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Premium Plan

Mahogany Ladies' Desk

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

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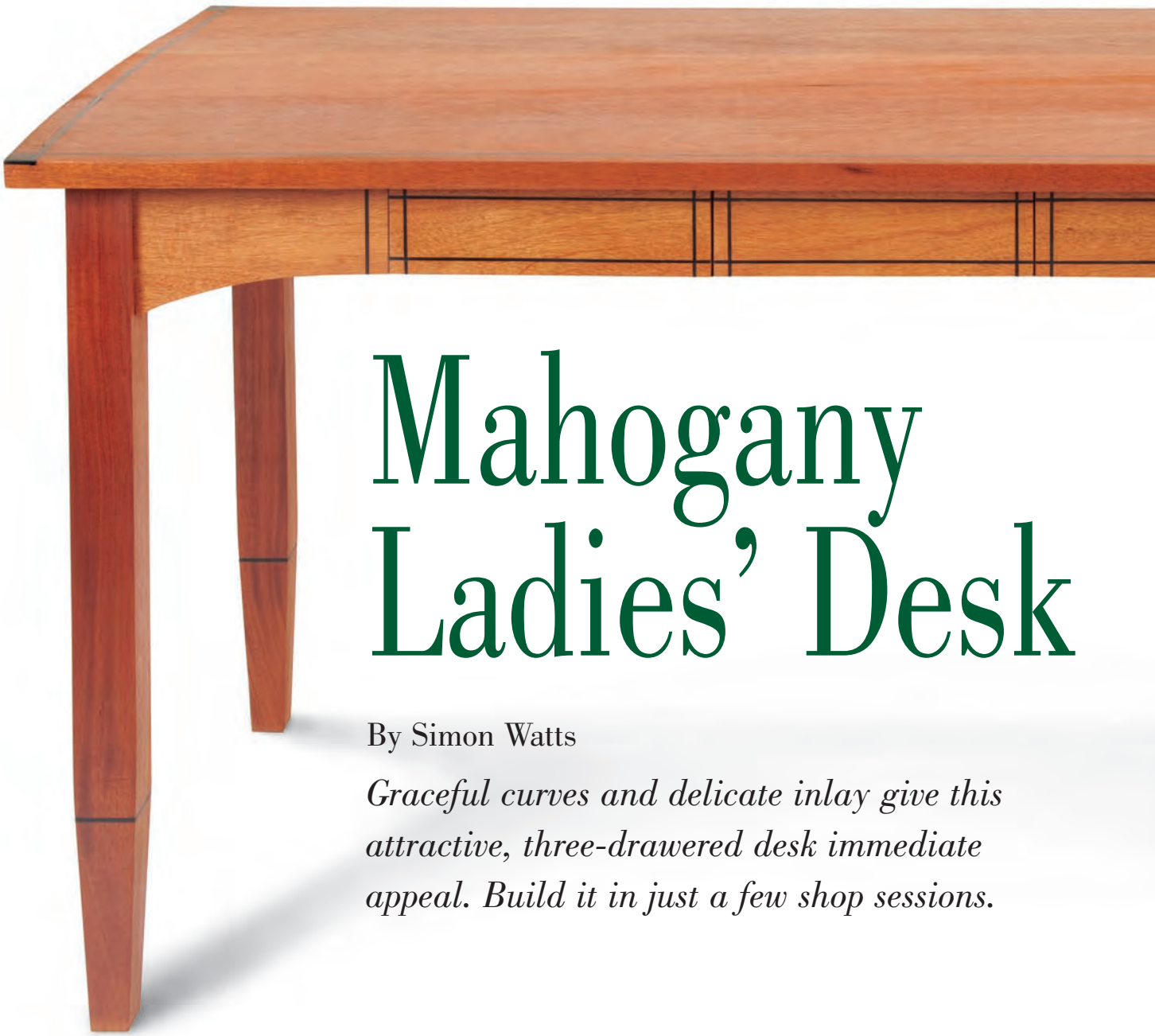

Mahogany Ladies' Desk

By Simon Watts

Graceful curves and delicate inlay give this attractive, three-drawered desk immediate appeal. Build it in just a few shop sessions.

I think of this piece as a ladies' desk (it was made for a lady) perhaps because of the feminine curves — as opposed to the more usual straight lines and hard corners of most desks. I did not intend this, but it was one of those designs that just evolved on its own. Anyway, the lady was pleased, which was just as well since we share an apartment in San Francisco.

I used mahogany for the desk, with ebony inlay, but other combinations would be equally suitable — walnut with maple inlay, for example, or cherry with rosewood. Cutting slots for the inlay is tricky ... one slip of the router and you'll have to start over. But I feel adding inlay to the top and carrying that theme over onto the drawer faces and legs adds elegance to this project. If you work carefully, guiding your router against a straightedge or a curved template, you'll have good success here.

Beginning with the Top

Start by gluing up stock for the desk top and rough-finishing it so there is a level surface for the router, then lay out the curves at the two ends. I initially set a beam compass to a radius of 52″ – the same length as the desk – intending to cut it on the band saw using a pivot. However, the curve looked wrong ... too mechanical and simple-minded. So I picked a straight-grained batten and put pressure on the ends with a long bar clamp, as shown in the left photo on page 4.

By changing the clamp pressure, I could adjust the amount of curvature very precisely. I don't know if the curve so generated has any mathematical pedigree, but I suspect it belongs to the same family as suspension bridges. Anyway, it looked right for this desk, so I marked the curve with a felt-tipped pen and then sawed it by hand with a 300mm Japanese saw. The flexible blade is ideal for cutting shallow curves such as this one.

I used the offcut as a sanding block to smooth the ends of the desk top, then traced the curve onto scrap and sawed it out as a template guide for the router. By clamping this guide to the desk top, I could rout out a groove for the inlay with confidence. If you are not comfortable making this cut with a router, I suggest

Whether you build this desk from mahogany with ebony inlay as the author did, or choose another wood combination, the inlay pattern will add elegance to the design and help to make your desk distinctive. While it may look difficult, the process is actually quite simple: rout shallow slots, fill them with bandsawn strips of your contrasting species and plane, scrape or sand it flush.

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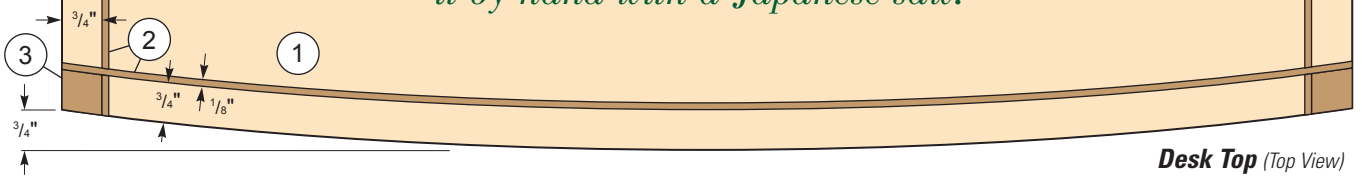


Desk Top *(Top View)*

Springing a batten in this fashion with a clamp (left) gives you a more attractive, interesting shape than the arc of a circle. The author cut the desk top's end curves with a fine-tooth Japanese saw (above). Its narrow, flexible blade can accommodate modest curves like these.

you practice on scrap wood until you are. Use a straight 3/16" carbide bit and be sure to go against the direction of the bit rotation. Otherwise, the bit can take charge and run away with you.

Cut the groove in the curved ends first and then, using a straightedge as a guide, cut slots along the long sides. Doing it this way minimizes tearout where the two grooves intersect. When done, use the router again with the same depth setting to cut the shallow notches at each corner for squares of inlay that join the strips where they meet.

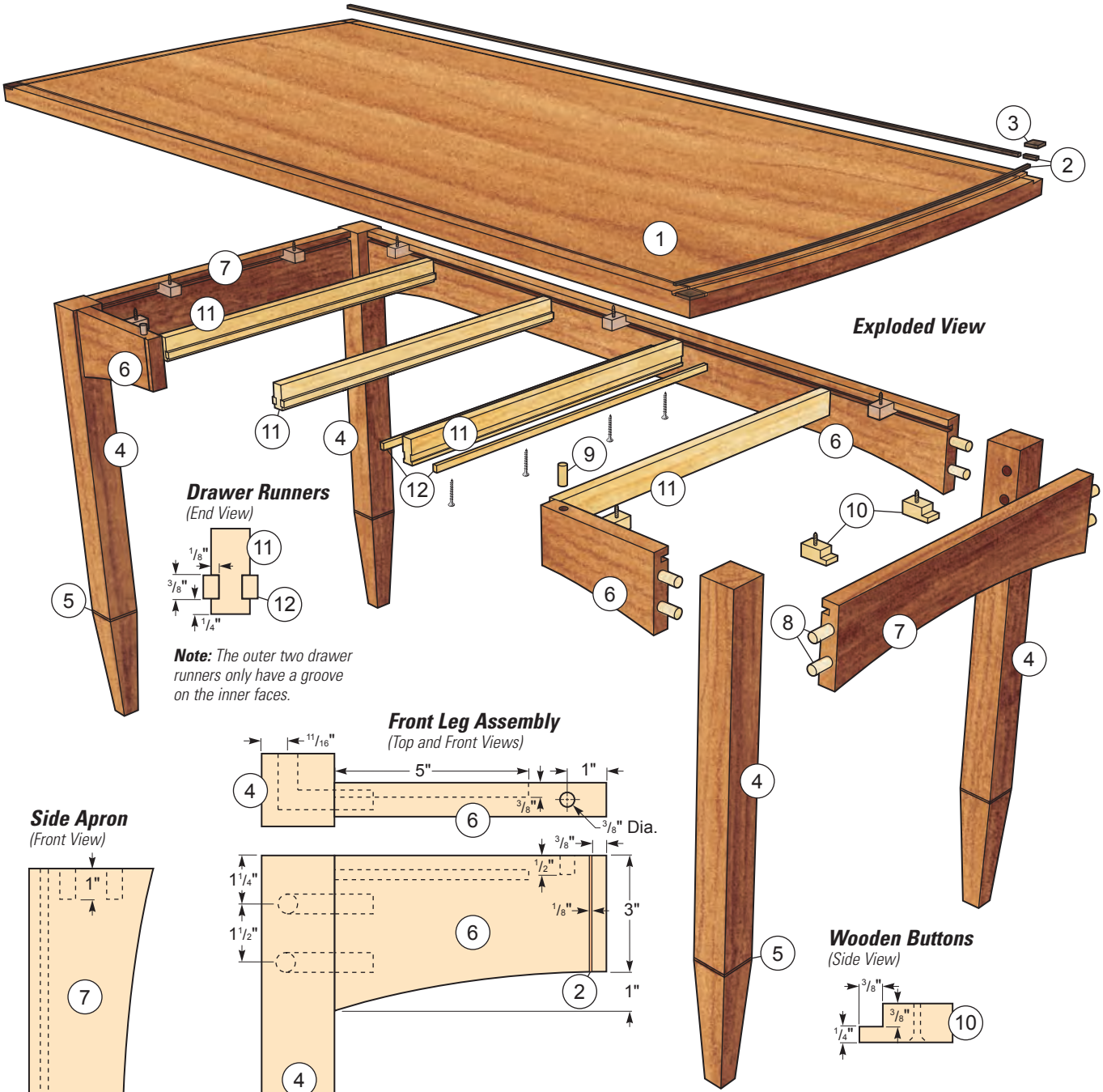
When cutting a precious wood such as ebony into inlay strips, I minimize waste by clamping a fence to the band saw instead of using the table saw. This works best with a 3/8"- or 1/2"-wide blade, because it's less likely to wander in the cut.

After cutting sufficient strips of inlay — you can butt them end to end if necessary — glue them into their slots. Start at the curved ends using a piece of hardwood scrap with wax paper in between so you can apply even pressure with clamps. Glue the long sides next. Now cut the small squares of ebony for each corner and glue them into place. Clean the top up with a block plane and scraper, sand it up to 120-grit, and set it aside to work on the base.

Assembling the Legs and Aprons

The legs are square in section and are tapered below the ebony bands. Cut them to size, and taper their ends (see bottom left photo on page 6). Slots for the leg inlays are best cut against a miter gauge on the table saw using the rip fence as a stop. It's a simple procedure. With the legs done, make up the front, back and side aprons. Use the flexible batten to form the bottom curves on these parts before shaping them at the band saw. Mark the location of the three drawer faces on one of the long aprons, but don't cut them out yet.

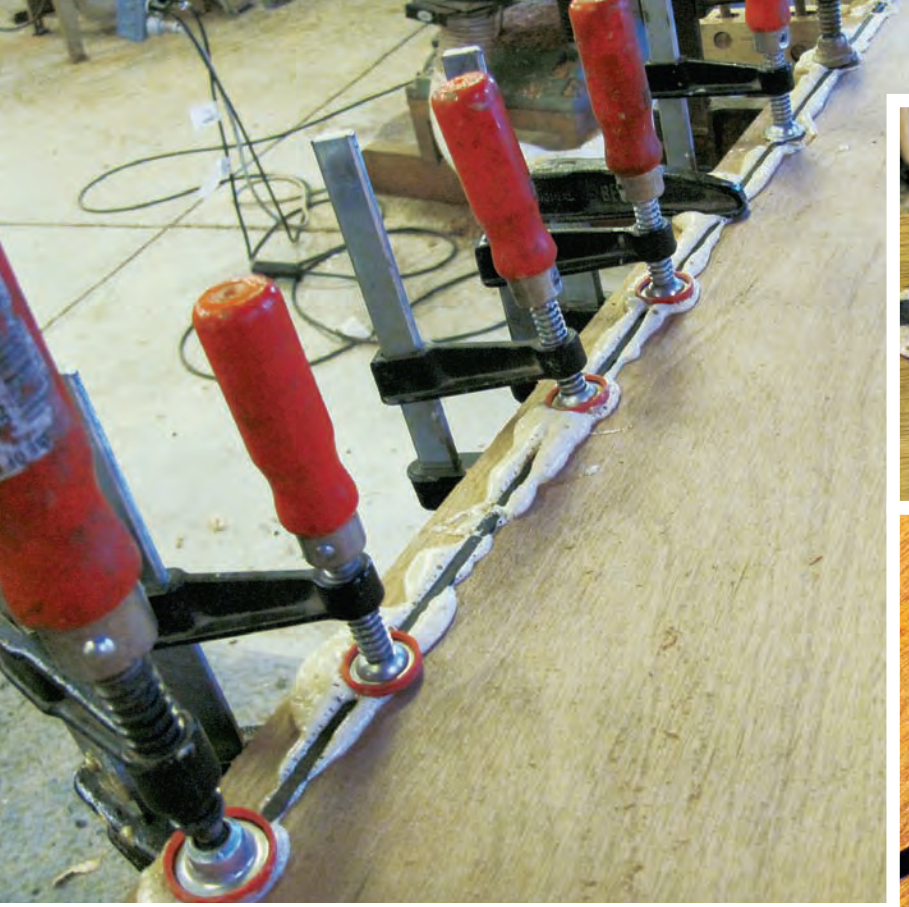
Before final assembly, mill a shallow slot for the wooden buttons on the inside of the aprons at your table saw or router table. These



MATERIAL LIST (DESK)

		T x W x L
1	Top (1)	7/8" x 24" x 52"
2	Top Inlay (1)	1/8" x 1/8" x 104"
3	Top Corner Inlay Blocks (4)	1/8" x 3/4" x 7/8"
4	Legs (4)	1⅞" x 1⅞" x 26½"
5	Leg Inlay (1)	1/8" x 1/8" x 34"
6	Front and Back Aprons (2)*	7/8" x 4" x 44¾"
7	Side Aprons (2)	7/8" x 4" x 18½"
8	Leg Dowels (16)	1/2" Dia. x 2"
9	Apron Dowels (2)	3/8" Dia. x 1"
10	Wooden Buttons (9)	5/8" x 3/4" x 1½"
11	Drawer Runners (4)	5/8" x 1⅜" x 19
12	Drawer Supports (6)	1/4" x 3/8" x 19"

** The drawer faces are cut from the front apron.*



After carefully routing shallow grooves in the desk top, the author used polyurethane glue (note the foam) and many clamps to install the ebony inlay (top left). Squares of ebony (top right) were added next to accent the corners. Planing, scraping and sanding leveled the strips and completed the attractive design (right).

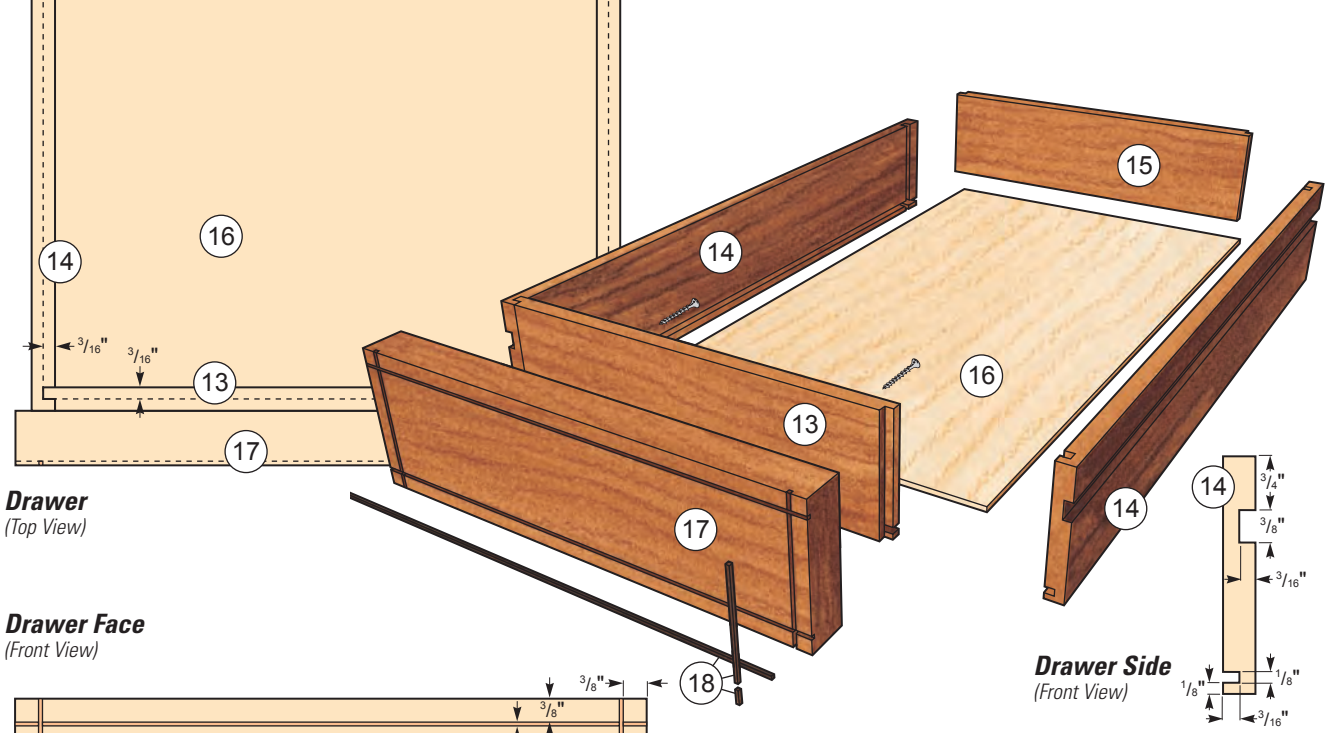
will connect the top to the base and allow for seasonal wood movement. Be careful to stop the slot cuts short of the drawer fronts on the front apron (see *Drawings*). With that work behind you, join the legs and four aprons together with pairs of 1/2" dowel pegs and glue. As you clamp the assembly up, be sure that the legs are parallel to each other (or even toe out slightly) by adjusting the placement and pressure of the clamps.

After the glue dries, mark out and cut the three drawer fronts free with a thin, fine-tooth saw. Label them clearly so you can reassemble them in the same sequence. This gives a consistency of grain and color — important in a delicate piece of furniture such as this desk. Make four crisscross cuts on each drawer face with a thin-kerf blade at the table saw to fit the 1/16"-wide inlay strips. Then cut slots across the ends of the "stub" apron pieces of the front apron for inlay here, too. Glue the inlay strips in place and then plane or sand them flush. Notice in the *Drawings* that I added a single dowel near the cut ends of the front stub apron in order to lock them in place underneath the desk top. They also will receive a wooden button and screw.

Speaking of which, use some scrap stock to make the nine wood buttons now, and drive a countersunk wood screw through each to fasten the desk top to the leg base. Be sure to position the buttons on the side aprons in a little bit from the legs so the top can expand widthwise with the seasons.

A scrap-made tapering jig with supports nailed in place held each leg blank securely for ripping the short tapers to shape.

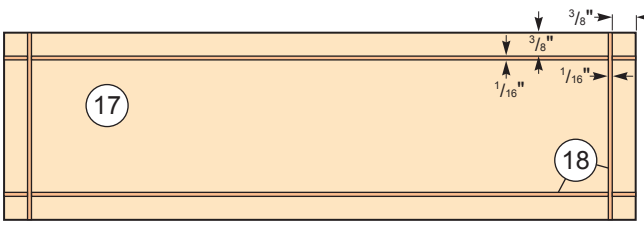
Make four grooves for leg inlay around the tapers by backing each leg blank up against the miter gauge and using the rip fence as a stop block.



Drawer
(Top View)

Drawer Face
(Front View)

Drawer Side
(Front View)



MATERIAL LIST (DRAWERS)

		T x W x L
13	Drawer Fronts (3)	3/8" x 2¾" x 9¼"
14	Drawer Sides (6)	3/8" x 2¾" x 17"
15	Drawer Backs (3)	3/8" x 2½" x 9¼"
16	Drawer Bottoms (3)	1/8" x 9¼" x 16 13/16"
17	Drawer Faces (3)*	7/8" x 3" x 10⅛"
18	Drawer Face Inlay (1)	1/16" x 1/16" x 90"

** The three drawer faces are cut from the front apron.*

In order to maintain a flowing grain pattern, the desk's drawers are cut with a thin blade from the front apron. The top fastens to the base with wood buttons (left). Their tongues fit into shallow grooves in the aprons.

Adding the Runners and Drawers

The desk drawers are suspended from the desk top and slide along pairs of drawer runners with supports dadoed into them. Use scrap stock to make the runners and supports. Then turn your attention to the drawer boxes. You can construct these drawers with any joinery you prefer, but the parts are sized in the *Material List* to accommodate rabbet-and-dado joints (see *Drawing*, above). Cut the joinery, make slots for the drawer bottoms and assemble the three drawers with glue and clamps. When the joints cure, cut 1/8"-deep, 3/8"-wide slots along the drawer sides for the runners. Then flip the desk over and set the three drawers and their runners in place. Use 2" countersunk screws in elongated holes to attach the drawer runners to the desk top. Only after the drawer boxes have been fitted and slide in and out smoothly should you attach the drawer faces. I didn't do this, and aligning the bands of inlay on the drawer faces after the drawers were in place was a tedious, time-consuming business. You can use short pieces of double-sided tape to position and hold the drawer faces in place temporarily, before fixing them permanently with screws driven from inside the drawer boxes.

There is no functional need for pulls with drawers this small since they are easily opened with a hand beneath the front edge. If you prefer the look of pulls, make a set using the same wood as the inlay in a style that suits your taste.

Simon Watts is a frequent contributor to Woodworker's Journal. *He lives in San Francisco in the winter and on an island home in Nova Scotia during the summer.*