Wine Rack

As well as displaying your wine collection, a good wine rack protects it, too. How? By holding each bottle at a slight angle so that its cork is kept damp. Dry corks shrink; when they do, air can enter the bottle and damage its contents. This handsome project will fit comfortably under any standard cabinet or on a pantry shelf.

Materials List

Walnut and maple are recommended for this project.

(1)	3/4" x 2-3/4" x 73"	Maple racks
(2)	3/4" x 10" x 12-1/4"	Maple sides
(1)	1/4" x 3/4" x 102"	Walnut insets
(1)	3/4" x 2-3/4" x 18"	Scrap wood

Suggested Tools

3/8" drill
No. 8 pilot bit and countersink with stop collar
Router
1/2" straight bit
No. 2 Phillips screwdriver
Compass
36" straightedge
Palm sander
Jigsaw

Hardware & Supplies

Yellow wood glue
No. 8 x 1" flathead wood screws
3/8" dowel plugs
Spray lacquer

Construction Procedure

1. Measure 3/4" from one long edge of the 73" maple board, and strike a line lengthwise. Measure 1-1/2" from the same edge, and strike a second line parallel to the first.

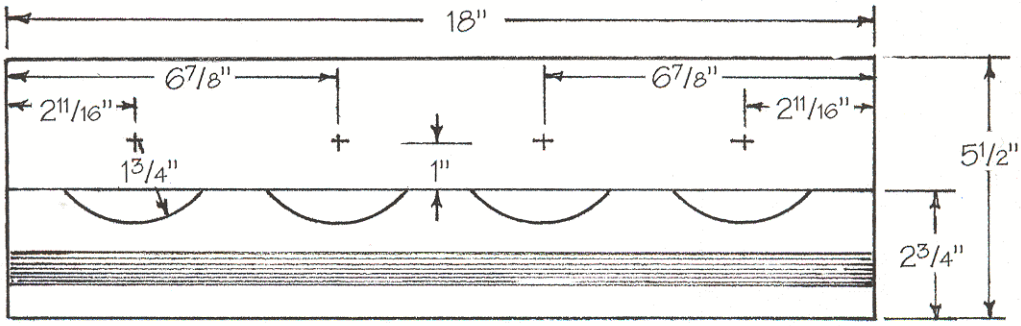
2. Using the 1/2" straight bit in the router, cut a dado 3/4" wide and 1/4" deep between the marked lines.

3. Cut a 1/4" x 3/4" x 73" strip of walnut, and glue it into the dado just completed.

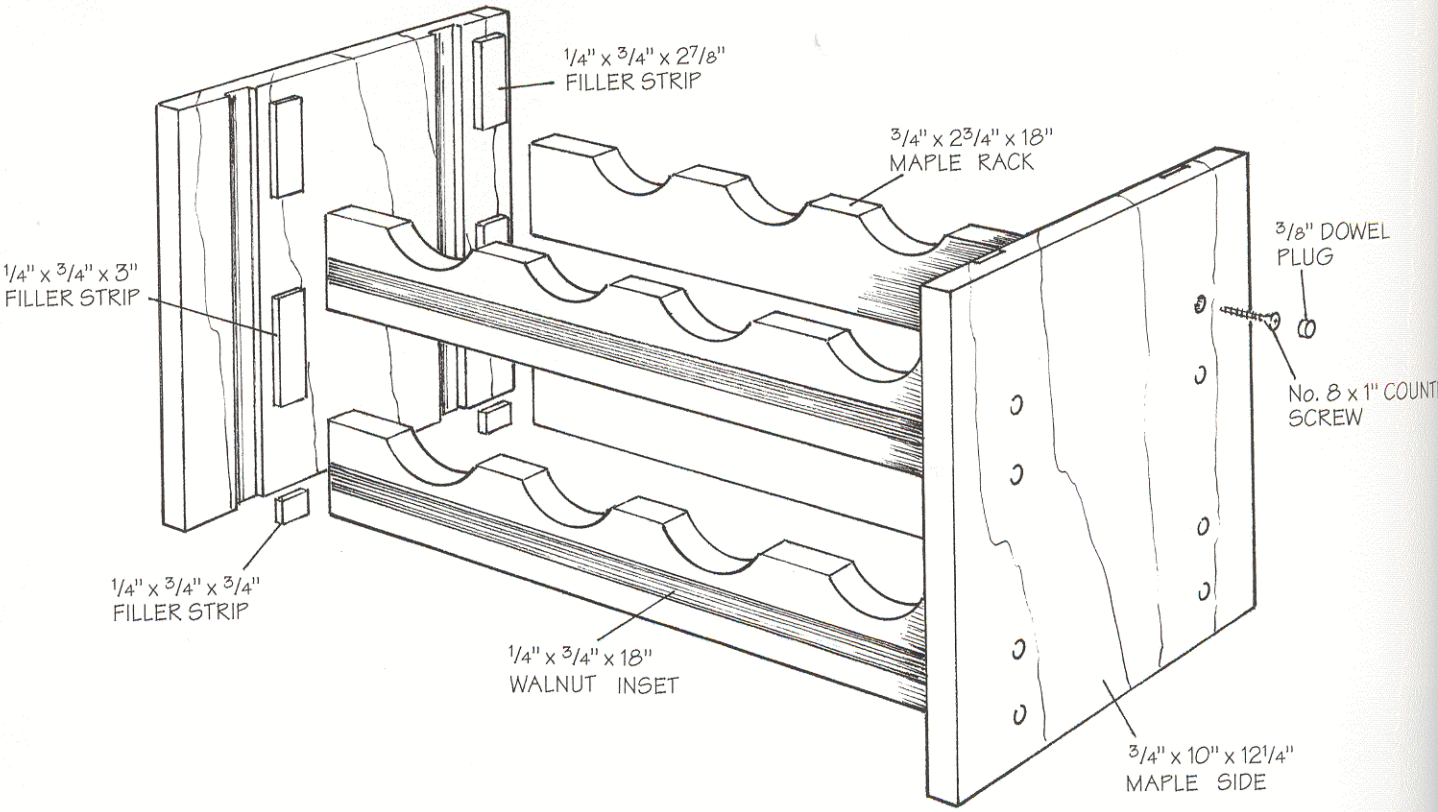
4. Cut the 2-3/4" x 73" maple board into four 18" rack pieces. Also cut a piece of 3/4" scrap wood to 2-3/4" x 18".

5. Lay one edge of the scrap piece next to the edge of a rack piece, with the ends flush and the rack's walnut inset facing out. (See the Rack Detail, in which the scrap piece rests above the rack itself). Measure 1" up from the inside edge of the scrap piece, and strike a line lengthwise. Then measure 2-11/16" and 6-7/8" in from each end of the scrap, and mark points across this line.

6. Strike a 1-3/4" radius across the rack's face from each of these four points. Repeat with the remaining three rack pieces.



RACK DETAIL



7. With a jigsaw, cut along the radius lines on all four rack pieces. Sand their edges and faces.

8. To locate the filler strip channels in the wine rack's sides, measure 1-1/2" and 2-1/4" from each long edge of the two 10" x 12-1/4" maple side pieces. Strike a lengthwise line at each point.

9. Use a 1/2" straight bit to rout a dado 3/4" wide and 1/4" deep at each of these four marked channels.

10. Cut the remaining walnut strip into twelve pieces: four 3/4" long, four 3" long, and four 2-7/8" long.

11. Glue the 3/4"-long walnut filler strips into the dadoes at the bottom end of each 10" x 12-1/4" side piece; glue the 2-7/8"-long strips into the dadoes at the top end. The end of each filler strip should be flush with the ends of the side pieces. Allow eight hours for the glue to dry.

12. Fasten the maple sides to the ends of the racks so that the radii on each rack are facing in the direction of the 2-7/8" filler strips. Butt the racks' outer edges against the walnut strips so that there's a 3" space between each upper and lower rack. Use the No. 8 pilot bit to drill holes 1-1/4" apart, through the sides and into the rack's ends; set the stop collar at 1-1/4". Secure the joints with No. 8 x 1" flathead screws.

13. Plug the screw holes with 3/8" dowel plugs glued in place. Sand the plugs flush with the wood's surface.

14. Glue the remaining four 3"-long walnut strips into the exposed dadoes between the racks. Adjust the strips' lengths as necessary to make them fit.

15. Sand the project lightly, and finish the wood with several coats of spray lacquer.

16. Place your wine bottles in the racks so that their necks tilt slightly downward.