged handle.

1. You will need a piece of mild steel (1/2" x 3/16" x 12").

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[1]Bealer,A. 1976. The Art of Blacksmithing. Funk & Wagnalls,N.Y. 438pp.

[2]Streeter,D. 1980. Professional Smithing. Charles Scribner's Sons,N.Y. 133pp.

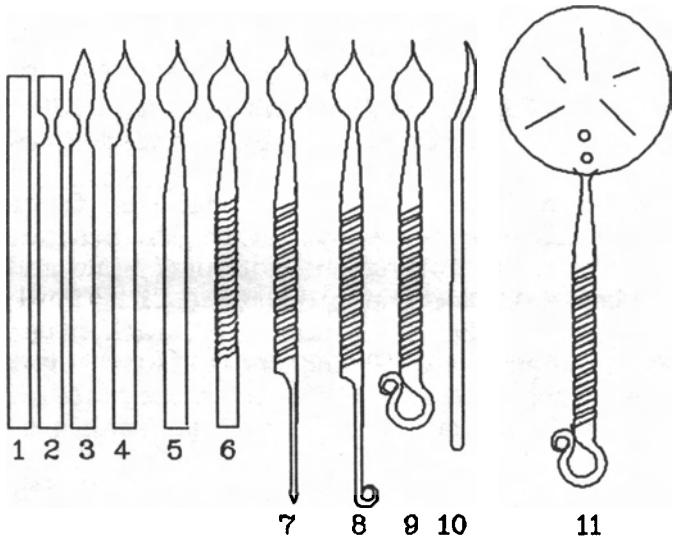
2. Fuller a groove 1" from the end (soon to be the bowl end).
3. Draw a point on that end.
4. Form a bilateral flame finial on the bowl end.
5. Forge a gradual taper back from the finial for several inches.

It is at this point that there is an infinite number of possibilities. One interesting handle I like is formed by:

6. Twist the handle from the taper back to 3" from the end of the piece of stock. The twist should be as even as possible and approximately 1/2" between relative points on each spiral.
7. In sections, heat the handle to a light orange and flatten the spirals. Straighten up the handle and smooth out any irregularities.

The other end can be formed into any number of finials. I have used a rat-tail finial on some and a fish-tail finial on others.

8. Form a rat-tail finial by extending the last 2" onto the face of the anvil & striking half-on & half-off the anvil. This will produce a shoulder. Draw out the end to 4 to 5", maintaining stock thickness but gradually tapering to a point. Roll a small curl on to the end.
9. Form a circular loop with the rest of the taper. I have found that a track-alinement pin makes a marvelous mandrel. Try to tuck the small finial into the shoulder & center the eye.
10. The bowl end should then be annealed (heat & cool slowly). The handle should then be wire brushed and cleaned-up to remove any fire-scale and irregularities.



11. To assemble the ladle, punch 2 3/16" holes in the flame finial (do not get to close to the pointed end of the finial). Dish the finial in the same form used to shape the bowl and adjust the curvature until it matches the bowl. Place the handle on the bowl and move it until you're satisfied with the angle. Mark the bowl through the holes in the finial and then punch those holes. In turn, place the rivet through the holes (the formed head in the bowl) and place the inverted assembly over the stake. Using the ballpeen, set the rivet. If you need to set the rivet on the inside of the bowl, be sure to place the ladle in the shaping form to support the ladle while striking the rivet.

The finished product can either be rubbed with a light oil (edible, please!) or treat the bowl in this manner but gently heat the handle and rub with a hard wax polish.