

Roll Out the Barrow

1. Cut out pieces according to the board dimensions below. Also, from two 8-foot 2-inch x 3-inch studs, cut:

- One yoke, 4-1/2 inches long (Cut opposing 12° angles. See dimensions below.) (E)
- Two handles, 58 inches long (Cut one end at 12°.) (F)
- Two legs, 12 inches long (Cut one end at 10°.) (G)

2. Cut two floor pieces 18-1/2 inches long from a 1-inch x 12-inch board. Rip the boards to 11 inches wide—one rip cut should be at 15°. This beveled edge will be positioned at the front of the box. Then bevel the ends of the boards 10° (see front view detail at far right for the proper direction of these cuts).

Lay the two floor pieces in position side by side with the ends facing toward you. Butt the boards together and temporarily tack the ends closest to you 1 inch from the front edge of your workbench. This will keep them in position as you assemble the box.

3. Attach one side to the cut edge of the floor boards. To do this, stand the appropriate side piece on the workbench in front of you so it runs along the length of the floor. Fasten it flush to the floor with 1-5/8-inch deck screws. (When assembling all pieces in this project, drill pilot holes first to keep the wood from splitting.)

Then stand the front piece in position on top of the floor. (Be sure to place it on the end cut 15° in step 2.) Fasten the side to it with 1-5/8-inch deck screws.

4. Stand the back piece on top of the floor. Attach the side to it using 1-5/8-inch deck screws.

5. Fasten the second side to the floor, front and back. To do this, unfasten the box from your workbench and turn the side to be completed toward you. Fasten the side with 1-5/8-inch deck screws.

6. Turn the box upside down and secure the floor to the front and back boards.

7. Shape handle grips with a saber saw, taking 3/8 inch off the top and bottom of the handles (see plan at right).

Then use a rasp or coarse sandpaper to round the ends of the grips.

8. Lay the two handles side by side on a flat work surface with the handle grips on the same end. Place the yoke against the angled ends of the handles. Space the handle grips 24 inches apart, measuring to the outside edge. The angle on the yoke should match the angle of the handles. Drill pilot holes and attach the yoke to the ends of the handle with 2-1/2-inch deck screws.

9. Lay the box on top of the handles. The front of the box should be set 18-1/2 inches back from the front of the yoke. Center the sides of the box between the handles. Fasten the box (from the inside) to the handles with 1-5/8-inch deck screws.

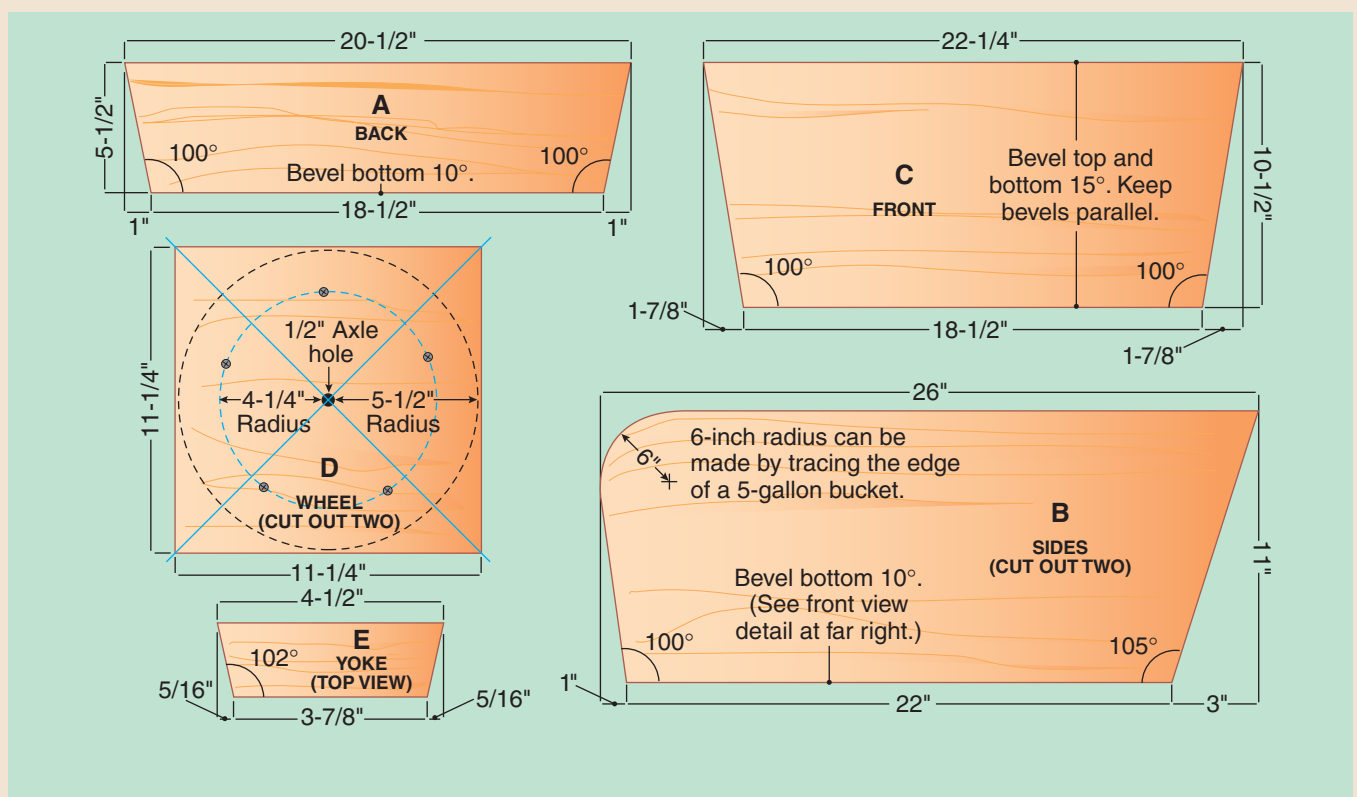
10. Locate and bore a hole for the wheel's axle through each handle. To do this, measure 9 inches from the front of the yoke along the top of each handle. Lay a straight edge across both handles and draw a line connecting these marks. This will provide a guideline to follow as you drill the axle holes. It is important that these holes line up.

With a combination square, carry the 9-inch lines down the outer sides of the handles. Measure 1-1/4 inches down from the top of the handles to locate each hole's center point. Drill a straight 1/2-inch hole through each handle, following the guideline you drew at the top of each handle. It's easier to drill a smaller pilot hole first before using the 1/2-inch bit.

11. Attach legs to the inside of the handles. The angle cut butts the floor of the box, and each leg should be flush with the back edge of the box. Square the legs perpendicular to the ground. Fasten with 2-1/2-inch deck screws.

12. Cut out an 11-inch round disk (D) from each 11-1/4-inch square piece. Find the center point of each piece by connecting the opposite corners of the square with a line drawn along a straight edge. Set a 5-1/2-inch radius on a compass and draw a circle on each board. Use a saber saw or band saw to cut out each disk.

13. Glue the two disks together and secure with 1-5/8-inch deck screws to make one wheel. Place the screws



about 1-1/4 inches from the edge of the wheel. You can quickly locate this distance by drawing a 4-1/4-inch radius circle on each side of the wheel. Drive five evenly spaced screws into one side of the wheel (space the screws about 5 inches apart). Then turn it over and drive five more screws into the side of the wheel, spacing the screws *between* the ones on the opposite side.

14. Drill a 1/2-inch axle hole in the center of the wheel.

15. Make axle spacers from a 2 x 2. To do this, mark the center on one end of the 2 x 2. (Remember, you can quickly find the center by connecting the opposite corners with straight lines.) At the center point, drill a 1/4-inch hole as deep as possible. Enlarge the hole to 1/2 inch.

Cut off a 1-1/4-inch piece from the 2 x 2 at 12°, or use the measurements shown in the illustration at top right. The 1/2-inch hole should be bored through the entire piece.

Continue drilling a 1/2-inch hole deeper into the end of the 2 x 2 and cut off another 1-1/4-inch piece at 90°. This piece will already have a 12° angle on one end.

16. Glue the spacers in place between the handles. Line up the 1/2-inch axle holes in the spacers with the 1/2-inch holes drilled in the handles in step 10. The angled ends should be glued to the handles with waterproof glue. Use the carriage

bolt to help line up the holes.

17. When the glue is dry, insert the wheel and assemble the axle (carriage bolt) and hardware as pictured. Be careful not to overtighten the bolt or the wheel will not turn.

18. Apply a coat of deck stain to the wheelbarrow to protect it from the elements. Apply liberally, especially at the edge of the wheel and the bottom of each leg because these pieces will be in contact with the ground. Make sure to brush the stain well into all joints.

19. Drill several 1/4-inch drainage holes in the bottom of the box and fill with potting soil and colorful plants.

Your friends and neighbors are sure to be wheely impressed when the wheelbarrow's filled to the brim with blooms.

Step 15: Drill 1/2-inch hole in end of 2 x 2 before cutting spacers.

