

Sea Urchin Box. Step by Step by Sally Ault

- 1. Put blank between centers. Round cylinder.*
- 2. Cut tenons on both ends*
- 3. Put blank in chuck with tail stock engaged.*
- 4. Measure sea urchin and mark out blank according to diagram.*
- 5. Cut tenon on lid blank, 2 tenons on foot blank.*
- 6. Part off between foot & finial sections.*
- 7. Re-engage tail stock to mark center*
- 8. Part between foot and lid*
- 9. Re-engage tail stock to mark center*
- 10. Part between Box and lid. True up box blank face.*
- 11. Measure urchin to establish width of box lip. Transfer measurement to box blank.*
- 12. Shape lip and undercut rim, reduce side diameter of box.*
- 13. Establish cut for mortise about 1/4" deep and hollow box.*
- 14. Sand and finish rim and inside box.*
- 15. Measure depth of box interior and cut a tenon on the outside of the blank. Part off*
- 16. Put lid blank in chuck and true face.*
- 17. Measure box mortise and transfer measurement to lid blank.*
- 18. Create lid tenon-fit to box mortise...well fitting but not tight.*
- 19. Cut a shallow scoop in lid.*
- 20. Create dovetail recess in lid making sure it is deeper than the tenon.*
- 21. Sand and finish interior of lid.*
- 22. Put lid in chuck using expansion mode in dovetail. Be careful with the pressure. Engage tail stock.*
- 23. Shape top of lid using gentle cuts toward headstock. You can remove lid from expansion hold to check how the lid shape works with the box.*
- 24. Remove tail stock. Shape area for finial or knob.*
- 25. If making a knob as part of the lid, shape now and sand and finish lid.*
- 26. If making a separate finial, drill a 1/8 or 1/4" hole in lid to accept tenon on finial.*
- 27. Sand and finish lid.*
- 28. Remove lid from chuck*

29. Put finial blank in chuck with tail stock engaged.
30. Round blank and layout design of finial.
31. Take tail stock away
32. Shape finial with flange or bead where tenon fits into lid. Leave 1/2" long tenon.
33. Sand and finish finial
34. Cut tenon to size of hole in lid using wrench sizer
35. Part off after measuring depth of hole
36. Glue finial into lid making sure it is straight by lining point up with tail stock point.
37. Put foot blank in chuck with TS end in chuck (not critical). Tail stock engaged.
38. True face of blank. Determine foot diameter and transfer measurement to blank.
39. Round blank to desired diameter of foot.
40. Create the tenon that will be glued into the shell.
41. Shape flange area which will contact the shell.
42. Create an undercut in the flange next to the tenon.
43. Shape the rest of the foot including pedestal if desired. A pedestal may be made separately in the same way as a finial if desired.
44. Put the tenon into the pin chuck with the tail stock engaged.
45. Shape underside of foot as much as possible with TS engaged then remove TS.
46. Finish cutting underside of foot using gentle cuts toward the headstock.
47. Sand and finish bottom of foot.
48. Measure diameter of box rim and transfer to shell...just inside the actual dimension.
49. Carve out shell to accept box being careful with diameter and centering of hole
50. Carve out shell to accept foot tenon...test fit to check for level.
51. Glue box into shell using 5 minute epoxy.
52. Check foot fit using level and/or profile gauge.
53. Glue in foot making sure it lines up with finial in all directions
54. Accept compliments!!!

My shell local source is Ocean Gifts and Shells. www.oceangiftsandshells.com. They have an Etsy store but it is limited and I haven't found Sea Urchins on their site.. If you are desperate, contact me and I will get some shells for you.

*I get sputniks from cindydrozda.com or Craft Supplies as well.
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