



The inlaid fan

SAND-SHADING AND VENEERING TRICKS
DEMYSTIFY THE PROCESS

BY BOB VAN DYKE

I have always been fascinated with the inlaid shaded fans that are so common in Federal furniture. The simplicity, the symmetry, and the idea that their three-dimensional quality is achieved by singeing the parts in hot sand intrigues me.

Surprisingly, it's not that difficult to make quarter fans, half fans, and full oval fans in your shop. I'll show you how to make a five-segmented quarter fan by cutting the veneer, shading it, and piecing it together. Once you have that down, you can expand to the half fan and full oval.

Lay out on a flat surface

You will need light-colored veneer—traditionally holly or sycamore. You'll

also need dark-colored veneer of the same thickness—usually black dyed tulip poplar or anigre, but any dark veneer such as rosewood or Macassar ebony is appropriate.

I work on a piece of pine approximately 10 in. by 16 in. Whatever your choice of work surface, it must be flat, and you must be able to cut into it.

Lay out a 90° quadrant on the work surface and subdivide that into five segments. Extend the segment lines longer than the fan you'll be making. Draw the arc of the fan at the radius you desire.

Cut the holly veneer into strips about $\frac{3}{4}$ in. wide and about $\frac{1}{2}$ in. longer than the radius of the fan.

Sand shading is the special effect

To begin shading, you will need some fine sand. It's easy to find online at Amazon or in craft stores and pet stores. Beach sand is usually too coarse. It works but will not give you as fine a transition from dark to light. You'll also need a burner, a cast-iron pan, and a pair of long tweezers to hold small pieces.

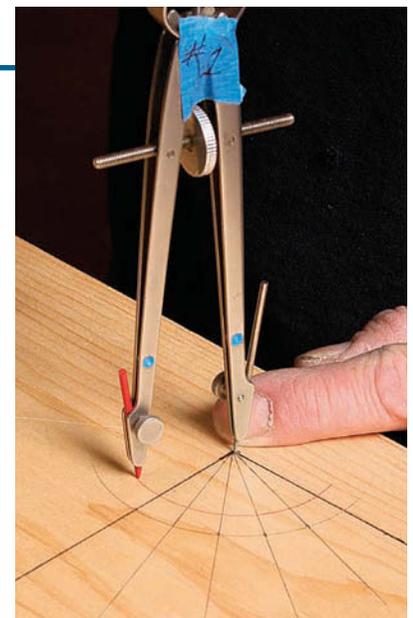
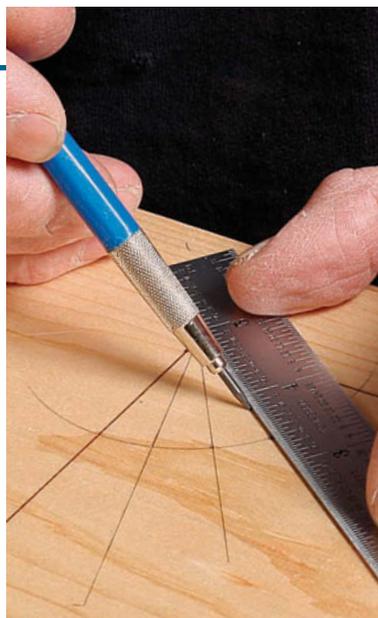
Put a layer of sand in the pan and place it on the burner set on high heat. Wait about five minutes, then test the heat by singeing the edge of a scrap piece of holly. I prefer to burn very quickly with high heat as it gives a very dramatic transition from light to dark.

When you get the effect you want, angle the holly strips in the sand, and

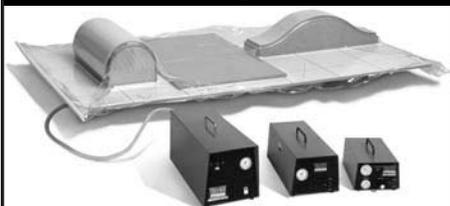
Draw the fan

Lay out the pattern.

Start by drawing out a 90° quadrant on your work surface (Van Dyke uses pine). Subdivide that into as many segments as you want the fan to have. Extend the segment lines longer than the fan you will be making. Finally, use a compass with a sharp lead to draw the actual arc of the fan.



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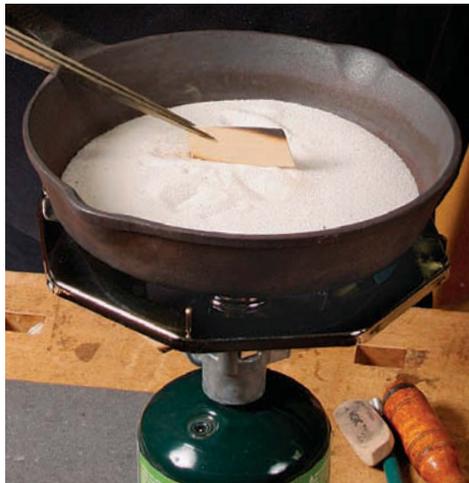
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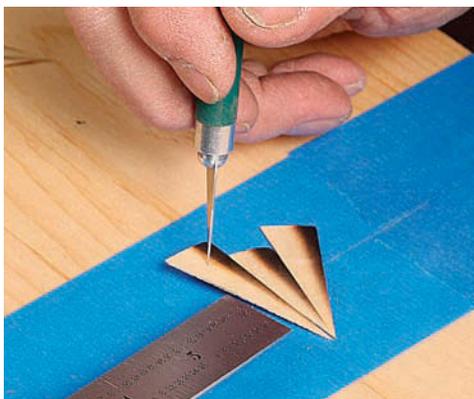
Make and assemble the segments

Shade the veneers.

Pour a layer of fine sand about $\frac{1}{2}$ in. deep into a cast-iron pan and set the burner on high. Using a pair of long tweezers to hold the veneer, singe both long edges, angling the holly in the sand to leave some of the edge uncooked.



Cut the segments to size. Position the shaded and planed edge of a veneer segment over a layout segment. Then position a wide chisel (bevel side in the waste) just proud of the other edge of the layout segment. Slide the chisel and veneer out of your layout drawing and cut to make a finished segment.



Stick it together. Lay down painter's tape sticky side up and adhere the first segment. Fit each segment to the previous one and rub firmly to burnish the tape so that they do not come loose.



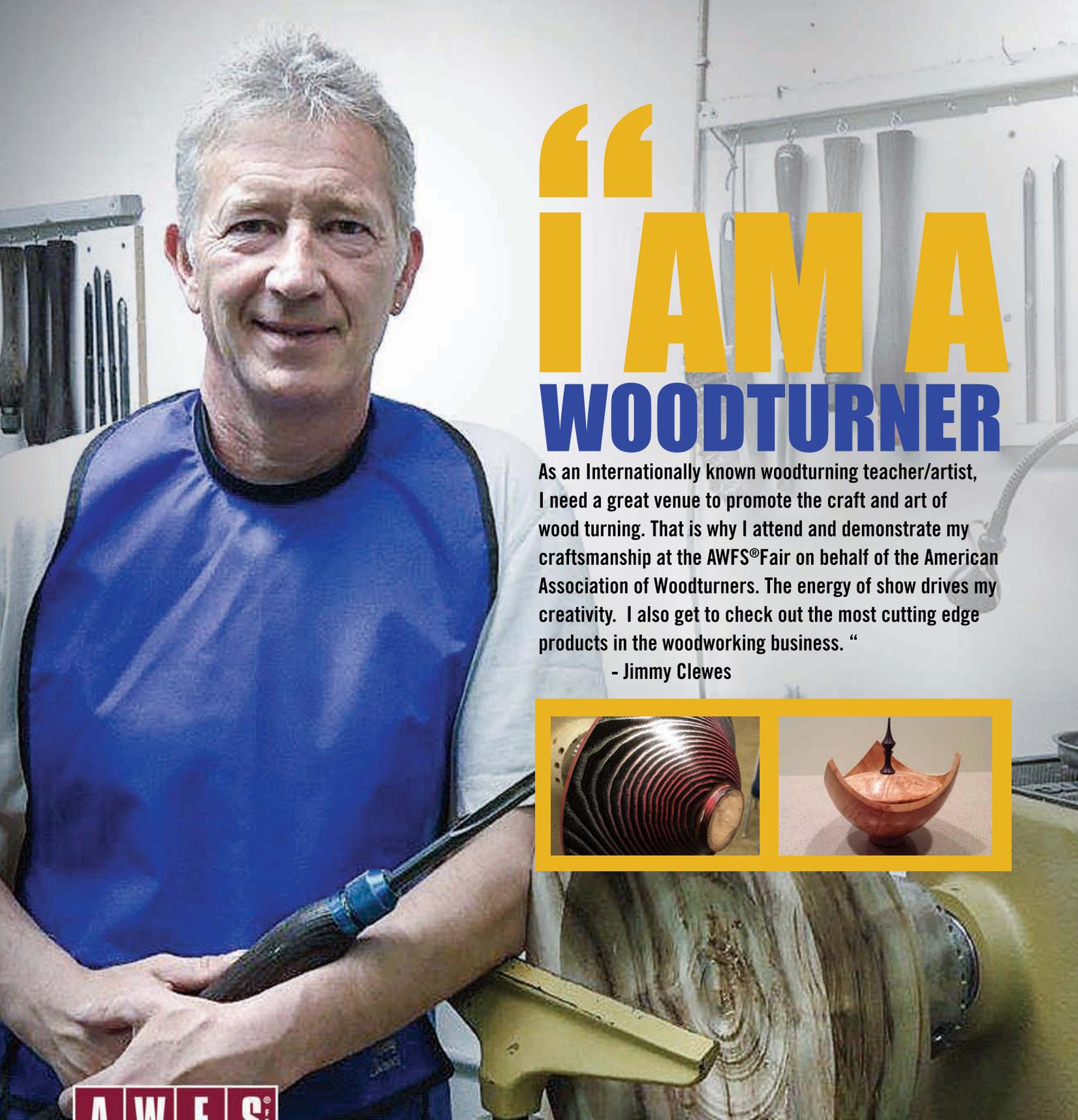
Cut the scallops. Use the same compass setting to draw a radius on the assembly. Cut a scallop at the top of each segment along the radius.



Free the fan. Slice along the long edges to release the assembly from the blue tape. Lay out fresh tape and press the assembly back down to the work surface.



Add the scallop tips. Van Dyke measures the width of the segments with dividers (left) and cuts a strip of black veneer to width, then uses a gouge to cut segments about $\frac{3}{8}$ in. long (center). Finally he presses a scallop into place at the top of each segment (right).



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Add a backer



Glue on a second layer. Cover the fan with veneer tape on the show face, and remove the blue tape. Then glue the fan to an oversize piece of $\frac{1}{4}$ -in. veneer (above). After the glue has dried, wet the veneer tape and peel it off the fan (right).



single both long edges. With a block plane and a mini shooting board, plane the burnt edge to adjust and straighten it.

Then cut the lengths of holly veneer to size. Position one over a segment of the penciled quadrant. Line up one edge with the edge of the segment and use a wide chisel or plane iron to cut the other edge just proud of the line. Make sure the bevel of the chisel is in the waste portion of the holly. Cut the rest of the segments the same way.

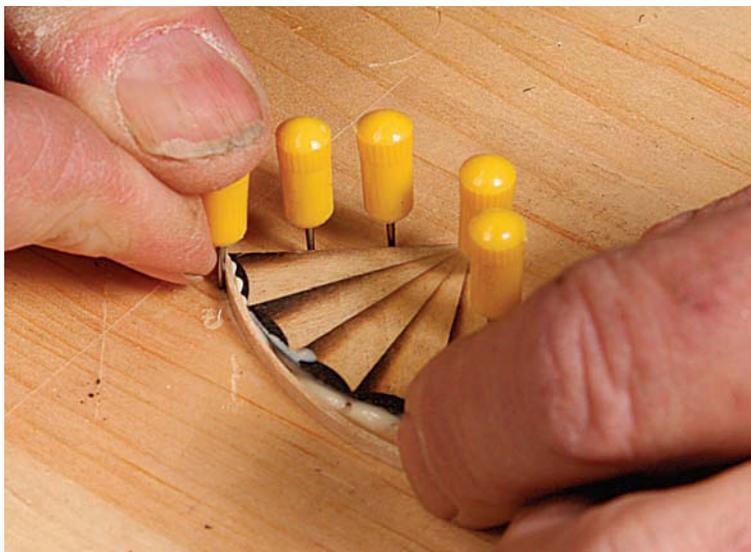
Cut the scallops

Assemble the fan carefully. You'll need a sticky surface to hold the segments. Stretch out some blue painter's tape, sticky side up, holding these strips under

Cut the fan free and size it. First, redraw the radius using the same compass setting as before. Use a wide chisel to cut the straight sides (center), and then cut along the radius line using a scrollsaw, fretsaw, or a large gouge whose sweep matches the radius of the fan (far right).



Add stringing. Use veneer pins (homecraftveneer.com) or push pins as clamps to secure the fan and put pressure on the stringing when you glue it to the fan.



tension with more blue tape, sticky side down. Lay down the first segment on the tape. Fit each succeeding segment to the previous one. Using the same compass setting as earlier, draw the radius of the fan on the assembly.

Find a gouge that has a deep enough sweep and is larger than the greatest width of the segments. I usually use a #8-13 mm gouge for fans this size. Hold the gouge at an angle so the bevel is vertical, and use it to cut a scallop at the top of each segment where the layout lines intersect. Cut the rest of the fan on the long edges to free it from the blue tape.

Now that the fan is together, add the black scallop detail. Stretch out more

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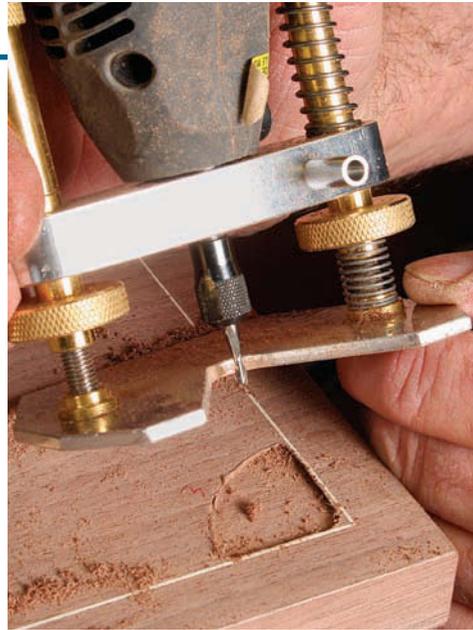
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Inlay the fan



Tack it in place. Van Dyke uses a dab of hide glue to temporarily secure the fan in place while he scores the outline.



Rout close and clean up by hand. Rout freehand and as close to the line as you're comfortable (left). Then use a gouge (above) to cut to the line.

blue tape sticky side up and adhere the fan to it. Using a straightedge and utility knife, cut a long-grain strip of the black veneer a little wider than the greatest width of the segments. Place the gouge across the grain of the black veneer. Holding the gouge vertically this time, cut enough segments to make the fan. Then fit each scallop into its segment.

Back the fan, size it, and set it in place

Now it's time to finish the fan. Cover the show face with veneer tape. Cut the fan free of the work surface and carefully remove the blue tape. Using tape-lined cauls to exert even pressure, glue the fan, veneer tape side up, to a piece of $\frac{1}{16}$ -in. veneer. After the glue has dried, remove the veneer tape and redraw the radius using the same compass setting as before. Carefully cut along the radius line with a gouge. Sand any irregularities and adjust the long edges with a block plane and shooting board so they are at 90° . If desired, add stringing to the curved edge.

The fan is now ready to set into your furniture project. Using a sharp knife, outline the edge of the fan. Rout close to the line, and then clean up to the line with a sharp gouge. I use hide glue to glue the fan into the recess. □

Bob Van Dyke is the founder and director of the Connecticut Valley School of Woodworking in Manchester, Conn.



Glue them in and clean them up. Using hide glue or yellow glue, glue and clamp the fans in place (left). When the glue is dry, use a scraper to flush them with the background (below).

