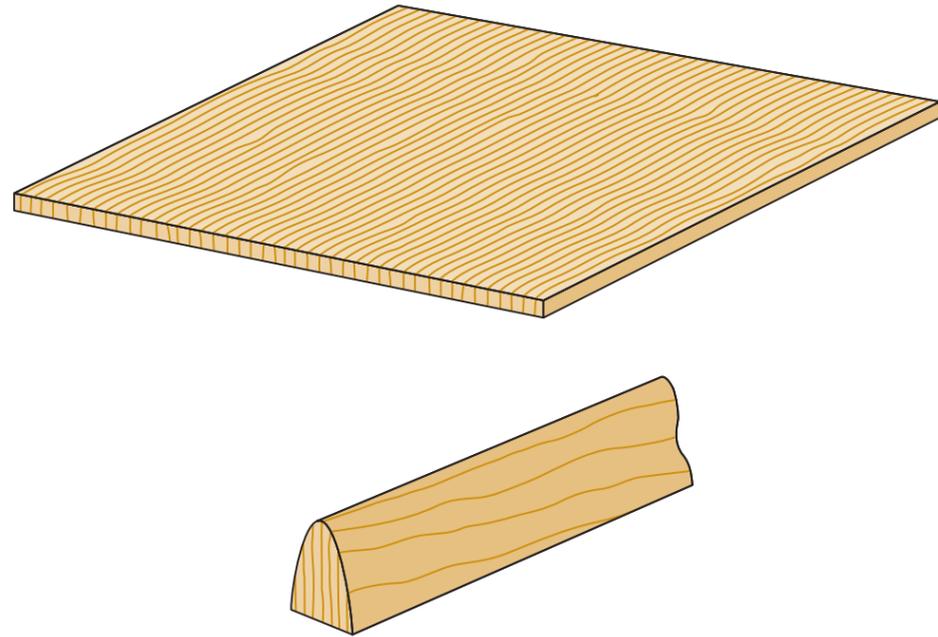


Grain Direction in Braces and Patches



9-71

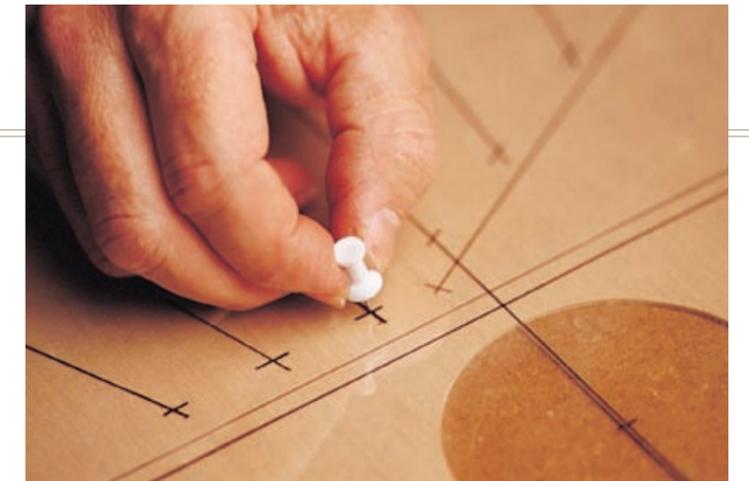
Laying Out the Braces

The layout of the braces must be lightly penciled onto the underside of the top to locate everything for gluing. Trace the position of the braces from the drawing to a piece of acetate (9-72). Place the soundboard on the workboard face-down, and secure with the registration pins. Place the acetate on the back side of the top using the pins to position it, and using a push pin, poke a tiny hole through the acetate at the end of each of the fan braces at their center, making a tiny hole on the top (9-73). Make similar marks at the ends of the transverse braces, marking the upper and lower edges. Remove the acetate and connect the dots with a sharp pencil, marking the locations of all the braces on the wood (9-74).

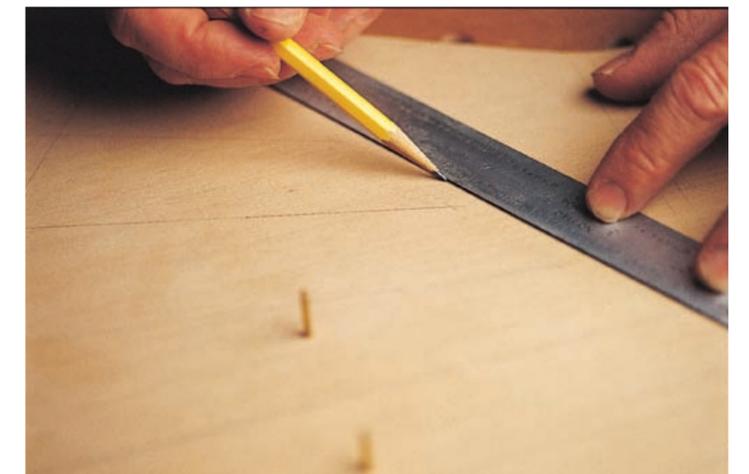
9-72 Laying out the braces on the underside of the top

There are three patches on this soundboard: the bridge patch, the fingerboard patch, and the donut around the sound hole. In woodworking, the rule is, wherever something is glued to one side, something must be glued to the other, for stability over the long haul. The bridge patch must be installed first, since five of the fan braces fit over it. All patches on this guitar are 0.075 inches thick. Cut enough stock for all the patches, as they are all the same thickness. Make a cardboard template of the bridge plate to shape the patch, and accurately drill the registration holes that are used to position the bridge on the soundboard. Place the template under the acetate in position, and drill the holes in the template. Hand-plane the stock for the patch to the desired thickness; then, using the template as a guide, drill the holes and cut to shape (9-75 through 9-77). Save the triangular pieces cut off the ends, because they will be used as depth gauges for cutting the notches in the fan braces (9-78).

Cut a caul for gluing out of 1/4-inch plywood the same size and shape as the patch, and drill the holes using the template. Apply glue to the patch, and push down over the registration pins, securing it in the correct position. Push the caul down over the patch and clamp in place. Set the timer for eight minutes, and clean the squeeze-out when time is up (9-79 through 9-81). Leave the clamps on until the glue cures completely, because the top is domed at this spot and it is necessary for the top to retain this shape.



9-73 Using a push pin through the acetate to mark braces



9-74 Connecting the pin marks to locate braces



9-75 Cardboard template of bridge plate