

Ant Barrier

Green Turning with Recycled Plastics

by James Duxbury

Hummingbirds have become a real summertime attraction around our house. We began with a small, single-tube feeder of the sugary fluid and have now progressed to a larger, four-hole model. It seems that the bigger the feeder, the more birds appear. They love it. However, ants love the sweet, sugary liquid too, and in no time, find a way to get up the support pole and down into the feeder. The ants don't eat much, but they crawl all over the feeder, getting right into the feeding tubes where they drown by the hundreds, contaminating the liquid and plugging the tubes. Greasing a short section of the supporting pole works well to deter the ants, but the grease dries out in a few weeks and becomes a real mess after a few applications.

Over the years, I have seen a few wishing well-style ant barriers turned out of wood, but never paid too much attention to them. Most are filled with cooking oil and hang between the support pole and the feeder, creating a moat of oil that the ants can't get through. There are two problems with this system: First, wood that is outdoors does not hold up well no matter what the coating is; and second, over time, the oil soaks out through the thin wall of the wooden moat. Also, both of these conditions are exaggerated when the feeder is hung out in full sun, as is often the case. Analyzing the problem, the design is good, but the material failed. Here is where we can utilize the concept of "going green" with recycled plastics to solve both of these problems.

MATERIALS

This ant barrier is designed around the use of recycled plastic lumber. Plastic lumber is actually a high-density, polyethylene plastic material made from gallon-style milk, water, soda, and juice containers, as well as some detergent and shampoo bottles (all recycling code #2). The product is 100% plastic, ultraviolet stabilized, with a slight wood grain-like

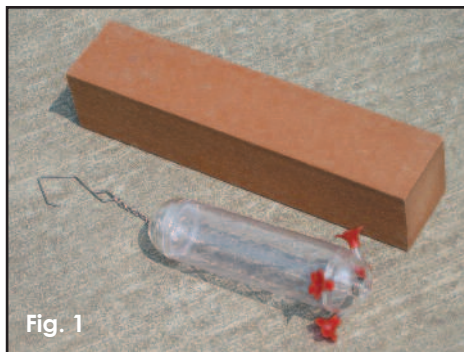


Fig. 1

These are the materials needed for the project.



texture. One source of the material is the Plastic Lumber Yard in Norristown, Pennsylvania (<http://plasticlumberyard.com>). This premium-grade lumber is a solid material and comes in a variety of colors. I happened to have a short piece of 4" x 4" x 4" in the teak color, which was used for this design (see **Fig. 1**). A couple



Fig. 2

The material will come off the tool in long ribbons that could get tangled in the lathe; so use caution and stop often to clear away the waste.



Fig. 3

Cut the blank to length on the bandsaw.



Fig. 4

Turn the blank to a cylinder first.

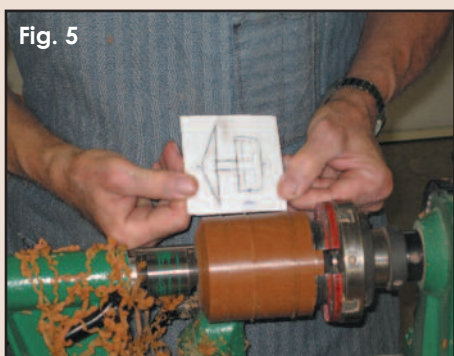


Fig. 5

Lay out the three defining lines and cut the lines with a parting tool.



Fig. 6

Start to cut the taper for the roof.



Fig. 7

Turn the stem down to 3/4" diameter.

SUPPLIES

Wood: one piece 4" x 4" x 4" plastic lumber with slight wood grain-like texture
Tools: bandsaw; lathe; 1" and 3/8" spindle gouges; 1/2" cutoff tool; 1/4" straight and 60° scrapers; 1/8" and 1/16" parting tools; drill press with appropriate-size drill for screw eyes
 Two 1/2" screw-in eye hooks
 Hummingbird feeder
 Cooking oil
 Safety glasses
 Full-face shield

Please refer to all manufacturers' labels for proper product usage.

A WORD OF CAUTION

The plastic lumber cuts well with a sharp gouge, but the strands of shavings can build into a continuous rope-like mess that could catch in the lathe and cause serious injury (see Fig. 2). Every few seconds, stop the cut and lift the tool to break the strand of cutoff material. Stop the lathe often to clean away debris. Always keep in mind that plastic materials melt easily, so use low speeds and sharp tools. Do not try to sand or burnish the material and always wear safety glasses. In fact, I would recommend the use of a full-face shield when turning anything.

CUT THE BLANK

Plastic lumber can be worked with most regular wood-working tools. Start by cutting about a 4" piece off the end of the 4" x 4" stock with the bandsaw (see Fig. 3). Again, remember it melts, so use low speeds when sawing, routing, jointing, or planing the material.

TURN THE PIECE

Set the lathe to about 800 rpm. Put the blank between centers and turn it cylindrical (see Fig. 4). See **Diagram A**

of 1/2" screw-in eye hooks and a hummingbird feeder (obtainable from a local hardware or building supply store) are also needed to complete the supplies list.



Fig. 8
Start to remove excess material with the scraper.



Fig. 9
Switch to the angled scraper to refine the moat area.



Fig. 10
Form the bottom with the 3/8" gouge.



Fig. 11
Part the blank off the lathe.



Fig. 12

These are the chisels used for this project.



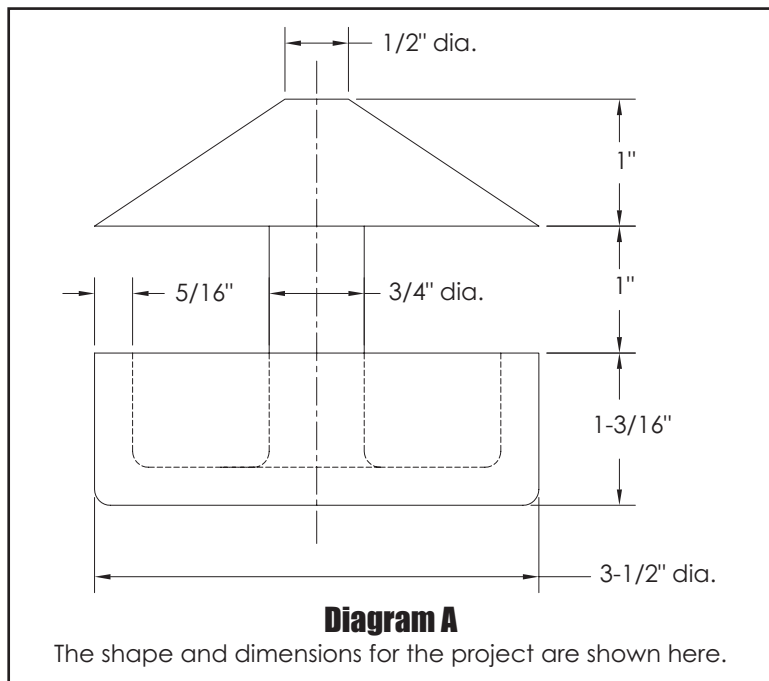
Fig. 13

Drill a hole for the screw eye on the drill press.

for dimensions. Lay out the three defining lines, and with a 1/16" parting tool, cut the lines into the piece (see **Fig. 5**).

Use the 3/8" gouge and start shaping the roof from the tailstock end. Leave about a 1/2" flat at the tailstock end and taper to the first cutline (see **Fig. 6**). When the roof is finished, switch to the 1/8" parting tool and start removing the material between the next two lines. Remember to turn off the lathe and clean the long strands of debris away often.

Finish turning the stem down to about 3/4" diameter (see **Fig. 7**). Switch to the straight scraper and start removing the material in the moat area (see **Fig. 8**). When that tool will not remove any more material, switch to the angled scraper and finish the inside of the moat (see **Fig. 9**). Be sure to leave the walls about 5/16" thick and cut the moat about 7/8" deep. Check the final depth of the bottom inside the moat, and mark that on the outside. Add 5/16" for the bottom thickness, and use the 3/8" gouge to form the bottom (see **Fig. 10**). Once the bottom is



formed and it is at a depth where the gouge will not work anymore, use the 1/16" parting tool to complete the bottom and part the piece off the lathe (see **Fig. 11**). This completes the lathe work. The lathe chisels used for this project are shown in **Fig. 12**.

On a drill press, drill a small hole in the center of the top and one in the center of the bottom to accept the screw eyes (see **Fig. 13**). Screw the eyes into place. Hook the top of the ant barrier onto whatever hummingbird

feeder support you are going to use. It is best to locate the feeder in full view for the most appreciation of these delightful little birds. Fill the moat of the ant barrier about two-thirds full with cooking oil and hang a full (mix one part sugar to one part water) feeder from the screw eye underneath it. It is amazing how fast the "hummers" will find it and how many there are. You will soon need much more sugar.

James Duxbury

James Duxbury, woodturner and inventor, is the kind of guy who thinks and creates "outside the box." His turnings are unique and he seldom turns the same thing twice. With the help of his pet parrotlet, Bean, creativity abounds—all sorts of fine turnings are made from small bottle stoppers to bowls, and even a working Foucault Pendulum.

Jim's kaleidoscopes are a signature item, custom designed, and have been the recipient of numerous blue ribbons. Although Jim quit working in 1996 and has claimed to be retired, he has since obtained two U.S. Patents and has a third one in progress.

The inventor of particulate dust respirators, his company, Duxterity LLC, markets the Resp-O-Rator™ and Resp-O-Rator Jr™, while Elegant Creations markets his gallery of fine wooden objects, including Kaleidoscope Plans, Kaleidoscope Building DVD, and custom wooden Kaleidoscopes. Details can be seen at www.duxterity.com.

Jim welcomes your questions and comments, and can be reached by e-mail at cyberdux@bellsouth.net.



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