

Behind the complex maze of intersecting grooves that make up these turned kitchen accessories lies a very simple idea.

Keuben Everett

he idea for this turned trivet was sparked by a tablesawn one given to a friend of mine. Square and dadoed halfway through its thickness from each side, it got me thinking how I could make something similar on my lathe. Playing with the design on and off for about a year and a half, I started with a square trivet dadoed from one side and turned from the other, then tried a square turned from both sides, followed by an oval design. Finally, a round woven rattan trivet belonging to my mother provided the inspiration that clinched the design.

My method incorporates a simple offset turning technique and uses only a parting tool. The key is an auxiliary faceplate that holds and indexes the trivet blanks. Once you make it, you'll tear through your shop scraps making trivets by the dozen.

Prepare the trivet blanks

To create trivet blanks, plane 6½"-wide stock to ¼" thick, and cut it into 6½" lengths. Glue and clamp together pairs of these squares with the grain of one piece perpendicular to the grain of the other. (We combined maple with cherry and ash with walnut. You also can use a single piece of ½"-thick stock or, if you're feeling adventurous, try ½"-thick solid-surface countertop material, such as Corian.)

2 To make a pattern for accurately trimming your trivet blanks to shape, cut a 6½" square of ½"-thick medium-density fiberboard (MDF). Mark the center of the square by drawing its diagonals, and then use a compass to draw a 61/8"-diameter circle on the square. Bandsaw the circle to shape, staying about 1/8" outside the line.

3 Attach the pattern disc blank to your lathe's 3" faceplate using the diagonal lines to center it. Fasten the disc with panhead sheet-metal screws long enough to penetrate ½" into the disc. Mount the disc on your lathe, and using your parting tool, turn the disc to a 6" diameter, as shown in Photo A.

Remove the pattern disc with the faceplate attached from your lathe. Place it on your laminated trivet blanks, and trace 6"-diameter circles on them with a pencil. Bandsaw the blanks just outside the pencil line. Now chuck a flush-trim bit in your table-mounted router and trim them to finished size, as shown in Photo B. With all the trivet blanks trimmed, remove the faceplate from the pattern disc.

Make an auxiliary faceplate

From ¼" MDF, cut a 10×10" backer, a 6½×10" insert, and two 1½×10" guides. Glue and clamp the two guides to the backer; drill countersunk screw holes for #8×11¼" flathead wood screws, where shown on **Drawing 1**; and screw the guides to the backer, as shown in **Photo C**.

2 Drill countersunk holes for #8-32×2" brass flathead machine screws, where shown on Drawing 1. Remove the insert and waxed paper, and clean up any excess glue. Now reinstall the insert, and fasten it to the backer with the machine screws, washers, and nuts.

3 Locate the centers on the front and back faces of the auxiliary faceplate by draw-

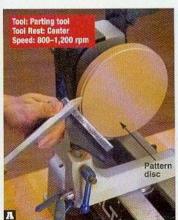
AUXILIARY FACEPLATE Diagonal line on back face for centering faceplate #8 x 1" panhead sheet-metal screw Vertical centerline #8-32 brass nut #8 brass washer circle %" shank holes. 31/10 countersunk INSERT 3" faceplate centerline Retaining tab 61/2 he" deep 11/6" #8-32 x 2" brass F.H. machine screw 10" #8 x 11/4" F.H. Tab overhangs the edge of the hole by 1/4" 13/4 wood screw 552" shank hole, countersunk with a 352" pilot hole 11/4" deep

ing their diagonals. Referring to Drawing 1, draw a 6"-diameter circle, a 9½"-diameter circle (indicated by the dashed line), and horizontal and vertical centerlines on the front face. (You'll form a recess for the trivet blanks inside the 6" circle, and use the centerlines to offset the insert and index the trivet blanks later.)

4 Bandsaw the auxiliary faceplate to shape, staying about 1/4" outside the

9½"-diameter circle. Using the drawn diagonals to center your lathe's 3" faceplate on the auxiliary faceplate back, drill plot holes and screw it in place. Mount the assembly on your lathe, and use your parting tool to true its edge.

5Working outward from the auxiliary faceplate center, start forming a ½/6"-deep recess with your parting tool. As you progress toward the marked circle, check its



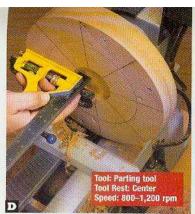
With the pattern disc blank mounted on your 3" faceplate, use your parting tool to true the disc and turn it to a 6" diameter. As you turn, check the diameter with calipers.



Secure the trivet blank to the pattern disc with double-faced tape. With a flush-trim bit in your table-mounted router, trim the blank to finished size.



With a piece of waxed paper wrapped around the insert for easy removal, apply glue to the guides, drill screw holes, and screw the guides to the backer.



When forming the %s"-deep recess that will hold the trivet blanks, stop the lathe periodically and check its depth with a combination square.

depth as shown in **Photo D**. When you get close to the circle line, start checking the diameter of the recess, as shown in **Photo E**. With the recess complete, adhere a piece of 120-grit sandpaper, as shown in **Photo F**.

6 From 1/8" hardboard, cut four 1/9/2/4" retaining tabs, and drill countersunk holes in each, where shown on Drawing 1.

Now start turning trivets

Make copies of the top and bottom trivet patterns from the WOOD Patterns® insert. Adhere the top patterns to the trivet blanks with spray adhesive. Then remove the machine screws from the auxiliary faceplate and mount a trivet blank, as shown in Photo G.

2 Start your lathe, and use your parting tool to cut the top face of the trivet, as shown in **Photo** H. Repeat these turning steps on all the trivet blanks.



Position the trivet blank pattern side out in the auxiliary faceplate recess. Fasten it in place with the four retaining tabs and the flathead machine screws, washers, and nuts.

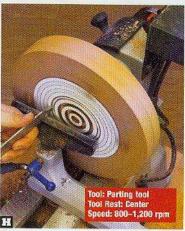


As you near the finished diameter of the recess, check it with a trivet blank. Increase its size in small increments until the blank fits snug and still allows for easy removal.

Remove the machine screws and retaining tabs, pop out the trivet blank, and peel away the pattern. Then reinstall the blank. To hold the insert in place, reinstall the machine screws without the retaining tabs. Finish-sand the top face of the trivet, as shown in Photo I. Now finish-sand the top faces of all your trivets.

4 Once again, remove the machine screws. Using the vertical centerline for reference, offset the insert 1½" to the right, where shown on Drawing 2. Using the holes in the insert as guides, drill new ½6" holes through the backer. Now trace the curved edge of the backer on the back of the insert. Remove the insert, and carefully bandsaw it on the traced line.

5 Place the insert in its new position, and fasten it with the retaining tabs, machine screws, washers, and nuts. Clamp the cutoff in the void created by offsetting the insert,



Cut into the blank, removing the pattern's shaded portions to a depth equal to half the trivet thickness. Stop just as you reach the different wood species of the bottom layer.



To keep the trivet blank from rotating in the recess during the turning operations, cut a piece of 120-grit sandpaper to size, spray it with adhesive, and stick it in the recess.

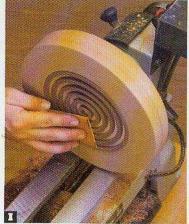
where shown on Drawing 2. Drill countersunk screw holes and drive the screws.

6 Adhere the bottom patterns to the trivet blanks with spray adhesive. Then mount a blank in the auxiliary faceplate recess, and align one of the pattern index lines with the faceplate horizontal centerline. Secure the blank with the retaining tabs.

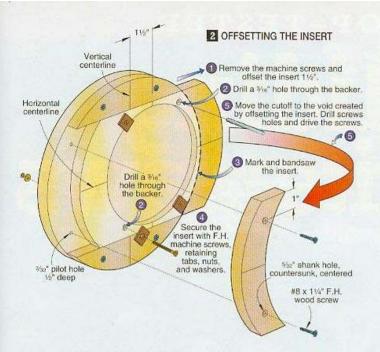
ZStart your lathe, and use your parting tool to cut the first set of concentric grooves, as shown in **Photo J**.

With the first set of grooves cut, move on to the second set, as shown in Photo K, and turn these grooves, as shown in Photo L. In the same manner, turn the last set of grooves. Repeat these turning steps on all the trivet blanks.

9 Remove the machine screws, retaining tabs, and the insert cutoff. Center the insert and secure it with the machine screws. Place the cutoff in its original



Holding the trivet in the auxiliary faceplate recess by pressing a piece of sandpaper against the trivet with your hand, switch on the lathe and finish-sand its top face.



position, drill pilot holes in the backer, and screw the cutoff in place. Remove the bottom patterns from the trivets and finishsand the bottom faces as you did the tops. (The insert and its cutoff are now in position for a new batch of trivets.)

Finishing up

Luse a hobby knife to trim away any flakes of wood left in the voids formed by the intersecting grooves.

2 Chuck a 1/8" round-over bit in your table-mounted router, and rout the top and bottom outside edges of the trivet. Finish-sand the round-overs.

3 Apply three coats of penetrating-oil finish, following the directions on the container. Let the finish dry for several days. Now take a few trivets into the kitchen and start cooking. ♠



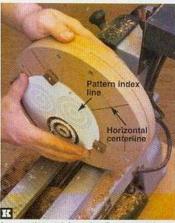
Reuben Everett

Retired after 33 years as a heating, air conditioning, and refrigeration service technician, Reuben now pursues his love of turning by making bowls, boxes, pens, and trivets that he sells through galleries. He also does architectural turning, producing balusters, newels, and column bases. Reuben taught turning at the Hermitage Foundation Museum in Norfolk, Virginia, and served as president of Tidewater Turners of Virginia. He was a demonstrator at the 2002 and 2003 symposiums of the American Association of Woodturners.

Written by Jan Svec with Jeff Mertz Project design: Reuben Everett, Virginia Beach, Va. Illustrations: Roxanne LeMoine



Cut into the blank, removing the pattern's shaded portions. To avoid catching the tool in the grooves cut from the other side, use a very light touch as you near the final depth.



Loosen the retaining tabs. Rotate the trivet blank 120°, aligning the pattern's next index line with the auxiliary faceplate horizontal centerline. Tighten the tabs.



With the trivet blank rotated to center the second set of concentric grooves, once again use your parting tool to remove the pattern's shaded portions.

