

Turning A Beads of Courage Box

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Background Information

Many woodturners are already familiar with the Beads of Courage program, but you may want to review the following 2 YouTube videos. The first is about 2 ½ minutes long and the second is slightly less than 2 minutes.

[Breads of Courage Promotional Video 2:20 minutes](#) after you are directed to this video, you will have to click the arrow on the bottom left of the screen for the video to start.)

[Children's Testimonials 1:56 minutes](#)

If you are interested in more information, there is a Beads of Courage website <http://beadsofcourage.net/> and there are a number of other You Tube videos on the internet.

The boxes we make are used to store the beads that the various children receive. The Georgia Association of Woodturners sponsored this charity at our 2015 Turning Southern Style symposium and we collected 82 boxes. I coordinated the Beads of Courage outreach at the 2016 AAW symposium and we collected more than 750 boxes. We are also going to sponsor the charity at our Turning Southern Style symposium this September in Dalton.

Beads of Courage Box Guidelines

The following guidelines were taken from the Beads of Courage web site.

- Beads of Courage members may receive thousands of beads. It is desirable for your boxes to hold all of them. As a result, turned or rectangular boxes need to be large. Large is better! Recommended interior dimensions for turned boxes are 6" diameter (5" minimum), 5" height (4" minimum). Recommended interior dimensions for flatwork boxes are 4" x 6" x 4."
- Box bases should be wide enough so the box is stable and does not tip over easily. Lids should be easy for small or ill children to remove or lift. Any finials should be easy for a small child to grasp and not too elaborate so they don't break. Avoid excessively elaborate designs that may easily break or be damaged.
- Finishing of boxes is extremely important! Beads of Courage members who receive these boxes are susceptible to germs/infections/molds. Bowls that have not been properly sealed can harbor mold. Please take the time to ensure you are using a safe finishing process that does not contain toxic materials. Also, do not use finishes like linseed oil that take a long time to off gas.
- All kinds of wood are beautiful! Please refrain from painting Beads of Courage boxes. Instead, highlight the beauty of the wood with clear varnish or stain, and/or burning.
- Embed the Beads of Courage logo bead in the design of the box. These logo beads can be ordered on the Beads of Courage website. Click on "Artist" and then the drop down tab "Information for Woodturners." If you cannot include a bead in the design, burn or letter Beads of Courage onto the lid or side of the box. Complete a Beads of Courage artist card and place it in the completed box.
- It is nice if you can personalize your donation. Marking your name or initials, type(s) of wood, and date on the box bottom is one way. It is also nice to enclose a personal note of encouragement, business, card, etc. inside the box.

Basics

Beads of Courage boxes can be made from any kind of wood. They can be made from single blanks, basic glue-ups or segmented pieces.

They can also take many different shapes, as long as they meet the box size guidelines. The opening at the top should also be a wide opening so the child can easily reach in to either place or retrieve beads. (I like to think “Cookie Jar” or “Canister”.)

Box embellishments can be very basic or very elaborate. They can be beaded, textured, burned and carved. They can also be free of any embellishment with just a nice finish. Remember – they all look great to the child who receives the box.

In this demo, I have chosen a design that can be made from board cutoffs and can be made without any hollowing tools. Please do not think this is the only kind of box you can make.

Regardless of your design plan, there are 3 pieces you have to turn for each box

1. The body
2. The lid
3. The knob

Turning the Body

For the demo I take various pieces of kiln dried lumber and glue them together until I get the box dimensions I need. If the desired interior box diameter is 6”, then the pieces should be about 7.25” square or 7.5” square.

Stack the boards on top of each other until you get the desired body height. If the desired interior depth is 5”, you probably need a stack that is about 5.5” – 6” thick. (Either 7-8 pieces of 3/4” lumber, 3 pieces of full dimension 8/4” lumber, or a combination that is about 5.5” – 6” thick.)

Before gluing these boards together, scribe a circle on each piece and cut the pieces round on a band saw.

You can also eliminate some of the turning by using a scroll saw to remove the center portion of the blanks before you glue them together. If you are going to do this, be sure to leave enough wood on the sides to allow you to turn the desired contours. Also, do

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not cut the center out of the bottom piece. Otherwise, you will have a pipe, instead of a body.

Before you glue the pieces together, you must decide how you are going to hold the glued assembly on the lathe. I use a recess and I turn the recess into the bottom piece before the glue up.

After you turn the recess in the base (or tenon if you prefer), glue the pieces together. Ensure the pieces are aligned so the grain is running in the same direction. Also, ensure you have processed the pieces so you have glue ready faces.

Mount the glued assemble on the lathe and turn the outside

Rough sand the outside while the box is still on the lathe. Do not final sand or apply a finish to the outside yet – you will probably scratch it while using calipers to measure the wall thickness while turning the inside of the bowl.

After turning the outside, turn the inside.

Now you can sand, embellish and finish both the inside and outside while the box is still on the lathe.

Reverse chuck the box and turn the bottom. You can either use a longworth chuck or a mouse pad on your 4 jaw chuck. Regardless, use the tail stock to center the box.

Sand, finish and sign the bottom.

Turning the Lid

Use a piece of wood that is approximately 6/4" in diameter to give you the necessary lift.

Mark the center on the bottom side of the top, mark the diameter needed (approximately 1/2" wider than the top of the box) and bandsaw a round blank about 3/4" larger in diameter than the top of the body.

Mount on the lathe. I use a screw chuck to hold the bottom side of the lid and then turn the top side of the lid. Leave a tenon in the middle of the top so you can reverse chuck it to turn the top. Drill a hole (about 3/8" deep) to mount the knob handle. Do not drill the whole way through the top.

Sand and finish the top side of the lid (except for the tenon) while it is on the lathe.

Remove from the lathe and mount the tenon in the chuck.

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Use a set of dividers to measure the outside diameter to match the outside diameter of the body and turn to fit. You may want to have the lid slightly overlap the body.

Use a set of dividers to measure the tenon that fits into the body and turn to fit. You do not want a tight suction fit. (Think cookie jar fit.) Also the lid or body may expand/contract after the turning is completed, so leave enough room for that movement.

Finish turning the bottom side of the lid. Be sure you do not turn into the hole for the knob handle.

Sand and finish the bottom side of the lid while it is still on the lathe.

Reverse chuck the lid and blend the edges of the tenon into the rest of the lid top.

Turning the Knob

Cut a piece of wood approximately the size of a bottle stopper (1 3/4" square x 2" long).

Drill a hole in the end to match a bottle stopper mandrel (My bottle stopper mandrel requires a 23/64" hole).

Mount the wood blank on the mandrel and turn the knob. No sharp edges or pointy finials. Turn a recess for the Beads of Courage Logo bead. The beads vary in size so each bead needs to be fitted individually.

Sand and finish while on the lathe.

Connecting the knob to the lid

Turn a dowel to connect the hole in the knob to the hole in the lid. In my example, the dowel is 23/64" in diameter,

Use wood glue to connect the knob to the lid.

Use epoxy or silicone to connect the bead to the knob. Do not use c/a glue.

Note: Since my bottle stopper mandrel requires a 23/64" hole, I also drill a 23/64" hole in the top to attach the knob.