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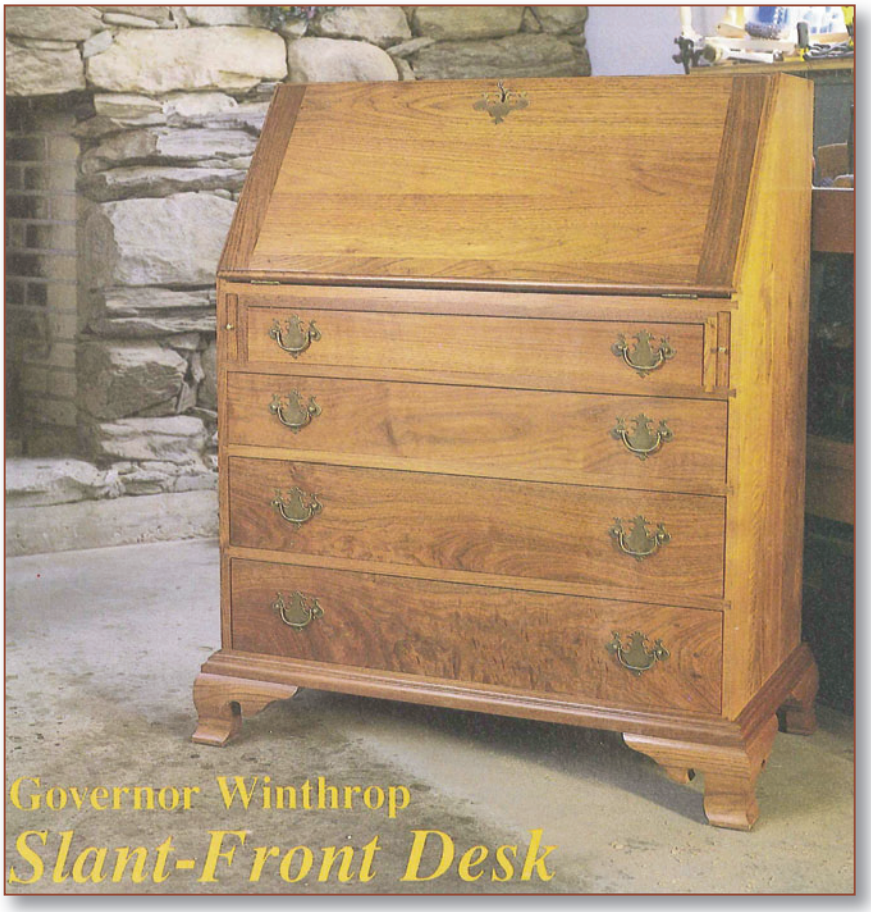
# Classic Project

## 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.

# Governor Winthrop Slant-Front Desk

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# Governor Winthrop *Slant-Front Desk*

Nearly every woodworker, no matter what his expertise, dreams of making some traditional ''classic'' woodworking project. A grandfather clock, a highboy, a tripod base tilt-top table, and a roll-top desk are a few of the most requested classics. Over the years, in addition to our many period or museum pieces, *The Woodworker's Journal* has featured all these projects, and we remain committed to offering more plans for such ''top-shelf'' work in the future.

A traditional slant-front desk is one of the classics that has been on our list for a long time. And we're especially proud that the desk we're finally featuring is one of the finest, the handsome Governor Winthrop Desk, based on an original Wallace Nutting design from Berea College's Wallace Nutting collection. The collection has been housed at Berea College since 1945, when Nutting's widow bequeathed his furniture collection and blueprints to the school.

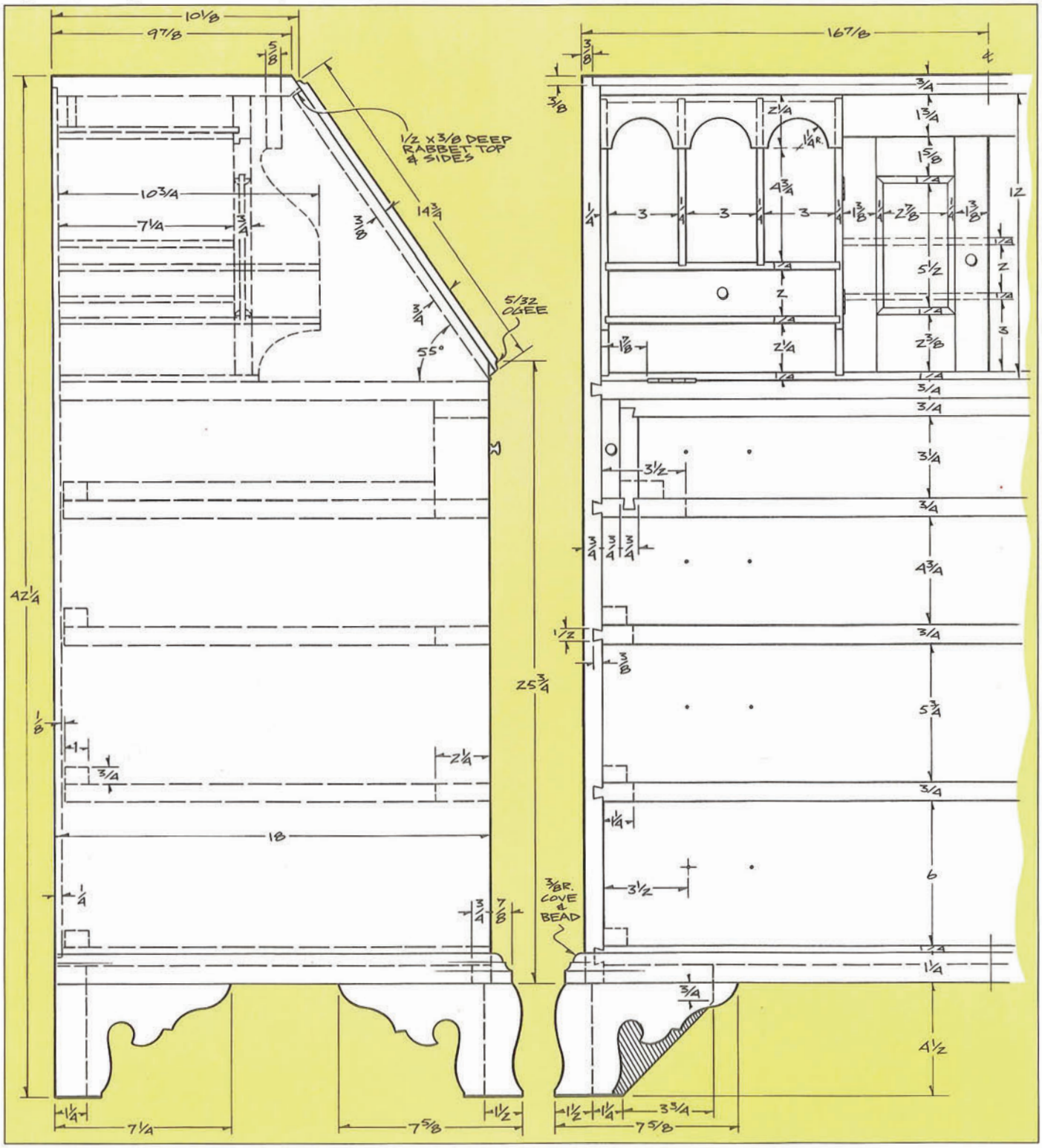
For those of you who are wondering just who Wallace Nutting and Governor Winthrop were, here's a little background. The good Governor Winthrop, namesake of this desk, was one of the three famous 17th-century Governor Winthrops—father, son and grandson, all named John Winthrop. The first John Winthrop served as governor in the Massachusetts Bay Colony and the latter two served as governors of colonial Connecticut. We suspect, given the style of the desk, that the owner of the original was probably either the son (who served as Governor from 1657–1676) or the grandson (who served from 1698–1707).

Wallace Nutting was the famous eclectic pastor/collector/artist/entre-

preneur whose passion for Colonial furniture spawned much of the initial interest, early in the 20th century, in what was then a most neglected style. Traveling the New England countryside, searching through barns, attics and old homes, Nutting discovered various Colonial furniture treasures, assembling a collection from which he then proceeded to build and market a line of reproductions. Although not an exact copy of the original (Nutting made a few changes to better accommodate modern materials and techniques), the desk is faithful in size, proportion and detail to the original—right down to the inclusion of a very cleverly concealed secret drawer. As shown, the desk is crafted in walnut, though cherry or mahogany would also be good choices.

## Can I Do It?

If you're like most woodworkers, there comes a time in your life when you step up from small or easy pieces to "serious" work. Perhaps this seminal moment was when you made your first cabinet door, hand-cutting mortises and tenons and discovering that the process really wasn't all that hard. Or perhaps the moment came when you first spent over $200 just for the wood to build a specific piece. Or maybe that moment came when you bought that long-sought, fully-adjustable dovetail jig, and savored the compliments as friends admired your



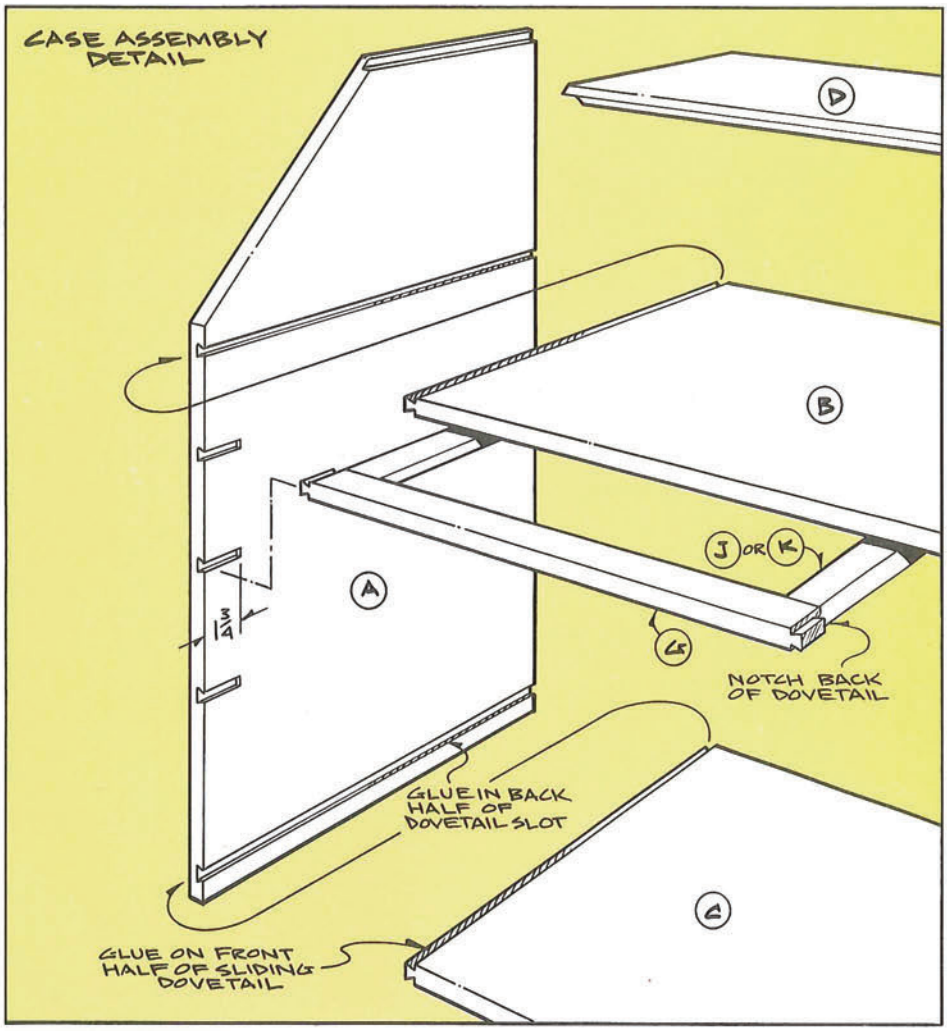
dovetailed drawers that looked every bit like they'd been hand cut by the world's top craftsman.

We wouldn't suggest that you undertake this piece if you've never made a door or drawer, but if you've never made a piece this large, don't be scared off. Its important pedigree notwithstanding, the desk is basically just a box, with some drawers, a pigeonhole section, a slant front and bracket feet. If your shop is equipped with the basics—table saw, band saw, jointer, planer, router and a good selection of clamps—then you should have no problem making the desk.

## What You'll Need

Whatever your choice of stock for the desk, take care with your board selection. Try to avoid any boards that would seem out of place (such as walnut with sapwood), especially for the front-facing surfaces such as the drawer fronts and slant front. Also, make certain that the stock you are using has been kiln-dried to a moisture content of no more than 6 to 7 percent. Although most of the stock is standard 3/4 in. thick material, there are a number of other stock size requirements. If you don't own a thickness planer, you can usually find a local millwork shop that will plane your stock to size for a reasonable fee.

In addition to your hardwood, you'll need 1/4 in. plywood for the back and drawer bottoms, and of course, the hardware.




## Let's Get to Work

As with any large case piece, the first order of business should be getting out stock, arranging boards so their grain matches as closely as possible, and jointing and edge gluing to make panels for the widest parts. For the desk, you'll likely need to edge-glue stock to yield the sides (A), desk surface (B), bottom (C), and slant front (E). Depending on what you have available, you may also need to edge-glue stock to yield the case top (D) and the pigeonhole tops (BB), bottom (CC), sides (DD), shelves (EE), (GG), and dividers (FF). All the 1/4 in. pigeonhole stock can be resawed from thicker material. If you are resawing 3/4 in. stock, that thickness should yield two 1/4 in. thicknesses, taking into account a generous allowance for final thicknessing to the 1/4 in. dimension.

Several of the parts are thicker than 3/4 in. Although you could laminate several boards to yield the required thicknesses, it's better to just obtain the parts from thicker rough stock. Buy 5/4 stock for the base moldings (R, S) and 8/4 stock for the feet (T, U) and foot supports (V).

The easiest and the most logical way to build a piece like the desk is to divide the construction into a series of separate assemblies. In both our written instructions and in the Bill of Materials, we've divided the desk into its component parts—the case, the case drawers, the pigeonhole section, and the pigeonhole doors and drawers. By tackling things one-at-a-time, you'll find that the desk isn't really all that complicated, after all.

## The Case: Can You Make A Big Box?

As shown in the Case Assembly Detail, the case is basically just a big box. The main parts of the basic box are the two sides (A), the desk surface (B), the bottom (C), and the top (D). After cutting the above parts to length and width, set to work cutting the rabbets on the ends of the sides and top, and the various dovetail slots in the sides. These cuts are best made before you cut back the two topmost corners of the sides, establishing the slope of the slant front when the desk is in the closed position.

*Cut the Dovetail Slots:* There are a pair of through dovetail slots in each side, for the desk surface and bottom

respectively, and three stopped dovetail slots in each side, to fit the dovetails cut on the ends of the drawer rails (G). As also shown in the Case Assembly Detail, these stopped dovetails are 1 3/4 in. long, or 1/2 in. shorter than the width of the drawer rails. Because the drawer rails and runners (J, K) are joined with a 1/2 in. long tenon, the dovetails on the drawer rail ends are notched back that same 1/2 in. A 1/2 in. dovetail bit set for a 3/8 in. deep cut is used for all these dovetails.

*Make The Slant Front Slope:* Once the rabbets and dovetails are cut, you can cut back the corners of the sides to the 55-degree angle shown in the side elevation (note that the cut starts 25 3/4 in. from the bottom end of the sides). Also, cut back the front edge of the top at a matching 55-degree angle, and rip the bottom edge of the top to establish the right angle surface into which the rabbet on the slant front will fit.

*Cut Sliding Dovetails:* With the sides and top all cut, next you'll need to establish the sliding dovetails on the ends of the desk surface and bottom. Since these two parts will be a sliding fit into the dovetails in the sides, it's important that you don't make the fit overly tight. The best approach is to first cut the dovetails a little tight, and then make a light trimming cut until the desk surface and bottom dovetails can slide effortlessly into their mating dovetail slots. Don't forget to make certain that the desk surface is 1/4 in. less in width than the sides and bottom; this 1/4 in. allows the case back (W) to fit in place. You can cut and fit the sliding dovetails on the ends of the drawer rails now, but don't worry about assembling the drawer frames just yet.

*Case Assembly Secrets:* You are now ready to assemble the case. There's a simple secret (see Case Assembly Detail) to getting the long sliding dovetails that join the sides, desk surface and bottom to go together without a panic. (When we say panic, just remember how you felt the last time a long sliding dovetail that you were assembling seized up before the dovetail had been fully seated!) The secret to an assembly like this is apply glue *only to the back* 1/2 of the dovetail slot length and *only to the front* 1/2 of the corresponding sliding dovetail. By using this system you are able to slide the parts half-way together before you begin to encounter any resistance from glue. Work quickly, and don't let any time pass between the time that you apply the glue and start the assembly. The moisture in the glue will quickly swell the wood, and even a sliding dovetail that fit together effortlessly when dry may be impossible to assemble.

Assemble the sides and bottom first, then add the desk surface, and lastly glue, counterbore, screw and plug the top in place. Face grain plugs matched carefully to the grain of the top will help to make this joint all but invisible. If you are a stickler for authenticity, then use half-blind dovetails to join the top and sides.

*Check Case for Squareness:* Before the glue on the case assembly sets, you'll want to check the assembly for squareness, and make adjustments if needed. Measure across the diagonals on the case back (from corner to corner). If the measurements aren't exactly equal, use a bar clamp and some blocks (so you don't mar the wood) to apply some pressure across the longer diagonal. Check the diagonals again and fine-tune the clamp pressure until the measurements are equal.

*Cut Back Rabbet:* Once the case assembly is dry, you can cut the rabbet in the sides, top and bottom for the plywood back. You can use a ball-bearing guided 3/8 in. rabbeting bit, set for a 1/4 in. deep cut for most of the work. However, where the desk surface interferes, you'll need to switch to a straight cutter and use the edge guide to guide the router. You can cut and fit the back, but don't mount it at this time. The back won't be mounted until after all the remaining work on the desk has been completed.

## Make and Mount the Drawer Frames

Make three drawer frames, each consisting of one drawer rail and a pair of runners. The bottom two drawer frames are identical, but the topmost drawer frame has wider runners (K), to accommodate the connector (I) and guide (L), and to serve as runners for both the slides (N, O) and the narrow top drawer. Note that a stub tenon (1/4 in. by 1/2 in. long) is used to join the runners to the rails on all three drawer frames, and that the back ends of the runners are drilled with slotted holes. These holes are for screwing the back end of the runners to the case sides, and the fact that they are slotted permits some seasonal wood movement in the sides. If the runners were permanently fastened to the case sides across the full width of the sides, there's a danger of the sides splitting should some shrinkage occur across the grain of such a wide piece.

The full dovetail on the bottom end of the connectors, and its mating dovetail rail slot are both 1 3/4 in. long—the same as on the rail ends and case—so as to not

## Bill of Materials
(all dimensions actual)

| Part | Description | Size | No. Req'd. |
|---|---|---|---|
| | **Case** | | |
| A | Side | 3/4 x 18 x 37 3/4 | 1 |
| B | Desk Surface | 3/4 x 17 3/4 x 33* | 1 |
| C | Bottom | 3/4 x 18 x 33* | 1 |
| D | Top | 3/4 x 10 1/8 x 33 | 1 |
| E | Slant Front | 3/4 x 14 3/4 x 30 1/4* | 1 |
| F | Slant Front End | 3/4 x 2 3/8 x 14 3/4 | 2 |
| G | Drawer Rail | 3/4 x 2 1/4 x 33 | 3 |
| H | Top Rail | 3/4 x 2 1/4 x 30 3/4 | 1 |
| I | Connector | 3/4 x 2 1/4 x 4 | 2 |
| J | Runner | 3/4 x 1 1/4 x 15 7/8* | 4 |
| K | Top Runner | 3/4 x 3 1/2 x 15 7/8* | 2 |
| L | Guide | 3/4 x 3/4 x 15 3/8 | 2 |
| M | Drawer Stop | 3/4 x 1 x 1 | 8 |
| N | Slide | 3/4 x 4 x 16 1/4* | 2 |
| O | Slide End | 3/4 x 2 1/4 x 4 | 2 |
| P | Slide Stop | 1/2 x 3/4 x 2 1/2 | 2 |
| Q | Filler | 3/4 x 3/4 x 32 1/4 | 1 |
| R | Base Front Molding | 7/8 x 1 1/4 x 35 1/2 | 1 |
| S | Base Side Molding | 7/8 x 1 1/4 x 18 7/8 | 2 |
| T | Front Foot | 1 1/2 x 4 1/2 x 7 5/8 | 4 |
| U | Back Foot | 1 1/2 x 4 1/2 x 7 1/4 | 2 |
| V | Back Foot Support | 1 1/4 x 5 1/4 x 5 | 2 |
| W | Back | 1/4 x 33 x 36 1/4 | 1 |
| | **Case Drawers (No's Req'd are per drawer)** | | |
| X | Front | See Chart | 1 |
| Y | Side | See Chart | 2 |
| Z | Back | See Chart | 1 |
| AA | Bottom | See Chart | 1 |
| | **Pigeonhole Section** | | |
| BB | Top | 1/4 x 8 3/4 x 10 | 2 |
| CC | Bottom | 1/4 x 8 1/4 x 32 1/4 | 1 |
| DD | Side | 1/4 x 10 3/4 x 11 3/4 | 4 |
| EE | Shelf | 1/4 x 10 3/4 x 9 3/4 | 4 |
| FF | Divider | 1/4 x 10 3/4 x 7 | 4 |
| GG | Center Shelf | 1/4 x 7 1/4 x 12 1/2 | 2 |
| HH | Front | 5/8 x 2 1/4 x 10 | 2 |
| II | Drawer Runner | 1/8 x 1/2 x 6 1/2 | 2 |

| Part | Description | Size | No. Req'd. |
|---|---|---|---|
| | **Doors** | | |
| JJ | Stile | 3/4 x 1 3/8 x 10 | 4 |
| KK | Top Rail | 3/4 x 1 5/8 x 3 7/8* | 2 |
| LL | Bottom Rail | 3/4 x 2 3/8 x 3 7/8* | 2 |
| MM | Panel | 1/4 x 3 3/4 x 6 1/2** | 2 |
| NN | Trim Molding | 1/4 x 1/4 | about 8 ft. |
| | **Pigeonhole Drawer** | | |
| OO | Front | 3/4 x 2 x 9 1/2 | 2 |
| PP | Side | 3/8 x 2 x 10 1/2 | 4 |
| QQ | Back | 3/8 x 1 1/2 x 9 1/8 | 2 |
| RR | Bottom | 1/4 x 9 1/8 x 9 13/16 | 2 |
| | **Secret Drawer** | | |
| SS | Front | 3/4 x 1 15/16 x 12 1/4 | 1 |
| TT | Side | 3/8 x 1 3/4 x 7 3/4 | 2 |
| UU | Back | 3/8 x 1 1/4 x 11 7/8 | 1 |
| VV | Bottom | 1/4 x 7 1/16 x 11 7/8 | 1 |
| | **Hardware*** ** | | |
| WW | Chippendale Pull | 3 3/4 x 2 3/4 | 8 |
| XX | Escutcheon | 3 3/4 x 2 3/4 | 1 |
| YY | Lock | 1 3/4 x 2 1/2 | 1 |
| ZZ | Knob | 3/8 dia. | 6 |
| AAA | Slant Front Hinge | 2 x 3 | 2 |
| BBB | Butt Hinge | 1 x 1 | 2 |
| CCC | Bullet Catch | 5/16 dia. x 3/8 long | 2 |

* Length includes tongue(s) or tenon(s).
** Panel width allows 1/8 in. for wood movement.

interfere with the stub tenon joining the rails and runners. Also at this time, make the top rail (H), and cut the interlocking half-dovetail on its ends and on the top ends of the connectors. Take care to test fit all these parts within the case.

If everything fits as intended, assemble the drawer frames and mount them in the case. The two bottom drawer frame assemblies will consist of just the drawer rails and runners. But the top drawer frame will include not only the drawer rail and the two runners, but also the connectors, top rail and guides. Use a framing square to make certain that the runners and rails meet at a perfect right angle. A small machinist's square is a handy way to make certain that the connectors are at a true right angle to the two rails that they connect. Once the drawer frame assemblies are out of clamps, apply glue and slide the rail dovetails into their mating stopped dovetails in the case sides. Measure carefully at the case back to insure that spacing between the drawer frames is the same at both the front and back, then screw through the slotted holes to secure the backs of the frames.

### Make the Slant Front Writing Surface and Sliding Supports

The slant front writing surface consists of the slant front (E) and the slant front ends (F), with a 1/4 in. by 1 in. long tenon on the slant front and a matching groove in the slant front ends joining these parts. A 5/32 in. ogee router bit and a 1/2 in. by 3/8 in. rabbeting bit are used to mold the ogee profile and the rabbet around the top edge and ends of the writing surface, respectively. Mortise for and mount the slant front hinges (AAA) and lock (YY), and mortise for and mount the lock catch plate on the case top.

The sliding supports consist of the slides (N) and the slide ends (O). Note the grain direction of the slide ends is top-to-bottom, and that a 1/4 in. by 3/4 in. long tenon and matching groove joins the slides and slide ends. Also, make and mount the slide stops (P), which prevent the supports from being pulled all the way out.

The sliding supports don't butt against a stop when in the closed position. Instead, they butt right against the case back. In theory, one might think that given the width of the case sides, and the possibility for wood movement, the slides might be sticking out 1/4 in. proud of the case front in winter, and be inset 1/4 in. during a humid summer. Theory, however, takes a back seat here to experience. Once your case is finished, and given the fact that you've taken special care to select only the best kiln-dried material, expansion and contraction should really be negligible. The best way to size the sliding supports is to cut them a little long for starters, and then make a final trimming cut at the back end just before mounting the case back. If some further adjustment is needed after several years of use, the supports can be easily removed by unscrewing the slide stops. Incidentally, for this same reason, when you mount the case drawers, it's a good idea to screw—but not glue—the drawer stops in place. This way, there's the opportunity for fine adjustment of the stops at some later date, just by unscrewing and removing the case back.

### Make the Base

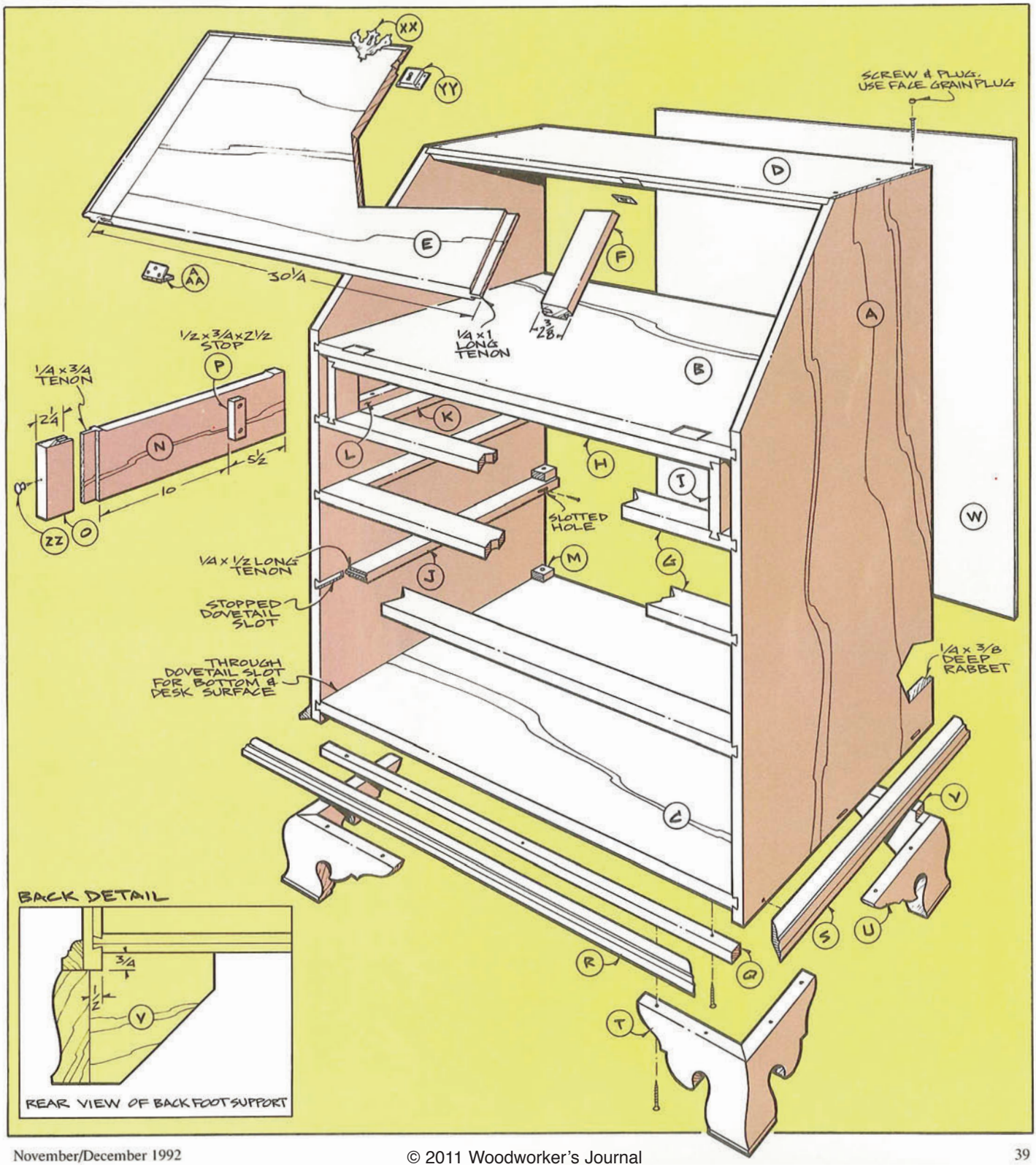
The base consists of the filler (Q), front and side moldings (R, S), front and back feet (T, U) and the back foot supports (V). The filler is just a 3/4 in. by 3/4 in. strip, glued in place between the sides and filling the space at the desk bottom. The moldings are easily profiled with a cove-and-bead or classical router bit. The front and back feet will be the greatest challenge, but here too, we've worked out a simple system.

Start with a length of stock 1 1/2 in.

thick by 4½ in. wide by at least 4 ft. long. The traditional process to make a bracket foot, such as that on our desk, was to use a combination of hollow and round molding planes. The round sole planes established the concave portion of the molded foot, the hollow planes rounded the convex shape. The craftsman used a simple wooden template to check his profiles as the work progressed. Experienced craftsmen typically developed a "book" of such templates for their most commonly used shapes and molding profiles.

Traditional hollow and round molding planes are still quite common, and can be purchased for about $15 to $30. If you are lucky, you may even find a complete set of both hollows and rounds by the same manufacturer. However, a more modern approach to making bracket feet uses the table saw for most of the work.

In a perfect world, every 10 in. table saw blade measures exactly 10 in. in diameter, and detailing a setup for making a cove cut on the table saw requires that we simply provide a blade height and a fence angle setting for you to duplicate on your saw. However, the problem with calling out a specific fence angle setting is that the angle will produce the desired cove only if your

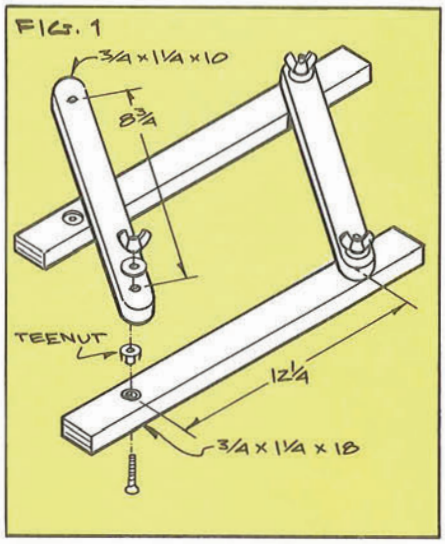


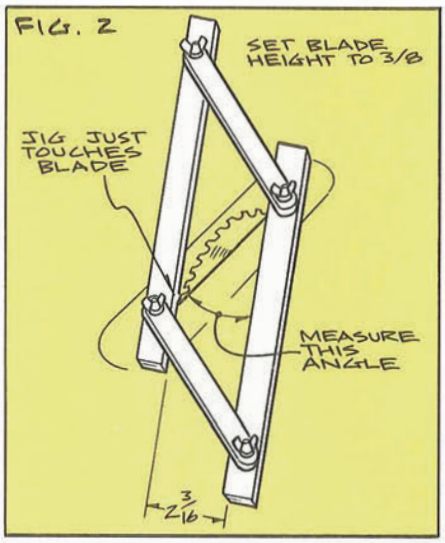
blade is an exact 10 in. diameter. If you have a 9 in. table saw, or if your 10 in. carbide blade has been resharpened several times and now measures 9 3/4 in., then the cove that you get with your blade won't be the same as the cove we achieved in our shop using a specific fence angle and our 10 in. blade.

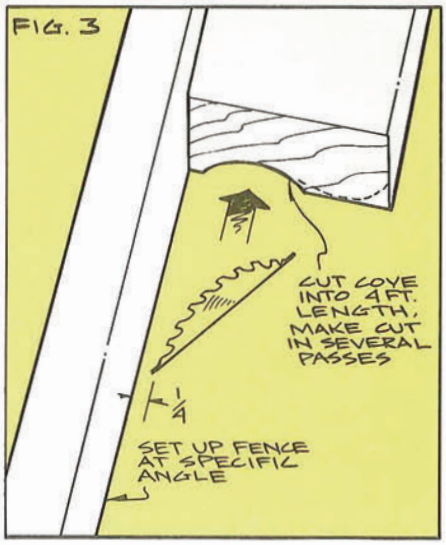
A better method is to use a shop-built parallel arm jig to set the fence angle. The jig, as shown in Fig. 1, is easy to make. It's just a pair of parallel arms joined with a pair of connectors. We've used T-nuts in the arms and wing nuts for quick adjustment and ease of use, but whatever hardware you use to make this jig, keep in mind that the most important point is to have the holes in the arms and connectors drilled both on-center and identical distances apart. The holes in our 18 in. long arms are exactly 12 1/4 in. apart, while the holes in the 10 in. long connectors are exactly 8 3/4 in. apart. This size parallel arm jig can be used to set up most coving operations with a table saw.

To use the jig is simplicity itself. As shown in Fig. 2, just set the jig so the parallel arms are a distance apart that's equal to the desired cove width (2 3/16 in. apart for our bracket foot cove), raise the table saw blade to the desired cove depth (3/8 in. for our foot), and position the jig at an angle so the blade touches both of the parallel arms. Using a protractor, an angle finder, or whatever other tools you use to determine angles, now measure the angle of the jig to the blade. Remove the jig, set up a fence at the specific angle, locating it 1/4 in. from the blade (when the blade is raised to the full 3/8 in. height) as shown in Fig. 3, and cut the cove in your 4 ft. length of foot stock. Just don't attempt to make the cove in a single pass. The usual procedure is to start with the blade raised about 1/8 in. and then raise the blade incrementally (about 1/16 in. to 1/8 in. at a time) until the full 3/8 in. cove depth is achieved.

Once the cove is established, the roundover is made next. Our bracket foot's roundover is roughly a 2 in. radius. The simplest way to make this radius (if you don't have a hollow molding plane) is to use a jointing plane to gradually shape the radius. Make a template from wood or stiff cardboard to gauge your progress. Once the radius is nearly complete, use sandpaper to final shape it and remove any of the lines left from the plane.




With the molded profile established, crosscut the board into the lengths required for the individual feet. Miter the ends of the front feet, then transfer the foot shape (see full-size pattern) to the flat back surface of the feet, and cut out with a band saw or a hand-held jigsaw. Final sand the shape, then glue the front feet together at the miters.

*Mount the Molding and Feet:* The front molding is a good long grain-to-long grain glue joint, but the side molding is glued only at the miters and near the front of the case sides. The remaining molding length is fastened with screws inserted through slotted holes in the case sides, as shown in the exploded view.

The feet are glued and screwed to the molding and the bottom of the case. Note that the 1 1/4 in. thick back foot support has a step cut into the top edge, to fit around the case sides and flush to the case bottom (see Back Detail).

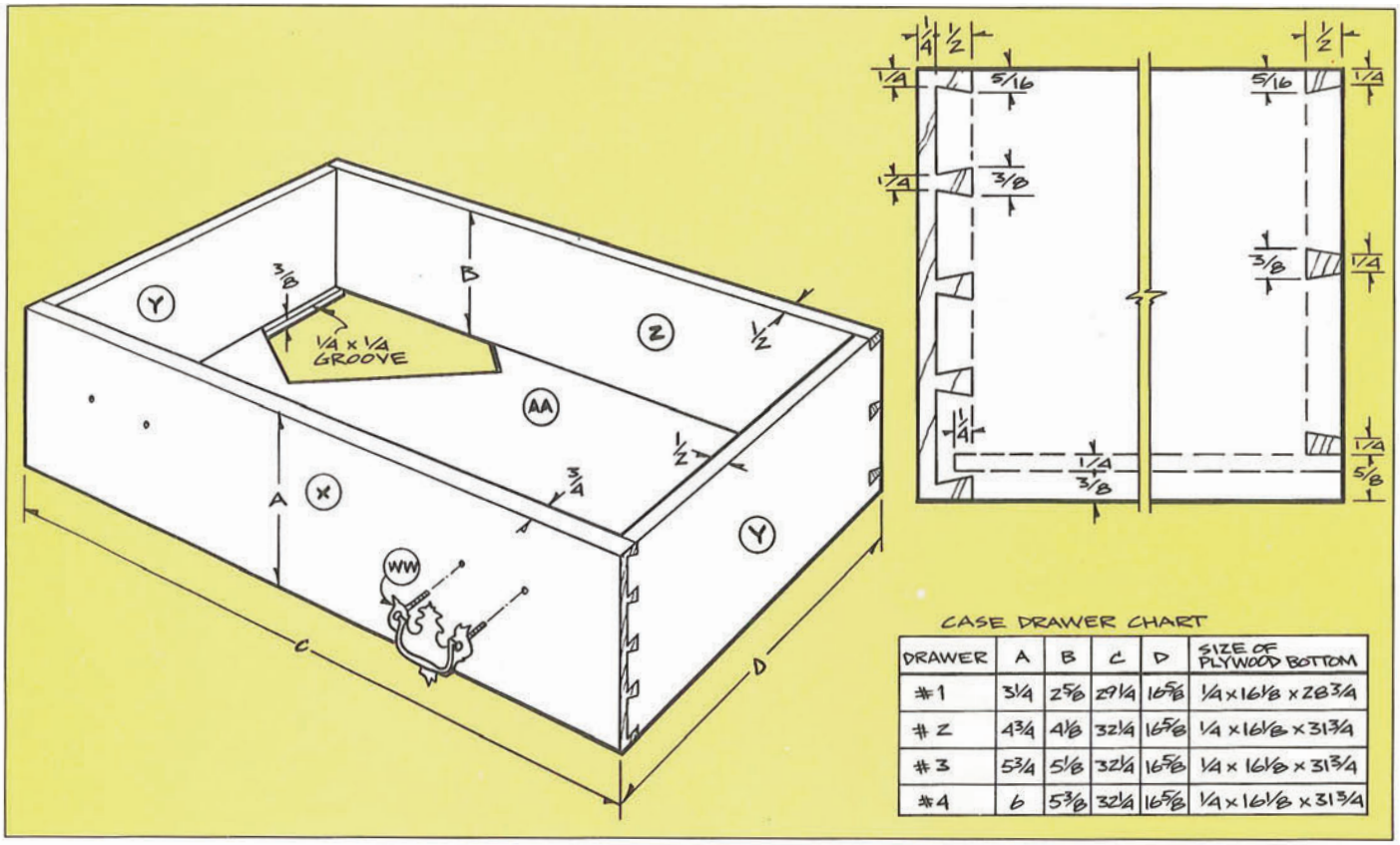
## The Case Drawers

Because of the explanation required with the rest of this piece, we won't go into great detail on the drawers. For a piece such as this, hand-cut dovetails—or machine cut dovetails made with a jig that allows for random spacing to yield a hand-cut look—are the best choice. Use half-blind dovetails to join the drawer fronts (X) with the sides (Y), and through dovetails to join the backs (Z) to the sides. The piece shown in the photo uses 1/4 in. plywood for the drawer bottoms (AA), though if you are a stickler for authenticity, bevel-edged drawer bottoms in solid stock could easily be substituted.

Our Case Drawer Chart shows the dimensions for the drawers, however, as with any case piece, you should make your drawers based on the actual dimensions from your case. The drawer depth should be sized to allow for the drawer stops (M). The best way to make the stops is to first make all the drawers, then cut and locate the stops so the drawers close flush with the case front.

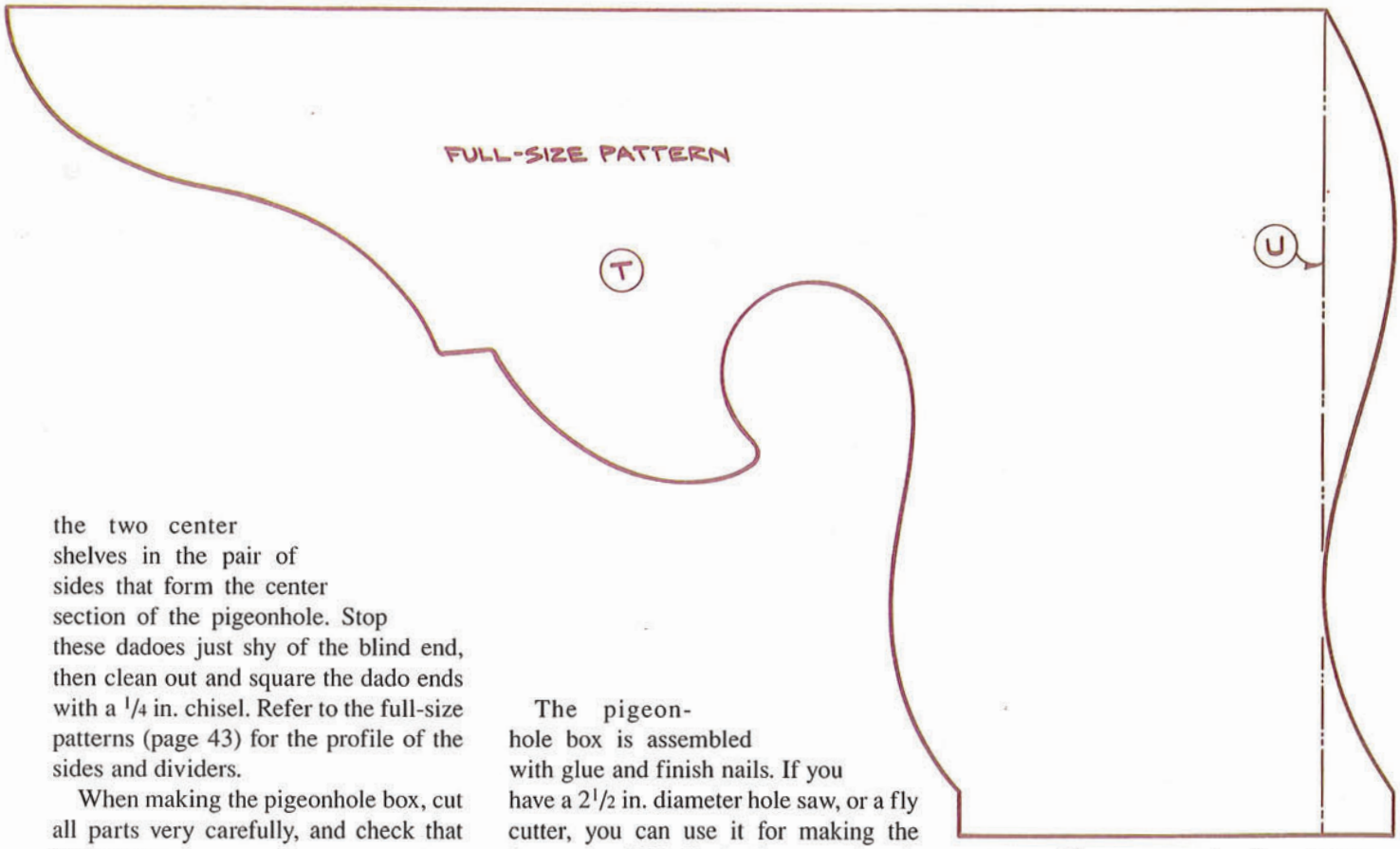
## The Pigeonhole Section

The pigeonhole section is cut, assembled and mounted in the case before the case back is added. The pigeonhole construction is basically just a box, with shelves, dividers, drawers and doors. The primary parts—the tops (BB), bottom (CC), sides (DD), shelves (EE, GG), and dividers (FF) are all 1/4 in. thick stock. Use the table saw dado head, set for a 1/4 in. wide cut, to establish the various dadoes and rabbets. Note that there are four nearly identical side parts, the only difference being the stopped dadoes for




CASE DRAWER CHART

| DRAWER | A | B | C | D | SIZE OF PLYWOOD BOTTOM |
|---|---|---|---|---|---|
| #1 | 3 1/4 | 2 5/8 | 29 1/4 | 16 5/8 | 1/4 x 16 1/8 x 28 3/4 |
| #2 | 4 3/4 | 4 1/8 | 32 1/4 | 16 5/8 | 1/4 x 16 1/8 x 31 3/4 |
| #3 | 5 3/4 | 5 1/8 | 32 1/4 | 16 5/8 | 1/4 x 16 1/8 x 31 3/4 |
| #4 | 6 | 5 3/8 | 32 1/4 | 16 5/8 | 1/4 x 16 1/8 x 31 3/4 |



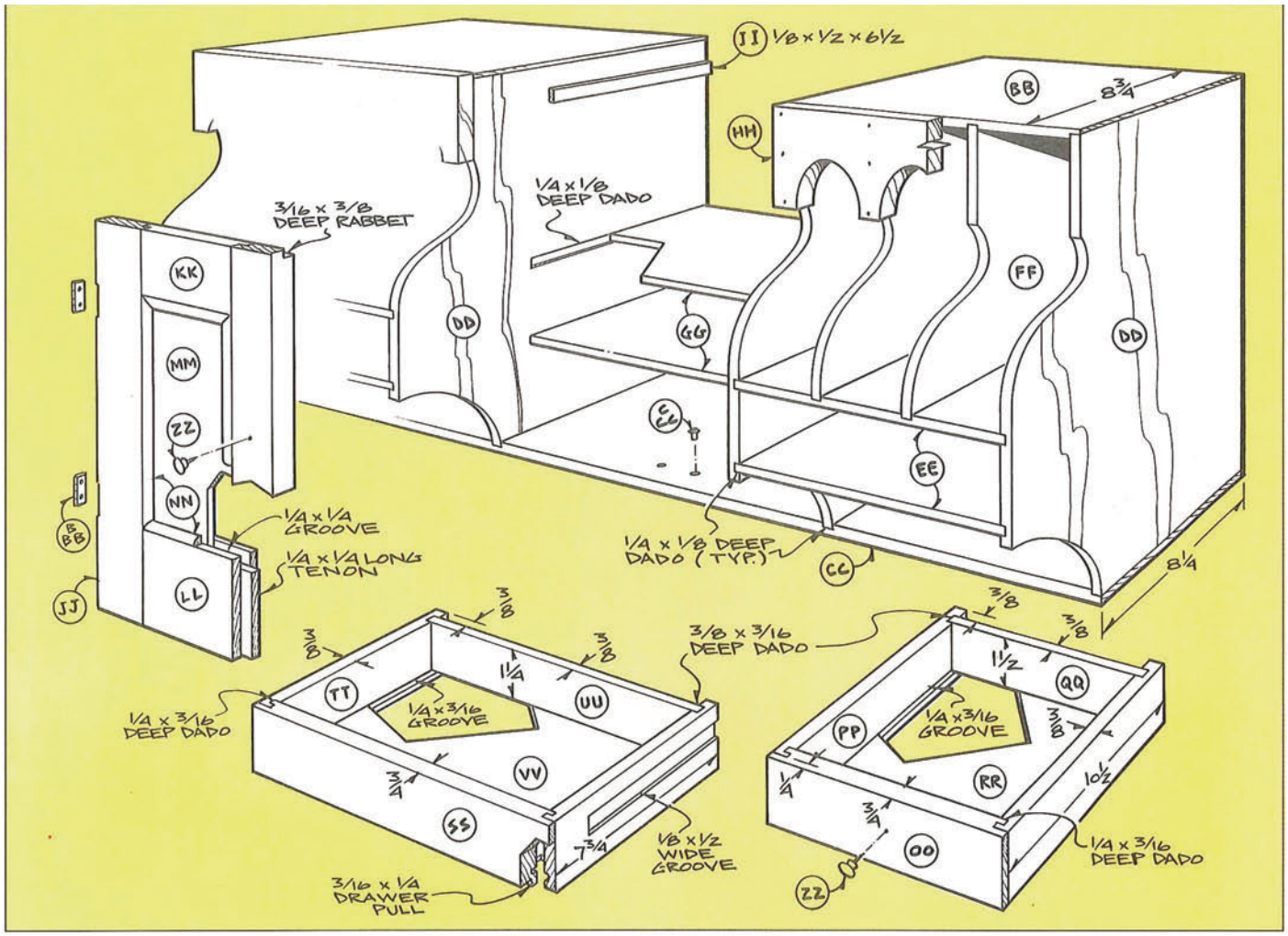

the two center shelves in the pair of sides that form the center section of the pigeonhole. Stop these dadoes just shy of the blind end, then clean out and square the dado ends with a 1/4 in. chisel. Refer to the full-size patterns (page 43) for the profile of the sides and dividers.

When making the pigeonhole box, cut all parts very carefully, and check that their lengths will allow the assembled pigeonhole box to fit within the desk cavity. The best way to avoid a problem is to dry assemble the box as you make it, checking regularly for the fit inside the desk.

The pigeonhole box is assembled with glue and finish nails. If you have a 2 1/2 in. diameter hole saw, or a fly cutter, you can use it for making the front parts (HH). Cut both parts to length and width, then edge-clamp the two parts together before cutting the three 2 1/2 in. diameter holes. Once the parts are unclamped you'll have a pair of front parts, each with their three 1 1/4 in. radius cutouts. You can make the drawer runners (II) for the secret drawer, but don't mount them just yet.

## The Pigeonhole Doors

The two pigeonhole doors are each just




a pair of stiles (JJ), with a 1/4 in. by 1/4 in. groove in one edge, and top and bottom rails (KK, LL), with the same size groove on one edge and tenons to fit the stile grooves. The panels (MM) on the desk shown are bookmatched sections of crotch walnut. A 1/4 in. by 1/4 in. quarter-round molding (NN) trims out the panels. Note that this molding is glued to the door frames only, and not to the panels.

As shown on the exploded view of the pigeonhole section, a 3/16 in. by 3/8 in. deep rabbet is cut into the top back edge of the two doors. Don't neglect to include this rabbet; it interlocks the bottom lip on the secret drawer, making it impossible to open the drawer with the doors in the closed position. You'll need to mount the doors, though, before you mount the pigeonhole unit in the case—the hinges (BBB) must be screwed in place from the back of the pigeonhole. Also note that the hinges are mortised into the doors only, and not into the pigeonhole sides. Make the hinge mortises in the doors deep enough to accommodate the hinges in the folded (closed) position. Before final mounting the doors, you'll also need to drill for and mount the bullet catches (CCC). Since the holes for the bullet catches are 3/8 in. deep, they extend through the pigeonhole bottom and into the desk surface. You'll need to first drill through the pigeonhole bottom, then slide the pigeonhole unit into place, and mark through the holes and onto the desk surface before completing the holes.

## Pigeonhole Drawers

We show a rabbeted construction on both the pair of pigeonhole drawers and the secret drawer. Make your drawers to fit the pigeonhole unit, using 3/4 in. thick stock for the fronts (OO, SS), 3/8 in. stock for the sides (PP, TT) and backs (QQ, UU) and 1/4 in. plywood for the bottoms (RR, VV). The only real difference between the drawers is their size and the fact that the secret drawer includes a 3/16 in. by 1/4 in. lip on the bottom edge of the front, and 1/8 in. deep by 1/2 in. wide stopped grooves in the sides to accept the drawer runners (II). Note that the lip on the bottom edge of the front of the secret drawer doesn't run the full length of the drawer, but must be notched back on either end. The pigeonhole section is constructed so the secret drawer can only be removed when both doors are fully opened. The notched lip on the drawer front fits between the rabbets of the opened doors as the drawer is slid out. This is difficult to describe, but should be clear from the detail photo on page 43, which shows the secret drawer being opened.

The 1/8 in. by 1/2 in. wide stopped groove in the sides of the secret drawer is best cut with a 1/2 in. diameter router bit, using the router table set up with a stop to limit the groove length to 6 1/2 in. Our illustration shows the groove and the runners as square-ended, so you'll need to use a chisel to square the groove ends. Back when the first Governor Winthrop Desk was made, routers weren't available (electricity had yet to be discovered). However, given our router-cut groove, an easier way is to just round the runner ends to match the radius at the groove ends. A pair of knobs (ZZ) completes the two pigeon-

hole drawers; the secret drawer, in keeping with its station, eschews the knob accoutrement. Instead, to open the secret drawer, one reaches under the drawer with both doors open, and the lip serves as a convenient finger pull.

## Finishing Up

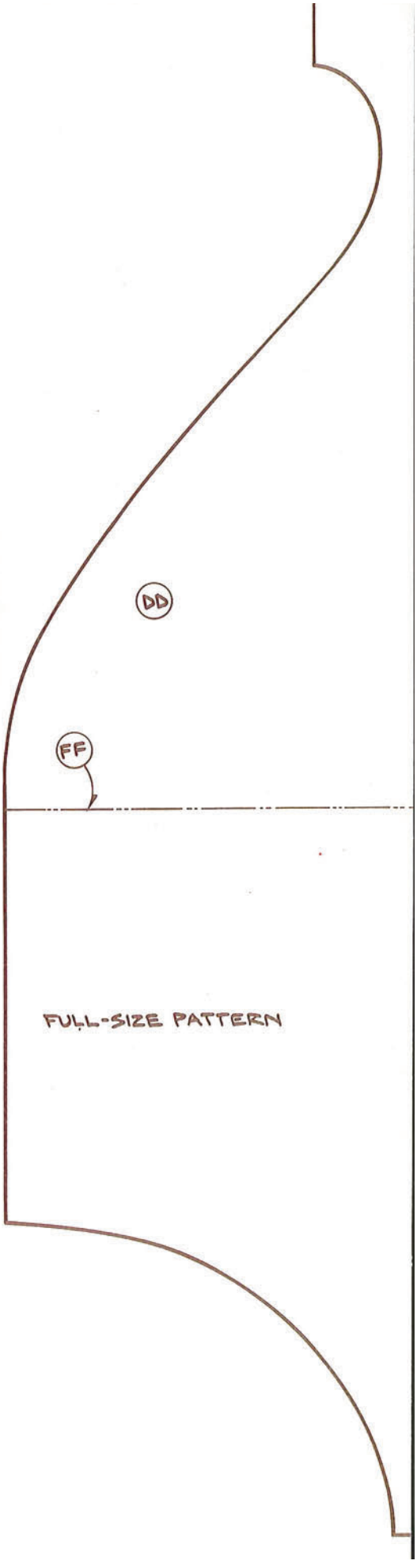
Needless to say, all the fine tuning and fitting of the drawers and doors for the pigeonhole section should be completed before the section is slid into the desk. When it finally comes time to mount the pigeonhole section, don't try to slide it into place from the desk front. That's a sure way to scratch the desk writing surface. The pigeonhole section is slid into place from the back, before the plywood case back is screwed in place. Use a screw or two to fasten the pigeonhole section securely, so it won't move; no glue is needed here. And while we're on the matter of glue, don't use any on the case back either. There's always the possibility that at some future time you may need to remove the back to make some repair or adjustment.

For convenience sake, it's a good idea to finish the pigeonhole section, and its doors and drawers, before the unit is mounted in the desk. You could finish the desk with the pigeonhole section already in place, but it's a lot easier to get into corners, nooks and cubbies when there's easy access from all sides. Take care to set all finish nails, and fill the nail holes on visible surfaces, such as the nails holding the front pieces, before applying the finish.

As for the final finish, you could really take your pick of several finishes, including penetrating oil, shellac and polyurethane. However, by far and away the best choice—and the finish used on the desk shown—is lacquer. A century or two ago, craftsmen used shellac in much the same way that lacquer is used today, but lacquer has several distinct advantages over shellac. It's durable, attractive, easy to maintain, and unlike shellac, it won't show a white ring from a moist glass that's left on the desk surface without benefit of a coaster. A spray finishing outfit is the best way to apply a lacquer finish, but if you don't have one, you can use brushing lacquer instead. Aerosol spray cans are another option, though on a project of this size your finishing budget will quickly be in the red if you're buying your finish in little aerosol cans.

The Chippendale pulls (WW), matching escutcheon (XX), and knobs (ZZ) should only be mounted after the desk has been finished. If you've pre-drilled for and already mounted some of the hardware, be sure to remove it before applying the finish. The hardware has it's own patina, and a layer of finish doesn't improve the look.

*The secret drawer lip rides in rabbets on the top of the doors*



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