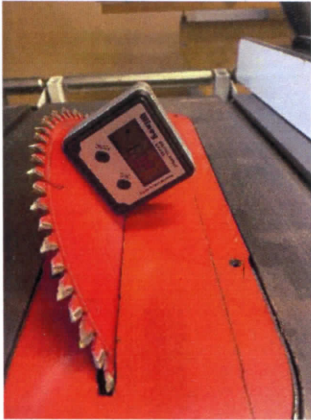


# Inside-Out Cross

By Dewayne Colwell

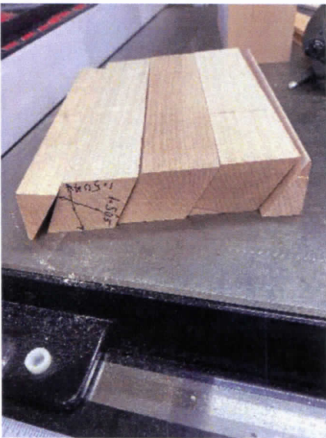
Inside-Out turning is a lot of fun. It allows you to create some unusual pieces that are somewhat more appealing than regular turning.



Accuracy is the key to having a successful project. This project will be 3-sided; therefore, you will need to have your saw blade set exactly to 30 degrees so that you can build 60-degree diamonds.

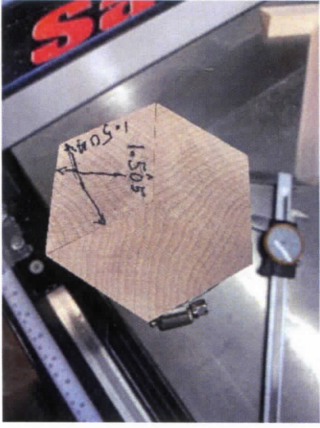


As pictured on the left, the thickness of the board needs to be as close to the width of the cut as possible.

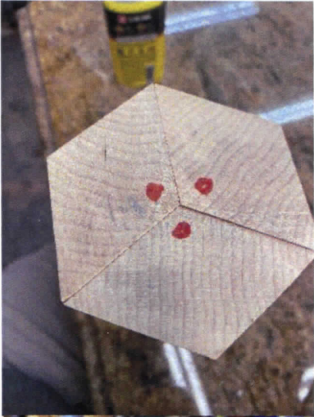


Once your saw is set correctly, you can rip three pieces that are all exactly the same.

Dry clamp your project to make sure that you do not have any wide joints.



Glue these pieces together using CA glue. Mark the three pieces on the inside corners for reference.

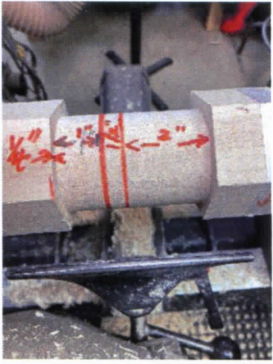


Wrap the project on both ends with nylon stranded boxing tape in the direction of the lathe rotation. This will ensure you will be safe during turning. Some people on YouTube will skip this step but safety is your responsibility and this step is crucial.



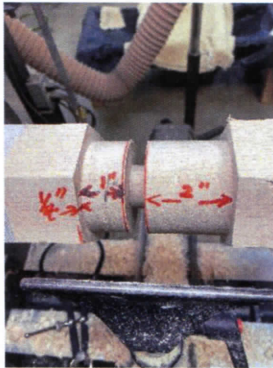
Mark the top of the project and the direction of rotation of the lathe to ensure that the tape gets tighter as it turns. Then draw the shape of the cross that you want in the center of the project.





The top, bottom and side pieces of the project are in thirds. The top section is 1/3 down, the bottom section will be 2/3 up and the center section will be 1/2".

Turn the entire portion of the cross to 1/4" depth the entire length of the cross. Mark the project so you know where the cross will be.

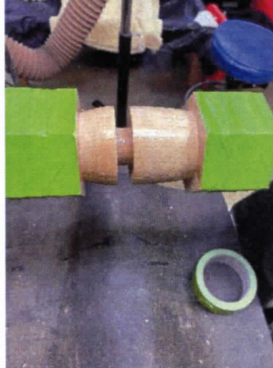


Part the center section marked 1/2" wide to 3/4" depth. That will leave the spool on the inside to approximately 1-1/8".

If you desire the cross to have straight lines (no curves), skip the next step.



If you desire to have a gothic designed cross (curved), you will need to cut both sides to a barrel shape (approximately 1/4" inch taper to the outside).



Sand the project to at least 220 grit. Tape the ends so that your spray finish does not get on the areas which will be your glue joints.

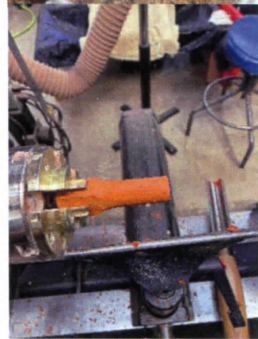
Spray finish as desired then wax the inside of the project.



Remove the project from the lathe. Remove the tape from both ends. Using a putty or shop knife, separate the three pieces that were glued together with CA glue.



Rotate the three pieces 180 degrees from their glued positions. Dry clamp to make sure all the joints fit well together. Once you are satisfied with the fit, apply glue and clamp the project at the top and bottom with hose clamps. Set aside to dry.



While the glue is drying, you will proceed to turn the finial of the project. Start by turning a spool shape approximately 1-1/8" in diameter and about 3-1/2" long.



Using the same formula as the inside cross, cut the to 1/3 down and bottom 2/3 leaving the horizontal part of the cross in place.

Cut a 1/4" x 1/2" dowel at the bottom of your cross. I used a 1/4" wrench to size the dowel.

Lock the head stock in place and sand one side of the cross flat. Rotate 180 degrees and sand the other side flat to complete your cross. Sand the project and apply a finish. When it is dry, part it off.

Unclamp project and place on the lathe. While turning, leave the project as large as possible.

Turn a tenon on the top of the project and place it in the chuck. Finish shaping the project leaving a small mortise on the bottom.

Reverse chuck the project on the lathe. Then shape as desired, making any beading and preferably a dome shape on the top. Leave a small bead at the very top for the finial. Drill a 1/4" hole 1/2" to accept the finial.

Glue the finial in place. Sand and finish the project

Using this process, you can use other inside-out features such as hearts. Have fun as you explore inside-out turning.

