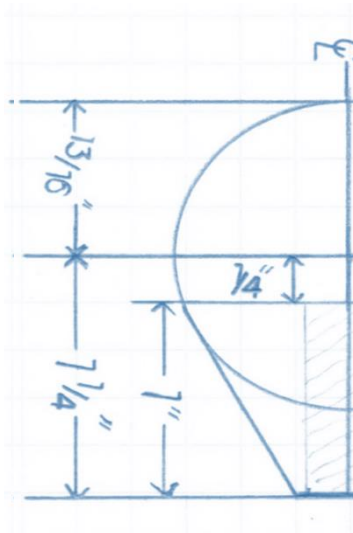


Lisle Heritage Society Ornament – 2016 Hot Air Balloon

Designed and Turned by



The 35th Annual Lisle Heritage Society Ornament draws on an "Eyes to the Skies" theme. The "Eyes to the Skies" festival and celebration has a long tradition in Lisle. The event has been running over the Independence Day holiday for over thirty years! The Eyes to the Skies Festival has been selected six times as *One of the Country's Top 100 Tourist Destinations* by the American Bus Association. It's been voted Best Festival by readers of *West Suburban Living Magazine* and named a member of the Illinois Festival Hall of Fame. Hampton Inn named it as a place to visit in its Year of 1,000 Weekends and the Chicago Centennial Flight Commission selected the festival for inclusion in its 12 Events for 12 Seconds when honoring the 100th anniversary of the first flight by the Wright Brothers.

Instructions for turning Balloon Ornament

There's a million ways to skin a cat, these will help get you started.

1. Mount drilled blank (~ 1 $\frac{3}{4}$ " by 2 $\frac{3}{4}$ ") on $\frac{3}{8}$ steel dowel in drill chuck, scroll chuck, collet chuck, etc. (Drill or collet chuck should be secured in Morse taper with threaded rod so it can't vibrate out.) The ornament must be turned this way. A "basket plug" will be inserted after the ornament is completed. (See picture)
2. Start the lathe, use an rpm that you are comfortable with. Bring up the tailstock and engage live center in other end of blank. There is enough waste on the blank for normal live centers, a small live center is good for this project. Go easy, basswood is soft.
3. Turn the blank to uniform diameter of 1 $\frac{5}{8}$ ". A skew works well here, the blank will tell the skew when it is round and a couple of light passes once round should get the diameter to where it needs to be. A smidge over 1 $\frac{5}{8}$ " is ok at this point. Use the story stick gauge to check the diameter.
4. Use the story stick and transfer the three lines needed for the project to the blank. Align the story stick at bottom of balloon blank. There should be a mark at 1", 1 $\frac{1}{4}$ " and 2 $\frac{1}{16}$ " from the bottom. Mark the lines around the blank.
5. Now bring the bottom $\frac{1}{8}$ " of the blank to a $\frac{5}{8}$ " diameter. Do this with a parting tool and a measuring device such as calipers, a $\frac{5}{8}$ " wrench works well here. Leaving this large for now will allow the angle cut to bring the bottom down to its final dimension of $\frac{1}{2}$ ". Also, with the parting tool bring down the waste at the top of the blank to $\frac{3}{8}$ " to $\frac{3}{16}$ " diameter. Part down to the third line. This is the top of the balloon.
6. Next turn the $\frac{13}{16}$ " radius curve that makes the top of the balloon. Use the same techniques used to turn a bead on a spindle. The second/middle story stick mark is the middle of the circle. The radius gauge and diameter gauge on the story stick can assist here to check the shape of the curve. Go easy, a little large is better than a little small here. The goal is to be no more than $\frac{1}{16}$ " or so out of round on the top. Be careful, it is easy to get a flat top. Leave some waste at the tailstock for now.

7. Using a small spindle gouge or detail gouge start making the angle cut that runs from the first mark (1" from bottom) to the base/bottom of the balloon. This is a straight line from the first mark to the bottom of the ornament. As you make the cuts your gouge should be working its way to the 5/8" diameter base. Again, a straight line from the bottom outer edge to the first mark. Your final passes will cut into the initial relief bringing the base to its final diameter of 1/2". Leave a little fat here, sanding will get you to the 1/2".

8. Move to the next mark, this is the center line of the 1 5/8" ball that makes up the balloon. Using the gouge create a radius, towards the bottom, (think turn a bead) that runs into the diagonal line that was created in step 7. Go easy. This radius softens the line and helps to give the balloon its round shape.

9. Reduce the waste at the top, pull the live center away and cut off the remaining waste. Work the top as needed to get a nice round curve.

10. Time to sand. Start with 180, (if you're really good, start with 240 or 320) and work your way through the grits to at least 400. Go easy, basswood is soft. Check the diameters (bottom and middle) and the radius using the story stick. It's Ok to work the grit gouge here if you need to refine the shape a smidge.

11. How did you do? The goal is to be within 1/16" on the top radius and 1/32" diameter at the center, base should be right at 1/2".

12. Drill a hole for the screw eye using 1/32" or smaller bit. (If you don't have a 1/32" bit don't sweat it, this hole will be drilled later.) Done!!

The screw eye and "basket plug" will be added by the committee chair prior to delivering the ornaments to the Lisle Heritage Society. *Thanks for participating, hope you had fun!!*

P.S. if you need help just ask, if you need a demo that can be arranged.

Scale Drawings for Reference

