

# Testing an Upgrade for the Lindsay Sphere Cutting Jig

by Fred Holder

In December 2006, when I was working on the January 2007 issue of *More Woodturning*, Fred Lindsay of Hendersonville, North Carolina contacted me concerning a possible review of the Sphere Cutting Jig that he has developed and was bringing to the market. Fred asked me if I would consider doing a review on this new tool. Since making spheres has been one of my concentrated efforts in woodturning for many years, I agreed to test his unit and found it an excellent tool.

I suggested to Fred that it would cut better with a Hunter Carbide Cutter. Mike Hunter furnished me a 3/8" shaft with a carbide cutter on it to try. I found that if the cutter was just placed horizontal for cutting each way, the finish was not excellent. I did rig it up for testing with a fixture that would allow me to rotate the cutter to a 45 degree angle for the cuts each way and it cut very cleanly. I told Fred Lindsay about my tests with the Hunter Carbide Cutter and suggested it would work if he could come up with an easy to rotate the shaft for each direction of cut.

Recently, Fred Lindsay called me to say he had gotten together with Mike Hunter and they had worked out a satisfactory way to mount the carbide cutter, with a slight downward tilt, so that it cut nice and clean both ways of swing. The new cutter and shaft is shown in Figure 1.



**Figure 1. The Lindsay/Hunter cutter for the Lindsay Sphere Cutting Jig.**

When it arrived, I was setting up the Lindsay Sphere Cutting Jig for a trial. Mildred said, "Great! I would like to try it on the little vase I'm making." The vase was to have a spherical bottom section. It was almost too large for the jig to swing and cut over the ends of the round section that was to become spherical shaped, so Mildred had to turn off the corners of the

section a bit to allow the jig to swing off of each side without having to make too heavy of a cut. She was doing this in Figure 2.



**Figure 2. Mildred turning off the end portions of the part to become a spherical shape.**

This was our first trial with the new cutter. It really worked great. Mildred is getting started on the spherical shape in Figure 3.



**Figure 3. Beginning the cuts to make the area spherical.**

She continued moving in the cutter and making cuts both ways until the cutter could no longer cut without damaging the top and bottom portions of the vase. This is shown in Figure 4. The cutting had been very good.



**Figure 4. Mildred making the finishing cuts on her spherical vase.**

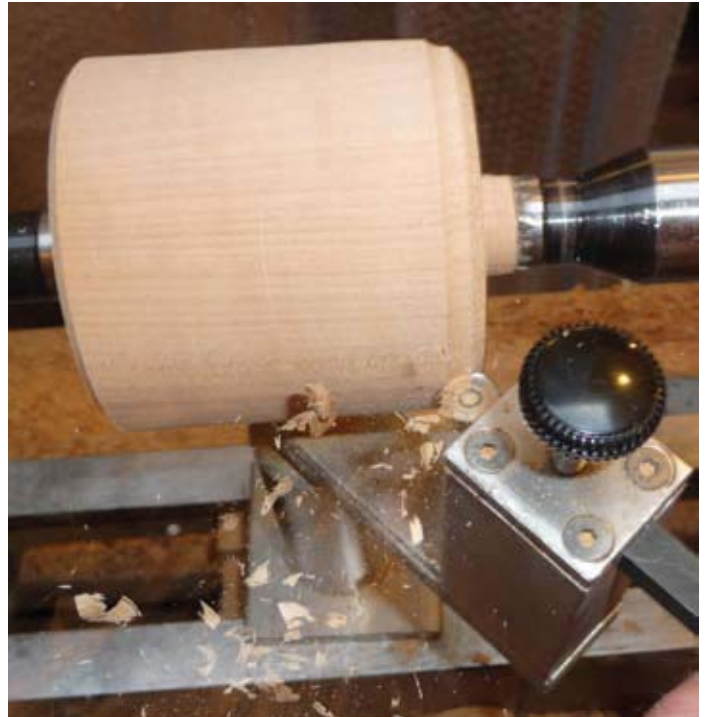
The next check of the tools was to actually make a ball. I grabbed a piece of wood off of the shelf, mounted it on the lathe, and turned it round and trimmed the ends to make a cylindrical section that was as long as it was in diameter as shown in Figure 5.



**Figure 5. The wood has been turned to a cylinder that is as long as it is in diameter.**

I then mounted the Lindsay jig with the new Lindsay/Hunter cutter and centered it as close as I could by

making small cuts on each side of the cylinder. This operation is shown in Figure 6.



**Figure 6. Making small cuts on each end of the cylinder to center the Lindsay jig.**

Once I had the jig centered, it was a simple task to turn the ball round, leaving only a tenon on each end. The cut was clean enough to be ready to sand. See Figure 7.



**Figure 7. The ball is now turned as far as it can go when mounted between centers.**

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I normally turn all of my balls (spheres) between centers. It is much less wasteful of wood doing it that way, because the piece of wood has to only be slightly longer than the diameter of the desired ball. One can mount a longer piece of wood in the lathe and virtually turn the entire ball without having to remount it between center cups as shown in Figure 8.



**Figure 8. The ball has been rotated 90 degrees and mounted between center cups to turn away the tenons.**

One could use the jig to turn away the tenons; however, setting up the sphere jig precisely on center is a difficult task. I haven't yet determined a way to easily center the jig under the wood. The only precision adjustment tool available is a plastic mallet. Therefore, I generally turn away the tenons with a 1/2 inch spindle gouge as shown in Figure 9.



**Figure 9. Turning away the tenons to make the ball round.**

The finished ball is shown in Figure 10. It came out quite round and required little sanding to make it smooth.



**Figure 10. The finished ball measured 3.25 inches in diameter and was very round.**

I'm pleased that Lindsay and Hunter got together to make up a tool that cuts much better and will hold an edge for a long time. The cost of the Lindsay Sphere Turning Jig including the new shaft and cutter is \$259.00 plus \$20.00 shipping and handling for a total of \$279.00. If you already have one of Fred Lindsay's sphere cutting jigs, you can purchase the new Lindsay/Hunter shaft and cutter for \$89.99 plus shipping and handling. You can order by credit card directly from Fred Lindsay's web site: <http://www.lindsaylathetools.com>

Fred says that there are three video tutorials on his web site showing: "How to set up tool", "How to use the Tool", and "How to turn tenons off using cup centers". My new computer doesn't seem to be set up to view all of these videos that are available, so I haven't looked at the tutorials.

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