

TURNING A BOTTLE STOPPER

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Bottle stoppers are easy to make and are fine gifts for friends and family. I suggest you turn a bunch of them at a time and keep some for impromptu gifts. They are fun to make because stoppers are quickly turned and there are a variety of shapes. In fact, I suggest that you try a variety of unique shapes. Doing this will help keep redundancy and boredom in check. I've given them for Christmas gifts, but the most fun is to give one to someone when they least expect it.

Tools:

1. 3/8" drill bit. I prefer a bradpoint bit because the point will not drift.
2. You will need a drill. I use a drill press to keep the hole at a 90° angle to the block of wood. You can use a hand held drill but you will have to be careful to keep it perpendicular to your work or you will lose wood getting your stopper true on the lathe.
3. A chuck that will grasp a 3/8" dowel. Any type of chuck will do as long as it runs true and has no runout (wobble).
4. 3/8" spindle gouge, or your favorite spindle turning tool. While some woodturners are purists, I believe a turner should use whatever tool works best for them. My favorite tool is a "Skewchigouge" by Crown. While I can still get an occasional catch, I find this tool very forgiving and easy to use. It would be very easy to make a tool similar to the "Skewchigouge" if you enjoy making tools. Some of my favorite turning tools are those that I made.
5. Parting tool. Either a 1/8" or a 1/16". Your choice.
6. Sandpaper of various grits. The smoothness of your final cut will determine the grit you use first. I might start with 100 or 150 grit and progress to 220 or 240 grit. When sanding, set your lathe to a low speed and don't forget to wear a dust mask. Be careful not to sand away the crisp detail of your cuts.

Finish:

While you can use any type of finish you prefer, I like a high gloss finish, which can be applied on the lathe, and be done with it. I found that a good friction polish does the job well. It dries fast and leaves a smooth high gloss finish with very little effort. There are several different brands on the market, which would do an excellent job. I use "Mylands High Build Friction Polish", but other brands would be "Hut Crystal Coat" and "Shellawax Liquid".

Material:

1. Bottle Stopper Corks

I use real cork for my bottle stoppers. There are other choices like silicone stoppers and metal cones, but I like real cork for two reasons; The look and the cost. There are two grades of Bottle Stopper Corks on the market, standard grade corks and premium grade Flor corks. I always use the Flor corks because if I'm going to spend the time making a bottle stopper, I don't want to use cheap material that may not last. I know of two sources for predrilled corks:

Craft Supplies USA (www.woodturnerscatalog.com) and
Packard Woodworks (www.packardwoodworks.com).

2. Dowels

Be careful here. Most dowels on the market today, advertised as 3/8" are not a true 3/8" but are a bit smaller. These dowels will not do, as the fit on the cork would be too loose. You need to be sure the dowel stock you use is a true 3/8". While you can order dowel stock for your corks from both Craft Supplies USA and Packard Woodworks, I find that I do just as well buying 3/8" oak dowels locally. I check them with a Vernier caliper before purchasing.

3. Wood

Here is a way to use up a lot of your scrap hardwood like cherry, oak, hard maple, walnut or a combination of woods. Almost all of my stoppers are of one solid chunk of wood, but gluing up contrasting woods can make for an eye-catching one. Try gluing up contrasting woods and cutting the blank on the bias. You could buy exotic woods too (ie cocobolo, purpleheart, rosewood, zebrawood, etc.). Just remember, if you buy exotic woods, you increase the cost and you don't use up your scraps.

4. Glue

Any good woodworkers glue will work satisfactorily. I prefer to use Titebond II because its setup time is fairly short, it's highly moisture resistant and it's food safe.

Procedure:

1. Cut a hardwood block approximately 1 1/2" X 1 1/2" X 2" high.
2. Drill a centered 3/8" hole, 1" deep in the endgrain of the block.
3. Cut a 3/8" dowel to a length of 2 3/8" and put a small chamfer on both ends.
4. Using a flat toothpick or a Q-tip, spread a thin coat of glue inside the hole. Also, spread a thin coat of glue on 1" of the 3/8" dowel.
5. Drive the dowel into the hole in the hardwood block using a wooden mallet and clean away any glue squeeze out with a damp paper towel. Set aside to dry.
6. Mount the doweled block of wood into the chuck so the bottom of the block is against the chuck. This helps keep the dowel from breaking when you true up the block of wood.
7. Turn the block into a cylinder. You may choose to move the tail center up to help stabilize the wood as you cut. Take light cuts and don't try to "hog" off the wood. You don't want to break the dowel.
8. Move the wood cylinder approximately 1/2" out from the chuck (The further away from the chuck the cylinder of wood, the bigger the chance the dowel will break).
9. Using your parting tool, true up the bottom of the cylinder 90° to the dowel. Now, make another shallow pass, cutting the bottom of the cylinder very slightly concave. This will help the cork seat tightly against the wood.
10. Move the wood cylinder back against the chuck.
11. Turn the cylinder to shape (Reference the section on Design on page 5). You can use the tail center if you want to, but I usually don't. I would rather take light cuts because I feel it takes less time. Note: The diameter of the bottom should be about 1 1/8".
12. Sand smooth with your lathe set on a low speed, being careful not to sand out the crisp details of your cuts. I usually sand to a 220 or 240 grit.
13. Apply the "Friction Polish" to a high gloss. I turn off the lathe and wet the wood with the "Friction Polish". Then I turn on my lathe, rewet the rag with more "Friction Polish" and move it across the wood until I see the high gloss appear.
14. Remove the piece from the lathe.
15. Using a flat toothpick or Q-tip, apply glue into the predrilled hole of the cork. Immediately, slide the cork onto the dowel and push it tightly against the base of wood. Wipe off any glue squeeze out with a damp paper towel and set aside to dry.
16. Carefully trim excess dowel at the end of the cork so it is flush. I then lightly touch it to my belt sander to polish the bottom of the dowel. You must be careful because the belt sander is aggressive and you don't want to bevel the cork.
17. You now have a bottle stopper!

Design:

Here is your chance to be creative and turn freeform! I usually have some basic idea of the shape I want but most of the time I'm just creating the shape as I go. An important lesson I learned from Warren Crowder, an accomplished woodworker and woodturner in northern Florida who mentored me, was to keep your turnings tight. That means, when you are turning small objects, keep your beads, coves, etc. small and crisp.

I like to observe turnings, pottery and other objects to get ideas for shapes. If I see an interesting one, I'll make a rough sketch. I've also gone to the library and found many good ideas for shapes from various woodturning instruction books. I will also sketch them. I keep my sketches handy to jog my memory as I create the turning.

I've included some basic shapes to help you get started. I like to have the top of the turning a simple shape and put detailed turnings next to the cork. Sometimes the detail is simple and sometimes quite ornate. If the wood has beautiful grain or markings, I'll keep the turning simple and let the wood speak for itself. If the wood is rather plain, I might get a little more ornate. Just remember, the more ornate you get, the more important it is to keep your turnings tight.

Examples Of Shapes

