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## CICAAW Demo of a Narrow Winged Box. By Rich Parker



### Caution:

This project requires your complete attention. The box will be spinning at a high rate and the narrow width results in an interrupted cutting process. The spinning wood is a “propeller” and can result in serious injury if you get your hand into it. Stay focused and observe all lathe safety practices. This is your responsibility.

### Making the winged bowl:

- 1) The wood should be sized to support the chuck jaws that you have for mounting small pieces of wood. There are several ways to chuck this but I will use a wood worm screw. You will need a set of jaws that can accommodate the inside of the bowl in expansion mode.
- 2) The wood should have a fairly straight grain and be tight grained as well. Maple, cherry walnut, and mahogany should work well.
- 3) Start with a block about 7 to 9 inches long and about 2 inches thick. The thickness of the blank will determine the curvature of the box and the height above the table that it sits. Mark the center and drill a hole for the wood worm screw and mount to lathe. Be as accurate as possible drilling the hole in the center. The bowl will be offset to one side if you are off a bit.
- 4) Mark the spigot size that fits your chuck jaws, in this case about 49 mm, on the block and turn a spigot about 3/16” deep.
- 5) Turn the wood around and mount the spigot into the scroll chuck with 50mm chuck jaws.
- 6) Mark a circle for the diameter of the box. It should be slightly smaller than what your chuck jaws will support. It should be smaller than the width of the wood too. If you don't have jaws that will work, you can make a jam chuck. The outside of the box will have a rabbit about 1/16” wider than the circle you make so keep that in mind when sizing the box.
- 7) Shape the outside of the piece, cutting a gentle curve to your liking. Stay back from the penciled circle of the outside diameter of the bowl, including the rabbit that will be made for a lid. Start at the outside end and work your way in toward the center staying clear of the bowl circle in the center. **Take very light cuts.** The edges will chip very easily which you may not be able to recover from. The lathe speed should be as high as you are comfortable with. I will use about 2500 RPM or so.
- 8) Sand the outside top of the piece to your final grit. (Not the edges.)
- 9) Hollow out the box about a 1/16” smaller than the circle that you drew. The depth is your call, but this is a small box and 3/4” is enough... your call, but don't go deep as the spigot as we will remove some of it latter.
- 10) Use a round nose scraper to clean up the box and sand through the final grit.
- 11) Put a 1/16” wide rabbit into the top of the box to shoulder the lid. The diameter of the rabbit should be worked out to fit into one of your scroll jaw sets as mentioned. You can also make a jam chuck if you don't

- have jaws the right size. You must be very careful if you make a jam chuck. Taping the wood to the chuck or using hot melt would be a good thing to do because of the high RPM turning.
- 12) Turn the piece around and clamp the bowl's rabbit into scroll chuck jaws in expansion mode. In this case, the 25mm jaws work well. Don't over tighten or you will split out the sides of the bowl. It is tight enough if you can't twist the piece in the jaws while the spindle is locked. Also, align the wood so that the jaws are oriented towards the length of the wood.
  - 13) Finish shaping the wings of the bowl, starting from the outside in. Pay attention to grain direction for the best cut. The bowl is shaped from the center to the wings. Make the legs as even as you can with about a 1/8" to 1/4" thickness. You should turn off most of the spigot to prevent it from touching the table top when the bowl is finished. The bowl should be shorter than the wings.
  - 14) Sand the bottom side. You can sand the bowl normally (with the lathe spinning), taking care not to touch the wings. The wings should not be sanded by hand with the lathe spinning. Some limited power sanding is possible if you rare gentle. Most of this side will be sanded by hand.
  - 15) The side edges of the box can be sanded on a flat surface. If there is significant edge chipping, you can round over the edges by sanding.
  - 16) Add you finish of choice to the winged box.

## Making the Top:

- 17) Start with a block 2.5" to 3" long and a little wider than winged bowl. Chuck it in any way you like. These size blocks will fit into the 50mm jaws of most scroll chucks. A spigot can be turned if you prefer that method or the square blank can be chucked directly.
- 18) Turn the block round and face off the end. Mark the diameter you need to fit the bowl's rabbit. Turn to the approximate diameter and put a slight bevel on the end. Test fit into the bowl. If the bevel fits, rotate the bowl to burnish a line indicating the correct diameter. Turn it gently to tune the fit as you would like. This type of box should have a loose lid to be functional and easy to open.
- 19) When the correct diameter is reached, hold the bowl in place and trace the top surface of the lid with the pencil. This will be the thickness of the top.
- 20) First scoop out the underside and decorate it with a couple of rings. Sand the end.
- 21) Turn the top side of the lid to the desired shape and form a knob or finial as you like. Sand the surfaces you can and finally, part off the top.
- 22) Make a jam chuck for the top to allow final sanding or finishing of the knob.
- 23) **Optional:** Making a collet type jam chuck allows a lot of hold power easily. Cut a slice of a fine grained wood about 5/8" thick. The width should be about a 1/2" larger in diameter than the top you want to chuck. Cut a saw kerf just shy of the center. Jam chuck this block against your scroll chuck and turn it round. Put a tenon on it and turn it around and chuck it into the scroll chuck.
- 24) Turn a pocket that is close to the size of your lid. It should be a slip fit but not loose. Finish the collet by turning a hole that connect the center to the saw kerf.
- 25) Put the lid into the collect you made and tighten the scroll chuck a bit until the lid is tight.
- 26) Finish the lid's knob or finish sanding.
- 27) Add your finish of choice to the top.