

Boxes by Kirk DeHeer

- 1) Select a blank. You want to use dry, stable, close-grained wood.
- 2) Mark centers and mount the blank safely and securely between centers on the lathe.
- 3) Chose a safe and efficient lathe speed. Remember this formula. Maximum diameter of the work, X RPM of the lathe. = 6000-9000

Example 3" X 2000 RPM = 6000

3" X 3000 RPM = 9000 So with a good sound blank mounted safely between centers with a diameter of 3" we would want a speed of between 2000 and 3000 RPM for a safe and efficient lathe speed. **Keep in mind you are the best safety equipment you have. If you do not feel safe Don't turn on the lathe.**

- 4) Turn the blank to a cylinder and put a tenon on each end of your blank.
- 5) Mount the blank in a scroll chuck with the top of the box in the chuck.
- 6) True up the box. Part off the two parts of the box leaving the top of the box in the chuck.
- 7) Rough shape the lid of the box. Do not let the cutting tool come into contact with the chuck. With the lid roughed to shape hollow out the lid.
- 8) The spigot on the lid needs to be perfectly cylindrical to have a good fit. If it tapers one way or the other it will either tighten up as it goes on and then will loosen and come off as soon as you start turning the final shape, or it will go on tight and then loosen and slip so wont be able to turn to final shape.
- 9) Sand and finish the inside of the lid. Don't sand the cylindrical walls. You don't want to change the shape. Use a finish that does not have a harsh smell.
- 10) Remove the top section and place the bottom section of your box in the scroll chuck. True up the blank and rough fit tenon to the lid.
 - A) A rough fit is where you set the tenon diameter of the inside on the lid, so you don't hollow the inside too big.
 - B) To make your rough fit, start by cutting a tapered tenon. Then check to see if it fits. If it does not fit, square up the tenon and cut a new taper. Repeat this until the lid just sits on the tenon. **Do not fit the lid!**
- 11) Hollow the base of the box. Shape the inside of the box to a cylinder for the length of tenon. Then shape the inside to suit the intended outside.
- 12) Sand and finish the inside of the box. Use a finish that does not have a harsh smell.
- 13) Fit the tenon to the lid with a **work fit**. (This is a tight fit that will act as a jam chuck so that you can shape the lid)
- 14) Before you mount the lid for shaping set the wall thickness of the box. Use the skew as a scraper to reduce the diameter of the outside of the box body wall in a narrow band just below the tenon to the final diameter desired.
- 15) With the lid mounted on the box, shape the outside of the box and lid down to the minimum diameter set in step 14.
- 16) Sand and finish the outside.
- 17) Remove the lid and carefully refine the tenon diameter to obtain the desired final fit with the lid. Tightness of the fit is dependent on the intended use of the box.
- 18) Check the inside length of the box. And mark the depth on the outside. Add the thickness of the base to the line and add a 1/16".
- 19) Part off the bottom of the box.
- 20) Make a jam chuck to fit the tenon of the base.
- 21) With the box mounted on the jam chuck shape the bottom of the box.
- 22) Sand and finish.