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CHERRY END TABLE

Time-honored techniques of hand joinery, executed with the help of modern tools and equipment, make this a project any craftsman can be proud of. Whether your decor is stark contemporary or cozy Early American, this end table's clean, elegant lines, highlighted by the rich tones and delicate figuring of oiled cherry, will fit right in.

Wood: For the greatest economy and the best results in matching color and figure, try to find a single piece of cherry stock that will yield all the solid parts of the table. Brush a little paint thinner on the surface to get an idea of the color and figure—it will dry harmlessly—then look for a matching piece of cherry-veneer plywood for the shelf.

With careful cutting, you can get all the solid pieces from a board that is 2 inches thick, 6/2 inches wide, and 10 1/2 feet long. First, cut a 32-inch length and rip it into two 3-inch widths for the legs . Then cut a 6-inch length and rip it into four 1 /4-inch widths for the wings (B), Cut three 20-inch lengths for the top. Rip the remainder into 2 1/2-inch widths for the aprons (C and D), then rip these pieces to a thickness of 1 *'1/4*inches. The edging (E and F) and screw blocks (H) can be made from the scrap.

Construction: The table is built in three clearly defined phases, each of which is shown on a separate page. First, the legs, wings, and aprons are cut roughly to shape and jointed to make the basic table structure . Then these parts are more carefully shaped, the shelf is fitted into notches in the legs, and the structure is assembled with glue , Finally, the top is formed and joined to the structure by means of slotted screw blocks . Because of the inevitable imprecision of mortise-and-tenon joints, i both the shelf and the top should be cut and shaped to fit the assembled leg-and-apron structure—not cut according to predetermined dimensions

It may be difficult to find 2-inch-thick boards wide enough to make the legs according to the diagram on the opposite page (Step 1). If so, you can cut all four legs 1 3/4 inches square and 24 7/8 inches long and join two wings to each, rather than one as we have done, in order to make the corner units. When rough-cutting the curved part of the tapered legs (Step 3, opposite page), guard against accidents by first making a series of parallel cuts about 1/4 inch apart. If you use a band saw for the job, tape a piece of scrap wood to the lower part of the leg, as shown in Step 3, just thick enough to keep the piece level on the saw table.

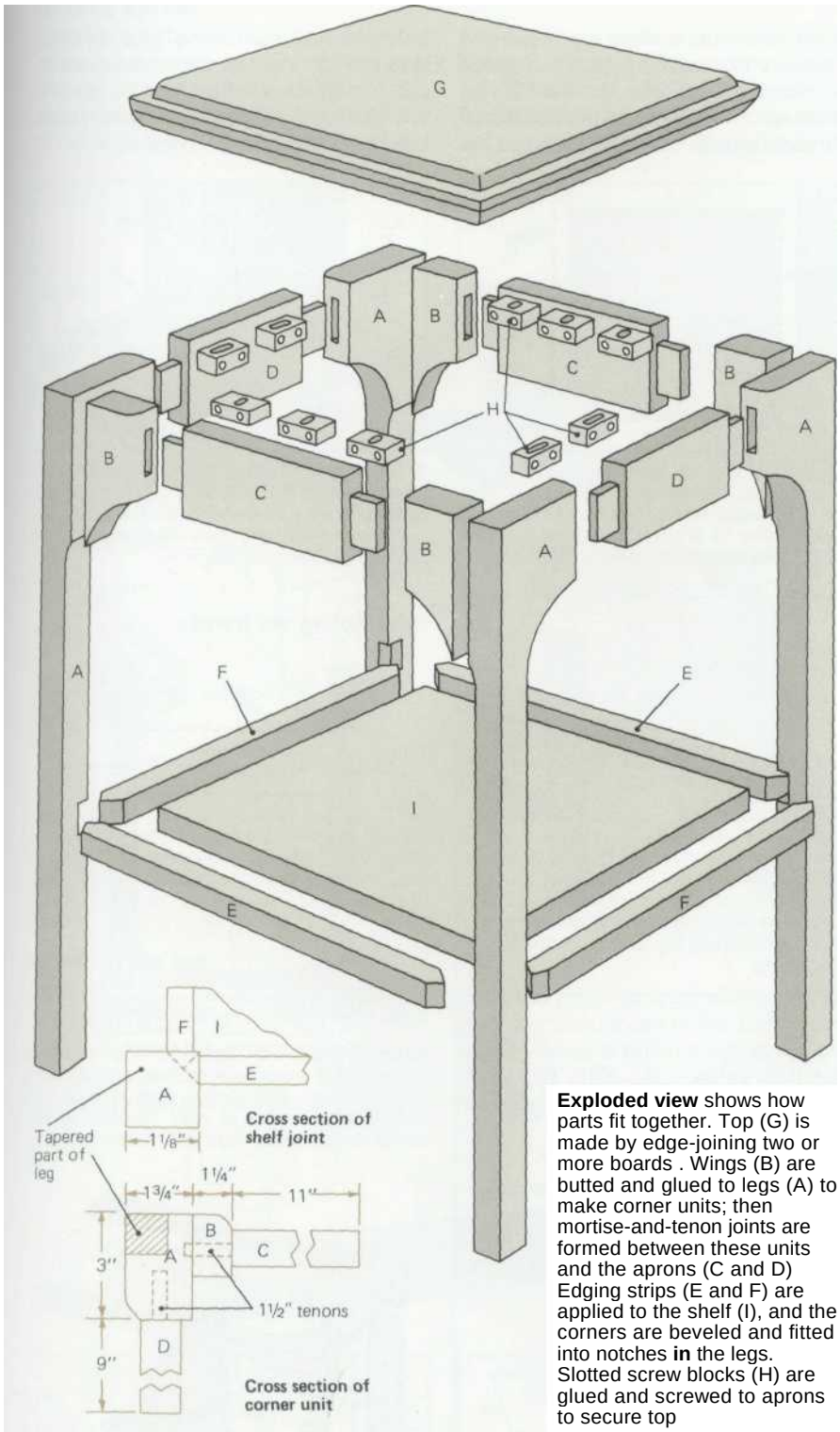
Finishing: After construction is completed, use a block plane or spokeshave to gently round all sharp edges—how much you round them is a matter of personal taste and esthetic judgment. Then sand with Nos, 100, 150, and 220 sandpaper to achieve a smooth surface. To bring out the natural color and figure of the wood, apply several coats of penetrating oil, such as linseed oil, tung oil, or a commercially prepared Danish-style natural finish. If you want a protective, glossy surface, wait about a week before rubbing in a coat of wax.

Parts list

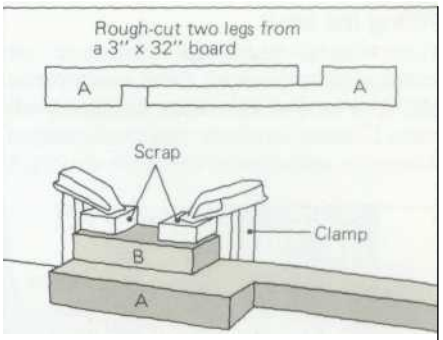
Part	Name	Quantity	Thickness	Width	Length	Material
A	Leg	4	1¾"	3"✲	24⅞"	Cherry
B	Wing	4	1¾"	1¼"	8"✲	Cherry
C	Side apron	2	1"	2½"	14"	Cherry
D	End apron	2	1"	2½"	12"	Cherry
E	Side edging	2	½"	⅞"✲	16"✲	Cherry
F	End edging	2	½"	⅞"✲	14"✲	Cherry
G	Top	1	1⅜"	16½"	18½"	Cherry
H	Screw block	10	⅝"	1"	1½"	Cherry
I	Shelf	1	¾"	12⅞"✲	14⅞"✲	A–2 cherry plywood

✲Measurement is approximate; cut to fit during construction.

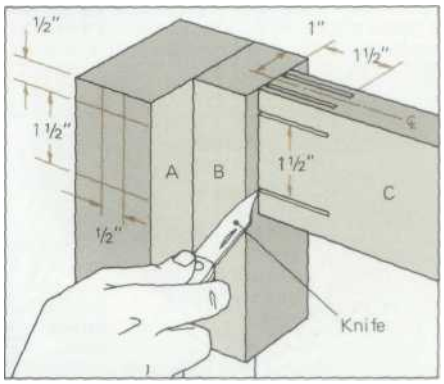
Tools and materials: Table saw with combination blade. Band saw. saber saw, or coping saw. Backsaw, miter box. Drill with 3/32", 11/64", and 5/16" twist bits. Framing and combination squares, T bevel, steel tape rule, marking gauge, mortising gauge (optional), pencil. Awl, mat knife. Screwdriver. Jack plane, block plane, shoulder plane (optional), spokeshave or drawknife. Straight chisels: 1/8", 3/8", 1/2*", 3/4*", 1", and 1 1/2*".* Mallet. Six 3' bar or pipe clamps, several assorted C-clamps. Orbital sander (optional), sanding block. Nos. 80, 100, 150, and 220 sandpaper Yellow carpenter's glue, penetrating oil. Wax (optional). Wax paper, heavy paper. 3/16*"* washers, 1 1/4" and 1 1/2" No, 8 roundhead screws. A 2" x 6 1/2" x 10 1/2"' board of cherry stock or the equivalent An 18" square of 3/4" A-2 cherry plywood.



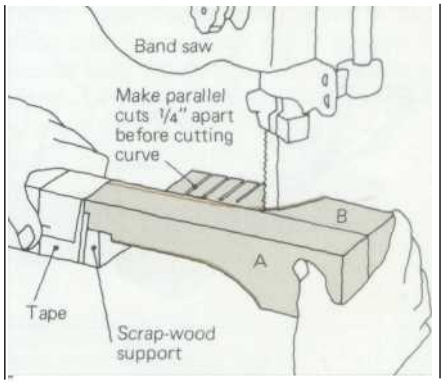
Exploded view shows how parts fit together. Top (G) is made by edge-joining two or more boards . Wings (B) are butted and glued to legs (A) to make corner units; then mortise-and-tenon joints are formed between these units and the aprons (C and D) Edging strips (E and F) are applied to the shelf (I), and the corners are beveled and fitted into notches **in** the legs. Slotted screw blocks (H) are glued and screwed to aprons to secure top



1. Plane stock to thickness for legs (A), wings (B), and aprons (C and D). Cut to length and width. Glue and clamp wings to legs to form corner units, making sure that the top edges are flush and the joints are square

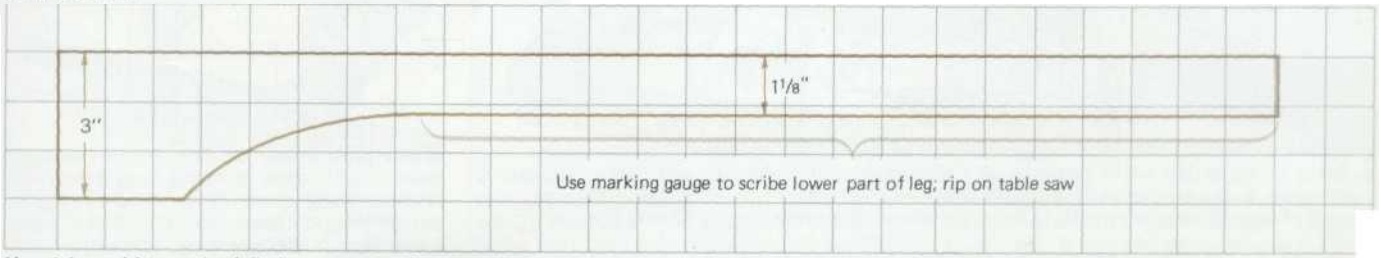


2. Use a table saw to cut cheeks of tenons 1 1/2 in. deep in ends of apron pieces (C and D). Position aprons flush with tops of corner units and mark for mortises Cut tenon shoulders and make mortises



3. Use pattern below to scribe outline of tapered leg on both outer faces of corner units Rough-cut to within 1/8 in. of scribed lines Rip straight sections on table saw, use band, saber, or coping saw to cut curves

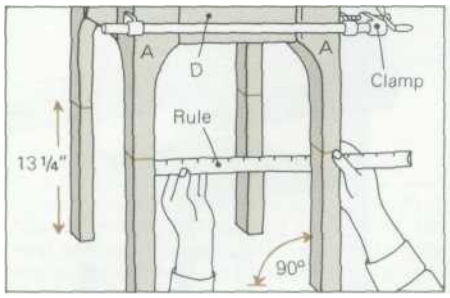
Leg pattern



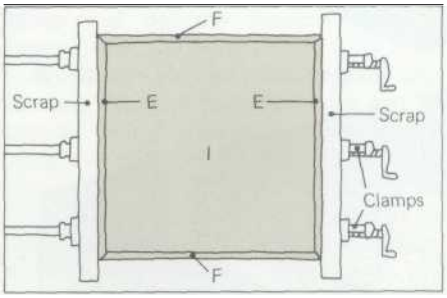
Use 1-in. grid to make full-size pattern of tapered leg on heavy paper. Scribe pattern on both outer faces of corner units.

Fitting the shelf

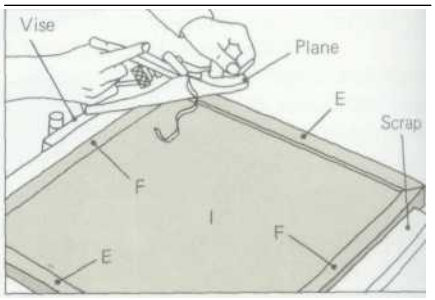
The table's sturdiness depends on custom-fitting the shelf. First, use a plane and spokeshave to reduce the rough-cut corner units to their scribed shapes. Assemble and clamp the table structure dry (no glue) with all four legs square to the ground. Cut and edge the shelf (Steps 1-3). The shelf corners are beveled so that the notches they must fit into can be cut straight across. Mark the bevel points (thickness of the edging plus 1/16 inch), then use the shelf corners themselves as patterns for the notches. After the notches are cut, doublecheck the bevel points before sawing off shelf corners.



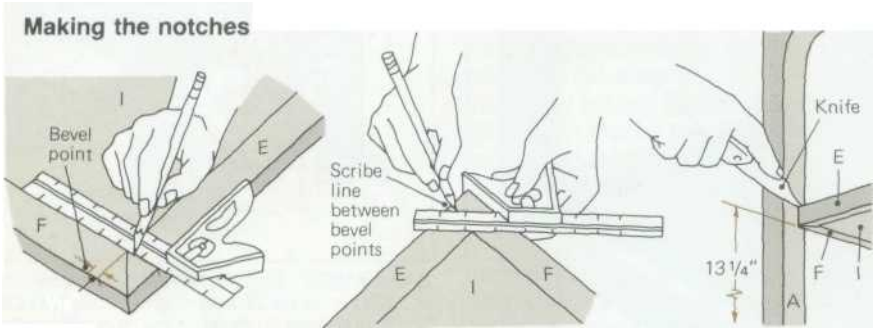
1. Rule a line around each leg 13 1/4 in. from the floor Measure the distances between the legs at these marks. Add 1/8 in. to each dimension to determine the size of the shelf (I). Cut shelf from $^{3}/4$-in plywood.



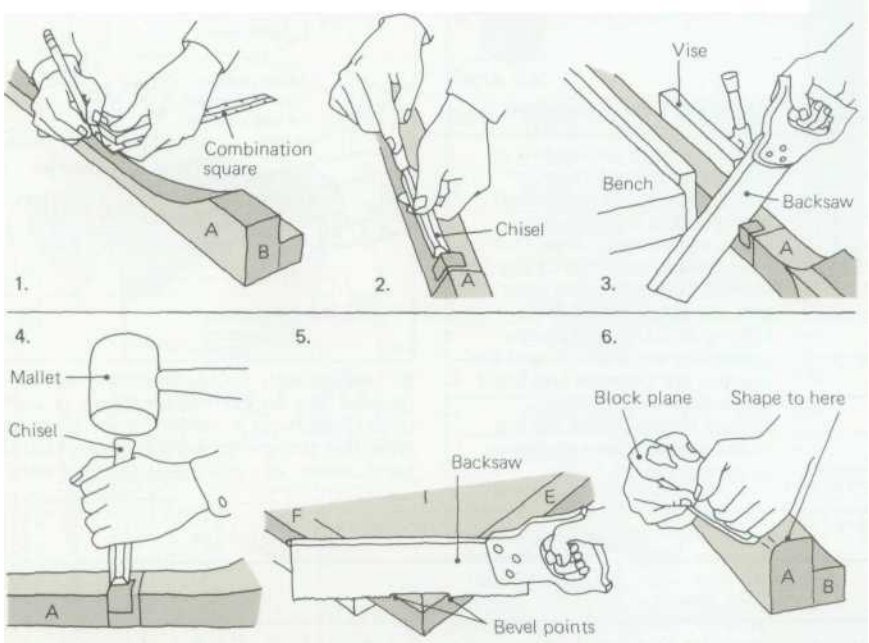
2. Miter one end of each side edging (E). Clamp to sides of shelf and cut an end edging (F) to fit between miters Mark and cut miters on opposite ends of parts E and fit other end edging. Glue and clamp edging in place.



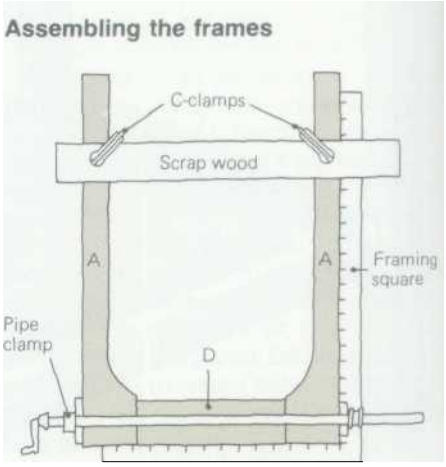
3. Plane parts E and F and sand with No sandpaper so that they are flush with both surfaces of shelf. Label each shelf corner and the corresponding leg before disassembling the table to cut the notches



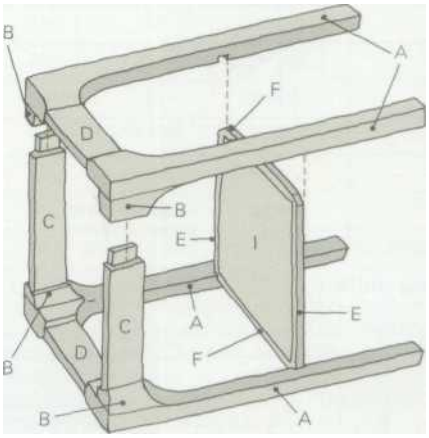
Extend outline of shelf (I) across edging (E and F); mark bevel points 1/16 in farther from corners. Hold each shelf corner against inner faces of its matching leg, and mark shelf thickness plus distance from corner to bevel points on leg



1. Scribe outline of each notch 2. Nick corner of each leg to ensure a clean saw cut 3. Cut notch to depth with backsaw 4. Chisel out notch, making its base flat or slightly concave 5. Doublecheck bevel points and saw off shelf corners. 6. Shape upper corners of legs (A) and wings (B) to the point where they meet aprons (C and D).



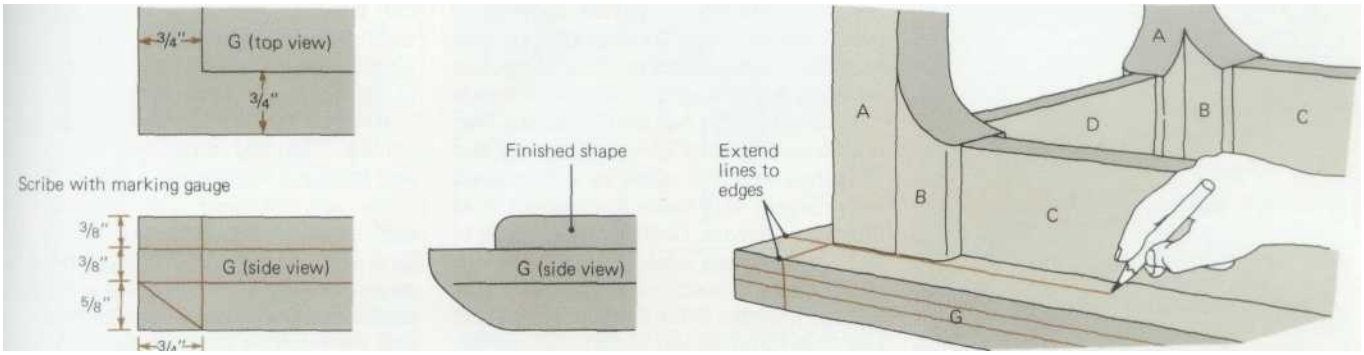
Sand all parts with Nos. 100, 150, and 220 paper Glue tenons of end aprons (D) into their mortises and apply pipe clamps To ensure squareness of end frames, secure scrap wood across legs with C-clamps

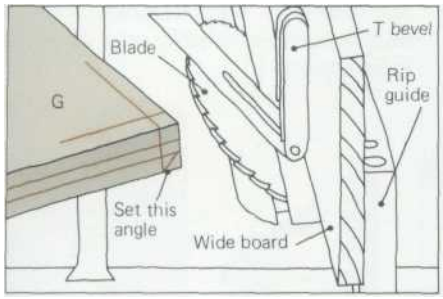


When glue dries, lay one end frame face down Apply glue to mortises and notches and insert side aprons (C) and shelf; then glue the other end frame in place. Stand table frame upright, square it up, and apply pipe clamps across legs.

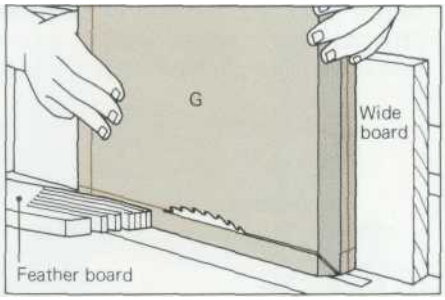
Shaping the top

The upper surface of the top is rabbeted all around to create a raised center panel. Viewed in silhouette, the edges of this panel should align with the outer surfaces of the table legs. The top's lower edge is beveled at an angle of about 40° to meet the upper edges of the corner units (A and B), Before beveling, center the table frame upside down on the underside of the top and outline the corner units; then set the angle of the table saw to cut just a hair outside these lines Gently round all sharp corners with a plane and No. 80 sandpaper to give the top a graceful form. Attach the top as shown below.

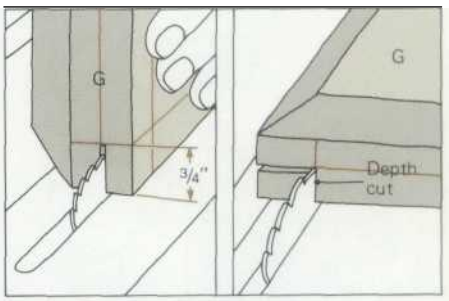




1. Use T bevel to transfer the angle from an edge of the marked-out top (G) to the table saw The blades of most saws can be tilted only to the right, so the rip guide must be moved to the left of the blade



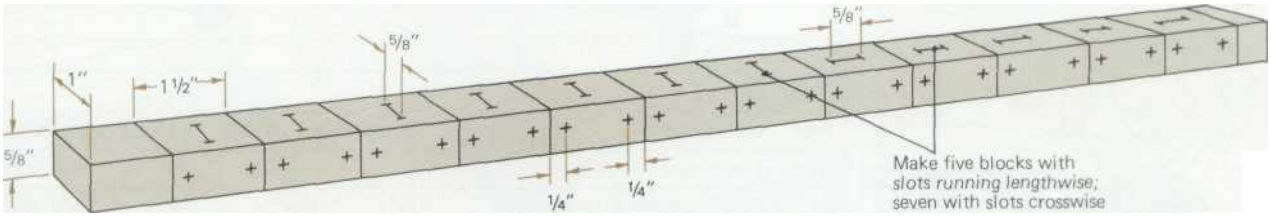
2. Make test cuts with scrap wood to find proper settings, then cut bevels along bottom edges of four sides of top.

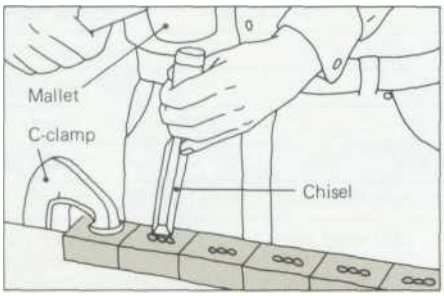


3. Move rip fence back to right side of blade and reset blade to 90°. Cut 3/4-in rabbets in all four edges of top Lower blade to 5/16 in. and adjust rip fence for depth cuts. Finish rabbets with chisel or shoulder plane.

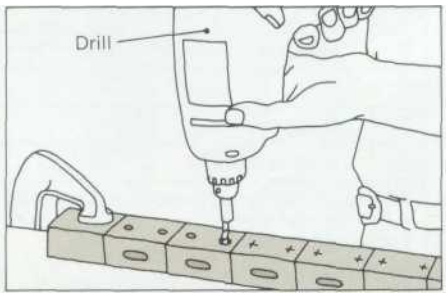
Attaching the top

Changes in humidity will cause the top to swell and shrink. If the top is firmly secured to the table structure, such movement will eventually weaken the mortise-and-tenon joints and may cause the, top to split. The problem is solved by attaching slotted screw blocks to the apron pieces, with all the slots running across the grain of the top, then driving screws through the slots and into the top. Make all the blocks from a strip of hardwood 5/8 inch thick and 1 inch wide that is at least 20 inches long, Mark out a dozen blocks as shown below—10 are needed, the other two are spares.

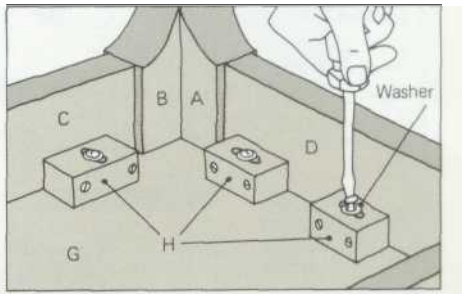




1. To make 5/8-in. slots in blocks, first drill three holes, using an 11/64-in. bit (Drill center hole first.) Then cut through waste from both sides with 1/2-in, chisel Finally, clean out the slots with 1/8-in chisel



2. Use an 11/64-in. bit to drill two shank holes through each block for the screws that will secure the blocks to the aprons Center the holes 1/4 in from the ends of the blocks Then cut the blocks apart.



3. Use glue and 1 1/2-in, No 8 screws to mount three blocks on each side apron (C) and two on each end apron (D). Attach top (G) with 11/4-in. No. 8 roundhead screws and 3/16-in washers. (Use 5/32-in. bit for pilot holes)