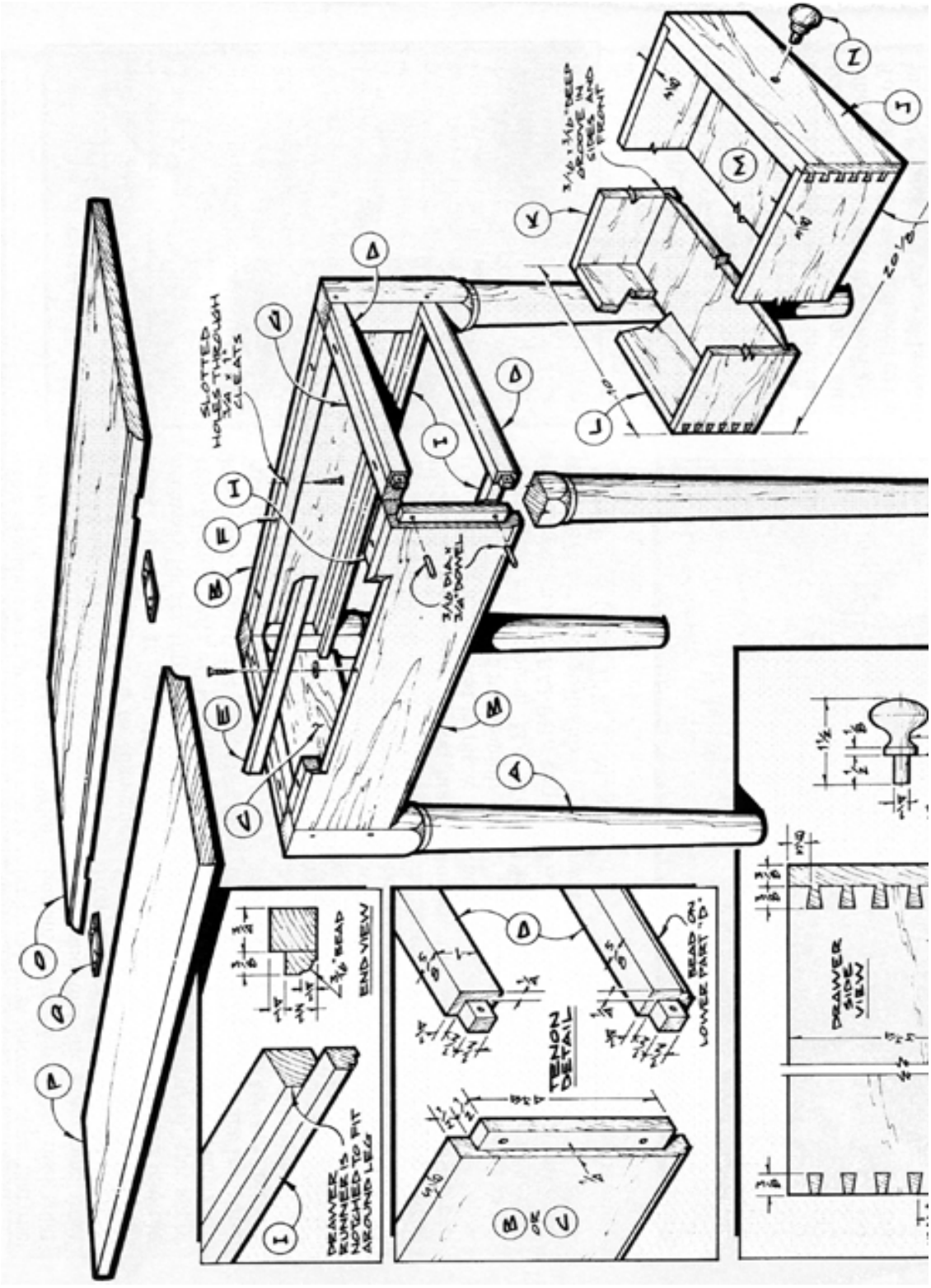
Project 17805EZ:

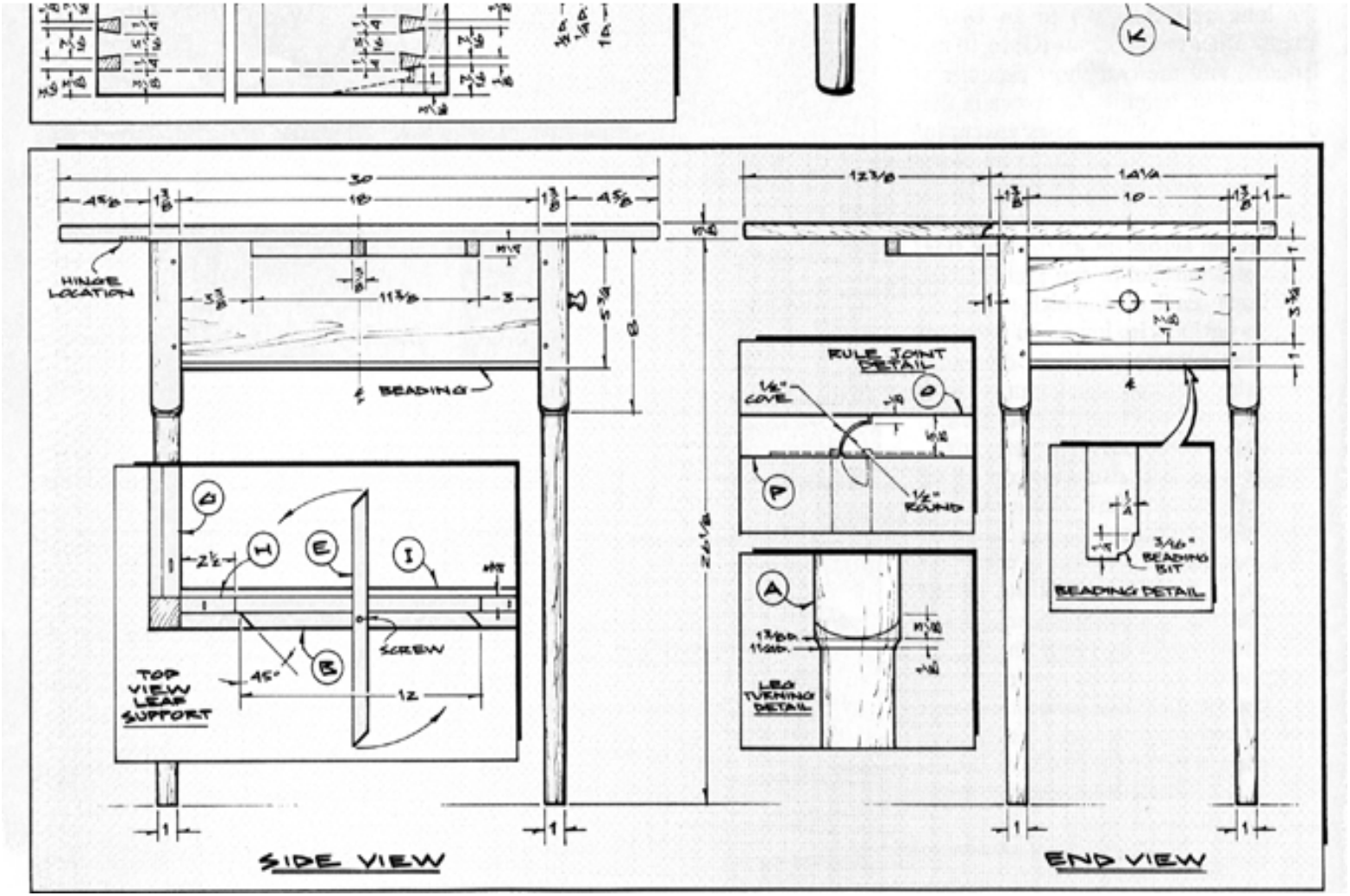
Shaker Single Drop-leaf Table

This small single drop-leaf table, made from butternut, is part of the collection at Hancock Shaker Village in Hancock, Massachusetts. The original incorporated what appeared to be a handmade brass leaf support, but since such a piece of hardware would be difficult to make and impossible to buy, we've substituted a traditional wooden design.

Several of the parts are made from either 3/8" or 5/8" thick stock. If you don't have a thickness planer, your local millwork shop or lumberyard may be able to plane down thicker stock for you. Although the original is butternut, we've seen similar Shaker tables in both pine and cherry.

Shaker Single Drop-leaf Table Complete Schematic




HINGE LOCATION
BEADING
RULE JOINT DETAIL
1/4" COVE
1/2" ROUND
BEADING DETAIL
3/16" BEADING BIT
TOP VIEW LEAF SUPPORT
SCREW
45°
LEG TURNING DETAIL
SIDE VIEW
END VIEW

Shaker Single Drop-leaf Table Materials List

Part	Description	Size	No. Req'd
A	Leg	1-3/8" x 1-3/8" x 20-1/8	4
B	Side Apron	5/8" x 5-3/4" x 19"*	2
C	End Apron	5/8" x 5-3/4" x 11"*	1
D	Stretcher	5/8" x 1" x 11"*	2
E	Leaf Support	5/8" x 3/4" x 12"	1
F	Long Side Cleat	3/4" x 1" x 18"	1
G	End Cleat	3/4" x 1" x 10"	2
H	Short Side Cleat	3/4" x 1" x 2-1/2"	2
I	Drawer Runner	3/4" x 1-1/8" x 19-1/2"	2
J	Drawer Front	3/4" x 3-3/4" x 10"	2
K	Drawer Side	3/8" x 3-3/4" x 19-3/4"	2
L	Drawer Back	3/8" x 3-3/4" x 10"	1
M	Drawer Bottom	3/8" x 9-5/8" x 19-1/2"	1
N	Drawer Knob	See detail.	1
O	Top	5/8" x 14-3/4" x 30"	1
P	Leaf	5/8" x 12-3/8" x 30"	1
Q	Hinge	2-7/8" x 1-1/2"	2

* Length includes tenons.

Shaker Single Drop-leaf Table Step-by-Step Instructions

1. Make the four legs (A) first, ripping each piece to a 1-3/8" square.
2. Cut each to a length of about 28".
3. Use the lathe and, starting at a point 8" from the top end of the leg, taper each leg to the dimensions shown in the front and side views and establish the 26-1/8" overall length.
4. Remove the piece and make the final cut with a handsaw.
5. Repeat the process for each leg.
6. Lay out each leg and mark the location of the various mortises.
7. Cut the mortises in the two left side legs to accept the two side aprons (B) and the end apron (C). **NOTE: Refer to the tenon detail for all mortise dimensions**.
8. Cut mortises in the two right side legs to accept the side aprons and the two stretchers (D).
9. Use a 50" length of 5/8" thick x 5-3/4" wide stock to make the side and end aprons.

10. Use a router and a 3/16" beading bit to cut the beading along the full length of the bottom edge.
11. Crosscut the stock for the side aprons into two 19" lengths.
12. Crosscut the stock for the end apron into and one 11" length.
13. Use the table saw and dado cutter to cut the tenons to the dimensions shown in the tenon detail.
14. Use the band or saber saw to cut a long notch in the left side apron to accept the leaf support (E).
15. Use sandpaper to smooth the saw marks.
16. Cut the leaf support to fit the notch.
17. Cut the stock for the two stretchers.
18. Use the router table, a 3/16" beading bit, and a push stick to cut the bead on the lower stretcher only.
19. Use the table saw to cut the tenons to the dimensions shown in the tenon detail.
20. Sand the legs, aprons, and stretchers.
21. Dry assemble the parts to insure that all components fit to your satisfaction.
22. Apply glue to the mortises and tenons.
23. Apply pressure with bar or pipe clamps.
24. Check for squareness and make adjustments if necessary.
25. Set the project aside to dry overnight.
26. Rip 3/4" thick stock to 1" widths to make the cleats.
27. Cut the long side cleat (F) to an 18" length.
28. Cut the two end cleats (G) to 10" lengths.
29. Cut the two short side cleats (H) to 2-1/2" lengths.
30.
31. Bore two or three 3/16" diameter holes to begin cutting the 3/16" wide x 1/2" long slotted holes in each cleat: three in each long side cleat, two in the end cleats, and one in each of the short side cleats. **NOTE: Cut across the grain in the side cleats and parallel to the grain in the end cleats**.
32. Use a round file to finish the slots.
33. Glue the cleats to the aprons once the slots are cut, making sure the top edges of the cleats are flush with the top edges of the aprons.
34. Rip 3/4" thick stock to a width of 1-1/8" to begin making the two drawer runners (I).
35. Cut the runner stock into two pieces, each one about 21" long (allows for extra stock).
36. Use the router table and a 3/16" beading bit to cut the bead as shown.

37. Flip the stock over.
38. Use a 3/8" straight bit to cut the 1/4" x 3/8" groove as shown in the end view detail.
39. Trim the parts to a final length of 19-1/2".
40. Use the table saw and dado cutter to cut the 3/4" x 3/4" notch on each end.
41. Glue the runners in place.
42. Edge-glue narrower stock to get the necessary widths for the top (O) and the leaf (P). **NOTE: Leave a little extra on both the length and width so that later, after the glue has dried, the stock can be trimmed to the exact dimensions.**
43. Use the router in conjunction with a 1/2" round-over bit and cove bits to cut the rule joint.
44. Make the drawer (parts J, K, L, M, and N) as shown, using 3/8" thick solid stock with the grain running from front to back to make the bottom.
45. Apply a narrow band of glue (about 1" long) at the midpoint of the front and back edges. **NOTE: Don't glue into the grooves all around as the bottom must be free to expand with changes in humidity.**
46. Sand all parts thoroughly.
47. Use 1-1/4 x #8 round head wood screws driven up through the slotted holes in the cleats to join the top to the base. **NOTE: A washer under the screw head will prove helpful here**.
48. Finish as desired.

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