Hollowing Through the Bottom, necessary steps and tips

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1) Mount your initial piece of wood between centers on the lathe.
2) Rough out a round cylinder or billet, true up the ends and create tenons on both ends of the cylinder.
3) Mount the plug end tenon into the chuck on the headstock end of the Lathe, reduce the diameter to make what will become the plug (about ¾"-1" thick). Cut the plug off using a cut-off tool / saw.
    a) *Note: make the plug about ¾ of the diameter of the cylinder (or the base diameterof your piece)*
4) With the plug piece still in the chuck, make a precise 10-degree taper on the plug piece. Taper down towards the tailstock end of the plug. Remove plug piece from the chuck.
5) Re-mount the large portion of the cylinder into the chuck and re-cut a tenon on the plug end, then reverse the cylinder on the chuck.
6) Using a Jacob's chuck, drill a hole through the center pith in the 'spout' end of the cylinder.
    a) *Note: the base of the piece will be towards the headstock, the spout towards the tailstock.*
7) Return tailstock live center into the drilled hole and start generally shaping the project, try to establish the propotion of the project, leaving plenty of mass on the spout end.
    a) *Note: You will be re-chucking the spout end of the project, so you need maintain the mass on the spout end.*
8) Reverse the project on the lathe, putting the spout end into the chuck. Using a Jacob's chuck, drill a hole in the center (pith) of the project on the base end. Use the tool of your choice to hollow out the project. Make the walls as thin as you are comfortable with, leaving the entry hole in the base smaller in diameter than the plug at this time.
    a) *Note: don't worry about interior smoothness, nobody will see it!*
9) Hollow through the project, including the 'shoulder', until you meet up with the hole drilled into the spout end of the piece, that is in the chuck now.
10) Carefully cut the tapered hole into the base to match the diameter and 10-degree taper of the plug.
    a) *Tip: Stop the lathe often to check the fit, it is OK if some of the plug thickness remains sticking out from the base of the cylinder.*
    b) *Note: A Bevel Gauge can be used to establish a precise taper.*
11) Put wood glue on the outer rim of the plug and the inner rim on the base of the cylinder. Put the plug into the project, **align the grain**. Set tailstock up as a press to hold the plug in place. Let it dry for a few hours.
    a) *Note: Once the plug is sound, re-true the tenon on the end in case the center has changed slightly.*
12) Reverse the project on the lathe. Return the tailstock/live center into the drilled hole in the spout end of the project and shape the spout end of the project, slowly tapering toward the tailstock to about 3/32" thickness at the end of the spout. Final shape the entire project at this point.
13) Sand the project on the lathe to your personal preference, power sanding helps! Remove from the chuck and set-aside.
14) With a scrap piece of wood or cut-off, make an O-ring jamb chuck that will accept the tapered end of the spout.
    a) *Note: Other types of jamb chucks can work for this step.*
15) Secure the spout end of the project into the O-ring jamb chuck and bring the tailstock up to the base.
16) Turn away the excess plug material, including the tenon, and shape the bottom of the hollowform so it will sit flat.
17) Use the point of a skew to make V-grooves on the bottom to hide the glue joint and add decoration. Reduce the nubbin to a small cone and cut or chissle off. Sand the bottom to suit.
18) Complete the final sanding, finish as desired then turn the project upside down and sign it!