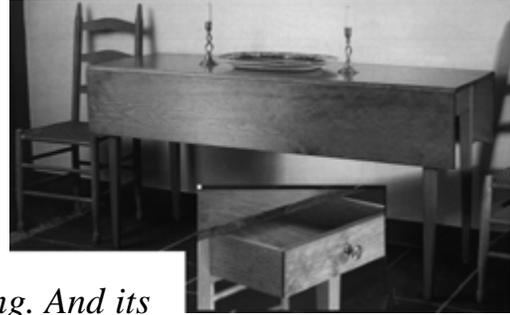


Project 18024EZ: Harvest Table



The Harvest Table invokes the simple charm that makes Early American furniture so appealing. And its precision joinery makes it a woodworking project worthy of the finest craftsman. One unusual detail we've incorporated is the dovetail wedges under the leaves. The wedges stiffen the leaves and prevent warping. The table uses simple turnouts to support the two leaves. You lift the leaf, reach under, and pivot the turnouts into the open position.

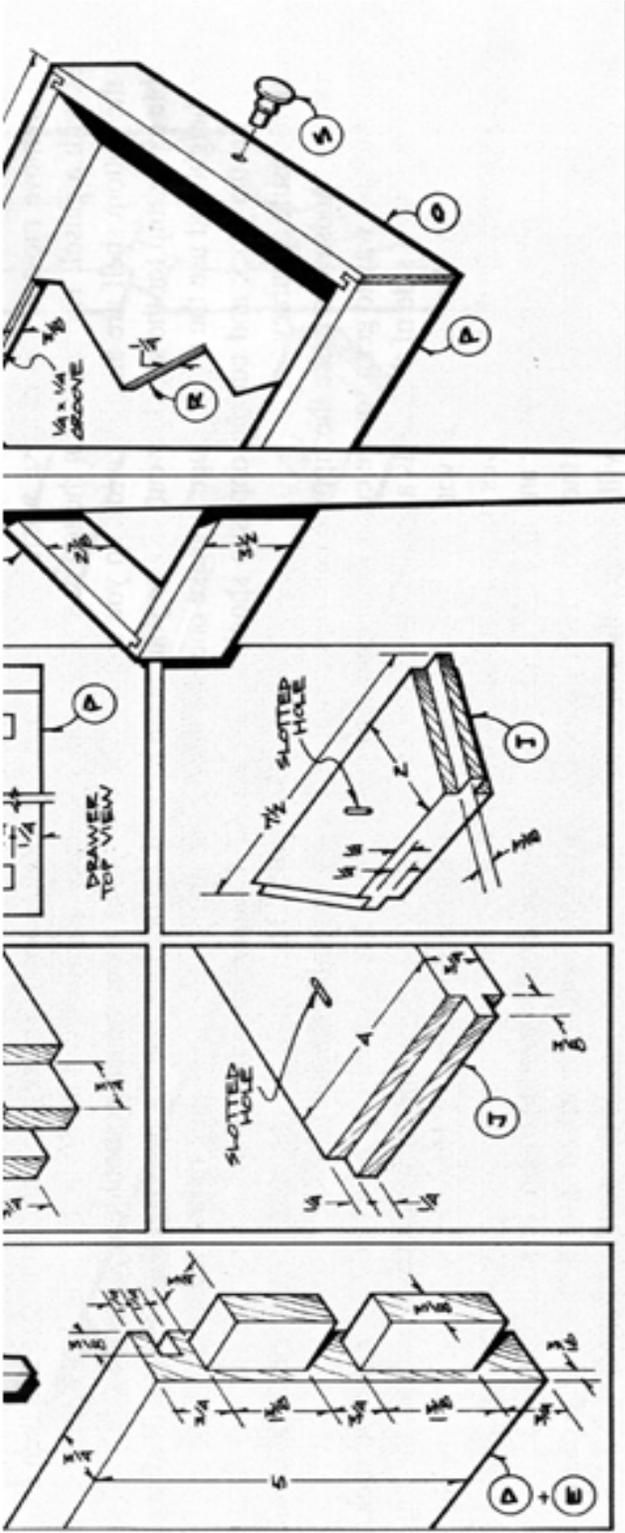
We made the table mostly from pine. The only hardwood parts are the wedges (N), drawer runner (K), drawer guide (L), drawer stop (M), drawer side (P) and drawer back (Q). The drawer bottom (R) is 1/4" thick oak plywood. The knob (S) is maple. But the drawer front (O) is pine.

Harvest Table Materials List

| Part | Description | Size | No. Req'd |
|------|------------------|----------------------------|-----------|
| A | Top | 3/4" x 19-7/8" x 60" | 1 |
| B | Leaf | 3/4" x 10-1/4" x 60" | 2 |
| C | Leg | 1-3/4" x 1-3/4" x 29-1/4" | 4 |
| D | Side Apron | 3/4" x 5" x 52"* | 2 |
| E | Rear Apron | 3/4" x 5" x 16-1/4"* | 1 |
| F | Bottom Stretcher | 3/4" x 1-5/8" x 16-1/4"* | 1 |
| G | Top Stretcher | 3/4" x 1-5/8" x 16-1/4"*** | 1 |
| H | Turnout | 11/16" x 1-1/2" x 16-3/8" | 4 |
| I | Corner Block | 3/4" x 2" x 7-1/2"* | 4 |
| J | Cleat | 3/4" x 4" x 16-3/4" | 1 |
| K | Drawer Runner | 3/4" x 3/4" x 1-5/8" | 2 |
| L | Drawer Guide | 5/8" x 1-1/2" x 9-7/8" | 4 |
| M | Drawer Stop | 3/4" x 3-1/2" x 1-5/8" | 2 |
| N | Wedge | 5/8" x 1-1/2" x 9-7/8" | 4 |
| O | Drawer Front | 3/4" x 3-1/2" x 14-3/4" | 2 |
| P | Drawer Side | 1/2" x 3-1/2" x 17-3/4" | 2 |
| Q | Drawer Back | 1/2" x 2-7/8" x 14-1/4" | 1 |
| R | Drawer Bottom | 1/4" x 14-1/4" x 17-1/2" | 1 |
| S | Knob | 1-1/4" dia. | 1 |
| T | Table Hinge | 1-1/2" x 2-7/8" | 6 |
| U | Turnout Stop | 11/16" x 2" x 4" | 4 |

* Length includes tenon or tongue.

** Length includes dovetail.



Harvest Table Step-by-Step Instructions

1. Cut and plane the legs (C) to the size shown in the Materials List.
2. **NOTE** that the legs taper from 1-3/4" to 1", but that the taper is on the two inside faces only.
3. Start cutting each leg taper 5-1/4" from the top.
4. Use a block plane to gradually chamfer the inside corners of the legs, starting at the same location as the taper, and making it widen to about 3/8" at the bottom of the leg, as shown in the exploded view.
5. Lay out and cut the mortises for the side aprons (D) and rear apron (E) as shown in the detail. **NOTE:** Use a double tenon to make the joints as strong as possible.
6. Cut the tenons for each part to fit the mortise you just cut. **NOTE: The rear apron is set in 1/8" from the face of the leg, but the side aprons are set in 3/8" (see Top View Leg Detail). The extra clearance allows room for the wedges when the leaves are closed.**
7. Cut the mortises for the bottom stretcher (F) (see detail) and the double tenons.
8. Use a dovetail saw to establish the dovetail on the ends of the top stretcher (G).
9. Scribe the profile onto the top of the leg.
10. Use a square to carry the layout down onto the leg side.
11. Use the dovetail saw and chisel to cut out the dovetail housing.
12. Use a bandsaw to start the notches for the turnouts (H).
13. Use a hand saw to finish the turnout notches, angling the ends to 30 degrees.
14. Cut out the notches and grooves corner blocks (I) and the cleat (J), again angling the ends of the notches are angled 30 degrees.
15. Use a router and 1/4" diameter straight bit or a dado head to cut the 1/4" wide by 3/8" deep grooves for the cleat and the corner blocks 1/4" from the top edge of the aprons and top stretcher.
16. Cut the corner blocks and cleat to fit and form the tongues on the ends.
17. Establish the slotted holes as shown, which will serve to mount the top (A).
18. **NOTE:** The slots allow for seasonal wood movement.
19. Plane the turnouts down to 11/16" thick to allow for the washer that serves as a pivot point.
20. Cut the angle on the turnouts.
21. Screw the turnouts in place.
22. Test the turnouts to make sure they fit correctly.
23. Use a round file to establish the finger-pull indentations in the aprons.

24. Begin assembling the table frame by first gluing the front two legs onto the stretchers and the rear two legs onto the rear apron.
25. Allow the glue to dry.
26. Glue those two assemblies onto the side aprons, with the cleat in between. Also, put the corner blocks in during the glue-up; that helps keep everything square.
27. Edge-glue narrower stock for the top and leaves (B), making sure the stock is exactly 3/4" thick, as the rule joint requires precision. **NOTE: The glue-ups should be slightly oversized to allow for squaring and cleaning up the edges. Take extra care when gluing up the stock so that you don't have to plane down the top to get it flat. You may want to insert splines or dowels to help keep the boards flush as you glue them together.**
28. Make sure that the cleats are waxed so they don't become a permanent part of the table.
29. Allow the glue to dry, and then remove the clamps.
30. Cut the top and leaves to size, leaving them 1/16" wider than the width in the Materials List.
31. Pass the top and leaves over a jointer, taking 1/32" off each edge. **NOTE: If you do have to plane the top a bit, stay away from the edges that will form the rule joint.**
32. Joint all four edges you'll be working with on the top and leaves, making sure they're square and true.
33. Select a 1/2" radius roundover bit and a 1/2" radius cover cutter to begin cutting the roundovers on the top and the cove on the leaf for the rule joint (see Rule Joint Detail).
34. Set the cutter to leave the 1/8" step as shown, and cut a test piece to make sure the setting is right on.
35. Cut the roundovers on the top once you are satisfied with the setting.
36. Test your setup on scrap before cutting the coves.
37. Cut the coves, setting the bit so it leaves the 1/8" thick edge as shown.
38. **NOTE:** The test piece for the coves should match the roundover test piece cut earlier. They should be perfectly flush.
39. Cut the coves in the leaves.
40. Adjust for the fact that the radius of the top roundover should be slightly less than the radius of the leaf cove.
41. Glue some 120-grit sandpaper to the cove test piece and remove about 1/32" from the roundovers, being careful to sand the roundovers only, not the 1/8" flat area.
42. Use sandpaper to slightly round the edges at the underside of the roundovers.

43. Locate the wedges on the leaves and make them.
44. Mortise for and mount the hinges (T) while you are making the leaves so you can make any final adjustments needed.
45. Mortise for the hinges.
46. Cut a notch to make room for the knuckle as shown in the Rule Joint Detail.
NOTE: The knuckle center is shifted slightly (1/32") toward the leaf from the theoretical center.
47. **NOTE** that the special table hinges used here are made so that the swing arc works out just right when the hinges are mortised in, and that the center of the knuckle barrel is inset precisely 1/8" from the bottom surface.
48. Make the drawer slightly smaller than the actual opening, leaving the dimensions varying slightly from those given in the Materials List.
49. Fit the drawer flush by sizing the front (O) about 1/16" less in width and length than the opening.
50. Equip the table saw with a dado head to begin making the drawer parts.
51. Set the dado for a 1/4" wide cut. **NOTE: You'll need a tenon jig to support the drawer front when cutting it on end.**
52. Establish the 1/2" deep groove in the ends of the front.
53. Establish the 1/4" deep dado at each end of the sides (P) (see Drawer Top View).
54. Form the 1/4" wide x 1/4" deep rabbet at the ends of the back (Q), as well as the 1/4" wide by 1/4" deep groove in the sides and front.
55. Cut back the inside tongue of the drawer front to 1/4".
56. Cut the drawer bottom (R) to fit.
57. Assemble the drawer.
58. Drill a 1/2" diameter hole in the drawer front to accept the drawer knob (S).
59. Use screws to install the drawer runners (K), drawer guides (L) and drawer stops (M).
60. Adjust the drawer stops so that the drawer front is just flush with the stretchers.
61. Add the turnout stops (U).
62. Remove the table hinges and turnouts mounted earlier for fitting.
63. Sand all the parts carefully.
64. Stain as desired.
65. Apply two coats of shellac and two coats of varnish, rubbing out the varnish with 000 steel wool between coats and being sure to varnish the underside of the top and leaves to help prevent warping.