

# Delta Circle Cutting Attachment

by Lyn J. Mangiameli

If woodturners have only one stationary power tool besides their lathe, it is almost always a bandsaw. In theory, the bandsaw can be ever so helpful in preparing wood blanks before mounting them on the lathe. A bandsaw can trim wood to length, remove bark and other waste, shape the blank so as to help orient the grain or other wood features within a blank, reduce the wood blank to a desired diameter (sometimes necessary to bring the wood blank within the swing of the lathe), and it can help create a relatively round blank that is better balanced upon initial rotation on the lathe. I say in theory, because while it is not difficult to find, nor extremely expensive to purchase, a bandsaw with the power, throat size and cutting height to trim larger blanks, it is usually very difficult to find an affordable band saw with a table sufficient in size to fully support large blanks while they are being prepared.

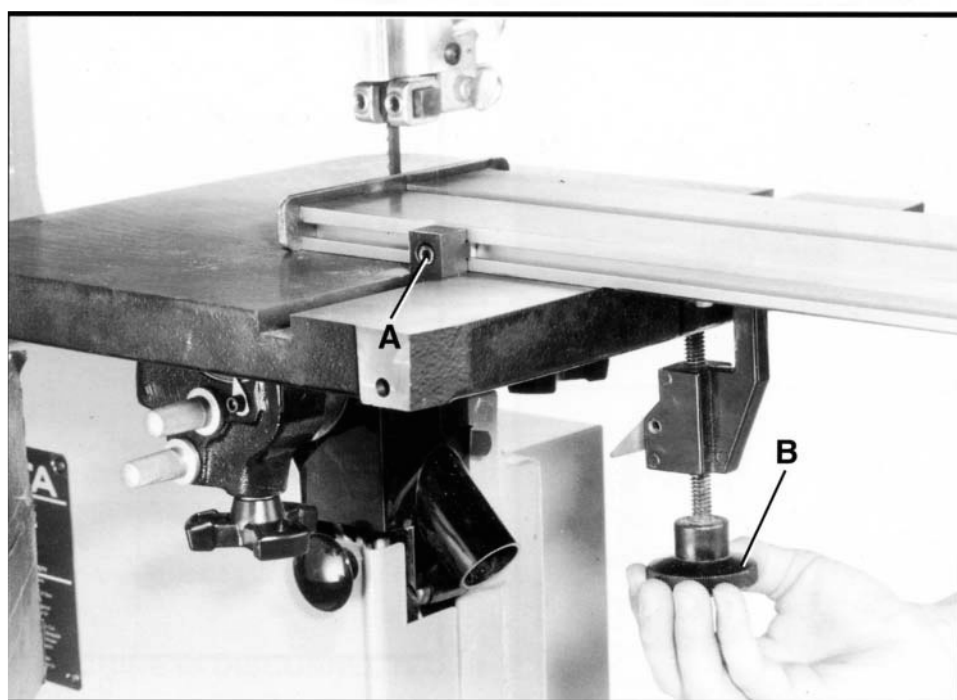
Until very recently, almost all bandsaws under \$1000 have had tables of 15 inches square or less. Keeping in mind that the blade is located towards the center of that table, meaning that there is only about half the table width to the front and side of the blade, it is easy to see that rounding a large blank on a bandsaw is often no easy task, frequently requiring brute force to attempt to hold on to the unsupported mass while trying to evenly rotate and guide the wood into the blade. Of course, this whole procedure sometimes is made even more exciting knowing one is working within inches of a huge gaping expanse of 10-12 vertical inches of (at least potentially) exposed blade. So the result is that many turners never even attempt to use a bandsaw when it might be the most useful, instead trying to trim the initial blank as round as possible with a chainsaw, or just giving up and throwing an uneven and imbalanced log onto the lathe for the crude task of removing bark and getting the blank into a minimally balanced state.

Now some woodturners have attempted to make their bandsaws more serviceable for larger blanks by building larger auxiliary tables, either fitting them over the existing table, or butting them up against the bandsaw table. I never have considered either approach that appealing, as the first results in loss of maximum exposed blade height, and the latter would result in the bandsaw taking up more space than I can afford to dedicate to it within my small shop. Furthermore, neither approach does anything to help with guiding the wood into the lathe so as to make a circle of consistent radius.

My solution to these problems came several years ago when Delta introduced a circle cutting attachment for their classic 14 inch bandsaw. I was



The Circle Cutting Attachment set up on a Delta Bandsaw.



This view shows the Circle Cutting Attachment being mounting to the bandsaw table.

skeptical and didn't obtain it immediately, but after the very first use, I became sold on the device. In my experience, it has been the best accessory I have obtained for my bandsaw and has dramatically increased its utility for woodturning.

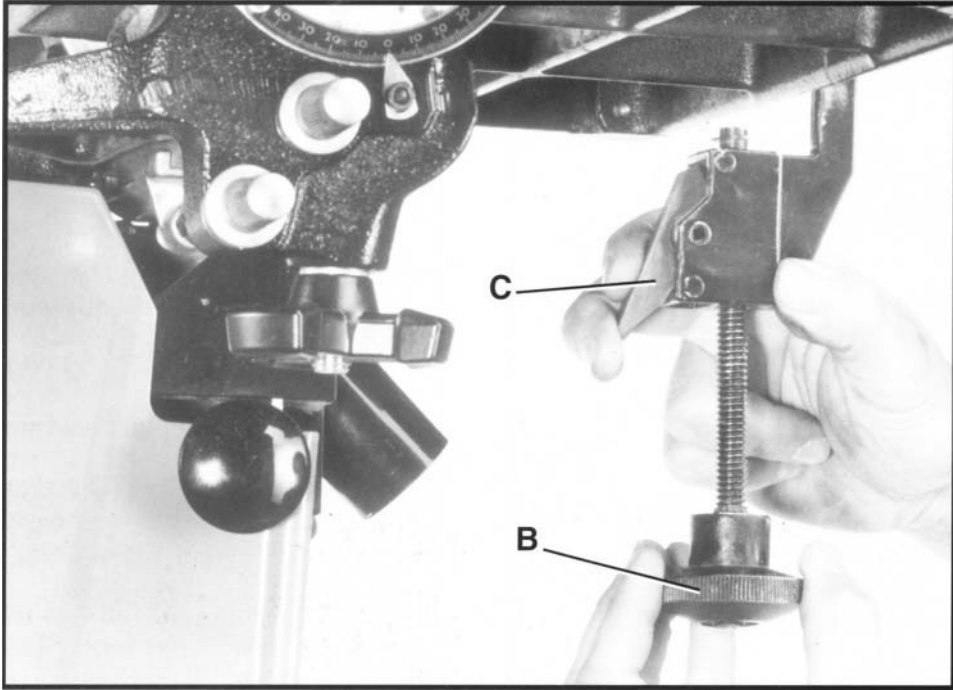
The Delta Circle Cutting Attachment is made up of a rectangular aluminum table 5 inches wide and 25.5 inches long. Hinged to the body is a single square tubed leg, which telescopes to adjust for table height. This is a great feature, as it allows leg length to be ad-

justed not only to accommodate accessories such as a mobile base, but also to fit a variety of other machines such as Delta 14 bandsaw clones manufactured by Jet, Grizzly, etc., as well as other stationary tools like disk sanders. If the need arises, the telescoping leg also allows for a circle to be cut with the table angled, which will create a tapered edge. The leg can be collapsed and folded up to allow the whole assembly to be compactly stored out of the way. It is also light enough to be easily moved between machines.

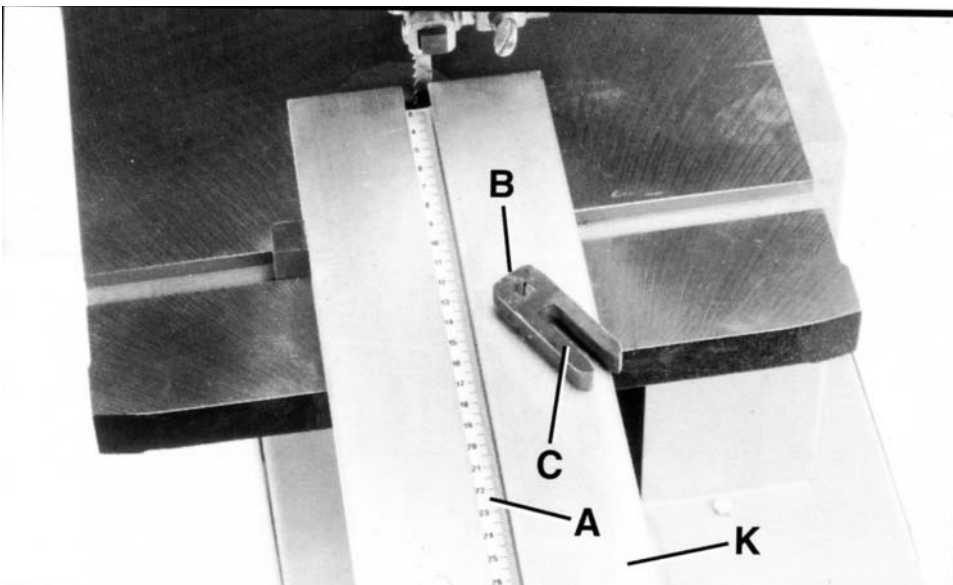
The aluminum table has channels along each of its lateral edges that allow two support wings to be attached anywhere along the length of the table. These wings provide an area of support 16 inches wide, which is fine for any woodturning blank up to about 24 inches, or flat table top up to 50 inches.

The circle attachment table has a T slot on its underside into which a clamping assembly is fitted (see accompanying photo). This clamping assembly can be fitted to almost any bandsaw or disk sander table. One end of the circle attachment table is positioned up close to the blade and sits on top of the bandsaw table. A stop block is fitted into one of the same lateral channels used by the wings. This stop block fits into a standard 3/4 by 3/8 inch miter slot and helps maintain proper positioning. The combination of the stop block and attachment clamp keeps the table solidly attached to and positioned correctly with the bandsaw table.

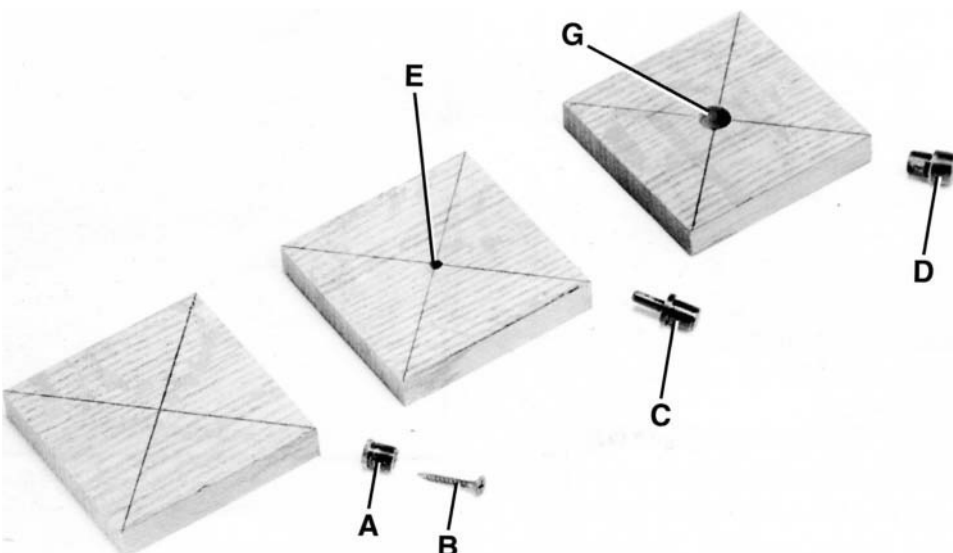
Finally, a long groove runs along the length of the top of the circle cutting attachment table, into which a movable U shaped saddle is located. There is a measuring scale within the groove that allows for determination of circle size. The saddle is locked in place which allows one precisely and repeatably to locate a pivot stud to create circles anywhere in diameter from 3 inches to 50 inches. There are three different pivot studs you can use, two of which fit into pre-drilled holes in the wood blank, and one which can be attached to the blank with a #6 flathead wood screw. Usually, I just drill a shallow 3/16 or 1/2 inch diameter hole on the bottom of the blank (you will need a fairly flat bottom, and though the instruction manual suggests you use a drill press, this level of accuracy is not needed for woodturning). Note that the pilot hole size for these studs corresponds well with the holes needed to use a Glaser Screw Chuck or the screw chuck accessories that come with many scroll chucks. I then seat the stud into the blank, then set the blank onto the circle cutting attachment table, such that the stud is slid forward and captured by the U shaped saddle. Since the closed end of the U shaped saddle is closest to the blade, this allows the blank to be ini-



This view shows the attaching clamp about to be engaged to hole the accessory to the bandsaw table.



This view shows the "U" shaped piece that fits into the slot in the accessory table to set the diameter of the disk to be cut by the bandsaw.



This view shows the three different pivot studs you can use, two of which fit into pre-drilled holes in the wood blank, and one which can be attached to the blank with a #6 flathead wood screw.

tially located back from the pivot point, than spiraled into the blade until the correct diameter is achieved when the pivot stud is fully against the closed end of the saddle.

All of this has taken much longer to describe than is required to set up and put the circle cutting attachment into service. In actual use, the circle cutting attachment works beautifully. It provides sufficient table support, and allows one to position the wings so that the support surface is near the pivot point, no longer does one have to struggle to keep the blank balanced and level. The Circle Cutting Attachment makes for much easier control of feed into the blade, and much safer manipulation of the blank. The central pivot point, and full table

support means one can grasp a blank well away from the blade. I find there is far less binding on the blade, resulting in a smoother and faster cutting action, compared to trying to free hand a circle. Needless to say, the central pivot point insures a constant radius, which results in a perfect circle and better balance to the turning blank.

When done, the circle cutting attachment can be collapsed and folded up to wait unobtrusively alongside the bandsaw until needed again, at which time it can be remounted in literally a few minutes. For those who have a Delta 14 inch style bandsaw, this accessory has my highest recommendation. Its cost from Highland Hardware, the only stocking supplier that I am aware of, is \$100.

(Note: Photos are from the Delta manual)

## A New Type of Woodworking Magazine

by Fred Holder

I received a call from Chris DeHut, editor of "Woodworking at Home" magazine, which is not really a magazine but a DVD that has print stories that you can print out on your computer printer and movies that you can watch on your computer or on your Television set. You do have to have a DVD drive for your computer and a DVD for your television to use this magazine.

It seems that Dick Sing had recommended that Chris advertise in More Woodturning. After talking with Chris, I decided I would like to subscribe to his "magazine". He suggested an exchange and the deal was struck. He sent me Issue Number 7, which was December 2003.

This is a new technology that I found very interesting. My wife and I viewed the DVD on our television set and then I printed out a couple of the transcriptions with pictures and drawings. On this basis, we decided to get the back issues and I subsequently ordered them.

Even though I do not do general woodworking, I found the entire DVD to be of interest.

The first part of Issue #7, was called the Construction Zone with Chris DeHut and covered two projects:

(1) A set of wall hung storage cabinets with pull-out vertical drawers. Each drawer had shelves in it for storage.

(2) An elegant CD/DVD storage cabinet. A perfect desk top accessory to organize your growing collection of Woodworking at Home DVD's it says at their web site.

The next segment was a two part construction story of a high-end miter saw stand. This was interesting and I

especially liked the fold down "wings" that are designed to use to hold long pieces of wood for cutting on the miter saw.

The next segment was devoted to sharpening your carving tools with David Reilly. This was an interesting segment and I learned a bit about sharpening carving tools that I did not already know. This section was very interesting and could be somewhat applicable to sharpening turning tools, especially if you hand sharpen on a stone.

The next section, "A turn for the better:" with Dick Sing covers the making of a bottle with a brush to hold your finish. Dick shows you how to do this in easy step by step processes. I'm sure this would be a handy item to have in any workshop and very useful in a woodturner's shop.

The next section is titled "Bragging Rights--Viewer Gallery" in which Adolph Schnieder shows you some of the very nice furniture that he has made. The highlight was a fantastic dressing table.

The next section was Tool Demos, which included two items:

(1) A Table Saw blade cover by Exaktor Tools Inc. which looked neat and provided a way to carry away the dust from sawing.

(2) The second was a Laser Guide by Laserkerf for the chop saw or miter saw. This device projected a laser beam on either side of where the saw blade would cut. Thus making it very easy to cut on the line.

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