



The design of this Canadian large cent makes it an ideal choice for a double-sided coin ring. It's a cinch to determine a coin's exact center with the aid of an easily assembled plastic jig.

Coin Ring Crafting

By John Bortscher

Several years ago I saw a photo of a coin ring, which someone had found while metal detecting. I was intrigued and wondered how it was made, but it wasn't until recently that I finally figured out how to make one. I'm sure that many of you have been fascinated by them, too; I thought that I would share my experiences and explain how you can easily make a coin ring of your own.

Which coin should you use? Copper, silver, brass coins are the easiest to work with. Nickel is too hard and may also pose health risks. As a general rule, Washington quarters make a size 6-1/2 or 7; half dollars make a size 12. A Mercury dime or a Wheat cent will make a size 1, a perfect baby ring! Foreign coins are a lot of fun to use, too, and most coin shops have bins full at a bargain price. Experiment, be creative, and you'll be amazed by what you can achieve.

A minimum number of tools are required to craft a coin ring. An electric drill and a rotary tool are a must, and vise grips are a good choice for holding the coin. Just be sure to put some leather in the jaws to prevent scratching the coin. You'll also need a heavy piece of metal to use as an anvil (I use a trailer hitch), and a ring mandrel or the tapered end of a pinch bar to hold the ring for some final processing. Other essentials include a set of drills, a 1/4" bolt (or smaller diameter) about 3" long, assorted grits of sandpaper, some jeweler's rouge, a large stainless steel spoon or small machinist's hammer, and a bit of patience.

OK, let's begin. First, grab the coin between your thumb and pointer finger, set it on the steel anvil, and start tapping the edge of the coin. Tap on the very top of the coin. After giving it 2-3 taps, slightly rotate the coin about 1/8".

The idea is to widen the coin around the edge *evenly*, with the lettering close to the edge— *e.g.*, "IN GOD WE TRUST"— being slowly pushed to the underside of the coin, from its original position to the sides. This is going to take you 3-5 hours or more, depending on the size of the coin and how hard you are hitting it with the spoon or hammer. If you hit the coin too hard, it will warp, and further tapping will be almost impossible from that point on; so, take your time. This is where patience is a virtue!

When you have finally got the lettering to the underside of the coin, you must drill a hole in the center. The hole must be big enough to push a bolt through. The coin will be mounted on the bolt with a washer on either side, and then tightened with two nuts, one on either side. The washers and bolts must be small enough to allow you to sand the outside of the coin. Attach the washers and nuts to the bolt and tighten the nuts.

Insert the open end of the bolt into the drill chuck and tighten. You now have a small, portable lathe. Put it in reverse, if you have that option on your drill. Turn the power on, and start the sanding process. Use a heavier grit or gauge paper, and sand out all of the dents from the tapping. Finish with a very light grit, using water on the sandpaper. When the outside of the ring is as smooth as you can get it, put some jeweler's rouge on a small piece of cloth and polish the outside of the coin. You can apply a fair amount of pressure, as this speeds up the polishing process. When you have a satisfactory shine, stop and *carefully* remove the nuts and washers from the



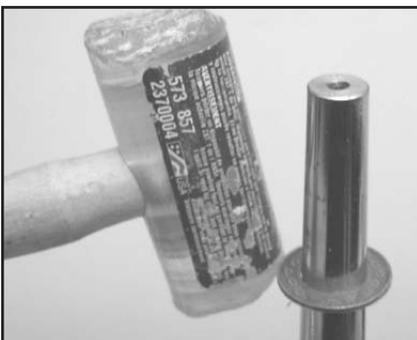
The point at which the two lines intersect indicates the center of the coin.



With the center carefully removed by repeated drilling and burring, the coin now resembles a washer.



Adding leather padding to the jaws of vise-grip pliers ensures that the coin will be tightly held without marring or scratching.



With the holed coin fitted onto a ring mandrel, the process of repeatedly pounding it with a plastic mallet can begin.

“As with anything else, quality improves with practice; but if you’ve followed these steps carefully, I think you’ll be surprised and pleased with even your first project”

bolt, removing the coin. Try not to scratch it!

You now have to put the coin in the vise grips, with leather around the edges to protect the shiny finish. Start increasing the size of the hole by using a drill bit, one bit size at a time. Enlarge it as much as you reasonably can without bending the coin in the vise grips. The hole needs to be big enough to accept a burr bit on the rotary tool.

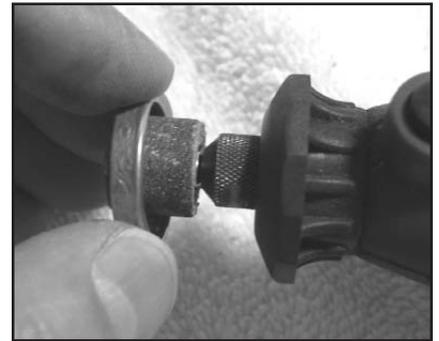
You now have to burr out the center carefully. You want an even cut, and for the lettering to remain inside the ring. The coin gets really *hot!* Be careful. I keep a spray bottle nearby and cool the coin off periodically. Burr close to the letters on the coin, but leave a small bit of material as a buffer zone.

Next, put one of those sanding drums on the rotary tool and create a nice, even ridge on the inside of the ring. Try using another, lighter gauge sandpaper to smooth it out even more.

To do the final touchups, first clean the inside (only) of the ring with one of those wire brushes on the rotary machine. Next, get a small felt buffing wheel, put it on



As the process proceeds, a humble copper coin is gradually transformed into a handsome ring you’ll be proud to give, display, or wear every day.



A small sanding drum is used to finish the inner and outer edges.



Final polishing with a felt disk, tripoli, and jeweler’s rouge gives the ring a rich, lustrous look.

the rotary machine, and at a lower rpm put the felt wheel over some polishing compound (jeweler’s rouge). Turn up the rpm’s on the rotary machine when finally touching the inside of the ring, and begin polishing the inside of the ring.

When finished, remove the ring and put it on the ring mandrel or other tapered piece of metal and repolish the outside. Give it a final bath with a toothbrush and soap. *Don’t use toothpaste!* To

remove the little pieces of dirt in the letters, carefully use a toothpick.

OK, it's done! Now you can give it to your spouse or significant other, and make another one for the kids, Uncle Jack, Aunt Linda, and of course yourself!

Up for another challenge? Now that you've mastered the basics of coin ring crafting, here's a unique design technique you might like to try...

Double-Sided Coin Rings

Although some of the basic principles apply, double-sided coin rings are made entirely differently from those with a polished outer finish. As their name implies, they have coin details and inscriptions both inside and outside the band.

How do you make them? The process starts with selecting the right coin.

Choose copper or silver coins. Brass and bronze will also work well. Don't try to use nickel, however. It's too hard to work with and will quickly wear out your tools. Also keep in mind that for this kind of ring, thinner is better. My favorite, and actually

one of the easiest coins to use, is a Canadian large cent. You can find them in poor condition, but still fine for ring-making, for less than \$1 at many coin shops. British pennies are another good choice and generally just as easy to buy. Of course, U.S. large cents work well, too, but are far more expensive. For this project, I've picked a 1916 Canadian large cent, cost 75¢. It's copper, thin, and has a dotted circle on the face which will help me achieve a near-perfect circle in the center.

Now a word about essential tools and supplies. In addition to the coin, you're going to need a solid metal ring mandrel, a plastic mallet, an electric drill with various sizes of drill bits, a Dremel-type rotary tool with a burring bit, a small sanding drum, some tripoli compound and jeweler's rouge, a sheet of light grit sandpaper, a vise or vise-grip pliers, and a spray bottle. Got 'em? Then let's get started!

The first step is the find the center of the coin. To do this, I made a jig by gluing a ruler over a plastic 90° template. I just set the coin underneath, draw a pencil line over the coin, rotate the



The original coins' designs, dates, and inscriptions can be clearly seen in this display of double-sided rings.



Your coinshooting finds can be transformed into elegant rings like these. Wear them with pride or give them to family and friends... a great way to share your hobby!

coin about 90°, and draw another line. The point where these two lines intersect should be the center.

Once the center is marked, use a center-punch or something similar (I use a concrete nail) to punch a hole.

Next, beginning with a very small size drill bit, drill a hole right through the coin. Move up a couple of bit sizes and drill again, enlarging the hole. Repeat this step until the hole is large enough for you to insert the burring bit on the rotary tool.

Note: The coin gets really hot— too hot to hold!— as larger bits are used and the burring begins. To secure it, I used a pair of vise-grips with strips of leather taped in the jaws. You could also put the coin in a bench vise, again

padding the jaws. Even then, the heat may become so intense that the leather starts to smoke, and that's where the spray bottle comes in handy. As you're working, periodically spray the coin to keep it cool. This allows it to remain locked in place in the jaws of the vise-grips or bench vise and saves time.

Continue the burring until the coin looks like a washer.

Now, pop the coin onto the ring mandrel and start pounding the edges downward— not too hard!— while slowly spinning the mandrel. Once you have gone around 3-4 times, pounding the coin's edges, carefully tap the ring farther down on the mandrel. Again, tap the ring's sides, rotating it as you pound.

After another 3-4 revolutions,

tap the ring farther down on the mandrel once again. You will reach a point at which the coin cannot be flattened any more.

So far, so good... but pay close attention to this next part. The instructions I am about to give are very important.

Take the ring off the mandrel (you may have to tap it) and *flip it over on the mandrel the other way*.

You must start pounding the ring farther down on the mandrel, increasing its inside diameter. Now, start pounding the sides of the ring, trying to get the outside portion of the ring closer to the mandrel. You will probably have to hit the ring a lot harder now, slowly rotating it as you pound.

As before, you must pound the ring farther down the mandrel, and then again start pounding the sides of the ring. The inner diameter *must* increase in size to compensate for the larger outside diameter, so that it will eventually lose its cone shape.

Continue this cycle until the ring is no longer conical but begins to look like a ring.

Now take the ring and rub it, flat, in circles on a sheet of light-grit sandpaper. Flip it over and do the same on the other side. Continue until it looks good.

Next, finish the inside/outside edges with a small sanding drum.

Finally, using a felt disk, polish the ring first with tripoli compound and then with jeweler's rouge for a gleaming, professional finish.

As with anything else, quality improves with practice; but if you've followed these steps carefully, I think you'll be surprised and pleased with even your first project and can proudly say, "I made it myself!"

Has a nice ring to it, don't you think? □