How to...Turn a platter or plate...

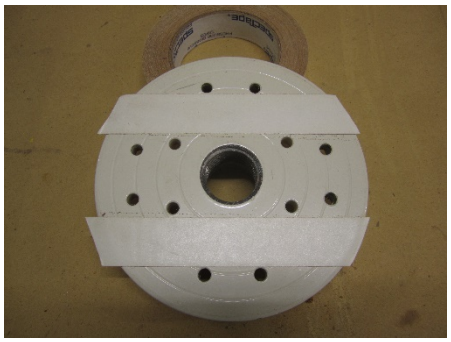
...using double faced tape as a chuck

by Tom Boley

Using double faced tape to hold a plate or platter on the lathe while turning sure seems like it wouldn't work very well but I have been doing this for many years and it has worked just fine. Here's how.

Plane or joint your blank so it is smooth on both sides. Mark a circle and cut out a round blank with your band saw but be sure to mark where the center of the circle is.

Using your compass, swing a centered circle just a hair over 6" in diameter on the side with the center mark. *Lay your faceplate in the circle first to see how much shows between the edge of the faceplate and the 6" pencil line.* Then put a strip of 1" wide double faced tape across each side of the face of the faceplate about halfway between the hole in the center and the outside edge. Sometimes you can use the screw holes in the faceplate to orient your tape. Peel the backing off the tape and very carefully and gently lay the taped faceplate in that 6" circle. When you are satisfied that it is fairly well centered, set it on the floor and stand on the faceplate to fully adhere it to the wood blank.



Screw that faceplate with the attached platter blank on the drive and then give it a bit of a spin to see how close to centered it is. It really isn't critical on this side, but you'll do it again for the other side and it will be very critical then so this is good practice. Bring the tailstock and the live center up to the blank and seat it against the wood.

Round the outside circumference of the blank and then shape the outside bottom edge of the platter on the tailstock side of the blank. This will be the bottom of the rim of the platter as in the picture.

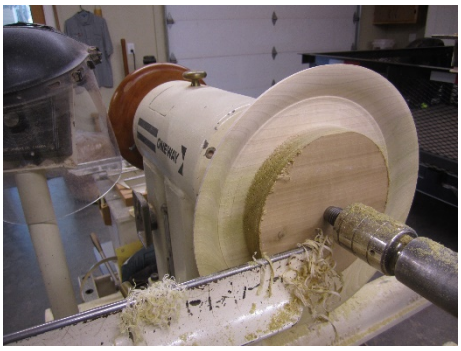
True up the bottom of the platter in toward the live center as far as you can go without touching the live center with your bowl gouge, taking about an eighth of an inch off. Then make a cut in from the edge of that bottom about a half or three-quarters of an inch and about a quarter inch deep. You can do that with several cuts if you like. They need to be absolutely straight across the bottom, neither angled in or out. Then skip a band about a quarter inch wide and go just inside that band to continue cutting away wood on the bottom of the piece to the same depth as that outside part. You will end up with a flat bottom with a band of wood sticking out from the bottom about a quarter inch plus that short peg between the bottom of the piece and the live center, as in the next picture. You can then round off that 1/4" high band to make a bead foot on the bottom of the piece. Back off the tailstock and very gently trim off that peg where it was. To the very best of your ability, ensure that the bottom of the piece is as absolutely dead flat as possible. This is where a square nose scraper may be helpful.

Let's put a footnote in here -- when you turn anything on the lathe, you are applying force to the wood with your cutting tool. The farther you are cutting from the center of the piece, the more leverage you have against the chuck. If the piece is not well held, a catch or aggressive cutting could dislodge it from the chucking system you are using. When you have the tailstock up against the bottom of the blank, you can cut confidently as it is highly unlikely that you will dislodge the piece from your chuck, in this case the double faced tape on the faceplate. However, when you back off the tailstock to trim off that little peg in the center, the only thing holding the wood in place is the tape. Cutting aggressively out away from the center of the piece and/or getting a catch out there may jerk the piece free of the tape so when the tailstock is backed off, cut gently. Also, when you are cutting that peg in the middle, the leverage you have against your "tape chuck" will be minimal but you should still make light cuts.

Once you have backed the tailstock away and trimmed off the peg, take great pains to make the bottom of your platter as flat as you can. Use a straight edge of some kind to judge flatness and trim as needed. The reason it must be so flat is that you will retape the faceplate and apply it to the bottom of the piece next and the flatter it is, the better the tape will adhere. Sand the bottom but be careful that you don't unflatten it by sanding too much in one spot.

IMPORTANT: Once it is really flat and before you remove it from the faceplate, make a small mark at the center with a pencil and then measure out 3" and mark a 6" circle on the bottom. That will be your target when you turn it around.

Pry the blank off the faceplate. Remove and discard the double faced tape strips. Test-fit that faceplate inside the 6" circle on the bottom of the platter. If you can't see the pencil line, use a compass to lightly mark another line slightly farther out and test fit the faceplate again. When you know how the faceplate compares to that new circle, apply two strips of tape as before. As you gently lay the faceplate within the circle, orient the grain of the wood with the direction of those two strips of tape. I'll explain why in a minute. Once centered, set it on the floor and stand on it again. Screw it on the headstock drive.

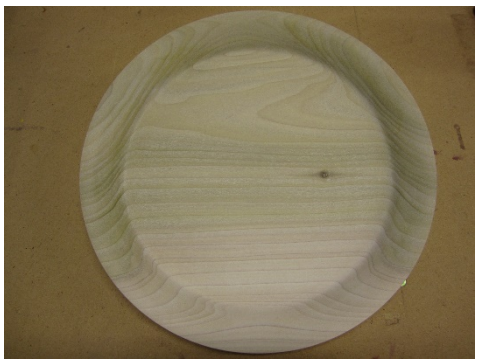


Bring up the tailstock for safety, as you should whenever you can when turning. Start at the outside edge and trim away wood from the inside of the piece. Do just the first couple of inches in toward the center down to final thickness. Then do the next couple of inches, and so forth, blending the previous cutting in with the next until you are at the center. All the while you must make the bottom of the inside of the platter as flat and straight across as you possibly can. Finally, back off the tailstock allowing the tape to hold the platter in position. Trim away that peg in the center with gentle cuts and then ensure the whole inside bottom is nice and flat. Sand.

Time to remove the finished platter from the faceplate. Orient the grain of the piece parallel to the floor. It may help to lock the headstock in position. Push or pull at the end of the platter closest to you, which should be end grain, to slowly unstick it from the tape. It may be helpful to slide something thin between the faceplate and platter in the center of the faceplate between those two

strips of tape. I use an old kitchen knife. If you have made your platter too thin and are pulling somewhere other than at the end grain, you could break the platter. By orienting it so the grain is parallel with the strips of tape, when you pull the platter away from the faceplate by gripping at the end grain and can pull pretty hard without concern about breaking the piece.

Once the platter is free from the faceplate, you may notice three things. First, there may be tape or at least tape residue still on the wood. Pull the tape off and use a paper towel with mineral spirits to take off any residue. Second, your pencil mark will still be there from when you centered the faceplate. Gently erase the pencil line. Third, if you used a kitchen knife or other device to help pry the platter away from the faceplate, you will have likely bruised the wood a bit. Gently sanding the bottom with 400 grit paper should clean up the erasure marks as well as the kitchen knife marks.



As always, I highly recommend signing your work. I use a vibrating engraver to write my name, the month and year, and the type of wood on the bottom. Depending on the wood, an engraver like that may leave a rough surface. Lightly sanding with 400 grit will smooth that out. Then finish the piece with your favorite varnish or other finish and enjoy.

You are always welcome to contact me if you have any questions.

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